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This announcement and the listing document referred herein is for informational purposes only as required by the Rules Governing the Listing of Securities on the Stock Exchange and is not an offer to sell or the solicitation of an offer to buy any securities in the United States or in any other jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. Neither this announcement nor anything herein (including the listing document) forms the basis for any contract or commitment whatsoever. The securities referred to herein have not been and will not be registered under the United States Securities Act of 1933, as amended, and may not be offered or sold in the United States absent registration or an applicable exemption from registration. Any public offering of securities to be made in the United States will be made by means of a prospectus. Such prospectus will contain detailed information about Anton Oilfield Services Group (the “Company”) and management, as well as financial statements. No public offer of securities is to be made by the Company in the United States.

For the avoidance of doubt, the publication of this announcement and the listing document referred to herein shall not be deemed to be an offer of securities made pursuant to a prospectus issued by or on behalf of the Company for the purposes of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong nor shall it constitute an advertisement, invitation or document containing an invitation to the public to enter into or offer to enter into an agreement to acquire, dispose of, subscribe for or underwrite securities for the purposes of the Securities and Futures Ordinance (Cap. 571) of Hong Kong.

ANTON 安東

安東油田服務集團

Anton Oilfield Services Group

(Incorporated in the Cayman Islands with limited liability)

(Stock Code: 3337)

**US\$150 MILLION 8.75% SENIOR NOTES DUE 2025
(the “Notes”, Stock Code: 40776)**

PUBLICATION OF THE OFFERING MEMORANDUM

This announcement is issued pursuant to Rule 37.39A of the Rules Governing the Listing of Securities (the “Listing Rules”) on The Stock Exchange of Hong Kong Limited (the “Stock Exchange”).

Please refer to the offering memorandum dated 19 July 2021 (the “Offering Memorandum”) appended herein in relation to the issuance of the Notes. As disclosed in the Offering Memorandum, the Notes were intended for purchase by professional investors (as defined in Chapter 37 of the Listing Rules) only and have been listed on the Stock Exchange on that basis. Accordingly, the Company, the Subsidiary Guarantors and the JV Subsidiary Guarantors (if any) confirms that the Notes are not appropriate as an investment for retail investors in Hong Kong. Investors should carefully consider the risks involved.

The Offering Memorandum does not constitute a prospectus, notice, circular, brochure or advertisement offering to sell any securities to the public in any jurisdiction, nor is it an invitation to the public to make offers to subscribe for or purchase any securities, nor is it calculated to invite offers by the public to subscribe for or purchase any securities.

The Offering Memorandum must not be regarded as an inducement to subscribe for or purchase any securities of the Company, and no such inducement is intended. No investment decision should be made based on the information contained in the Offering Memorandum.

By Order of the Board
Anton Oilfield Services Group
LUO Lin
Chairman

Hong Kong, 27 July 2021

As at the date of this announcement, the executive Directors are Mr. LUO Lin, Mr. PI Zhifeng and Mr. FAN Yonghong, the non-executive Director is Mr. HUANG Song and the independent non-executive Directors are Mr. ZHANG Yongyi, Mr. ZHU Xiaoping and Mr. WEE Yiau Hin.

IMPORTANT NOTICE

THIS OFFERING IS AVAILABLE ONLY TO INVESTORS WHO ARE OR ARE ACTING FOR THE ACCOUNT OR BENEFIT OF NON-U.S. PERSONS THAT ARE ADDRESSEES OUTSIDE THE UNITED STATES

IMPORTANT: You must read the following before continuing. The following disclaimer applies to the attached document following this page, and you are therefore advised to read this carefully before reading, accessing or making any other use of the attached document. In accessing the attached document, you agree to be bound by the following terms and conditions, including any modifications to them any time you receive any information from us as a result of such access.

NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY SECURITIES IN ANY JURISDICTION WHERE IT IS UNLAWFUL TO DO SO. THE SECURITIES REFERRED TO IN THE ATTACHED DOCUMENT HAVE NOT BEEN, AND WILL NOT BE, REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "U.S. SECURITIES ACT"), OR UNDER ANY SECURITIES LAWS OF ANY STATE OR OTHER JURISDICTION OF THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS (AS DEFINED IN REGULATION S UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED), AND MAY NOT BE OFFERED, SOLD, RESOLD, TRANSFERRED OR DELIVERED, DIRECTLY OR INDIRECTLY, WITHIN THE UNITED STATES EXCEPT PURSUANT TO AN APPLICABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT AND IN COMPLIANCE WITH ANY APPLICABLE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR OTHER JURISDICTION.

The attached document is not a prospectus for the purposes of the European Union's Regulation (EU) 2017/1129.

PROHIBITION OF SALES TO EEA RETAIL INVESTORS – The New Notes (as defined in the attached document) are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area (the "EEA"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU, as amended ("MiFID II"); or (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the "Insurance Distribution Directive"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently, no key information document required by Regulation (EU) No 1286/2014 (as amended, the "PRIIPs Regulation") for offering or selling the New Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the New Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

The attached document is not a prospectus for the purposes of the European Union's Regulation (EU) 2017/1129 as it forms part of domestic law of the United Kingdom by virtue of the European Union (Withdrawal) Act 2018, as amended by the European Union (Withdrawal Agreement) Act 2020 (the "EUWA").

PROHIBITION OF SALES TO UK RETAIL INVESTORS – The New Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the United Kingdom. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law of the United Kingdom by virtue of the EUWA; or (ii) a customer within the meaning of the provisions of the United Kingdom's Financial Services and Markets Act 2000, as amended (the "FSMA") and any rules or regulations made under the FSMA to implement the Insurance Distribution Directive, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law of the United Kingdom by virtue of the EUWA. Consequently no key information document required by Regulation (EU) No 1286/2014 as it forms part of domestic law of the United Kingdom by virtue of the EUWA (the "UK PRIIPs Regulation") for offering or selling the New Notes or otherwise making them available to retail investors in the United Kingdom has been prepared and therefore offering or selling the New Notes or otherwise making them available to any retail investor in the United Kingdom may be unlawful under the UK PRIIPs Regulation.

The communication of the attached document and any other document or materials relating to the issue of the New Notes offered hereby is not being made, and such documents and/or materials have not been approved, by an authorized person for the purposes of section 21 of the FSMA. Accordingly, such documents and/or materials are not being distributed to, and must not be passed on to, the general public in the United Kingdom. The communication of such documents and/or materials as a financial promotion is only being made to those persons in the United Kingdom who have professional experience in matters relating to investments and who fall within the definition of investment professionals (as defined in Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Financial Promotion Order")), or who fall within Article 43(2) of the Financial Promotion Order, or who are any other persons to whom it may otherwise lawfully be made under the Financial Promotion Order (all such persons together being referred to as "relevant persons"). In the United Kingdom, the New Notes offered hereby are only available to, and any investment or investment activity to which the attached document relates will be engaged in only with, relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on the attached document or any of its contents.

Confirmation and your representation: In order to be eligible to view the attached document or make an investment decision with respect to the securities, investors must be outside the United States. By accepting the e-mail and accessing the attached document, you shall be deemed to have represented to us and the Initial Purchasers (as defined below) that (1) you are or are acting for the account or benefit of a non-U.S. person (as defined in Regulation S under the U.S. Securities Act of 1933, as amended (the "U.S. Securities Act")) outside the United States and to the extent you purchase the securities described in the attached offering memorandum, you will be doing so pursuant to Regulation S under the U.S. Securities Act, (2) the electronic mail address that you gave us and to which this e-mail has been delivered is not located in the United States and (3) you consent to delivery of the attached document by electronic transmission.

You are reminded that the attached document has been delivered to you on the basis that you are a person into whose possession the attached document may be lawfully delivered in accordance with the laws of jurisdiction in which you are located and you may not, nor are you authorized to, deliver or disclose the contents of the attached document to any other person.

The materials relating to the offering do not constitute, and may not be used in connection with, an offer or solicitation in any place where offers or solicitations are not permitted by law. If a jurisdiction requires that the offering be made by a licensed broker or dealer and the initial purchasers or any affiliate of the initial purchasers is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by the initial purchasers or such affiliate on behalf of the issuer in such jurisdiction. The attached document has been sent to you in an electronic form. You are reminded that documents transmitted via this medium may be altered or changed during the process of electronic transmission and consequently, none of Nomura International plc and Admiralty Harbour Capital Limited (the "Initial Purchasers"), any person who controls it or any director, officer, employee or agent of it or affiliate of any such person accepts any liability or responsibility whatsoever in respect of any difference between the attached document distributed to you in electronic format and the hard copy version available to you on request from the Initial Purchasers.

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ANTON 安東

Anton Oilfield Services Group 安東油田服務集團

(incorporated in the Cayman Islands with limited liability)

US\$88,097,000 8.75% Senior Notes due 2025
Issue Price 98.534%

Our 8.75% Senior Notes due 2025 (the “New Notes”) will bear interest at the rate of 8.75% per annum and will mature on January 26, 2025. The New Notes will bear interest from July 26, 2021, payable semiannually in arrears on January 26 and July 26 of each year, commencing January 26, 2022.

The New Notes are senior obligations of Anton Oilfield Services Group (the “Company” and the “Issuer”), guaranteed by certain of our existing subsidiaries (the “Subsidiary Guarantors”), other than (1) those organized under the laws of the PRC and (2) certain other subsidiaries specified in “Description of the New Notes.” We refer to the guarantees by the Subsidiary Guarantors as Subsidiary Guarantees.

We have the option to redeem the New Notes in certain circumstances and at certain redemption prices. See “Description of the New Notes — Optional Redemption.” Upon the occurrence of a Change of Control (as defined in the indenture governing the New Notes (the “Indenture”), we must make an offer to repurchase all New Notes outstanding at a purchase price equal to 101% of their principal amount, plus accrued and unpaid interest, if any, to the date of repurchase.

The New Notes will be (1) at least *pari passu* in right of payment against the Company with all other unsecured, unsubordinated Indebtedness (as defined in the Indenture) of the Company (subject to any priority rights of such unsubordinated Indebtedness pursuant to applicable law), (2) senior in right of payment to any existing and future obligations of the Company expressly subordinated in right of payment to the New Notes, (3) effectively subordinated to the secured obligations of the Company to the extent of the value of the collateral securing such obligations, and (4) effectively subordinated to all existing and future obligations of the Non-Guarantor Subsidiaries (as defined below). In addition, applicable law may limit the enforceability of the Subsidiary Guarantees. See the section entitled “Risk Factors — Risks Relating to the Subsidiary Guarantees.”

For a more detailed description of the New Notes, see the section entitled “Description of the New Notes” beginning on page 126.

We are concurrently conducting an exchange offer for our outstanding 2022 Notes (as defined herein) (the “Concurrent Exchange Offer”). Pursuant to the Concurrent Exchange Offer, we expect to issue additional New Notes (the “Exchange Notes”) in an aggregate principal amount of US\$61,903,000. The total size of the New Notes and the Exchange Notes will be US\$150,000,000. Any Exchange Notes issued will have the same terms as and form a single class with the New Notes issued in this offering.

Investing in the New Notes involves risks. Investors should be aware that the New Notes will be guaranteed by Subsidiary Guarantors which do not currently have significant operations and that there are various other risks relating to the New Notes, the Company and its subsidiaries, their business and their jurisdictions of operations which investors should familiarize themselves with before making an investment in the New Notes. See the section entitled “Risk Factors” beginning on page 13 and particularly beginning on page 38 for risks relating to the Subsidiary Guarantees of this offering memorandum.

Application will be made to The Stock Exchange of Hong Kong Limited (the “SEHK”) for the listing of, and permission to deal in, the New Notes (as defined herein) by way of debt issues to professional investors (as defined in Chapter 37 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “Listing Rules)) (“Professional Investors”) only. This offering memorandum is for distribution to Professional Investors only.

The SEHK has not reviewed the contents of this offering memorandum other than to ensure that the prescribed form disclaimer and responsibility statement, and a statement limiting the distribution of this offering memorandum to Professional Investors only, have been reproduced in this offering memorandum. Listing of the New Notes on the SEHK is not to be taken as an indication of the commercial merits or credit quality of the New Notes of the Company or the Subsidiary Guarantors or quality of disclosure in this offering memorandum. Hong Kong Exchanges and Clearing Limited and the SEHK take no responsibility for the contents of this offering memorandum, make no representation as to its accuracy or completeness and expressly disclaim any liability whatsoever for any loss howsoever arising from or in reliance upon the whole or any part of the contents of this offering memorandum.

Notice to Hong Kong investors: The Company and the Subsidiary Guarantors confirm that the New Notes are intended for purchase by Professional Investors only and will be listed on The Stock Exchange of Hong Kong (SEHK) on that basis. Accordingly, the Company and the Subsidiary Guarantors confirm that the New Notes are not appropriate as an investment for retail investors in Hong Kong. Investors should carefully consider the risks involved.

The New Notes and the Subsidiary Guarantees have not been and will not be registered under the United States Securities Act of 1933, as amended (the “U.S. Securities Act”), and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons (as defined in Regulation S under the U.S. Securities Act) except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the U.S. Securities Act. The New Notes are being offered and sold by the Initial Purchasers (as defined herein) only to non-U.S. persons outside the United States in compliance with Regulation S under the U.S. Securities Act (“Regulation S”). For a description of certain restrictions on resale and transfer, see the section entitled “Transfer Restrictions.”

The Company has been assigned a long-term corporate credit rating of B1 with a negative outlook by Moody’s Investors Service (“Moody’s”), and the New Notes are expected to be rated B1 by Moody’s. The ratings do not constitute a recommendation to buy, sell or hold the New Notes and may be subject to suspension, reduction or withdrawal at any time by Moody’s. A suspension, reduction or withdrawal of the rating assigned to the New Notes may adversely affect the market price of the New Notes.

With reference to the Notice on Promoting the Reform of the Filing and Registration System for Issuance of Foreign Debt by Enterprises (國家發展改革委關於推進企業發行外債備案登記制管理改革的通知(發改外資[2015]2044號)) (the “NDRC Notice”) promulgated by National Development and Reform Commission (the “NDRC”) of the PRC on September 14, 2015 which came into effect on the same day, we have registered the issuance of the New Notes with the NDRC and obtained a certificate from the NDRC on May 19, 2021 evidencing such registration. Pursuant to the registration certificate, we will cause relevant information relating to the issue of the New Notes to be reported to the NDRC within ten PRC working days after the issue date of the New Notes.

It is expected that delivery of the New Notes will be made on or about July 26, 2021 through the book-entry facilities of Euroclear Bank SA/NV (“Euroclear”) and Clearstream Banking S.A. (“Clearstream”) against payment therefor in immediately available funds.

Joint Global Coordinators and Joint Bookrunners

Nomura

Admiralty Harbour

The date of this offering memorandum is July 19, 2021

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This offering memorandum does not constitute an offer to sell to, or a solicitation of an offer to buy from, any person in any jurisdiction to whom it is unlawful to make the offer or solicitation in such jurisdiction. Neither the delivery of this offer memorandum nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in our affairs since the date of this offer memorandum or that the information contained in this offering memorandum is correct as of any time after that date.

This offering memorandum is not a prospectus for the purposes of the European Union's Regulation (EU) 2017/1129.

PROHIBITION OF SALES TO EEA RETAIL INVESTORS – The New Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area (the “EEA”). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU, as amended (“MiFID II”); or (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the “Insurance Distribution Directive”), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently no key information document required by Regulation (EU) No 1286/2014 (as amended, the “PRIIPs Regulation”) for offering or selling the New Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the New Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

This offering memorandum is not a prospectus for the purposes of the European Union's Regulation (EU) 2017/1129 as it forms part of domestic law of the United Kingdom by virtue of the European Union (Withdrawal) Act 2018, as amended by the European Union (Withdrawal Agreement) Act 2020 (the “EUWA”).

PROHIBITION OF SALES TO UK RETAIL INVESTORS – The New Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the United Kingdom. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law of the United Kingdom by virtue of the EUWA; or (ii) a customer within the meaning of the provisions of the United Kingdom's Financial Services and Markets Act 2000, as amended (the “FSMA”) and any rules or regulations made under the FSMA to implement the Insurance Distribution Directive, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law of the United Kingdom by virtue of the EUWA. Consequently no key information document required by Regulation (EU) No 1286/2014 as it forms part of domestic law of the United Kingdom by virtue of the EUWA (the “UK PRIIPs Regulation”) for offering or selling the New Notes or otherwise making them available to retail investors in the United Kingdom has been prepared and therefore offering or selling the New Notes or otherwise making them available to any retail investor in the United Kingdom may be unlawful under the UK PRIIPs Regulation.

The communication of this offering memorandum and any other document or materials relating to the issue of the New Notes offered hereby is not being made, and such documents and/or materials have not been approved, by an authorized person for the purposes of section 21 of the FSMA. Accordingly, such documents and/or materials are not being distributed to, and must not be passed on to, the general public in the United Kingdom. The communication of such documents and/or materials as a financial promotion is only being made to those persons in the United Kingdom who have professional experience in matters relating to investments and who fall within the definition of investment professionals (as defined in Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the “Financial Promotion Order”)), or who fall within Article 43(2) of the Financial Promotion Order, or who are any other persons to whom it may otherwise lawfully be made under the Financial Promotion Order (all such persons together being referred to as “relevant persons”). In the United Kingdom, the New Notes

offered hereby are only available to, and any investment or investment activity to which this offering memorandum relates will be engaged in only with, relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on this offering memorandum or any of its contents.

IN CONNECTION WITH THIS OFFERING, ANY OF THE INITIAL PURCHASERS, AS STABILIZING MANAGER, OR ANY PERSON ACTING ON ITS BEHALF, MAY PURCHASE AND SELL THE NEW NOTES IN THE OPEN MARKET. THESE TRANSACTIONS MAY, TO THE EXTENT PERMITTED BY APPLICABLE LAWS AND REGULATIONS, INCLUDE SHORT SALES, STABILIZING TRANSACTIONS AND PURCHASES TO COVER POSITIONS CREATED BY SHORT SALES. THESE ACTIVITIES MAY STABILIZE, MAINTAIN OR OTHERWISE AFFECT THE MARKET PRICE OF THE NEW NOTES. AS A RESULT, THE PRICE OF THE NEW NOTES MAY BE HIGHER THAN THE PRICE THAT OTHERWISE MIGHT EXIST IN THE OPEN MARKET. IF THESE ACTIVITIES ARE COMMENCED, THEY MAY BE DISCONTINUED AT ANY TIME AND MUST IN ANY EVENT BE BROUGHT TO AN END AFTER A LIMITED TIME. THESE ACTIVITIES WILL BE UNDERTAKEN SOLELY FOR THE ACCOUNT OF THE STABILIZING MANAGER, AND NOT FOR US OR ON OUR BEHALF.

We, having made all reasonable inquiries, confirm that: (i) this offering memorandum contains all information with respect to us, our subsidiaries and affiliates referred to in this offering memorandum, the New Notes and the Subsidiary Guarantees that is material to the issue of the New Notes; (ii) the statements contained in this offering memorandum relating to us and our subsidiaries are in every material respect true and accurate and not misleading; (iii) the opinions and intentions expressed in this offering memorandum with regard to us and our subsidiaries are honestly held, have been reached after considering all relevant circumstances and are based on reasonable assumptions; (iv) there are no other material facts in relation to us, our subsidiaries, the New Notes and the Subsidiary Guarantees, the omission of which would, in the context of the issue of the New Notes, make this offering memorandum, as a whole, misleading; and (v) we have made all reasonable enquiries to ascertain such facts and to verify the accuracy of all such information and statements. We accept responsibility accordingly.

This offering memorandum is highly confidential. We are providing it solely for the purpose of enabling you to consider a purchase of the New Notes. You should read this offering memorandum before making a decision whether to purchase the New Notes. You must not use this offering memorandum for any other purpose, or disclose any information in this offering memorandum to any other person.

We have prepared this offering memorandum, and we are solely responsible for its contents. This offering memorandum includes particulars given in compliance with the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, for the purpose of giving information with regard to the Company and the Subsidiary Guarantors. The Company and the Subsidiary Guarantors accept full responsibility for the accuracy of the information contained in this document and confirms, having made all reasonable enquiries, that to the best of its knowledge and belief there are no other facts the omission of which would make any statement herein misleading.

You are responsible for making your own examination of us and your own assessment of the merits and risks of investing in the New Notes. By purchasing the New Notes, you will be deemed to have acknowledged that you have made certain acknowledgements, representations and agreements as set forth under the section entitled “Transfer Restrictions” below.

No representation or warranty, express or implied, is made by the Initial Purchasers, Citicorp International Limited (the “Trustee”), Citibank, N.A., London Branch (the “Paying and Transfer Agent” and the “Registrar”) or any of their respective affiliates, directors or advisors as to the accuracy or completeness of the information set forth herein, and nothing contained in this offering memorandum is, or should be relied upon as, a promise or representation, whether as to the past or the future. None of the Initial Purchasers, the Trustee, the Paying and Transfer Agent, the Registrar or any of their respective affiliates, directors or advisors has independently verified any of the information contained in this offering memorandum. They can give no assurance that this information is accurate, truthful or complete, and, to the fullest extent permitted by law, none of them accepts any responsibility for the contents of this offering

memorandum. This offering memorandum is not intended to provide the basis of any credit or other evaluation nor should it be considered as a recommendation by the Company, the Subsidiary Guarantors, the Initial Purchasers, the Trustee, the Paying and Transfer Agent or the Registrar that any recipient of this offering memorandum should purchase the New Notes.

Each person receiving this offering memorandum acknowledges that: (i) such person has been afforded an opportunity to request from us and to review, and has received, all additional information considered by it to be necessary to verify the accuracy of, or to supplement, the information contained herein; (ii) such person has not relied on the Initial Purchasers or any person affiliated with the Initial Purchasers in connection with any investigation of the accuracy of such information or its decision; and (iii) no person has been authorized to give any information or to make any representation concerning us, our subsidiaries and affiliates, the New Notes or the Subsidiary Guarantees (other than as contained herein and information given by our duly authorized officers and employees in connection with investors' examination of our company and the terms of the offering of the New Notes) and, if given or made, any such other information or representation should not be relied upon as having been authorized by us or the Initial Purchasers.

The New Notes and the Subsidiary Guarantees have not been approved or disapproved by the United States Securities and Exchange Commission ("SEC"), any state securities commission in the United States or any other United States regulatory authority, nor have any of the foregoing authorities passed upon or endorsed the merits of the offering or the accuracy or adequacy of this offering memorandum. Any representation to the contrary is a criminal offense in the United States.

We are not, and the Initial Purchasers are not, making an offer to sell the New Notes, including the Subsidiary Guarantees, in any jurisdiction except where an offer or sale is permitted. The distribution of this offering memorandum and the offering of the New Notes, including the Subsidiary Guarantees, may in certain jurisdictions be restricted by law. Persons into whose possession this offering memorandum comes are required by us and the Initial Purchasers to inform themselves about and to observe any such restrictions. For a description of the restrictions on the offer and distribution of the New Notes, including the Subsidiary Guarantees, and distribution of this offering memorandum, see the section entitled "Transfer Restrictions" below.

This offering memorandum summarizes certain material documents and other information, and we refer you to them for a more complete understanding of what we discuss in this offering memorandum. In making an investment decision, you must rely on your own examination of us and the terms of the offering of the New Notes, including the merits and risks involved. We are not making any representation to you regarding the legality of an investment in the New Notes by you under any legal, investment, taxation or similar laws or regulations. You should not consider any information in this offering memorandum to be legal, business or tax advice. You should consult your own professional advisors for legal, business, tax and other advice regarding an investment in the New Notes.

We expressly reserve the absolute right, at our sole discretion, to withdraw the offering of the New Notes at any time, and the Initial Purchasers reserve the right to reject any commitment to subscribe for the New Notes in whole or in part and to allot to any prospective purchaser less than the full amount of the New Notes sought by such purchaser. The Initial Purchasers or certain of their respective affiliates may acquire for their own account a portion of the New Notes.

CERTAIN DEFINITIONS AND CONVENTIONS

We have prepared this offering memorandum using a number of conventions, which you should consider when reading the information contained herein. When we use the terms “we,” “us,” “our” and words of similar import, we are referring to Anton Oilfield Services Group itself or to Anton Oilfield Services Group and its subsidiaries, as the context requires. When we use the term the “Company,” we are referring to Anton Oilfield Services Group itself and when we use the term the “Group,” we are referring to Anton Oilfield Services Group and its subsidiaries.

Market data and certain industry forecasts and statistics in this offering memorandum have been obtained from both public and private sources, including market research, publicly available information and industry publications. Although we believe this information to be reliable, it has not been independently verified by us or the Initial Purchasers or their respective directors and advisers, and neither us, the Initial Purchasers nor our or their respective directors and advisers make any representation as to the accuracy or completeness of that information. In addition, third-party information providers may have obtained information from market participants and such information may not have been independently verified. This offering memorandum summarizes certain documents and other information, and investors should refer to them for a more complete understanding of what is discussed in those documents. You should not unduly rely on such market data, industry forecast and PRC and natural gas industry and energy market statistics.

The information and statistics set forth in this offering memorandum relating to the PRC and the natural gas industry and energy market in the PRC were taken or derived from various government and private publications. The Initial Purchasers do not make any representation as to the accuracy of such information and statistics, which may not be consistent with other information or statistics compiled within or outside the PRC. Due to possibly inconsistent collection methods and other problems, the information and statistics herein may be inaccurate and should not be unduly relied upon.

We record and publish our financial information in Renminbi. Unless otherwise stated in this offering memorandum, all translations from Renminbi into U.S. dollars were made at the rate of RMB6.5250 to US\$1.00, the noon buying rate in New York City for cable transfers payable in Renminbi as certified for customs purposes by the Federal Reserve Bank of New York on December 31, 2020, and all translations from Hong Kong dollar amounts to U.S. dollars were made at the rate of HK\$7.7534 to US\$1.00, the noon buying rate in New York City for cable transfers payable in Hong Kong dollars as certified for customs purposes by the Federal Reserve Bank of New York on December 31, 2020. All such translations in this offering memorandum are provided solely for your convenience and no representation is made that the Renminbi amounts referred to herein have been, could have been or could be converted into U.S. dollars and HK dollars, or vice versa, at any particular rate or at all. For further information relating to the exchange rates, see “Exchange Rate Information.”

In this offering memorandum, references to “US\$” and “U.S. dollars” are to United States dollars, the official currency of the United States of America (the “United States” or “U.S.”); references to “HK\$” are to Hong Kong dollars, the official currency of the Hong Kong Special Administrative Region of the PRC (“Hong Kong” or “HK”); references to “RMB” or “Renminbi” are to Renminbi, the official currency of the People’s Republic of China; references to “Macau” are to the Macau Special Administrative Region of the PRC; references to the “PRC government” or “State” are to the central government of the PRC, including all political subdivisions (including provincial, municipal and other regional or local government entities) and instrumentalities thereof, or, where the context requires, any of them; and references to the “PRC” and “China” are to the People’s Republic of China and, for the purposes of this offering memorandum, do not include Hong Kong, Macau or Taiwan.

Unless the context otherwise requires, references to “2018,” “2019” and “2020” in this offering memorandum are to our financial years ended December 31, 2018, 2019 and 2020.

“Board of Directors” or “Board” means the board of Directors of the Company.

“CAGR” means Compound Annual Growth Rate.

“CNOOC” means China National Offshore Oil Corp. (中國海洋石油總公司).

“CNPC” means China National Petroleum Corporation (中國石油天然氣集團公司).

“Connected person” and “controlling shareholder” each has the meaning ascribed to it in the Listing Rules (as defined below).

“Corporate Governance Asia” means a quarterly journal on corporate governance.

“Director(s)” mean the director(s) of the Company.

“EIT Law” means the Enterprise Income Tax Law of the PRC, which came into effect on January 1, 2008.

“Listing Rules” means the Rules Governing the Listing of Securities on the SEHK, as amended, supplemented or otherwise modified from time to time.

“MOFCOM” means the PRC Ministry of Commerce (中國商務部).

“NDRC” means the National Development and Reform Commission (中國人民共和國國家發展和改革委員會).

“NDRC Notice” means the Notice On Promoting the Reform of Filing and Registration System for Issuance of Foreign Debt by Enterprises (國家發展改革委關於推進企業發行外債備案登記制管理改革的通知).

“PBOC” means the People’s Bank of China (中國人民銀行), the central bank of the PRC.

“SAFE” means the PRC State Administration of Foreign Exchange (中國國家外匯管理局), the PRC government agency responsible for matters relating to foreign exchange administration.

“Chengdu Xiangtou Group” means Chengdu Xiangcheng Investment Group Co., Limited (成都香城投資集團有限公司).

“SEHK” means The Stock Exchange of Hong Kong Limited.

“SFO” means the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time.

“Shaanxi Yanchang Petroleum” means Shaanxi Yanchang Petroleum (Group) Co., Ltd. (陝西延長石油(集團)有限責任公司).

“Sinopec” means China Petrochemical Corporation (中國石油化工集團公司).

“2020 Notes” means the 9.75% senior notes due 2020 issued by us on December 5, 2017.

“2022 Notes” means the 7.50% senior notes due 2022 issued by us on December 2, 2019.

In this offering memorandum, where information has been presented in thousands or millions of units, amounts may have been rounded up or down. Accordingly, totals of columns or rows of numbers in tables may not be equal to the apparent total of the individual items and actual numbers may differ from those contained herein due to rounding.

The English names of the PRC nationals, entities, departments, facilities, laws, regulations, certificates, titles and the like are translations of their Chinese names and are included for identification purposes only. In the event of any inconsistency, the Chinese name prevails.

FORWARD-LOOKING STATEMENTS

This offering memorandum includes “forward-looking statements.” All statements other than statements of historical fact contained in this offering memorandum, including, without limitation, those regarding our future financial position and results of operations, strategies, plans, objectives, goals and targets, future developments in the markets where we participate or are seeking to participate, and any statements preceded by, followed by or that include the words “believe,” “expect,” “aim,” “intend,” “will,” “may,” “anticipate,” “seek,” “should,” “estimate” or similar expressions or the negative thereof, are forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties and other factors, some of which are beyond our control, which may cause our actual results, performance or achievements, or industry results to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These forward-looking statements are based on numerous assumptions regarding our present and future business strategies and the environment in which we will operate in the future. Important factors that could cause our actual results, performance or achievements to differ materially from those in the forward-looking statements include, among others, the following:

- the industries in which we operate;
- industry risks;
- our financial condition;
- abundant supply of natural gas;
- fluctuations in the price of natural gas;
- the achievement of our expansion plans;
- our ability to maintain our established market position;
- availability and costs of bank loans and other forms of financing;
- demand for natural gas over alternative fuels;
- changes in competitive conditions and our ability to compete under those conditions;
- regulatory restrictions to the pricing of our products;
- the regulatory environment of our industry in general; and
- changes in political, economic, legal and social conditions in China, including the specific policies of the PRC central and local governments affecting the markets where we operate.

Additional factors that could cause actual results, performance or achievements to differ materially include, but are not limited to, those discussed under “Risk Factors” and elsewhere in this offering memorandum. We caution you not to place undue reliance on these forward-looking statements which reflect our management’s view only as of the date of this offering memorandum. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this offering memorandum might not occur.

ENFORCEMENT OF CIVIL LIABILITIES

We are an exempted company incorporated in the Cayman Islands with limited liability, and each Subsidiary Guarantor is also incorporated outside the United States. The Cayman Islands has a different body of securities laws from the United States and protections for investors may differ.

All of our assets and the assets of the Subsidiary Guarantors are located outside the United States. In addition, a majority of our directors and officers and the Subsidiary Guarantors' directors and officers are nationals or residents of countries other than the United States (principally in the PRC), and all or a substantial portion of such persons' assets are located or may be located, as the case may be, outside the United States. As a result, it may be difficult for investors to effect service of process within the United States upon us, any of the Subsidiary Guarantors or such persons or to enforce against us or any of the Subsidiary Guarantors or such persons judgments obtained in United States courts, including judgments predicated upon the civil liability provisions of the securities laws of the United States or any state thereof.

We and each of the Subsidiary Guarantors expect to appoint Cogency Global Inc. as our and their respective agent to receive service of process with respect to any action brought against us or the Subsidiary Guarantors in any state or the United States federal court located in the Borough of Manhattan, The City of New York in connection with any suit, action or proceeding arising out of, or relating to, the New Notes, any Subsidiary Guarantee, or the Indenture governing the New Notes and the Subsidiary Guarantees.

We have been advised by our Cayman Islands legal advisers, Maples and Calder (Hong Kong) LLP, that, as a general matter, a judgment obtained in a foreign court will be recognised and enforced in the courts of the Cayman Islands at common law without any re-examination of the merits of the underlying dispute, by an action commenced on the foreign judgment debt in the Grand Court of the Cayman Islands, where the judgment:

- (a) is given by a foreign court of competent jurisdiction;
- (b) imposes on the judgment debtor a liability to pay a liquidated sum for which the judgment has been given;
- (c) is final;
- (d) is not in respect of taxes, a fine or a penalty; and
- (e) was not obtained in a manner and is not of a kind the enforcement of which is contrary to natural justice or the public policy of the Cayman Islands.

We have been advised by our British Virgin Islands legal advisers, Maples and Calder (Hong Kong) LLP, that, as a general matter, in the case of a final and conclusive judgment obtained against the Issuer in a court of a foreign country (with which no reciprocal arrangements with the British Virgin Islands exist or extend) for a definite sum, may be registered and enforced as a judgment of the British Virgin Islands court if application is made for registration of the judgment within twelve months or such longer period as the court may allow, and if the British Virgin Islands court considers it just and convenient that the judgment be so enforced. Alternatively, the judgment may be treated as a cause of action in itself so that no retrial of the issues would be necessary. In either case, it will be necessary that in respect of the foreign judgment:

- (a) the foreign court issuing the judgment had jurisdiction in the matter and the judgment debtor either submitted to such jurisdiction or was resident or carrying on business within such jurisdiction and was duly served with process;
- (b) the judgment given by the foreign court was not in respect of penalties, taxes, fines or similar fiscal or revenue obligations of the Company;

- (c) in obtaining judgment there was no fraud on the part of the person in whose favor judgment was given or on the part of the foreign court;
- (d) recognition or enforcement of the judgment in the British Virgin Islands would not be contrary to public policy;
- (e) the proceedings pursuant to which judgment was obtained were not contrary to natural justice; and
- (f) the judgment given by the foreign court is not the subject of an appeal.

Hong Kong has no arrangement for the reciprocal enforcement of judgments with the United States. However, under Hong Kong common law, a foreign judgment (including one from a court in the United States predicated upon U.S. federal or state securities laws) may be enforced in Hong Kong by bringing an action in a Hong Kong court, and then seeking summary or default judgment on the strength of the foreign judgment, provided that the foreign judgment is for a debt or definite sum of money and is final and conclusive on the merits. In addition, the Hong Kong courts may refuse to recognize or enforce a foreign judgment if such judgment:

- (i) was obtained by fraud;
- (ii) was rendered by a foreign court that lacked the appropriate jurisdiction at the time (as determined by Hong Kong jurisdictional rules);
- (iii) is contrary to public policy or natural justice in Hong Kong;
- (iv) is based on foreign penal, revenue or other public law; or
- (v) falls within Section 3(1) of the Foreign Judgments (Restriction on Recognition and Enforcement) Ordinance (Chapter 46 of the Laws of Hong Kong).

Further, we have been advised by our PRC legal advisers, Tian Yuan Law Firm, that there is uncertainty as to whether the courts of China would (i) enforce judgments of U.S. courts obtained against us, our directors or officers, any Subsidiary Guarantor or its directors or officers predicated upon the civil liability provisions of the U.S. federal or state securities laws or (ii) entertain original actions brought in China against us, our directors or officers, any Subsidiary Guarantor or its directors or officers predicated upon the U.S. federal or state securities laws.

GLOSSARY OF TECHNICAL TERMS

This glossary of technical terms contains explanations of certain terms and definitions used in this offering memorandum. The terms and their meanings may not correspond to standard industry meaning or usage of those terms.

“acidizing”	The pumping of acid into the well bore to break down seismic formation near the well bore, a procedure to enhance productivity by increasing the effective well radius.
“API”	American Petroleum Institute.
“bcm”	billion cubic meters.
“btu”	British thermal unit.
“casing”	A steel pipe that is screwed together and lowered into the well bore after drilling; the casing, along with the cement, provide support to the well bore against surrounding geological pressure so as to maintain well bore stability.
“cementing”	To prepare and pump cement into place in a well bore. This procedure is used to reinforce and seal an oil and gas well.
“directional drilling”	The technology for drilling inclined and horizontal wells.
“down-hole”	Pertaining to or underground in the well bore (as opposed to being on the surface).
“drill bit”	The tool attached to the end of the drill string which cuts and bores its way through the rock formations at the bottom of the well.
“drill collar”	A thick-walled seamless, tube made of solid bars of plain carbon steel or reinforced alloy steel with threads in both ends, which connects the drill pipe to the drill bit.
“drill pipe”	A seamless steel pipe made of advanced alloy steel screwed together by joints which connects the rotary system on the rig to the drill collar and drill bit downwell. It is used for deepening the well bore and transmitting the torque, and it forms a channel for the circulation of drilling fluids.
“drill string”	The connected column of drill pipe, drill collar and drill bit, which is driven by the rotary system of a rig.
“drilling fluids”	Fluids circulated downwell during drilling to cool and lubricate the drill bit, remove well cuttings, maintain downwell pressure and preserve the integrity of the well bore. Drilling fluids can be water, oil, or gas-based, with various additives. Synonymous with “drilling mud” in general usage.

“field”	A general term in geology for all discoveries in a specified (continued) oil producing area. The oil producing area is a geological unit subject to single or multiple geological factors.
“fracturing and acidizing”	The acid treatment process of squeezing acid into the stratum under pressure sufficient to form cracks by fracturing the stratum.
“HHP”	hydraulic horsepower.
“horizontal well”	A well drilled by deviation drilling to achieve an inclination typically greater than 70 degrees. Such wells are drilled into reservoir formations to allow for maximum oil and gas recovery and productivity.
“HTHP” or “high-temperature and high-pressure”	High-temperature and high-pressure downwell conditions, which typically includes temperatures greater than 200°C and pressure greater than 10,000 psi; HTHP conditions make drilling more difficult.
“LWD”	“Logging While Drilling.” Improvement of MWD; in addition to the functions of MWD, it can also conduct well logging and identify the nature of the formation.
“mmbbls”	million barrels.
“mmboe”	million barrels of oil equivalent.
“MWD”	“Measurement While Drilling.” The technique and equipment for measuring the inclination and location of the wellbores, without suspending the drilling process.
“oil and gas production”	The process of extracting oil and gas from underground to the surface using a series of methods.
“oil production”	The process of extracting oil from underground to the surface using a series of methods.
“psi”	Pounds per square inch, used to measure air or liquid pressure.
“reservoir”	Porous rock layers or formations, such as sandstone, limestone and dolomite, that can store and allows percolation of oil and natural gas.
“sand control”	Methods or techniques to prevent the migration of reservoir sand into the well bore, areas near the well bore, or the down-hole pumping equipment during oil and gas production.
“shale gas”	Shale gas is natural gas produced from shale rock. Vast quantities of gas are contained within shale rock in North America, which have only been significantly exploited in recent times as extraction technology has improved. Substantial quantities of shale gas are also thought to exist in Europe and China.

“sidetracking”	A technology for conducting inclined well drilling in vertical wells or completed wells; it is used to stimulate old wells and increase production.
“tcm”	trillion cubic meters.
“tight gas”	A form of natural gas in underground reservoirs with low permeability due to the fine-grained nature of the sediments, compaction, or infilling of pore spaces by carbonate or silicate cements.
“well completion”	Services and installation of equipment that are necessary to prepare a well for production, including casing and well treatment, such as fracturing and acidizing.
“well logging”	Gathering, analysis and interpretation of data obtained down-hole with special tools and techniques regarding geological attributes and hydrocarbon potential of an area.
“well bore” or “wellbore”	A well hole.
“workover”	Any work on a completed well designed to maintain, restore or improve production on a producing petroleum reservoir.

SUMMARY

This summary does not contain all the information that may be important to you in deciding to invest in the New Notes. You should read the entire offering memorandum, including the section entitled “Risk Factors” and our consolidated financial information and related notes thereto, before making an investment decision.

Overview

We are a leading, independent and integrated oilfield service provider with a global footprint, covering a number of major oil and gas basins in the world. We are an innovative company with a full suite of products and integrated solutions throughout the entire oil and gas development process. Our products and services encompass the full spectrum of oil and gas development stages and meet the diverse needs of our customers to maximize the value of their oil and gas assets. Our products and services are not only targeted solutions for different stages of oil and gas development, but also expert consulting services and integrated solutions.

We are committed to deepening our engagements within the global emerging markets of oil and gas development. We operate in more than 30 countries and regions, including China, the Middle East, Africa, Central China, Southeast Asia and Latin America. This truly global network provides us the agility to support and fulfill the service needs of our customers across the globe.

We have strategically expanded our operations into overseas markets, including the Middle East and Central Asia and Africa, by implementing the “Belt and Road” initiative. In 2018, 2019 and 2020, our overseas revenue accounted for 63.1%, 53.1% and 40.6%, respectively, of our total revenue. In the domestic market, our operations in China span across China’s major onshore oil and gas fields, including, in particular, the Tarim Basin, the Sichuan Basin and the Erdos Basin, three major basins in China. In 2018, 2019 and 2020, our domestic revenue accounted for 36.9%, 46.9% and 59.4%, respectively, of our total revenue.

We focus on the provision of oil and gas field development services to our customers. We engage in three business clusters, namely, drilling technology, well completion and oil production services. Our drilling technology cluster includes engineering technical services and products during the drilling stage to solve problems encountered in directional drilling, drilling assessment, drilling acceleration, enhanced reservoir contact and integrated drilling. Our well completion cluster includes well completion and stimulation services from integrated solutions for well cementing and completion, production well completion, equipment, tools and materials. Our oil production services cluster primarily focuses on workover services and production operation management services including integrated oilfield management and management and maintenance services for oilfield ground stations. Revenue from our drilling technology cluster contributed approximately 45.6%, 45.2% and 42.2%, respectively, of the total revenue in 2018, 2019 and 2020; revenue from our well completion cluster contributed approximately 25.3%, 23.3% and 24.3%, respectively, of the total revenue for the same periods; and revenue from our oil production cluster contributed approximately 29.1%, 31.5% and 33.5%, respectively, of the total revenue for the same periods.

We have strategically cooperated with Chinese oil and gas companies, Chinese state-owned oilfield service companies and domestic and international oilfield service providers. Our cooperation and strategic alliances with Chinese national oil companies and Chinese state-owned oilfield service companies have enabled us to enhance our market position and our cooperation and strategic alliances with domestic and international oilfield service companies have enabled us to enhance our technical and service capabilities. In December 2020, we signed an investment agreement with Chengdu Xiangtou Group, the largest state owned investment group in Xindu District, Chengdu, and introducing Xiangtou as the Group’s strategic partner. Xiangtou has invested RMB70.0 million in establishing a joint venture with the Group where both parties can combine their comparative advantages and grow the Group’s financial leasing business.

Our business depends largely on the level of development activity and corresponding capital spending of oil and natural gas companies. These activity and spending levels are strongly influenced by the current and expected oil and natural gas prices. In 2020, under the dual influence from COVID-19 and plunge in global oil price, our businesses faced unprecedented challenges. In the domestic markets, clients significantly reduced the rates of service fulfillment. Nonetheless, we benefited from the effective controlling measures implemented by the PRC government and seized the opportunities to develop our businesses in natural gas and unconventional resources. In the oversea markets, we faced steep travel restrictions and quarantine procedures, forcing us to suspend many large-scale, asset heavy projects. Nevertheless, our oilfield management business model demonstrated its resilience and provided “welcome” cushion against the full-blown impact of the COVID-19 pandemic on our overseas business. Our integrated oilfield management contract at the Majnoon oilfield in Iraq was renewed and our oilfield management project in Chad, West Africa was successfully commissioned. In 2018, 2019 and 2020, we recorded revenue of RMB2,935.9 million, RMB3,589.5 million and RMB3,087.7 million (US\$473.2 million), separately.

Competitive Strengths

We believe the following competitive strengths contribute to our success and distinguish us from our competitors:

- strong market position in “Belt and Road” countries, with increasing presence;
- integrated oilfield management service provider with advantageous position in the industry chain;
- “asset-light” business model requiring relatively low capital expenditures;
- strong technical and comprehensive service capabilities at a competitive cost;
- strategic alliances;
- disciplined financial and cost management policies;
- well-positioned in the fast-growing natural gas industry in emerging global markets and China;
- prudent liability management; and
- experienced and stable management team.

Business Strategies

Our strategic objective is to become a leading global oilfield service provider in the long run. To achieve such objective, we plan to pursue the following business strategies:

- continue to align our geographic focus with the central government’s “Belt and Road” initiatives;
- continue to solidify market position in the domestic natural gas market;
- continue to implement the integrated service model; and
- continue to cooperate with international and national oil companies as well as independent oilfield service companies and international and other oilfield service companies.

Recent Developments

Strategic Guideline for 2021

On January 26, 2021, we announced the strategic guideline for our development in 2021, reiterating our goal to become the most influential comprehensive integrated oilfield technical services company in the global emerging market for oil and gas development. In 2021, we plan to seize the opportunities offered by the national government's "14th Five-Year Plan" to focus on the domestic market of natural gas development, continue to actively seek cooperation opportunities with more international oil companies in our key overseas market like Iraq and further identify and seize market opportunities arising in global emerging markets.

Resolutions at the Annual General Meeting

At our Annual General Meeting held on May 25, 2021, our shareholders duly passed the resolutions to, among other thing, (i) give a general mandate to our Directors to repurchase shares not exceeding 10% of our issued share capital; (ii) give a general mandate to our Directors to allot, issue and deal with additional shares not exceeding 20% of our issued share capital; and (iii) re-elect Mr. Pi Zhifeng as an executive director, Mr. Huang Song as a non-executive director, Mr. Zhang Yongyi as an independent non-executive director, and Mr. Zhu Xiaoping as an independent non-executive director.

Renewal of the Integrated Oilfield Management Services Project

On June 30, 2021, we entered into a contract with Basra Oil Company to successfully renew our integrated oilfield management services project for a large oilfield in southern Iraq. We will continue to provide integrated comprehensive management services, and expand our service scope to include management of third parties in various areas of the project. The new contract became effective on July 1, 2021.

General Information

Our Company was incorporated in the Cayman Islands on August 3, 2007 as an exempted company with limited liability with registration number 192682. Our registered office is located at PO Box 309, Uglan House, Grand Cayman, KY1-1104, Cayman Islands. Our principal place of business in the PRC and headquarters is located at No. 8, Pingcui West Road, Donghuqu, Chaoyang District, Beijing 100102, China. Our principal place of business in Hong Kong is Level 54, Hopewell Centre, No. 183 Queen's Road East, Wanchai, Hong Kong. Our website is www.antonoil.com. Information contained on our website does not constitute a part of this offering memorandum.

THE OFFERING

The following is a brief summary of the terms of the offering and is qualified in its entirety by the remainder of this offering memorandum. Terms used in this summary and not otherwise defined shall have the meanings given to them in the section entitled “Description of the New Notes.”

Issuer	Anton Oilfield Services Group.
New Notes Offered	US\$88,097,000 aggregate principal amount of 8.75% Senior Notes due 2025 (the “New Notes”).
Offering Price	98.534% of the principal amount of the Notes.
Maturity Date.....	January 26, 2025.
Interest.....	The New Notes will bear interest from and including July 26, 2021 at the rate of 8.75% per annum, payable semi-annually in arrears.
Interest Payment Dates	January 26 and July 26 each year, commencing January 26, 2022.
Ranking of the New Notes.....	The New Notes are: <ul style="list-style-type: none">• general obligations of the Company;• senior in right of payment to any existing and future obligations of the Company expressly subordinated in right of payment to the New Notes;• at least <i>pari passu</i> in right of payment with all other unsecured, unsubordinated Indebtedness of the Company (subject to any priority rights of such unsecured, unsubordinated Indebtedness pursuant to applicable law);• guaranteed by the Subsidiary Guarantors on a senior basis, subject to the limitations described in “Description of the New Notes — The Subsidiary Guarantees” and in “Risk Factors — Risks Relating to the Subsidiary Guarantees;”• effectively subordinated to all existing and future obligations of the Non-Guarantor Subsidiaries; and• effectively subordinated to all existing and future secured obligations of the Company to the extent of the value of the collateral securing such obligations.

Subsidiary Guarantors.....

Each of the Subsidiary Guarantors will jointly and severally guarantee the due and punctual payment of the principal of, premium, if any, and interest on, and all other amounts payable under, the New Notes. The initial Subsidiary Guarantors that will execute the Indenture on the Original Issue Date will consist of Anton Oilfield Services Company Limited and T&C International Trading Ltd. The Restricted Subsidiaries organized under the laws of the PRC (the “PRC Non-Guarantor Subsidiaries”) and other Restricted Subsidiaries that are not the initial Subsidiary Guarantors (collectively, the “Other Non-Guarantor Subsidiaries”) are hereinafter referred to as the Existing Non-Guarantor Subsidiaries. Certain initial Subsidiary Guarantors will not have significant operations or assets.

None of the existing PRC Non-Guarantor Subsidiaries or any future Restricted Subsidiaries organized under the laws of the PRC will provide a Subsidiary Guarantee at any time in the future.

A Subsidiary Guarantee given by a Subsidiary Guarantor may be released in certain circumstances. See “Description of the New Notes — The Subsidiary Guarantees — Release of the Subsidiary Guarantees.”

The Company will cause each of its future Subsidiaries (other than Subsidiaries organized under the laws of the PRC, Exempted Subsidiaries and Listed Subsidiaries), as soon as practicable after it becomes a Restricted Subsidiary or ceases to be an Exempted Subsidiary or a Listed Subsidiary, to execute and deliver to the Trustee a supplemental indenture to the Indenture pursuant to which such Restricted Subsidiary will guarantee the payment of the New Notes. Notwithstanding the foregoing sentence, the Company may elect to have any future Restricted Subsidiary (and its Restricted Subsidiaries) organized outside the PRC other than Exempted Subsidiaries or Listed Subsidiaries not provide a Subsidiary Guarantee at the time such entity becomes a Restricted Subsidiary or ceases to be an Exempted Subsidiary or a Listed Subsidiary (the “New Non-Guarantor Subsidiary” and, together with the Existing Non-Guarantor Subsidiaries, the “Non-Guarantor Subsidiaries”); provided that, after giving effect to the amount of Consolidated Assets of such Restricted Subsidiary, the Consolidated Assets of all Restricted Subsidiaries organized outside the PRC (other than Exempted Subsidiaries or Listed Subsidiaries) that are not Subsidiary Guarantors do not exceed 20% of the Total Assets of the Company.

Ranking of the Subsidiary Guarantees.....	<p>The Subsidiary Guarantee of each Subsidiary Guarantor:</p> <ul style="list-style-type: none"> • is a general obligation of such Subsidiary Guarantor; • is effectively subordinated to the secured obligations of such Subsidiary Guarantor, to the extent of the value of the assets serving as security therefor; • is senior in right of payment to all future obligations of such Subsidiary Guarantor expressly subordinated in right of payment to such Subsidiary Guarantee; • ranks at least <i>pari passu</i> with all other unsecured, unsubordinated Indebtedness of such Subsidiary Guarantor (subject to any priority rights of such unsecured, unsubordinated Indebtedness pursuant to applicable law); and • is effectively subordinated to all existing and future obligations of the Non-Guarantor Subsidiaries.
Use of Proceeds	<p>The Company plans to use the net proceeds from this offering primarily to optimize its debt structure and refinance existing indebtedness and for general corporate purposes.</p> <p>Pending application of the net proceeds of this offering, the Company intends to invest such net proceeds in “Temporary Cash Investments” as defined under “Description of the New Notes.”</p>
Optional Redemption	<p>At any time and from time to time on or after January 26, 2024, the Company may at its option redeem the New Notes, in whole or in part, at a redemption price equal to 104.375% of the principal amount of the New Notes redeemed, plus accrued and unpaid interest, if any, to (but not including) the redemption date.</p> <p>At any time prior to January 26, 2024, the Company may at its option redeem the New Notes, in whole but not in part, at a redemption price equal to 100% of the principal amount of the New Notes redeemed plus the Applicable Premium as of, and accrued and unpaid interest, if any, to (but not including) the redemption date.</p> <p>In addition, at any time and from time to time prior to January 26, 2024, the Company may redeem up to 35% of the aggregate principal amount of the New Notes with the Net Cash Proceeds of one or more sales of Common Stock of the Company in an Equity Offering at a redemption price of 108.75% of the principal amount of the New Notes redeemed, plus accrued and unpaid interest, if any, to (but not including) the redemption date.</p>
Repurchase of New Notes upon a Change of Control Triggering Event.....	<p>Not later than 30 days following a Change of Control Triggering Event, the Company will make an Offer to Purchase all outstanding New Notes at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to (but not including) the Offer to Purchase Payment Date.</p>

Additional Amounts All payments of principal of, and premium (if any) and interest on the New Notes or under the Subsidiary Guarantees will be made without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature imposed or levied by or within any jurisdiction in which the Company, a Surviving Person or an applicable Subsidiary Guarantor is organized or resident for tax purposes (or any political subdivision or taxing authority thereof or therein) or any jurisdiction through which payment is made by or on behalf of the Company, a Surviving Person or the applicable Subsidiary Guarantor, as the case may be (or any political subdivision or taxing authority thereof or therein), unless such withholding or deduction is required by law or by regulation or governmental policy having the force of law. In the event that any such withholding or deduction is so required, the Company, a Surviving Person or the applicable Subsidiary Guarantor, as the case may be, will pay such Additional Amounts as will result in receipt by the Holder of each New Note of such amounts payable under the New Notes or the Subsidiary Guarantees, as the case may be, as would have been received by such Holder had no such withholding or deduction been required. See “Description of the New Notes — Additional Amounts.”

Redemption for Taxation Reasons... Subject to certain exceptions and as more fully described herein, the New Notes may be redeemed, at the option of the Company or a Surviving Person with respect to the Company, as a whole but not in part, upon giving not less than 30 days’ nor more than 60 days’ notice to the Holders (which notice shall be irrevocable) and the Trustee, at a redemption price equal to 100% of the principal amount thereof, together with accrued and unpaid interest (including any Additional Amounts), if any, to the Tax Redemption Date, if the Company, a Surviving Person or a Subsidiary Guarantor would be obligated to pay certain Additional Amounts as a result of certain changes in specified tax laws or other circumstances. See “Description of the New Notes — Redemption for Taxation Reasons.”

Covenants The New Notes, the Indenture governing the New Notes and the Subsidiary Guarantees will limit the Company’s ability and the ability of its Restricted Subsidiaries to, among other things:

- incur additional Indebtedness and issue preferred stock;
- make investments or other specified Restricted Payments;
- guarantee Indebtedness;
- enter into certain transactions with affiliates;
- create Liens;
- enter into Sale and Leaseback Transactions;

- sell assets;
- enter into agreements that restrict the Company’s Restricted Subsidiaries’ ability to pay dividends;
- issue and sell Capital Stock of Restricted Subsidiaries;
- effect a consolidation or merger; and
- engage in different business activities.

Transfer Restrictions The New Notes will not be registered under the Securities Act or under any state securities laws of the United States and will be subject to customary restrictions on transfer and resale. See “Transfer Restrictions.”

Form, Denomination and Registration The New Notes will be issued only in fully registered form, without coupons, in denominations of US\$200,000 of principal amount and integral multiples of US\$1,000 in excess thereof and will be initially represented by one or more global notes deposited with a common depository and registered in the name of the common depository (or its nominee) for the accounts of Euroclear and Clearstream.

Book-Entry Only..... The New Notes will be issued in book-entry form through the facilities of Euroclear or Clearstream for the accounts of its participants. For a description of certain factors relating to clearance and settlement, see “Description of the New Notes — Book-Entry; Delivery and Form.”

Delivery of the New Notes The Company expects to make delivery of the New Notes against payment therefor on or about July 26, 2021, which is expected to be the fifth business day following the date of this offering memorandum. See “Plan of Distribution.”

Trustee Citicorp International Limited.

Paying and Transfer Agent and Registrar..... Citibank, N.A., London Branch.

Listing and Trading..... Application has been made to the Hong Kong Stock Exchange for the listing of, and permission to deal in, the New Notes by way of debt issue to Professional Investors only as described in this offering memorandum.

Ratings..... The New Notes are expected to be rated B1 by Moody’s. We cannot assure investors that these ratings will not be adversely revised or withdrawn either before or after delivery of the New Notes.

Identification Numbers for the New Notes.....	<u>ISIN</u>	<u>Common Code</u>
	XS2364121645	236412164

Governing Law	The New Notes and the Indenture will be governed by and will be construed in accordance with the laws of the State of New York.
Risk Factors	See “Risk Factors” and the other information in this offering memorandum for a discussion of factors that should be carefully considered before deciding to invest in the New Notes.

SUMMARY CONSOLIDATED FINANCIAL INFORMATION

The following summary consolidated financial information as of and for each of the years ended December 31, 2018, 2019 and 2020 (except for EBITDA data or as otherwise indicated in the tables below) has been derived from our consolidated financial statements as of and for the years ended December 31, 2019 and 2020, which have been audited by Deloitte Touche Tohmatsu, our independent auditor, and are included elsewhere in this offering memorandum (our “consolidated financial statements”). Our consolidated financial information has been prepared and presented in accordance with International Financial Reporting Standards (“IFRS”) issued by the International Accounting Standard Board. The summary financial data below should be read in conjunction with the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial information and the notes thereto included elsewhere in this offering memorandum. Historical results are not necessarily indicative of results that may be achieved in any future period.

Summary Consolidated Statement of Profit or Loss and Other Financial Data

	As of December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
	(in thousands)			
Revenue				
Goods and services	2,875,197	3,328,839	2,823,638	432,741
Rental.....	60,691	260,658	264,014	40,462
Total revenue	2,935,888	3,589,497	3,087,652	473,203
Cost of sales	(1,821,615)	(2,308,042)	(2,277,830)	(349,092)
Gross profit	<u>1,114,273</u>	<u>1,281,455</u>	<u>809,822</u>	<u>124,111</u>
Other gains, net.....	11,932	176	40,279	6,173
Impairment losses under expected credit loss model, net of reversal	(75,201)	(87,693)	(83,437)	(12,787)
Selling expenses.....	(171,152)	(193,298)	(175,487)	(26,895)
Administrative expenses.....	(197,241)	(215,403)	(198,959)	(30,492)
Research and development expenses.....	(28,002)	(51,682)	(56,327)	(8,632)
Sales tax and surcharges	(10,346)	(13,973)	(11,360)	(1,741)
Operating profit	<u>644,263</u>	<u>719,582</u>	<u>324,531</u>	<u>49,736</u>
Interest income.....	2,565	3,367	18,760	2,875
Finance expenses.....	(300,019)	(298,500)	(312,693)	(47,922)
Finance costs, net	<u>(297,454)</u>	<u>(295,133)</u>	<u>(293,933)</u>	<u>(45,046)</u>
Share of profit of a joint venture	355	762	141	22
Profit before income tax	<u>347,164</u>	<u>425,211</u>	<u>30,739</u>	<u>4,711</u>
Income tax expense.....	(96,443)	(142,791)	(114,499)	(17,548)
(Loss)/profit for the year	<u>250,721</u>	<u>282,420</u>	<u>(83,760)</u>	<u>(12,837)</u>
(Loss)/profit attributable to				
Owners of the Company	222,423	268,583	(95,844)	(14,689)
Non-controlling interests.....	28,298	13,837	12,084	1,852
	<u>250,721</u>	<u>282,420</u>	<u>(83,760)</u>	<u>(12,837)</u>
Other financial data (unaudited):				
EBITDA ⁽¹⁾	<u>1,314,923</u>	<u>1,505,399</u>	<u>1,065,539</u>	<u>163,301</u>
EBITDA margin ⁽²⁾	<u>44.8%</u>	<u>41.9%</u>	<u>34.5%</u>	<u>34.5%</u>

Notes:

- (1) We calculate EBITDA by adding depreciation, amortization, finance expenses, share of profit of a joint venture, asset impairment provisions to and deducting interest income from profit or loss before income tax expense. EBITDA is not a standard measure under IFRS and should not be considered as an alternative to cash flows from operating activities, a measure of liquidity or an alternative to net income as indicators of our operating performance or any other measures of liquidity, profitability or cash flows derived in accordance with IFRS. We have included EBITDA herein because we believe they are useful supplements to cash flow data as measures of our performance and our ability to generate cash from operations to service debt and pay taxes. EBITDA presented herein may not be comparable to similarly titled measures presented by other companies. Investors should not compare our EBITDA to EBITDA presented by other companies because not all companies use the same definition. Investors should also note that the EBITDA as presented herein are calculated differently from Consolidated EBITDA as defined and used in the Indenture governing the New Notes. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Non-GAAP Financial Measures” for a reconciliation of our profit for the year under IFRS to our EBITDA, and “Description of the New Notes — Definitions” for a description of the manner in which Consolidated EBITDA is defined for purposes of the Indenture governing the New Notes.
- (2) EBITDA margin is calculated by dividing EBITDA by revenue for the relevant period, expressed as a percentage.

Summary Consolidated Statement of Financial Position Data

	As of December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
	(in thousands)			
Assets				
Non-current assets				
Property, plant and equipment.....	2,255,805	2,137,866	2,099,390	321,746
Right-of-use assets	—	189,901	137,951	21,142
Prepaid lease payments	75,635	—	—	—
Goodwill	242,004	242,004	242,004	37,089
Intangible assets.....	252,714	259,986	273,652	41,939
Interest in a joint venture.....	3,046	3,808	3,949	605
Interest in an associate.....	—	2,000	2,000	307
Prepayments and other receivables.....	112,810	155,696	66,428	10,181
Other non-current assets.....	8,375	—	—	—
Deferred income tax assets	52,076	34,637	21,993	3,371
	<u>3,002,465</u>	<u>3,025,898</u>	<u>2,847,367</u>	<u>436,380</u>
Current assets				
Inventories	744,359	765,496	930,618	142,623
Prepaid lease payments	1,932	—	—	—
Trade and notes receivables	1,948,030	2,200,247	2,133,789	327,017
Contract assets	58,579	75,519	30,618	4,692
Prepayments and other receivables.....	437,958	648,048	605,475	92,793
Current portion of other non-current assets.	5,694	—	—	—
Restricted bank deposits.....	330,948	368,730	454,169	69,604
Cash and cash equivalent.....	686,636	2,422,874	879,085	134,726
	<u>4,244,136</u>	<u>6,480,914</u>	<u>5,033,754</u>	<u>771,455</u>
Total assets.....	<u><u>7,246,601</u></u>	<u><u>9,506,812</u></u>	<u><u>7,881,121</u></u>	<u><u>1,207,835</u></u>

	As of December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
	(in thousands)			
Equity				
Capital and reserves attributable to the owners of the Company				
Share capital	275,959	276,273	268,179	41,100
Reserves	2,369,915	2,625,865	2,357,933	361,369
	2,645,874	2,902,138	2,626,112	402,469
Non-controlling interests	48,688	55,525	137,609	21,090
Total equity	<u>2,694,562</u>	<u>2,957,663</u>	<u>2,763,721</u>	<u>423,559</u>
Liabilities				
Non-current liabilities				
Long-term bonds	2,051,403	2,028,423	1,855,625	284,387
Long-term borrowings	243,341	202,426	131,388	20,136
Lease liabilities	—	69,259	31,771	4,869
Deferred income tax liabilities	10,440	10,219	9,998	1,532
	2,305,184	2,310,327	2,028,782	310,924
Current liabilities				
Short-term borrowings	879,192	497,749	763,953	117,081
Current portion of long-term bonds	14,498	2,116,445	11,034	1,691
Current portion of long-term borrowings	82,214	92,174	163,639	25,079
Trade and notes payables	714,091	957,406	1,403,295	215,064
Accruals and other payables	455,278	404,528	534,581	81,928
Lease liabilities	—	45,834	34,384	5,270
Contract liabilities	38,814	13,976	37,982	5,821
Current income tax liabilities	62,768	110,710	139,750	21,418
	2,246,855	4,238,822	3,088,618	473,352
Total liabilities	<u>4,552,039</u>	<u>6,549,149</u>	<u>5,117,400</u>	<u>784,276</u>
Total equity and liabilities	<u>7,246,601</u>	<u>9,506,812</u>	<u>7,881,121</u>	<u>1,207,835</u>
Net current assets	<u>1,997,281</u>	<u>2,242,092</u>	<u>1,945,136</u>	<u>298,103</u>
Total assets less current liabilities	<u>4,999,746</u>	<u>5,267,990</u>	<u>4,792,503</u>	<u>734,483</u>

RISK FACTORS

You should carefully consider the risks and uncertainties described below and other information contained in this offering memorandum before investing in the New Notes. The risks and uncertainties described below may not be the only ones that we face. Additional risks and uncertainties that we are not aware of or that we currently believe are immaterial may also materially and adversely affect our business, financial condition or results of operations. If any of the possible events described below occurs, our business, financial condition or results of operations could be materially and adversely affected. In such case, we may not be able to satisfy our obligations under the New Notes, and you could lose all or part of your investment.

Risks Relating to Our Business

Our future success depends in part on our ability to establish and maintain strategic partnerships, and failure to do so could have a material adverse effect on our market penetration and revenue growth.

As part of our business strategy, we have entered into strategic alliances and cooperative relationships with renowned international and domestic companies to develop technologies, enhance service capacities and better service our customers. In August 2018, we entered into a business cooperation agreement with CRCC Financial Leasing Co., Ltd (“CRCC”), an ultra large construction enterprise managed by the State-owned Assets Supervision and Administration Commission (“SASAC”) of the State Council, to develop asset leasing business in China. In December 2020, we signed an investment agreement to introduce Chengdu Xiangtou Group, the largest state-owned investment group in Xindu District, Chengdu, as our new strategic partner. So far, Xiangtou has invested RMB70.0 million in establishing a joint venture with the Group where both parties can combine their comparative advantages and expand the Group’s financial leasing business. We have also signed strategic partnership agreements with some leading Chinese fracturing equipment manufacturers, which we believe has further enhanced our service capacity. We plan to continue to seek for opportunities for strategic alliances with the leading players in the oil and gas industry as well as the high-end natural gas market and develop strategic partnership with clients to increase our market share. However, we may not always be able to identify or attract such companies, or successfully maintain our strategic relations with our existing partners. Failure to establish, attract or maintain strategic partnerships could have a material adverse effect on our market penetration, revenue growth and profitability.

In addition, strategic alliances with our partners could subject us to a number of risks, including risks associated with sharing proprietary information and loss of control of operations that are material to our business. Moreover, strategic partnerships may be expensive to implement, subject us to the risk of nonperformance by our counterparty or lead to monetary losses that may materially and adversely affect our business.

We may not be able to manage future growth and expansion successfully.

As we continue to develop our business, we will have to continually improve our management, operational and financial systems and strengthen our internal procedures and controls. The expansion of our business operations may also require us to establish and develop new relationships with our customers, suppliers, joint venture partners and other third parties. Our expansion plans may be affected by a number of factors which may be beyond our control. These factors include fluctuations in domestic and international demand for our services and products, increasing competition in the industry and our ability to obtain sufficient financing for our expansion efforts. Any unfavorable change in any of these factors may disrupt our expansion plans and have a material adverse effect on our business, results of operations and financial position.

We plan to continue expanding our operations throughout China, and in overseas markets by focusing on expanding the business with our existing customers and exploring opportunities to work with international oil companies. Our expansion is based on our forward-looking assessment of our customers' needs and market prospects, and we cannot assure you that our assessment will always turn out to be correct. Our expansion plans may also be affected by a number of factors beyond our control. These factors include fluctuations in demand for natural gas and related commodity prices, increasing competition in the industry, environmental standards, government regulation and our ability to obtain sufficient financing for our expansion efforts. In addition, to expand into new markets, we may have limited knowledge of the conditions of, and little or no experience in, the new markets that we plan to expand into. As we enter new markets, we may not have the same level of familiarity with local regulations, business practices, as well as customer behavior and preferences, as compared to the areas in which we are relatively established, and we may face intense competition from oilfield service providers with an established presence and market share in those areas. However, there is no assurance that our expansion will be profitable or generate positive cash flows. Any failure in effectively managing our expansion may materially and adversely affect our business, financial condition and results of operations.

We face risks associated with sales of our services and products in overseas markets, and if we are not able to effectively manage these risks, our ability to manage and grow our business abroad will be limited.

A substantial portion of our revenue was derived from overseas markets, which amounted to 63.1%, 53.1% and 40.6% of our total revenue in 2018, 2019 and 2020, respectively. We intend to further grow our business activities in overseas markets, in particular, in the Middle East, the Americas, Central Asia and Africa and where we believe oil and gas development activity is likely to grow significantly in the near future. The marketing and sale of our services and products overseas exposes us to a number of risks, including:

- fluctuation in foreign currency exchange rates;
- increased costs associated with maintaining the ability to understand the overseas markets and anticipate their future trends;
- difficulties in staffing and managing overseas operations;
- failure to develop appropriate risk management and internal control structures for overseas companies;
- difficulties and increased costs relating to compliance with different commercial and legal requirements in overseas markets;
- market entry barriers, such as strong local competitors that may have a proximity advantage and local connections, which may prevent us from competing effectively;
- failure to obtain or maintain licenses or certifications for our services and products in these markets;
- risks relating to any unfavorable relationship that may exist between China and any foreign country in which we operate;
- inability to obtain, maintain or enforce intellectual property rights;
- unanticipated changes in prevailing economic conditions and regulatory requirements;
- trade barriers such as tariffs, taxes and other restrictions and expenses; and
- social unrest, acts of terrorism, epidemic, pandemic, war or other armed conflict.

If any of the risks described above materialize, or if we are unable to manage these risks effectively, our ability to manage or grow our international business would be undermined, which may in turn materially and adversely affect our business, financial condition, results of operations and prospects.

Our business may be affected by financial, geo-political and general economic events and circumstances prevailing from time to time in the Middle East.

In 2018, 2019 and 2020, we generated from operations in Iraq in the Middle East, which accounted for approximately 39.9%, 39.6% and 31.1% of our total revenue in the same years, respectively. Our business may be affected by financial, geo-political and general economic events and circumstances prevailing from time to time in the Middle East, which may prevent us from delivering our services or otherwise adversely affect our business operations in the region. In particular, the current political unrest in the Middle East has resulted in significant concern that production from oil exporters in the region may be reduced, which in turn could adversely affect the demand for oilfield services and products in the region. It is not possible to predict the occurrence of any financial, geo-political or economic events or circumstances, including war or hostilities, in the future and we cannot assure you that we would be able to develop our business in the Middle East market if such adverse political events or circumstances were to occur.

Our operations are largely subject to changes in our major customers' needs, preferences and technical requirements, which are beyond our control.

We generally do not have long-term commitments from our customers for the provision of services or products or other types of cooperation. Our operations, including our service and product offerings, pricing, procurement, and research and development efforts, are largely subject to changes in the demands, preferences and technical requirements of our major customers, which are major oil and gas producers in China. We may not have the expertise, technology or capital resources to respond adequately to those changes or in a timely manner, or at all. If we fail to respond to those changes in a timely manner, or at all, we may lose such customers and our results of operations may be materially adversely affected.

Failure to protect our intellectual property rights may materially and adversely affect our competitive position and operations and we may be exposed to infringement or misappropriation claims by third parties.

Our success is in part attributable to the intellectual property that we have developed or acquired. There can be no assurance that measures we have taken to protect our intellectual property rights are adequate to prevent or deter infringement or other misappropriation of our intellectual property. Any significant infringement of our proprietary technologies and processes could weaken our competitive position and have an adverse effect on our operations. To protect our intellectual property rights, we may have to commence legal proceedings against any misappropriation or infringement. However, there can be no assurance that we will prevail in such proceedings. We may be subject to litigation or other proceedings involving the violations of intellectual property rights of third parties. The defense of such litigation or other proceedings can be both costly and time-consuming, and may divert our management's attention. An adverse ruling in any such litigation or proceedings to which we may become a party could materially and adversely affect our business, reputation, financial condition or results of operations.

Our growth depends on our ability to continue to attract and retain qualified personnel.

A team of talented and experienced engineers and other technical experts as well as other experienced and qualified personnel is crucial to our business and future development. We will continue our efforts to recruit professional talents with local work experience and industry knowledge to support our global expansion strategy. However, talented and experienced personnel are scarce in our industry and competition for their services is intense. Failure to recruit and retain a quality talent team may affect our expansion into the high-end market and thus may have a material adverse effect on our business prospects and results of operations. If we fail to recruit, retain or train skilled or talented employees, our growth and business prospects could be materially and adversely affected.

Our success depends substantially on the continuing efforts of the members of our senior management and our ability to retain them.

Our business depends, to a significant extent, on the capability and expertise of our senior management team members, including our executive directors and other members of our management who have operational experience in the oilfield services business. In particular, we rely on Mr. Luo Lin, our founder and Chairman, who has more than 29 years of experience in the petroleum gas industry. Our other executive directors and senior management have in-depth knowledge of the operation, technology and management of the oilfield services industry, or extensive experience in financial management and investment of the oilfield services industry. For example, Mr. Pi Zhifeng, our Chief Executive Officer and executive Director, has 19 years of experience in business and capital market operations. If one or more of our senior management team members are unable or unwilling to continue in their present positions, we may not be able to identify and recruit suitable replacements in a timely manner, or at all, and the implementation of our business strategies may be affected, which could materially and adversely affect our operations.

If we fail to develop or adopt new oilfield service technologies, our business and competitiveness may be harmed.

The oilfield services industry is competitive and the underlying oilfield service technologies are rapidly evolving. The relevant technologies and market trends are subject to constant changes based on customers' needs. We cannot assure you that we will be able to predict such technology or market trends. If we fail to predict changes in production technology or apply new technologies in a timely manner, whether developed in-house or through licensing, we may not be able to respond effectively to customers' needs. Responding to and adapting to technological developments and changes in the oil and gas industry, and the integration of new technologies or industry standards, may require substantial investment of resources, time and capital. There can be no assurance that we will be able to respond and adapt to such technological and industry developments in a timely manner. In the event that we fail to do so, our business, results of operations and competitions may be materially and adversely affected. In addition, in 2018, 2019 and 2020, we incurred research and development expenses of approximately RMB28.0 million, RMB51.7 million and RMB56.3 million (US\$8.6 million), respectively. If we fail to develop new technologies or our newly developed technologies fail to meet customers' needs, we will not be able to fully recover our costs and expenses incurred in the technology development, which could have a material adverse effect on our business, financial condition and results of operations.

Our operations require significant cash outflow and we may not be able to timely obtain sufficient financing to fund our ongoing operations and expansions.

We need sufficient financing to fund our ongoing operations, existing and future capital expenditures and expansion plans. It is not unusual for an oil and gas service provider to generate negative operating cash flow over a particular period when the cash outlay for ongoing operations, existing and future capital expenditures and expansion plans for that period, after offsetting changes in other working capital items, exceeds the cash inflow from sales of its services and products over the same period. We experienced significant cash outflow from operating activities in 2016 as the demand for oil and gas services and products declined due to, among others, the depressed market conditions which are the result of the dramatic drop in oil and gas price in those years. We therefore require external funding to fund our operations and to develop new projects and continue our expansion plans. In the past, we had utilized equity and debt financing to fund our business operations. We typically use internal funds, proceeds from sales of our services and products, bank loans and other borrowings to finance our operations. We expect to continue to fund our operations and expansion plans through these sources and our cash flow position improved in 2018, 2019 and 2020. For the same periods, we had net cash generated from operating activities of RMB420.0 million, RMB610.3 million and RMB805.4 million (US\$123.4 million), respectively. However, we cannot assure you that such funds will be sufficient or that any additional external financing can be obtained on satisfactory or commercially reasonable terms, or at all.

A number of factors, such as general economic conditions, our financial performance, credit availability from financial institutions and monetary policies in the PRC, may affect our ability to obtain adequate financing for our projects on favorable terms, if at all. Many of these factors are beyond our control. In addition, PBOC regulates the reserve requirement ratio for commercial banks in the PRC, which affects the availability and cost of financing from them. PBOC adjusted the bank reserve requirement ratio once in 2016, four times in 2018 and four times in 2019 and two times in 2020 up to May 31, 2020. The reserve requirement ratio for commercial banks currently ranges from 11.0% to 13.0%. We cannot assure you that the PRC government will not introduce other measures which may limit our access to capital resources. The foregoing and other governmental actions and policy initiatives may limit our ability to use bank loans or other borrowings to finance our operations and expansions and, therefore, may require us to maintain a relatively high level of internally sourced cash or obtain funding at a higher cost. As a result, our business, results of operations, and financial condition may be materially and adversely affected.

We rely on a limited number of major customers for a substantial portion of our revenue.

Although we have a diversified customer base, we derive a significant amount of our revenue from the provision of services and sale of products, on a non-exclusive basis, to the customers who are the subsidiaries or affiliates of certain major Chinese or international oil and gas producers or service providers. In 2018, 2019 and 2020, our five largest customers accounted for approximately 66.1%, 69.8% and 74.6%, respectively, of our total revenue, and our largest customer, accounted for approximately 25.6%, 32.2% and 31.4%, respectively, of our total revenue, for the same period. For certain major oil and gas producers in China, they usually demand a credit term of 220 to 270 days, except for retention money which would be collected one year after the completion of the services. Due to their dominant market position in China, we cannot assure you that we will be able to negotiate higher prices or shorter credit terms for the services provided to them. If our major customers significantly reduce their use of our services and products for whatever reason, and we are unable to find comparable alternative customers, our business, results of operations and financial condition could be adversely affected. We endeavor to diversify our customer base and reduce customer concentration in the future. However, there can be no assurance that our efforts will succeed.

We may not be able to procure raw materials or lease equipment from suppliers on acceptable terms or in a timely manner.

Our operations are dependent on having sufficient raw materials and suitable equipment to provide services to our customers. Although past fluctuations in the supply and price of raw materials did not have any material adverse impact on us as we source and procure raw materials at an earlier stage in anticipation of future increase of price or shortage of raw materials or pass on the additional cost of raw materials to our customers, we cannot assure you that such fluctuations in the future would not have any material, adverse impact on our business and financial results. If any of the suppliers failed to supply raw materials or lease equipment of acceptable quality, quantity and price in a timely manner, particularly if we are unable to obtain the raw materials or lease equipment from alternative suppliers on a timely basis or on commercially acceptable terms, our service delivery schedule may be disrupted, which could result in loss of revenue and customers. In addition, fluctuations in the supply and price of equipment for lease may have a material adverse effect on our business and results of operations.

Any disruption in the supply of raw materials to us may harm our business.

Although we use different suppliers for sourcing consumables, equipment and replacement components and parts used in our operations, our purchases are concentrated on a limited number of suppliers. Purchases from our five largest suppliers accounted for approximately 29.3%, 29.3% and 22.4%, respectively, of our total purchases in 2018, 2019 and 2020, and purchases from our largest supplier accounted for approximately 10.0%, 8.2% and 6.5%, respectively, of our total purchases for the same period. We do not have long-term supply contracts with our suppliers and we do not hedge against the price volatility of raw materials. If there is a disruption in the supply by one or more of our major suppliers and we fail to find replacement suppliers on favorable terms or at all, our ability to effectively provide services and products may be severely affected, and as a result, our business may be harmed.

We may not be able to grow successfully through future acquisitions, or to integrate the acquired businesses effectively.

As part of our growth strategy, we may continue to expand our business through acquisitions. We intend to explore merger and acquisition opportunities both domestically and overseas that could complement our oilfield service portfolios and enhance our technology expertise. We may not be able to continue to identify suitable acquisition opportunities or successfully acquire identified targets on favorable terms. Currently, the competition for acquisition opportunities is limited but may become intense, increasing our acquisition cost or refraining us from making acquisitions. We may be required to incur substantial indebtedness to finance future acquisitions. Such additional debt service requirements may impose a significant burden on our operations and financial condition. In addition, we may not be successful in integrating our current or future acquisitions into our existing operations, which may result in unforeseen operational difficulties, weaker financial performance, or divert our management's attention.

Any material disputes between us and our joint venture partners may adversely affect the results of operations and financial condition of the relevant joint venture and, if unresolved, could potentially lead to a termination of that joint venture.

If there is a material dispute between us and our joint venture partners in connection with the performance of a party's obligations or the scope of a party's responsibilities under a joint venture agreement, we may not be able to resolve such dispute through negotiation. In the event that a material dispute cannot be resolved, the business and operations of the joint venture may be adversely affected, and the joint venture agreement may be terminated by mutual consent of the parties or as a result of a material breach by one party. In addition, the operational, financial or other conditions of our joint venture partners may deteriorate, which may adversely affect their ability to continue to perform their obligations under the joint venture agreements or other contracts, which in turn could have an adverse impact on the business of the joint venture. In the event that any of the above events occurs, our financial condition and results of operations may be adversely affected.

Our high outstanding trade receivables and the turnover days of our trade receivables may adversely affect our financial condition and results of operations.

As of December 31, 2018, 2019 and 2020, our trade and notes receivables were high, which amounted to RMB1,948.0 million, RMB2,200.2 million and RMB2,133.8 million (US\$327.0 million), respectively. For 2018, 2019 and 2020, our trade receivables turnover days were 220 days, 196 days and 226 days, respectively.

Any extended delay in payments by any major customer would have a material adverse effect on the aging schedule and turnover days of our trade receivables. Our customers' ability to pay may be impaired by a number of factors, including, among others, unfavorable global market conditions for the oil and gas industry, deteriorating liquidity of our customers or delayed commencement of oil and gas production activities. The occurrence of any of these factors could affect our customers' ability to make timely payments, and we cannot assure you that our customers will make payment in full to us on a timely basis, or at all. Delays in receiving payments from, or non-payment by, our customers may adversely affect our cash flow position and our ability to meet our working capital requirements. In addition, customers' defaults in making payments to us on sales or supply contracts for which we have already incurred significant costs and expenditures can reduce our financial resources that would otherwise be available.

The results of our operations are subject to seasonal variations.

Historically, our revenue has been higher during the second half of the year due to a number of factors:

- Due to the nature of oil exploration and production operations, more deliveries and collections occur in the second half of the year; and

- Most of our customers set annual budgets early in the year and incur the budgeted capital expenditures to carry our relevant activities later in the year, particularly in the second half of the year.

As a result of the above factors, demand for our services and products can be cyclical and subject to seasonal variations and our results of operations may fluctuate on a seasonal basis. This inherent fluctuation in our revenue may place pressure on our short-term liquidity during times of low activity, particularly in the first half of the year.

Although we maintain insurance coverage as required by the laws in countries where we operate, we do not have any product liability, business interruption or litigation insurance coverage for our operations.

Even though we maintain insurance coverage required by the laws in the countries in which we operate, it may not be sufficient to cover our potential losses or liabilities. In particular, we do not have any product liability, services warranty, business interruption or litigation insurance coverage for our operations. There is no assurance that we will not have any such complaints or claims, which may result in substantial costs and the diversion of resources. The occurrence of certain incidents, including earthquakes, fires, severe weather, wars, floods, and power outages, and the consequences, damages and disruptions resulting from them, may not be covered adequately or at all by our insurance policies. There can be no assurance that we will be able to maintain adequate insurance in the future. Further, there can be no assurance that insurance will continue to be available on acceptable terms or at all. The occurrence of an adverse claim in excess of our coverage could expose us to substantial costs, which may have a material adverse impact on our financial condition and results of operations.

We may be unable to obtain external financing on favorable terms, or at all, to fund our ongoing operations and expansions.

To fund our ongoing operations, existing and future capital expenditure requirements, investment plans and other financing requirements, we need sufficient internal sources of liquidity or access to additional financing from external sources. We principally fund our operations from a combination of cash generated from our business operations and bank borrowings. We cannot assure you that in the future we will be able to secure sufficient capital to fund our working capital requirements and planned capital expenditures. In particular, the availability of external funding is subject to various factors, some of which are beyond our control, including obtaining governmental approvals, prevailing capital market conditions, credit availability, interest rates and the performance of the businesses we operate. Our inability to arrange sufficient funding in a timely manner or on terms that are satisfactory to us could adversely affect our business, results of financial condition and expansion plans.

The interests of our controlling shareholder may conflict with the interests of the holders of the New Notes.

As of December 31, 2020, our controlling shareholder, Mr. Luo Lin, beneficially owned approximately 24.52% of our issued share capital. Subject to our memorandum and articles of association and applicable laws and regulations, our controlling shareholder will continue to have the ability to exercise a controlling influence on our management, policies and business by controlling the composition of our Board, determining the timing and amount of our dividend payments, approving significant corporate transactions, including mergers and acquisitions, and approving our annual budgets. We cannot assure you that our controlling shareholder will not cause us to enter into transactions or take, or fail to take, other actions or make decisions that may conflict with the best interests of the holders of the New Notes and affect the value of your investment in the New Notes.

We are required to comply with various environmental, health, safety and other laws and regulations, the compliance with which may be onerous or expensive.

We are required to comply with various and extensive environmental, health and safety laws and regulations in the PRC and the overseas jurisdictions in which we operate. Further, as our shares are listed on the SEHK, we are also subject to the Listing Rules. However, there is no assurance that any similar oversight would not occur in the future. If we fail to comply with any of these laws and regulations, we could be exposed to penalties, fines, suspension or revocation of our licenses or permits to conduct business, administrative proceedings and litigation. In light of the magnitude and complexity of these laws and regulations, compliance with them or the establishment of effective monitoring systems may be onerous or require a significant amount of financial and other resources. As these laws and regulations continue to evolve, they may impose additional or onerous standards and requirements, compliance with which may require us to incur significant costs that we may not be able to pass on to our customers. As a result, our business and results of operations may be materially and adversely affected.

We face risks associated with the market access licenses certified by our customers in China, and if we fail to obtain or renew such licenses, our business operations will be adversely affected.

Most of our customers in China issue their own market access licenses to qualified oilfield services providers. The qualification process assesses services providers in terms of their service quality, capabilities, experience and expertise. Once issued, such licenses allow the licensees to provide oilfield services in a region for a specified period of time. Such licenses also specify the scope of services that can be provided. There is no assurance that we can successfully obtain all such licenses from our existing or potential customers or that such licenses, if successfully obtained, can be renewed upon expiration. Failure to obtain or renew such market access licenses may materially and adversely affect our business.

We operate in certain overseas countries, and may not be able to prevent possible sales of our products and services to countries, governments, entities, or persons, targeted by United States economic sanctions.

The U.S. Government, including the State Department and the Department of the Treasury's Office of Foreign Assets Control, or OFAC, administers certain laws and regulations, or the U.S. Economic Sanctions Laws, that impose restrictions upon U.S. persons and, in some instances, non-U.S. persons, including foreign entities owned or controlled by U.S. persons, with respect to activities or transactions with certain countries, governments, entities and individuals that are the subject of the U.S. Economic Sanctions Laws, or Sanctions Targets. Under the U.S. Economic Sanctions Laws, U.S. persons are generally prohibited from facilitating such activities or transactions. U.S. Economic Sanctions Laws targeting Iran also authorize extraterritorial sanctions against non-U.S. persons who engage in trade or other transactions involving certain sectors in Iran, including the energy sector. In particular, the Iran Sanctions Act of 1996 (the "ISA"), as amended, authorizes sanctions aimed at Iran's development, production, and sale of petroleum resources, including sanctions targeting persons who knowingly sell, lease or provide to Iran goods, services, technology, information or support that could directly and significantly facilitate the maintenance or expansion of Iran's domestic production of refined petroleum products, where such facilitation has a fair market value of \$1,000,000 or more or, during a 12-month period has an aggregate fair market value of \$5,000,000 or more. The Iran Freedom and Counter Proliferation Act of 2012, or IFCA, effective July 1, 2013, expanded the scope of U.S. sanctions to authorize sanctions targeting any person determined to be part of Iran's energy, shipping or shipbuilding sectors or a port operator in Iran, along with any person who knowingly conducts or facilitates a significant transaction for the supply of goods or services used in connection with such persons.

We provide certain oil production services to a subsidiary of Lukoil Oil Company ("Lukoil") in connection with its oilfield operations in Iraq. In addition, we entered into agreements with two subsidiaries of Rosneft Oil Company ("Rosneft") to provide comprehensive oilfield repair services to Rosneft's oilfield operations in Iraq. We started to provide the services in the first quarter of 2021. Each of Lukoil and Rosneft has been identified by the U.S. Department of the Treasury's Office of Foreign Assets Control as a sanctioned party with a Sectoral Sanctions Identification ("SSI"). Under Directive 2 and Directive 4 (each as amended) under Executive Order 13662, transactions by a "U.S. person" (as

defined in the Executive Order 13662) or within the United States are prohibited if such transactions are with an SSI entity that involve (i) “new” debt with a maturity of over 60 days, including extension of commercial credit with that maturity, or (ii) certain Arctic offshore, deepwater, or shale projects with potential for oil production. The interpretation or implementation of the SSI sanctions involve uncertainties and may be difficult to predict. Our transactions with Lukoil and Rosneft may be interpreted as sanctioned activities, which could limit our ability to conduct certain activities or lead to negative media or investor attention.

We provide oilfield services and products to some of our customers who have business or trading activities in countries that are the subject of the U.S. Economic Sanctions Laws, including Iran, which may be interpreted as activities targeted by the ISA, IFCA, E.O. 13846 or any other applicable sanctions laws or regulations. As we continuously expand our business in the Middle East and the rest of the world, we cannot assure you that our current or future activities, including the provision of services or the sale of products, will not be subject to the U.S. Economic Sanctions Laws or similar sanctions regimes in other jurisdictions. Our provision of services or sale of products to our customers with operations in Iran only generated revenue in 2018 and 2019, which represented only an insignificant portion of our consolidated assets, revenue and net income for the relevant years. In addition, as of March 31, 2021 we had borrowed from the Bank of Kunlun loans in the aggregate principal amount of approximately RMB305.0 million (US\$46.7 million). Bank of Kunlun is on the List of Foreign Financial Institutions Subject to Part 561 by the Office of Foreign Assets Control of the Department of Treasury of the United States.

The proceeds from this offering will not be used to repay these loans with Bank of Kunlun or applied toward any sanctioned activities involving Rosneft. In the event that we are subject to sanctions due to any of the above, it would prevent us from engaging in certain trade transactions in the United States or obtaining certain types of financing from the United States or such other jurisdictions, and U.S. persons would be prohibited from engaging in any transactions related to the New Notes.

We face risks related to natural disasters, outbreaks, epidemics or pandemics, which could significantly disrupt our operations. In particular, we could be materially and adversely affected by the COVID-19 pandemic. Our insurance policies may not provide adequate coverage for the related losses.

Significant damage or impediments to our business operations may arise as a result of, including but not limited to, (i) natural disasters such as earthquakes, floods, prolonged droughts and typhoons; (ii) epidemics or pandemic such as the outbreak of COVID-19, Severe Acute Respiratory Syndrome (“SARS”), the H1N1 influenza, also known as swine flu, and avian influenza; and (iii) others.

A novel strain of coronavirus, or COVID-19, broke out toward the end of 2019 and has spread throughout China and globally. The Chinese central government and the local governments have introduced various temporary measures to contain the COVID-19 pandemic, such as mandatory quarantine and travel restrictions, which could impact national and local economy to different degrees. Meanwhile, governments around the world have imposed various controlling measures to prevent the movement of people, transfer of equipment and shipment of materials, measures resulting many large-scale, asset-heavy projects to pause. For example, the Iraqi government enforced strict control measures by closing borders, cutting off international flights and imposing strict travel restrictions between provinces to minimize the movement of people. As a result, oil prices plunged significantly and clients around the world temporized in the rates of service fulfillment. Albeit we will adjust to the challenging and changing business environment and the economic conditions in our best efforts such as by switching to asset-light oilfield management projects, we cannot predict how countries would continually react or respond to the global crisis. We also cannot assure you that our business would not be adversely affected by potential delays, reductions in business activities or commercial transactions or general uncertainties surrounding the duration of the government’s extended business or travel restrictions. Our business, financial condition, operations and prospects could be further affected if COVID-19 or any other epidemic harms the general economy of PRC or other countries where we do business. In addition, our business operations could be materially disrupted if any of our employees is suspected of contracting the COVID-19 or any other epidemic disease, since our employees could be quarantined and our offices or operating sites, domestic or oversea, might be shut down for disinfection. Our business operations may also be adversely impacted if our suppliers or other business partners are affected by COVID-19.

Risks Relating to Our Industry

A prolonged decline in or substantial volatility of oil and gas prices and reduction in exploration and production activities could adversely affect the demand for our services and products.

The demand for our services and products is influenced by oil and natural gas prices and the related level of exploration and production activities, such as drilling and well completion activities, and the corresponding related spending in the areas in which we have operations. Volatility or weakness in oil and natural gas prices or the expectation that oil and natural gas prices will decrease affects the spending patterns of our customers, and may in turn materially and adversely affect demand for our services and products. A prolonged downturn in oil and gas prices could depress the demand for oil and natural gas and the level of exploration, development and production activities, thus leading to a decrease in demand for oilfield services. The significant decline in oil and gas prices that began in late 2014 and early 2020 has caused reductions in the exploration, development and production activities of most of our customers and their spending on our services. These spending reductions have curtailed certain drilling programs that reduced demand for our services as compared to the activity levels before, as well as the prices we can charge. These reductions negatively affected our revenue and profitability. In 2020, we recorded a net loss. In addition, certain of our customers could become unable to pay their service providers, including us, as a result of the decline in oil and gas prices. Reduced discovery rates of new oil and gas reserves in our areas of operation as a result of reduced capital spending by certain of our customers may also have a negative long-term impact on our business, even in an environment of stronger oil and gas prices. Any of these conditions or events could adversely affect our operating results. If oil and gas prices do not recover, or recover to a level that would allow us to generate reasonable profits, or at all, in the future, or our customers fail to increase their capital spending and drilling activity, it could have a material adverse effect on our liquidity, results of operations and financial condition. In addition, oil and gas prices generally have been volatile and we are unable to predict future oil and gas prices or the level of activity in the oil and gas industry.

Oil and gas prices may also be affected by, among others, government regulation of downstream oil and gas services, energy consumption growth, price and production of alternative energy products, market uncertainty, political developments and a variety of other factors not within our control. Some or all of these factors may lead to a decrease in the level of exploration, development and production activities, thus reducing the demand for our services and products.

Demand for our services may be adversely affected by trends in exploration and production activities other than oil and natural gas prices.

Demand for our services may be impacted by the spending patterns and other characteristics of our customers, the quality of exploration and production activities, government regulation, and other factors. These factors include, without limitation:

- The success or failure of exploration activities. Unsuccessful exploration activities may lead to stagnant or reduced oilfield services activities, which may adversely affect our results of operations and constrain our opportunity for growth;
- The geology types of new or existing opportunities. The geology types of new or existing opportunities such as deep or shallow wells, horizontal or vertical wells, may adversely affect the demand for the types of services we offer;
- Business strategies of our major customers. The business strategies of our major customers may have a profound impact on our results of operations. If our major customers adopt strategies with the effect (whether intended or unintended) of reducing demand for our services, our business may be adversely affected;

- Government regulation on licensing. If the government modifies its licensing policies with respect to the provision of oil and gas exploration and production, it may alter the composition of our customer base, and force us to make adjustments in our operations to meet the needs of different customers;
- The pace of development in our market and infrastructure. If development is slow in certain regional markets and there is insufficient infrastructure, oil and gas fields may not be able to develop fully to utilize the services that we are prepared to offer;
- The delay or rescheduling of oil and gas pipeline projects of our major customers. Any delay or rescheduling of oil and gas pipeline projects of our major customers in the areas where we operate or plan to offer our services and products may lead to an increase in our operating expenses or a prolonged payback period for us; and
- Government taxes. Imposition of or increase in government taxes may adversely affect exploration and production activity, especially with respect to marginal oilfields.

Any adverse development in some or all of these factors could have a material adverse effect on our business, financial condition and results of operations.

We face intense competition in our industry, and failure to compete effectively may adversely affect our business and prospects.

We face intense competition in China and the overseas markets in which we operate. Many of our competitors may have longer operating histories, stronger capital resources, better research and development capabilities, a larger customer base, stronger customer relationships, or better brand or name recognition than we do. Moreover, some of our competitors may also be better positioned to develop superior services and product features and advanced technological innovations and may be better able to adapt to market trends than we are. Our ability to compete depends on our ability to offer integrated oilfield services and high-quality products that are suitable for our customers' needs at competitive prices. Our operations may be adversely affected if our current competitors or new market entrants introduce new services or products with better features and performance or offer more competitive prices. If we cannot compete effectively, we may lose market share and our results of operations may be materially and adversely affected.

Our businesses involve inherent risks and occupational hazards, which could harm our reputation, subject us to liability claims and cause us to incur substantial costs.

Our operations are subject to occupational hazards inherent in the oil and gas industry, such as fires, explosions, blowouts and oil spills that can cause personal injury or loss of life, damage to or destruction of property or equipment, or pollution and other damage to the environment. In addition, loss of oil and gas production and damage to geological formation can occur in the completion and workover operations. Any of these consequences, to the extent that they are significant, could result in business interruption or suspension of operations, legal liability and damage to our reputation and corporate image. Litigations arising from a catastrophic occurrence at a location where our services and equipment are used may result in us being named as a defendant in lawsuits asserting potentially large claims, including claims brought by our customers alleging deficiencies in safety or failures in our services or products. In such case, our reputation could be materially and adversely affected and we could be subject to litigation or other similar proceedings. The defense of such litigation or other similar proceedings can be both costly and time-consuming, regardless of the outcome. If such litigation results in unfavorable decisions, our business, financial condition and results of operations could be materially and adversely affected.

We normally seek to lower our exposure to the potential claims associated with our businesses through contractual limitations of liability, indemnities from our customers, subcontractors and suppliers, and insurance. These measures, however, may not always be effective due to various factors, many of which may be out of our control. These factors include:

- in some of the jurisdictions in which we operate, including China, environmental and workers' compensation liabilities may be assigned to us as a matter of law and may not be limited through contracts;
- customers and subcontractors may not have adequate financial resources to satisfy their indemnity obligations to us;
- losses may arise from risks not addressed or expected in our indemnity agreements; and
- our insurance coverage may not be sufficient or we may not be able to obtain insurance against some risks on commercially reasonable terms, or at all.

Any adverse development in some or all of these factors could have a material adverse effect on our business, financial condition and results of operations.

Risks Relating to the PRC

Adverse changes in the PRC's political, economic and social conditions, laws, regulations and policies could have an adverse effect on overall economic growth in China, which may adversely affect our business.

A majority of our assets are located in the PRC. Accordingly, our financial condition, results of operations and prospects are subject, to a large extent, to economic, political and legal developments in China. China's economy differs from the economies of most other countries in many respects, including the extent of government intervention in the economy such as government control of foreign exchange and the allocation of resources, the general level of economic development and growth rates.

While the PRC economy has experienced significant growth in the past 30 years, this growth has been uneven across different periods, regions and amongst various economic sectors. The PRC government has implemented various measures to encourage economic development and guide the allocation of resources. The PRC government also continues to play a significant role in regulating industry development by imposing industrial policies, exercising significant control over China's economic growth through the allocation of resources, controlling the payment of foreign currency-denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies. Certain measures taken by the PRC government to guide the allocation of resources may benefit the overall economy of China but may, however, also have a negative effect on us. For example, our business, financial condition, results of operations and prospects may be adversely affected by government control over capital investments, changes in tax regulations that are applicable to us, changes in interest rates and statutory reserve rates for banks or government control in bank lending activities.

In May 2017, Moody's Investors Service downgraded China's sovereign credit rating for the first time since 1989 and changed its outlook from stable to negative, citing concerns on the country's rising levels of debt and expectations of slower economic growth. In September 2017, S&P Global Ratings downgraded China's sovereign credit rating for the first time since 1999, citing similar concerns. The full impact of such actions by international rating agencies remains to be seen, but the perceived weaknesses in China's economic development model, if proven and left unchecked, would have profound implications. If China's economic conditions worsen, or if the banking and financial systems experience difficulties from over-indebtedness, businesses in China may face a more challenging operating environment.

In particular, the trade war between the United States and China may have an adverse impact on the global economic conditions. In 2018, the U.S. government, under the administration of President Donald J. Trump, imposed several rounds of tariffs on various categories of imports from China, and China responded with similarly sized tariffs on U.S. products in retaliation. The trade war escalated in May 2019, when the U.S. increased tariffs on US\$200 billion worth of Chinese products from 10% to 25%, and China

increased tariffs on US\$60 billion worth of U.S. goods in response. Moreover, since May 2019, the U.S. has banned six Chinese technology firms from exporting certain sensitive U.S. goods. In August 2019, the U.S. Treasury declared China a currency manipulator. On September 1, 2019, the U.S. implemented further tariffs on more than US\$125 billion worth of Chinese goods. On September 2, 2019, China lodged a complaint in the World Trade Organization against the U.S. over the import tariffs. The rhetoric surrounding the trade war has continued to escalate, and trade negotiations between the two governments, even though ongoing, have not yielded breakthroughs. Increased tariffs may affect the costs and prices of goods and services in various industries, leading to a decline in consumer's purchasing power and volume of transactions. However, the amicable resolution of the trade war remains elusive, and the lasting impact it may have on China's economy and the industries in which our Group operates remains uncertain. Should the trade war between the U.S. and China begin to materially impact China's economy, the purchasing power of our customers in China would be negatively affected.

Governmental control over currency conversion may limit our ability to utilize our cash effectively.

The PRC government imposes controls on the convertibility of the Renminbi into foreign currencies and, in certain cases, the remittance of currency out of China. We receive the majority of our turnover in Renminbi. As a Cayman Islands holding company, we may rely on dividend payments from our PRC subsidiaries to fund any cash and financing requirements we may have. Under existing PRC foreign exchange regulations, payments of current account items, including profit distributions and trade and service-related foreign exchange transactions, can be made in foreign currencies without prior approval from SAFE by complying with certain procedural requirements. Therefore, our PRC subsidiaries are able to pay dividends in foreign currencies to us without prior approval from SAFE. But approval from or registration with appropriate government authorities is required where Renminbi is to be converted into foreign currency and remitted out of China to pay capital expenses such as the repayment of loans denominated in foreign currencies. This could affect the ability of our PRC subsidiaries to obtain foreign exchange through debt. The PRC government may also at its discretion restrict access in the future to foreign currencies for current account transactions. If the foreign exchange control system prevents us from obtaining sufficient foreign currencies to satisfy our foreign currency demands, we may not be able to satisfy our obligations under the New Notes.

PRC regulations relating to the establishment of offshore special purpose vehicles by PRC residents may subject our PRC individual beneficial owners to personal liability, limit our PRC subsidiaries' ability to distribute profits and other proceeds to us, or otherwise adversely affect our financial position and results of operations.

The Circular on the Management of Offshore Investment and Financing and Round Trip Investment By Domestic Residents through Special Purpose Vehicles (《關於境內居民通過特殊目的公司境外投融資及返程投資外匯管理有關問題的通知》) (the “**Circular 37**”) was promulgated on July 4, 2014 with effect from the same day, which replaced the Circular on the Relevant Issues Concerning Foreign Exchange Administration for Domestic Residents to Engage in Financing and Round Trip Investment via Overseas Special Purpose Companies (《關於境內居民通過境外特殊目的公司融資及返程投資外匯管理有關問題的通知》) (the “**Circular 75**”). According to the Circular 37, domestic resident shall be required to register with the local branch of SAFE for foreign exchange registration of overseas investments before contributing the domestic and overseas lawful assets or interests into a SPV, and to update such registration in the event of any change of basic information of the registered SPV or major changes in the SPV's capital, including increases and decreases of capital, share transfers, share swaps, mergers or divisions. Pursuant to the Circular of SAFE on Further Simplifying and Improving the Direct Investment-related Foreign Exchange Administration Policies (《關於進一步簡化和改進直接投資外匯管理政策的通知》) (the “**Circular 13**”) promulgated by the SAFE and effective on June 3, 2015, the power to accept SAFE registration was delegated from local SAFE to local banks.

The PRC individual beneficial owners of the Company have completed the registration with the local provincial SAFE branch for the establishment of our SPVs according to the Circular 75. However, we may not at all times be fully aware or informed of the identities of all our beneficiaries who are PRC nationals, and may not always be able to compel our beneficiaries to comply with the requirements of Circular 37.

As a result, we cannot assure you that all of our PRC individual beneficial owners will at all times comply with, or in the future make or obtain any applicable registrations or approvals required by Circular 37 or other related regulations. Failure to comply with the registration procedures set forth in Circular 37 may result in restrictions being imposed on the foreign exchange activities of the relevant onshore company, including on the increase of its registered capital, the payment of dividends and other distributions to its offshore parent or affiliate and the capital inflow from the offshore entity, and may also subject the relevant domestic resident to penalties and restrictions under PRC foreign exchange administration regulations.

We face regulatory uncertainties in China concerning our employees' participation in our share incentive plan.

In February 2012, SAFE issued the Notices on Issues Concerning the Foreign Exchange Administration for Domestic Individuals Participating in a Stock Incentive Plan of an Overseas Publicly-Listed Company (《國家外匯管理局關於境內個人參與境外上市公司股權激勵計畫外匯管理有關問題的通知》) (the “Circular 7”). According to Circular 7, if “PRC individuals” (meaning both PRC residents and non-PRC residents who reside in the PRC for a continuous period of not less than one year, excluding the foreign diplomatic personnel and representatives of international organizations) participate in any share incentive plan of an overseas listed company, a qualified PRC domestic agent, which could be the PRC subsidiaries of such overseas listed company, shall, among other things, file, on behalf of such individuals, an application with foreign exchange authorities to conduct the foreign exchange registration with respect to such share incentive plan, and obtain approval for an annual allowance with respect to the purchase of foreign exchange in connection with the share purchase or share option exercise. Such PRC individuals' foreign exchange income received from the sale of shares and dividends distributed by the overseas listed company and any other income shall be fully remitted into a collective foreign currency account in the PRC opened and managed by the PRC domestic agent before distribution to such individuals. In addition, such PRC individuals must also retain an overseas entrusted institution to handle matters in connection with the exercise of their share options and their purchase and sale of shares.

According to Circular 7, from time to time, we need to make applications or update our registration with SAFE or its local branches on behalf of our employees who are affected by our new share incentive plan or material changes in our current share incentive plan. We cannot assure you that such application will be successful. If we or the participants of our share incentive plans who are PRC citizens fail to comply with Circular 7, we and/or such participants of our share incentive plans may be subject to fines and legal sanctions. In addition, there may be additional restrictions on the ability of such participants to exercise their stock options or remit proceeds gained from sale of their stock into China, and we may be prevented from further granting share incentive awards under our share incentive plans to our employees who are PRC citizens. Such events could adversely affect our ability to retain talented employees.

The discontinuation of or reduction in any preferential tax treatments currently available to us in the PRC may have an adverse effect on our financial condition and results of operations.

Under the EIT Law, both foreign-invested and PRC-owned domestic enterprises generally are subject to a uniform 25% income tax rate. However, certain “High-Tech Enterprises” or “Great Western Development Enterprises” may enjoy a preferential income tax rate of 15%. Six of our PRC subsidiaries, including Shandong Precede Petroleum Technology Co., Ltd., Sichuan Anton Oil Gas Engineering And Technology Services Ltd., Anton Oilfield Services (Group) Limited, Beijing Hinen-Hitech Petroleum Technology Development Co., Ltd., Tianjin Anton Petroleum Machinery Manufacturing Co., Ltd and Xinjiang Tong'ao have been recognized as “High-Tech Enterprises” and enjoy a preferential income tax rate of 15% until such recognition will be subject to reassessment for renewal. In addition, locating in the western China and falling within the Catalogue of Encouraged Industries in Western China, Anton Tong'ao Technological Products Company Limited may enjoy a preferential income tax rate of 15% according to the Announcement on Continuation of Enterprise Income Tax Policy for the Development of Western China (《關於延續西部大開發企業所得稅政策的公告》). There is no assurance that any of our eligible PRC subsidiaries will be able to enjoy the 15% preferential tax treatments in the future. If any of our eligible PRC subsidiaries fail to renew its “High-Tech Enterprises” status or no longer meet the

requirements for enjoying preferential income tax rate in Western China, our financial conditions and results of operations may be materially and adversely affected.

There are significant uncertainties under the EIT Law relating to the withholding tax liabilities of our PRC subsidiaries, and interest payables by us to our foreign investors and gain on the sale of our New Notes may also become subject to withholding taxes under PRC tax laws.

Under the EIT Law, the profits of a foreign invested enterprise arising in or after 2008 and which are later distributed to its immediate holding company outside the PRC will be subject to a withholding tax rate of 10% if the immediate holding company is determined by the PRC tax authority to be a non-resident enterprise for PRC tax purposes, unless there is an applicable tax treaty with the PRC that provides for a different withholding arrangement. Pursuant to a special arrangement between Hong Kong and the PRC, such rate is lowered to 5% if a Hong Kong resident enterprise owns over 25% of a PRC company. Pursuant to the Administrative Measures for Tax Agreements Treatment for Non-resident Taxpayers (非居民納稅人享受稅收協定待遇管理辦法), which was promulgated by SAT on October 14, 2019 and became effective on January 1, 2020, a non-resident taxpayer meeting conditions for enjoying the tax agreement treatment may be entitled to the tax agreement treatment itself/himself when filing a tax return or making a withholding declaration through a withholding agent, subject to the subsequent administration by competent tax authorities. During the subsequent administration, the competent taxation authorities have the right to investigate the documents submitted by the non-resident taxpayer to determine whether it meets the tax agreement treatment, which, if not, shall pay taxes in arrears and may subject to late tax payment liability. In addition, under the EIT Law, enterprises established under the laws of jurisdictions outside China with their “de facto management bodies” located within China may be considered to be PRC resident enterprises for tax purposes.

Furthermore, as described in “Taxation — PRC,” if we were treated as a PRC “resident enterprise,” interest payable to certain “non-resident enterprise” holders on the New Notes may be subject to PRC withholding tax at a rate of 10%, or a lower rate for holders who qualify for the benefits of a double-taxation treaty with China, and capital gains realized by holders of New Notes may be treated as income derived from sources within China and be subject to a 10% PRC withholding tax. In addition to the uncertainty as to the application of the new “resident enterprise” classification, there can be no assurance that the PRC government will not amend or revise the taxation laws, rules and regulations to impose stricter tax requirements, higher tax rates or apply the EIT Law, or any subsequent changes in PRC tax laws, rules or regulations retroactively. As there may be different applications of the EIT Law and any amendments or revisions, comparisons between our past financial results may not be meaningful and should not be relied upon as indicators of our future performance. If such changes occur and/or if such changes are applied retroactively, such changes could materially and adversely affect our results of operations and financial condition.

Uncertainties with respect to the PRC legal system could have an adverse effect on our operations.

The PRC legal system is based on written statutes. Unlike under common law systems, decided legal cases have little value as precedents in subsequent legal proceedings. In 1979, the PRC government began to promulgate a comprehensive system of laws and regulations governing economic matters in general, and forms of foreign investment (including wholly foreign-owned enterprises and joint ventures) in particular. These laws, regulations and legal requirements are relatively new and are often changing, and their interpretation and enforcement involve significant uncertainties that could limit the reliability of the legal protections available to us. For example, we have registered the issuance of the New Notes with the NDRC with reference to the NDRC Notice and are required to file a post-issuance report with the NDRC within 10 working days in the PRC pursuant to the registration certificate. As the NDRC Notice is a new regulation, there are still uncertainties regarding its interpretation, implementation and enforcement by the NDRC. If we fail to complete such filing in accordance with the relevant requirements, due to any change in the relevant regulation we may be subject to penalties or other enforcement actions by relevant PRC government authorities. In addition, we may have to resort to administrative and judicial proceedings in order to enforce the legal protections that we enjoy either by law or contract. As PRC administrative and judicial authorities have significant discretion in interpreting and implementing statutory and contractual terms, it may be more difficult to evaluate the outcomes of administrative and judicial proceedings and the level of legal protections we enjoy. These uncertainties may impede our ability to enforce the contracts into which we have entered with our business partners, customers and suppliers. In addition, we cannot predict the effects of future developments in the PRC legal system. We may be required in the future to procure additional permits, authorizations and approvals for our existing and future operations, which may not be obtainable in a timely fashion or at all. Any failure to obtain such permits or authorizations may have an adverse effect on our financial condition and results of operations.

It may be difficult to serve process within the PRC or to enforce any judgment obtained from non-PRC courts against us or our Directors.

A majority of our operating subsidiaries are incorporated in the PRC, and a majority of our Directors currently reside within the PRC and a majority of our assets are located within the PRC. The PRC does not currently have treaties providing for the reciprocal recognition or enforcement of civil and commercial judgments of courts located in the United States, the United Kingdom, Singapore, Japan and most other western countries. An Arrangement between Mainland and Hong Kong on Reciprocal Recognition and Enforcement of Judgments of Civil and Commercial Cases was signed on January 18, 2019 but has not yet come into effect. After a judicial interpretation has been promulgated by the Supreme People's Court and the relevant procedures have been completed by the Hong Kong Special Administrative Region, both sides will announce a date on which the Arrangement shall come into effect. As a result, it may not be possible for investors to effect service of process upon our subsidiaries or our Directors resident in the PRC pursuant to the authority of non-PRC courts. Further, the recognition and enforcement in the PRC of judgments of courts outside the PRC might be difficult or impossible. See "Enforcement of Civil Liabilities."

Our operations and financial performance could be adversely affected by labor shortages, increase in labor costs and changes to the PRC labor-related law and regulations.

The PRC Labor Contract Law became effective on January 1, 2008, and it was amended on December 28, 2012, which took effect on July 1, 2013. The current PRC Labor Contract Law imposes greater liabilities on employers and significantly increases the cost of an employer's decision to reduce its workforce. Further it requires certain terminations to be based upon seniority instead of merit. In the event that we decide to significantly change or decrease our workforce, the PRC Labor Contract Law could adversely affect our financial condition and results of operations. In addition, the PRC government has continued to introduce various new labor-related regulations after the promulgation of the PRC Labor Contract Law. Among other things, the paid annual leave provisions require that the paid annual leaves ranging from five to fifteen days be available to nearly all employees and further require that employers compensate an employee for any annual leave days the employee is unable to take in the amount of three times of such employee's daily salary, subject to certain exceptions.

On October 28, 2010, the Standing Committee of the National People’s Congress promulgated the PRC Social Insurance Law, which was amended on December 29, 2018. According to the PRC Social Insurance Law, employees will participate in pension insurance, work-related injury insurance, medical insurance, unemployment insurance and maternity insurance and the employers must, together with their employees or separately, pay for the social insurance premiums for such employees.

As a result of the implementation of these and any future rules and regulations designed to enhance the standard for labor protection, our labor costs may continue to increase. Furthermore, as the interpretation and implementation of these new laws and regulations are still evolving, we cannot assure you that our employment practice will at all times be deemed fully in compliance, which may cause us to face labor disputes or governmental investigation. If we are deemed in violation of such labor law and regulations, we could be subject to penalties, compensations to the employees and loss of reputation, and as a result our business, financial condition and results of operations could be materially and adversely affected.

The PRC national economy and economies in different regions of the PRC may be adversely affected by natural disasters, acts of God, and occurrence of epidemics.

Our business is subject to general economic and social conditions in the PRC, in particular, in regions where our production bases are located. Natural disasters, epidemics and other acts of God which are beyond our control may adversely affect the economy, infrastructure and livelihood of the people in China. Some regions in China, including certain cities where we operate, are under the threat of flood, earthquake, sandstorm, snowstorm, fire, drought, or epidemics such as Severe Acute Respiratory Syndrome, or SARS, H5N1 avian flu or the human swine flu, also known as Influenza A (H1N1). For instance, a serious earthquake and its successive aftershocks hit Sichuan province in May 2008 and in April 2013, another earthquake and aftershocks hit Sichuan province again, both resulting in tremendous loss of lives, injury and destruction of assets in the region. In August 2015, a series of explosions occurred at a container storage station at the Tianjin Port, resulting in heavy casualties and extensive destruction at the warehouse compound. Moreover, the COVID-19 pandemic which began at the end of 2019 has affected millions of individuals and adversely impacted national economies worldwide, including China. Operation of the global industrial chain, supply chain and value chain were once again disrupted, leading to the first negative growth after the financial crisis in the world’s seaborne trade in 2020. As a result, the market breadth of bulk carrier market, crude oil vessel market and refined oil tanker market fluctuated in 2020. Given the uncertainties as to the development of the outbreak at the moment, it is difficult to predict how long these conditions will persist and to what extent to which we may be affected.

In addition, past occurrences of epidemics, depending on their scale, have caused different degrees of damage to the national and local economies in China. In April 2013, there were reports of cases of H7N9 avian flu in southeast China, including deaths in Shanghai and Jiangsu, Zhejiang and Anhui provinces. A recurrence of SARS or an outbreak of any other epidemics in China, such as the H5N1 avian flu or the human swine flu, especially in the cities where we have operations, may result in material disruptions to our property development and our sales, which in turn may adversely affect our business, financial condition and results of operations.

Risks Relating to the New Notes

We are a holding company and payments with respect to the New Notes are structurally subordinated to liabilities, contingent liabilities and obligations of our subsidiaries.

We are a holding company with no material operations. We conduct our operations through our PRC subsidiaries. The New Notes will not be guaranteed by any current or future PRC subsidiaries. In addition, shares of our PRC subsidiaries will not be pledged for the benefit of the holders of the New Notes. Our primary assets are loans to and ownership interests in our PRC subsidiaries, which are held through the Subsidiary Guarantors. The Subsidiary Guarantors do not have material operations. Accordingly, our ability to pay principal and interest on the New Notes and the ability of the Subsidiary Guarantors to satisfy their obligations under the Subsidiary Guarantees will depend upon our receipt of principal and interest payments on the intercompany loans and distributions of dividends from our subsidiaries. See “— Risks Relating to the PRC — Governmental control over currency conversion may limit our ability to utilize our cash effectively.”

Creditors, including trade creditors of our PRC subsidiaries and any holders of preferred shares in such entities, would have a claim on such subsidiaries and assets that would be prior to the claims of holders of the New Notes. As a result, our payment obligations under the New Notes will be effectively subordinated to all existing and future obligations of such subsidiaries, and all claims of creditors of our PRC subsidiaries will have priority as to the assets of such entities over our claims and those of our creditors, including holders of the New Notes. As of December 31, 2020, our PRC subsidiaries had indebtedness in the amount of RMB1,059.0 million (US\$162.3 million). See “Description of Other Material Indebtedness.” The New Notes and the Indenture limit the ability of our subsidiaries, including our PRC subsidiaries, to incur debt. However, these limitations are subject to significant exceptions. In addition, our secured creditors or those of any Subsidiary Guarantor would have priority as to our assets or the assets of such Subsidiary Guarantor securing the related obligations over claims of holders of the New Notes to the extent such assets do not also secure such claims.

We have substantial indebtedness and may incur substantial additional indebtedness in the future, which could adversely affect our financial health and our ability to generate sufficient cash to satisfy our outstanding and future debt obligations.

We now have, and will continue to have after the offering of the New Notes, a substantial amount of indebtedness. As of December 31, 2018, 2019 and 2020, our total borrowings (including the 2022 Notes, long-term borrowings and short-term borrowings) amounted to RMB3,270.6 million, RMB4,937.2 million and RMB2,925.6 million (US\$448.4 million), respectively.

Our substantial indebtedness could have important consequences to you. For example, it could:

- limit our ability to satisfy our obligations under the New Notes and other debt;
- increase our vulnerability to adverse general economic and industry conditions;
- require us to dedicate a substantial portion of our cash flow from operations to servicing and repaying our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and for other general corporate purposes;
- limit our flexibility in planning for or reacting to changes in our businesses and the industry in which we operate;
- place us at a competitive disadvantage compared to our competitors that have less debt;
- limit, along with the financial and other restrictive covenants of our indebtedness, among other things, our ability to borrow additional funds;
- increase the cost of additional financing; and
- affect our net profit.

In the future, we may from time to time incur substantial additional indebtedness and contingent liabilities. Although the Indenture governing the New Notes restricts us and our Restricted Subsidiaries from incurring additional debt and contingent liabilities, these restrictions are subject to important exceptions and qualifications. Under such covenant, we may incur (i) certain Permitted Indebtedness or (ii) additional indebtedness if we can, among other things, satisfy the Fixed Charge Coverage Ratio. The Fixed Charge Coverage Ratio is derived by dividing Consolidated EBITDA by Consolidated Fixed Charges. Because our definition of Consolidated Interest Expense (which is a significant component of Consolidated Fixed Charges) for the New Notes excludes (i) the interest expense on indebtedness of third parties that we guarantee (except to the extent that such interest expense is actually paid by us) and (ii) any distributions incurred, accrued or payment on any Perpetual Security Obligation that is accounted for as equity in accordance with the relevant generally accepted accounting principles, our Consolidated Interest Expense and our ability to incur additional debt could be even larger when compared to other similarly situated PRC senior notes issuers whose covenants would typically include such interest expense in the definition of consolidated interest expense. In addition, because our definition of Consolidated EBITDA includes the Consolidated Net Income of non-Wholly Owned Restricted Subsidiaries attributable

to third party shareholders (other than to the extent of any payments, distributions or amounts paid to such third party shareholders), our Consolidated EBITDA and our ability to incur additional debt could be even larger when compared to other similarly situated PRC senior notes issuers whose definition of Consolidated EBITDA would typically exclude such Consolidated Net Income of non-Wholly Owned Restricted Subsidiaries. If we or our subsidiaries incur additional debt, the risks that we face as a result of our already substantial indebtedness and leverage could intensify.

Our ability to generate sufficient cash to satisfy our outstanding and future debt obligations will depend upon our future operating performance, which will be affected by prevailing economic conditions and financial, business and other factors, many of which are beyond our control. We anticipate that our operating cash flow will be sufficient to meet our anticipated operating expenses and to service our debt obligations as they become due. However, we may not generate sufficient cash flow for these purposes. If we are unable to service our indebtedness, we will be forced to adopt an alternative strategy that may include actions such as reducing or delaying capital expenditures, selling assets, restructuring or refinancing our indebtedness or seeking equity capital. These strategies may not be instituted on satisfactory terms, if at all.

In addition, the terms of the Indenture prohibit us from incurring additional indebtedness unless (i) we are able to satisfy certain financial ratios or (ii) we are able to incur such additional indebtedness pursuant to any of the exceptions to the financial ratios requirements and meet any other applicable restrictions. Our ability to meet our financial ratios may be affected by events beyond our control. We cannot assure you that we will be able to meet these ratios. Certain of our other financing arrangements also impose operating and financial restrictions on our business. See “Description of Other Material Indebtedness.” Such restrictions in the New Notes and our other financing arrangements may negatively affect our ability to react to changes in market conditions, take advantage of business opportunities, obtain future financing, fund required capital expenditures, or withstand a continuing or future downturn in our business. Any of these factors could materially and adversely affect our ability to satisfy our obligations under the New Notes and other debt.

Our subsidiaries are subject to restrictions on the payment of dividends and the repayment of intercompany loans or advances to us and our subsidiaries.

As a holding company, we depend on the receipt of dividends and the interest and principal payments on intercompany loans or advances from our subsidiaries, including our PRC subsidiaries, to satisfy our obligations, including our obligations under the New Notes. The ability of our subsidiaries to pay dividends and make payments on intercompany loans or advances to their shareholders is subject to, among other things, distributable earnings, cash flow conditions, restrictions contained in the articles of association of our subsidiaries, applicable laws and restrictions contained in the debt instruments of such subsidiaries. These restrictions could have a negative impact on the calculation of our EBITDA and could also reduce the amounts that we receive from our subsidiaries, which would restrict our ability to meet our payment obligations under the New Notes and the ability of the Subsidiary Guarantors to satisfy their obligations under the Subsidiary Guarantees. In addition, if any of our subsidiaries raises capital by issuing equity securities to third parties, dividends declared and paid with respect to such shares would not be available to us to make payments on the New Notes.

PRC laws and regulations permit payment of dividends only out of accumulated profits as determined in accordance with PRC accounting standards and regulations. Our PRC subsidiaries are also required to set aside a portion of their after-tax profits according to PRC accounting standards and regulations to fund certain reserves that are not distributable as cash dividends by the board of directors. In addition, since January 1, 2008, dividends paid by our PRC subsidiaries to their non-PRC parent companies have been subject to a 10% withholding tax, unless there is a tax treaty between the PRC and the jurisdiction in which the overseas parent company is incorporated, which specifically exempts or reduces such withholding tax. Pursuant to a double tax treaty between Hong Kong and the PRC, if the non-PRC parent company is a Hong Kong resident and directly holds a 25% or more interest in the PRC enterprise, such withholding tax rate may be lowered to 5%. However, according to a Circular of the PRC State Administration of Taxation dated February 3, 2018, tax treaty benefits will be denied to companies without substantive business activities. As a result of such limitations, there could be timing limitations on payments from our PRC subsidiaries to meet payments required by the New Notes or satisfy our obligations under the Subsidiary Guarantees, and there could be restrictions on payments required to redeem the New Notes at maturity or as required for any early redemption.

Furthermore, in practice, the market interest rate that our PRC subsidiaries can pay with respect to offshore loans generally may not exceed comparable interest rates in the international finance markets. The interest rates on shareholders' loans paid by our subsidiaries, therefore, are likely to be lower than the interest rate for the New Notes. Our PRC subsidiaries are also required to pay a 10% (or 7% if the interest is paid to a Hong Kong resident, subject to approval by local tax authorities) withholding tax on our behalf on the interest paid under any shareholders' loans. PRC regulations require our non-PRC subsidiaries making shareholder loans in foreign currencies to our PRC subsidiaries to be registered with foreign exchange authorities. Prior to payment of interest and principal on any such shareholder loan, the PRC subsidiaries must present evidence of payment of the withholding tax on the interest payable on any such shareholder loan and evidence of registration with foreign exchange authorities, as well as any other documents that foreign exchange authorities may require.

As a result of the foregoing, we cannot assure you that we will have sufficient cash flow from dividends or payments on intercompany loans or advances from our subsidiaries to satisfy our obligations under the New Notes or the obligations of the Subsidiary Guarantors under the Subsidiary Guarantees.

The terms of the New Notes give us enhanced flexibility to pay substantial amounts of dividends.

We pay dividends to our shareholders from time to time. Under the Indenture, any such dividend payment will be a "Restricted Payment," which cannot be made unless we can, among other things, satisfy the Fixed Charge Coverage Ratio. However, such restriction is subject to important exceptions and qualifications. Under the terms of the New Notes, we may pay dividends on our common stock in an aggregate amount up to 20% of our profit for the immediately prior fiscal year without satisfying the Fixed Charge Coverage Ratio. With such an exception, we may be able to pay substantial amounts of dividends even when we are highly leveraged, which may materially and adversely affect our ability to service our indebtedness, including the New Notes.

We may be subject to risks presented by fluctuations in exchange rates between the Renminbi and other currencies, particularly the U.S. dollar.

The New Notes are denominated in U.S. dollars, while a majority of our turnover are generated by our PRC operating subsidiaries and are denominated in Renminbi. Pursuant to reforms of the exchange rate system announced by the PBOC on July 21, 2005, Renminbi-to-foreign currency exchange rates are allowed to fluctuate within a narrow and managed band against a basket of foreign currencies, rather than being effectively linked to the U.S. dollar. Further, from May 18, 2007, the PBOC enlarged the floating band for the trading prices in the inter-bank foreign exchange market of the Renminbi against the U.S. dollar from 0.3% to 0.5% around the central parity rate, effective on May 21, 2007. This allows the Renminbi to fluctuate against the U.S. dollar by up to 0.5% above or below the central parity rate published by the PBOC. The floating band was further widened to 1.0% on April 16, 2012. The floating band was further widened to 2.0% on March 17, 2014. The PBOC announces the closing price of a foreign currency traded against the Renminbi in the inter-bank foreign exchange market after the closing of the market on each working day, and makes it the central parity for trading against the Renminbi on the following working day. Effective since August 11, 2015, market makers are required to quote their central parity rates for Renminbi against U.S. dollar to the China Foreign Exchange Trade System daily before the market opens by reference to the closing rate of the PRC inter-bank foreign exchange market on the previous trading day in conjunction with the demand and supply conditions in the foreign exchange markets and exchange rate movements of major currencies. PBOC has further authorized the China Foreign Exchange Trade System to announce its central parity rate for Renminbi against the U.S. dollar through a weighted averaging of the quotes from the market makers after removing the highest quote and the lowest quote. The PRC government may adopt further reforms of its exchange rate system, including making the Renminbi freely convertible in the future. If such reforms were implemented and resulted in devaluation of the Renminbi against the U.S. dollar, our financial condition and results of operations could be adversely affected because of our substantial U.S. dollar denominated indebtedness and other obligations. Such a devaluation could also adversely affect the value, translated or converted into U.S. dollars or otherwise, of our earnings and our ability to satisfy our obligations under the New Notes.

There are limited hedging instruments available in China to reduce our exposure to exchange rate fluctuations between the Renminbi and other currencies. In addition, following the offering of the New Notes, we may enter into foreign exchange or interest rate hedging agreements in respect of our U.S. dollar-denominated liabilities under the New Notes. These hedging agreements may require us to pledge or transfer cash and other collateral to secure our obligations under the agreements, and the amount of collateral required may increase as a result of mark-to-market adjustments. The Initial Purchasers or certain of their respective affiliates may enter into such hedging agreements permitted under the Indenture governing the New Notes, and these agreements may be secured by pledges of our cash and other assets as permitted under the Indenture. If we were unable to provide such collateral, it could constitute a default under such agreements.

Any hedging obligation entered into or to be entered into by us or our subsidiaries, may contain terms and conditions that may result in the early termination, in whole or in part, of such hedging obligation upon the occurrence of certain termination or analogous events or conditions (howsoever described), including such events relating to us and/or any of our subsidiaries, and the terms and conditions of such hedging obligation(s) may provide that, in respect of any such early termination, limited or no payments may be due and payable to, or that certain payments may be due and payable by, us and/or any of our subsidiaries (as relevant) in respect of any such early termination. Any such early termination, in whole or in part, of any such hedging obligation(s), and the payment and any other consequences and effects of such early termination(s), may be material to our financial condition and/or any of our subsidiaries and may be material in relation to the performance of our or their respective obligations under or in relation to the New Notes (if applicable), any indebtedness or any other present or future obligations and commitments.

We may not be able to repurchase the New Notes upon a change of control triggering event.

Upon the occurrence of a change of control triggering event, the holder of each Note will have the option to require us to redeem all or some of the holder's Notes at a purchase price equal to 101% of the principal amount plus accrued and unpaid interest. See "Description of the New Notes."

The source of funds for any such purchase would be our available cash or third-party financing. However, we may not have enough available funds at the time of the occurrence of any change of control triggering event to make purchases of the outstanding New Notes. Our failure to make the offer to purchase or to purchase the outstanding New Notes would constitute an event of default under the New Notes. The event of default may, in turn, constitute an event of default under other indebtedness, any of which could cause the related debt to be accelerated after any applicable notice or grace periods. If our other debt were to be accelerated, we may not have sufficient funds to purchase the New Notes and repay the debt.

In addition, the definition of change of control triggering event for purposes of the Indenture governing the New Notes does not necessarily afford protection for the holders of the New Notes in the event of some highly leveraged transactions, including certain acquisitions, mergers, refinancings, restructurings or other recapitalizations, although these types of transactions could increase our indebtedness or otherwise affect our capital structure or credit ratings. The definition of change of control triggering event for purposes of the Indenture governing the New Notes also includes a phrase relating to the sale of "all or substantially all" of our assets. Although there is a limited body of case law interpreting the phrase "substantially all," there is no precise established definition under applicable law. Accordingly, our obligation to make an offer to purchase the New Notes, and the ability of a holder of the New Notes to require us to purchase its New Notes pursuant to the offer as a result of a highly-leveraged transaction or a sale of less than all of our assets may be uncertain.

We may be able to redeem the New Notes in whole at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest in the event we are required to pay additional amounts because we are treated as a PRC “resident enterprise.”

In the event we are treated as a PRC “resident enterprise” under the EIT Law, we may be required to withhold PRC tax on interest payable to certain of our non-resident investors. In such case, we will, subject to certain exceptions, be required to pay such additional amounts as will result in receipt by a holder of a New Note of such amounts as would have been received by the holder had no such withholding been required. As described under “Description of the New Notes — Redemption for Taxation Reasons,” in the event we are required to pay additional amounts as a result of certain changes in or interpretations of tax law, including any change or interpretation that results in our being required to withhold tax on interest payments as a result of our being treated as a PRC “resident enterprise,” we may redeem the New Notes in whole at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest.

We have designated and will designate certain subsidiaries under the indenture governing the 2022 Notes and the Indenture, as the case may be, and may designate other subsidiaries, as Unrestricted Subsidiaries subject to the conditions set forth in the indenture governing the 2022 Notes and the Indenture and after such designation, those subsidiaries generally will not be subject to various covenants under the Indenture

We are permitted to designate certain of our subsidiaries as Unrestricted Subsidiaries under the Indenture and our existing indenture governing the 2022 Notes, subject to certain conditions. Our Unrestricted Subsidiaries are generally not be subject to the restrictive covenants in the Indenture and our existing indenture governing the 2022 Notes. As of the date of this offering memorandum, we have designated Anton Oilfield Services International Company Limited (安東油田服務國際有限公司) (“Anton Oilfield International”) and its subsidiaries as Unrestricted Subsidiaries under our indenture governing the 2022 Notes, and will designate Anton Oilfield International and its subsidiaries as Unrestricted Subsidiaries under the Indenture. See “Business — Principal Services and Products — Integrated Service Model” for the reasons for the designation and “Description of the New Notes” for a full list of our existing Unrestricted Subsidiaries. The effects of designation of a subsidiary as an Unrestricted Subsidiary include, but are not limited to: (i) the business, assets and liabilities of such subsidiary will no longer be part of the credit underlying the 2022 Notes and the New Notes; (ii) such subsidiary will not be subject to the restrictive covenants applicable to Restricted Subsidiaries under the Indenture or the indenture governing the 2022 Notes; (iii) as applicable, the Subsidiary Guarantees of such subsidiary may be released; and (iv) interest expenses on Indebtedness (as defined in the Indenture) of such subsidiary will not be included in the calculation of our Consolidated Interest Expense (as defined under “Description of the New Notes — Definitions”), other than such interest expenses on indebtedness that is guaranteed and is actually paid by the Company or a Restricted Subsidiary. As a result of any such designation, the value of assets subject to the restrictive covenants under the Indenture may decrease and the market pricing and trading of the New Notes may be materially affected. Accordingly, you are cautioned as to our intended initial designation of Unrestricted Subsidiaries under the Indenture, and our ability to designate further Unrestricted Subsidiaries subject to the conditions set forth in the Indenture.

The terms of the New Notes permit us to make investments in Unrestricted Subsidiaries and minority owned joint ventures.

In light of oil and gas prices, sizes of projects and other factors, we may from, time to time, consider developing oil and gas service business or other related businesses jointly with selected business partners. As a result, we may need to make investments in joint ventures (including joint ventures in which we may own less than a 50% equity interest) and such joint ventures may or may not be Restricted Subsidiaries. Although the Indenture restricts us and our Restricted Subsidiaries from making investments in Unrestricted Subsidiaries or minority joint ventures, these restrictions are subject to important exceptions and qualifications, including, among others, that we may, subject to certain conditions, make investments in any Unrestricted Subsidiaries and minority owned joint ventures primarily engaged in a permitted business up to an aggregate amount of up to 15% of our total assets without satisfying the Fixed Charge Coverage Ratio. See “Description of the New Notes.”

Noteholders may be unable to enforce their rights under U.S. bankruptcy law.

We are incorporated under the laws of the Cayman Islands, and our principal assets are located in the PRC. Under federal bankruptcy law in the United States, courts typically have jurisdiction over a debtor's property, wherever located, including property situated in other countries. However, courts outside of the United States may not recognize the United States bankruptcy court's jurisdiction. Accordingly, difficulties may arise in administering a United States bankruptcy case involving a Cayman Islands, British Virgin Islands or Hong Kong debtor with property located outside of the United States, and any orders or judgments of a bankruptcy court in the United States may not be enforceable outside of the United States.

The insolvency laws of the Cayman Islands and other local insolvency laws may differ from U.S. bankruptcy law or those of another jurisdiction with which holders of the New Notes are familiar.

Because we are incorporated under the laws of the Cayman Islands, an insolvency proceeding relating to us, even if brought in the United States, would likely involve Cayman Islands insolvency laws, the procedural and substantive provisions of which may differ from comparable provisions of United States federal bankruptcy law. In addition, the Subsidiary Guarantors are incorporated in the British Virgin Islands or Hong Kong and the insolvency laws of the British Virgin Islands and Hong Kong may also differ from the laws of the United States or other jurisdictions with which the holders of the New Notes are familiar.

We may be unable to obtain and remit foreign exchange.

Our ability to satisfy our obligations under the New Notes depends solely upon the ability of our subsidiaries in the PRC to obtain and remit sufficient foreign currency to pay dividends to us and to repay shareholder loans. Our PRC subsidiaries must present certain documents to SAFE, its authorized branch, or the designated foreign exchange bank, for approval before they can obtain and remit foreign currencies out of the PRC (including, in the case of dividends, evidence that the relevant PRC taxes have been paid and, in the case of shareholder loans, evidence of the registration of the loan with SAFE). Prior to payment of interest and principal on any shareholder loan we make to our PRC subsidiaries, the relevant PRC subsidiary must also present evidence of payment of the 10% (or 7% if the interest is paid to a Hong Kong resident, subject to approval by local tax authorities) withholding tax on the interest payable in respect of such shareholder loan. If any PRC subsidiary for any reason fails to satisfy any of the PRC legal requirements for remitting foreign currency payments, the PRC subsidiary will be unable to pay us dividends or interest and principal on our existing shareholder loans, which may affect our ability to satisfy our obligations under the New Notes.

If we are unable to comply with the restrictions and covenants in our debt agreements or the Indenture, there could be a default under the terms of these agreements or the Indenture, which could cause repayment of our debt to be accelerated.

If we are unable to comply with the restrictions and covenants in the Indenture governing the New Notes, or our current or future debt obligations and other agreements, there could be a default under the terms of these agreements. In the event of a default under these agreements, the holders of the debt could terminate their commitments to lend to us, accelerate repayment of the debt and declare all amounts borrowed due and payable or terminate the agreements, as the case may be. Furthermore, some of our debt agreements, including the Indenture, contain cross-acceleration or cross-default provisions. As a result, our default under one debt agreement may cause the acceleration of repayment of debt, including the New Notes, or result in a default under our other debt agreements, including the Indenture. If any of these events occur, we cannot assure you that our assets and cash flow would be sufficient to repay in full all of our indebtedness, or that we would be able to find alternative financing. Even if we could obtain alternative financing, we cannot assure you that it would be on terms that are favorable or acceptable to us.

Our operations are restricted by the terms of the New Notes and other debt agreements, which could limit our ability to plan for or to react to market conditions or meet our capital needs, which could increase your credit risk.

The Indenture and other debt agreements include a number of significant restrictive covenants. These covenants restrict, among other things, our ability, and the ability of our Restricted Subsidiaries, to:

- incur or guarantee additional indebtedness and issue disqualified or preferred stock;
- make investments or other specified restricted payments;
- issue or sell capital stock of Restricted Subsidiaries;
- guarantee indebtedness of Restricted Subsidiaries;
- sell assets;
- create liens;
- enter into sale and leaseback transactions;
- enter into agreements that restrict the Restricted Subsidiaries' ability to pay dividends, transfer assets or make intercompany loans;
- enter into transactions with shareholders or affiliates; and
- effect a consolidation or merger.

These covenants could limit our ability to plan for or react to market conditions or to meet our capital needs. Our ability to comply with these covenants may be affected by events beyond our control, and we may have to curtail some of our operations and growth plans to maintain compliance.

A trading market for the New Notes may not develop, and there are restrictions on resale of the New Notes.

The New Notes are a new issue of securities for which there is currently no trading market. Application has been made to the SEHK for the listing of, and permission to deal in, the New Notes by way of debt issues to Professional Investors only as described in this offering memorandum. However, we cannot assure you that we will obtain or be able to maintain a listing on the SEHK, or that if listed, a liquid trading market will develop. We have been advised that the Initial Purchasers intend to make a market in the New Notes, but the Initial Purchasers are not obligated to do so and may discontinue such market making activity at any time without notice. In addition, the New Notes are being offered pursuant to exemptions from registration under the Securities Act and, as a result, you will only be able to resell your New Notes in transactions that have been registered under the Securities Act or in transactions not subject to or exempt from registration under the Securities Act. See "Transfer Restrictions." We cannot predict whether an active trading market for the New Notes will develop or be sustained.

Certain transactions that constitute "connected transactions" under the Listing Rules will not be subject to the "Limitation on Transactions with Shareholders and Affiliates" covenant.

Our shares are listed on the SEHK, and we are required to comply with the Listing Rules, which provide, among other things, that any transaction between a listed company or any of its subsidiaries, on the one hand, and a "connected person" of such listed company, on the other hand, is a "connected transaction" that, if the value of such transaction exceeds the applicable *de minimis* thresholds, will require the prior approval of the independent shareholders of such listed company. The definition of "connected person" to a listed company includes, among others, any 10% or more shareholder of (i) such listed company or (ii) any subsidiary of such listed company. The concept of "connected person" also captures "associates," which include, among others, (a) any subsidiary of such "connected person," (b) any holding

company of such “connected person” and any subsidiary of such holding company, and (c) any company in which such entity or entities mentioned in (a) and (b) above taken together has/have the power to exercise control, directly or indirectly, of 30% or more of the voting power of such company.

The “Limitation on Transactions with Shareholders and Affiliates” covenant in the New Notes only applies to transactions between the Company or any Restricted Subsidiary, on the one hand, and (x) any holder (or any Affiliate of such holder) of 10% or more of the shares of the Company or (y) any Affiliate of the Company, on the other hand. As such, transactions between the Company or any Restricted Subsidiary, on the one hand, and an Affiliate of any Restricted Subsidiary, on the other hand, will not be captured by such covenant, even though they may be connected transactions under the Listing Rules and subject to any requirements under the Listing Rules to obtain approval from independent shareholders. As a result, we are not required by the terms of the New Notes to ensure that any such transactions are on terms that are fair and reasonable, and we will not need to deliver officers’ certificates or procure the delivery of fairness opinions of accounting, appraisal or investment banking firms to the trustee of the New Notes for any such transactions.

The liquidity and price of the New Notes following the offering may be volatile.

The price and trading volume of the New Notes may be highly volatile. Factors such as variations in our turnover, earnings and cash flows and proposals for new investments, strategic alliances and/or acquisitions, interest rates, fluctuations in price for comparable companies and government regulations and changes thereof applicable to our industry and general economic conditions nationally or internationally could cause the price of the New Notes to change. Any such developments may result in large and sudden changes in the trading volume and price of the New Notes. We cannot assure you that these developments will not occur in the future.

The New Notes will initially be held in book-entry form, and therefore you must rely on the procedures of the relevant clearing systems to exercise any rights and remedies.

The New Notes will initially only be issued in global certificated form and held through Euroclear and Clearstream. Interests in the global New Notes representing the New Notes will trade in book-entry form only, and New Notes in definitive registered form will be issued in exchange for book-entry interests only in very limited circumstances. Owners of book-entry interests will not be considered owners or holders of the New Notes for purposes of the Indenture. Accordingly, you must rely on the procedures of Euroclear and Clearstream, and if you are not a participant in Euroclear or Clearstream, on the procedures of the participant through which you own your interest, to exercise any rights and obligations of a holder of the New Notes under the Indenture. Upon the occurrence of an Event of Default under the Indenture, unless and until definitive registered New Notes are issued with respect to all book-entry interests, if you own a book-entry interest, you will be restricted to acting through the relevant clearing system. The procedures to be implemented through Euroclear and Clearstream may not be adequate to ensure the timely exercise of rights under the New Notes. See “Description of the New Notes — Book-Entry; Delivery and Form.”

Certain facts and statistics in this offering memorandum are derived from publications not independently verified by us, the Initial Purchasers, or our or their respective advisers.

Facts and statistics in this offering memorandum relating to China’s and the global economy and the oilfield service industry are derived from publicly available sources. While we have taken reasonable care to ensure that the facts and statistics presented are accurately reproduced from such sources, they have not been independently verified by us, the Initial Purchasers or our or their respective advisers, and, therefore, we make no representation as to the accuracy of such facts and statistics, which may not be consistent with other information compiled within or outside China. Due to possibly flawed or ineffective calculation and collection methods and other problems, the facts and statistics herein may be inaccurate or may not be comparable to facts and statistics produced for other economies and should not be unduly relied upon. Further, we cannot assure you that they are stated or compiled on the same basis or with the same degree of accuracy as may be the case elsewhere.

Our corporate ratings or the ratings on the New Notes may be lowered or withdrawn in the future.

The New Notes are expected to be rated B1 by Moody's. Additionally, we have been assigned a long-term corporate credit rating of B1 with a negative outlook by Moody's. A rating is not a recommendation to buy, sell or hold securities and may be subject to revision, suspension or withdrawal at any time. We cannot assure you that a rating will remain for any given period of time or that a rating will not be lowered or withdrawn entirely by the relevant rating agency if in its judgment circumstances in the future so warrant. We have no obligation to inform holders of the New Notes of any such revision, downgrade or withdrawal.

The New Notes are subject to optional redemption by us.

As set forth in "Description of the New Notes — Optional Redemption," the New Notes may be redeemed at our option in the circumstances set out therein. An optional redemption feature is likely to limit the market value of the New Notes. During any period when we may elect to redeem the New Notes, the market value of those New Notes generally will not rise substantially above the price at which they can be redeemed. This may also be the case prior to any redemption period. We may be expected to redeem the New Notes when the current financing cost is lower than the interest rate on the New Notes. In such case, a holder of the New Notes generally would not be able to reinvest the redemption proceeds at an effective interest rate as high as the interest rate on the New Notes being redeemed and may only be able to reinvest so at a significantly lower rate. It may therefore cause a negative financial impact on the holders of the New Notes. Potential investors should consider reinvestment risk in light of other investments available at that time.

Risks Relating to the Subsidiary Guarantees

Our initial Subsidiary Guarantors do not currently have significant operations.

None of our current PRC subsidiaries will provide a Subsidiary Guarantee either upon issuance of the New Notes or at any time thereafter. No future subsidiaries that are organized under the laws of the PRC or their PRC or non-PRC subsidiaries will provide a Subsidiary Guarantee at any time in the future. In addition, certain of our future offshore subsidiaries will not be required to guarantee the New Notes if the consolidated assets of all our offshore subsidiaries that do not guarantee the New Notes (other than the Exempted Subsidiaries and Listed Subsidiaries) do not exceed 20% of our total assets. As a result, the New Notes will be effectively subordinated to all the debt and other obligations, including contingent obligations and trade payables, of the PRC subsidiaries and the other Non-Guarantor Subsidiaries.

Under the terms of the New Notes, a Subsidiary Guarantor may be able to release its Subsidiary Guarantee if it sells or issues no less than 20.0% of the Capital Stock of such Subsidiary Guarantor to a third party, as long as the consolidated assets of all Restricted Subsidiaries organized outside the PRC (other than the Exempted Subsidiaries and Listed Subsidiaries) that are not Subsidiary Guarantors do not account for more than 20% of our total assets.

Certain initial Subsidiary Guarantors that will guarantee the New Notes do not have significant operations. Almost all of our revenue and income (as shown in our consolidated financial information included elsewhere in this offering memorandum) are attributed to our PRC and oversea operating subsidiaries and any contribution from direct operations of the Subsidiary Guarantors are immaterial. We cannot assure you that the initial Subsidiary Guarantors or any subsidiaries that may become Subsidiary Guarantors in the future will have the funds necessary to satisfy our financial obligations under the New Notes if we are unable to do so.

The Subsidiary Guarantees may be challenged under applicable insolvency or fraudulent transfer laws, which could impair the enforceability of the Subsidiary Guarantees.

Under bankruptcy laws, fraudulent transfer laws, insolvency laws in the British Virgin Islands or bankruptcy law, fraudulent transfer laws, insolvency or unfair preference or similar laws in Hong Kong and other jurisdictions where future Subsidiary Guarantors may be established or where insolvency

proceedings may be commenced with respect to any such Subsidiary Guarantor, a guarantee could be voided, or claims in respect of a guarantee could be subordinated to all other debts of that guarantor if, among other things, the guarantor, at the time it incurred the indebtedness evidenced by, or when it gives, its guarantee:

- incurred the debt with the intent to hinder, delay or defraud creditors or was influenced by a desire to put the beneficiary of the guarantee in a position which, in the event of the guarantor's insolvency, would be better than the position the beneficiary would have been in had the guarantee not been given;
- received less than reasonably equivalent value or fair consideration for the incurrence of such guarantee;
- was insolvent or rendered insolvent by reason of such incurrence;
- was engaged in a business or transaction for which the guarantor's remaining assets constituted unreasonably small capital; or
- intended to incur, or believed that it would incur, debts beyond its ability to pay such debts as they mature.

The measure of insolvency for purposes of the foregoing will vary depending on the laws of the jurisdiction which are being applied. Generally, however, a guarantor would be considered insolvent at a particular time if it were unable to pay its debts as they fell due or if the sum of its debts was then greater than all of its property at a fair valuation or if the present fair saleable value of its assets was then less than the amount that would be required to pay its probable liabilities in respect of its existing debt as it became absolute and matured. We cannot assure you that such limitation will be effective in preserving the enforceability of any of the Subsidiary Guarantees. In addition, a guarantee may be subject to review under applicable insolvency or fraudulent transfer laws in certain jurisdictions or subject to a lawsuit by or on behalf of creditors of the guarantors. In such case, the analysis set forth above would generally apply, except that the guarantee could also be subject to the claim that, since the guarantee was not incurred for the benefit of the guarantor, the obligations of the guarantor thereunder were incurred for less than reasonably equivalent value or fair consideration, and, as a result, such guarantee would be rendered void.

In an attempt to limit the applicability of insolvency and fraudulent transfer laws in certain jurisdictions, the obligations of the Subsidiary Guarantors under the Subsidiary Guarantees will be limited to the maximum amount that can be guaranteed by the applicable Subsidiary Guarantor without rendering the guarantee, as it relates to such Subsidiary Guarantor, voidable under such applicable insolvency or fraudulent transfer laws.

If a court voided a Subsidiary Guarantee, subordinated such guarantee to other indebtedness of the Subsidiary Guarantor, or held the Subsidiary Guarantee unenforceable for any other reason, holders of the New Notes would cease to have a claim against that Subsidiary Guarantor based upon such guarantee, would be subject to the prior payment of all liabilities (including trade payables) of such Subsidiary Guarantor, and would solely be creditors of us and any Subsidiary Guarantor whose guarantee was not voided or held unenforceable. We cannot assure you that, in such an event, after providing for all prior claims, there would be sufficient assets to satisfy the claims of the holders of the New Notes.

USE OF PROCEEDS

We estimate that the proceeds from this offering, after deducting the underwriting discounts and commissions and other estimated expenses payable by us in connection with this offering, will be approximately US\$82.9 million. We intend to use the net proceeds from this offering primarily to optimize our debt structure and refinance existing indebtedness and for general corporate purposes.

Pending application of the net proceeds of this offering, we intend to invest such net proceeds in “Temporary Cash Investments” as defined under the section entitled “Description of the New Notes.”

EXCHANGE RATE INFORMATION

PRC

The PBOC sets and publishes daily a base exchange rate with reference primarily to the supply and demand of Renminbi against a basket of currencies in the market during the prior day. The PBOC also takes into account other factors, such as the general conditions existing in the international foreign exchange markets. From 1994 to July 20, 2005, the conversion of Renminbi into foreign currencies, including Hong Kong dollars and U.S. dollars, was based on rates set daily by the PBOC on the basis of the previous day's inter-bank foreign exchange market rates and then current exchange rates in the world financial markets. During this period, the official exchange rate for the conversion of Renminbi to U.S. dollars remained generally stable. Although the PRC government introduced policies in 1996 to reduce restrictions on the convertibility of Renminbi into foreign currencies for current account items, conversion of Renminbi into foreign currencies for capital items, such as foreign direct investment, loan principals and securities trading, still requires the approval of SAFE and other relevant authorities. On July 21, 2005, the PRC government introduced a managed floating exchange rate system to allow the value of the Renminbi to fluctuate within a regulated band based on market supply and demand and by reference to a basket of currencies. On the same day, the value of the Renminbi appreciated by approximately 2% against the U.S. dollar.

On May 18, 2007, the PBOC enlarged the floating band for the trading prices in the inter-bank foreign exchange market of the Renminbi against the U.S. dollar from 0.3% to 0.5% around the central parity rate, effective on May 21, 2007. This allows the Renminbi to fluctuate against the U.S. dollar by up to 0.5% above or below the central parity rate published by the PBOC. The floating band was further widened to 1.0% on April 16, 2012. The floating band was further widened to 2.0% on March 17, 2014. The PBOC announces the closing price of a foreign currency traded against the Renminbi in the inter-bank foreign exchange market after the closing of the market on each working day, and makes it the central parity for trading against the Renminbi on the following working day. Effective since August 11, 2015, market makers are required to quote their central parity rates for Renminbi against U.S. dollar to the China Foreign Exchange Trade System daily before the market opens by reference to the closing rate of the PRC inter-bank foreign exchange market on the previous trading day in conjunction with the demand and supply conditions in the foreign exchange markets and exchange rate movements of major currencies. PBOC has further authorized the China Foreign Exchange Trade System to announce its central parity rate for Renminbi against the U.S. dollar through a weighted averaging of the quotes from the market makers after removing the highest quote and the lowest quote. The PBOC announces the closing price of a foreign currency traded against the Renminbi in the inter-bank foreign exchange market after the closing of the market on each working day, and makes it the central parity for the trading against the Renminbi on the following working day. The PRC government may adopt further reforms of its exchange rate system, including but not limited to making the Renminbi freely convertible in the future.

The following table sets forth the noon buying rate for U.S. dollars in New York City for cable transfer in Renminbi as certified for customs purposes by the Federal Reserve Bank of New York for the periods indicated:

Period	Noon buying rate			
	Period end	Average ⁽¹⁾	High	Low
		(RMB per US\$1.00)		
2015	6.4778	6.2869	6.4896	6.1870
2016	6.9430	6.6549	6.9580	6.4480
2017	6.5063	6.7530	6.9575	6.4773
2018	6.8755	6.6292	6.9737	6.2649
2019	6.9618	6.9014	7.1786	6.6822
2020	6.5250	6.8878	7.1681	6.5208
December	6.5250	6.5393	6.5705	6.5208
2021				
January	6.4282	6.4672	6.4822	6.4282
February	6.4730	6.4601	6.4869	6.4344
March	6.5518	6.5109	6.5716	6.4932
April	6.4749	6.5186	6.5649	6.4710
May	6.3674	6.4321	6.4749	6.3674
June (through June 18, 2021)	6.4525	6.4022	6.4525	6.3796

Note:

- (1) Determined by averaging the rates on the last business day of each month during the relevant year, except for monthly average rates, which are determined by averaging the daily rates during the respective months.

Hong Kong

The Hong Kong dollar is freely convertible into other currencies, including the U.S. dollar. Since October 17, 1983, the Hong Kong dollar has been linked to the U.S. dollar at the rate of HK\$7.80 to US\$1.00. The Basic Law of Hong Kong (the “Basic Law”), which came into effect on July 1, 1997, provides that no foreign exchange control policies shall be applied in Hong Kong.

The market exchange rate of the Hong Kong dollar against the U.S. dollar continues to be determined by the forces of supply and demand in the foreign exchange market. However, against the background of the fixed rate system which applies to the issuance and withdrawal of Hong Kong currency in circulation, the market exchange rate has not deviated significantly from the level of HK\$7.80 to US\$1.00. In May 2005, the Hong Kong Monetary Authority broadened the 22-year-old trading band from the original rate of HK\$7.80 per U.S. dollar to a rate range of HK\$7.75 to HK\$7.85 per U.S. dollar. The Hong Kong government has indicated its intention to maintain the link within that rate range. Under the Basic Law, the Hong Kong dollar will continue to circulate and remain freely convertible. However, no assurance can be given that the Hong Kong government will maintain the link within the current range or at all.

The following table sets forth the noon buying rate for U.S. dollars in New York City for cable transfer in Hong Kong dollars as certified for customs purposes by the Federal Reserve Bank of New York for the periods indicated:

Period	Noon buying rate			
	Period end	Average ⁽¹⁾	High	Low
		(HK per US\$1.00)		
2015	7.7507	7.7519	7.7686	7.7495
2016	7.7534	7.7618	7.8270	7.7505
2017	7.8128	7.7950	7.8267	7.7540
2018	7.8305	7.8376	7.8499	7.8043
2019	7.7894	7.8335	7.8499	7.7850
2020	7.7534	7.7562	7.7951	7.7498
December	7.7534	7.7519	7.7539	7.7505
2021				
January	7.7531	7.7533	7.7555	7.7517
February	7.7567	7.7529	7.7567	7.7515
March	7.7746	7.7651	7.7746	7.7562
April	7.7664	7.7691	7.7849	7.7596
May	7.7610	7.7654	7.7697	7.7608
June (through June 18, 2021)	7.7627	7.7604	7.7643	7.7566

Note:

- (1) Determined by averaging the rates on the last business day of each month during the relevant year, except for monthly average rates, which are determined by averaging the daily rates during the respective months.

CAPITALIZATION AND INDEBTEDNESS

The following table sets forth our indebtedness and capitalization as of December 31, 2020 on (i) an actual basis and (ii) on an adjusted basis after giving effect to the issuance of the New Notes in this offering after deducting the underwriting discounts and commissions and other estimated expenses payable by us in connection with this offering. The following table should be read in conjunction with our consolidated financial information and related notes included in this offering memorandum.

The as-adjusted information below is illustrative only and, other than disclosed under (ii) above, does not take into account any changes in our borrowings and capitalization after December 31, 2020.

	As of December 31, 2020			
	Actual		As adjusted	
	(RMB)	(US\$)	(RMB)	(US\$)
	(in thousands)			
Cash and cash equivalents	879,085	134,726	1,420,008	217,626
Current debt: ⁽¹⁾				
Short-term borrowings	763,953	117,081	763,953	117,081
Current portion of long-term				
bonds	11,034	1,691	11,034	1,691
Current portion of long-term				
borrowings	163,639	25,079	163,639	25,079
Total current debt	938,626	143,851	938,626	143,851
Non-current debt:				
Long-term bonds.....	1,855,625	284,387	1,855,625	284,387
Long-term borrowings	131,388	20,136	131,388	20,136
New Notes to be issued.....	—	—	540,923	82,900
Total non-current debt	1,987,013	304,523	2,527,936	387,423
Total equity	2,763,721	423,559	2,763,721	423,559
Total capitalization ⁽²⁾	4,750,734	728,082	5,291,657	810,982

Notes:

(1) Neither our current debt nor non-current debt include capital commitments. We do not have any material contingent liabilities.

(2) Total capitalization represents total non-current debt and total equity.

Except as otherwise disclosed in this offering memorandum, there has been no material adverse change in our indebtedness or capitalization since December 31, 2020.

SELECTED CONSOLIDATED FINANCIAL INFORMATION

The following table presents our summary financial and other data. Our consolidated financial statements as of and for the years ended December 31, 2019 and 2020 were audited by Deloitte Touche Tohmatsu, independent certified public accountants. Our consolidated financial statements have been prepared and presented in accordance with IFRS, which differ in certain respects from generally accepted accounting principles in other jurisdictions. The summary financial data below should be read in conjunction with our consolidated financial statements and the notes to those statements included elsewhere in this offering memorandum. Results for interim periods are not indicative of results for the full year. The summary financial data below should be read in conjunction with the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial information and the notes thereto included elsewhere in this offering memorandum. Historical results are not necessarily indicative of results that may be achieved in any future period.

Selected Consolidated Statement of Profit or Loss and Other Financial Data

	As of December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
	(in thousands)			
Revenue				
Goods and services	2,875,197	3,328,839	2,823,638	432,741
Rental.....	60,691	260,658	264,014	40,462
Total revenue	2,935,888	3,589,497	3,087,652	473,203
Cost of sales	(1,821,615)	(2,308,042)	(2,277,830)	(349,092)
Gross profit	<u>1,114,273</u>	<u>1,281,455</u>	<u>809,822</u>	<u>124,111</u>
Other gains, net.....	11,932	176	40,279	6,173
Impairment losses under expected credit loss model, net of reversal	(75,201)	(87,693)	(83,437)	(12,787)
Selling expenses.....	(171,152)	(193,298)	(175,487)	(26,895)
Administrative expenses.....	(197,241)	(215,403)	(198,959)	(30,492)
Research and development expenses.....	(28,002)	(51,682)	(56,327)	(8,632)
Sales tax and surcharges	(10,346)	(13,973)	(11,360)	(1,741)
Operating profit	<u>644,263</u>	<u>719,582</u>	<u>324,531</u>	<u>49,736</u>
Interest income.....	2,565	3,367	18,760	2,875
Finance expenses.....	(300,019)	(298,500)	(312,693)	(47,922)
Finance costs, net	<u>(297,454)</u>	<u>(295,133)</u>	<u>(293,933)</u>	<u>(45,047)</u>
Share of profit of a joint venture	355	762	141	22
Profit before income tax	<u>347,164</u>	<u>425,211</u>	<u>30,739</u>	<u>4,711</u>
Income tax expense.....	(96,443)	(142,791)	(114,499)	(17,548)
(Loss)/profit for the year	<u>250,721</u>	<u>282,420</u>	<u>(83,760)</u>	<u>(12,837)</u>
(Loss)/profit attributable to				
Owners of the Company	222,423	268,583	(95,844)	(14,689)
Non-controlling interests	28,298	13,837	12,084	1,852
	<u>250,721</u>	<u>282,420</u>	<u>(83,760)</u>	<u>(12,837)</u>
Other financial data (unaudited):				
EBITDA ⁽¹⁾	<u>1,314,923</u>	<u>1,505,399</u>	<u>1,065,539</u>	<u>163,301</u>
EBITDA margin ⁽²⁾	<u>44.8%</u>	<u>41.9%</u>	<u>34.5%</u>	<u>34.5%</u>

Notes:

- (1) We calculate EBITDA by adding depreciation, amortization, finance expenses, share of profit of a joint venture, asset impairment provisions to and deducting interest income from profit or loss before income tax expense. EBITDA is not a standard measure under IFRS and should not be considered as an alternative to cash flows from operating activities, a measure of liquidity or an alternative to net income as indicators of our operating performance or any other measures of liquidity, profitability or cash flows derived in accordance with IFRS. We have included EBITDA herein because we believe they are useful supplements to cash flow data as measures of our performance and our ability to generate cash from operations to service debt and pay taxes. EBITDA presented herein may not be comparable to similarly titled measures presented by other companies. Investors should not compare our EBITDA to EBITDA presented by other companies because not all companies use the same definition. Investors should also note that the EBITDA as presented herein are calculated differently from Consolidated EBITDA as defined and used in the Indenture governing the New Notes. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Non-GAAP Financial Measures” for a reconciliation of our profit for the year under IFRS to our EBITDA, and “Description of the New Notes — Definitions” for a description of the manner in which Consolidated EBITDA is defined for purposes of the Indenture governing the New Notes.
- (2) EBITDA margin is calculated by dividing EBITDA by revenue for the relevant period, expressed as a percentage.

Selected Consolidated Statement of Financial Position Data

	As of December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
	(in thousands)			
Assets				
Non-current assets				
Property, plant and equipment.....	2,255,805	2,137,866	2,099,390	321,746
Right-of-use assets.....	—	189,901	137,951	21,142
Prepaid lease payments.....	75,635	—	—	—
Goodwill.....	242,004	242,004	242,004	37,089
Intangible assets.....	252,714	259,986	273,652	41,939
Interest in a joint venture.....	3,046	3,808	3,949	605
Interest in an associate.....	—	2,000	2,000	307
Prepayments and other receivables.....	112,810	155,696	66,428	10,181
Other non-current assets.....	8,375	—	—	—
Deferred income tax assets.....	52,076	34,637	21,993	3,371
	<u>3,002,465</u>	<u>3,025,898</u>	<u>2,847,367</u>	<u>436,380</u>
Current assets				
Inventories.....	744,359	765,496	930,618	142,623
Prepaid lease payments.....	1,932	—	—	—
Trade and notes receivables.....	1,948,030	2,200,247	2,133,789	327,017
Contract assets.....	58,579	75,519	30,618	4,692
Prepayments and other receivables.....	437,958	648,048	605,475	92,793
Current portion of other non-current assets.....	5,694	—	—	—
Restricted bank deposits.....	330,948	368,730	454,169	69,604
Cash and cash equivalent.....	686,636	2,422,874	879,085	134,726
	<u>4,244,136</u>	<u>6,480,914</u>	<u>5,033,754</u>	<u>771,455</u>
Total assets	<u>7,246,601</u>	<u>9,506,812</u>	<u>7,881,121</u>	<u>1,207,835</u>
Equity				
Capital and reserves attributable to the owners of the Company				
Share capital.....	275,959	276,273	268,179	41,100
Reserves.....	2,369,915	2,625,865	2,357,933	361,369
	<u>2,645,874</u>	<u>2,902,138</u>	<u>2,626,112</u>	<u>402,469</u>
Non-controlling interests.....	48,688	55,525	137,609	21,090
Total equity	<u>2,694,562</u>	<u>2,957,663</u>	<u>2,763,721</u>	<u>423,559</u>

	As of December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
		(in thousands)		
Liabilities				
Non-current liabilities				
Long-term bonds	2,051,403	2,028,423	1,855,625	284,387
Long-term borrowings	243,341	202,426	131,388	20,136
Lease liabilities	—	69,259	31,771	4,869
Deferred income tax liabilities	10,440	10,219	9,998	1,532
	<u>2,305,184</u>	<u>2,310,327</u>	<u>2,028,782</u>	<u>310,924</u>
Current liabilities				
Short-term borrowings	879,192	497,749	763,953	117,081
Current portion of long-term bonds	14,498	2,116,445	11,034	1,691
Current portion of long-term borrowings	82,214	92,174	163,639	25,079
Trade and notes payables	714,091	957,406	1,403,295	215,064
Accruals and other payables	455,278	404,528	534,581	81,928
Lease liabilities	—	45,834	34,384	5,270
Contract liabilities	38,814	13,976	37,982	5,821
Current income tax liabilities	62,768	110,710	139,750	21,418
	<u>2,246,855</u>	<u>4,238,822</u>	<u>3,088,618</u>	<u>473,352</u>
Total liabilities	<u>4,552,039</u>	<u>6,549,149</u>	<u>5,117,400</u>	<u>784,276</u>
Total equity and liabilities	<u>7,246,601</u>	<u>9,506,812</u>	<u>7,881,121</u>	<u>1,207,835</u>
Net current assets	<u>1,997,281</u>	<u>2,242,092</u>	<u>1,945,136</u>	<u>298,103</u>
Total assets less current liabilities	<u>4,999,746</u>	<u>5,267,990</u>	<u>4,792,503</u>	<u>734,483</u>

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with the section entitled "Selected Consolidated Financial Information" and our consolidated financial information, including the notes thereto, included elsewhere in this offering memorandum. All significant intra-group transactions, balances and unrealized gains on intra-group transactions have been eliminated.

In this section of the offering memorandum, references to "2018," "2019" and "2020" refer to our financial years ended December 31, 2018, 2019 and 2020 respectively.

Our historical results do not necessarily indicate our performance for any future periods. The discussion and analysis of our financial condition and results of operations contain forward-looking statements that involve risks and uncertainties. In evaluating our business, you should carefully consider the information provided in the section entitled "Risk Factors" in this offering memorandum.

Overview

We are a leading, independent and integrated oilfield service provider with a global footprint, covering a number of major oil and gas basins in the world. We are an innovative company with a full suite of products and integrated solutions throughout the entire oil and gas development process. Our products and services encompass the full spectrum of oil and gas development stages and meet the diverse needs of our customers to maximize the value of their oil and gas assets. Our products and services are not only targeted solutions for different stages of oil and gas development, but also expert consulting services and integrated solutions.

We are committed to deepening our engagements within the global emerging markets of oil and gas development. We operate in more than 30 countries and regions, including China, the Middle East, Africa, Central China, Southeast Asia and Latin America. This truly global network provides us the agility to support and fulfill the service needs of our customers across the globe. We have been listed on the SEHK since December 2007.

We have strategically expanded our operations into overseas markets, including the Middle East and Central Asia and Africa, by implementing the "Belt and Road" initiative. In 2018, 2019 and 2020, our overseas revenue accounted for 63.1%, 53.1% and 40.6%, respectively, of our total revenue. In the domestic market, our operations in China span across China's major onshore oil and gas fields, including, in particular, the Tarim Basin, the Sichuan Basin and the Erdos Basin, three major basins in China. In 2018, 2019 and 2020, our domestic revenue accounted for 36.9%, 46.9% and 59.4%, respectively, of our total revenue.

We focus on the provision of oil and gas field development services to our customers. We engage in three business clusters, namely, drilling technology, well completion and oil production services. Our drilling technology cluster includes engineering technical services and products during the drilling stage to solve problems encountered in directional drilling, drilling assessment, drilling acceleration, enhanced reservoir contact and integrated drilling. Our well completion cluster includes well completion and stimulation services from integrated solutions for well cementing and completion, production well completion, equipment, tools and materials. Our oil production services cluster primarily focuses on workover services and production operation management services including integrated oilfield management and management and maintenance services for oilfield ground stations. Revenue from our drilling technology cluster contributed approximately 45.6%, 45.2% and 42.2%, respectively, of the total revenue in 2018, 2019 and 2020 revenue from our well completion cluster contributed approximately 25.3%, 23.3% and 24.3%, respectively, of the total revenue for the same periods, and revenue from our oil production cluster contributed approximately 29.1%, 31.5% and 33.5%, respectively, of the total revenue in for the same periods.

Significant Factors that Affect our Results of Operations

Our business, financial condition and results of operations are affected by a number of factors, many of which are beyond our control. See “Risk Factors.” Such factors include the following:

General economic environment

We provide our products and services in the oil and gas industry that is sensitive to changes in general economic conditions. Accordingly, our revenue, gross profit and financial condition depend significantly on general economic conditions and the impact of these conditions on demand for our products and services in the markets where we operate. Any slowdown in the economic growth in China and other regions where we operate our business may lower demand for our products and services and adversely affect us. As the oil and gas industry is sensitive to macroeconomic conditions, any negative trend in the global economy may also put pricing pressure on our services, which may adversely affect profitability. The financial and economic situation may also have a negative impact on our customers and third parties with whom we do, or may do, business. Any of these factors may affect our financial condition and results of operations.

In 2020, the onslaught of the COVID-19 pandemic plunged the world economy into a downturn. Oil prices fell precipitously and the oil and gas industry faced huge challenges. Although the demand for oilfield services in the domestic market remained buoyant, due to the significant dips in oil prices, clients reduced significantly the rates of service fulfillment. In the overseas markets, in order to contain the spread of the virus, countries around the world introduced travel restrictions and quarantine procedures, which prevented oil companies and service providers from deploying personnel to the field or moving equipment as freely as they did in normal times, and forced the suspension of many large-scale, asset-heavy projects. These practices significantly impacted the Group’s business in Iraq and other Belt and Road countries.

Demand for and supply of oil and natural gas

Demand for our products and services is sensitive to the level of exploration, development and production activities of, and the corresponding capital spending by, oil and natural gas companies, which are, in turn, driven by the demand for oil and natural gas and affected by the supply of oil and natural gas. Demand for and supply of oil and natural gas are affected by prices of oil and natural gas, energy consumption growth, price and production of alternative energy products, market uncertainty, political developments, government policy changes and a variety of other factors not within our control. A substantial increase in oil and natural gas prices tends to increase demand for oil and natural gas and the level of exploration, development and production activities, thus leading to increase in demand for our services, while a prolonged downturn in oil and gas prices such as the period between the second half of 2014 to early 2016 and early 2020, could depress the level of oilfield project activities and demand for our services.

However, the impact of fluctuations of oil and gas prices may be offset or overcome by other factors such as continuing world energy consumption growth. In addition, to maintain the sustainable growth of China’s economy, the PRC government is expected to continue to support oilfield exploration, development and production in China in the foreseeable future, while overseas countries, such as those in the Middle East, whose economies and state budgets rely heavily on the export of oil and oil by-products, are also expected to continue to support the oilfield industry. We also believe such expected growth in energy consumption and continued support of the oilfield industry by the PRC government and other countries where we operate will generate significant business opportunities for us. We believe our cost-competitive services will provide us with an advantage in the international and domestic markets where we compete for business opportunities, despite possible fluctuations in the oil and natural gas prices from time to time.

Development of oilfields and the level of exploration and production activities

The development of oilfields includes the discovery of new oilfields, the expansion of operations in existing oilfields and the development of marginal oilfields. The current overall level of exploration in some regions where we operate, including Iraq, Chad, Pakistan, Kazakhstan and China in particular, is still below that of some other major oil producing countries. We believe that China and some of our other target markets offer great potential for discovering new oilfields and sound growth opportunities for both exploration and production companies and oilfield services providers like us. The development of oilfields in the regions where we operate will increase the demand for oilfield services and related products, which would in turn have a positive impact on our results of operations. Conversely, a lack of new development of oilfields may dampen the demand for oilfield services and intensify the competition among the existing service providers in the market. For the years ended December 31 2018, 2019 and 2020, we derived substantial portion of our revenue from the Middle East, China and other emerging markets in Africa and Central Asia. We believe the determination from the PRC government to increase oil and gas production may also drive the state-owned oil companies to further open up upstream exploration and development work and outsource services to oilfield service providers.

Servicing capacity

Servicing capacity includes human resources, equipment capacity and the ability to introduce new services and products. A lack of human resources and equipment capacity to operate our integrated service model could have a material and adverse effect on our results of operations. If we fail to timely develop our integrated services to suit market needs, our revenue, operating cash flow and competitive position may be adversely affected. In the last few years, we have completed the optimization of our servicing capacity, which has enabled us to capture new opportunities in meeting the demand for oilfield services in certain emerging global markets, such as Iraq, Chad, Pakistan and Kazakhstan. These countries face a growing need for oilfield production and in particular, the supply of technology, equipment, materials and technical personnel required to facilitate production output. We have also developed a partner network and leveraged our partners' resources to provide equipment and technical personnel without incurring significant capital expenditure expenses. In addition, we have seen an increase in the demand for services for shale gas projects in the domestic market. We believe that we have built up sufficient servicing capability to meet such demand.

Change in laws, regulations and public policies

We currently have operations and assets mainly in the PRC and also in various foreign countries and regions, including the Middle East, the Americas, Central Asia and Africa. We may continue to expand our operations into additional countries to further enhance our competitiveness in the international market and diversify our geographic risk profile. The laws and regulations in the places where we operate regulating the oil and gas industry would have a significant impact on our operations.

China is pursuing measures in enhancing natural gas supply security in recent years. According to BP Statistical Review of World Energy 2020, China's natural gas consumption grew from 59.3 bcm in 2006 to 307.3 bcm in 2019, representing a CAGR of 13.5%. Despite such growth, natural gas accounted for only a small portion of China's primary energy consumption in 2019. The Chinese government stated its intention to increase this proportion to 10% by 2020 in its Energy Development 13th Five-Year Plan. In addition to energy mix targets, the current 13th Five-Year Plan aims to reduce carbon emissions per unit of GDP by 18% after the country surpassed its target of 17% by an additional 3% in the 12th Five-Year Plan. The rapid expansion of natural gas infrastructure underpins the Chinese government's commitment to accelerate the transition from coal to cleaner burning fuels such as natural gas in order to reduce carbon dioxide emissions. Our financial condition and result of operations are expected to benefit from such policies encouraging the growth of the natural gas industry, as we continue to invest in natural gas and unconventional resources development in the domestic market, and leveraged our technological strengths to actively secure service orders.

Our non-PRC interests could be affected by changes in governmental policies or social instability or other political, economic or diplomatic developments in or affecting these foreign nations which are beyond our control, including, among other things, changes in environmental, health and safety, and labor laws, the risks of war and terrorism, expropriation, nationalization, renegotiation or nullification of existing contracts, taxation policies, foreign exchange and repatriation restrictions, changing political conditions, foreign exchange rate fluctuations and currency controls. Our operations are subject to laws and regulations in countries where we operate. Changes in such laws and regulations could change environmental protection requirements and the amounts of taxes, royalties and other amounts payable to governments or governmental agencies. Such changes could also affect our financial condition and results of operations.

Seasonality

Historically, our revenue was higher in the second half of the year. The oilfield service industry typically has a revenue collection cycle of three to six months due to the nature of oil exploration and production operations, and more product and service deliveries and collections tend to occur in the second half of the year. Also, most of our customers are state-owned enterprises, which typically set an annual budget early in the year while incur more capital expenditures and other purchases later in the second half of the year. See “Risk Factors — Risks Relating to Our Business — The results of our operations are subject to seasonal variations.”

Increase in operational expenditure-driven revenue

Our revenue is generated from the services offered to oil and natural gas companies and affected by the level of their oil and gas exploration and production activities. In adjusting to the decline in oil and natural gas prices, we have diversified our revenue stream by increasing our operational expenditure-driven services such as oil production cluster services, relative to capital expenditure-driven services such as well completion cluster services, the general workover services and production operation maintenance services in Iraq, enabling us to become less susceptible to fluctuations in the capital expenditure budgets of oil and natural gas companies.

The availability and cost of adequate financing for our capital expenditures

We operate in a capital intensive industry and it is essential that we have adequate financing to support our business expansion in the future. We believe our competitiveness depends in part on our ability to make large capital expenditures, which are generally associated with acquisitions, refurbishments or replacements of our equipment, facilities and industrial bases. Therefore, we periodically require large amounts of capital to finance such acquisitions, construction and purchases. Our capital expenditure plans are subject to our ability to generate sufficient cash flows from our operations and the availability and terms of external financing. We aim to finance our business and other capital expenditures through internal funds, borrowings and other funds raised from capital markets, such as the proceeds from the issuance of our shares and debt offerings. As of December 31, 2020, our total borrowings (including the long-term and short-term borrowings and the 2022 Notes) amounted to RMB2,925.6 million (US\$448.4 million). The level of our borrowings and the total amount raised through other financing methods, as well as any fluctuations in our borrowing costs, will materially affect our finance costs, results of operations and financial condition. See “— Liquidity and Capital Resources.”

Cost of materials and staff costs

Cost of materials, including raw materials, parts and consumables, accounts for a major portion of our operating costs. Our material requirements are affected by the changes in our product and service mix as well as fluctuations in commodity prices such as steel and nonferrous metals, which affect the prices of drill pipe and coating materials. Staff costs also represent a major component of our cost of sales. As a technical service provider, we value our human resources as a strategic asset and place a strong emphasis on human resource management, including in the recruitment and profession development of our staff. We believe our staff is of vital importance in our implementation of the integrated service model of our business. As we expand our business, we expect our demand for materials and human resources will increase.

Critical Accounting Policies and Estimates

Critical accounting policies and estimates are those accounting policies and estimates that involve significant judgments and uncertainties and potentially yield materially different results under different assumptions and conditions. We prepare our consolidated financial information in conformity with IFRS, which requires that we adopt accounting policies and make estimates that, we believe, are the most appropriate in the circumstances for the purposes of giving a true and fair view of our results and financial condition. Estimates and judgments are based on our historical experience, prevailing market conditions and rules and regulations, and various other factors that we believe to be relevant under the circumstances, which are reviewed on a continual basis taking into account the changing environment and circumstances. Some of our accounting policies and estimates require a higher degree of judgment than others in their application. We believe the following accounting policies and estimates involve the most significant judgment in the preparation of our consolidated financial information:

Amendments to IFRSs that are mandatorily effective

We have applied the Amendments to References to the Conceptual Framework in IFRS Standards and the following amendments to IFRSs issued by the International Accounting Standards Board (“IASB”) for the first time, which are mandatorily effective for the annual period beginning on or after January 1, 2020 for the preparation of the 2020 consolidated financial statements:

Amendments to IAS 1 and IAS 8	<i>Definition of Material</i>
Amendments to IFRS 3	<i>Definition of a Business</i>
Amendments to IFRS 9, IAS 39 and IFRS 7	<i>Interest Rate Benchmark Reform</i>

The application of the Amendments to References to the Conceptual Framework in IFRS Standards and the amendments to IFRSs had no material impact on the our financial positions and performance for 2020 and prior years and/or on the disclosures set out in these consolidated financial statements.

New and amendments to IFRSs in issue but not yet effective

The Group has not early applied the following new and amendments to IFRSs that have been issued but are not yet effective:

IFRS 17	<i>Insurance Contracts and the related Amendments</i>
Amendment to IFRS 16	<i>Covid-19-Related Rent Concessions</i>
Amendments to IFRS 3	<i>Reference to the Conceptual Framework</i>
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16	<i>Interest Rate Benchmark Reform-Phase 2</i>
Amendments to IFRS 10 and IAS 28	<i>Sale or Contribution of Assets between an Investor and its Associate or Joint Venture</i>
Amendments to IAS 1	<i>Classification of Liabilities as Current or Non-current</i>
Amendments to IAS 1 and IFRS Practice Statement 2	<i>Disclosure of Accounting Policies</i>
Amendments to IAS 8	<i>Definition of Accounting Estimates</i>
Amendments to IAS 16	<i>Property, Plant and Equipment: Proceeds before Intended Use</i>
Amendments to IAS 37	<i>Onerous Contracts – Cost of Fulfilling a Contract</i>
Amendments to IFRS Standards	<i>Annual Improvements to IFRS Standards 2018-2020</i>

All of the above new and amendments to IFRSs are effective after for annual periods beginning on or after January 1, 2021. The Directors anticipate that the application of all new and amendments to IFRSs will have no material impact on the consolidated financial statements in the foreseeable future.

Revenue from contracts with customers

The Group has applied IFRS 15 retrospectively with the cumulative effect of initially applying this Standard recognised at the date of initial application, January 1, 2018. Any difference at the date of initial application is recognised in the opening retained earnings (or other components of equity, as appropriate) and comparative information has not been restated.

Under IFRS 15, the Group recognises revenue when (or as) a performance obligation is satisfied, i.e. when “control” of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good and service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met

- the customer simultaneously receives and consumes the benefits provided by the Group’s performance as the Group performs;
- the Group’s performance creates and enhances an asset that the customer controls as the Group performs; or
- the Group’s performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

A contract asset represents the Group’s right to consideration in exchange for goods or services that the Group has transferred to a customer that is not yet unconditional. It is assessed for impairment in accordance with IFRS 9. In contrast, a receivable represents the Group’s unconditional right to consideration, i.e. only the passage of time is required before payment of that consideration is due.

Contracts with multiple performance obligations (including allocation of transaction price)

For contracts that contain more than one performance obligations, typically drilling technology service and well completion service (within oilfield technology services) in one contract, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis.

The stand-alone selling price of the distinct good or service underlying each performance obligation is determined at contract inception. It represents the price at which the Group would sell a promised good or service separately to a customer. If a stand-alone selling price is not directly observable, the Group estimates it using appropriate techniques such that the transaction price ultimately allocated to any performance obligation reflects the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer.

Over time revenue recognition: measurement of progress towards complete satisfaction of a performance obligation

Output method

The progress towards complete satisfaction of a performance obligation is measured based on output method, which is to recognise revenue on the basis of direct measurements of the value of the goods or services transferred to the customer to date relative to the remaining goods or services promised under the contract, that best depict the Group’s performance in transferring control of goods or services.

Property, plant and equipment

Property, plant and equipment, other than construction in progress, are stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Construction-in-progress represents property, plant and equipment under construction and is stated at cost. This includes the costs of construction, machinery and other expenditures necessary for the purpose of preparing the construction-in-progress for its intended use and those borrowing costs incurred before the assets ready for intended use that are eligible for capitalisation. Construction-in-progress is not depreciated until such time as the relevant asset is completed and ready for its intended use.

Depreciation of property, plant and equipment is calculated using the straight-line method except for drill pipes are depreciated using unit-of-production method, to allocate their costs to their residual values over their estimated useful lives, as follows:

	Estimated useful life
Buildings.....	5-50 years
Machinery and equipment.....	5-10 years
Motor vehicles.....	5-10 years
Furniture, fixtures and others.....	5 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of the financial period.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised within "other gains, net", in the consolidated statement of profit or loss.

Financial assets

The Group has applied IFRS 9 in accordance with the transition provisions set out in IFRS 9 since January 1, 2018.

Classification and subsequent measurement of financial assets (upon application of IFRS 9)

Financial assets that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to collect contractual cash flows; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets that meet the following conditions are subsequently measured at FVTOCI:

- the financial asset is held within a business model whose objective is achieved by both selling and collecting contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Impairment of financial assets

The Group recognises a loss allowance for ECL on financial assets which are subject to impairment under IFRS 9 (including trade and notes receivables, contract assets, other receivables, restricted bank deposits and cash and cash equivalents). The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

The Group always recognises lifetime ECL for trade receivables and contract assets. For trade receivables and contract assets with significant balances mainly from large multinational and state-owned oil companies, the ECL are assessed individually. For trade receivables and contract assets from private and relatively small customers, the ECL are assessed collectively using a provision matrix with appropriate groupings.

For all other instruments, the Group measures the loss allowance equal to 12m ECL, unless when there has been a significant increase in credit risk since initial recognition, the Group recognises lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition.

Financial liabilities

Financial liabilities at amortised cost

Financial liabilities including long-term borrowings, short-term borrowings, long-term bonds, trade and notes payables and part of accruals and other payables are subsequently measured at amortised cost, using the effective interest method.

Non-substantial modifications of financial liabilities

For non-substantial modifications of financial liabilities that do not result in derecognition, the carrying amount of the relevant financial liabilities will be calculated at the present value of the modified contractual cash flows discounted at the financial liabilities' original effective interest rate. Transaction costs or fees incurred are adjusted to the carrying amount of the modified financial liabilities and are amortised over the remaining term. Any adjustment to the carrying amount of the financial liability is recognised in profit or loss at the date of modification.

Hedging activities

The Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedging transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items.

Assessment of hedging relationship and effectiveness

For hedge effectiveness assessment, the Group considers whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes that result from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio but the risk management objective for that designated hedging relationship remains the same, the Group adjusts the hedge ratio of the hedging relationship (i.e. rebalances the hedge) so that it meets the qualifying criteria again.

Net investment hedge

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in other comprehensive income. The gain or loss relating to the ineffective portion is recognised in profit or loss.

Gains and losses accumulated in equity are included in the profit or loss when the foreign operation is partially disposed of or sold.

Current and deferred income tax

The tax expense for the period comprises of current and deferred tax. Tax is recognised in the consolidated statement of profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case the tax is also recognised in other comprehensive income or directly in equity, respectively.

Current income tax

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of the financial period in the countries where the Company's subsidiaries and joint ventures operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax

Deferred income tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted by the end of financial period and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax liabilities are provided on temporary differences arising from investments in subsidiaries and joint ventures, except for deferred income tax liability where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax assets are recognised on deductible temporary differences arising from investments in subsidiaries and joint ventures only to the extent that it is probable the temporary difference will reverse in the future and there is sufficient taxable profit available against which the temporary difference can be utilised.

For the purposes of measuring deferred tax for leasing transactions in which the Group recognizes the right of use assets and the related lease liabilities, the Group first determines whether the tax deductions are attributable to the right-of-use assets or the lease liabilities.

For leasing transactions in which the tax deductions are attributable to the lease liabilities, the Group applies IAS 12 Income Taxes requirements to the lease transaction as a whole. Temporary differences relating to right of use assets and lease liabilities are assessed on a net basis. Excess of depreciation on right-of-use assets over the lease payments for the principal portion of lease liabilities resulting in net deductible temporary differences.

Patents

Patents are initially recorded at actual cost incurred to acquire and amortised on a straight-line basis over their estimated useful lives, ranging from 3 to 10 years. Development costs that are directly attributable to the design, development and application of patents are recognised as intangible assets when the following criteria are met:

- It is technically feasible to complete the patents so that it will be available for use;
- Management intends to complete the patents and use or sell it;
- There is an ability to use or sell the patents;
- It can be demonstrated how the patents will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development and to use or sell the patents are available; and
- The expenditure attributable to the patents during its development can be reliably measured.

Directly attributable costs that are capitalised as part of the patent include material costs, patent development employee costs and an appropriate portion of relevant overheads. Other development expenditures that do not meet these criteria are recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

Goodwill

Goodwill arises on the acquisition of subsidiaries, and represents the excess of the consideration transferred over the Group's interest in net fair value of the net identifiable assets, liabilities and contingent liabilities of the acquiree and the fair value of the non-controlling interest in the acquiree.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash generating units ("CGUs"), or groups of CGUs, that is expected to benefit from the synergies of the combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes. Goodwill is monitored at the operating segment level.

Goodwill impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of the CGU containing the goodwill is compared to the recoverable amount, which is the higher of value in use and the fair value less costs to sell. Any impairment is recognised immediately as an expense and is not subsequently reversed.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted average method. The cost of finished goods, work-in-progress and project-in-progress comprises design costs, raw materials, direct labour, other direct costs and related production overheads (based on normal operating capacity). Net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

Impairment on tangible and intangible assets other than goodwill

At the end of the reporting period, the Group reviews the carrying amounts of its tangible, intangible assets with finite useful lives to determine whether there is any indication that these assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the relevant asset is estimated in order to determine the extent of the impairment loss (if any).

The recoverable amount of property, plant and equipment, right-of-use assets and intangible assets are estimated individually. When it is not possible to estimate the recoverable amount individually, the Group estimates the recoverable amount of the CGU to which the asset belongs.

In addition, the Group assesses whether there is indication that corporate assets may be impaired. If such indication exists, corporate assets are also allocated to individual CGU, when a reasonable and consistent basis of allocation can be identified, or otherwise they are allocated to the smallest group of CGUs for which a reasonable and consistent allocation basis can be identified

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset (or a CGU) for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a CGU) or a group of CGUs is estimated to be less than its carrying amount, the carrying amount of the asset (or a CGU) or a group of CGUs is reduced to its recoverable amount. For corporate assets or portion of corporate assets which cannot be allocated on a reasonable and consistent basis to a CGU, the Group compares the carrying amount of a group of CGUs, including the carrying amounts of the corporate assets or portion of corporate assets allocated to that group of CGUs, with the recoverable amount of the group of CGUs. In allocating the impairment loss, the impairment loss is allocated first to reduce the carrying amount of any goodwill (if applicable) and then to the other assets on a pro rata basis based on the carrying amount of each asset in the unit or the group of CGUs. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if measurable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro rata to the other assets of the unit or the group of CGUs. An impairment loss is recognized immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a CGU or a group of CGUs) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or a CGU or a group of CGUs) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

Leases

Definition of a lease (upon application of IFRS 16)

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified on or after the date of initial application, the Group assesses whether a contract is or contains a lease based on the definition under IFRS 16 at inception or modification date. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.

The Group as a lessee (upon application of IFRS 16)

Right-of-use assets (upon application of IFRS 16)

The cost of right-of-use asset includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received;
- any initial direct costs incurred by the Group; and
- an estimate of costs to be incurred by the Group in dismantling and removing the underlying assets, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities.

Right-of-use assets in which the Group is reasonably certain to obtain ownership of the underlying leased assets at the end of the lease term is depreciated from commencement date to the end of the useful life.

Otherwise, right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

The Group presents right-of-use assets as a separate line item on the consolidated statement of financial position.

Lease liabilities (upon application of IFRS 16)

At the commencement date of a lease, the Group recognises and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The Group presents lease liabilities as a separate line item on the consolidated statement of financial position.

The Group as a lessee (prior to 1 January 2019)

The Group leases certain property, plant and equipment.

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the consolidated statement of profit or loss on a straight-line basis over the period of the lease.

The Group as a lessor

Classification and measurement of leases

Leases for which the Group is a lessor are classified as operating leases. Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease. Rental income which are derived from the Group's ordinary course of business are presented as revenue.

The Group as a lessor (upon application of IFRS 16)

Sublease

The Group leases certain drilling equipment from its suppliers and then leases to its customers. When the Group is an intermediate lessor, it accounts for the head lease and the sublease as two separate contracts.

The sublease is classified as a finance or operating lease by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset.

Selected Items of Statement of Comprehensive Income

Revenue

For 2018, 2019 and 2020, we recorded revenue of RMB2,935.9 million, RMB3,589.5 million and RMB3,087.7 million (US\$473.2 million), respectively.

The following table sets forth a breakdown of our revenue by cluster for the periods indicated:

	For the year ended December 31,						
	2018		2019		2020		
	(RMB)	(%)	(RMB)	(%)	(RMB)	(US\$)	(%)
	(in millions)						
Drilling technology.....	1,339.9	45.6	1,624.2	45.2	1,303.9	199.8	42.2
Well completion.....	741.8	25.3	836.0	23.3	750.0	114.9	24.3
Oil production services.....	854.2	29.1	1,129.3	31.5	1,033.8	158.5	33.5
Total.....	2,935.9	100.0	3,589.5	100.0	3,087.7	473.2	100.0

Revenue from our drilling technology cluster is derived from our provision of services and products during the drilling stage, which includes integrated service management, directional drilling, drilling and completion fluid service, drilling tool rental and technical service, drilling rig services, oilfield waste management and oil production facilities inspection and assessment technology.

Revenue from our well completion cluster is derived from our provision of services and products during well completion, which includes integrated well completion services, pressure priming service, coiled tubing service, fracturing acidizing technique and chemical materials and gravel packing services.

Revenue from our oil production cluster is derived from our provision of services and products during oil production, which includes production operation management, workover services and tubing and casing repair and anti-corrosion service.

The table below sets forth a breakdown of our revenue by region for the periods indicated:

	For the year ended December 31,						
	2018		2019		2020		
	(RMB)	(%)	(RMB)	(%)	(RMB)	(US\$)	(%)
	(in millions)						
Overseas.....	1,852.2	63.1	1,906.2	53.1	1,254.8	192.3	40.6
Iraq.....	1,170.6	39.9	1,419.8	39.6	961.1	147.3	31.1
Other overseas markets	681.6	23.2	486.4	13.5	293.7	45.0	9.5
Domestic.....	1,083.7	36.9	1,683.3	46.9	1,832.9	280.9	59.4
Total.....	2,935.9	100.0	3,589.5	100.0	3,087.7	473.2	100.0

Domestic revenue is primarily derived from our operations in major gas-producing basins in China, including the Tarim Basin, the Sichuan Basin and the Erdos Basin.

Operating expenses

The following table sets forth a breakdown of our operating expenses by nature for the periods indicated:

	For the year ended December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
			(in thousands)	
Material and services purchased	835,697	1,010,288	1,020,668	156,424
Staff costs	576,029	768,784	738,742	113,217
Depreciation	261,577	319,951	313,094	47,984
Amortization	36,442	32,635	30,934	4,741
Sales tax and surcharges	10,346	13,973	11,360	1,741
Other operating expenses	583,466	724,460	688,602	105,533
Total	2,303,557	2,870,091	2,803,400	429,640

The following table sets forth a breakdown of our operating expenses by function for the periods indicated:

	For the year ended December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
			(in thousands)	
Cost of sales	1,821,615	2,308,042	2,277,830	349,092
Impairment losses under expected credit loss model, net of reversal	75,201	87,693	83,437	12,787
Selling expenses.....	171,152	193,298	175,487	26,895
Administrative expenses.....	197,241	215,403	198,959	30,492
Research and development expenses	28,002	51,682	56,327	8,632
Sales tax and surcharges	10,346	13,973	11,360	1,741
Total	2,303,557	2,870,091	2,803,400	429,639

Cost of sales

Cost of sales primarily consists of costs incurred directly in our business activities, including the consumption of raw materials and services, depreciation associated with our equipment, overhead costs, direct labor costs, and fuel and utilities costs that are directly related to our production and services rendered.

Impairment losses under expected credit loss model, net of reversal

Impairment losses under expected credit loss model, net of reversal, primarily consists of impairment of trade and other receivables.

Selling expenses

Selling expenses primarily consist of salary and benefits for our sales and marketing staff, marketing and advertising expenses as well as other business promotional expenses and maintenance costs.

Administrative expenses

Administrative expenses primarily consist of salary, wage and benefits for our administrative staff, utilities expenses and certain office supply expenses, depreciation and amortization, travelling expenses and other miscellaneous expenses.

Research and development expenses

Research and development expenses primarily consist of salary, wage and benefits for our research and development staff and investments in research projects.

Sales tax and surcharges

We are subject to sales tax and surcharges, primarily including business tax.

Other gains, net

Our other gains or losses primarily comprise government grants and subsidies, gain or loss on disposal of property, plant and equipment and certain other gains and losses.

Finance costs, net

Finance costs, net represent the net of (i) interest income from deposits, (ii) interest expense on bank borrowings, (iii) interest expense on bonds, (iv) interest expense on lease liabilities, (v) exchange gains from periodic adjustments of recorded foreign currency assets and liabilities and foreign currency transaction, and (vi) others.

Share of profit of a joint venture

Share of profit of a joint venture comprises our of proportionate share of profit of a joint venture, Xinjiang PengAn Energy Technology Co., Ltd.

Income tax expense

Under the current laws of the Cayman Islands, we are not subject to the payment of Cayman Islands income tax. Similarly our subsidiaries incorporated in the British Virgin Islands are currently not subject to profits tax in the British Virgin Islands. Accordingly, taxation primarily represents the tax payable by our subsidiaries in the PRC and other jurisdictions where we operate and represents the sum of the tax currently payable and deferred tax.

Our provision for PRC enterprise income tax is based on the standard rate of 25%. Certain of our PRC subsidiaries were entitled to tax concessions whereby the profits of those subsidiaries were taxed at a preferential income tax rates of 15%.

For more information on our income tax expense and the income tax rates that our subsidiaries are subject to, please refer to note 28 and note 29 of our audited financial statements as of and for the years ended December 31, 2019 and 2020 included elsewhere in this offering memorandum.

Results of Operations

2020 compared to 2019

Revenue

Our revenue decreased by 14.0% from RMB3,589.5 million for 2019 to RMB3,087.7 million (US\$473.2 million) for 2020. The decrease was largely due to the broad-based impact of COVID-19 on our overseas operations.

Drilling technology cluster

Revenue from our drilling technology cluster decreased 19.7% from RMB1,624.2 million in 2019 to RMB1,303.9 million (US\$ 199.8 million) in 2020, mainly due to the disruptions of the Group's drilling service projects as a result of COVID-19 and the lower service price offered by some domestic clients.

- Integrated drilling service: our revenue from the integrated drilling service amounted to RMB124.2 million (US\$19.0 million) in 2020, representing a decrease of approximately 66.2% from revenue of RMB367.7 million in 2019. The decrease was mainly due to the suspension of large integrated drilling projects in the overseas markets such as Iraq due to the pandemic.

- Directional drilling services: our directional drilling services recorded revenue of RMB84.9 million (US\$13.0 million) in 2020, representing a decrease of approximately 54.4% from RMB186.3 million in 2019. The decrease was mainly due to the suspension of directional drilling projects in the overseas markets such as Iraq and Chad.
- Drilling tool rental and services: this product line recorded revenue of RMB251.9 million (US\$38.6 million) in 2020, representing a decrease of approximately 17.6% from RMB305.6 million in 2019, mainly due to the reduction in service price by clients.
- Drilling rig services: our drilling rig services recorded revenue of RMB601.4 million (US\$92.2 million) in 2020, representing an increase of approximately 64.0% from RMB366.6 million in 2019. The growth was mainly attributable to the Group's initiative to seek breakthroughs in a difficult climate. We designed financing solutions and secured access to financing for clients and won a large drilling rig services contract in Pakistan.
- Oilfield waste management services: our oilfield waste management services recorded revenue of RMB118.0 million (US\$18.1 million) in 2020, representing a decrease of approximately 45.6% from RMB216.9 million in 2019, mainly due to reduced overseas demand for drilling fluid and completion fluid services and the reduced service price from domestic clients.
- Oil production facilities inspection and evaluation services: this product line recorded revenue of RMB123.5 million (US\$18.9 million) in 2020, a decrease of 27.3% from RMB169.9 million in 2019. The decrease was mainly due to the reduction in service price by clients.

Well completion cluster

Revenue from our well completion cluster decreased by 10.3% from RMB836.0 million 2019 to RMB750.0 million (US\$114.9 million) in 2020, mainly due to the suspension of some higher-margin overseas projects due to COVID-19.

- Well completion integration: our well completion integration services recorded revenue of RMB101.0 million (US\$15.5 million) in 2020, representing a decrease of approximately 49.6% from RMB200.4 million in 2019. The decrease was mainly due to delays in the implementation of overseas projects as a result of the pandemic.
- Pressure pumping services: our pressure pumping services recorded revenue of RMB331.7 million (US\$50.8 million) in 2020, representing an increase of 21.1% from RMB274.0 million in 2019. The increase was mainly attributable to the execution of many new orders for pressure pumping services secured by the Group in the Shanxi coalbed methane and Erdos tight gas markets.
- Coiled tubing services: this product line recorded revenue of RMB106.4 million (US\$16.3 million) in 2020, a decrease of 47.0% from RMB200.8 million in 2019. The decrease was mainly the result of delayed construction of the coiled tubing project in Iraq due to the pandemic.
- Fracturing/acidizing and chemical materials: the product line of fracturing/acidizing and chemical materials recorded revenue of RMB66.7 million (US\$10.2 million) in 2020, up 40.4% from RMB47.5 million in 2019, mainly from the growth of fracturing services in Shanxi and Erdos in China.
- Gravel packing services: our gravel packing services recorded revenue of RMB144.2 million (US\$22.1 million) in 2020, an increase of 28.1% compared to RMB112.6 million in 2019.

Oil production services cluster

Revenue from the oil production services cluster decreased by 8.5% from RMB1,129.3 million in 2019 to RMB1,033.8 million (US\$158.4 million) in 2020, mainly due to the construction delays of some of the asset-light oilfield management business. The two large asset-light management projects in this cluster contributed stable revenue streams to the Group throughout the year.

- Production operation services: Revenue from production operation services segment increased 4.4% from RMB788.5 million in 2019 to RMB823.3 million (US\$126.2 million) in 2020, mainly benefiting from the smooth operation of the Majnoon oilfield management project in Iraq and oilfield management project in Chad throughout the year.
- Workover services: Revenue from workover service segment decreased by 43.0% from RMB283.2 million in 2019 to RMB161.3 million (US\$24.7 million) in 2020, mainly suffering from delayed execution of overseas projects.
- Oil tubing and casing and anti-corrosion technology services: revenue from oil tubing and casing and anti-corrosion technology segment decreased by 14.6% from RMB57.6 million in 2019 to RMB49.2 million (US\$7.5 million) in 2020.

Cost of sales

Cost of sales decreased by 1.3% from RMB2,308.0 million in 2019 to RMB2,277.8 million (US\$349.1 million) in 2020, lower than the pace of revenue decrease, mainly due to the increase of project operation costs affected by the pandemic, which led to the increase of lower gross margin projects.

Gross profit

As a result of the foregoing, gross profit decreased by 36.8% from RMB1,281.5 million in 2019 to RMB809.8 million (US\$124.1 million) in 2020. Our gross profit margin decreased from 35.7% in 2019 to 26.2% in 2020.

Other gains

Other gains increased by RMB40.1 million from RMB0.2 million in 2019 to RMB40.3 million (US\$6.2 million) in 2020, mainly due to our repurchase of 2020 USD-denominated bonds in the secondary market and from government grants and subsidies received during the year.

Impairment loss of financial assets

Impairment loss on financial assets decreased from RMB87.7 million in 2019 to RMB83.4 million (US\$12.8 million) in 2020, down 4.9%. The impairment loss was mainly because we provided for impairment of accounts receivable in accordance with the expected credit loss model under IFRSs.

Selling expenses

Selling expenses decreased 9.2% from RMB193.3 million in 2019 to RMB175.5 million (US\$26.9 million) in 2020, mainly due to our optimization of staffs, adjustment of salary structure and tight control on business expenses.

Administrative expenses

Administrative expenses decreased 7.6% from RMB215.4 million in 2019 to RMB199.0 million (US\$30.5 million) in 2020, mainly due to the savings on staff expenses and strengthened control on various expenses.

Research and development expenses

Research and development expenses increased by 8.9% from RMB51.7 million in 2019 to RMB56.3 million (US\$8.6 million) in 2020.

Sales tax and surcharges

Sales tax and surcharges decreased from RMB14.0 million in 2019 to RMB11.4 million (US\$1.7 million) in 2020.

Operating profit

Operating profit decreased by 54.9% from RMB719.6 million in 2019 to RMB324.5 million (US\$49.7 million) in 2020. The operating profit margin in 2020 was 10.5%, down 9.5 percentage points from 20.0% in 2019, mainly due to the lower than expected project executions affected by the COVID-19 pandemic, which resulted in a decrease in revenue. Meanwhile, fixed costs such as depreciation and labor costs still need to be recorded and operating profit decreased significantly.

Finance costs, net

Net finance costs decreased from RMB295.1 million in 2019 to RMB293.9 million (US\$45.0 million) in 2020.

Profit before income tax

As a result of the foregoing, our profit before income tax increased from RMB425.2 million in 2019 to RMB30.7 million (US\$4.7 million) in 2020.

Income tax expense

Income tax expense decreased from RMB142.8 million in 2019 to RMB114.5 million (US\$17.5 million) in 2020.

(Loss)/Profit for the year

As a result of the foregoing, we had a loss of RMB83.8 million (US\$12.8 million) in 2020 compared to a profit of RMB282.4 million in 2019.

Profit/(loss) attributable to non-controlling interests

Our loss attributable to equity holders of the Company was RMB95.8 million (US\$14.7 million) in 2020, compared to a profit of RMB268.6 million in 2019.

2019 compared to 2018

Revenue

Our revenue in 2019 was RMB3,589.5 million, representing an increase of RMB653.6 million or 22.3% from RMB2,935.9 million in 2018. The increase in our revenue was mainly due to the substantial growth in the domestic business under a market environment in which China is fully promoting oil and gas development, and the growth of oilfield management business in the Iraqi market.

Drilling technology cluster

Revenue from our drilling technology cluster increased 21.2% from RMB1,339.9 million in 2018 to RMB1,624.2 million in 2019, mainly due to the increase in capital expenditures of customers for new production capacity and the investment in new well development.

- Integrated drilling services: in 2019, our integrated drilling projects were actively carried out in the Iraqi market and the shale gas market in southwest China. Our revenue from integrated drilling services was RMB367.7 million in 2019, which was approximately 14.1% lower than RMB428.0 million in 2018.
- Directional drilling services: directional drilling services have been carrying out with high quality in Iraq, Northwest China, Xinjiang, and Southwest Shale Gas, and other markets. Due to the suspension of some projects in other overseas markets by the Group, directional drilling services recorded revenue of RMB186.3 million in 2019, a decrease of approximately 9.3% from RMB205.4 million in 2018.
- Drilling fluid services: our oil-based muds and high-performance water-based muds serve the Group's traditional superior services in the domestic northwest Xinjiang market. During the year, the development of the northwest Xinjiang market picked up pace, and the business volume of this product line increased significantly. In 2019, the Group's drilling fluid services recorded revenue of RMB200.1 million, a significant increase of 46.6% from RMB136.5 million in 2018.
- Drilling tool rental and services: with the increase of the overall drilling business volume, customers have maintained strong demand for drilling tools, which has promoted the substantial growth of drilling tool rental and services businesses. During the reporting period, the product line recorded revenue of RMB305.6 million, a significant increase of 158.1% from RMB118.4 million of 2018.
- Land drilling services: while drilling projects in Iraqi and Pakistani markets operated smoothly, drilling business in the Erdos market in China and other markets witnessed further increased. Our land drilling services recorded revenue of RMB366.6 million in 2019, an increase of 20.7% from RMB303.8 million in 2018.
- Oil production facilities inspection and evaluation services: in 2019, the demand for Oil production facilities inspection and evaluation services further expanded. In 2019, the product line recorded revenue of RMB169.9 million, a significant increase of 56.4% from RMB108.6 million in 2018.

Well completion cluster

Revenue from our well completion cluster increased by 12.7% from RMB741.8 million in 2018 to RMB836.0 million in 2019, mainly due to our reduction of projects in overseas emerging markets with higher profit margins but a poor cash flow outlook and increase of domestic market pressure pumping projects.

- Well completion integration: the well completion integration product line maintained stable operations, and the workload was basically flat compared to the same period last year. In 2019, we recorded revenue of RMB200.4 million, a decrease of approximately 7.4% from RMB216.5 million in 2018.
- Pressure pumping service: we mainly provided pressure pumping services to customers in the southwest shale gas market and the Erdos market in 2019. Benefiting from the overall acceleration of domestic capacity building, pressure pumping services recorded revenue of RMB274.0 million in 2019, a significant increase of 58.7% from RMB172.6 million in 2018.
- Coiled tubing service: in 2019, we continued to provide customers with high-quality coiled tubing services in overseas Iraqi markets, domestic northwest Xinjiang and southwest shale gas markets. Due to the decrease in other overseas market projects, in 2019, the product line recorded revenue of RMB200.8 million, a 14.4% decrease from RMB234.7 million in 2018.

- Fracturing/acidizing technique and chemical materials: in 2019, our low-modulus carbonated rock segmented sand fracturing technology was successfully tested in Iraq's Halfaya oil field. It is expected to be further promoted in the entire Iraqi market in the future. Domestic market operation volume is stable. In 2019, the product line recorded revenue of RMB47.5 million, an increase of 7.5% from RMB44.2 million in 2018.
- Gravel packing service: the product line recorded revenue of RMB112.6 million in 2019, a significant increase of 52.6% from RMB73.8 million in 2018.

Oil production services cluster

Revenue from oil production services cluster increased by 32.2% from RMB854.2 million in 2018 to RMB1,129.3 million in 2019. The Majnoon oilfield, whose management we took over in the Iraqi market, maintained high-quality operations during the year. In addition, we have secured new orders for integrated oilfield management services in the African Chad market which we have been successfully put into trial production in February 2020. We believe the integrated oilfield management services in the African Chad market will contribute towards stable growth of the cluster in the future.

- Production operation service: Revenue from production operation services segment increased by 30.3% from RMB605.1 million in 2018 to RMB788.5 million in 2019. Several factors contributed to the revenue increase. First, the integrated oilfield management service project undertaken by us for the large-scale oilfield in southern Iraq, the Majnoon oilfield, maintained stable operation in 2019. Second, Since the formal takeover of the oilfield management on July 1, 2018, we have smoothly operated the oilfield for more than one and a half years, and the oilfield operations have been carried out in an orderly manner with the production capacity gradually increased. Third, we have successfully won the bid for oilfield management projects in the African Chad market.
- Workover service: revenue from workover service segment increased by 31.8% from RMB214.8million in 2018 to RMB283.2 million in 2019, mainly due to adjustments to customer operation plans in some regional markets.
- Oil tubing and casing and anti-corrosion technology: revenue from oil tubing and casing and anti-corrosion technology segment significantly increased by 67.9% from RMB34.3 million in 2018 to RMB57.6 million in 2019.

Cost of sales

Cost of sales increased from RMB1,821.6 million in 2018 to RMB2,308.0 million in 2019, an increase of 26.7%, mainly due to the increase in revenue.

Gross profit

As a result of the foregoing, gross profit increased by 15.0% from RMB1,114.3 million in 2018 and to RMB1,281.5 million in 2019.

Other gains, net

Other gains decreased from RMB11.9 million in 2018 to RMB0.2 million in 2019, a decrease of 98.3%.

Impairment loss of financial assets

The impairment loss of financial assets increased from RMB75.2 million in 2018 to RMB87.7 million in 2019, an increase of 16.6%, mainly due to the increase in the impairment provision for other receivables under the ECL model.

Selling expenses

Selling expenses in 2019 were RMB193.3 million, an increase of RMB22.1 million, or 12.9%, from RMB171.2 million in 2018, which was mainly due to the increased sales activities as a result of the recovery in the market and the growth of our business.

Administrative expenses

Administrative expenses in 2019 were RMB215.4 million, an increase of RMB18.2 million, or 9.2%, from RMB197.2 million in 2018, mainly due to the increased labor costs as the business grew. However, by strengthening control in various expenditures, the increase in administrative expenses is within the controllable range.

Research and development expenses

R&D expenses in 2019 were RMB51.7 million, an increase of RMB23.7 million, or 84.6%, from RMB28.0 million in 2018.

Sales tax and surcharges

Sales tax and surcharges in 2019 were RMB14.0 million, representing an increase of RMB3.7 million, or 35.9%, from RMB10.3 million in 2018, which was mainly due to the growth in business of the Group.

Operating profit

As the result of the foregoing, the operating profit in 2019 was RMB719.6 million, an increase of RMB75.3 million, or 11.7%, from RMB644.3 million in 2018. The operating profit margin in 2019 was 20.0%, a decrease of 1.9 percentage points from 21.9% in 2018, which was mainly due to the pursuit of high-cash-flow and high-ROE projects under the “asset-light” business model. Through cooperation with third parties to provide related project services with heavy asset requirements, the profit margin under this business model has been slightly lower than before, but due to the substantial increase in group revenue, the operating profit still increased significantly.

Finance costs, net

In 2019, net financial costs were RMB295.1 million, a decrease of approximately RMB2.4 million as compared to RMB297.5 million in 2018.

Profit before income tax

As a result of the foregoing, our profit before income tax increased by 22.5% from RMB347.2 million in 2018 to RMB425.2 million in 2019.

Income tax expense

In 2019, income tax expenses were RMB142.8 million, an increase of RMB46.4 million from RMB96.4 million in 2018, which was mainly due to the increase in operating profit of the Group.

Profit for the year

Based on the above, our profit for the year of 2019 was RMB282.4 million, an increase of RMB31.7 million, or 12.6%, compared to RMB250.7 million in 2018.

Profit attributable to non-controlling interests

In 2019, our profit attributable to owners of the Company was RMB268.6 million, an increase of RMB46.2 million compared to 2018.

Liquidity and Capital Resources

We implemented a management approach with cash flow management at the core and tight control throughout the lifecycle of projects and with accelerated turnover in working capital. Our primary uses of cash have been, and are expected to be, the funding of operating and capital expenditures relating to enhancement of our service capacities, including investments in fixed assets such as equipment and facilities for our main business lines, and investments in research and development projects. We have strengthened our partnership with Chinese banks and increased our available credit lines to ensure ample liquidity on the book. Meanwhile, the Group carried out proactive debt management, repurchased 9.75% senior notes due December 2020 (the “2020 Notes”) through tender offer at accommodating capital market conditions to alleviate the financial stress of a concentrated repayment-at-maturity. The Group also made multiple repurchases of the 2020 Notes and 7.5% senior notes due 2022 (the “2022 Notes”) in the secondary market to reduce financing costs. During the year, the Group had successfully completed the repayment of the 2020 Notes in full. We expect that our cash flow from operating activities, together with our cash and cash equivalents, currently available banking facilities and additional anticipated borrowings will be sufficient to fund our operating and capital expenditures, to make scheduled interest and amortization payments under our outstanding indebtedness and to fund our anticipated.

As of December 31, 2020, we had cash and bank deposits of approximately RMB1,333.3 million (US\$204.3 million) (including: restricted bank deposits, cash and cash equivalents), representing a decrease of RMB1,458.3 million as compared to December 31, 2019. This was mainly due to our repayment in full of US\$300 million worth of bonds during the year.

The Group’s outstanding short-term borrowings as at December 31, 2020 amounted to approximately RMB764.0 million (US\$117.1 million). Approximately RMB930.0 million (US\$142.5 million) of the credit facilities underwritten to us by domestic banks remained unused.

As of December 31, 2020, our gearing ratio was 61.2%, representing a decrease of 5.6 percentage points from the gearing ratio of 66.8% as at December 31, 2019. The calculation of gearing is based on total borrowings divided by total capital. Total borrowings include borrowings, bonds, lease liabilities and trade and notes payables (as shown in the consolidated statement of financial position). Total capital is calculated based on equity (as shown in the consolidated statement of financial position) plus total borrowings.

As of December 31, 2020, equity attributable to equity holders of the Company was RMB2,626.1 million (US\$402.5 million), a decrease of RMB276.0 million from RMB2,902.1 million as at December 31, 2019.

Cash flows

The following table sets forth a summary of our net cash flow for the periods indicated:

	For the year ended December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
	(in thousands)			
Net cash generated from operating activities	420,008	610,250	805,366	123,428
Net cash used in investing activities	(98,196)	(101,884)	(169,919)	(26,041)
Net cash generated from/(used in) financing activities	(795,545)	1,204,051	(2,159,344)	(330,934)
Net (decrease)/increase in cash and cash equivalents	(473,733)	1,712,417	(1,523,897)	(233,547)
Cash and cash equivalents at beginning of the year	1,133,097	686,636	2,422,874	371,322
Exchange gain/(loss) on cash and cash equivalents	27,272	23,821	(19,892)	(3,049)
Cash and cash equivalents at end of the year	686,636	2,422,874	879,085	134,726

In 2020, our net cash generated from operating activities of RMB805.4 million (US\$123.4 million) was attributable to net cash inflow from operations of RMB859.6 million (US\$131.7 million) and interest received of RMB18.8 million (US\$2.9 million), partially offset by income tax paid of RMB73.0 million (US\$11.2 million). Cash inflow from operations before changes in working capital was RMB724.8 million (US\$111.1 million), primarily attributable to interest expenses on bank borrowings and to bonds of RMB363.9 million (US\$55.8 million) and depreciation charge in relation to property, plant and equipment of RMB273.5 million (US\$41.9 million). Changes in working capital contributed to a negative net cash outflow of RMB134.8 million (US\$20.7 million), consisting primarily of (i) an increase in trade and notes receivables of RMB217.7 million (US\$33.4 million) and (ii) an increase in inventory of RMB183.5 million (US\$28.1 million), partially offset by an increase in trade and notes payable of RMB440.1 million (US\$67.4 million), an increase in accruals and other payables of RMB77.0 million (US\$11.8 million) and a decrease of prepayment and other receivables and value-added tax recoverable of RMB45.8 million (US\$7.0 million).

In 2019, our net cash generated from operating activities of RMB610.3 million was attributable to net cash inflow from operations of RMB684.5 million and interest received of RMB3.4 million, partially offset by income tax paid of RMB77.6 million. Cash inflow from operations before changes in working capital was RMB1,213.8 million, primarily attributable to profit for the year of RMB282.4 million, interest expenses on bank borrowings and bonds of RMB304.7 million and depreciation charge in relation to property, plant and equipment of RMB281.7 million. Changes in working capital contributed to a net cash outflow of RMB529.3 million consisting primarily of (i) an increase in trade and notes receivables of RMB289.6 million, (ii) an increase of prepayment and other receivables and value-added tax recoverable of RMB230.1 million and (iii) an increase in inventory of RMB22.9 million, partially offset by an increase in trade and notes payable of RMB70.1 million and an increase in accruals and other payables of RMB12.5 million.

In 2018, our net cash generated from operating activities of RMB420.0 million was attributable to net cash inflow from operations of RMB481.1 million and interest received of RMB2.6 million, partially offset by income tax paid of RMB63.6 million. Cash inflow from operations before changes in working capital was RMB1,047.6 million, primarily attributable to profit for the year of RMB250.7 million, interest expenses on bank borrowings and bonds of RMB284.7 million and depreciation charge in relation to property, plant and equipment of RMB261.6 million. Changes in working capital contributed to a net cash outflow of RMB566.6 million consisting primarily of (i) an increase in trade and notes receivables of RMB345.5 million, (ii) an increase in inventory of RMB173.2 million and (iii) a decrease in trade and notes payables of RMB89.7 million, partially offset by a decrease in restricted bank deposits of RMB54.2 million and an increase in contract liabilities of RMB38.8 million.

Net cash used in investing activities

Our net cash used in investing activities was RMB169.9 million (US\$26.0 million) in 2020 primarily reflecting our purchase of intangible assets of RMB39.0 million (US\$6.0 million) and purchase of property, plant and equipment of RMB138.5 million (US\$21.2 million), partially offset by disposal of property, plant and equipment of RMB7.6 million (US\$1.2 million).

Our net cash used in investing activities was RMB101.9 million in 2019 primarily reflecting our purchase of intangible assets of RMB35.2 million and purchase of property, plant and equipment of RMB86.1 million, partially offset by proceeds from disposal of property, plant and equipment of RMB21.5 million.

Our net cash used in investing activities was RMB98.2 million in 2018 primarily reflecting our purchase of intangible assets of RMB63.2 million and purchase of property, plant and equipment of RMB36.0 million, partially offset by proceeds from disposal of property, plant and equipment of RMB1.0 million.

Net cash generated from/(used in) financing activities

Our net cash used in financing activities was RMB2,159.3 million (US\$330.9 million) in 2020 primarily reflecting (i) repurchase of long-term bonds RMB1,418.1 million (US\$217.3 million), repayments of short-term borrowings RMB728.2 million (US\$111.6 million) million and (iii) repayments of long-term bonds RMB685.4 million (US\$105.0 million), partially offset by proceeds from short-term borrowings RMB993.7 million (US\$152.3 million), proceeds from long-term borrowings RMB147.0 (US\$22.5 million) million and capital injection from a non-controlling interest RMB70.0 million (US\$10.7 million).

Our net cash from financing activities was RMB1,204.1 million in 2019 primarily reflecting (i) proceeds from long-term bonds RMB2,037.8 million, (ii) proceeds from long-term borrowings RMB100.0 million and (iii) proceeds from long-term bonds exercised RMB2.0 million, partially offset by repayments of short-term borrowings RMB1,246.5 million, interest paid RMB269.6 million and repayments of long-term borrowings RMB135.7 million.

Our net cash used in financing activities was RMB795.5 million in 2018 primarily reflecting (i) repayments of short-term borrowings of RMB1,509.6 million, (ii) repayment of long term-bonds of RMB490.9 million, (iii) interest paid of RMB278.5 million and (iv) repayments of long-term borrowings of RMB197.2 million, partially offset by proceeds from short-term borrowings of RMB1,505.9 million and proceeds from long-term borrowings of RMB357.3 million.

Capital Commitments and Contingent Liabilities

Capital commitments

Capital commitments related to investments in property, plant and equipment at the reporting date but not yet provided for in the consolidated statement of financial position were as follows:

	For the year ended December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
	(in thousands)			
Contracted but not provided for	20,887	71,142	79,586	12,197
	<u>20,887</u>	<u>71,142</u>	<u>79,586</u>	<u>12,197</u>

Operating leases

We lease various offices, warehouses, equipment and machinery under non-cancellable operating lease agreements. The table below sets forth our minimum lease payments under such non-cancellable operating leases as of the dates indicated:

	For the year ended December 31,			
	2018	2019 ¹	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
	(in thousands)			
No later than one year	17,511	—	—	—
One to five years	21,662	—	—	—
	<u>39,173</u>	<u>—</u>	<u>—</u>	<u>—</u>

Note: On January 1, 2019, we adopted IFRS 16 and recognized additional lease liabilities for leases previously classified as operating leases.

Contingent liabilities

As at December 31, 2020, the Group did not have any material contingent liabilities or guarantees.

Indebtedness

We have financed our operations primarily through cash flows from operations and bank and other borrowings. The table below sets forth details of our borrowings as of the dates indicated:

	For the year ended December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US\$)
	(in thousands)			
Long-term:				
Long-term bonds ⁽¹⁾	2,065,901	4,144,868	1,866,659	286,078
Secured long-term borrowings ⁽²⁾	325,555	294,600	295,027	45,215
Less: current portion of Long-term borrowings	(82,214)	(92,174)	(163,639)	(25,079)
Less: current portion of long-term notes	(14,498)	(2,116,445)	(11,034)	(1,691)
Subtotal	<u>2,294,744</u>	<u>2,230,849</u>	<u>1,987,013</u>	<u>304,523</u>
Short-term:				
Unsecured short-term borrowings				
— RMB denominated.....	248,393	80,406	—	—
Secured short-term borrowings ⁽³⁾				
— RMB denominated	444,408	329,600	631,628	96,801
— US\$ denominated	85,720	87,743	82,035	12,572
Other borrowings unsecured ⁽⁴⁾				
— RMB denominated.....	100,671	—	50,290	7,707
Add: current portion of Long-term borrowings.....	82,214	92,174	163,639	25,079
Add: Current portion of Long-term bonds.....	14,498	2,116,445	11,034	1,691
Subtotal	<u>975,904</u>	<u>2,706,368</u>	<u>938,626</u>	<u>143,850</u>
Total ⁽⁵⁾	<u>3,270,648</u>	<u>4,937,217</u>	<u>2,925,639</u>	<u>448,373</u>

Notes:

(1) We issued US\$250 million 7.50% senior notes at par value on October 31, 2013, which have been fully repaid as of the date of this offering memorandum. We issued US\$300 million 7.50% senior notes at discount of par value on December 5, 2017, which have been fully repaid as of the date of this offering memorandum. On December 2, 2019, we issued the 2022 Notes. See the section entitled “Description of Other Material Indebtedness — 2022 Notes” for more details.

(2) As at December 31, 2020, secured long-term borrowings of RMB56,425,000 (US\$8,647,510) represented borrowings from China Railway Construction Financial Leasing Co., Ltd., a third party, which will mature in July 2021, and secured by the Group’s equipment with a carrying value of RMB240,791,000 (US\$36,902,835).

As at December 31, 2020, secured long-term bank borrowings of RMB96,184,000 (US\$14,740,843) were secured by the Group’s buildings with a carrying value of RMB87,341,000 (US\$13,385,594) and right-of-use assets (leasehold lands) with a carrying value of RMB5,548,000 (US\$850,268), respectively.

As at December 31, 2020, secured long-term bank borrowings of RMB97,213,000 (US\$14,898,544) were secured by the Group’s trade receivables amounting to RMB282,420,000 (US\$43,282,759).

As at December 31, 2020, long-term bank borrowings of RMB45,205,000 (US\$6,927,969) were guaranteed by Beijing Zhongguancun Sci-tech Guaranty Co., Ltd. (北京中關村科技融資擔保有限公司), a third party.

(3) As of December 31, 2020, secured short-term bank borrowings of RMB500,189,000 (US\$76,657,318) were secured by the Group’s trade receivables amounting to RMB754,199,000 (US\$115,586,054).

As of December 31, 2020, RMB denominated short-term bank borrowings of RMB131,439,000 (US\$20,143,908) and US\$ denominated short-term bank borrowings of RMB82,035,000 (US\$12,572,414) were guaranteed by Mr. Luo Lin, the Company’s ultimate controlling shareholder.

As of December 31, 2019, secured short-term bank borrowings of RMB40,021,000 were secured by the Group's buildings with a carrying value of RMB46,815,000 and right-of-use assets (leasehold lands) with a carrying value of RMB2,423,000, respectively.

As of December 31, 2019, short-term bank borrowings of RMB100,741,000 were guaranteed by Beijing Zhongguancun Sci-tech Guaranty Co., Ltd. (北京中關村科技融資擔保有限公司), a third party.

As of December 31, 2019, secured short-term bank borrowings of RMB10,000,000 were secured by the bank deposits amounting to RMB10,260,000.

- (4) As at December 31, 2020, other short-term borrowings represented a loan borrowed by Anton Oilfield Services (Group) Ltd. from Beijing Zhongguancun Sci-tech Guaranty Co., Ltd. (北京中關村科技融資擔保有限公司), a third party.
- (5) As at December 31, 2020, the undrawn bank borrowing facilities of the Group of approximately RMB930 million (US\$142.5 million), with expiry dates up to July 8, 2022, were unsecured.

As of December 31, 2020, our outstanding short-term borrowings amounted to approximately RMB764.0 million (US\$117.1 million). Approximately RMB930.0 million (US\$142.5 million) of the credit facilities underwritten to the Group by domestic banks remained unused.

On December 2, 2019, we issued the 2022 Notes with a principal amount of US\$300 million at an interest rate of 7.5% per annum. As of December 31, 2020, US\$289,900,000 of the 2022 Notes remained outstanding. See the section entitled "Description of Other Material Indebtedness — 2022 Notes" for more details.

Since December 31, 2020, except for those incurred in the ordinary course of business, there has not been any material adverse change in our indebtedness. For more information, see "Description of Other Material Indebtedness."

Off-Balance Sheet Commitments and Arrangements

As of the date of this offering memorandum, we do not have any material off-balance sheet commitments and arrangements.

Market Risks

Foreign exchange risk

We conduct our businesses primarily in Renminbi. However, there is an increasing amount of foreign currency-denominated transactions arising from our expanding operations in overseas markets. Most of our overseas transactions are denominated and settled in U.S. dollar. We are exposed to foreign exchange risk with our bank deposits and borrowings denominated in U.S. dollar. The conversion of Renminbi into foreign currencies is subject to the rules and regulations of foreign exchange control promulgated by the PRC government. An appreciation of the Renminbi against the U.S. dollar would generally result in a gain arising from our U.S. dollar denominated debt and a loss arising from our bank deposits in U.S. dollars. A depreciation of the Renminbi against the U.S. dollar would have the opposite effect. In addition, a depreciation of Renminbi would negatively affect the value of dividends paid by our PRC subsidiaries, which may in turn affect our ability to service our foreign currency denominated debt.

As of the date of this offering memorandum, we do not have any currency hedging arrangements in place.

Interest rate risk

Our interest rate risk arises from long-term bonds, long-term borrowings and short-term borrowings. Borrowings obtained at variable rates expose the Group to cash flow interest rate risk. Long-term bonds, long-term borrowings and lease liabilities obtained at fixed rates expose the Group to fair value interest rate risk.

As of the date of this offering memorandum, we do not have any interest rate swap in place to hedge our exposure to interest rate risk. Higher interest rates may increase our finance cost, and our business, financial condition and results of operations could be materially and adversely affected. Changes in interest rates could also adversely affect the value of our financial assets.

Credit risk

Our credit risk is primarily attributable to trade and other receivables. We have policies in place to ensure that sales of products and services are made to customers with an appropriate credit history. Our historical experience in collection of trade and other receivables falls within the recorded allowance and we believe that adequate provision for uncollectible receivables has been made in our financial statements. A considerable portion of our sales were made to the several major oilfield operators in the PRC and their affiliates, which are state-owned entities with good credit reputation. As of December 31, 2020, most of our cash and cash equivalents were placed with state-owned banks in the PRC, and we believe the corresponding credit risk is relatively low.

We also have limited credit risks on notes receivable, restricted bank deposits and cash equivalents because the counterparties are banks with high credit ratings assigned by international credit rating agencies. Also, most of our restricted bank deposits and cash and cash equivalents were placed with state-owned banks in the PRC and Hong Kong, the relevant credit risk is relatively low. We perform impairment assessment under 12m ECL model on notes receivable, restricted bank deposits and cash and cash equivalents. Our Directors do not expect any losses from non-performance by these counterparties.

Non-GAAP Financial Measures

We use certain non-GAAP data, such as EBITDA, to provide additional information about our operating performance as we believe that they are useful measures for certain investors to assess our operating performance, operating cash flow and historical ability to meet debt service and capital expenditure requirement. We calculate EBITDA by adding depreciation and amortization, finance expenses, share of profit of a joint venture and asset impairment provisions to and deducting interest income from profit or loss before income tax expense.

EBITDA is not a standard measure under IFRS and should not be considered as an alternative to cash flows from operating activities, a measure of liquidity or an alternative to net income as indicators of our operating performance or any other measures of liquidity, profitability or cash flows derived in accordance with IFRS. Investors should also note that EBITDA as presented herein may be calculated differently from Consolidated EBITDA as defined and used in the Indenture governing the New Notes. Interest expense excludes amounts capitalized.

As a measure of our operating performance, we believe that the most directly comparable IFRS measure to EBITDA is profit before income tax. We use EBITDA in addition to profit before income tax because profit before income tax includes many accounting items associated with capital expenditures, such as depreciation and amortization. These accounting items may vary between companies depending on the method of accounting adopted by a company. Funds depicted by this measure may not be available for debt service due to covenant restrictions, capital expenditure requirements and other commitments.

The following table reconciles our definition of EBITDA to our profit before income tax under IFRS for the periods indicated:

	For the year ended December 31,			
	2018	2019	2020	
	(RMB)	(RMB)	(RMB)	(US)
	(in thousands)			
EBITDA for reportable segments	1,314,923	1,505,399	1,065,539	163,301
Corporate overheads	(588,980)	(615,496)	(569,065)	(87,213)
Depreciation	(243,388)	(294,039)	(311,314)	(47,711)
Amortisation	(30,239)	(27,806)	(28,264)	(4,332)
Asset impairment provisions.....	(91,554)	(124,682)	(103,408)	(15,848)
Interest income	768	2,149	2,867	439
Finance expenses	(14,721)	(21,076)	(25,757)	(3,947)
Share of profit of a joint venture	355	762	141	22
Profit before income tax	<u>347,164</u>	<u>425,211</u>	<u>30,739</u>	<u>4,711</u>

You should not consider our definition of EBITDA in isolation or construe them as alternatives to profit for the periods indicated or as indicators of operating performance or any other standard measures under IFRS. Our EBITDA measures may not be comparable to similarly titled measures used by other companies. Investors should also note that EBITDA as presented herein may be calculated differently from Consolidated EBITDA as defined and used in the indenture governing the New Notes, interest expense excludes amounts capitalized. See the sections entitled “Description of the New Notes — Definitions” for a description of the manner in which Consolidated EBITDA is defined for purposes of the Indenture governing the New Notes.

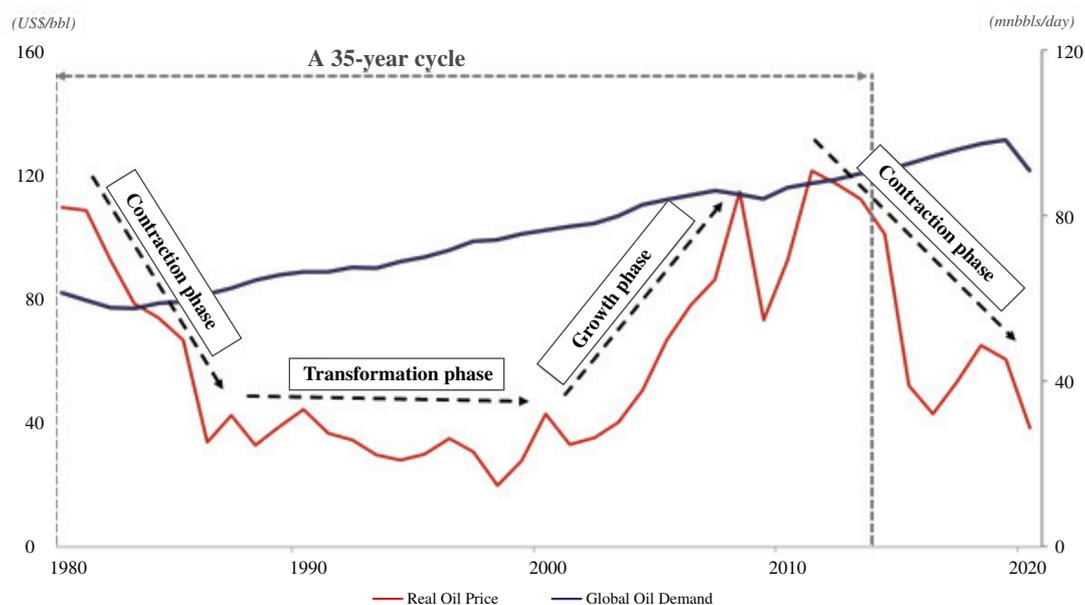
INDUSTRY OVERVIEW

This section provides an overview of the oilfield services industry globally and in the PRC. The information presented in this section has been extracted from publicly available documents and reports prepared by third parties, which have not been independently verified by us, the Initial Purchasers or any of their respective affiliates and advisers. You should not place undue reliance on such information. The information and statistics set out in this section may not be consistent with information compiled by other official sources within or outside the PRC or Hong Kong. The market outlook is not to be viewed as a recommendation to invest, or not invest, in any particular securities, or companies.

Overview

2020 has brought both transformation opportunities and challenges for companies working in the oil and gas industry. Although global oil supply is expected to increase from 93.9 million barrels per day (“bpd”) in 2020 to 104.2 million bpd in 2026, according to International Energy Agency (IEA), extended OPEC+ production has been cut since 2018 and the supply reduction in several major markets continuously put supply growth on hold. Going forward, the United States crude oil production growth may slow down as cash discipline tightens, and the OPEC’s production is expected to rise in the back drop of declining output from maturing fields in non-OPEC countries. From 2020 to 2023, average supply growth is forecasted to be 1.6 million bpd per year. The COVID-19 pandemic has halted business or at least slowed business growth for the industry in 2020. While the industry has started to recover from the COVID-19 pandemic and there has been a growth in the demand for oil and gas, it may take time for the businesses to fully recover and expand. However, there lies the very opportunity for companies to strategically transition to clean energy production, such as in natural gas exploitation, and plan for the arrival of the new super oil cycle.

The following table shows the 35-year super oil cycle from 1980s to 2010s and the price downfall from 2014 to 2020 with the future growth projection:

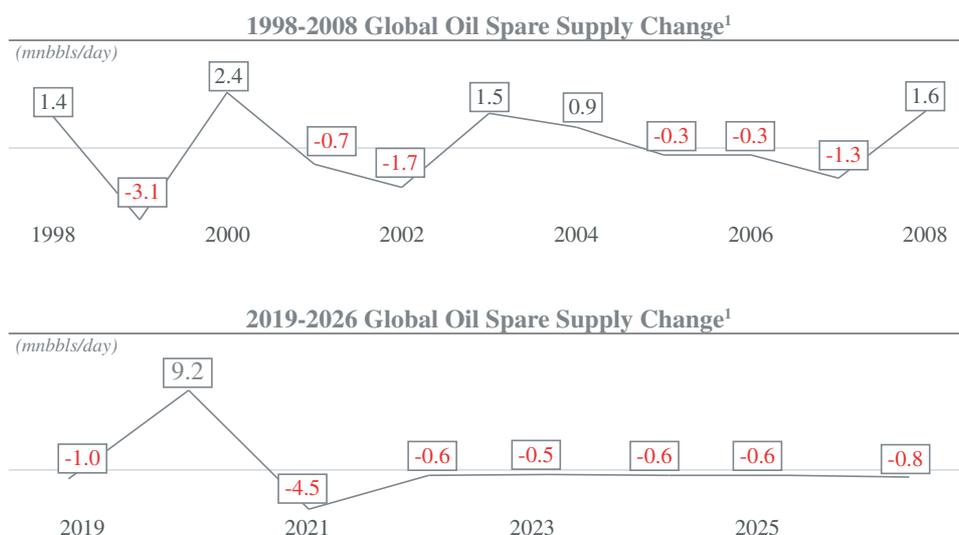


Source: EIA, IEA, BP Statistical Review.

Global Oil Supply

Global oil supply was plummeted by spending cut and project delay in 2020. Due to the collapse in global oil price and oil demand in early of the year, OPEC+ producers set forth a historical cut of nearly 10 million bpd with their April 2020 pact. Supply dropped from 100.5 million bpd in 2019 to 93.9 million bpd in 2020, largely contributed by the ongoing uncertainty around oil demand as impacted by the Covid-19 pandemic. The OPEC+ coalition agreed to boost collective crude output by 400,000 bpd each month from August to December, 2020 and extend their supply management agreement through the end of 2022. IEA projects that, following record 2020 production decline, the Middle East will drive world oil supply to increase to 104.2 million bpd by 2026, setting forth a situation similar to the years in early 2000s.

The following tables show the global oil spare supply change from 1998 to 2008 and the projected change from 2019 to 2026:

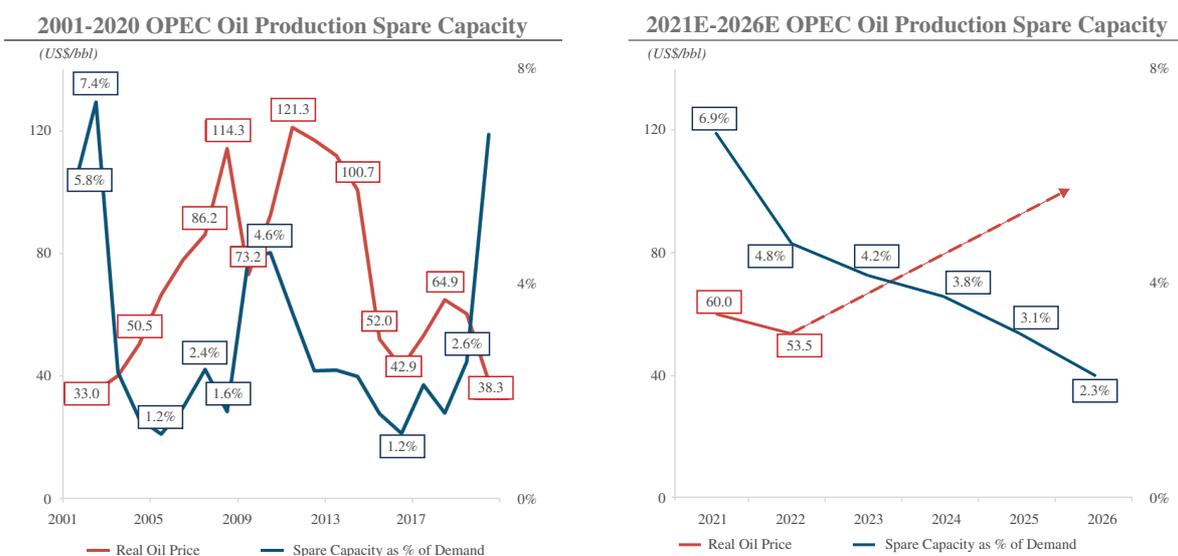


Source: BP Statistical Review, IEA.

1. The Spare Supply Change is calculated by the YoY change in Global Oil Supply subtracted by the YoY change in total Global Oil Demand of the respective year.

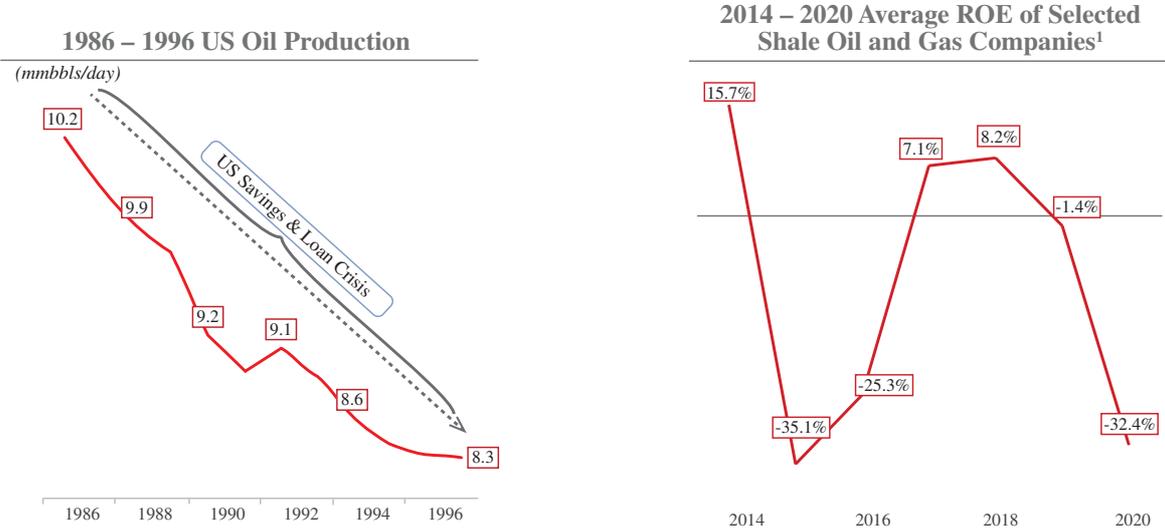
The OPEC+ effective spare capacity in 2021 might fall to 5 million bpd in the fourth quarter but could stand at 5.1 million bpd in 2022 given the planned capacity expansions. Effective spare production capacity is projected to fall to 2.4 million bpd in 2026, the lowest level since 2016, according to IEA. Total oil productions are projected to rise by 10.2 million bpd by 2026 from a six-year low of 94 million bpd in 2020, and global capacity is projected to increase 5 million bpd by 2026 versus 2020. According to IEA, to meet the increasing demand in the world oil market, oil companies in the Middle East will continue to focus on the traditional strategies that feature capacity building, and upstream investment on exploration and production is projected to increase.

The following tables show the changes in OPEC’s oil production spare capacity from 2001 to 2020 and the estimated changes from 2021 to 2026:



Source: IEA, EIA, BP Statistical Review.

The shale supply from the United States may not continue to account for as much market share in the overall supply in the world market due to its high-cost nature. According to IEA, the industry is becoming wary of the increasingly stringent ESG criteria in the United States and the chance of more regulations under the Biden administration, which may slow down the pace of oil production. The following tables show the historical changes on oil production and U.S. savings and loan crisis as well as the changes on the average return on equity of selected oil and gas companies:



Source: BP Statistics Review.

1. Selected companies include the composite companies of Solactive Shale Gas Index.

Middle Eastern countries are expected to continue to generate a large portion of the world’s oil supply in the near future. According to IEA, Saudi Arabia, Iraq, the UAE, and Kuwait are projected to contribute to 46% of the increase in supply from 2020 to 2026. Iraq, as OPEC’s second largest oil producer, currently outputs around 4.4 million bpd under OPEC+ production cuts. The current production capacity is around 3.9 million bpd comparing to 3.5 million bpd in 2014 as Iran has agreed to reduce production in 2020 under the OPEC+ agreement. The traction of notable growth in Iraqi oil production is expected to continue. IEA forecasts that Iraqi oil production will gradually reach to approximately 6 million bpd in 2030. Rystad Energy is also optimistic and expects oil production to reach 6 million bpd by 2023 and to stay around 6.2-6.3 million bpd through 2030. This forecast may have further upside if developments in infrastructure projects can be accelerated. In addition, IEA projects that global oil companies in the Middle East will continue to increase upstream E&P spending and actively look for alternatives to cope with the continue growing trend on the demand side in the next super oil cycle.

Albeit facing sanctions and potential cutoff from the global market supply, the projected production growth in the Middle East areas is largely underpinned by the countries’ high dependency on oil revenue to support economy development. For instance, the Iraqi government accounted approximately 97% of annual budget from oil revenues in 2020, making it one of the most oil-dependent countries in the world. This massive budget was a more than a 40% increase from the previous years, featuring the highest deficit and second-highest spending volume since the 2003 Iraq War that reflects the pressing needs of growing government revenues to rebuild the country after a long period of political instability and social unrest.

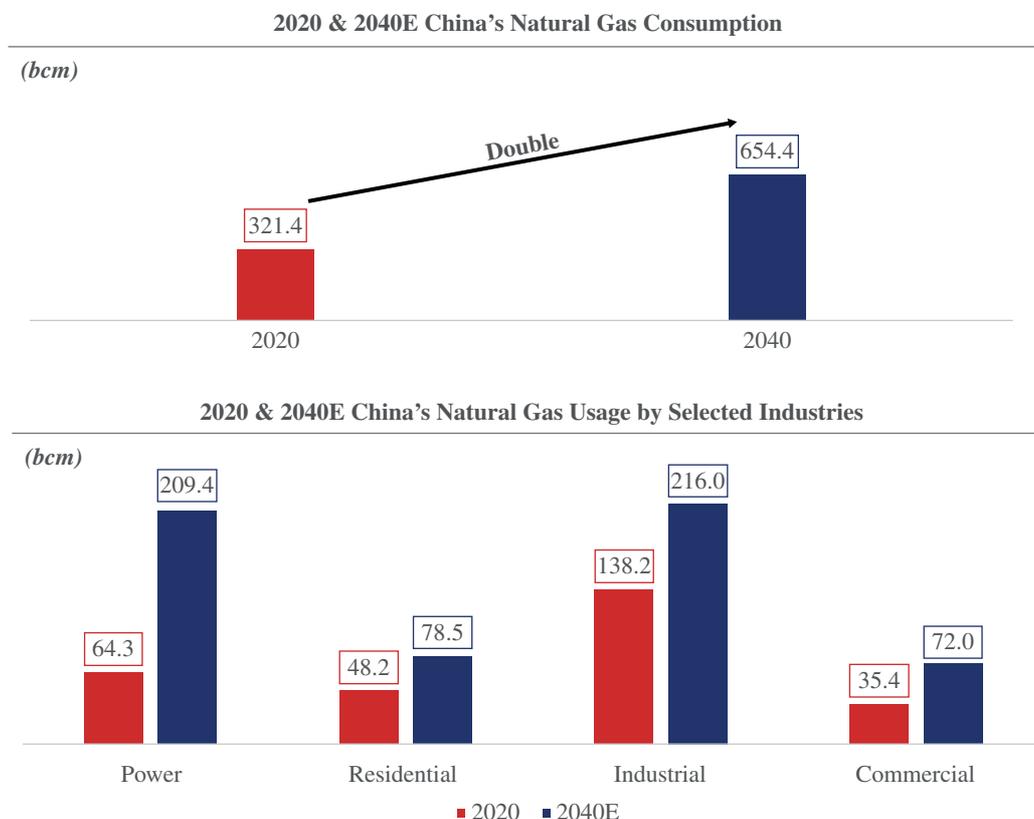
Many other Middle East and North African (MENA) countries also demonstrate economic dependence on oil to a large degree. For example, Saudi Arabia expects oil revenues to make up around 62% of its 2020 planned budget. Chad, one of the most significant oil producers in North Africa, heavily rely on oil exports to sustain the country’s economic development, with oil making up approximately 74% out of total value for exported goods in 2018. Many MENA countries’ inherent low oil production costs, make them less sensitive to the oil price environment. Therefore, development of oil and gas activities is expected to see continued support in these countries. The increase in oil production remains vital to position the economy for continual growth.

Global Gas Supply

Natural gas currently represents more than 20% of the world's total energy consumption in 2020, according to SIA Energy, driven predominantly by the power generation sector. SIA Energy also projected that global demand for natural gas is expected to increase by 29% by 2040, supplying 25% of total energy consumed worldwide. In 2020, the power and industrial sectors accounted for the majority of natural gas consumed globally. The remaining was consumed by a mix of residential, transportation, energy losses and other sectors. Riding on the growth of power and industrial sectors in Asia, the Middle East, and North America, long-term gas demand growth is expected to be driven mainly by the aforementioned continents. The strong prospects of the Middle East's natural gas demand growth are underpinned by its sizeable population and economic growth after its recovery from political hardships and economic sanctions, pushing up demand for natural gas as a feedstock for the industrial and power sectors, especially in the expanding petrochemical industry.

In Asia, China is one of the few countries where gas production is forecasted to increase while other countries have declining gas supplies. The advancement of liquefied natural gas (LNG) trading has facilitated more inter-continental gas flows between each continent. In terms of LNG export volume, North America, Australia and Middle East have grown since 2010, though Middle East exports may be limited by increasing demand. Asia's demand for natural gas has historically been fulfilled by LNG imports from Australia and Middle East, and pipeline imports within Asian countries, and is expected to be met by growing pipeline imports from Russia.

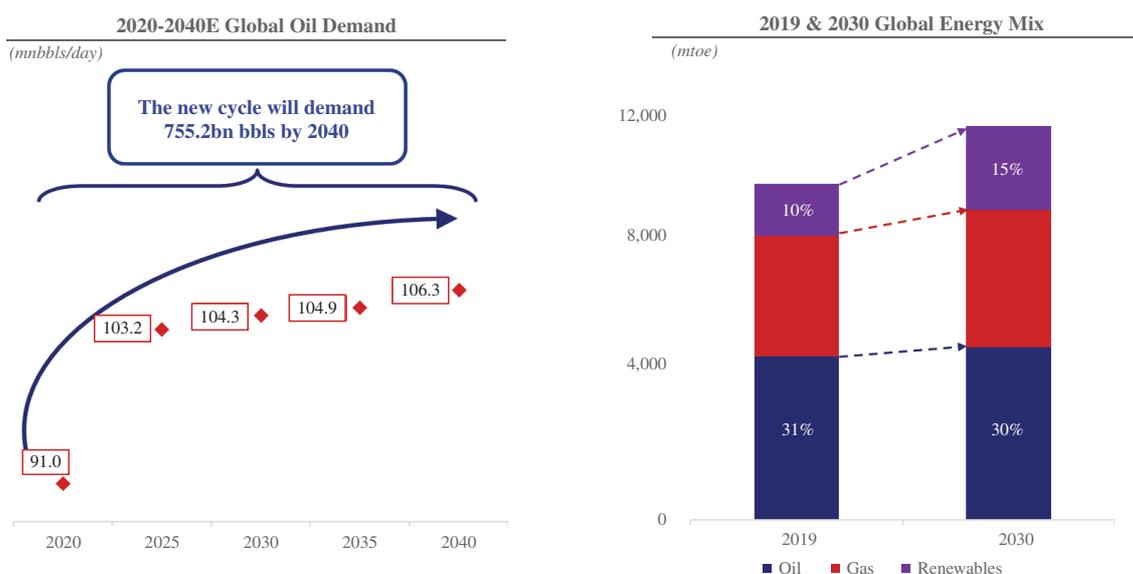
In addition, to continually reduce carbon emission, the Chinese government has stated its intention to increase the share of natural gas in China's primary energy mix in its Energy Development 13th Five-Year Plan. China's natural gas demand is expected to grow in the next 5 years, driven by strong consumption from the residential and power sectors which are prioritized by the Chinese government as key sectors in the transition from coal-to-gas. Going forward, natural gas is set to play an important role in China's energy mix, establishing the need for further development of China's natural gas resources. The following tables show China's projected natural gas consumption and usage by selected industries from 2020 to 2040:



Source: SIA Energy.

Global Oil and Gas Demand

Global oil and gas demand is expecting to have a steady growth in the next decade. Although global demand for crude oil in 2020 fell to 91 million bpd as a nine-year low, the IEA projected that it would rebound to approximately 96.2 million bpd in 2021 and further to 104 million bpd in 2026. Also, the worldwide impact under the Covid-19 pandemic largely contributed to the potentially temporary dropdown on the low demand, since businesses and oil need have been largely put on halt. The prolonged and repeated lockdowns plus stringent social distancing measures, including widespread teleworking and stagnated international travel, have caused OECD demand to plunge by 5.6 million bpd in 2020. With more people around the world getting vaccinated and restrictions being eased and lifted, global oil demand will foreseeably rebound in the short term. The following table shows the past and estimated oil demand growth from 2020 to 2040.



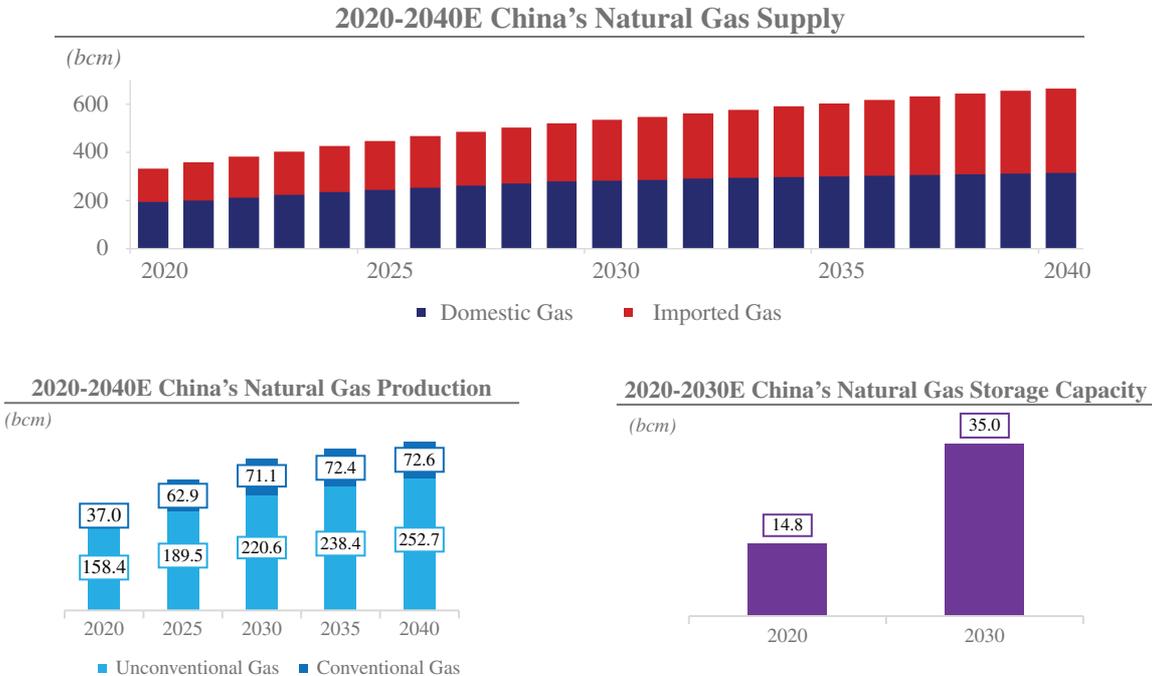
Source: IEA, *Global Energy Mix under Stated Policy Scenario*.

In the long term, more than 50% of global demand growth is expected to be driven by China and India, in the backdrop of middle class expansion and continuous economic growth. As the world's most populated countries, China and India together represent significant areas of oil consumption growth, due to expanding fleets of passenger vehicles, stronger demand for petrochemical products to attain improved living standards and increasing power generation corresponding to industrial activities. China's demand for gas, in particular, will experience consistent growth towards 2040. As China gradually tightens environmental regulations and phases out polluting coal-fired power plants, gas will continue to grow and become an important part of China's future energy mix.

China Energy Independence to Increase Domestic Production

The development of oil and gas in China is more sensitive to the Chinese government's strategic policy to strengthen energy security and control carbon emissions as opposed to movements in a commodity pricing market. China imported 504 million tons of crude oil from January to November 2020, according to the General Administration of Customs, showing another year of high dependency on foreign crude oil for over 70 percent.

While the pursuit of energy independence drove Chinese national oil companies (NOCs) to expand their international portfolios back in 2009, it is expected to boost domestic production in the coming years. In the newly published Seven-Year Action Plans orchestrated by the National Energy Administration, the government has pushed for renewed focus in domestic upstream production from 2019 to 2025 to secure its energy supply. SIA projects that China’s domestic natural gas production will increase from 185.4 billion cubic metres in 2020 to 325.3 billion cubic metres in 2040, and China’s natural gas storage capacity will increase from 14.8 billion cubic metres in 2020 to 35.0 billion cubic metres in 2030. The following tables show China’s projected natural gas supply in the next two decades:



Source: National Development and Reform Commission, SIA Energy.

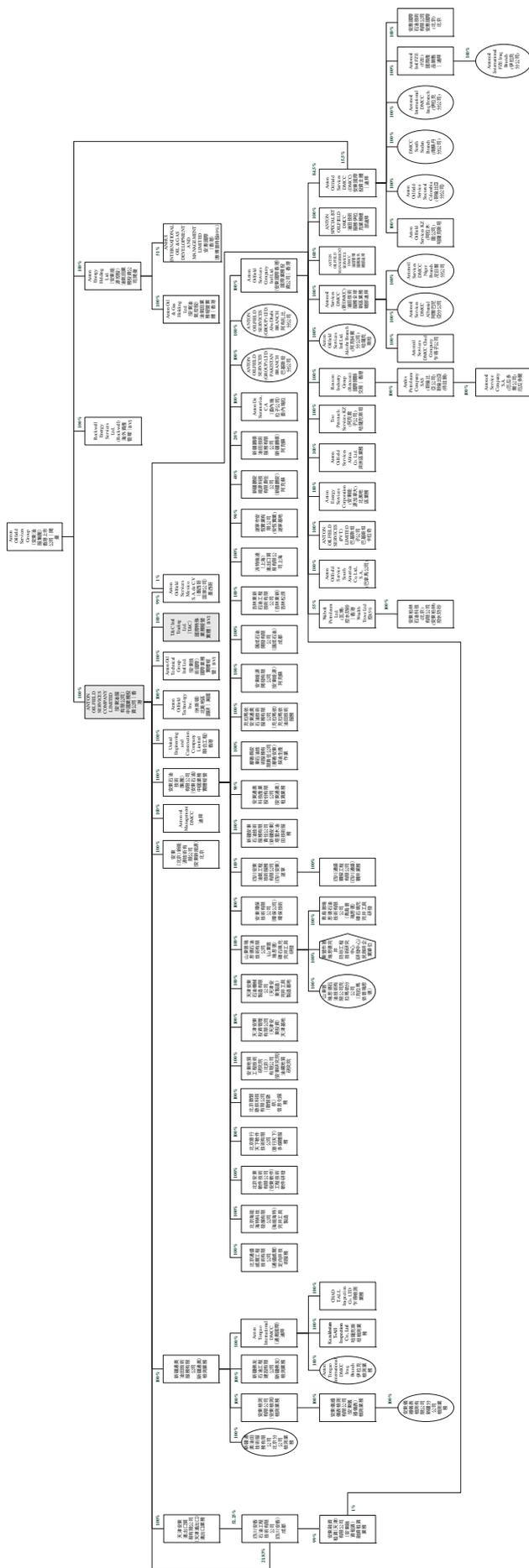
Major NOCs have committed to the Seven-Year Plans, with China National Petroleum Corporation (CNPC) and China National Offshore Oil Corporation (CNOOC) disclosing targets for their plans to focus on growing production, adding new reserves and increasing exploration spending. For instance, CNPC has disclosed plans to focus on four key regions: Xinjiang, Songliao, Changqing and Southeast Region. In 2018, CNPC revealed plans that the company aims to spend more than RMB150 billion by 2022 to boost oil and gas output in the Xinjiang province in China, which has long been the key focus of development by Chinese authorities. The company has also stated ambitions to increase spend on frontier exploration to US\$640 million per year, which is five times the current level. With this high level of investments, the upstream oil and gas production in Xinjiang is expected to reach 1 million boepd, according to CNPC. Furthermore, PetroChina and Sinopec have entered into a joint research framework agreement for the Tarim Basin, Junggar Basin (both in Xinjing) and Sichuan Basin. The agreement covers 81 prospecting rights with an area of 305,800 square kilometers. Under the agreement, the two companies will conduct in-depth and systematic joint research in the three basins. In addition, the government has also rolled out a series of policy reforms and incentives to increase foreign participation and make the E&P sector more competitive.

The Erdos Basin in the Northern part of China also remains an area that is expected to see continued investments into the upstream oil and gas sector. Sinopec lately announced that the company had added 44.2 billion cubic meters of gas reserves in the basin. This reserves addition will bring the company’s reserves in the Dongsheng field to 123.9 billion cubic meters. Annual production from the field is expected to grow to 2 billion cubic meters next year from currently 1.35 billion cubic meters. On the other hand, CNOOC has released it’s “two 20 million” plan to discover 20 million cubic meters of gas in the western South China Sea and 20 million metric tons of oil in the eastern South China Sea.

In addition to the companys' movement, the Chinese government has adopted multititle incentivizing measures to boost domestic oil and gas production. This includes providing subsidies and tax reduction for unconventional resource development which now also includes subsidies for tight gas. Furthermore, a new reform for new acreage awards and exit awards have been put into place in order has made it possible for foreign companies to invest in Chinese oil and gas activities without forming joint ventures with domestic NOCs. The administrative process has also been made more streamlined, by removing the need for approval by the National Development and Reform Commission for the Overall Development Program.

CORPORATE STRUCTURE

The following chart sets forth our corporate structure as of the date of this offering memorandum:



BUSINESS

Overview

We are a leading, independent and integrated oilfield service provider with a global footprint, covering a number of major oil and gas basins in the world. We are an innovative company with a full suite of products and integrated solutions throughout the entire oil and gas development process. Our products and services encompass the full spectrum of oil and gas development stages and meet the diverse needs of our customers to maximize the value of their oil and gas assets. Our products and services are not only targeted solutions for different stages of oil and gas development, but also expert consulting services and integrated solutions.

We are committed to deepening our engagements within the global emerging markets of oil and gas development. We operate in more than 30 countries and regions, including China, the Middle East, Africa, Central China, Southeast Asia and Latin America. This truly global network provides us the agility to support and fulfill the service needs of our customers across the globe. We have been listed on the SEHK since December 2007.

We have strategically expanded our operations into overseas markets, including the Middle East and Central Asia and Africa, by implementing the “Belt and Road” initiative. In 2018, 2019 and 2020 our overseas revenue accounted for 63.1%, 53.1% and 40.6%, respectively, of our total revenue. In the domestic market, our operations in China span across China’s major onshore oil and gas fields, including, in particular, the Tarim Basin, the Sichuan Basin and the Erdos Basin, three major basins in China. In 2018, 2019 and 2020, our domestic revenue accounted for 36.9%, 46.9% and 59.4%, respectively, of our total revenue.

We focus on the provision of oil and gas field development services to our customers. We engage in three business clusters, namely, drilling technology, well completion and oil production services. Our drilling technology cluster includes engineering technical services and products during the drilling stage to solve problems encountered in directional drilling, drilling assessment, drilling acceleration, enhanced reservoir contact and integrated drilling. Our well completion cluster includes well completion and stimulation services from integrated solutions for well cementing and completion, production well completion, equipment, tools and materials. Our oil production services cluster primarily focuses on workover services and production operation management services including integrated oilfield management and management and maintenance services for oilfield ground stations. Revenue from our drilling technology cluster contributed approximately 45.6%, 45.2% and 42.2%, respectively, of the total revenue in 2018, 2019 and 2020; revenue from our well completion cluster contributed approximately 25.3%, 23.3% and 24.3%, respectively, of the total revenue for the same periods; and revenue from our oil production cluster contributed approximately 29.1%, 31.5% and 33.5%, respectively, of the total revenue for the same periods.

We have strategically cooperated with Chinese oil and gas companies, Chinese state-owned oilfield service companies and domestic and international oilfield service providers. Our cooperation and strategic alliances with Chinese national oil companies and Chinese state-owned oilfield service companies have enabled us to enhance our market position and our cooperation and strategic alliances with domestic and international oilfield service companies have enabled us to enhance our technical and service capabilities. In August 2018, we entered into a business cooperation agreement with CRCC Financial Leasing Co., Ltd (“CRCC”), an ultra large construction enterprise managed by the State-owned Assets Supervision and Administration Commission (“SASAC”) of the State Council, to develop asset leasing business in China. In December 2020, we signed an investment agreement with Chengdu Xiangtou Group, the largest state-owned investment group in Xindu District, Chengdu, as the Group’s new strategic partner. Xiangtou has invested RMB70.0 million to establish a joint venture with us where we can combine our comparative advantages and expand our financial leasing business.

Our business depends largely on the level of development activity and corresponding capital spending of oil and natural gas companies. These activity and spending levels are strongly influenced by

the current and expected oil and natural gas prices. In 2020, under the dual influence from COVID-19 and plunge in global oil price, our businesses faced unprecedented challenges. In the domestic markets, clients significantly reduced the rates of service fulfillment. Nonetheless, we benefited from the effective controlling measures implemented by the PRC government and seized the opportunities to develop our businesses in natural gas and unconventional markets such as shale gas area. In the oversea markets, we faced steep travel restrictions and quarantine procedures that caused us to suspend many large-scale, asset-heavy projects. Nevertheless, we introduced high-quality asset-light oilfield management projects to our oversea clients and plan on further expanding this business model. Our integrated oilfield management contract at the Majnoon oilfield in Iraq was renewed and our oilfield management project in Chad, West Africa was successfully commissioned. In 2018, 2019 and 2020, we recorded revenue of RMB2,935.9 million, RMB3,589.5 million and RMB3,087.7 million (US\$473.2 million), respectively.

Our Strengths

We believe the following competitive strengths contribute to our success and distinguish us from our competitors:

Strong market position in “Belt and Road” countries, with increasing presence

We believe that our performance in the overseas market will continue to be a key growth driver for our services and products. By implementing the “Belt and Road” Initiative, we have strategically expanded into a number of countries across the world, spanning the Middle East, the Americas, Central Asia and Africa, which we believe provides a strong foundation for our further expansion in overseas markets. As a result of our business expansion overseas, we recorded increasing revenue from our overseas operations in 2018 and 2019, which amounted to RMB1,852.2 million and RMB1,906.2 million, respectively, accounting for 63.1% and 53.1% of our total revenue for the same periods, respectively. Although the revenue from our overseas operation decreased in 2020 largely due to unprecedented global the pandemic, we believe the Chinese government’s “Belt and Road” Initiative has and will continue to stimulate capital spending in the oil and natural gas industry in the “Belt and Road Countries” which will, in turn, continue to provide us with growth opportunities in the overseas markets. Capitalizing on the opportunities in the Middle East, Central Asia and Africa with support from the Chinese government, strong flow of investment capital from Chinese oil and gas companies to fulfill the Chinese government’s mandate and potential cooperation with certain policy banks in China for conducting business in “Belt and Road” countries, we intend to further solidify our market position in emerging global markets in the Middle East and Africa in particular and actively seek opportunities in new regions. As we gain experience and raise our reputation in the overseas market, we believe we will be able to increase our business with existing customers and gain workload from new customers based on our integrated service model, wide-ranging service and product offering, advanced technologies and low cost structure.

Integrated oilfield management service provider with advantageous position in the industry chain

We provide our customers with integrated oilfield management service. Such service primarily hinge upon talent, technology and resources allocation capabilities under strong market influence power. Acting as an independent integrated oilfield management service provider, we are well positioned in the oilfield technical services industry chain. We not only offer services stemmed from general operating expenses, but also will have greater edges over winning more services arising from capital expenditures for the whole oilfield, hence can further expand our traditional services scale and augment the synergic growth facilitated by both our traditional and new business models.

We have won two representative large-scale integrated oilfield management service projects. The first one is the “Majnoon” project we won in April 2018, in which we manage the Iraq’s third largest oilfield, Majnoon oilfield. We provide the customer with integrated oilfield management services including the overall operation and maintenance of the oilfield, general engineering management such as facility maintenance, and the management of third-party services for integrated well delivery services encompassing turn-key drilling and workover services etc., as well as end-to-end materials management and supporting services. The contractual service fee is around US\$100 million per annum, covering

service fees for the delivery of personnel and materials needed for related oilfield production and operation and project management fees. In September 2019, we won another integrated oilfield management service in Chad, the “Chad” project. Similar to the Majnoon project, this project winning represents another breakthrough in our integrated oilfield management service business in the global emerging markets. See “Business — Recent Development” for more details. For these projects, we will be the sole decision maker in procurement of work contracts and will work with third party oilfield service companies to service asset. The winning of the two projects demonstrates our competitive advantages and service capability in this type of large integrated management projects.

“Asset-light” business model requiring relatively low capital expenditures

We have made selective investments for equipment under our “asset-light” business model. For example, fracturing and horizontal well drilling are important technologies to enhance natural gas production. To enable us to provide those technical services, we invest in necessary equipment such as pressure pumps and drilling rigs, which can be utilized in many types of stimulation and drilling services. Our strategic investment in such equipment, we believe, not only develops our equipment services, but also drives the development of our individual technical services, without us having to incur substantially more capital expenditures. For instance, pressure pumps can also be utilized in fracturing services and, as a result, drive the development of well completion tools and chemicals, and drilling rigs can also be utilized in drilling services and, as a result, drive the development of directional drilling and drilling fluid. In addition, we can utilize pressure pumps and drilling rigs to undertake turnkey service contracts. We believe our strategic investment and high utilization rate allow us to stay efficient while keeping the costs low.

In addition, we are able to mobilize excess capacity from our rigs and equipment in China to our international operations, further reducing the outflow of capital expenditures and allowing for incremental growth in revenues. Relocating our rigs to our overseas operations also allows us to increase our gross margins and decrease the turnover days of our trade receivables. We believe this strategy enables us to maintain a low cost structure by reducing our need to purchase large and costly equipment for overseas projects. Our “asset-light” business model also includes working closely with our strategic partners in the expansion of our business overseas and leveraging their available resources, particularly in emerging global markets where we do not yet have the local resources, to carry out and complete selected projects or tasks. Such business model allows us to mitigate our development risks, reduce our cash flow requirements by assigning our capital spending to only necessary purchases of equipment or services for the overseas market and enhance our efficiency by allowing us to focus on services that we specialize in and outsource tasks that are better suited for our strategic partners. For example, we will leverage our strategic partners’ local resources if a significant number of large-scale equipment are required for a particular project overseas. We may also sub-contract services to our strategic partners with available local manpower to complete certain projects.

The “asset-light” business model also applies to our integrated oilfield management service business. We won two major integrated oilfield management service projects, the “Majnoon” project in April 2018, and the “Chad” project in September 2019. Both projects endure low operating risk and require low capital intensity. For more information on these two projects, see “— Integrated oilfield management service provider with advantaged position in the industry chain.”

Strong technical and comprehensive service capabilities at a competitive cost

We believe we possess advanced technology and strong research and development capabilities to continuously introduce and develop new technologies to meet our clients’ needs. As of December 31, 2020, we had over 317 registered patents. QHSE standards are a key to participating in international and large tenders for oil and gas services businesses. We have established our QHSE management center to oversee our operations since 2013, which we believe has enabled us to align with international standards and compete effectively with our domestic peers. In addition, based on our deep understanding of geological characteristics in key operating regions, we possess strong reservoir geology research ability. Furthermore, we have the capacity of providing one-stop service for oil reservoir research, development design and engineering operations.

We are able to provide quality technical services that are on par with our Western service provider counterparts to our customers at a competitive cost. In addition, we have developed local operational support and/or engineering personnel and local supply chains in the domestic market and overseas. We also work with a number of strategic partners and may introduce new technologies into our markets for greater efficiency. In addition, we may also rely on the local resources of our strategic partners to carry out certain tasks or complete certain projects.

Strategic alliances

We have built up a strategic cooperation with Schlumberger, one of the world's largest oilfield services companies, and collaborated with it since 2006. Our strategic partnership with Schlumberger has granted us access to internationally advanced technologies, enabling us to expand into certain technologically challenging markets, thereby enhancing our competitiveness. The cooperation has also helped us to improve our QHSE standards to align with the international level and exposed us to leading global management experience. In 2018, we entered into a business cooperation agreement with CRCC Financial Leasing Co., Ltd ("CRCC") to develop asset leasing business in China. In 2020, we made active progress in developing synergies between industry and finance. In December 2020, we signed an investment agreement with Chengdu Xiangtou Group, a state-owned investment group in Xindu District, Chengdu, as our strategic partner to grow our financial leasing business. For more information on our strategic partnerships, see "Business — Strategic Alliances." We believe these strategic partnerships will enable us to further expand our business in the domestic and overseas markets.

Disciplined financial and cost management policies

We have disciplined financial and cost management policies to manage our financial resources. We intend to keep our cost structure competitive as we continue to expand in the domestic market and grow our operations and explore opportunities in the overseas market. We have adopted disciplined capital expenditure plans and measures to strengthen our inventory management to ensure timely supply of materials, monitor our purchasing needs to take advantage of available discounts from our suppliers and increase our efforts to improve our operational efficiency.

We also take a prudent approach to investment, including investment in human resources supporting our growth as an oilfield technical service company, investment in key technologies required for the development of our business and investment in necessary equipment for our core business clusters to support business expansion. We believe our disciplined financial policies will enable us to further expand in our target markets, provide us with greater flexibility in capital management and help us sustain long-term growth.

Furthermore, we bridge partners along our supply chain with financial institutions. We assist our customers and suppliers gain access to loans and borrowings from financial institutions, which in turn, results in more timely payment from our customers to us and less pressure on us to pay our suppliers. In this way, we benefit from the combination of the industry value chain and financial resources.

Well-positioned in the fast-growing oil and gas industry in emerging global markets and China

Global oil and gas sector has been supported by the recovery of global economic growth and oil demand. Increasing demand from non-OECD countries and/or regions such as China, India, the Middle East and Africa is expected to continue to drive global oil consumption in the near future. According to the International Energy Agency, the primary driver in global oil and gas consumption in the global markets has been the growth in non-OECD markets, with oil consumption growing from 43.1 million barrels per day in 2011 to 48.9 million barrels per day in 2020 and gas consumption growing from 1,706 billion cubic meters in 2011 to 2,146 billion cubic meters in 2019. As the demand grows, the shift toward exploration in low-cost producing countries or regions will continue to develop, the so-called emerging global markets. We believe that we are well-positioned in some of the fastest growing emerging global markets, such as Iraq, Pakistan, Kazakhstan and Ethiopia, to take advantage of this development trend. We also believe that energy security has become an essential premise for China to continue its economic growth, and that the Chinese government will continue to encourage investment in oil and natural gas industries. See "Industry Overview." We believe that all the factors above have driven and will continue to drive the demand for oilfield services. With our integrated oilfield service capacity, we believe we are well positioned to capture the business opportunities arising from the growth of the natural gas industry in emerging global markets and China.

Well-positioned in the industry transformation upon the new super oil cycle

2020 could be the end of a 35-year oil industry cycle that started in 1986, but it is also the beginning of a new industry growth cycle. Indeed, although the 2020 oil and gas macro environment is similar to the situation in 1986 in many ways, the new oil cycle presents a more optimistic condition that allows us to well position our business strengths. Global upstream spending decreased sharply since 2014, similar to the oil price significant downfall in 1980s. But throughout the 1990s, global oil demand increased steadily as China emerged as a global power, whereas oil price continued to fall under the weight of considerable oversupply of low cost and low decline OPEC capacity. We believe that we may seize the opportunities lying in the current round of industrial transformation. We believe national oil companies in China and Middle East will invest more in oil exploration and production that will allow us to provide our drilling technologies and production services. Also, we are able to follow up on China's energy transition to natural gas development with our integrated services to gas field development. For more information about the industry transformation and the new super oil cycle, see "Industry Overview."

Prudent liability management

We place an great emphasis on financial health and are committed to maintain stringent risk control practices and sound liability management systems. For example, we have established an internal audit department that oversees our internal control and risk management activities with other departments. We focus on cash flow management in our daily operations and actively monitor key financial ratios as well as the repayment of debt through prudent liability management policies with the aim to maintain a healthy leverage level. Benefitting from our prudent liability management policies, we have been able to maintain sufficient liquidity and optimize our debt maturity profile during our business expansions. As of December 31, 2020, our long-term indebtedness (including the long-term borrowings and non-current portion of our long-term bonds) accounted for approximately 67.9% of our total indebtedness (including the long-term bonds and short-term and long-term borrowings).

In addition, we have been actively maintaining access to diversified onshore and offshore financing channels to optimize our debt structure and increase overall liquidity. We believe that our prudent liability management policies will continue to help us to maintain sufficient liquidity and enhance our ability to secure financing in the future.

Experienced and stable management team

We have a stable and experienced management team. The industry experience and knowledge of our senior management team have significantly contributed to our corporate governance system and to the success of our operations. Our founder and Chairman, Mr. Luo Lin, has more than 27 years of experience in the petroleum industry. Mr. Pi Zhifeng, our Chief Executive Officer and executive Director, has 19 years of experience in business and capital market operations. A majority of our key senior management team is similarly experienced in and knowledgeable about the oil and gas industry and oilfield operations, and some of them have previously served in executive positions in major oil and gas enterprises. Our management has effectively mitigated the adverse risks from our last downgrade and implemented strategies to position the Company to capture future growth. Our key management team members have, on average, worked for us for twelve years. The stability of our management team is critical to our long-term development and the continued growth of our business.

Our Strategies

Our goal is to become a leading global oilfield services provider in the long run. To achieve such goal, we plan to pursue the following business strategies:

Continue to align our geographic focus in emerging markets with the central government's "Belt and Road" initiatives

We plan to work closely with our key customers and strategic partners and leverage our existing layout in the overseas market to further extend our geographical coverage and grow our business in the overseas market. In particular, we will rely on our advantage of offering quality products and services that are on par with our western service provider counterparts at a competitive cost, while continue to work closely with international oil companies as they continue to develop their oilfield exploration and production projects. We will also continue to work with our existing customers in the overseas market and leverage our integrated service model to cross-sell our services to them. In addition, we will focus our efforts to actively explore possibilities to work with more international oil companies and strive to become involved in their projects. The oil and gas industry has seen a steady increase in demand in recent years, as China continued to emerge as a global power with a strong appetite for energy while oil prices remain competitive. Therefore, we continue to see the value in investing in emerging markets and taking advantage of the "Belt and Road" initiatives. We have identified Iraq, Ethiopia, Pakistan, Kazakhstan and certain other countries in Africa as our major targets of continued overseas development, as we believe that the expected increase in market demand and price for oil and gas over the next decade or so will support the development of oil and gas fields through the utilization of more advanced and efficient techniques in countries where it has traditionally known to be challenging and uneconomical to exploit. As such, we believe our quality services and products and competitive costs may continue to fill a void in the available supply of oil and gas field development services and capture new opportunities in the coming years, and allow us to gain additional market shares in the global market, particular the emerging global markets. In addition, to support our business growth and overseas market expansion, we will continue to recruit qualified professionals with international work experience and knowledge about the industry and local markets in order to support our growing business overseas.

Continue to solidify market position in domestic natural gas market

As a result of the Chinese government's continued push to increase the consumption and supply of natural gas for energy security and environmental concerns, we believe the prospect for the domestic natural gas market is favorable and will continue to present new business opportunities for us. We plan to capitalize on such opportunities to further develop our integrated oil and gas field development technical services. We will focus on improving our market position in the major natural gas producing basins in China and diversify our services to independent oil and gas companies covering such basins. We will focus on both conventional gas projects and unconventional gas projects such as tight gas and shale gas. We plan to further explore and promote our services in domestic regions where we have proven track record in providing services and products to actively establish, develop and manage relationships with oil and gas companies with a presence in such regions. We believe that we are well-positioned to further expand our business in the domestic market to further develop and strengthen our business in the domestic market.

Continue to implement the "asset-light" and integrated service model

We will continue to implement our "asset-light" and integrated service model. In doing so, we plan to continue to develop our individual technical services and further develop our services and products under our "asset-light" and integrated service model. Our integrated service model is particularly suitable for the emerging global markets given our ability to provide wide-ranging services to support our customers' needs in different stages of developing and exploring oil and natural gas fields, allowing us to offer package services that cover engineering, oil production, well completion and drilling tasks. We also will continue to utilize our integrated management system to obtain turnkey service orders and allocate the work efficiently between our operational teams or external teams for certain technical services. We may

rely on our strategic partners for certain technical services if they have the available resources and technical expertise. Also, we intend to achieve multi-product coverage with the same customers by crossing-selling our products and services, thereby improving our efficiency and reducing our costs with economies of scale.

One of our operating philosophies is to improve cash flow and achieve high return on capital. We believe that the “asset-light” and integrated service business model will continue to make contributions to steady cash flow and higher return on capital. We will continue to proactively seek further implementation of such model in global market with the goal of achieving high-quality leap-frogging growth.

Continue to cooperate with international and national oil companies as well as independent oilfield service companies and international and other oilfield service companies

We intend to develop a deeper understanding of the needs of our customers’ oil and gas field projects so that we will be able to routinely perform early stage oilfield evaluation, project planning and design service for them and further strengthen our cooperation with them. Leveraging on our research and development capabilities and existing long-term relationships with our key customers, we will continue to build strategic partnerships with international, Chinese national and independent oil and gas companies and target to assist them to improve operating efficiency, reduce cost and increase production. We will also continue to cooperate with international and other oilfield service companies to further enhance our market position by leveraging their market experience, equipment and other resources.

Recent Developments

Strategic Guideline for 2021

On January 26, 2021, we announced the strategic guideline for our development in 2021, reiterating our goal to become the most influential comprehensive integrated oilfield technical services company in the global emerging market for oil and gas development. In 2021, we plan to seize the opportunities offered by the national government’s “14th Five-Year Plan” to focus on the domestic market of natural gas development, continue to actively seek cooperation opportunities with more international oil companies in our key overseas market like Iraq and further identify and seize market opportunities arising in global emerging markets.

Resolutions at the Annual General Meeting

At our Annual General Meeting held on May 25, 2021, our shareholders duly passed the resolutions to, among other things: (i) give a general mandate to our Directors to repurchase shares not exceeding 10% of our issued share capital; (ii) give a general mandate to our Directors to allot, issue and deal with additional shares not exceeding 20% of our issued share capital; and (iii) re-elect Mr. Pi Zhifeng as an executive director, Mr. Huang Song as a non-executive director, Mr. Zhang Yongyi as an independent non-executive director and Mr. Zhu Xiaoping as an independent non-executive director.

Renewal of the Integrated Oilfield Management Services Project

On June 30, 2021, we entered into a contract with Basra Oil Company to successfully renew our integrated oilfield management services project for a large oilfield in southern Iraq. We will continue to provide integrated comprehensive management services, and expand our service scope to include management of third parties in various areas of the project. The new contract became effective on July 1, 2021.

Principal Services and Products

Overview

We provide oil and gas field services and products to Chinese oil and gas companies in China and their overseas operations. We provide our customers with integrated or specific services across a broad spectrum of oil and gas field development.

In 2015, we reclassified our business clusters and product lines to further optimize our business structure, improve our operational management and organization and increase synergies among the business clusters.

The comparison between original business divisions prior to 2015 and our current business divisions are as follows:

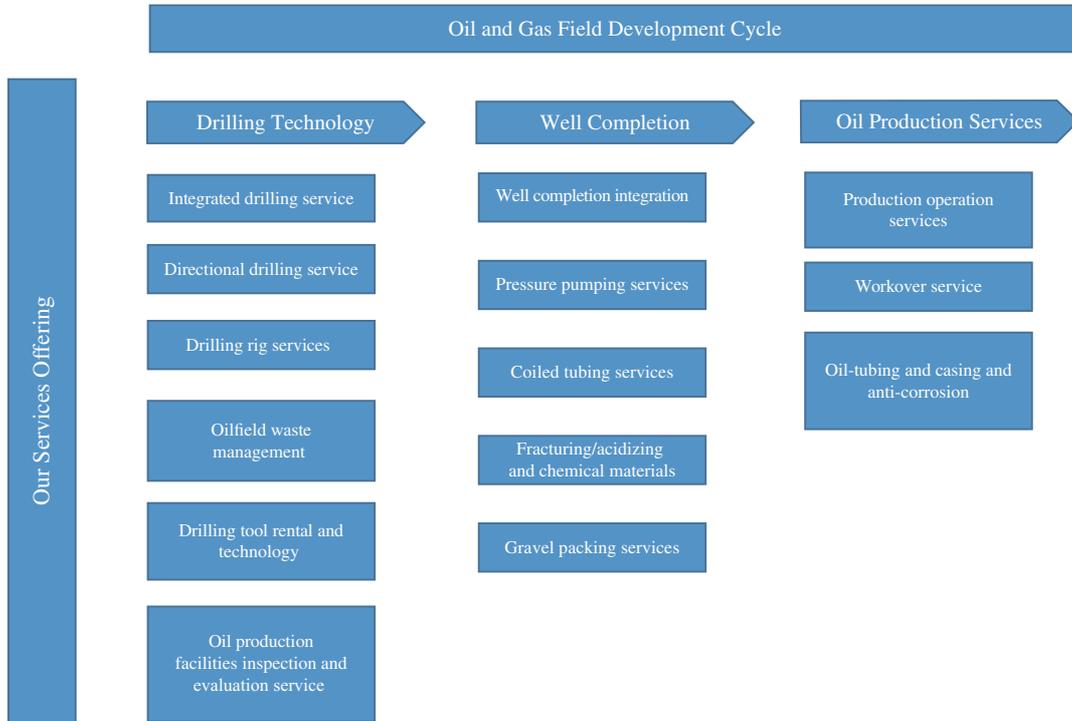
Classification by our current business clusters		Classification by original business clusters		
Drilling technology cluster	Integrated drilling services	Drilling technology cluster	Integrated module: Reservoir production management	
	Directional drilling services		Integrated project management	
Well completion cluster	Drilling rig services	Tubular services cluster	Integrated drilling	
	Oilfield waste management services		Directional drilling	
	Drilling tool rental services	Down-hole operation cluster	Drilling fluid	
	Oil production facilities inspection and evaluation services		Land drilling	
	Well completion integration		Well completion cluster	Oilfield waste management
				Pressure pumping services
Coiled tubing services	Down-hole operation cluster	Inspection and evaluation		
Fracturing/acidizing and chemical materials		Helium testing		
Gravel packing services	Well completion cluster	Pressure pumping		
Oil Production Services Cluster		Down-hole operation cluster	Coiled tubing	
	Tubular services cluster		Oilfield chemicals	
		Production operation service	Stimulation Operation	
Workover service	Down-hole operation cluster	Well completion tools		
Oil tubing and casing and anti-corrosion technology		Integrated well completion		
	Down-hole operation cluster	Sand and water control technology		
		Gravel packing		
	Tubular services cluster	Production operation service		
		Workover service		
	Tubular services cluster	Oil tubing and casing and anti-corrosion technology		
		Oil tubing and casing and anti-corrosion technology		

Our business is classified into three clusters, namely drilling technology, well completion and oil production service. Our drilling technology cluster includes engineering technical services and products during the drilling stage to solve problems encountered in directional drilling, drilling assessment, drilling acceleration, enhanced reservoir contact and integrated drilling. Our well completion cluster includes well completion and stimulation services from integrated solutions for well cementing and completion, production well completion, equipment, tools and materials. Our oil production services cluster includes production operation management services for oilfield ground stations. We set forth below the details for each of the three clusters:

- Drilling technology cluster: our services mainly include the provision of directional drilling, oilfield waste management, drilling new technology and rig services;
- Well completion cluster: our services mainly include the provision of well completion integration and gravel packing well completion services; and

- Oil production services: our services primarily include power engineering construction, operation, inspection and maintenance, artificial life technology design, management, optimization operation support, water injection, profile control, ground equipment maintenance and rehabilitation, re-engineering, installation overhaul and oil and gas field ground construction projects.

The following diagram outlines the well life across the exploration and production processes as they relate to our services:



The following table shows a breakdown of our revenue by business clusters for the periods indicated:

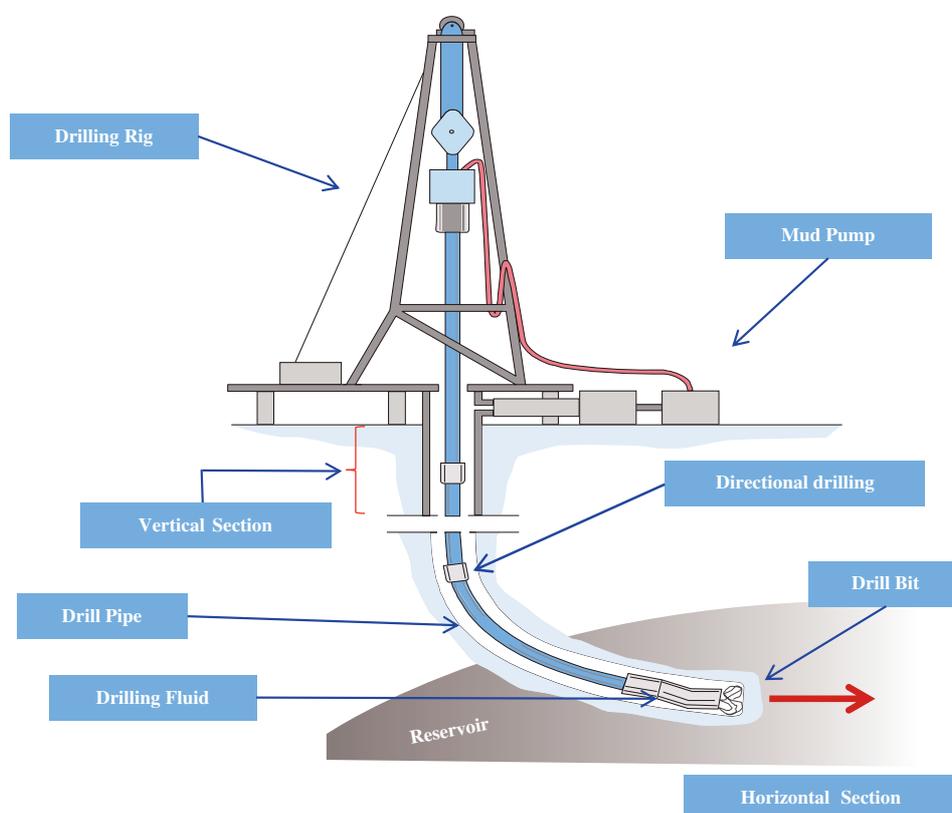
	For the year ended December 31,						
	2018		2019		2020		
	(RMB)	(%)	(RMB)	(%)	(RMB)	(US\$)	(%)
	(in millions)						
Drilling technology	1,339.9	45.6	1,624.2	45.2	1,303.9	199.8	42.2
Well completion.....	741.8	25.3	836.0	23.3	750.0	114.9	24.3
Oil production services.....	854.2	29.1	1,129.3	31.5	1,033.8	158.5	33.5
Total	2,935.9	100.0	3,589.5	100.0	3,087.7	473.2	100.0

Drilling Technology Cluster

Overview

Drilling is the process of breaking ground formations by using mechanical equipment and rock-breaking tools to create a cylindrical wellbore vertically or at a certain angle, with the aim of reaching underground oil and gas reservoirs. The purposes of drilling include geophysical assessment, oil and gas exploration and development. It is an important operation and typically accounts for a large portion of the overall cost of exploring and developing an oil and gas field. The key technical challenges during drilling include improving the drilling speed and the penetration rate of drilling, drilling a horizontal well and reducing drilling cost.

Our drilling technology cluster provides engineering and technical services and products to oil and gas companies during the drilling stage, including integrated service management, directional drilling, drilling and completion fluid service, drilling tool rental and technical service, drilling rig services, oilfield waste management and oil production facilities inspection and assessment technology, to assist them in well constructions.



The following table sets forth a summary of our major services under the drilling technology cluster:

Services/Products	Description
Integrated drilling services.....	It integrates new technologies for drilling, well completion and special tools; provides comprehensive technical services from design to matching tools, production technique and related equipment; integrates individual competitive drilling technologies and provides integrated drilling and well completion technical solutions.
Directional drilling	It is a technique of drilling by setting the drilling tool along the pre-set path in the reservoirs at a certain direction including horizontal direction.
Drilling tool rental and technical service	It provides drilling tool rental, rehabilitation and anti-abrasion service, tubular processing and manufacturing and storage solutions.
Drilling rig services	It operates rigs to complete drilling jobs, including the delivery of service with self-owned rigs and third party owned rigs under management.
Oilfield waste management	It offers waste and pollutants management service throughout the oil and gas exploration and development stages such as oil-based drilling fluid and drill cutting treatment and fracture fluid treatment. It also provides drilling fluid system comprising oil-based muds, high-performance water-based muds and biosynthetic-based environmentally friendly drilling fluid system, intended to address down-hole complications, shorten the drilling cycle and increase drilling speed.
Oil production facilities inspection and assessment technology	This service includes site testing service for oil production equipment, devices and instruments for customers across petrochemical, pharmaceutical, machinery manufacturing and electronics. It also includes tubular helium testing services.

Drilling technology services are largely affected by the capital spending of oil and natural gas companies. Our drilling technology services provide engineering and technical services and products that offer solutions to solve problems encountered in the drilling stage. Our revenue increased in the years of 2018 to 2019 through our efforts to expand in the overseas markets. The revenue generated from our drilling technology cluster increased from RMB1,339.9 million in 2018 to RMB1,624.2 million in 2019. The revenue generated from our drilling technology cluster decreased to RMB1,303.9 million (US\$199.8 million) in 2020 under the dual influence from COVID-19 and plunge in global oil price.

Integrated drilling service

Integrated drilling services apply new technologies for drilling, well completion and special tools, provides comprehensive technical services from design to matching tool, production technique and related equipment, and integrates individual competitive drilling technologies and provides integrated drilling and well completion technical solutions. In 2018, 2019 and 2020, the revenue generated from integrated drilling service was RMB428.0 million, RMB367.7 million and RMB124.2 million (US\$19.0 million), respectively.

Directional drilling

Directional drilling is a technique of drilling by setting the drilling tool along the pre-set path in the reservoirs at a certain direction including horizontal direction. Unlike vertical drilling, directional drilling does not drill vertically into the target region, but is a technique of drilling into the target region by deviating the wellbore from the vertical track. Directional drilling has been an important technology to optimize wellbore path, enhance reservoir contact and enhance the oil production of single wells. Therefore, as the demand for oil production increases in China, the demand for horizontal wells has increased accordingly, which in turn drives the demand for directional drilling services.

We are a leading directional drilling service provider in China. Our directional drilling services include directional drilling technology, sidetracking drilling technology and steerable drilling technology. Through MWD (measurement while drilling) and LWD (logging while drilling) techniques and Rotary Steerable Drilling (“RSS”), we are generally able to complete directional wells and horizontal wells in various complicated environment, such as in HTHP wells and thin pay zones. In 2018, 2019 and 2020, the revenue generated from our directional drilling services was RMB205.4 million, RMB186.3 million and RMB84.9 million (US\$13.0 million), respectively.

Drilling tool rental and technical service

To complement our other drilling technology services, we also provide drilling tool rental, rehabilitation and anti-abrasion service, tubular processing and manufacturing and storage solutions. In 2018, 2019 and 2020, the revenue generated from our drilling tool rental and technical service was RMB118.4 million, RMB305.6 million and RMB251.9 million (US\$38.6 million), respectively.

Drilling rig services

We currently have eight drilling service units, six of which are used in the domestic market, two of which are used in Iraq. We also manage five drilling rigs owned by independent third parties. In 2018, our drilling operations in the Iraq and Pakistan markets were under smooth construction, and also cooperated with certain state-owned oil companies in Ordos and Xinjiang Mahu regions. In 2019, our drilling rig services continued to grow, primarily due to our operations in southwest China shale gas market and northwest Xinjiang market. In 2020, we achieved growth in revenue recorded for our drilling rig services, by designing financings solutions and securing access to financing for clients and obtaining a large drilling rig services contract in Pakistan. In 2018, 2019 and 2020, the revenue generated from our drilling rig services was RMB303.8 million, RMB366.6 million and RMB601.4 million (US\$92.2) million, respectively.

Oilfield waste management service

We apply advanced technology and combine domestic and international resources to offer waste and pollutants management services throughout oil and gas exploration and development such as oil-based drilling fluid and drill cutting treatment and fracture fluid treatment. In 2020, we merged our drilling and completion fluid services product line into our oilfield waste management services product line. We provide drilling fluid system comprising oil-based muds, high-performance water-based muds and biosynthetic-based environmentally friendly drilling fluid system, intended to address down-hole complications, shorten the drilling cycle and increase drilling speed. We provide our customers with integrated services including drilling fluid on-site services, drilling fluid technology R&D, technical research and design, and sales services. In 2018, 2019 and 2020, the revenue generated from oilfield waste management was RMB36.4 million, RMB16.8 million and RMB118.0 million (US\$18.1 million) (after merge of product lines), respectively.

Oil production facilities inspection and assessment technology

We adopt international standards in conducting site testing for oil production equipment, devices and instruments for customers across petrochemical, pharmaceutical, machinery manufacturing and electronics. We also provide tubular helium testing services which use the mixed gas of helium and nitrogen to test tubing threaded connector against helium leak in the natural gas wells.

In 2018, 2019 and 2020, the revenue generated from oil production facilities inspection and assessment technology service was RMB108.6 million, RMB169.9 million and RMB123.5 million (US\$18.9 million), respectively.

Well Completion Cluster

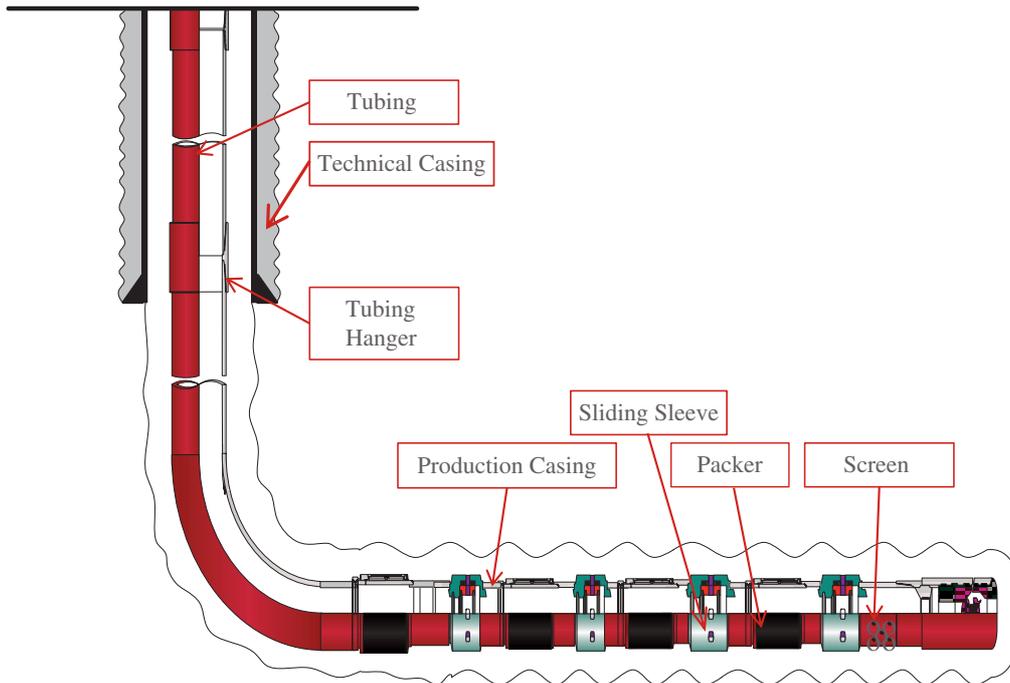
Overview

We provide integrated well completion service and certain other technical services to our clients. Well completion is the technique which connects wellbore to the reservoirs after drilling and preparing the wellbore for oil and gas production. It is a critical stage in the oil and gas well construction process. The core objective of well completion is to complete a well and optimize the life and efficiency of oil and gas production. Whether a well can maximize oil and gas production economically largely depends on the well completion technique used. The challenges of well completion operations include keeping the wellbore stable after drilling, preventing sand and water from entering the wellbore and completing a well under complex conditions such as for a horizontal well to ensure flow control.

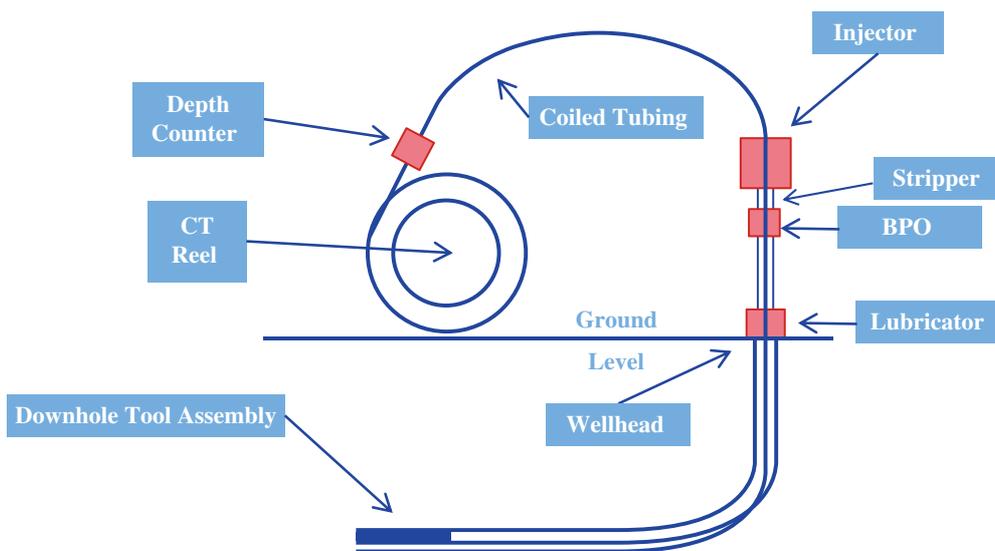
Certain other technical services, such as pressure pumping, coiled tubing, fracturing/acidizing technique and chemical materials, are used in the completion or production stage of a wellbore. The services involve modifying the original structure of a wellbore, in particular, a wellbore of low permeability using equipment and materials and constructs efficient oil and gas channels to achieve production enhancement. With the development of unconventional oil and gas, our technical service offer necessary techniques for well construction in order to stimulate reservoirs with low permeability and to develop oil and gas.

Our well completion cluster provides engineering and technical services and products to oil and gas companies, including integrated well completion services, pressure priming service, coiled tubing service, fracturing acidizing technique and chemical materials and gravel packing services, to assist them in wellbore completion and oil production. Our well completion cluster provides oil and gas companies with engineering technical services and products that develop oil and gas fields, and optimizes production through various stimulation techniques and solutions to address output constraints in low permeability or low-yield wells in China and overseas projects with a pressing need for output recovery. Major technical challenges of well completion operations include transforming low-yielding oil and gas fields with low permeability into high-yielding fields, and using the suitable process to insert tools and materials more effectively and efficiently for reservoir modification.

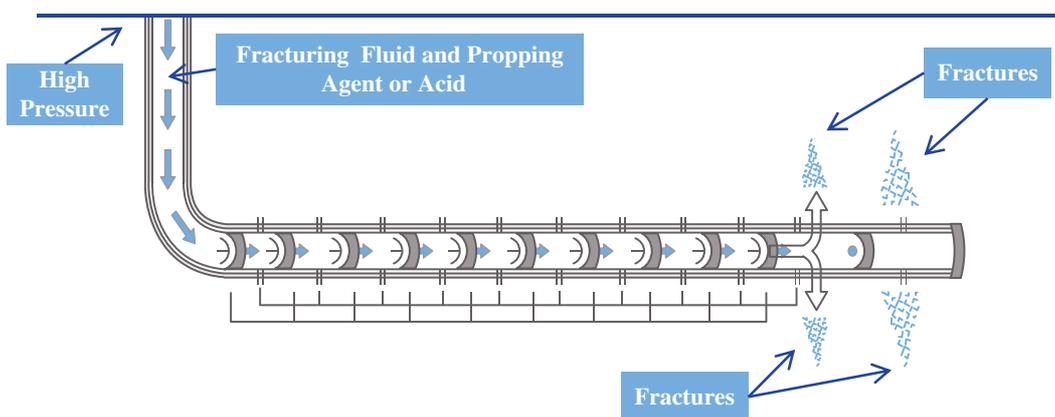
Integrated Well Completion



Coiled Tubing Operations



Stimulation (Horizontal well multistage fracturing)



The following table sets forth a summary of our major services under the well completion cluster:

<u>Services/Products</u>	<u>Description</u>
Integrated completion services	Integrated well completion engineering design and implementation services, including cementing completion and production completion.
Completion tools	Well cementing and completion tools and production well completion tool services.
Fracturing and pumping	Provides equipment to implement our stimulation services.
Coiled tubing operations	Jointless piping spooled on a reel to be used for oil and gas well interventions when stretched. It is used along with other tools and materials to perform well completion and oil production operations; also applied in fracturing technologies.
Fracturing and Acidizing techniques and chemical material.....	Provides tools to implement our acidizing and fracturing technologies to stimulate oil production.
Sand screen and water control services.....	Sand control completion tools and integrated design for sand control well completion, sand-screen and water control.

Our well completion services are largely dependent upon the capital spending of oil and natural gas companies, and our well completion cluster business was negatively affected by the decline in oil and natural gas prices in 2014 to 2016. However, supply for oil and natural gas has increased in this low-price environment and our well completion services has gradually recovered since 2017 by relying on our “asset-light” business model. In 2018, 2019 and 2020, the revenue generated from our well completion cluster was RMB741.8 million, RMB836.0 million and RMB750.0 million (US\$114.9 million), respectively.

Integrated well completion services and completion tool

Well completion integration are integrated well completion solution service, including cementing completion and production completion. We also provide a host of well cementing and completion tools and production well completion tool services.

We believe we are a leading well cementing and completion services provider in China. Our well completion integration services involve providing customers with a package of well completion solutions, including utilizing well cementing and completion pipe string and ancillary tool technology. The integrated well completion solutions are specifically designed against different formations and reservoirs to solve various technical problems in each case. We offer completion tools and services. In 2018, 2019 and 2020, the revenue generated from our well completion integration services and completion tools was RMB216.5 million, RMB200.4 million and RMB101.0 million (US\$15.5) million, respectively.

Fracturing and pumping

Fracturing and pumping provides equipment to implement our stimulation services.

As China steps up its efforts to develop low-permeability reservoirs, oil and gas companies need stimulation technologies to implement fracturing technical services to meet their oil and gas production targets and as a result, they need not only stimulation tools and materials, but pressure pumps as well to implement stimulation technologies. We believe there will be escalated demands for pressure pumping services in the domestic market in the short run. We currently have pressure pumps of approximately 10,000 HHP.

To implement our integrated business strategy, we launched our pressure pumping services in the second half of 2012, and since then, we have made strategic investment in pressure pumps to enhance our fracturing service capabilities. The service harnesses the HHP of pumping equipment and other related operational capabilities to help clients implement fracturing technology and processes. Through our strategic development of pressure pumping service capabilities, we aim to deliver an integrated service offering with effective stimulation technology by combining pressure pumps with our fracturing technology, tools and other materials. In 2018 and 2019, we mainly provided pressure pumping services in respect of fracturing and production stimulation in the southwestern shale gas and Ordos regional markets. In 2020, we secured many new orders for pressure pumping services in the Shanxi coalbed methane and Erdos tight gas markets. In 2018, 2019 and 2020, the revenue generated from pressure pumping service was RMB172.6 million, RMB274.0 million and RMB331.7 million (US\$50.8 million), respectively.

Coiled tubing service

Coiled tubing operations refer to jointless piping spooled on a reel to be used for oil and gas well interventions when stretched. Coiled tubing operation is a special operation which continuously inserts small-sized coiled tubing into the wells in order to carry out various well development operations. Compared with the traditional operation, coiled tubing operation can be used in drilling, completion and oil production with many benefits.

We are a leading coiled tubing operation service provider in China. In the domestic market, we, as a pioneer promoting new techniques in coiled tubing, continued to strengthen advanced techniques combining coiled tubing with the use of various down-hole tools, seeking to introduce the added value and technical diversity of coiled tubing services to down-hole operations. We have received continuous workload in shale gas and CBM projects in Sichuan Basin, and Guizhou province. Our operations in the domestic markets primarily focus on northwest and southwest China region. We experienced a decreased workload in 2019 primarily due to the decrease in number of projects in overseas market other than Iraq. Chinese operators in Iraq have a brisk demand for production recovery, but the local oilfields have thick layers and carbonate rocks which make production difficult. We introduced coiled tubing acidizing services in Iraq which pump acidizing chemicals and fluids through coiled tubing into the formations, gaining quick access to the oil reservoir and materializing production. We have maintained stable workload in the Iraqi market in 2018 and 2019. In 2020, we experienced delayed construction of the coiled tubing project in Iraq due to the pandemic. In 2018, 2019 and 2020, the revenue generated from our coiled tubing operation services was RMB234.7 million, RMB200.8 million and RMB106.4 million (US\$16.3 million), respectively.

Fracturing and acidizing chemical materials

Fracturing and acidizing chemical materials are used to stimulate oil production. We are a leading stimulation technical service provider in China and can generally complete relatively difficult well operations. Our fracturing and acidizing chemicals have been successfully used in conventional and unconventional gas and tight gas development. We also provide chemical materials used in well completion and for oil production technologies. In 2018, 2019 and 2020, the revenue from fracturing and acidizing chemical materials was RMB44.2 million, RMB47.5 million and RMB66.7 million (US\$10.2 million), respectively.

Sand screen and water control service

We provide sand control well completion stimulation service, with high pressure gravel packing as the core offering, and supporting services for AICD water control.

We are a leading gravel packing well completion service and tool provider in China and possess leading gravel packing well completion technologies and tools which can be used in cased and open holes. We offer our gravel packing well completion services and equipment through Shandong Precede Petroleum Technology Co., Ltd. (山東普瑞思德石油技術有限公司), a subsidiary in which we acquired a 75% equity interest in 2008. In 2018, 2019 and 2020, the revenue generated from our gravel packing well completion services was RMB73.8 million, RMB112.6 million and RMB144.2 million (US\$22.1 million), respectively.

Oil Production Services Cluster

Overview

Our oil production services are influenced by the operational spending of oil and natural gas companies. In the low-price environment, we diversified our revenue stream and further expanded our oil production services, particularly in the overseas market, and achieved relatively significant growth in recent years or periods. Our oil production services provide oil companies with engineering technical services and products during oil production stage. Our services include production operation management, workover services and tubing and casing repair and anti-corrosion service. These services aim to assist oil companies to solve various technical problems during oil production and enhance production and recovery rate through various operations. We have shifted our focus towards emerging overseas markets by providing operational management services for new oilfields, which had much higher returns. In 2018, 2019 and 2020, the revenue generated from our oil production services was RMB854.2 million, RMB1,129.3 million and RMB1,033.8 million (US\$158.4 million), respectively.

Services/Products	Description
Production operation management.....	provides operation management services for oilfield ground stations.
Workover services	provides conventional and major workover for mainly oil and gas wells and routine maintenance services.
Tubing and casing repair and anti-corrosion service.....	provides tubing and casing technical services.

Production operation management

We provide production operation management services for oilfield ground stations, including power engineering construction, operation, inspection and maintenance, artificial life technology design, management, optimization of operational support, water injection, profile control, ground equipment maintenance and rehabilitation, re-engineering, installation overhaul and oil and gas field ground construction products. We have achieved growth for this business in 2018, 2019 and 2020. During the same period, the revenue generated from production operation management was RMB605.1 million, RMB788.5 million and RMB823.3 million (US\$126.2 million), respectively.

Workover services

Our workover services include conventional and major workover for oil and gas wells, sidetrack, fishing, oil testing and integrated well completion operations and routine maintenance services. We have three workover rigs and 10 rental workover rigs in the domestic market. In the overseas market, we have started providing workover services in Ethiopia in 2016. Domestically, our service teams primarily work in Xinjiang region, the PRC. In 2018, 2019 and 2020, the revenue generated from workover services was RMB214.8 million, RMB283.2 million and RMB161.3 million (US\$24.7 million), respectively.

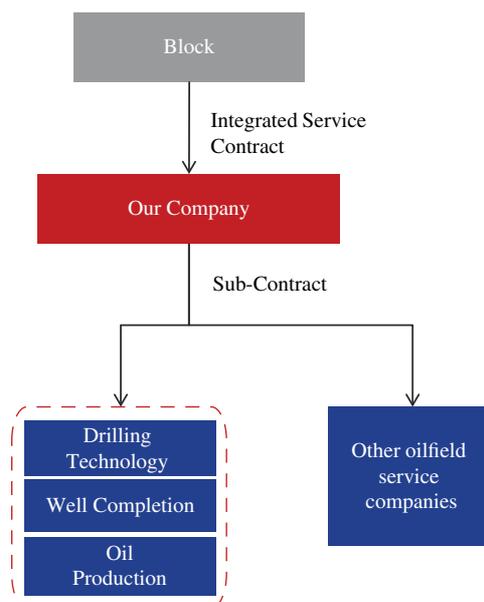
Tubing and casing repair and anti-corrosion service

We provide tubing and casing repair and anti-corrosion service with Premium Thread Design, a reputable supplier that is specialized in tubes and casing for domestic and international oil and gas companies. In 2018, 2019 and 2020, the revenue generated from tubing and casing and anti-corrosion service was RMB34.3 million, RMB57.6 million and RMB49.2 million (US\$7.5 million), respectively.

Integrated Service Model

Integrated service model is a customer-centered service model, mainly applied to ultra complex projects, or block projects which require high efficiency, also known as unconventional projects, and block projects which require recovery of production, also known as brownfield projects.

The following diagram outlines our integrated service model:



Under our integrated service model, once we obtain turnkey service orders through our integrated management system, we allocate the work among our services departments based on the technology requirements from our clients, encompass project designing and management, supervision and individual technical services to our clients. We will also sub-contract some equipment services and materials, such as rigs and casing, to other oilfield service companies. This service model has the benefit of reducing risks, achieving increased production and cost savings through the entire process of management of oil and gas exploration and development, from project design, resource allocation to project implementation.

We initiated our integrated service strategy in 2010, aiming to drive the growth of our individual services. We have in recent years accumulated the experience necessary to provide integrated services to oil and gas companies and our integrated service model has been met with success. We have seen a strong demand for our integrated service in emerging global markets, such as Iraq, Pakistan, Kazakhstan, Ethiopia and certain other countries in Africa, mainly due to the lack of expertise and available resources in those markets. We will continue to make efforts to meet such demand, achieve multi-product coverage with the same customers, leverage cross-sector synergies, improve efficiency and reduce costs with economies of scale. We believe that our integrated services can increase production with lowered cost.

We have made investment in necessary equipment and facilities, such as drilling rigs and pressure pumps to support the implementation of our integrated service model. Those equipment and facilities that we invest in can also be used in the provision of comprehensive integrated service and enables us to win integrated service contracts, which in turn drives the growth of our individual services, for example, drilling fluid, directional drilling, completion tools and chemicals, which do not incur substantially more capital expenditures. As a result, we are able to maintain our “asset-light” model. We have also established reservoir research department to study and analyze reserves, in order to further promote our integrated service model.

We believe we are well positioned to continue to improve the integrated service model as we have established business line spanning across various phases in the oil and gas field development cycle and the reservoir research and development capabilities. We aim to promote development of each of our individual business clusters, gain access to more sizeable projects which generate more revenue than single projects, distinguish us from our current competitors by raising the barrier to entry and strengthen risk control by having full coverage over the whole project and development process through the implementation of integrated service model.

In addition, we continue to evaluate our business model and strive to optimize our business portfolio, and may further restructure and monetize our certain oilfield technical services conducted through our wholly owned HK subsidiary, Anton Oilfield Services International Company Limited (“Anton Oilfield International”), and its subsidiaries, depending on market conditions. As of the date of this offering memorandum, we have designated Anton Oilfield International and its subsidiaries as Unrestricted Subsidiaries under the 2022 Indenture for the purposes of the internal restructuring. However, there is no definite timetable or execution plan with respect to such restructuring, and such restructuring may or may not materialize.

Competition

Oil and gas field service providers typically compete for customers and market share on the basis of technical capabilities, track record, lead time of services and products, experience, reliability and price.

Competition in the overseas market

The competition landscape of the oil and gas field services industry in the overseas markets is described below:

International Oilfield Service Providers: The overseas markets in which we operate or intend to enter are primarily dominated by international oilfield service providers. Most of them offer high quality services with advanced technologies but also at high cost. We believe that our strength lies in the fact that we are a high-quality Chinese service provider with strong cost management capabilities. In “Belt and Road” countries, where our customers are mainly independent Chinese oil companies, we also stand apart from international oilfield service providers for being more familiar and at ease with the embedded cultural norms of such customers.

Competition in the Domestic Market

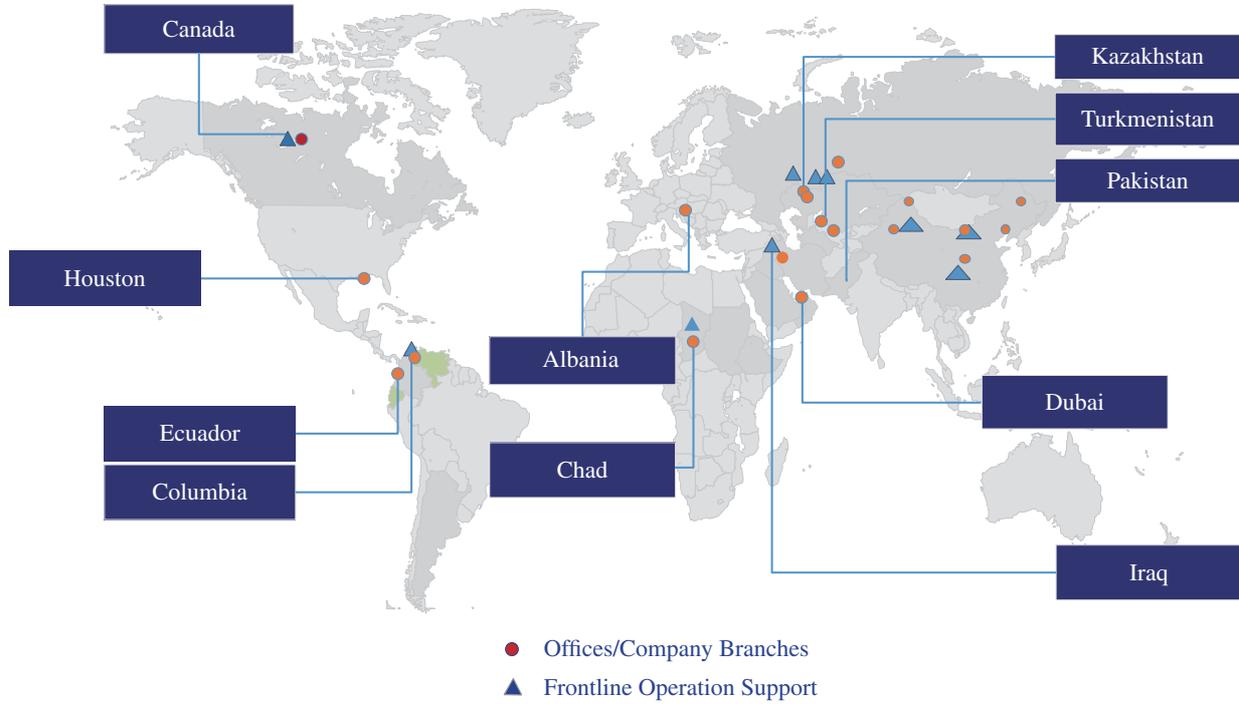
The competition landscape of the oil and gas field services industry in China is described below:

- *State-owned Oilfield Service Companies:* The oilfield services companies associated with the two major PRC state-owned enterprises, namely, CNPC and Sinopec, dominate the conventional market segment of Chinese oilfield services sector. Those companies typically have large-scale drilling equipment and facilities. However, they generally lack advanced technology and are more focused on drilling business models, making them less efficient when dealing with unconventional resources.
- *International Oilfield Service Companies:* Major international oilfield services companies possess significant financial and technical resources. These companies provide a wide range of products and services and have extensive experience in high-end oilfield services. In addition, they typically have strong research and development capabilities and offer significant technical support to their clients. However, they have high costs.
- *Independent Oilfield Service Companies:* The independent oilfield services sector is highly fragmented, with many smaller independent oilfield service companies focusing on either specific geographic areas or specific types of products or services. The competition in this segment of large, integrated and established domestic independent oilfield service companies is very limited due to several barriers such as technology, geological conditions, talent mobility and access to capital, inhibiting the growth of smaller domestic independent service companies or restricting new market entrants.

Geographical Coverage

We currently have operations in China and certain overseas markets. The following maps indicate our geographical coverage in the domestic markets and overseas markets, respectively:

Overseas Markets



Domestic Markets



The table below sets forth a breakdown of our revenue by region for the periods indicated:

	For the year ended December 31,						
	2018		2019		2020		
	(RMB)	(%)	(RMB)	(%)	(RMB)	(US\$)	(%)
	(in millions)						
Overseas	1,852.2	63.1	1,906.2	53.1	1,254.8	192.3	40.6
Iraq.....	1,170.6	39.9	1,419.8	39.6	961.1	147.3	31.1
Other overseas markets	681.6	23.2	486.4	13.5	293.7	45.0	9.5
Domestic	1,083.7	36.9	1,683.3	46.9	1,832.9	280.9	59.4
Total	2,935.9	100.0	3,589.5	100.0	3,087.7	473.2	100.0

Sales and Marketing

Building on our sales experience, we have developed and implemented four selling strategies, namely, strategic selling and marketing, technique selling and marketing, brand selling and marketing and value selling and marketing. For strategic selling and marketing, we typically enter into strategic cooperation agreements or framework agreements with our customers to form a long-term partnership with them. For example, we have entered into a framework agreement with a Chinese customer for an integrated CBM project in the domestic market. We have also entered into several long-term strategic cooperation agreements with a customer in Iraq with respect to the provision of general workover and well completion services. For technique selling and marketing, we promote international unconventional gas development technology in China and certain emerging global markets to help our customers to develop their high-production reservoirs of low permeability at low cost, for examples by providing horizontal well multistage fracturing technical services to the oil and gas reservoirs of PetroChina and Sinopec in China, and by providing pressure pumping service to an independent Chinese company Pakistan, which has increased the productivity of a single well by over ten times. In addition, we provide new technologies and/or products, such as nano-chemical materials and bio-based muds, to our customers in Southwest China. The use of nano-chemical materials has helped our customer to achieve increased productivity for trial wells and the use of bio-based muds has helped our customer to set a new drilling record in the region. For brand selling and marketing, we follow a “We succeed by helping others succeed” philosophy and leverage our well established recognized brand name and expanded partnership network to look for new opportunities in the market. For value selling and marketing, we boost our sales by making valuable contributions to our customers, such as increasing oil production, improving efficiency and reducing costs, through our integrated service model to our customers.

As of December 31, 2020, we had six sales offices in the PRC covering all major domestic oil and gas fields. Due to the different geological conditions of oilfields, an oilfield service provider with diversified oilfield equipment and services is required to have the capability to provide tailor-made solutions to meet the customers’ requirements. Hence, the success of our marketing efforts is primarily dependent on the ability of our sales and marketing personnel to understand the technical features of our services and products and respond promptly to our customers’ needs. We primarily use our own personnel to market our products and services. Most of our sales representatives hold a bachelor’s degree. We believe that their expertise, particularly their ability to explain clearly the technical features and advantages of our services and products, and to understand and anticipate the needs of our customers, gives us a competitive advantage in our sales and marketing activities. As of December 31, 2020, we had 19 offices overseas and while most of our service contracts in our overseas markets were secured from national and international oil companies and local subsidiaries of Chinese state-owned companies.

Customers

We have a diversified customer base, including Chinese national oil and natural gas companies and their subsidiaries and/or affiliates, international oil companies and independent oil companies. As of December 31, 2020, we had more than 500 customers in total.

In 2018, 2019 and 2020, our top five customers, all of which are the subsidiaries or associates of the major state-owned or international oil and gas companies or service providers, accounted for approximately 66.1%, 69.8%, and 74.6% of our revenue, respectively. Our largest customer accounted for approximately 25.6%, 32.2% and 31.4% of our revenue for the corresponding periods.

We commenced our operations in 1999 and since then have been able to develop a strong relationship with our customers, particularly our major international customers. Some of our major customers have approximately a 21-year business relationship with us, while other relationships, particularly those with our customers in our overseas markets, are shorter. We do not believe that our business relies on any particular customer, including any individual subsidiary or affiliate of the national oil and gas companies, since such customers generally enjoy independence in selecting their oilfield technology providers. We believe that we have strong and stable business relationships with our major customers and have entered into strategic alliances with some of them. See “— Strategic Alliances.” We believe that our ability to provide integrated services covering drilling technology, well completion and oil production services adds significant value to our customers who can rely on one services provider to address their various needs in a cost-effective manner, which further strengthens our business relationships with them and enables us to establish strategic alliances with them. Our ability to provide high-end oilfield services, also has secured a number of loyal customers for us. During the course of our multi-year relationships, we have developed in-depth understanding of the geological conditions of, and gained the ability to provide customized solutions for, the oilfields of our major customers, which we believe any replacement services providers would find difficult to develop over a short period of time. We believe these factors have contributed to our strong and stable relationship with our major customers.

Some of our service contracts require us to provide services to our customers for a definite term (typically one year), while others are project-by-project based and require us to provide services for a specific number of well operations or to provide particular services. The terms and conditions of our service contracts generally include engineering and quality requirements specified by our customers. Our customers are normally required to provide us with utilities, such as power and water that are necessary for performing the services. Depending on specific geological and other relevant conditions and the types of service, a well operation may last from a few days to a few months and a service contract that covers a few or a few dozen well operations may last from a few weeks to a year. These contracts may be terminated due to force majeure events or a party’s failure to perform services that satisfy relevant requirements. Our customers are normally required to settle the payment of fees with us within 220 to 270 days after our services have been rendered, except for certain services for which our customers retain a small portion (typically 5%) of the service fees as warranty deposit and typically settle the same with us within one year after our services have been rendered.

Research and Development

Our research and development efforts are focused on, among other things, improving technical and other features of our products and services; developing new products, processes and services; and providing customers with customized solutions that address their specific needs and requirements to improve their oil and gas production and their operational efficiency. Since 2008, we have established the Anton Research Institute and seven technology centers to focus on the development and introduction of technologies, including a technology center in Houston, U.S.A., in order to study the latest industry and technology developments, introduce advanced technology into China, and help liaise with international oil and gas service companies for potential cooperation opportunities to further improve the technical features of our products and services.

In 2018, 2019 and 2020, we incurred research and development expenses equivalent to approximately 1.0% to 1.8% of our revenue per year and plan to maintain an appropriate level of research and development expenses going forward. In 2018, 2019 and 2020, we incurred approximately RMB28.0 million, RMB51.7 million and RMB56.3 million (US\$8.6 million) in research and development expenses, respectively. As of December 31, 2020, we had over 317 registered patents. As of December 31, 2020, six of our PRC subsidiaries had been recognized as “High-Tech Enterprises.”

As a result of our continuous research and development efforts, we have been able to enhance the quality of the oil and gas field services we provide and have become an integrated oil and gas field services provider. We will continue to focus on our research and development efforts to further improve our position as one of the leading Chinese independent oil and gas field services providers.

Purchases

Our raw materials consist mainly of consumables and replacement components and parts, tools, chemicals and other materials. We purchase from third parties consumables, components and parts required for our services and products. We evaluate each of our raw materials suppliers based on a variety of quality and other standards. We believe we have established long-term or strategic business relationships with our key suppliers to ensure the stable supply and timely delivery of high-quality raw materials and components. We have not experienced any major difficulties in procuring raw materials necessary for performing our services and manufacturing our products. In 2018, 2019 and 2020, purchases from our five largest suppliers accounted for approximately 29.3%, 29.3% and 22.4% of our total purchases, respectively. Our largest supplier accounted for approximately 10.0%, 8.2% and 6.5%, respectively, of our total purchases for the corresponding periods.

Inventory

We monitor and control our inventory level so as to provide our services in a timely manner, avoiding situations of insufficient stock or, over-stocking or having our stock become obsolete. Due to the particular nature of our business, which primarily involves the provision of oil and gas field services, our inventory consists primarily of well completion tools that are installed deep in the well or on the ground at the wellhead, drilling fluids used in drilling activities and replacement components and parts for equipment such as drilling rigs and pressure pumps. The required level of inventory is generally determined based on the amount of services that are regularly performed and are covered by annual service contracts, the number of services orders that our clients placed with us, the amount of services required under service contracts signed on a project-by-project basis, our procurement cycle for materials, tools, chemicals and components and working capital controls.

Pricing Policy

We determine and adjust the prices for our products and services on the basis of market supply and demand. The oil and gas industry is sensitive in terms of the effectiveness, reliability and lead time of oilfield services, and in recent years, it has placed a relatively higher priority on price. In determining our prices, we take into account the value added by our products and services such as increases in production volume or reduction of risks and costs, the availability and pricing of comparable products and services in the market, our cost of goods or services, the convenience offered by our comprehensive services, and the positioning of our products and services in the target market.

QHSE (Quality, Health, Safety and Environment)

In January 2013, we established our QHSE Management Center to oversee our overall operations. We also established the QHSE Committee under our Board of Directors. Our QHSE Committee is chaired by Mr. Pi Zhifeng, our Chief Executive Officer and executive director, and our Chairman and executive director, Mr. Luo Lin. They are responsible for providing guidance and advice regarding our QHSE strategies, representing our commitment to introducing international practices to enhance our service

abilities in both domestic and overseas markets. Our long-term strategic partner, Schlumberger, has helped us to evaluate and elevate our QHSE standards to meet certain international standards. In January 2008, we received the Q/SY1002.1-2007 health, safety and environmental management systems certificate and the GB/T24001-2004 (ISO14001:2004 IDT) environmental system certificate from China Petroleum Health Safety Environment Audit Center. We also received the SY/T6276-2010 health, safety and environmental management systems certificate and the GB/T28001-2011 occupational health and safety management systems certificate from China Petroleum Health Safety Environment Audit Center in January 2011.

In May 2020, we upgraded the QHSE Committee to the ESG (Environment, Social and Governance) Committee. The original two members of the QHSE Committee, namely, Mr. Luo Lin and Mr. Pi Zhifeng, the executive directors, continue to serve as members of the ESG Committee, and Mr. Fan Yonghong, an executive director, joined the ESG Committee as a new member, with Mr. Pi Zhifeng serving as chairman of the ESG Committee. They are responsible for reviewing and evaluating the ESG report and current status of our environmental, social and governance performance and making recommendation to the board for related policy formulation and system establishment.

Quality

We believe that the quality of our products and services is crucial to our continued growth and hence quality control is a high priority in our business operations. We aim to achieve a consistent quality in our products and services with the involvement and commitment from all levels of management and staff. We have implemented a set of stringent quality control procedures designed to ensure that our services and products meet the relevant industry standards and quality requirements of our customers.

In December 2004, we have passed and obtained API Q1: 2003 (7th version) Specification for Quality Programs for the Petroleum, Petrochemical and Natural Gas Industry certificate, and our products were allowed to use the API Spec 5CT, API Spec 7, API Spec 7-1 logos. We also obtained the GB/T19001-2008/ISO9001:2008 and GB/T50430-2007 quality management system certificates in November 2012. In July 2013, our products were allowed to use the API Spec 11B and API Spec 11D1 logos.

Health and Safety

We place great emphasis on health and safety control. We believe that one of our most important assets is our employees. We consider injuries to our employees and/or damage to our physical assets a threat to our reputation and to our financial success. As our business expands and the complexity of our operations increases, we regularly review and ensure that our occupational health and safety procedures and measures comply with relevant legal standards.

We have adopted a set of health and safety procedures and standards, based on the specifications and guidelines set out by the relevant authorities in China. We have prescribed and implemented our safety manual for the detection and prevention of the occurrence of accidents in our facilities. We conduct regular and required maintenance on our equipment and work sites to ensure proper and safe working conditions. Our plants, working stations and various facilities have been designed to maintain a safe working environment. We provide protective uniforms and personal care products to our field employees for their personal protection. We seek to minimize our employees' exposure to certain health risk factors inherent to the oilfield services, such as dust and noise, through carefully choosing our production equipment and processes. In addition, we schedule annual physical examinations for all of our employees. However, as our operations involve handling of heavy machinery and components and hazardous chemicals, our employees may face the risk of various work-related injuries and accidents.

Environment

Our operations create or emit noise and waste water, gas and dust, particularly rock dust, drilling fluids and waste oil that are created or discharged down-hole during the operation and are brought up to the surface. We are subject to the environmental laws and regulations in jurisdictions where we have operations. These laws and regulations in general empower government authorities to impose fees for the discharge of wastes, levy fines for offenses, or order closure of any manufacturing facilities which fail to comply with related laws and regulations. It is a common practice in the oilfield services industry for the well or oilfield owners and developers to, absent negligence or fault on the part of relevant service providers, clean up rock dust, drilling fluids, waste oil and other wastes produced from providing relevant services. As of the date of this offering memorandum, we incurred no environmental compliance expenses, and we do not expect to incur any material environmental compliance expenses.

As of the date of this offering memorandum, we have not been subject to any sanctions by PRC or overseas environmental authorities for non-compliance with respect to our production and facilities since our inception. We have been in compliance in all material respects with applicable environmental laws, and did not incur any material costs in complying with such laws. Although we do not expect to incur any material cost in this regard in the future, any additional or more onerous environmental laws or regulations may cause us to incur significantly higher costs, which we may not be able to pass on to our customers. See “Risk Factors — Risks Relating to Our Business — We are required to comply with various environmental, health, safety and other laws and regulations, the compliance with which may be onerous or expensive.”

Strategic Alliances

We have entered into strategic alliances with a number of our customers, including Chinese national oil companies, Chinese state-owned oilfield service companies and international oilfield service companies. Most of the strategic alliances are generic in nature and serve as a framework under which our customers recognize our services capabilities and agree to develop a mutually beneficial business relationship with us in the oilfield services industry. Such strategic alliances do not have provisions for specific projects, such as the number of well operations, service fees and other terms that are normally contained in a specific oilfield service contract.

In August 2018, we entered into a business cooperation agreement with CRCC Financial Leasing Co., Ltd (“CRCC”), an ultra large construction enterprise managed by the State-owned Assets Supervision and Administration Commission (“SASAC”) of the State Council, to develop asset leasing business in China. Both parties will consolidate the advantages in their respective industries in compliance with national laws and regulations and the relevant industrial development policies, and will actively implement the “Belt and Road” Initiative through cooperation in various areas. The agreement has a valid term of five years, subject to renewal by agreement entered into by both parties no less than six months prior to the expiry of the business cooperation agreement.

In 2020, we made active progress in developing synergies between industry and finance. In December 2020, we signed an investment agreement with Chengdu Xiangtou Group, the largest state-owned investment group in Xindu District, Chengdu, as our strategic partner. Xiangtou has invested RMB70.0 million in establishing a joint venture with us where we can combine our comparative advantages and expand the financial leasing business.

Intellectual Property Rights

We conduct substantial research and development activities, and intellectual property protection is crucial to our business.

As of December 31, 2020, we had over 317 registered patents and we had one registered patent in the U.S. and one registered patent in Russia. We rely on a combination of non-disclosure, confidentiality and other contractual agreements with our Directors, employees and other third parties, as well as privacy and trade secret laws, to protect and limit access to and distortion of our intellectual property rights. In

accordance with the Patent Law of the PRC and the Rules for the Implementation of the Patent Law of the PRC, in order to obtain a patent, it is necessary to disclose the details of the design to the public. Hence, there is a risk that by publication of our proprietary technologies, competitors may learn, copy and reverse-engineer the technologies or process developed by us and produce derivative products. See “Risk Factors — Risks Relating to Our Business — Failure to protect our intellectual property rights may materially and adversely affect our competitive position and operations and we may be exposed to infringement or misappropriation claims by third parties.” While we will apply for patents for certain of our developed technologies or processes that are difficult to replicate, we will continue to maintain certain of our proprietary technologies as trade secrets.

As of December 31, 2020, we were not aware of any infringement or unauthorized use of our intellectual property rights by any third party.

Insurance

Consistent with what we believe to be the customary industry practice in China, we currently maintain property insurance covering our major property, plant and equipment. Our insurance policies do not typically cover third party liabilities, business interruptions or environmental damages arising from our operations or caused by natural disasters, such as earthquakes. This practice is consistent with what we believe to be the industry practice in China. Accordingly, there may be circumstances in which we will not be covered or compensated for certain losses, damages and liabilities, which may in turn adversely affect our financial position and results of operations. In 2018, 2019 and 2020, we had not filed any material claims against our insurers or had material disputes with our insurers. See “Risk Factors — Risks Relating to Our Business — Although we maintain insurance coverage as required by the laws in countries where we operate, we do not have any product liability, business interruption or litigation insurance coverage for our operations.”

Separately, our employees participate in various basic social insurance plans organized by the PRC municipal and provincial governments whereby we make monthly contributions to these plans according to relevant local regulations.

Property

We both own and lease properties for our operations. When we state that we own certain properties in China, we own the relevant long-term land use rights. In China, with very few exceptions, industrial land is owned by the state.

We occupy our owned properties for purposes of, among others, research and development and production. We have a total gross floor area of approximately 100,000 sq.m. As of December 31, 2020, all of our subsidiaries had obtained the valid land use rights certificate for our owned properties.

We occupy our rental properties for purposes of, among others, production. We leased a total gross floor area of approximately 20,000 sq.m.. As a result, it is possible that third parties may seek to assert their ownership rights against the lessors or challenge our leases. In such cases, we may need to relocate and seek alternative locations. See “Risk Factors — Risks Relating to Our Business — Certain production facilities occupied by us have defective titles.”

Employees and Employee Benefits

As of December 31, 2020, we had a total of approximately 4,005 employees. The following table sets out a breakdown of our employees by function:

<u>Employee Function</u>	<u>Number of Employees</u>
Engineers	1,521
Field operator.....	1,616
Field experts	237
Management, marketing personnel and function personnel.....	631
Total.....	4,005

As of December 31, 2020, we had approximately 1,298 employees who were foreign hires and approximately 741 employees who were assigned to work overseas.

The remuneration package of our employees includes salary, bonus, share options and other employee benefits. In general, we determine employee salaries based on the principle of three “P”s, namely, performance, position and people (including each individual’s qualifications and experience). We also established a remuneration system based on performance review, where performance assessment is measured against various strategic indicators and aligned with the reward and penalty in the employee remuneration so as to motivate the employees to meet and exceed the indicators. We are subject to social insurance contribution plans organized by the PRC local governments. In accordance with the relevant national and local labor and social welfare laws and regulations, we are required to pay, on behalf of our employees, a monthly social insurance premium covering pension insurance, work-related injury insurance, medical insurance, unemployment insurance, maternity insurance and housing reserve fund. We provide benefits to expatriates that we believe to be in line with customary international practices or local labor laws. Local staff employed by our overseas subsidiaries enjoy the welfare benefits mandated by local laws and regulations.

Legal Proceedings

From time to time, we, together with our subsidiaries and associates, have been involved in legal proceedings or other disputes in the ordinary course of our business, which are primarily disputes with our suppliers and customers. As of the date of this offering memorandum, we are not aware of any legal, arbitration or administrative proceedings against us or any of our directors or senior management members which may have a material adverse effect on our business, results of operations or financial position.

REGULATORY OVERVIEW

The following discussion summarizes the principal PRC laws, regulations, policies and administrative directives to which we are subject.

SUMMARY OF THE PRC LAWS AND REGULATIONS

PRC Laws and Regulations on Foreign Investment of the Oilfield Services Industry

Prior to January 1, 2020, the fundamental laws governing the foreign-invested enterprises were the Sino-foreign Equity Joint Venture Enterprise Law of the PRC (《中華人民共和國中外合資經營企業法》), the Sino-foreign Cooperative Joint Venture Enterprise Law of the PRC (《中華人民共和國中外合作經營企業法》), and the Wholly Foreign-invested Enterprise Law of the PRC (《中華人民共和國外資企業法》), together with their implementation rules and regulations. These laws, rules and regulations applied to the establishment, material changes, approving requirements, registered capital requirements, foreign exchange restrictions, accounting practices, taxation, labor issues and other aspects of a foreign-invested enterprise.

On March 15, 2019, the National People's Congress approved the Foreign Investment Law of the PRC (《中華人民共和國外商投資法》) (the “**Foreign Investment Law**”), which came into effect on January 1, 2020 and replaced the trio of existing laws regulating foreign investment in China, namely, the Sino-foreign Equity Joint Venture Enterprise Law, the Sino-foreign Cooperative Joint Venture Enterprise Law and the Wholly Foreign-invested Enterprise Law. The Foreign Investment Law aims to further expand the opening-up of the Chinese market, promote the foreign investment, and protect the legitimate rights and interests of foreign investors.

Since 2017, the National Development and Reform Commission (the “**NDRC**”) and the Ministry of Commerce (“**MOFCOM**”) promulgated the Special Administrative Measures for Access of Foreign Investment (Negative List) (《外商投資准入特別管理措施(負面清單)》) (the “**Negative List**”) to set out the areas where foreign investment is prohibited or restricted, which serves as a supplement to the Foreign Investment Law or its predecessors. The Negative List originated from the Catalogue of Industries for Guiding Foreign Investment (《外商投資產業指導目錄》) which was promulgated in the 1990s and amended from time to time. The Negative List was adopted in 2017 nationwide with the aim of integrating all the foreign-investment restrictions in one document and eliminating the market entry restrictions on foreign investment outside the Negative List. Since its first promulgation in 2017, the Negative List has been revised from time to time, and the recent revision was published on June 23, 2020.

According to the Negative List (as amended in 2020), the core business of our PRC subsidiaries, which includes the oilfield services business, the production of relevant tools and equipment related to oil extraction and the wholesale and commission sale of oil equipment, is not covered under the Negative List (as amended in 2020).

PRC Regulations on Industrial Product Permits and Work Safety

Administration Permits for Industrial Products

The Regulations on the Administration of Permits for the Production of Industrial Products (《中華人民共和國工業產品生產許可證管理條例》) (the “**Production Permit Regulations**”) were promulgated by the State Council on July 9, 2005 and came into force on September 1, 2005. The Implementing Measures for the Regulation on the Administration of Permits for the Production of Industrial Products (《中華人民共和國工業產品生產許可證管理條例實施辦法》) were amended and promulgated by the General Administration of Quality Supervision, Inspection and Quarantine on April 21, 2014 and came into effect on August 1, 2014. Pursuant to the Production Permit Regulations, the government should implement a system to issue production permits to enterprises that are engaged in the production of products that fall within the required catalogue. Enterprises manufacturing products that fall under the said catalogue should apply for and obtain production permits from designated authorities.

Work Safety and Product Quality

Pursuant to the revised Law of the People's Republic of China on Work Safety (《中華人民共和國安全生產法》) (the “**Work Safety Law of 2014**”), which was promulgated by the Standing Committee of the National People's Congress, became effective on December 1, 2014 and is applicable to work safety in units that are engaged in production and business activities within the territory of the PRC, production and business units shall (i) abide by the Work Safety Law and other laws and regulations concerning work safety, redouble their efforts to ensure work safety by setting up and improving the responsibility system for work safety and improve other conditions to ensure that the responsibility system guarantees work safety; (ii) educate and train their employees in work safety to ensure that employees acquire the necessary knowledge about work safety and are familiar with the relevant rules for work safety and the regulations for safe operations. Workers operating at special posts in production and business units shall, in accordance with relevant State regulations, receive special training in safe operations, and they shall only be assigned to such posts after obtaining special qualification certificates. In the event of any failure to comply with the aforesaid provision, production or business units shall be ordered to make correction within specified time limit and may, in addition, be fined not more than RMB50,000; if it fails to make the correction within the time limit, it shall be ordered to suspend production or business operation for rectification and, in addition, be fined not less than RMB50,000 but not more than RMB100,000, and its person directly in charge and other person subject to direct liability shall be fined not less than RMB10,000 but not more than RMB20,000.

The Work Safety Law was last amended on June 10, 2021 by the Standing Committee of the National People's Congress and will come into effect on September 1, 2021. Compared with the abovementioned (i), the Work Safety Law of 2021 supplements that production and business units shall set up and improve the work safety responsibility system undertaken by all personnel, increase the investment in capital, materials, technology and personnel for work safety, strengthen work safety standardization and informatization construction, establish a dual prevention mechanism for graded management and control of risks and for the detection and management of hidden dangers, and establish the mechanisms for preventing and defusing risks. Compared with the abovementioned (ii), the Work Safety Law of 2021 raises its penalty level to the extent that production or business units shall be ordered to make correction within specified time limit and may, in addition, be fined not more than RMB100,000; if it fails to make the correction within the time limit, it shall be ordered to suspend production or business operation for rectification and, in addition, be fined not less than RMB100,000 but not more than RMB200,000, and its person directly in charge and other person subject to direct liability shall be fined not less than RMB20,000 but not more than RMB50,000.

The principal legal provisions governing product liability are set out in the Product Quality Law of the PRC (《中華人民共和國產品質量法》), which was promulgated on February 22, 1993, became effective on September 1, 1993 and was amended on August 27, 2009 and December 29, 2018. The Product Quality Law of the PRC is applicable to all activities relating to the production and sale of any product within the territory of the PRC. Producers and sellers are liable for product quality in accordance with the Product Quality Law of the PRC.

PRC Laws and Regulations on Environmental Protection

General Regulations

Pursuant to the PRC Environmental Protection Law (《中華人民共和國環境保護法》), which was promulgated by the Standing Committee of the National People's Congress and became effective on December 26, 1989 and was amended on April 24, 2014, the environmental protection authority at state level is empowered to formulate national environmental quality and discharge standards and monitor the PRC's environmental system nationwide. The environmental protection authority at local level is responsible for environmental protection within its jurisdiction. Local environmental protection authority may set stricter local standards than the national standards, in which case enterprises are required to comply with the stricter of the two sets of standards.

Environmental Impact Appraisal

Pursuant to the Regulations on the Administration of Construction Project Environmental Protection (《建設項目環境保護管理條例》) promulgated by the State Council, which became effective on

November 29, 1998 and was amended on July 16, 2017 and came into effect on October 1, 2017, the State Council has effected a construction project environmental impact evaluation system. The state practices classified control over construction project environmental protection in accordance with the extent of the environmental impact of construction projects in pursuance of the following provisions: (i) a report on environmental impact should be compiled for a construction project that may cause major impact on the environment, giving a comprehensive and detailed evaluation of the pollution generated and environmental impact caused by the construction project; (ii) a statement on environmental impact should be compiled for a construction project that may cause light impact on the environment, giving an analysis or special-purpose evaluation of the pollution generated and environmental impact caused by the construction project; and (iii) a registration form should be filled out and submitted for a construction project that has slight impact on the environment and does not require an environmental impact evaluation.

Pollutant discharge

The PRC Environmental Protection Law requires any enterprise operating a facility that produces pollutants or other hazardous materials to take effective measures to control and properly dispose of waste gases, waste water, waste residue, dust or other waste materials. Any enterprise that discharges pollutants must report to and register with the relevant authorities in accordance with the provisions of the competent department of environmental protection administration under the State Council. Any entity that discharges pollutants in excess of the prescribed national or local standards must pay a fee for excessive discharge according to state provisions and shall assume responsibility for eliminating and controlling the pollution. If an enterprise has caused severe environmental pollution and has failed to eliminate or control the pollution within a required period of time, a fine may be imposed, or the enterprise may be ordered to suspend or close down its operations.

According to the PRC Law on the Prevention and Treatment of Water Pollution (《中華人民共和國水污染防治法》), which was promulgated on May 11, 1984 and amended on February 28, 2008 and was further amended on June 27, 2017 and came into effect on January 1, 2018, enterprises and institutions that discharge industrial waste water directly or indirectly into a body of water should obtain a license for discharging pollutants.

According to the PRC Law for the Prevention and Treatment of Air Pollution (《中華人民共和國大氣污染防治法》), which was promulgated on September 5, 1987 and amended on August 29, 2015 and October 26, 2018, administrative departments for environmental protection under the people's governments at and above the county level shall implement the unified supervision and administration of atmospheric pollution prevention and control. Other administrative departments under the people's governments at and above the county level shall, within their respective authority limits, carry out supervision and administration of matters related to the prevention and control of atmospheric pollution. Enterprises, public institutions and other manufacturing and business operators shall take effective measures to prevent and reduce atmospheric pollution, and shall be legally liable for any damage caused in connection with atmospheric pollution.

PRC Laws and Regulations on Tax

PRC Enterprise Income Tax Law

According to the Enterprise Income Tax Law of the PRC (《中華人民共和國企業所得稅法》), which was enacted on March 16, 2007 and last amended on December 29, 2018, and the Implementation Rules to the EIT Law (《中華人民共和國企業所得稅法實施條例》), which was promulgated on December 6, 2007 and amended on April 23, 2019 by the State Council, enterprises are classified as either resident enterprises or non-resident enterprises. The income tax rate for resident enterprises, including both domestic and foreign-invested enterprises, shall typically be 25%. Non-resident enterprises which have not established agencies or offices in China, or which have established agencies or offices in China but whose income has no association with such agencies or offices shall pay enterprise income tax on its income deriving from inside China at the reduced rate of 10%. The Enterprise Income Tax Law of the PRC also provides that high-tech enterprises that need key support from the state shall pay enterprise income tax at the reduced rate of 15%.

After the implementation of the EIT law, the preferential tax treatment for encouraged enterprises located in western China and certain industry-oriented tax incentives are still available. Pursuant to the Announcement on Continuation of Enterprise Income Tax Policy for the Development of Western China (《關於延續西部大開發企業所得稅政策的公告》), which came into effect on 1 January, 2021, the enterprises within the state-encouraged industry located in western China shall pay enterprise income tax at the reduced rate of 15% for years from January 1, 2021 to December 31, 2030.

PRC Value Added Tax

According to the Temporary Regulations on Value-added Tax (《增值稅暫行條例》), which was promulgated by the State Council on December 13, 1993 and amended on November 10, 2008, February 6, 2016 and November 19, 2017, respectively, and the Detailed Implementation Rules of the Temporary Regulations on Value-added Tax (《增值稅暫行條例實施細則》), which was promulgated by the MOF on December 25, 1993, and was amended on December 15, 2008 and October 28, 2011 respectively, all taxpayers selling goods, providing processing, repair or replacement services, selling services, intangible properties or immovable properties within the PRC or importing goods to the PRC shall pay value-added tax.

PRC Business Tax

On March 23, 2016, the Ministry of Finance and the State Administration of Taxation promulgated the Circular of the Ministry of Finance and the State Administration of Taxation on Overall Implementation of the Pilot Program of Replacing Business Tax with Value-added Tax (《關於全面推開營業稅改徵增值稅試點的通知》) (the “**Circular 36**”), which became effective on May 1, 2016. Pursuant to the Circular 36, entities and individuals providing services within the PRC are subject to VAT. The services are treated as being sold within the PRC where either the service provider or the service recipient is located in the PRC. Circular 36 further clarifies that “loans” refer to the activity of lending capital for another’s use and receiving interest income thereon. Based on the definition of “loans” under Circular 36, the issuance of the New Notes is likely to be treated as a “loan” provided by the noteholders of the New Notes to the Issuer, which thus shall be regarded as the financial services for VAT purposes. In general, the income derived from the provision of loans will not be subject to VAT in the PRC if none of the Issuer, or the noteholders of the New Notes is within the PRC. However, it is uncertain whether a foreign incorporated company which is deemed to be a PRC resident enterprise would be regarded as being within the PRC. In the event that the Issuer is deemed to be a PRC resident enterprise and is deemed to be within the PRC by the PRC tax authorities, the noteholders of the New Notes may be deemed to be providing financial services to the Issuer within the PRC and consequently, the amount of interest on the New Notes payable by the Issuer to any non-resident noteholders of the New Notes may be subject to withholding VAT at the rate of 6% plus related surcharges.

PRC Laws and Regulations on Foreign Currency Exchange

Foreign Currency Exchange

The fundamental regulation governing foreign exchange in China is the Foreign Exchange Administration Rules of the PRC (《中華人民共和國外匯管理條例》) (the “**Foreign Exchange Administration Rules**”). This was promulgated by the State Council of the PRC on January 29, 1996 and amended on January 14, 1997 and August 5, 2008 with effect from the same day. Under these rules, Renminbi is generally freely convertible for payments of current account items, such as trade and service-related foreign exchange transactions and dividend payments, but not freely convertible for capital account items, such as direct investment, loan or investment in securities outside China, unless the prior approval of SAFE or its local counterparts is obtained.

Return investment via overseas special purpose Vehicles

According to the Circular on the Management of Offshore Investment and Financing and Round Trip Investment By Domestic Residents through Special Purpose Vehicles (《關於境內居民通過特殊目的公司境外投融資及返程投資外匯管理有關問題的通知》) (the “**Circular 37**”), which was promulgated on July 4, 2014 with effect from the same day, the domestic resident shall be required to register with the local branch of SAFE for foreign exchange registration of overseas investments before contributing the domestic and overseas lawful assets or interests into a SPV, and to update such registration in the event of any change of basic information of the registered SPV or major changes in the SPV’s capital, including increases and decreases of capital, share transfers, share swaps, mergers or divisions.

Failure to comply with the registration procedures set forth in Circular 37 may result in restrictions being imposed on the foreign exchange activities of the relevant onshore company, including on the increase of its registered capital, the payment of dividends and other distributions to its offshore parent or affiliate and the capital inflow from the offshore entity, and may also subject the relevant domestic resident to penalties and restrictions under PRC foreign exchange administration regulations.

M&A Rules

Under the Provisions on the Merger and Acquisition of Domestic Enterprises by Foreign Investors (Revised in 2009) (《關於外國投資者併購境內企業的規定》) (2009年修訂), the “**M&A Rules**”), if a domestic company or enterprise, or a domestic natural person, acquires a domestic affiliated company in the name of a company lawfully established or controlled abroad, approval from the MOFCOM is required.

PRC Laws and Regulations on Labor Protection

According to the Labor Law of the PRC (《中華人民共和國勞動法》) (the “**Labor Law**”), which was promulgated by the Standing Committee of the NPC on July 5, 1994 and amended on August 27, 2009 and December 29, 2018, respectively, an employer shall establish a comprehensive management system to safeguard the rights of its employees, including developing and improving its labor safety and health system, stringently implementing national protocols and standards on labor safety and health, conducting labor safety and health education for workers, guarding against labor accidents and reducing occupational hazards. Labor safety and health facilities must comply with relevant national standards. An employer must provide employees with the necessary labor protection equipment that comply with labor safety and health conditions stipulated under national regulations, as well as provide regular check-ups for workers that engage in operations with occupational hazards. Laborers who engage in special operations shall have received specialized training and obtained the pertinent qualifications. An employer shall develop a vocational training system. Vocational training funds shall be set aside and used in accordance with national regulations and vocational training for workers shall be carried out systematically based on the actual conditions of the company.

The Labor Contract Law of the PRC (《中華人民共和國勞動合同法》) which was promulgated by the Standing Committee of the NPC on June 29, 2007 and became effective on January 1, 2008, and was amended on December 28, 2012, and the Implementation Regulations on Labor Contract Law of the PRC (《中華人民共和國勞動合同法實施條例》), which was promulgated and became effective on September 18, 2008, regulate the relationship between employer and employee and contain specific provisions on the terms of the labor contract. Labor contracts must be made in writing. An employer and an employee may enter into a fixed-term labor contract, an unfixed-term labor contract, or a labor contract that concludes upon the completion of certain work assignments, after reaching due negotiations. An employer may legally terminate a labor contract and dismiss its employees after reaching an agreement upon due negotiations with the employee or by fulfilling the statutory conditions. Labor contracts concluded prior to the enactment of the Labor Contract Law and subsisting within the validity period thereof shall continue to be honored.

According to the Social Insurance Law of the PRC (《中華人民共和國社會保險法》), the Interim Regulations on the Collection and Payment of Social Insurance Premiums (《社會保險費徵繳暫行條例》), the Regulations on Work Injury Insurance (《工傷保險條例》), the Regulations on Unemployment Insurance (《失業保險條例》), and the Trial Measures on Employee Maternity Insurance of Enterprises (《企業職工生育保險試行辦法》), enterprises in the PRC shall provide benefit plans for their employees, which include basic pension insurance, basic medical insurance, unemployment insurance, maternity insurance and work injury insurance. An enterprise must provide social insurance by processing social insurance registration with local social insurance agencies and shall pay or withhold relevant social insurance premiums for or on behalf of employees. On September 6, 2011, the MHRSS promulgated the Interim Measures for Participation in the Social Insurance System by Foreigners Working within the Territory of China (《在中國境內就業的外國人參加社會保險暫行辦法》), which clarifies that employers shall also participate in the basic pension insurance, basic medical insurance, unemployment insurance, maternity insurance and work injury insurance for its foreign national employees.

According to the Regulations on the Administration of Housing Provident Fund (《住房公積金管理條例》), which was promulgated and became effective on April 3, 1999 and last amended on March 24, 2019, employers are required to contribute to housing provident funds for the benefit of their employees.

Other PRC Laws and Regulations

Post-doctoral Work Station

In accordance with the Notice of Ministry of Human Resources and Social Security on the Application for Post-Doctoral Work Station (《人力資源和社會保障部關於開展博士後科研工作站申報工作的通知》), which was promulgated and effected on December 25, 2009, enterprises and institutions engaged in science research and technology development or that operate in high-tech development zones or economic development zones, as well as overseas students working in pioneer areas at the provincial level or above, that apply to set up post-doctoral work stations, shall satisfy the following preconditions: (i) having an independent legal entity and good conditions for business operations; (ii) having considerable size and specialized science research and development institutions; (iii) having a high quality research team and post-doctoral research program with innovative theory and technology; and (iv) being capable of providing good research conditions and necessary living conditions. According to this notice, entities with research and development centers at the provincial level or above or that undertake major national programs may be given priority in setting up post-doctoral work stations.

Provisions for import and export goods

Pursuant to the Foreign Trade Law of the PRC (《中華人民共和國對外貿易法》), which was promulgated by the Standing Committee of the National People's Congress on May 12, 1994 and revised on November 7, 2016, and the Measures for the Archival Filing and Registration of Foreign Trade Business Operators (《對外貿易經營者備案登記辦法》), which was promulgated by the Ministry of Commerce on June 25, 2004 and became effective on July 1, 2004, and was last amended on May 10, 2021, the PRC adopted a filing and registration system for foreign trade operators engaged in imports and exports of goods or technology, implemented by the Foreign Trade Authority under the State Council and its entrusted agencies. Foreign trade operators that have not filed for registration in accordance with the provisions will be declined by Customs to carry out the customs clearance and inspection procedures for the import and export of goods.

Pursuant to the Customs Law of the PRC (《中華人民共和國海關法》), which was promulgated by the Standing Committee of the National People's Congress on January 22, 1987 and last amended on April 29, 2021, together with related regulations, the declaration of import and export goods may be made by consignees and consignors themselves, and such formalities may also be completed by their entrusted customs brokers that have registered with Customs. Consignees and consignors of import or export goods and customs brokers engaged in customs declaration shall register with Customs in accordance with the law. Principal regulations on the inspection of import and export commodities are set out in the Law of the People's Republic of China on Import and Export Commodity Inspection (《中華人民共和國進出口商品檢驗法》), which was promulgated by the Standing Committee of the National People's Congress on February 21, 1989 and last amended on April 29, 2021, together with its implementation rules. According to the aforesaid relevant laws and regulations, import and export commodities that are subject to compulsory inspection listed in the catalogue compiled by the State administration shall be inspected by the commodity inspection authorities. Import and export commodities that are not subject to statutory inspection shall be subject to random inspection.

MANAGEMENT

Directors

Our Board of Directors is responsible and has general powers for the management and conduct of our business.

The rights and obligations of each member of the Board of Directors are regulated by the by-laws and by our shareholders during our general meetings.

Our Board of Directors is responsible for the leadership and control of our Company, and is responsible for setting up the overall strategy as well as reviewing the operation and financial performance of the Group.

Our governance framework provides for checks and balances while allowing our management flexibility for prompt decision making in the ordinary course of business. Post-implementation audits of significant expenditures are conducted and reviewed by designated committees and by our Board of Directors.

The members of the Board of Directors are as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Luo Lin	54	Chairman and Executive Director
Pi Zhifeng	43	Executive Director and Chief Executive Officer
Fan Yonghong	50	Executive Director, President and Chief Technology Officer
Huang Song	58	Non-executive Director
Zhang Yongyi	85	Independent Non-executive Director
Zhu Xiaoping	72	Independent non-executive Director
Wee Yiaw Hin	62	Independent non-executive Director

Executive Directors

Luo Lin (羅林), aged 54, is the Chairman and the founder of the Group. Prior to establishing the Group, Mr. Luo worked at the Tarim Basin from 1992 to 1999. Mr. Luo has 29 years of experience in the petroleum industry. He has an Executive Master of Business Administration (EMBA) degree from Tsinghua University and a bachelor's degree in well bore engineering from Southwest Petroleum Institute (西南石油學院). Mr. Luo is also a certified lawyer and a chartered accountant in the PRC.

Pi Zhifeng (皮至峰), aged 43, is the Executive Director and Chief Executive Officer of the Company, in charge of strategic management, the achievement of overall business operation target and capital market of the Group. Mr. Pi joined the Group in 2004, and was responsible for the strategic planning, M&A, marketing etc.. Prior to joining the Group, Mr. Pi was responsible for investment in China Chengxin Financial Consultancy Co., Ltd (中誠信財務顧問有限公司). Mr. Pi has a Master of Business Administration degree from the University of Chicago Booth School of Business in the U.S.

Fan Yonghong (范永洪), aged 50, is the Executive Director, President and Chief Technology Officer of the Company, and is in charge of the Company's business operation, product line management and technical construction. Mr. Fan joined the Group in 2004, and was responsible for the setup of the oilfield service business and the management of business clusters of the Group. Prior to joining the Group, Mr. Fan was employed by PetroChina Tarim Oilfield Company (中石油塔里木油田分公司) between 1991 and 2004. He has 30 years of experience in the petroleum industry. Mr. Fan has an Executive Master of Business Administration (EMBA) degree from China Europe International Business School (CEIBS).

Non-executive Director

Huang Song (黃松), aged 58, is the Non-executive Director of the Company and also a senior engineer of water supply and drainage. Mr. Huang invented for is an inventor of many patents in the industry and won the first prize of Science and Technology progress of Petro China. Acting as the Chairman and General Manager of Beijing Oil HBP Technology Co., Ltd from 1998 to 2009, he was also the former Chairman of China Oil HBP Science & Technology Co., Ltd ("China Oil HBP" from 2009 to 2019) and is currently the Vice Chairman and General Manager of China Oil HBP. Mr. Huang was appointed as an Engineer and Senior Engineer in The Investigation and Design Research Institute of Henan Petroleum Exploration Bureau of Sinopec from 1986 to 1998. Before his career in The Investigation and Design Research Institute of Henan Petroleum Exploration Bureau of Sinopec, he served in Henan Oilfield Drilling Company and Oil Recovery Technology Research Institute from 1981 to 1986.

Independent Non-executive Directors

Zhang Yongyi (張永一), aged 85, is the Independent Non-executive Director of the Company. Mr. Zhang has extensive experience in the petroleum industry. Mr. Zhang was appointed as the Deputy General Manager of CNPC in 1992. Prior to this, he had taught in the Southwest Petroleum Institute (西南石油學院) for more than 32 years. Mr. Zhang was appointed as Chairman of the Supervisory Committee for State-owned Large and Medium Enterprises (國有大中型企業監事會主席) in 2000 and appointed by the State Council of the PRC as inspector (國務院稽察特派員) in 1998.

Zhu Xiaoping (朱小平), aged 72, is the Independent Non-executive Director. Mr. Zhu has extensive experience in corporate finance and is currently an Accounting Professor of the Renmin University of China (中國人民大學). He served as the Director of the China Accounting Society (中國會計學會理事) and Director of the China Audit Society (中國審計學會理事).

Wee Yiaw Hin, aged 62, is the Independent Non-executive Director. Dato Wee has more than 30 years of experience in the Oil & Gas Industry across the Exploration & Production and Gas & LNG value chain. His experience spans the Technical and Operational functions and Senior Management and Board Positions. He spent 21 years in Shell in Malaysia and Overseas, and joined PETRONAS as Executive Vice President and Chief Executive Officer of Upstream Business in May 2010. Dato Wee was Executive Director and Executive Committee member of the board of PETRONAS Group. Dato Wee graduated as a Civil Engineer and holds a Masters of Science Degree from Imperial College, UK.

Senior Management

SHEN Haihong (沈海洪), aged 52, is an Executive Vice President of the Company, and is in charge of project operation management, knowledge management and management optimization. Mr. Shen joined the Group in 2007, and was in charge of the tubular service cluster as well as operational management of the Group. Prior to joining the Group, Mr. Shen was employed by CNPC between 1991 and 2006. He has more than 28 years of experience in the petroleum industry. Mr. Shen has a Master of Business Administration degree from Tsinghua University and a bachelor's degree in well bore engineering from Southwest Petroleum Institute (西南石油學院), and is also a senior engineer in well bore engineering.

XU Hongjian (徐宏劍), aged 40, The financial controller of the Company, is in charge of the Group's financial policy, finance working direction, investment and financial management. Mr. Xu joined the Group in 2006 and was responsible for the financial work, risk control and marketing of the Group. Prior to joining the Group, from 2003 to 2006, Mr. Xu worked at Deloitte & Touche LLP and was engaged in financial audit. Mr. Xu holds a bachelor's degree in finance from Fudan University.

Company Secretary

The Company has engaged with Tricor Services Limited, external service provider, and Ms. Lau Jeanie (“Ms. Lau”) has been appointed in replacement of Dr. Ngai Wai Fung of SWCS Corporate Services Group (Hong Kong) Limited as the Company’s company secretary with effect from 7 August 2020. Then, Ms. Au-Yeung Nelly (“Ms. Au-Yeung”) has been appointed as the company secretary of the Company in replacement of Ms. Lau on 30 October 2020. Ms. Au-Yeung has complied with Rule 3.29 of the Listing Rules by taking no less than 15 hours of the relevant professional training during the year.

Board Committees

Audit Committee

Our Company established the Audit Committee on November 17, 2007 in compliance with the Listing Rules. The terms of reference adopted by the Audit Committee deal clearly with its duties and authorities. The Audit Committee is mainly responsible for monitoring the relationship between our Company and the external auditors, making proposals to the board on the appointment, renewal and dismissal of our external auditors as well as the relevant remuneration and terms of appointment, reviewing our financial information and overseeing our financial reporting system and internal control procedures.

The Audit Committee has three members, comprising of Mr. Zhu Xiaoping, Mr. Zhang Yongyi and Dato Wee Yiau Hin. They are all independent non-executive Directors. The Audit Committee is chaired by Mr. Zhu Xiaoping.

Nomination Committee

Our Company established the Nomination Committee on November 17, 2007 with written terms of reference which deal clearly with its duties and authorities. The Nomination Committee is responsible for reviewing the structure, number and composition of the board and making recommendations to the board on the policy and procedures for the nomination of directors, identifying individuals suitably qualified to become board members and selecting or making recommendations to the board on the selection of individuals nominated for directorships, making recommendations to the board on the appointment or re-appointment of directors, succession planning for directors, in particular the chairman and the chief executive officer, reviewing the independence of the independent non-executive directors and submitting proposals to the board and review the Board Diversity Policy in particular the measurable objectives contained therein to ensure their progress and appropriateness.

The Nomination Committee has three members, comprising Mr. Dato Wee Yiau Hin and Mr. Zhang Yongyi, both being independent non-executive Directors, and Mr. Luo Lin, an executive Director. The Nomination Committee is chaired by Mr. Zhang Yongyi.

Remuneration Committee

Our Company established the Remuneration Committee on November 17, 2007 with written terms of reference which deal clearly with its duties and authorities. The Remuneration Committee is mainly responsible for reviewing and recommending the terms of remuneration, benefits, bonus and other allowances of the directors and senior management, submitting proposals to the board on the remuneration policy and structure of all our directors and senior management and approving and monitoring the execution of our share option scheme.

The Remuneration Committee has three members, comprising Mr. Zhu Xiaoping and Dato Wee Yiau Hin, both being independent non-executive Directors, and Mr. Luo Lin, an executive Director. The Remuneration Committee is chaired by Dato Wee Yiau Hin.

ESG (Environment, Social and Governance) (Formerly Know As QHSE (Quality, Health, Safety, Environment) Committee)

The Company set up the QHSE Committee on January 21, 2013 and further upgraded it to ESG Committee on May 21, 2020. ESG Committee aims at building an advanced governance structure of employee stock ownership and construct an environmental friendly business model to reduce environmental harm, improve resource use efficiency, help career development, promote stakeholder development and achieve long-term sustainable developmental goals. ESG Committee manifests our resolution to promote the ESG-related work on a top-down basis. Specifically, ESG Committee is responsible for assisting the Board to review and evaluate the current status of the Group's environmental, social and governance performance; recommending in respect of matters potentially affecting the Group's environmental, social and governance standards and the Group's environmental, social and governance policy formulation and system establishment; assisting the Board to supervise the implementation of the Group's environmental, social and governance policies and evaluating; and reviewing the ESG report and submitting the report to the Board to ensure the Board's full participation in ESG governance and report disclosure. The ESG Committee has three members, comprising of Mr. Luo Lin, Mr. Pi Zhifeng and Mr. FAN Younghong, all being Executive Directors. Mr. Pi Zhifeng is the Chairman of the ESG Committee.

PRINCIPAL SHAREHOLDERS

As of the date of this offering memorandum, according to the register we maintain in accordance with Section 336 of the SFO, the following parties have interests or short positions in 5% or more of our issued share capital.

Name of Substantial Shareholders	Capacity	Number of ordinary shares held	Approximate percentage of shareholding ⁽³⁾
Luo Lin	Beneficial owner	737,494,330	24.52 (L)
Pro Development Holdings Corp ⁽¹⁾	Beneficiary owner	664,140,740	22.08 (L)
China Oil HBP Science & Technology Co., Ltd ⁽²⁾	Interest of controlled corporation	193,766,678	6.44 (L)

Notes:

- (1) Pro Development Holdings Corp. is a company wholly-owned by Avalon Assets Limited and holds 664,140,740 Shares; Serangoon Limited and Seletar Limited owns 50% interest of Avalon Assets Limited respectively. Serangoon Limited and Seletar Limited are wholly owned by Credit Suisse Trust Limited. Credit Suisse Trust Limited is the trustee of Loles Trust. Mr. Luo Lin is the founder of Loles Trust of which Mr. Luo Lin and his family members are the beneficiaries. By virtue of the SFO, Credit Suisse Trust Limited, Serangoon Limited, Seletar Limited, Avalon Assets Limited are deemed to be interested in the shares held by Pro Development Holdings Corp.
- (2) Hong Kong Huihua Global Technology Limited, which is a company wholly-owned by China Oil HBP Science & Technology Co., Ltd. and holds 193,766,678 shares. By virtue of the SFO, China Oil HBP Science & Technology Co., Ltd. is deemed to be interested in the shares held by Hong Kong Huihua Global Technology Limited.
- (3) “(L)” and “(S)” mean long and short position respectively.

Except as disclosed above, no other parties were recorded in the register of the Company required to be maintained under Section 336 of the SFO as having interests or short positions in the shares or underlying shares of the Company as of the date of this offering memorandum.

RELATED PARTY TRANSACTIONS

The following discussion describes certain material related party transactions between us or our consolidated subsidiaries and our Directors, executive officers and principal shareholders and, in each case, the companies with whom they are affiliated. Each of our related party transactions was entered into in the ordinary course of business, on fair and reasonable commercial terms, in our interests and the interests of our shareholders.

The table below sets forth certain material transactions between us and our related parties during the years ended December 31, 2018, 2019 and 2020:

<u>Names of related parties</u>	<u>Nature of relationship</u>	<u>Nature of transaction</u>	<u>For the year ended December 31,</u>			
			<u>2018</u>	<u>2019</u>	<u>2020</u>	
			(RMB)	(RMB)	(RMB)	(US\$)
			(in thousands)			
Mr. Luo Lin	The ultimate controlling shareholder of the Company	Short-term borrowings guarantor	181,357	138,318	213,474	32,716
Mr. Luo Lin	The ultimate controlling shareholder of the Company	New Notes payable guarantor	—	50,000	—	—

DESCRIPTION OF OTHER MATERIAL INDEBTEDNESS

To fund our existing business operations and to finance our working capital requirements, we have borrowed money or incurred indebtedness from various banks. As of December 31, 2020, our total borrowings (including the long-term and short-term borrowings and the 2022 Notes) amounted to RMB2,925.6 million (US\$448.4 million). Since December 31, 2020, the Company has from time to time incurred additional indebtedness in the ordinary course of business. We set forth below a summary of the material terms and conditions of these loans and other indebtedness.

PRC Indebtedness

Bilateral Bank Loan Agreements

Certain of our PRC operating subsidiaries have entered into loan agreements with a number of PRC banks, including Citi Bank, Shanghai Pudong Development Bank, China Merchants Bank, and Industrial Bank Co., Ltd. These loans are typically used to satisfy our working capital requirements and are repayable within one year.

Interest

The principal amounts outstanding under almost all of the PRC bank loans are Renminbi denominated and bear interest at fixed rates ranging from 3.02% to 6.90% per annum.

Covenants

Under these PRC bank loans, our subsidiary borrowers have agreed, among other things, not to take relevant actions without first notifying the lender and/or obtaining the lenders' prior consent. Such relevant actions mainly consist of:

- creating encumbrances on any part of properties or assets or dealing with assets in a way that may adversely affect its ability to repay its loans;
- granting guarantees to any third parties that may adversely affect its ability to repay its loans;
- applying for bankruptcy, liquidation and dissolution proceedings;
- transferring part or all of the liabilities under the loans to a third party; and
- merger, split, transfer of shares, sales of assets or decrease of registered capital.

Events of Default

The PRC loan agreements contain certain customary events of default, including failure to pay the amount payable on the due date, unauthorized use of loan proceeds, failure to obtain the lender's approval for an act that requires the latter's approval, failure to give prompt notice of any material change to the article of association, business scope, financial status or accounting methods and material breach of the terms of the loan agreement. The banks are entitled to terminate their respective agreements and/or demand immediate repayment of the loans and any accrued interest upon the occurrence of an event of default.

Guarantee and security

Certain of our PRC subsidiaries have entered into counter guarantee and security agreements with the guarantors in connection with the bank loan agreements, pursuant to which such PRC subsidiaries have provided guarantees and security including real property rights and of such PRC subsidiaries.

2022 Notes

On December 2, 2019, we issued the 2022 Notes, which are 7.50% senior notes due 2022 in an aggregate principal amount of US\$300.0 million pursuant to an indenture (the “2022 Indenture”). The aggregate principal amount of the 2022 Notes outstanding is US\$289,900,000 million as of the date of this offering memorandum. The terms of the 2022 Notes limit the ability of our Company to incur indebtedness (as defined therein) except for permitted indebtedness (as defined therein).

Guarantee

The obligations pursuant to the 2022 Notes are guaranteed by our existing subsidiaries other than those organized under the laws of the PRC and certain other subsidiaries specified in the 2022 Indenture.

In December 2020, as part of the internal restructuring, we designated Anton Oilfield Services International Company Limited (“Anton Oilfield International”) and its subsidiaries as Unrestricted Subsidiaries and released the relevant subsidiary guarantee provided by Anton Oilfield International, Antonoil International FZE, Anton Oilfield Serviced DMCC and Roxxon Industry Group Limited accordingly under the 2022 Indenture. See “Business — Principal Services and Products — Integrated Service Model” for the reasons for the designation and “Description of the New Notes” a full list of our existing Unrestricted Subsidiaries. Upon such designation, the existing subsidiary guarantors under the 2022 Indenture include Anton Oilfield Services Company Limited and T&C International Trading Ltd. (the “Existing Subsidiary Guarantors”). Each of the Existing Subsidiary Guarantors, jointly and severally, guarantees the due and punctual payment of the principal, any premium, and interest on, and all other amounts payable under, the 2022 Notes.

Interest

The 2022 Notes bear an interest rate of 7.50% per annum. Interest is payable semi-annually in arrears.

Covenants

Subject to certain conditions and exceptions, the 2022 Indenture contains certain covenants, restricting us and each of the related restricted subsidiaries from, among other things:

- incurring additional indebtedness and issuing preferred stock;
- making investments or other restricted payments;
- guaranteeing indebtedness;
- entering into certain transactions with affiliates;
- creating liens;
- entering into sale and leaseback transactions;
- selling assets;
- entering into agreements that restrict restricted subsidiaries’ ability to pay dividends;
- issue and sell capital stock of restricted subsidiaries;
- effect a consolidation or merger; and
- engaging in different business activities.

Events of Default

The 2022 Indenture contain certain customary events of default, including default in the payment of principal, or of any premium, on the 2022 Notes, when such payments become due, default in payment of interest which continues for 30 consecutive days, breaches of covenants, insolvency and other events of default specified in the 2022 Indenture.

If an event of default occurs and is continuing, the 2022 Notes Trustee or the holders of at least 25% of the outstanding 2022 Notes may declare the principal of the 2022 Notes plus any accrued and unpaid interest and premium (if any) to be immediately due and payable.

Change of Control

Upon the occurrence of a change of control triggering event, we are obligated to make an offer to repurchase all outstanding 2022 Notes at a purchase price equal to 101% of the principal amount plus any accrued and unpaid interest.

Maturity and Redemption

The maturity date of the 2022 Notes is December 2, 2022.

At any time on or prior to December 2, 2021, at we may redeem up to 35% of the aggregate principal amount of the 2022 Notes at a redemption price of 107.50% of the principal amount of the 2022 Notes, plus accrued and unpaid interest, if any, to (but no including) the redemption date. In addition, at any time prior to December 2, 2021, we may redeem the 2022 Notes at a redemption price equal to 100% of the principal amount of the 2022 Notes plus a premium.

DESCRIPTION OF THE NEW NOTES

For purposes of this “Description of the New Notes,” the term “Company” refers only to Anton Oilfield Services Group, and any successor obligor on the Notes, and not to any of its subsidiaries, and the term “Notes” only refers to the New Notes issued by the Company. Each Subsidiary of the Company which Guarantees the Notes is referred to as a “Subsidiary Guarantor,” and each such guarantee is referred to as a “Subsidiary Guarantee.”

The Notes are to be issued under an indenture (the “Indenture”), to be dated as of the Original Issue Date, among the Company, the Subsidiary Guarantors, as guarantors, and Citicorp International Limited, as trustee (the “Trustee”).

The following is a summary of certain provisions of the Indenture, the Notes and the Subsidiary Guarantees. This summary does not purport to be complete and is qualified in its entirety by reference to all of the provisions of the Indenture, the Notes and the Subsidiary Guarantees. It does not restate those agreements in their entirety. Whenever particular sections or defined terms of the Indenture not otherwise defined herein are referred to, such sections or defined terms are incorporated herein by reference. Copies of the Indenture will be available for inspection on or after the Original Issue Date at the corporate trust office of the Trustee at 20/F, Citi Tower, One Bay East, 83 Hoi Bun Road, Kwun Tong, Kowloon, Hong Kong.

BRIEF DESCRIPTION OF THE NOTES

The Notes are:

- general obligations of the Company;
- senior in right of payment to any existing and future obligations of the Company expressly subordinated in right of payment to the Notes;
- at least *pari passu* in right of payment with all unsecured, unsubordinated Indebtedness of the Company (subject to any priority rights of such unsecured, unsubordinated Indebtedness pursuant to applicable law);
- guaranteed by the Subsidiary Guarantors on a senior basis, subject to the limitations described below under “— The Subsidiary Guarantees” and in “Risk Factors — Risks Relating to the Subsidiary Guarantees”;
- effectively subordinated to all existing and future obligations of the Non-Guarantor Subsidiaries (defined below); and
- effectively subordinated to all existing and future secured obligations of the Company to the extent of the value of the collateral securing such obligations.

The Notes will mature on January 26, 2025, unless redeemed earlier pursuant to the terms thereof and the Indenture. The Indenture allows additional Notes to be issued from time to time (the “Additional Notes”), subject to certain limitations described under “— Further Issues.” Unless the context requires otherwise, references to the “Notes” for all purposes of the Indenture and this “Description of the New Notes” include any Additional Notes that are actually issued.

The Notes will bear interest at 8.75% per annum from the Original Issue Date or from the most recent interest payment date to which interest has been paid or duly provided for, payable semiannually in arrears on January 26 and July 26 of each year (each an “Interest Payment Date”), commencing January 26, 2022. So long as the Notes are held in global form, each payment in respect of the Global Note will be made to the person shown as the holder of the Notes in the Notes register at the close of business (of the relevant

clearing system) on the Clearing System Business Day before the due date for such payments, where “Clearing System Business Day” means a weekday (Monday to Friday, inclusive) except December 25 and January 1. Interest on the Notes will be calculated on the basis of a 360-day year comprised of twelve 30-day months.

Interest on the Notes will be paid to the Holders of record at the close of business on January 11 or July 11 immediately preceding an Interest Payment Date (each, a “Record Date”), notwithstanding any transfer, exchange or cancellation thereof after a Record Date and prior to the immediately following Interest Payment Date. Except as described under “Optional Redemption” and otherwise provided in the Indenture, the Notes may not be redeemed prior to maturity (unless they have been repurchased by the Company). In any case in which the date of the payment of principal of, or premium (if any) or interest on, the Notes is not a Business Day in the relevant place of payment or in the place of business of the Paying Agent, then payment of principal, premium (if any) or interest need not be made in such place on such date but may be made on the next succeeding Business Day in such place. Any payment made on such Business Day shall have the same force and effect as if made on the date on which such payment is due, and no interest on the Notes shall accrue for the period after such date.

The Notes will be issued only in fully registered form, without coupons, in denominations of US\$200,000 and integral multiples of US\$1,000 in excess thereof. No service charge will be made for any registration of transfer or exchange of the Notes, but the Company may require payment of a sum sufficient to cover any transfer tax or other similar governmental charge payable in connection therewith.

All payments on the Notes will be made in U.S. dollars by the Company at the office or agency of the Company maintained for that purpose (which initially will be an office of the Paying Agent, currently located at Citibank, N.A., Dublin Branch, One North Wall Quay, Dublin 1, Ireland, and the Notes may be presented for registration of transfer or exchange at such office or agency; *provided* that, if the Notes are in definitive form and the Company acts as its own paying agent at the option of the Company, payment of interest may be made by check mailed (at the expense of the Company) to the address of the Holders as such address appears in the Note register maintained by the Registrar or by wire transfer. Interest payable on the Notes held through Euroclear or Clearstream will be available to Euroclear or Clearstream participants (as defined herein) on the Business Day following payment thereof.

THE SUBSIDIARY GUARANTEES

The initial Subsidiary Guarantors that will execute the Indenture on the Original Issue Date will consist of Anton Oilfield Services Company Limited and T&C International Trading Ltd. The Restricted Subsidiaries organized under the laws of the PRC (the “PRC Non-Guarantor Subsidiaries”) and other Restricted Subsidiaries that are not organized under the laws of the PRC and that are not the initial Subsidiary Guarantors (collectively, the “Other Non-Guarantor Subsidiaries”) are hereinafter referred to as the Existing Non-Guarantor Subsidiaries. Certain of the initial Subsidiary Guarantors are holding companies that do not have significant operations.

None of the existing PRC Non-Guarantor Subsidiaries or any future Restricted Subsidiaries organized under the laws of the PRC will provide a Subsidiary Guarantee at any time in the future. Although the Indenture contains limitations on the amount of additional Indebtedness that Non-Guarantor Subsidiaries may incur, the amount of such additional Indebtedness could be substantial. In the event of a bankruptcy, liquidation or reorganization of any Non-Guarantor Subsidiary, such Non-Guarantor Subsidiary will pay the holders of its debt and its trade creditors before it will be able to distribute any of its assets to the Company. See “Risk Factors — Risks Relating to the Notes — We are a holding company and payments with respect to the Notes are structurally subordinated to liabilities, contingent liabilities and obligations of our subsidiaries.”

The Company will cause each of its future Subsidiaries (other than Subsidiaries organized under the laws of the PRC, Exempted Subsidiaries and Listed Subsidiaries), as soon as practicable after it becomes a Restricted Subsidiary or ceases to be an Exempted Subsidiary or a Listed Subsidiary, to execute and deliver to the Trustee a supplemental indenture to the Indenture pursuant to which such Restricted Subsidiary will Guarantee the payment of the Notes. Notwithstanding the foregoing sentence, the Company may elect to have any future Restricted Subsidiary (and its Restricted Subsidiaries) organized outside the PRC other than Exempted Subsidiaries or Listed Subsidiaries not provide a Subsidiary Guarantee at the time such entity becomes a Restricted Subsidiary or ceases to be an Exempted Subsidiary or a Listed Subsidiary (the “New Non-Guarantor Subsidiary” and, together with the Existing Non-Guarantor Subsidiaries, the “Non-Guarantor Subsidiaries”); *provided* that, after giving effect to the amount of Consolidated Assets of such Restricted Subsidiary, the Consolidated Assets of all Restricted Subsidiaries organized outside the PRC (other than Exempted Subsidiaries or Listed Subsidiaries) that are not Subsidiary Guarantors do not exceed 20.0% of Total Assets.

Each Restricted Subsidiary that Guarantees the Notes after the Original Issue Date is referred to as a “Future Subsidiary Guarantor” and, upon execution of the applicable supplemental indenture to the Indenture, will be a “Subsidiary Guarantor.”

As of December 31, 2020,

- the Company and its consolidated Subsidiaries (including the Non-Guarantor Subsidiaries) had total consolidated indebtedness (consisting of the 2022 Notes, long-term borrowings and short-term borrowings) of approximately RMB2,925.6 million (US\$448.4 million), of which RMB845.1 million (US\$129.5 million) was secured; and
- the Non-Guarantor Subsidiaries had total indebtedness (consisting of long-term borrowings and short-term borrowings) of approximately RMB1,059.0 million (US\$162.3 million).

In addition, as of December 31, 2020, the Non-Guarantor Subsidiaries had capital commitments and contingent liabilities of approximately RMB79.6 million (US\$12.2 million) and nil, respectively.

The Subsidiary Guarantee of each Subsidiary Guarantor:

- is a general obligation of such Subsidiary Guarantor;
- is effectively subordinated to the secured obligations of such Subsidiary Guarantor, to the extent of the value of the assets serving as security therefor;
- is senior in right of payment to all future obligations of such Subsidiary Guarantor expressly subordinated in right of payment to such Subsidiary Guarantee;
- ranks at least *pari passu* with all other unsecured, unsubordinated Indebtedness of such Subsidiary Guarantor (subject to any priority rights of such unsecured, unsubordinated Indebtedness pursuant to applicable law); and
- is effectively subordinated to all existing and future obligations of the Non-Guarantor Subsidiaries.

Under the Indenture, and any supplemental indenture to the Indenture, as applicable, each of the Subsidiary Guarantors will jointly and severally Guarantee the due and punctual payment of the principal of, premium, if any, and interest on, and all other amounts payable under, the Notes. The Subsidiary Guarantors will (1) agree that their obligations under the Subsidiary Guarantees will be enforceable irrespective of any invalidity, irregularity or unenforceability of the Notes or the Indenture and (2) waive their right to require the Trustee to pursue or exhaust its legal or equitable remedies against the Company prior to exercising its rights under the Subsidiary Guarantees. Moreover, if at any time any amount paid under a Note or the Indenture is rescinded or must otherwise be restored, the rights of the Holders under the Subsidiary Guarantees will be reinstated with respect to such payments as though such payment had not been made. All payments under the Subsidiary Guarantees are required to be made in U.S. dollars.

Under the Indenture, and any supplemental indenture to the Indenture, as applicable, each Subsidiary Guarantee will be limited to an amount not to exceed the maximum amount that can be Guaranteed by the applicable Subsidiary Guarantor without rendering the Subsidiary Guarantee, as it relates to such Subsidiary Guarantor, voidable under applicable law relating to fraudulent conveyance or fraudulent transfer or similar laws affecting the rights of creditors generally. If a Subsidiary Guarantee were to be rendered voidable, it could be subordinated by a court to all other indebtedness (including Guarantees and other contingent liabilities) of the applicable Subsidiary Guarantor, and, depending on the amount of such indebtedness, a Subsidiary Guarantor's liability on its Subsidiary Guarantee could be reduced to zero.

The obligations of each Subsidiary Guarantor under its respective Subsidiary Guarantee may be limited, or possibly invalid, under applicable laws. See "Risk Factors — Risks Relating to the Subsidiary Guarantees — The Subsidiary Guarantees may be challenged under applicable insolvency or fraudulent transfer laws, which could impair the enforceability of the Subsidiary Guarantees."

Release of the Subsidiary Guarantees

A Subsidiary Guarantee given by a Subsidiary Guarantor may be released in certain circumstances, including:

- upon repayment in full of the Notes;
- upon a defeasance and discharge or satisfaction and discharge as described under "— Defeasance — Defeasance and Discharge" or "— Satisfaction and Discharge";
- upon the designation by the Company of a Subsidiary Guarantor as an Unrestricted Subsidiary in compliance with the terms of the Indenture;
- upon the sale, disposition or merger of a Subsidiary Guarantor in compliance with the terms of the Indenture (including the covenants under "— Certain Covenants — Limitation on Sales and Issuances of Capital Stock in Restricted Subsidiaries," "— Certain Covenants Limitation on Asset Sales" and "— Consolidation, Merger and Sale of Assets") resulting in such Subsidiary Guarantor no longer being a Restricted Subsidiary, so long as such Subsidiary Guarantor is simultaneously released from its obligations in respect of any of the Company's other Indebtedness or any Indebtedness of any other Restricted Subsidiary; or
- in the case of a Subsidiary Guarantor that becomes a New Non-Guarantor Subsidiary, in compliance with the terms of the Indenture.

In the case of a Subsidiary Guarantor with respect to which the Company or any of its Restricted Subsidiaries is proposing to sell, whether through the sale of existing shares or the issuance of new shares, no less than 20% of the Capital Stock of such Subsidiary Guarantor, the Company may concurrently with or as soon as practicable after the consummation of such sale or issuance of Capital Stock, (a) instruct the Trustee to release the Subsidiary Guarantees provided by such Subsidiary Guarantor and each of its

Restricted Subsidiaries organized outside the PRC, and upon such release such Subsidiary Guarantor and its Restricted Subsidiaries organized outside the PRC will become New Non-Guarantor Subsidiaries (such that each New Non-Guarantor Subsidiary will no longer Guarantee the Notes) without any requirement to seek the consent or approval of the Holders of the Notes, *provided* that after giving effect to the release of such Subsidiary Guarantees, the amount of Consolidated Assets of all Restricted Subsidiaries organized outside the PRC (other than Exempted Subsidiaries or Listed Subsidiaries) that are not Subsidiary Guarantors (including such New Non-Guarantor Subsidiaries) do not exceed 20.0% of Total Assets. A Subsidiary Guarantee of a Subsidiary Guarantor may only be released pursuant to this paragraph if as of the date of such proposed release, no document exists that is binding on the Company or any of the Restricted Subsidiaries that would have the effect of (a) prohibiting the Company or any of the Restricted Subsidiaries from releasing such Subsidiary Guarantee or (b) requiring the Company or such Subsidiary Guarantor to deliver or keep in place a guarantee of other Indebtedness of the Company by such Subsidiary Guarantor.

No release of a Subsidiary Guarantor from its Subsidiary Guarantee shall be effective against the Trustee or the Holders until the Company has delivered to the Trustee an Officers' Certificate stating that all requirements relating to such release have been complied with and such release is authorized and permitted by the terms of the Indenture.

As of the date of the Indenture, all of the Company's Subsidiaries other than the Existing Unrestricted Subsidiaries will be "Restricted Subsidiaries." However, under the circumstances described below under "— Certain Covenants — Designation of Restricted and Unrestricted Subsidiaries," the Company will be permitted to designate certain of its Subsidiaries as "Unrestricted Subsidiaries." The Company's Unrestricted Subsidiaries will generally not be subject to the restrictive covenants in the Indenture. The Company's Unrestricted Subsidiaries will not Guarantee the Notes.

FURTHER ISSUES

Subject to the covenants described below and in accordance with the terms of the Indenture, the Company may, from time to time, without notice to or the consent of the Holders, create and issue Additional Notes having the same terms and conditions as the Notes (including the benefit of the Subsidiary Guarantees) in all respects (or in all respects except for the issue date, issue price and the first interest period and, to the extent necessary, certain temporary securities law transfer restrictions) (a "Further Issue") so that such Additional Notes may be consolidated and form a single class with the previously outstanding Notes and vote together as one class on all matters with respect to the Notes; *provided* that the issuance of any such Additional Notes will then be permitted under the "Limitation on Indebtedness" covenant described below.

OPTIONAL REDEMPTION

At any time and from time to time on or after January 26, 2024, the Company may at its option redeem the Notes, in whole or in part, at a redemption price equal to 104.375% of the principal amount of the Notes redeemed, plus accrued and unpaid interest, if any, to (but not including) the redemption date.

At any time prior to January 26, 2024, the Company may at its option redeem the Notes, in whole but not in part, at a redemption price equal to 100% of the principal amount of the Notes redeemed plus the Applicable Premium as of, and accrued and unpaid interest, if any, to (but not including) the redemption date. Neither the Trustee nor the Paying Agent will be responsible for verifying or calculating the Applicable Premium.

At any time and from time to time prior to January 26, 2024, the Company may at its option redeem up to 35% of the aggregate principal amount of the Notes with the Net Cash Proceeds of one or more sales of Common Stock of the Company in an Equity Offering at a redemption price of 108.75% of the principal amount of the Notes redeemed, plus accrued and unpaid interest, if any, to (but not including) the redemption date; *provided* that at least 65% of the aggregate principal amount of the Notes issued on the Original Issue Date remains outstanding after each such redemption and any such redemption takes place within 60 days after the closing of the related Equity Offering.

The Company will give not less than 30 days' nor more than 60 days' notice of any redemption. If less than all of the Notes are to be redeemed at any time, the Notes for redemption will be selected as follows:

- (1) if the Notes are listed on any national securities exchange and/or held through any clearing system, in compliance with the requirements of the principal national securities exchange on which the Notes are listed (if any) and/or any applicable requirements of the clearing systems through which the Notes are held; or
- (2) if the Notes are not listed on any national securities exchange and are not held through the clearing systems, on a pro rata basis, by lot or by such other method as the Trustee in its sole and absolute discretion shall deem to be fair and appropriate unless otherwise required by law.

No Note of US\$200,000 in principal amount or less shall be redeemed in part. If any Note is to be redeemed in part only, the notice of redemption relating to such Note will state the portion of the principal amount to be redeemed. With respect to any Certificated Note, a new Note in principal amount equal to the unredeemed portion will be issued upon cancellation of the original Note. On and after the redemption date, interest will cease to accrue on Notes or portions of them called for redemption.

REPURCHASE OF NOTES UPON A CHANGE OF CONTROL TRIGGERING EVENT

Not later than 30 days following a Change of Control Triggering Event, the Company will make an Offer to Purchase all outstanding Notes (a "Change of Control Offer") at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to (but not including) the Offer to Purchase Payment Date (as defined in clause (2) of the definition of "Offer to Purchase").

The Company will have agreed in the Indenture that it will timely repay all Indebtedness or obtain consents as necessary under or terminate, agreements or instruments that would otherwise prohibit a Change of Control Offer required to be made pursuant to the Indenture. Notwithstanding this agreement of the Company, it is important to note that if the Company is unable to repay (or cause to be repaid) all of the Indebtedness, if any, that would prohibit the repurchase of the Notes or is unable to obtain the requisite consents of the holders of such Indebtedness, or terminate any agreements or instruments that would otherwise prohibit a Change of Control Offer, it would continue to be prohibited from purchasing the Notes. In that case, the Company's failure to purchase tendered Notes would constitute an Event of Default under the Indenture. Certain of the events constituting a Change of Control Triggering Event under the Notes may also constitute an event of default under certain other debt instruments of the Company and its Subsidiaries.

Future debt of the Company may also (1) prohibit the Company from purchasing Notes in the event of a Change of Control Triggering Event; (2) provide that a Change of Control Triggering Event is a default; or (3) require repurchase of such debt upon a Change of Control Triggering Event. Moreover, the exercise by the Holders of their right to require the Company to purchase the Notes could cause a default under other Indebtedness, even if the Change of Control Triggering Event itself does not, due to the financial effect of the purchase on the Company. The Company's ability to pay cash to the Holders following the occurrence of a Change of Control Triggering Event may be limited by the Company's and the Subsidiary Guarantors' then existing financial resources. There can be no assurance that sufficient funds will be available when necessary to make the required purchase of the Notes. See "Risk Factors — Risks Relating to the Notes — We may not be able to repurchase the Notes upon a change of control triggering event."

The definition of Change of Control includes a phrase “all or substantially all” as used with respect to the assets of the Company. No precise definition of the phrase has been established under applicable law, and the phrase will likely be interpreted under applicable law of the relevant jurisdictions based on particular facts and circumstances. Accordingly, there may be a degree of uncertainty as to the ability of a Holder of Notes to require the Company to repurchase such Holder’s Notes as a result of a sale of less than all the assets of the Company to another person or group. Notwithstanding the above, the Company will not be required to make a Change of Control Offer following a Change of Control Triggering Event if a third party makes the Change of Control Offer in the same manner, at the same times and otherwise in compliance with the requirements set forth in the Indenture applicable to a Change of Control Offer made by the Company and purchases all Notes validly tendered and not withdrawn under such Change of Control Offer.

The Trustee shall not be required to take any steps to ascertain whether a Change of Control Triggering Event or any event which could lead to the occurrence of a Change of Control Triggering Event has occurred and shall not be liable to any person for any failure to do so.

Except as described above with respect to a Change of Control Triggering Event, the Indenture does not contain provisions that permit the Holders to require that the Company purchase or redeem the Notes in the event of a takeover, recapitalization or similar transaction.

NO MANDATORY REDEMPTION OR SINKING FUND

There will be no mandatory redemption or sinking fund payments for the Notes.

ADDITIONAL AMOUNTS

All payments of principal of, and premium (if any) and interest on the Notes or under the Subsidiary Guarantees will be made without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature imposed or levied by or within any jurisdiction in which the Company, a Surviving Person (as defined under “— Consolidation, Merger and Sale of Assets”) or an applicable Subsidiary Guarantor is organized or resident for tax purposes or any political subdivision or taxing authority thereof or therein (each, as applicable, a “Relevant Taxing Jurisdiction”) or any jurisdiction through which payment is made by or on behalf of the Company, a Surviving Person or the applicable Subsidiary Guarantor, as the case may be, or any political subdivision or taxing authority thereof or therein (together with the Relevant Taxing Jurisdictions, the “Relevant Jurisdictions”), unless such withholding or deduction is required by law or by regulation or governmental policy having the force of law. In the event that any such withholding or deduction is so required, the Company, a Surviving Person or the applicable Subsidiary Guarantor, as the case may be, will pay such additional amounts (“Additional Amounts”) as will result in receipt by the Holder of each Note, of such amounts as would have been received by such Holder had no such withholding or deduction been required, except that no Additional Amounts shall be payable:

- (1) for or on account of:
 - (a) any tax, duty, assessment or other governmental charge that would not have been imposed but for:
 - (i) the existence of any present or former connection between the Holder or beneficial owner of such Note and the Relevant Jurisdiction other than merely holding such Note or the receipt of payments thereunder or under a Subsidiary Guarantee, including, without limitation, such Holder or beneficial owner being or having been a national, domiciliary or resident of such Relevant Jurisdiction or treated as a resident thereof or being or having been physically present or engaged in a trade or business therein or having or having had a permanent establishment therein;

- (ii) the presentation of such Note (in cases in which presentation is required) more than 30 days after the later of the date on which the payment of the principal of, premium, if any, and interest on, such Note became due and payable pursuant to the terms thereof or was made or duly provided for, except to the extent that the Holder thereof would have been entitled to such Additional Amounts if it had presented such Note for payment on any date within such 30-day period; or
 - (iii) the failure of the Holder or beneficial owner to comply with a timely request of the Company, a Surviving Person or any Subsidiary Guarantor, addressed to the Holder or beneficial owner, as the case may be, to provide information concerning such Holder's or beneficial owner's nationality, residence, identity or connection with any Relevant Jurisdiction, if and to the extent that due and timely compliance with such request would have reduced or eliminated any withholding or deduction as to which Additional Amounts would have otherwise been payable to such Holder;
- (b) any estate, inheritance, gift, sale, transfer, personal property or similar tax, assessment or other governmental charge;
 - (c) any tax, duty, assessment or other governmental charge to the extent such tax, duty, assessment or other governmental charge results from the presentation of the Note (where presentation is required) for payment and the payment can be made without such withholding or deduction by the presentation of the Note for payment elsewhere;
 - (d) any tax, assessment, withholding or deduction required by sections 1471 through 1474 of the Internal Revenue Code of 1986, as amended ("FATCA"), any current or future Treasury Regulations or rulings promulgated thereunder, any law, regulation or other official guidance enacted in any jurisdiction implementing FATCA, any intergovernmental agreement between the United States and any other jurisdiction to implement FATCA, or any agreement with the U.S. Internal Revenue Service under FATCA; or
 - (f) any combination of taxes, duties, assessments or other governmental charges referred to in the preceding clauses (a), (b), (c) and (d); or
- (2) to a Holder that is a fiduciary, partnership or person other than the sole beneficial owner of any payment to the extent that such payment would be required to be included in the income under the laws of a Relevant Jurisdiction, for tax purposes, of a beneficiary or settlor with respect to the fiduciary, or a member of that partnership or a beneficial owner who would not have been entitled to such Additional Amounts had that beneficiary, settlor, partner or beneficial owner been the Holder thereof.

As a result of these provisions, there are circumstances in which taxes could be withheld or deducted but Additional Amounts would not be payable to some or all beneficial owners of Notes.

At least 30 days prior to each date on which any payment under or with respect to the Notes is due and payable, if the Company or any Subsidiary Guarantor will be obligated to pay Additional Amounts with respect to such payment (unless such obligation to pay Additional Amounts arises after the 30th day prior to the date on which payment under or with respect to the Notes is due and payable, in which case it will be as soon as practicable thereafter), the Company or such Subsidiary Guarantor will deliver to the Trustee an Officers' Certificate stating the fact that such Additional Amounts will be payable and the amounts so payable and will set forth such other information necessary to enable the Paying Agent to pay such Additional Amounts to the Holders on such payment date.

In addition, the Company will pay any stamp, issue, registration, documentary, value added or other similar taxes and other duties (including interest and penalties) payable in any Relevant Jurisdiction in respect of the creation, issue, offering, execution or enforcement of the Notes, or any documentation with respect thereto (other than such taxes imposed on a transfer of Notes other than the initial resale by the Initial Purchasers).

Whenever there is mentioned in any context the payment of principal of, and any premium or interest on, any Note or under any Subsidiary Guarantee, such mention shall be deemed to include payment of Additional Amounts provided for in the Indenture to the extent that, in such context, Additional Amounts are, were or would be payable in respect thereof.

REDEMPTION FOR TAXATION REASONS

The Notes may be redeemed, at the option of the Company or a Surviving Person with respect to the Company, as a whole but not in part, upon giving not less than 30 days' nor more than 60 days' notice to the Holders (which notice shall be irrevocable) and the Trustee, at a redemption price equal to 100% of the principal amount thereof, together with accrued and unpaid interest (including any Additional Amounts), if any, to the date fixed by the Company or the Surviving Person, as the case may be, for redemption (the "Tax Redemption Date") if, as a result of:

- (1) any change in, or amendment to, the laws (or any regulations or rulings promulgated thereunder) of a Relevant Taxing Jurisdiction, excluding any applicable treaty with the Relevant Taxing Jurisdiction, affecting taxation; or
- (2) any change in the existing official position or the stating of an official position regarding the application or interpretation of such laws, regulations or rulings (including a holding, judgment or order by a court of competent jurisdiction), which change or amendment becomes effective or, in the case of an official position, is announced (i) with respect to the Company or any initial Subsidiary Guarantor, on or after the Original Issue Date, or (ii) with respect to any Future Subsidiary Guarantor or Surviving Person, on or after the date such Future Subsidiary Guarantor or Surviving Person becomes a Subsidiary Guarantor or a Surviving Person, with respect to any payment due or to become due under the Notes or the Indenture, the Company, a Surviving Person or a Subsidiary Guarantor, as the case may be, is, or on the next Interest Payment Date would be, required to pay Additional Amounts (but, in the case of a Subsidiary Guarantor, only if such amount cannot be paid by the Company or another Subsidiary Guarantor that can pay such amount without the obligation to pay Additional Amounts), and such requirement cannot be avoided by the taking of reasonable measures by the Company, a Surviving Person or a Subsidiary Guarantor, as the case may be; *provided* that no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which the Company, a Surviving Person or a Subsidiary Guarantor, as the case may be, would be obligated to pay such Additional Amounts if a payment in respect of the Notes were then due.

Prior to the giving of any notice of redemption of the Notes pursuant to the foregoing, the Company, a Surviving Person or a Subsidiary Guarantor, as the case may be, will deliver to the Trustee at least 30 days but not more than 60 days before a redemption date:

- (1) an Officers' Certificate stating that such change or amendment referred to in this section entitled "Redemption for Taxation Reasons" has occurred, describing the facts related thereto and stating that such requirement cannot be avoided by the Company, a Surviving Person or a Subsidiary Guarantor, as the case may be, taking reasonable measures; and
- (2) an Opinion of Counsel or an opinion of a tax consultant, in either case of recognized standing with respect to tax matters of the Relevant Taxing Jurisdiction, stating that the requirement to pay such Additional Amounts results from such change or amendment referred to in this section entitled "Redemption for Taxation Reasons."

The Trustee shall and shall be entitled to accept such certificate and opinion as sufficient evidence of the satisfaction of the conditions precedent described above, in which event it shall be conclusive and binding on the Holders.

Any Notes that are redeemed will be cancelled.

CERTAIN COVENANTS

Set forth below are summaries of certain covenants contained in the Indenture.

Limitation on Indebtedness

- (1) The Company will not, and will not permit any Restricted Subsidiary to, Incur any Indebtedness (including Acquired Indebtedness); *provided* that the Company and any Subsidiary Guarantor may Incur Indebtedness (including Acquired Indebtedness) and any Non-Guarantor Subsidiary may Incur Permitted Subsidiary Indebtedness if, after giving effect to the Incurrence of such Indebtedness or Permitted Subsidiary Indebtedness and the receipt and application of the proceeds therefrom, (x) no Default has occurred and is continuing and (y) the Fixed Charge Coverage Ratio would not be less than 3.0 to 1.0. Notwithstanding the foregoing, the Company will not permit any Restricted Subsidiary to Incur any Disqualified Stock (other than Disqualified Stock held by the Company or a Subsidiary Guarantor, so long as it is so held).
- (2) Notwithstanding the foregoing, the Company and, to the extent provided below, any Restricted Subsidiary may Incur, each and all of the following (“Permitted Indebtedness”):
 - (a) Indebtedness under the Notes (excluding any Additional Notes) and each Subsidiary Guarantee;
 - (b) Indebtedness of the Company or any Restricted Subsidiary outstanding on the Original Issue Date excluding Indebtedness permitted under clause (c) below; *provided* that Indebtedness of Non-Guarantor Subsidiaries under this clause (b) shall be included in the calculation of Permitted Subsidiary Indebtedness;
 - (c) Indebtedness of the Company or any Restricted Subsidiary owed to the Company or any Restricted Subsidiary; *provided* that (i) any event which results in (x) any Restricted Subsidiary to which such Indebtedness is owed ceasing to be a Restricted Subsidiary or (y) any subsequent transfer of such Indebtedness (other than to the Company or any Restricted Subsidiary) shall be deemed, in each case, to constitute an Incurrence of such Indebtedness not permitted by this clause (c) and (ii) if the Company is the obligor on such Indebtedness, such Indebtedness must expressly be subordinated in right of payment to the Notes, and if any Subsidiary Guarantor is the obligor on such Indebtedness (and neither the Company nor any other Subsidiary Guarantor is the obligee), such Indebtedness must be expressly subordinated in right of payment to the Subsidiary Guarantee of such Subsidiary Guarantor;
 - (d) Indebtedness (“Permitted Refinancing Indebtedness”) of the Company or any Restricted Subsidiary issued in exchange for, or the net proceeds of which are used to refinance or refund, replace, exchange, renew, repay, redeem, defease, discharge or extend (collectively, “refinance” and “refinances” and “refinanced” shall have a correlative meaning), then outstanding Indebtedness Incurred under the proviso in paragraph (1) above or clauses (a), (b), (d), (f), (k), (n), (o), (p), (r), (s), (t) or (u) of paragraph (2) and any refinancings thereof in an amount not to exceed the amount so refinanced (plus premiums, accrued interest, fees and expenses); *provided* that (i) Indebtedness the proceeds of which are used to refinance the Notes or Indebtedness that is *pari passu* with, or subordinated in right of payment to, the Notes or any Subsidiary Guarantee shall only be permitted under this clause (d) if (A) in case the Notes are refinanced in part or the Indebtedness to be refinanced is *pari passu* with the Notes or any Subsidiary Guarantee, such new Indebtedness, by its terms or by the terms of any agreement

or instrument pursuant to which such new Indebtedness is issued or remains outstanding, is expressly made *pari passu* with, or subordinate in right of payment to, the remaining Notes or such Subsidiary Guarantee, as the case may be, or (B) in case the Indebtedness to be refinanced is subordinated in right of payment to the Notes or any Subsidiary Guarantee, such new Indebtedness, by its terms or by the terms of any agreement or instrument pursuant to which such new Indebtedness is issued or remains outstanding, is expressly made subordinate in right of payment to the Notes or such Subsidiary Guarantee, as the case may be, at least to the extent that the Indebtedness to be refinanced is subordinated to the Notes or such Subsidiary Guarantee, as the case may be, (ii) such new Indebtedness, determined as of the date of Incurrence of such new Indebtedness, does not mature prior to the Stated Maturity of the Indebtedness to be refinanced, and the Average Life of such new Indebtedness is at least equal to the remaining Average Life of the Indebtedness to be refinanced, and (iii) in no event may Indebtedness of the Company or any Subsidiary Guarantor be refinanced pursuant to this clause by means of any Indebtedness of any Restricted Subsidiary that is not a Subsidiary Guarantor;

- (e) Indebtedness Incurred by the Company or any Restricted Subsidiary pursuant to Hedging Obligations entered into in the ordinary course of business and designed solely to protect the Company or any Restricted Subsidiary from fluctuations in interest rates, currencies or the price of commodities and not for speculation;
- (f) any *Pari Passu* Guarantee;
- (g) Indebtedness arising from the honoring by a bank or other financial institution of a check, draft or similar instrument inadvertently, except in the case of daylight overdrafts, drawn against insufficient funds in the ordinary course of business; *provided*, however, this Indebtedness is extinguished within five Business Days of Incurrence;
- (h) Indebtedness of the Company or any Restricted Subsidiary in respect of workers' compensation claims and claims arising under similar legislation, or in connection with self-insurance or similar requirements, in each case in the ordinary course of business;
- (i) Indebtedness arising from agreements of the Company or any Restricted Subsidiary providing for indemnification, adjustment of purchase price, earn-out or other similar obligations, in each case Incurred or assumed in connection with the disposition of any business or assets of the Company or any Restricted Subsidiary, other than Guarantees of Indebtedness Incurred by any Person acquiring all or any portion of any of the Company's or a Restricted Subsidiary's business or assets for the purpose of financing an acquisition; *provided*, however, the maximum assumable liability in respect of all this Indebtedness shall at no time exceed the gross proceeds actually received by the Company and/or the relevant Restricted Subsidiary in connection with the disposition;
- (j) obligations with respect to trade letters of credit, performance and surety bonds and completion guarantees provided by the Company or any Restricted Subsidiary securing obligations, entered into in the ordinary course of business, to the extent the letters of credit, bonds or guarantees are not drawn upon or, if and to the extent drawn upon is honored in accordance with its terms and, if to be reimbursed, is reimbursed no later than 30 days following receipt of a demand for reimbursement following payment on the letter of credit, bond or guarantee;
- (k) Indebtedness of the Company or any Restricted Subsidiary incurred in the ordinary course of business:
 - (i) representing Capitalized Lease Obligations; or
 - (ii) constituting purchase money Indebtedness incurred to finance all or any part of the purchase price of equipment, property or assets of the Company or any Restricted Subsidiary (including the purchase of Capital Stock of any Person holding such

equipment, property or assets that is, or will upon such purchase become, a Restricted Subsidiary) or the cost of development, construction or improvement of equipment, property or assets to be used in the ordinary course of a Permitted Business by the Company or any Restricted Subsidiary;

provided that (A) the aggregate of such purchase money Indebtedness shall not exceed the purchase price of such equipment, property or assets so acquired or the cost of such development, construction or improvement, (B) such purchase money Indebtedness shall be Incurred no later than 180 days after the acquisition of such equipment, property or assets or completion of such development, construction or improvement and (C) on the date of the Incurrence of any Indebtedness pursuant to this clause (k), and after giving effect thereto, the sum of (1) the aggregate principal amount outstanding of all such Indebtedness Incurred pursuant to this clause (k) (together with any refinancings thereof) plus (2) the aggregate principal amount outstanding of all Indebtedness Incurred under clauses (n), (p), (r), (s), (t) and (u) below (together, in each case, with any refinancings thereof) does not exceed an amount equal to 25.0% of Total Assets;

- (l) Guarantees by any Non-Guarantor Subsidiary of any Indebtedness of any other Non-Guarantor Subsidiary; *provided* that the Indebtedness guaranteed is permitted to be Incurred under the Indenture;
- (m) Guarantees by the Company and any Subsidiary Guarantor of any Indebtedness of the Company or any Restricted Subsidiary; *provided* that the Indebtedness guaranteed is permitted to be Incurred under the Indenture;
- (n) Indebtedness of the Company or any Restricted Subsidiary used by the Company or any Restricted Subsidiary for working capital; *provided* that, on the date of the Incurrence of any Indebtedness pursuant to this clause (n) and after giving effect thereto, the sum of (1) the aggregate principal amount outstanding of all such Indebtedness Incurred pursuant to this clause (n) (together with refinancings thereof) plus (2) the aggregate principal amount outstanding of all Indebtedness Incurred under clause (k) above and clauses (p), (r), (s), (t) and (u) below (together, in each case, with any refinancings thereof) does not exceed an amount equal to 25.0% of Total Assets;
- (o) Indebtedness of the Company or any Restricted Subsidiary in an aggregate principal amount outstanding at any time (together with any refinancings thereof) not to exceed US\$30.0 million (or the Dollar Equivalent thereof);
- (p) Bank Deposit Secured Indebtedness Incurred by the Company or any Restricted Subsidiary; *provided* that, on the date of the Incurrence of any Indebtedness pursuant to this clause (p) and after giving effect thereto, the sum of (1) the aggregate principal amount outstanding of all such Indebtedness Incurred pursuant to this clause (p) (together with any refinancings thereof) plus (2) the aggregate principal amount outstanding of all Indebtedness Incurred under clauses (k) and (n) above and clauses (r), (s), (t) and (u) below (together, in each case, with any refinancings thereof) does not exceed an amount equal to 25.0% of Total Assets;
- (q) Indebtedness of the Company or any Restricted Subsidiary constituting an obligation to pay the deferred purchase price pursuant to a Staged Acquisition Agreement, to the extent that such deferred purchase price is paid within 12 months after the date on which the obligation to pay such deferred purchase price by the Company or such Restricted Subsidiary arises pursuant to such Staged Acquisition Agreement;

- (r) Indebtedness Incurred by the Company or any Restricted Subsidiary constituting a Guarantee of Indebtedness of any Person (other than the Company or a Restricted Subsidiary) by the Company or such Restricted Subsidiary; *provided* that, on the date of the Incurrence of all such Indebtedness and after giving effect thereto, the sum of (1) the aggregate principal amount outstanding of all such Indebtedness Incurred pursuant to this clause (r) (together with any refinancings thereof), plus (2) the aggregate principal amount outstanding of all Indebtedness Incurred under clauses (k), (n) (p) and (q) above and clauses (s), (t) and (u) below (together, in each case, with any refinancings thereof), does not exceed an amount equal to 25.0% of Total Assets;
 - (s) Acquired Indebtedness of any Restricted Subsidiary Incurred and outstanding on the date on which such Person becomes a Restricted Subsidiary (other than Indebtedness Incurred (A) to provide all or any portion of the funds utilized to consummate the transaction or series of transactions pursuant to which a Person becomes a Restricted Subsidiary or (B) otherwise in contemplation of a Person becoming a Restricted Subsidiary or any such acquisition); *provided* that, on the date of the Incurrence of all such Indebtedness and after giving effect thereto, the sum of (1) the aggregate principal amount outstanding of all such Indebtedness Incurred pursuant to this clause (s) (together with any refinancings thereof), plus (2) the aggregate principal amount outstanding of all Indebtedness Incurred under clauses (k), (n), (p), (q) and (r) above and clauses (t) and (u) below (together with any refinancings thereof), does not exceed an amount equal to 25.0% of Total Assets;
 - (t) Indebtedness Incurred by the Company or any Restricted Subsidiary under Credit Facilities; *provided* that, on the date of the Incurrence of all such Indebtedness and after giving effect thereto, the sum of (1) the aggregate principal amount outstanding of all such Indebtedness Incurred pursuant to this clause (t) (together with any refinancings thereof), plus (2) the aggregate principal amount outstanding of all Indebtedness Incurred pursuant to clauses (k), (n), (p), (q), (r) and (s) above and clause (u) below (together with any refinancings thereof), does not exceed an amount equal to 25.0% of Total Asset; and
 - (u) Indebtedness of the Company or any Restricted Subsidiary constituting an obligation to pay the deferred purchase price of Capital Stock of a Person pursuant to a Minority Interest Staged Acquisition Agreement, to the extent that such deferred purchase price is paid within 12 months after the date the Company or such Restricted Subsidiary enters into such Minority Interest Staged Acquisition Agreement and becomes obligated to pay such deferred purchase price pursuant to such Minority Interest Staged Acquisition Agreement; *provided* that, on the date of the Incurrence of all such Indebtedness and after giving effect thereto, the sum of (1) the aggregate principal amount outstanding of all such Indebtedness Incurred pursuant to this clause (u) (together with refinancings thereof), plus (2) the aggregate principal amount outstanding of all Indebtedness Incurred pursuant to clauses (k), (n), (p), (q), (r), (s) and (t) above (together with refinancings thereof) does not exceed an amount equal to 25.0% of Total Assets.
- (3) For purposes of determining compliance with this “Limitation on Indebtedness” covenant, in the event that an item of Indebtedness meets the criteria of more than one of the types of Permitted Indebtedness, or of Indebtedness described in the proviso in paragraph (1) of this covenant and one or more types of Permitted Indebtedness, the Company, in its sole discretion, shall classify, and from time to time may reclassify, such item of Indebtedness in one or more types of Indebtedness described above. Indebtedness permitted by the “Limitation on Indebtedness” covenant need not be permitted solely by reference to one provision permitting such Indebtedness but may be permitted in part by one such provision and in part by one or more other provisions of the covenant permitting such Indebtedness.

- (4) Notwithstanding any other provision of this covenant, the maximum amount of Indebtedness that may be Incurred pursuant to this covenant will not be deemed to be exceeded with respect to any outstanding Indebtedness due solely to the result of fluctuations in the exchange rates of currencies. For purposes of determining compliance with any U.S. dollar denominated restriction on the Incurrence of Indebtedness, the U.S. dollar-equivalent principal amount of Indebtedness denominated in a foreign currency shall be calculated based on the relevant currency exchange rate in effect on the date such Indebtedness was Incurred, in the case of term Indebtedness, or first committed, in the case of revolving credit Indebtedness; *provided* that if such Indebtedness is Incurred to refinance other Indebtedness denominated in a foreign currency, and such refinancing would cause the applicable U.S. dollar-dominated restriction to be exceeded if calculated at the relevant currency exchange rate in effect on the date of such refinancing, such U.S. dollar-dominated restriction shall be deemed not to have been exceeded so long as the principal amount of such refinancing Indebtedness does not exceed the principal amount of such Indebtedness being refinanced. The principal amount of any Indebtedness Incurred to refinance other Indebtedness, if Incurred in a different currency from the Indebtedness being refinanced, shall be calculated based on the currency exchange rate applicable to the currency in which such refinancing Indebtedness is denominated that is in effect on the date of such refinancing.

Limitation on Restricted Payments

The Company will not, and will not permit any Restricted Subsidiary to, directly or indirectly (the payments or any other actions described in clauses (1) through (4) below being collectively referred to as “Restricted Payments”):

- (1) declare or pay any dividend or make any distribution on or with respect to the Company’s or any Restricted Subsidiary’s Capital Stock (other than dividends or distributions payable or paid solely in shares of the Company’s or any Restricted Subsidiary’s Capital Stock (other than Disqualified Stock or Preferred Stock) or in options, warrants or other rights to acquire shares of such Capital Stock) held by Persons other than the Company or any Restricted Subsidiary;
- (2) purchase, call for redemption or redeem, retire or otherwise acquire for value any shares of Capital Stock of the Company or any Restricted Subsidiary or any direct or indirect parent of the Company (including options, warrants or other rights to acquire such shares of Capital Stock) held by any Persons other than the Company or any Restricted Subsidiary (other than the purchase of Capital Stock of a Person pursuant to a Staged Acquisition Agreement;
- (3) make any voluntary or optional principal payment, or voluntary or optional redemption, repurchase, defeasance, or other acquisition or retirement for value, of Subordinated Indebtedness (excluding any intercompany Indebtedness between or among the Company and any Restricted Subsidiary); or
- (4) make any Investment, other than a Permitted Investment;

if, at the time of, and after giving effect to, the proposed Restricted Payment:

- (a) a Default has occurred and is continuing or would occur as a result of such Restricted Payment;
- (b) the Company could not Incur at least US\$1.00 of Indebtedness under the proviso in paragraph (1) of the covenant described under “— Limitation on Indebtedness”; or

- (c) such Restricted Payment, together with the aggregate amount of all (1) Restricted Payments made by the Company and the Restricted Subsidiaries after the Original Issue Date and (2) payments made by the Company and its Restricted Subsidiaries after the Measurement Date but on or before the Original Issue Date that would have been Restricted Payments had they been made after the Original Issue Date (in each case excluding those payments permitted by clauses (2) through (9) of the immediately following paragraph), shall exceed the sum (without duplication) of:
- (i) 50% of the aggregate amount of the Consolidated Net Income of the Company (or, if the Consolidated Net Income is a loss, minus 100% of the amount of such loss) accrued on a cumulative basis during the period (taken as one accounting period) beginning on July 1, 2013 and ending on the last day of the Company's most recently ended fiscal quarter for which consolidated financial statements of the Company (which the Company shall use its reasonable best efforts to compile in a timely manner and which may be internal consolidated financial statements) are available; plus
 - (ii) 100% of the aggregate Net Cash Proceeds received by the Company after the Measurement Date as a capital contribution to its common equity by, or from the issuance and sale of its Capital Stock (other than Disqualified Stock) to, a Person who is not a Restricted Subsidiary of the Company, including any such Net Cash Proceeds received upon (A) the conversion by a Person who is not a Restricted Subsidiary of the Company of any Indebtedness (other than Subordinated Indebtedness) of the Company into Capital Stock (other than Disqualified Stock) of the Company, or (B) the exercise by a Person who is not a Restricted Subsidiary of the Company of any options, warrants or other rights to acquire Capital Stock of the Company (other than Disqualified Stock), in each case after deducting the amount of any such Net Cash Proceeds used to redeem, repurchase, defease or otherwise acquire or retire for value any Subordinated Indebtedness or Capital Stock of the Company; plus
 - (iii) the amount by which Indebtedness of the Company or any Restricted Subsidiary is reduced on the Company's consolidated balance sheet upon the conversion or exchange (other than by a Restricted Subsidiary of the Company) subsequent to the Measurement Date of any Indebtedness of the Company or any Restricted Subsidiary convertible or exchangeable into Capital Stock (other than Disqualified Stock) of the Company (less the amount of any cash, or the Fair Market Value of any other property, distributed by the Company upon such conversion or exchange); *provided, however*, that the foregoing amount shall not exceed the Net Cash Proceeds received by the Company or any Restricted Subsidiary from the Incurrence of such Indebtedness; plus
 - (iv) an amount equal to the net reduction in Investments (other than reductions in Permitted Investments) that were made after the Measurement Date in any Person resulting from (A) payments of interest on Indebtedness, dividends or repayments of loans or advances by such Person, in each case to the Company or any Restricted Subsidiary (except, in each case, to the extent any such payment or proceeds are included in the calculation of Consolidated Net Income) after the Measurement Date, (B) the unconditional release of a Guarantee provided by the Company or any Restricted Subsidiary after the Measurement Date of an obligation of another Person, (C) to the extent that an Investment made after the Measurement Date is sold or otherwise liquidated or repaid for cash, the lesser of (x) cash return of capital with respect to such Investment (less the cost of disposition, if any) and (y) the initial amount of such Investment, or (D) from redesignations of Unrestricted Subsidiaries as Restricted Subsidiaries, not to exceed, in each case, the amount of Investments (other than Permitted Investments) made by the Company or any Restricted Subsidiary after the Measurement Date in any such Person; plus
 - (v) US\$25.0 million (or the Dollar Equivalent thereof).

The foregoing provision shall not be violated by reason of:

- (1) the payment of any dividend or redemption of any Capital Stock within 60 days after the related date of declaration or call for redemption if, at said date of declaration or call for redemption, such payment or redemption would comply with the preceding paragraph;
- (2) the redemption, repurchase, defeasance or other acquisition or retirement for value of Subordinated Indebtedness of the Company or any Subsidiary Guarantor with the Net Cash Proceeds of, or in exchange for, a substantially concurrent Incurrence of Permitted Refinancing Indebtedness;
- (3) the redemption, repurchase or other acquisition of Capital Stock of the Company or any Subsidiary Guarantor (or options, warrants or other rights to acquire such Capital Stock) in exchange for, or out of the Net Cash Proceeds of, a substantially concurrent capital contribution or sale (other than to a Subsidiary of the Company) of, shares of Capital Stock (other than Disqualified Stock) of the Company (or options, warrants or other rights to acquire such Capital Stock); *provided* that the amount of any such Net Cash Proceeds that are utilized for any such Restricted Payment will be excluded from clause (c)(ii) of the preceding paragraph;
- (4) the redemption, repurchase, defeasance or other acquisition or retirement for value of Subordinated Indebtedness of the Company or any Subsidiary Guarantor in exchange for, or out of the Net Cash Proceeds of, a substantially concurrent capital contribution or sale (other than to a Subsidiary of the Company) of, shares of the Capital Stock (other than Disqualified Stock) of the Company (or options, warrants or other rights to acquire such Capital Stock); *provided* that the amount of any such Net Cash Proceeds that are utilized for any such Restricted Payment will be excluded from clause (c)(ii) of the preceding paragraph;
- (5) the payment of any dividends or distributions declared, paid or made by a Restricted Subsidiary payable, on a pro rata basis or on a basis more favorable to the Company, to all holders of any class of Capital Stock of such Restricted Subsidiary;
- (6) cash payments in lieu of the issuance of fractional shares in connection with the exercise of warrants, options or other securities convertible into or exchangeable for Capital Stock of the Company; *provided* that any such cash payment shall not be for the purpose of evading the limitation of this “Limitation on Restricted Payments” covenant (as determined in good faith by the Board of Directors of the Company);
- (7) (A) the repurchase, redemption or other acquisition or retirement for value of any Capital Stock of the Company or any Restricted Subsidiary held by an employee benefit plan of the Company or any Restricted Subsidiary, any current or former officer, director, consultant, or employee of the Company or any Restricted Subsidiary (or permitted transferees, estates or heirs of any of the foregoing), or (B) the repurchase, redemption or other acquisition or retirement for value of the Capital Stock of the Company or any Restricted Subsidiary (directly or indirectly, including through any trustee, agent or nominee) in connection with an employee benefit plan or share award scheme, and any corresponding Investment by the Company or any Restricted Subsidiary in any trust or similar arrangements to the extent of such repurchased, redeemed, acquired or retired Capital Stock, *provided* that the aggregate price paid for all such repurchased, redeemed, acquired or retired Capital Stock may not exceed US\$8.0 million (or the Dollar Equivalent thereof using the Original Issue Date as the date of determination) in any fiscal year, with any unused amount (representing the difference between such US\$8.0 million and the actual amount of the aggregate price paid for such repurchased, redeemed, acquired or retired Capital Stock) with respect to or during any such fiscal year being carried over to the subsequent fiscal year;

- (8) the payment of any dividend or distribution payable or paid in Capital Stock (other than Disqualified Stock or Preferred Stock) of any Unrestricted Subsidiary or in options, warrants or other rights to acquire shares of such Capital Stock;
- (9) the distribution or payments of Securitization Fees in connection with Receivables Financing;
- (10) the repurchase of, or the declaration and payment of dividends on, the Common Stock of the Company by the Company in an aggregate amount in any fiscal year not to exceed 20.0% of profit for the immediately prior fiscal year based on the consolidated financial statements of the Company for such fiscal year; or
- (11) payments, including distributions, made under or in connection with any Perpetual Security Obligation pursuant to the terms thereof or in connection with a repurchase or redemption thereof;

provided that, in the case of clauses (2), (3) and (4) of this paragraph, no Default shall have occurred and be continuing or would occur as a consequence of the actions or payments set forth therein.

The amount of any Restricted Payments (other than cash) will be the Fair Market Value on the date of the Restricted Payment of the asset(s) or securities proposed to be transferred or issued by the Company or the Restricted Subsidiary, as the case may be, pursuant to the Restricted Payment. The value of any assets or securities that are required to be valued by this covenant will be the Fair Market Value. The Board of Directors' determination of the Fair Market Value of a Restricted Payment or any such assets or securities (other than those made pursuant to clauses (5) through (11) of the second paragraph of this "— Limitation on Restricted Payments" covenant) must be based upon an opinion or an appraisal issued by an appraisal or investment banking firm of recognized international standing if the Fair Market Value exceeds US\$10.0 million (or the Dollar Equivalent thereof).

Not later than the date of making any Restricted Payment (other than those made pursuant to clauses (5) through (11) of the second paragraph of this "— Limitation on Restricted Payments" covenant) in excess of US\$10.0 million (or the Dollar Equivalent thereof), the Company will deliver to the Trustee an Officers' Certificate stating that such Restricted Payment is permitted and setting forth the basis upon which the calculations required by this "— Limitation on Restricted Payments" covenant were computed, together with a copy of any fairness opinion or appraisal required by the Indenture (and the Trustee shall have no obligation to review or distribute such computation, opinion or approval to Holders).

Limitation on dividend and other payment restrictions affecting Restricted Subsidiaries

- (1) Except as provided below, the Company will not, and will not permit any Restricted Subsidiary to, create or otherwise cause or permit to exist or become effective any encumbrance or restriction on the ability of any Restricted Subsidiary to:
 - (a) pay dividends or make any other distribution on any Capital Stock of such Restricted Subsidiary owned by the Company or any other Restricted Subsidiary;
 - (b) pay any Indebtedness or other obligation owed to the Company or any other Restricted Subsidiary;
 - (c) make loans or advances to the Company or any other Restricted Subsidiary; or
 - (d) sell, lease or transfer any of its property or assets to the Company or any other Restricted Subsidiary.

provided that it being understood that (i) the priority of any Preferred Stock in receiving dividends or liquidating distributions prior to dividends or liquidating distributions being paid on Common Stock; (ii) the subordination of loans or advances made to the Company or any Restricted Subsidiary to other Indebtedness Incurred by the Company or any Restricted Subsidiary; and (iii) the provisions contained in documentation governing Indebtedness requiring transactions between or among the Company and any Restricted Subsidiary or between or among any Restricted Subsidiary to be on fair and reasonable terms or on an arm's length basis, in each case, shall not be deemed to constitute such an encumbrance or restriction.

- (2) The provisions of paragraph (1) do not apply to any encumbrances or restrictions:
- (a) existing in agreements as in effect on the Original Issue Date, or in the Notes, the Subsidiary Guarantees, the Indenture, any Pari Passu Guarantee or any Indebtedness of the Company or any Subsidiary Guarantor guaranteed by any Pari Passu Guarantee, or any extensions, refinancings, renewals or replacements of any of the foregoing agreements; *provided* that the encumbrances and restrictions in any such extension, refinancing, renewal or replacement, taken as a whole, are no more restrictive in any material respect to the Holders than those encumbrances or restrictions that are then in effect and that are being extended, refinanced, renewed or replaced;
 - (b) existing under or by reason of applicable law, rule, regulation or order;
 - (c) with respect to any Person or the property or assets of such Person acquired by the Company or any Restricted Subsidiary, existing at the time of such acquisition and not incurred in contemplation thereof, which encumbrances or restrictions are not applicable to any Person or the property or assets of any Person other than such Person or the property or assets of such Person so acquired, and any extensions, refinancings, renewals or replacements thereof; *provided* that the encumbrances and restrictions in any such extension, refinancing, renewal or replacement, taken as a whole, are no more restrictive in any material respect to the Holders than those encumbrances or restrictions that are then in effect and that are being extended, refinanced, renewed or replaced;
 - (d) that otherwise would be prohibited by the provision described in clause (1)(d) of this covenant if they arise, or are agreed to, in the ordinary course of business and that (i) restrict in a customary manner the subletting, assignment or transfer of any property or asset that is subject to a lease or license, (ii) exist by virtue of any Lien on, or agreement to transfer, option or similar right with respect to any property or assets of the Company or any Restricted Subsidiary not otherwise prohibited by the Indenture or (iii) do not relate to any Indebtedness, and that do not, individually or in the aggregate, detract from the value of property or assets of the Company or any Restricted Subsidiary in any manner material to the Company or any Restricted Subsidiary;
 - (e) with respect to a Restricted Subsidiary and imposed pursuant to an agreement that has been entered into for the sale or disposition of all or substantially all of the Capital Stock of, or property and assets of, such Restricted Subsidiary that is permitted by the “— Limitation on Sales and Issuances of Capital Stock in Restricted Subsidiaries,” “— Limitation on Indebtedness” and “— Limitation on Asset Sales” covenants;
 - (f) with respect to any Restricted Subsidiary and imposed pursuant to an agreement that has been entered into for the Incurrence of Indebtedness permitted under clause (2)(o) of the “— Limitation on Indebtedness” covenant if, as determined by the Board of Directors, the encumbrances or restrictions are (i) customary for such type of agreement and (ii) would not, at the time agreed to, be expected to materially and adversely affect the ability of the Company to make required payment on the Notes and any extensions, refinancings, renewals or replacements of any of the foregoing agreements; *provided* that the encumbrances and restrictions in any such extension, refinancing, renewal or replacement, taken as a whole, are no more restrictive than those encumbrances or restrictions that are then in effect and that are being extended, refinanced, renewed or replaced;

- (g) existing in customary provisions in joint venture agreements and other similar agreements permitted under the Indenture, to the extent such encumbrance or restriction relates to the activities or assets of a Restricted Subsidiary that is a party to such joint venture and if (as determined in good faith by the Board of Directors) (i) the encumbrances or restrictions are customary for a joint venture or similar agreement of that type and (ii) the encumbrances or restrictions would not, at the time agreed to, be expected to materially and adversely affect (x) the ability of the Company to make the required payments on the Notes or (y) any Subsidiary Guarantor to make required payments under its Subsidiary Guarantee; or
- (h) existing with respect to any Unrestricted Subsidiary or the property or assets of such Unrestricted Subsidiary that is designated as a Restricted Subsidiary in accordance with the terms of the Indenture at the time of such designation and not incurred in contemplation of such designation, which encumbrances or restrictions are not applicable to any Person or the property or assets of any Person other than such Unrestricted Subsidiary or its subsidiaries or the property or assets of such Unrestricted Subsidiary or its subsidiaries, and any extensions, refinancing, renewals or replacements thereof; *provided* that the encumbrances and restrictions in any such extension, refinancing, renewal or replacement, taken as a whole, are no more restrictive in any material respect to the Holders than those encumbrances or restrictions that are then in effect and that are being extended, refinanced, renewed or replaced.

Limitation on sales and issuances of Capital Stock in Restricted Subsidiaries

The Company will not sell, and will not permit any Restricted Subsidiary, directly or indirectly, to issue or sell, any shares of Capital Stock of a Restricted Subsidiary (including in each case options, warrants or other rights to purchase shares of such Capital Stock) except:

- (1) to the Company or a Wholly Owned Restricted Subsidiary, or in the case of a Restricted Subsidiary that is not a Wholly Owned Restricted Subsidiary, pro rata to its shareholders or incorporators or on a basis more favorable to the Company or its Restricted Subsidiaries;
- (2) to the extent such Capital Stock represents director's qualifying shares or is required by applicable law to be held by a Person other than the Company or a Wholly Owned Restricted Subsidiary;
- (3) for the sale of all the shares of the Capital Stock of a Restricted Subsidiary if permitted under and made in accordance with, the "— Limitation on Asset Sales" covenant;
- (4) the issuance or sale of Capital Stock of a Restricted Subsidiary if, immediately after giving effect to such issuance or sale, such Restricted Subsidiary would no longer constitute a Restricted Subsidiary; *provided* that any remaining Investment in such Person would have been permitted to be made under the "Limitation on Restricted Payments" covenant if made on the date of such issuance or sale and that the Company applies the Net Cash Proceeds of such issuance or sale in accordance with the "— Limitation on Asset Sales" covenant; or
- (5) the issuance or sale of Capital Stock of a Restricted Subsidiary (which remains a Restricted Subsidiary after any such issuance or sale); *provided* that the Company or such Restricted Subsidiary applies the Net Cash Proceeds of such issuance or sale in accordance with the "— Limitation on Asset Sales" covenant.

Limitation on issuances of Guarantees by Restricted Subsidiaries

The Company will not permit any Restricted Subsidiary that is not a Subsidiary Guarantor, directly or indirectly, to Guarantee any Indebtedness (“Guaranteed Indebtedness”) of the Company or any Subsidiary Guarantor, unless (1) (a) such Restricted Subsidiary simultaneously executes and delivers a supplemental indenture to the Indenture providing for an unsubordinated Subsidiary Guarantee of payment of the Notes by such Restricted Subsidiary and (b) such Restricted Subsidiary waives and will not in any manner whatsoever claim or take the benefit or advantage of, any rights of reimbursement, indemnity or subrogation or any other rights against the Company or any other Restricted Subsidiary as a result of any payment by such Restricted Subsidiary under its Subsidiary Guarantee until the Notes have been paid in full or (2) such Guarantee is permitted by clause 2(b), (c) or (p) (in the case of clause (2)(p), with respect to the Guarantee provided by any Restricted Subsidiary that is not a Subsidiary Guarantor through the pledge of cash deposits, bank accounts or other assets to secure (or the use of any Guarantee, letter of credit or similar instrument to Guarantee), directly or indirectly, any Bank Deposit Secured Indebtedness of the Company or any Subsidiary Guarantor) under the “Limitation on Indebtedness” covenant.

If the Guaranteed Indebtedness (1) ranks *pari passu* in right of payment with the Notes or any Subsidiary Guarantee, then the Guarantee of such Guaranteed Indebtedness will rank *pari passu* in right of payment with, or subordinated to, the Subsidiary Guarantee or (2) is subordinated in right of payment to the Notes or any Subsidiary Guarantee, then the Guarantee of such Guaranteed Indebtedness will be subordinated in right of payment to the Subsidiary Guarantee at least to the extent that the Guaranteed Indebtedness is subordinated to the Notes or the Subsidiary Guarantee.

Limitation on transactions with shareholders and Affiliates

The Company will not, and will not permit any Restricted Subsidiary to, directly or indirectly, enter into, renew or extend any transaction or arrangement (including, without limitation, the purchase, sale, lease or exchange of property or assets, or the rendering of any service) with (x) any holder (or any Affiliate of such holder) of 10.0% or more of any class of Capital Stock of the Company or (y) any Affiliate of the Company (each an “Affiliate Transaction”), unless:

- (1) the Affiliate Transaction is on fair and reasonable terms that are no less favorable to the Company or the relevant Restricted Subsidiary, as the case may be, than those that would have been obtained in a comparable transaction by the Company or the relevant Restricted Subsidiary with a Person that is not such a holder or an Affiliate of the Company; and
- (2) the Company delivers to the Trustee:
 - (a) with respect to any Affiliate Transaction or series of related Affiliate Transactions involving aggregate consideration in excess of US\$5.0 million (or the Dollar Equivalent thereof), a Board Resolution set forth in an Officers’ Certificate certifying that such Affiliate Transaction complies with this covenant and such Affiliate Transaction has been approved by a majority of the disinterested members of the Board of Directors; and
 - (b) with respect to any Affiliate Transaction or series of related Affiliate Transactions involving aggregate consideration in excess of US\$10.0 million (or the Dollar Equivalent thereof), in addition to the Board Resolution required in clause 2(a) above, an opinion issued by an accounting, appraisal or investment banking firm of recognized international standing as to the fairness to the Company or such Restricted Subsidiary, as the case may be, of such Affiliate Transaction from a financial point of view issued by an accounting, appraisal or investment banking firm of recognized international standing.

The foregoing limitation does not limit, and shall not apply to:

- (1) the payment of reasonable and customary regular fees to directors of the Company who are not employees of the Company;
- (2) transactions between or among the Company and any Wholly Owned Restricted Subsidiary or between or among Wholly Owned Restricted Subsidiaries;
- (3) any Restricted Payment of the type described in clause (1), (2) or (3) of the first paragraph of the covenant described above under “— Limitation on Restricted Payments” if permitted by that covenant;
- (4) transactions with a Person (other than an Unrestricted Subsidiary) that is an Affiliate of the Company solely because the Company owns, directly or through a Restricted Subsidiary, Capital Stock in, or controls, such Person;
- (5) any sale of Capital Stock (other than Disqualified Stock) of the Company; and
- (6) the payment of compensation to officers and directors of the Company or any Restricted Subsidiary pursuant to an employee stock or share option scheme, so long as such scheme is in compliance with the listing rules of The Stock Exchange of Hong Kong Limited (the “SEHK”), which as of the Original Issue Date require a majority shareholder approval of any such scheme.

In addition, the requirements of clause (2) of the first paragraph of this covenant shall not apply to (i) Investments (other than Permitted Investments) not prohibited by the “Limitation on Restricted Payments” covenant, (ii) transactions pursuant to agreements in effect on the Original Issue Date and described in this Offering Memorandum, or any amendment or modification or replacement thereof, so long as such amendment, modification or replacement is not more disadvantageous to the Company and its Restricted Subsidiaries than the original agreement in effect on the Original Issue Date and (iii) any transaction between or among (A) the Company (or any Wholly Owned Restricted Subsidiary) and any Restricted Subsidiary that is not a Wholly Owned Restricted Subsidiary or between or among Restricted Subsidiaries that are not Wholly Owned Restricted Subsidiaries or (B) the Company and/or a Restricted Subsidiary on the one hand and any Minority Joint Venture or Unrestricted Subsidiary on the other hand; and (iv) any Affiliate Transaction that is conducted in accordance with the relevant rules and regulations of the SEHK, for so long as the Capital Stock of the Company remains listed on the SEHK; *provided* that (a) in the case of clauses (iii) and (iv), such transaction is entered into in the ordinary course of business and (b) in the case of clause (iii), none of the other shareholders or other partners of or in such Restricted Subsidiary that is not a Wholly Owned Restricted Subsidiary, Minority Joint Venture or Unrestricted Subsidiary, as the case may be, is a Person described in clauses (x) or (y) of the first paragraph of this covenant (other than by reason of such other shareholder or other partner being an officer or director of such Restricted Subsidiary, Minority Joint Venture or Unrestricted Subsidiary, as the case may be).

Limitation on Liens

The Company will not, and will not permit any Restricted Subsidiary to, directly or indirectly, incur, assume or permit to exist any Lien of any nature whatsoever on any of its assets or properties of any kind, whether owned at the Original Issue Date or thereafter acquired, except Permitted Liens, unless the Notes are (or, in respect of any Lien on any Subsidiary Guarantor’s property or assets, any Subsidiary Guarantee of such Restricted Subsidiary is) secured equally and ratably with (or, if the obligation or liability to be secured by such Lien is subordinated in right of payment to the Notes, prior to) the obligation or liability secured by such Lien, for so long as such obligation or liability is secured by such Lien.

In the event that one or more Liens (and documents relating thereto) are to be established or maintained to effect equal and ratable security arrangements in respect of the Notes (as contemplated under the preceding paragraph) with regards to Indebtedness proposed to be or previously Incurred by the Company or any Subsidiary Guarantor in compliance with the terms of the Indenture, the Company or such Subsidiary Guarantor may instruct the Trustee to directly, or through its Affiliates (in its capacity as Trustee or that of a collateral agent on such terms as it shall require) and without the consent of any Holders, (a) enter into one or more intercreditor agreements, pledge agreements, collateral and security agreements or other arrangements intended to effect the shared security arrangements contemplated by this paragraph among holders of such Indebtedness and (b) complete or facilitate the completion by itself or other parties of filings, registrations or other actions necessary to effect or perfect the relevant Liens or related arrangements.

Limitation on Sale and Leaseback Transactions

The Company will not, and will not permit any Restricted Subsidiary to, enter into any Sale and Leaseback Transaction; *provided* that the Company or any Restricted Subsidiary may enter into a Sale and Leaseback Transaction if:

- (1) the Company or such Restricted Subsidiary, as the case may be, could have (a) Incurred Indebtedness in an amount equal to the Attributable Indebtedness relating to such Sale and Leaseback Transaction under the covenant described under “— Limitation on Indebtedness” and (b) incurred a Lien to secure such Indebtedness pursuant to the covenant described above under “— Limitation on Liens,” in which case, the corresponding Indebtedness will be deemed Incurred and the corresponding Lien will be deemed incurred pursuant to those provisions;
- (2) the gross cash proceeds of that Sale and Leaseback Transaction are at least equal to the Fair Market Value of the property that is the subject of such Sale and Leaseback Transaction; and
- (3) the transfer of assets in that Sale and Leaseback Transaction is permitted by, and the Company or such Restricted Subsidiary, as the case may be, applies the proceeds of such transaction in compliance with, the covenant described below under “— Limitation on Asset Sales.”

Limitation on Asset Sales

The Company will not, and will not permit any Restricted Subsidiary to, consummate any Asset Sale, unless:

- (1) no Default shall have occurred and be continuing or would occur as a result of such Asset Sale;
- (2) the consideration received by the Company or such Restricted Subsidiary, as the case may be, is at least equal to the Fair Market Value of the assets sold or disposed of; and
- (3) at least 75% of the consideration received consists of cash, Temporary Cash Investments or Replacement Assets (as defined below); *provided* that in the case of an Asset Sale in which the Company or such Restricted Subsidiary receives Replacement Assets involving aggregate consideration in excess of US\$10.0 million (or the Dollar Equivalent thereof), the Company shall deliver to the Trustee an opinion as to the fairness to the Company or such Restricted Subsidiary of such Asset Sale from a financial point of view issued by an accounting, appraisal or investment banking firm of recognized international standing. For purposes of this provision, each of the following will be deemed to be cash:
 - (a) any liabilities, as shown on the Company’s most recent consolidated balance sheet, of the Company or any Restricted Subsidiary (other than contingent liabilities and liabilities that are by their terms subordinated to the Notes or any Subsidiary

Guarantee) that are assumed by the transferee of any such assets pursuant to a customary assumption, assignment, novation or similar agreement that releases the Company or such Restricted Subsidiary, as the case may be, from further liability; and

- (b) any securities, notes or other obligations received by the Company or any Restricted Subsidiary from such transferee that are promptly, but in any event within 30 days of closing, converted by the Company or such Restricted Subsidiary, as the case may be, into cash, to the extent of the cash received in that conversion.
- (4) Within 360 days after the receipt of any Net Cash Proceeds from an Asset Sale, the Company or any Restricted Subsidiary may apply such Net Cash Proceeds to:
- (a) permanently repay unsubordinated Indebtedness of the Company or any Restricted Subsidiary (and, if such unsubordinated Indebtedness repaid is revolving credit Indebtedness, to correspondingly reduce commitments with respect thereto) in each case owing to a Person other than the Company or a Restricted Subsidiary; or
 - (b) acquire properties and assets that replace the properties and assets that were the subject of such Asset Sale or that will be used in the Permitted Businesses (including any shares of Capital Stock in a Person holding such properties or assets that is primarily engaged in a Permitted Business) (“Replacement Assets”); or
 - (c) make an Investment in cash or Temporary Cash Investments pending application of such Net Cash Proceeds as set forth in clause (a) or (b) above.
- (5) Any Net Cash Proceeds from Asset Sales that are not applied or invested as provided in clause (4) will constitute “Excess Proceeds.” Excess Proceeds of less than US\$10 million (or the Dollar Equivalent thereof) will be carried forward and accumulated. When accumulated Excess Proceeds exceed US\$10 million (or the Dollar Equivalent thereof), within ten days thereof, the Company must make an Offer to Purchase Notes having a principal amount equal to:
- (a) accumulated Excess Proceeds, multiplied by
 - (b) a fraction (x) the numerator of which is equal to the outstanding principal amount of the Notes and (y) the denominator of which is equal to the outstanding principal amount of the Notes and all *pari passu* Indebtedness similarly required to be repaid, redeemed or tendered for in connection with the Asset Sale,

rounded down to the nearest US\$1,000.

The offer price in any Offer to Purchase will be equal to 100% of the principal amount plus accrued and unpaid interest to the date of purchase, and will be payable in cash.

If any Excess Proceeds remain after consummation of an Offer to Purchase, the Company or any Restricted Subsidiary may use those Excess Proceeds for any purpose not otherwise prohibited by the Indenture. If the aggregate principal amount of Notes (and any other *pari passu* Indebtedness) tendered into (or required to be prepaid or redeemed in connection with) such Offer to Purchase exceeds the amount of Excess Proceeds, the Notes to be purchased on a pro rata basis will be selected in the manner set out under “— Optional Redemption”. Upon completion of each Offer to Purchase, the amount of Excess Proceeds will be reset at zero.

Limitation on business activities

The Company will not, and will not permit any Restricted Subsidiary to, directly or indirectly, engage in any business other than Permitted Businesses; *provided*, that the Company or any Restricted Subsidiary may own Capital Stock of an Unrestricted Subsidiary or joint venture or other entity that is engaged in a business other than Permitted Businesses as long as any Investment therein was not prohibited under the “— Limitation on Restricted Payments” covenant.

Use of proceeds

The Company will not, and will not permit any Restricted Subsidiary to, use the net proceeds from the sale of the Notes issued and sold on the Original Issue Date, in any amount, for any purpose other than (1) as specified under “Use of Proceeds” in this Offering Memorandum (or in the case of Additional Notes, the offering document relating to the sale of such Additional Notes) and (2) pending the application of all of such net proceeds in such manner, to invest the portion of such net proceeds not yet so applied in cash or Temporary Cash Investments.

Designation of Restricted and Unrestricted Subsidiaries

On the Original Issue Date, each of the Existing Unrestricted Subsidiaries shall be an Unrestricted Subsidiary. Any future Subsidiary of any Existing Unrestricted Subsidiary shall also be an Unrestricted Subsidiary.

The Board of Directors may designate any Restricted Subsidiary to be an Unrestricted Subsidiary; *provided* that (1) no Default shall have occurred and be continuing at the time of or after giving effect to such designation; (2) such Restricted Subsidiary does not own any Disqualified Stock of the Company or any Subsidiary Guarantor or Disqualified or Preferred Stock of a Restricted Subsidiary that is not a Subsidiary Guarantor or hold any Indebtedness of, or any Lien on any property of, the Company or any Restricted Subsidiary, if such Disqualified or Preferred Stock or Indebtedness could not be Incurred under the covenant described under “— Limitation on Indebtedness” or such Lien would violate the covenant described under “— Limitation on Liens”; (3) such Restricted Subsidiary does not own any Voting Stock of another Restricted Subsidiary, and all of its Subsidiaries are Unrestricted Subsidiaries or are being concurrently designated to be Unrestricted Subsidiaries in accordance with this paragraph; (4) none of the Company or any Restricted Subsidiary Guarantees or provides credit support for the Indebtedness of such Restricted Subsidiary; and (5) the Investment deemed to have been made thereby in such newly designated Unrestricted Subsidiary and each other newly designated Unrestricted Subsidiary being concurrently redesignated would be permitted to be made by the covenant described under “— Limitation on Restricted Payments.”

The Board of Directors may designate any Unrestricted Subsidiary to be a Restricted Subsidiary; *provided* that (1) no Default shall have occurred and be continuing at the time of or after giving effect to such designation; (2) any Indebtedness of such Unrestricted Subsidiary outstanding at the time of such designation which will be deemed to have been Incurred by such newly designated Restricted Subsidiary as a result of such designation would be permitted to be Incurred by the covenant described under “— Limitation on Indebtedness”; (3) any Lien on the property of such Unrestricted Subsidiary at the time of such designation which will be deemed to have been incurred by such newly designated Restricted Subsidiary as a result of such designation would be permitted to be incurred by the covenant described under “— Limitation on Liens”; (4) such Unrestricted Subsidiary is not a Subsidiary of another Unrestricted Subsidiary (that is not concurrently being designated as a Restricted Subsidiary); and (5) if such Restricted Subsidiary is not a Non-Guarantor Subsidiary pursuant to the terms of the Indenture, such Restricted Subsidiary will upon such designation execute and deliver to the Trustee a supplemental indenture to the Indenture by which such Restricted Subsidiary will become a Subsidiary Guarantor.

Government approvals and licenses; Compliance with law

The Company will, and will cause each Restricted Subsidiary to, (1) obtain and maintain in full force and effect all governmental approvals, authorizations, consents, permits, concessions and licenses as are necessary to engage in the Permitted Businesses; (2) preserve and maintain good and valid title to its properties and assets (including land-use rights) free and clear of any Liens other than Permitted Liens; and (3) comply with all laws, regulations, orders, judgments and decrees of any governmental body, except to the extent that failure so to obtain, maintain, preserve and comply with would not reasonably be expected to have a material adverse effect on (a) the business, results of operations or prospects of the Company and its Restricted Subsidiaries, taken as a whole, or (b) the ability of the Company or any Subsidiary Guarantor to perform its obligations under the Notes, the Indenture or the relevant Subsidiary Guarantee.

Anti-layering

The Company will not Incur, and will not permit any Subsidiary Guarantor to Incur, any Indebtedness if such Indebtedness is contractually subordinated in right of payment to any other Indebtedness of the Company or any Subsidiary Guarantor, as the case may be, unless such Indebtedness is also contractually subordinated in right of payment to the Notes and the Subsidiary Guarantees on substantially identical terms; *provided* that this requirement does not apply to distinctions between categories of Indebtedness that exist by reason of any Liens or Guarantees securing or in favor of some but not all of such Indebtedness.

Maintenance of insurance

The Company will, and will cause its Restricted Subsidiaries to, maintain insurance with reputable and financially sound carriers against such risks and in such amounts as is customarily carried by similarly situated businesses, including, without limitation, property and casualty insurance.

SUSPENSION OF CERTAIN COVENANTS

If on any date following the date of the Indenture, the Notes have a rating of Investment Grade from the Rating Agency and no Default has occurred and is continuing (a “Suspension Event”), then, beginning on that day and continuing until such time, if any, at which the Notes cease to have a rating of Investment Grade from the Rating Agency, the provisions of the Indenture summarized under the following captions will be suspended:

- (1) “— Certain Covenants — Limitation on Indebtedness”;
- (2) “— Certain Covenants — Limitation on Restricted Payments”;
- (3) “— Certain Covenants — Limitation on Dividend and Other Payment Restrictions Affecting Restricted Subsidiaries”;
- (4) “— Certain Covenants — Limitation on Sales and Issuances of Capital Stock in Restricted Subsidiaries”;
- (5) “— Certain Covenants — Limitation on Issuances of Guarantees by Restricted Subsidiaries”;
- (6) “— Certain Covenants — Limitation on Business Activities”;
- (7) “— Certain Covenants — Limitation on Sale and Leaseback Transactions”;
- (8) “— Certain Covenants — Limitation on Asset Sales”;

(9) clauses (3), (4) and (5)(x) of the first and second paragraphs of “— Consolidation, Merger and Sale of Assets”; and

(10) clause (2)(a) of “— Provision of Financial Statements and Reports.”

During any period that the foregoing covenants have been suspended, the Board of Directors may not designate any Restricted Subsidiary as an Unrestricted Subsidiary pursuant to the covenant summarized under “— Certain Covenants — Designation of Restricted and Unrestricted Subsidiaries” or the definition of “Unrestricted Subsidiary.”

Such covenants will be reinstated and apply according to their terms as of and from the first day on which a Suspension Event ceases to be in effect. Such covenants will not, however, be of any effect with regard to actions of the Company or any Restricted Subsidiary properly taken in compliance with the provisions of the Indenture during the continuance of the Suspension Event, and following reinstatement the calculations under the covenant summarized under “— Certain Covenants — Limitation on Restricted Payments” will be made as if such covenant had been in effect since the date of the Indenture except that no Default will be deemed to have occurred solely by reason of a Restricted Payment made while that covenant was suspended.

There can be no assurance that the Notes will ever achieve a rating of Investment Grade or that any such rating will be maintained.

PROVISION OF FINANCIAL STATEMENTS AND REPORTS

- (1) So long as any of the Notes remain outstanding, the Company will file with the Trustee and furnish to the Holders upon request, as soon as they are available but in any event not more than 10 calendar days after they are filed with The Stock Exchange of Hong Kong Limited or any other recognized exchange on which the Company’s common shares are at any time listed for trading, true and correct copies of any financial report in the English language filed with such exchange; *provided* that if at any time the Common Stock of the Company ceases to be listed for trading on a recognized stock exchange, the Company will file with the Trustee and furnish to the Holders:
- (a) as soon as they are available, but in any event within 90 calendar days after the end of the fiscal year of the Company, copies of the financial statements (on a consolidated basis and in the English language) of the Company in respect of such financial year (including a statement of income, balance sheet and cash flow statement) prepared in accordance with GAAP and audited by a member firm of an internationally recognized firm of independent accountants;
 - (b) as soon as they are available, but in any event within 45 calendar days after the end of the second financial quarter of the Company, copies of the financial statements (on a consolidated basis and in the English language) of the Company in respect of such half-year period (including a statement of income, balance sheet and cash flow statement) prepared in accordance with GAAP and reviewed by a member firm of an internationally recognized firm of independent accountants; and
 - (c) as soon as they are available, but in any event within 45 calendar days after the end of each of the first and third financial quarters of the Company, copies of the unaudited financial statements (on a consolidated basis and in the English language) of the Company, including a statement of income, balance sheet and cash flow statement, prepared on a basis consistent with the audited financial statements of the Company, together with a certificate signed by the person then authorized to sign financial statements on behalf of the Company to the effect that such financial statements are true in all material respects and present fairly the financial position of the Company as at the end of, and the results of its operations for, the relevant quarterly period.

- (2) In addition, so long as any Note remains outstanding, the Company will provide to the Trustee (a) within 120 days after the close of each fiscal year ending after the Original Issue Date, an Officers' Certificate stating the Fixed Charge Coverage Ratio with respect to the four most recent fiscal quarters and showing in reasonable detail the calculation of the Fixed Charge Coverage Ratio, including the arithmetic computations of each component of the Fixed Charge Coverage Ratio, together with a certificate from the Company's external auditors verifying the accuracy and correctness of the calculation and arithmetic computation; *provided* that the Company shall not be required to provide such auditor certificate if its external auditors refuse to provide such certificate as a result of a policy of such external auditors not to provide such certificate; and (b) as soon as possible and in any event within 30 days after the Company becomes aware or should reasonably become aware of the occurrence of a Default and/or an Event of Default, an Officers' Certificate setting forth the details of the Default and/or the Event of Default, and the action which the Company proposes to take with respect thereto.

EVENTS OF DEFAULT

The following events will be defined as "Events of Default" in the Indenture:

- (1) default in the payment of principal of (or premium, if any, on) the Notes when the same becomes due and payable at maturity, upon acceleration, redemption or otherwise;
- (2) default in the payment of interest or Additional Amounts on any Note when the same becomes due and payable, and such default continues for a period of 30 consecutive days;
- (3) default in the performance or breach of the provisions of the covenant described under "— Consolidation, Merger and Sale of Assets" or "— Certain Covenants Limitation on Liens" or the failure by the Company to make or consummate an Offer to Purchase in the manner described under "— Repurchase of Notes upon a Change of Control Triggering Event" or "— Certain Covenants — Limitation on Asset Sales;"
- (4) the Company or any Restricted Subsidiary defaults in the performance of or breaches any other covenant or agreement in the Indenture, or under the Notes (other than a default specified in clause (1), (2) or (3) above) and such default or breach continues for a period of 30 consecutive days after written notice by the Trustee or the Holders of 25% or more in aggregate principal amount of the Notes;
- (5) there occurs with respect to any Indebtedness of the Company or any Restricted Subsidiary having an outstanding principal amount of US\$15.0 million (or the Dollar Equivalent thereof) or more in the aggregate for all such Indebtedness of all such Persons, whether such Indebtedness now exists or shall hereafter be created, (a) an event of default that has caused the holder thereof to declare such Indebtedness to be due and payable prior to its Stated Maturity and/or (b) a failure to make a principal payment when due;
- (6) one or more final judgments or orders for the payment of money are rendered against the Company or any Restricted Subsidiary and are not paid or discharged, and there is a period of 60 consecutive days following entry of the final judgment or order that causes the aggregate amount for all such final judgments or orders outstanding and not paid or discharged against all such Persons to exceed US\$15.0 million (or the Dollar Equivalent thereof) during which a stay of enforcement, by reason of a pending appeal or otherwise, is not in effect;
- (7) an involuntary case or other proceeding is commenced against the Company or any Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary) with respect to it or its debts under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect seeking

the appointment of a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Company or any Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary) or for any substantial part of the property and assets of the Company or any Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary) and such involuntary case or other proceeding remains undismissed and unstayed for a period of 60 consecutive days; or an order for relief is entered against the Company or any Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary) under any applicable bankruptcy, insolvency or other similar law as now or hereafter in effect;

- (8) the Company or any Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary), (a) commences a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or consents to the entry of an order for relief in an involuntary case under any such law, (b) consents to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Company or any Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary) or for all or substantially all of the property and assets of the Company or any Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary) or (c) effects any general assignment for the benefit of creditors (other than, in each case under (b), any of the foregoing that arises from any solvent liquidation or restructuring of a Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary) in the ordinary course of business that shall result in the net assets of such Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary) being transferred to or otherwise vested in the Company or any Restricted Subsidiary on a pro rata basis or on a basis more favorable to the Company); or
- (9) any Subsidiary Guarantor denies or disaffirms its obligations under its Subsidiary Guarantee or, except as permitted by the Indenture, any Subsidiary Guarantee is determined to be unenforceable or invalid or will for any reason cease to be in full force and effect.

If an Event of Default (other than an Event of Default specified in clause (7) or (8) above) occurs and is continuing under the Indenture, the Trustee or the Holders of at least 25% in aggregate principal amount of the Notes then outstanding, by written notice to the Company (and to the Trustee if such notice is given by the Holders), may, and the Trustee at the written direction of such Holders, subject to being indemnified and/or secured to its satisfaction, shall declare the principal of, premium, if any, and accrued and unpaid interest on the Notes to be immediately due and payable. Upon a declaration of acceleration, such principal premium, if any, and accrued and unpaid interest shall be immediately due and payable. If an Event of Default specified in clause (7) or (8) above occurs with respect to the Company or any Significant Restricted Subsidiary (or any group of Restricted Subsidiaries that together constitutes a Significant Restricted Subsidiary), the principal of, premium, if any, and accrued and unpaid interest on the Notes then outstanding shall automatically become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Holder.

The Holders of at least a majority in principal amount of the outstanding Notes by written notice to the Company and to the Trustee may on behalf of all the Holders waive all past defaults and rescind and annul a declaration of acceleration and its consequences if:

- (1) all existing Events of Default, other than the nonpayment of the principal of, premium, if any, and interest on the Notes that have become due solely by such declaration of acceleration, have been cured or waived; and
- (2) the rescission would not conflict with any judgment or decree of a court of competent jurisdiction.

Upon such waiver, the Default will cease to exist, and any Event of Default arising therefrom will be deemed to have been cured, but no such waiver will extend to any subsequent or other Default or impair any right consequent thereon.

If an Event of Default occurs and is continuing, the Trustee may pursue, in its own name or as trustee of an express trust, any available remedy by proceeding at law or in equity to collect the payment of principal of and interest on the Notes or to enforce the performance of any provision of the Notes or the Indenture. The Trustee may maintain a proceeding even if it does not possess any of the Notes or does not produce any of them in the proceeding.

The Holders of at least a majority in aggregate principal amount of the outstanding Notes may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee. However, the Trustee may refuse to follow any direction that conflicts with law or the Indenture, that may involve the Trustee in personal liability, or if it is not provided with indemnity and/or security to its satisfaction, and may take any other action it deems proper that is not inconsistent with any such direction received from Holders. In addition, the Trustee will not be required to expend its own funds under any circumstances.

A Holder may not institute any proceeding, judicial or otherwise, with respect to the Indenture or the Notes, or for the appointment of a receiver or trustee, or for any other remedy under the Indenture or the Notes, unless:

- (1) the Holder has previously given the Trustee written notice of a continuing Event of Default;
- (2) the Holders of at least 25% in aggregate principal amount of outstanding Notes make a written request to the Trustee to pursue the remedy;
- (3) such Holder or Holders offer the Trustee indemnity and/or security satisfactory to the Trustee against any costs, liability or expense to be incurred in compliance with such written request;
- (4) the Trustee does not comply with the request within (x) 60 days after receipt of the written request pursuant to clause (2) above or (y) 60 days after the receipt of the offer of indemnity and/or security pursuant to clause (3) above, whichever occurs later; and
- (5) during such 60-day period, the Holders of a majority in aggregate principal amount of the outstanding Notes do not give the Trustee a written direction that is inconsistent with the request.

However, such limitations do not apply to the right of any Holder of a Note to receive payment of the principal of, premium, if any, or interest on, such Note or any payment under any Subsidiary Guarantee, or to bring suit for the enforcement of any such payment, on or after the due date expressed in the Notes, which right shall not be impaired or affected without the consent of the Holder.

Two Officers of the Company must certify to the Trustee in writing, on or before a date not more than 120 days after the end of each fiscal year ending after the Original Issue Date, that a review has been conducted of the activities of the Company and the Restricted Subsidiaries and the Company's and the Restricted Subsidiaries' performance under the Indenture and that the Company and each Restricted Subsidiary have fulfilled all of their respective obligations thereunder, or, if there has been a default in the fulfillment of any such obligation, specifying each such default and the nature and status thereof. The Company will also be obligated to notify the Trustee in writing of any default or defaults in the performance of any covenants or agreements under the Indenture. See "— Provision of Financial Statements and Reports."

CONSOLIDATION, MERGER AND SALE OF ASSETS

The Company will not consolidate with, merge with or into another Person, permit any Person to merge with or into it, or sell, convey, transfer, lease or otherwise dispose of all or substantially all of the properties and assets of the Company and the Restricted Subsidiaries (computed on a consolidated basis) (as an entirety or substantially an entirety in one transaction or a series of related transactions) unless each of the following conditions is satisfied:

- (1) the Company shall be the continuing Person, or the Person (if other than it) formed by such consolidation or merger, or with or into which the Company consolidated or merged, or that acquired or leased such property and assets (the “Surviving Person”) shall be a company organized and validly existing under the laws of the British Virgin Islands, the Cayman Islands, Hong Kong or UAE and shall expressly assume, by a supplemental indenture to the Indenture, executed and delivered to the Trustee, all the obligations of the Company under the Indenture and the Notes, including the obligation to pay Additional Amounts with respect to any jurisdiction in which it is organized or resident for tax purposes or from or through which payment is made, and the Indenture and the Notes, as the case may be, shall remain in full force and effect;
- (2) immediately after giving effect to such transaction, no Default shall have occurred and be continuing;
- (3) immediately after giving effect to such transaction on a *pro forma* basis, the Company or the Surviving Person, as the case may be, shall have a Consolidated Net Worth equal to or greater than the Consolidated Net Worth of the Company immediately prior to such transaction;
- (4) immediately after giving effect to such transaction on a *pro forma* basis, the Company or the Surviving Person, as the case may be, could Incur at least US\$1.00 of Indebtedness under the proviso of paragraph (1) of the covenant described under “— Certain Covenants — Limitation on Indebtedness”;
- (5) the Company shall deliver to the Trustee (x) an Officers’ Certificate (attaching the arithmetic computations to demonstrate compliance with clauses (3) and (4)) and (y) an Opinion of Counsel, in each case stating that such consolidation, merger or transfer and the relevant supplemental indenture complies with this provision and that all conditions precedent provided for in the Indenture relating to such transaction have been complied with;
- (6) each Subsidiary Guarantor, unless such Subsidiary Guarantor is the Person with which the Company has entered into a transaction described under this “Consolidation, Merger and Sale of Assets” covenant, shall execute and deliver a supplemental indenture to the Indenture confirming that its Subsidiary Guarantee shall apply to the obligations of the Company or the Surviving Person, as the case may be, in accordance with the Notes and the Indenture; and
- (7) no Rating Decline shall have occurred.

No Subsidiary Guarantor will consolidate with, merge with or into another Person, permit any Person to merge with or into it, or sell, convey, transfer, lease or otherwise dispose of all or substantially all of the properties and assets of the Subsidiary Guarantor and its Restricted Subsidiaries (computed on a consolidated basis) (as an entirety or substantially an entirety in one transaction or a series of related transactions) to another Person (other than the Company or another Subsidiary Guarantor), unless each of the following conditions is met:

- (1) such Subsidiary Guarantor shall be the continuing Person, or the Person (if other than it) formed by such consolidation or merger, or with or into which the Subsidiary Guarantor consolidated or merged, or that acquired or leased such property and assets shall be the Company, another Subsidiary Guarantor or shall become a Subsidiary Guarantor concurrently with the transaction in accordance with the Indenture;
- (2) immediately after giving effect to such transaction, no Default shall have occurred and be continuing;
- (3) immediately after giving effect to such transaction on a *pro forma* basis, the Company shall have a Consolidated Net Worth equal to or greater than the Consolidated Net Worth of the Company immediately prior to such transaction;
- (4) immediately after giving effect to such transaction on a *pro forma* basis, the Company could Incur at least US\$1.00 of Indebtedness under the proviso of paragraph (1) of the covenant described under “— Certain Covenants — Limitation on Indebtedness”;
- (5) the Company shall deliver to the Trustee (x) an Officers’ Certificate (attaching the arithmetic computations to demonstrate compliance with clauses (3) and (4) and (y) an Opinion of Counsel, in each case stating that such consolidation, merger or transfer and the relevant supplemental indenture complies with this provision and that all conditions precedent provided for in the Indenture relating to such transaction have been complied with; and
- (6) no Rating Decline shall have occurred;

provided that this paragraph shall not apply to any sale or other disposition that complies with the “Limitation on Asset Sales” covenant or any Subsidiary Guarantor whose Subsidiary Guarantee is unconditionally released in accordance with the provisions described under “— The Subsidiary Guarantees — Release of the Subsidiary Guarantees.”

The foregoing requirements shall not apply to a consolidation or merger of any Subsidiary Guarantor with and into the Company or any other Subsidiary Guarantor, so long as the Company or such Subsidiary Guarantor survives such consolidation or merger. Although there is a limited body of case law interpreting the phrase “substantially all,” there is no precise established definition of the phrase under applicable law. Accordingly, in certain circumstances there may be a degree of uncertainty as to whether a particular transaction would involve “all or substantially all” of the property or assets of a Person. The foregoing provisions would not necessarily afford Holders protection in the event of highly leveraged or other transactions involving the Company or the Subsidiary Guarantors that may adversely affect Holders.

NO PAYMENTS FOR CONSENTS

The Company will not, and will not permit any of its Subsidiaries to, directly or indirectly, pay or cause to be paid any consideration, whether by way of interest, fee or otherwise, to any Holder for or as an inducement to any consent, waiver or amendment of any of the terms or provisions of the Indenture, the Notes or any Subsidiary Guarantee unless such consideration (1) is offered to be paid and (2) is paid to all Holders that consent, waive or agree to amend such term or provision on the same terms and within the time period set forth in the solicitation documents relating to such consent, waiver or amendment.

Notwithstanding the foregoing, in any offer or payment of consideration for, or as an inducement to, any consent, waiver or amendment of any of the terms or provisions of this Indenture or the Notes in connection with an exchange or tender offer, the Company and any Restricted Subsidiary may exclude (i) Holders or beneficial owners of the Notes that are not institutional “accredited investors” as defined in Rule 501 under the Securities Act, and (ii) Holders or beneficial owners of the Notes in any jurisdiction where the inclusion of such Holders or beneficial owners would require the Company or any Restricted Subsidiary to comply with the registration requirements or other similar requirements under any securities laws of such jurisdiction, or the solicitation of such consent, waiver or amendment from, or the granting of such consent or waiver, or the approval of such amendment by, Holders or beneficial owners in such jurisdiction would be unlawful, in each case as determined by the Company in its sole discretion.

DEFEASANCE

Defeasance and discharge

The Indenture will provide that the Company will be deemed to have paid and will be discharged from any and all obligations in respect of the Notes on the 183rd day after the deposit referred to below, and the provisions of the Indenture will no longer be in effect with respect to the Notes (except for, among other matters, certain obligations to register the transfer or exchange of the Notes, to replace stolen, lost or mutilated Notes, to maintain paying agencies, to pay Additional Amounts and to hold monies for payment in trust) if, among other things:

- (1) the Company (a) has deposited with the Trustee (or its agent), in trust, cash in U.S. dollars, U.S. Government Obligations or a combination thereof that through the payment of interest and principal in respect thereof in accordance with their terms will provide money in an amount sufficient to pay the principal of, premium, if any, and accrued interest on the Notes on the Stated Maturity of such payments in accordance with the terms of the Indenture and the Notes and (b) has delivered to the Trustee an Opinion of Counsel or a certificate of an internationally recognized firm of independent accountants to the effect that the amount deposited by the Company is sufficient to provide payment for the principal of, premium, if any, and accrued interest on, the Notes on the Stated Maturity of such payment in accordance with the terms of the Indenture;
- (2) the Company has delivered to the Trustee (a) either (i) an Opinion of Counsel of recognized standing with respect to U.S. federal income tax matters that is based on a change in applicable U.S. federal income tax law occurring after the Original Issue Date to the effect that beneficial owners will not recognize income, gain or loss for U.S. federal income tax purposes as a result of the Company’s exercise of its option under this “Defeasance and Discharge” provision and will be subject to U.S. federal income tax on the same amount and in the same manner and at the same time as would have been the case if such deposit, defeasance and discharge had not occurred or (ii) a ruling directed to the Company or Trustee received from the U.S. Internal Revenue Service to the same effect as the aforementioned Opinion of Counsel and (b) an Opinion of Counsel of recognized standing to the effect that the creation of the defeasance trust does not violate the U.S. Investment Company Act of 1940, as amended, and after the passage of 123 days following the deposit, the trust fund will not be subject to the effect of Section 547 of the United States Bankruptcy Code or Section 15 of the New York Debtor and Creditor Law;
- (3) the Company shall have delivered to the Trustee an Officers’ Certificate stating that the deposit was not made by it with the intent of preferring the Holders over any other of its creditors or with the intent of defeating, hindering, delaying or defrauding any other of its creditors or others; and

- (4) immediately after giving effect to such deposit on a *pro forma* basis, no Event of Default, or event that after the giving of notice or lapse of time or both would become an Event of Default, shall have occurred and be continuing on the date of such deposit or during the period ending on the 183rd day after the date of such deposit, and such defeasance shall not result in a breach or violation of, or constitute a default under, any other agreement or instrument to which the Company or any Restricted Subsidiary is a party or by which the Company or any Restricted Subsidiary is bound.

In the case of either discharge or defeasance of the Notes, each of the Subsidiary Guarantees will terminate.

Defeasance of certain covenants

The Indenture will further provide that the provisions of the Indenture will no longer be in effect with respect to clauses (3), (4), 5(x) and (7) under the first paragraph, and clauses (3), (4), (5)(x) and (6) under the second paragraph under “— Consolidation, Merger and Sale of Assets” and all the covenants described herein under “— Certain Covenants,” other than as described under “— Certain Covenants — Government Approvals and Licenses; Compliance with Law” and “— Certain Covenants – Anti-Layering,” clause (3) under “Events of Default” with respect to clauses (3), (4), 5(x) and (7) under the first paragraph and clauses (3), (4), 5(x) and (6) under the second paragraph under “— Consolidation, Merger and Sale of Assets” and with respect to the other events set forth in such clause, clause (4) under “— Events of Default” with respect to such other covenants and clauses (5) and (6) under “— Events of Default” shall be deemed not to be Events of Default, upon, among other things, the deposit with the Trustee, in trust, of cash in U.S. dollars, U.S. Government Obligations or a combination thereof that through the payment of interest and principal in respect thereof in accordance with their terms will provide money in an amount sufficient to pay the principal of, premium, if any, and accrued interest on the Notes on the Stated Maturity of such payments in accordance with the terms of the Indenture and the Notes, the satisfaction of the provisions described in clauses (2)(b), (3) and (4) of the preceding paragraph and the delivery by the Company to the Trustee of an Opinion of Counsel of recognized standing with respect to U.S. federal income tax matters to the effect that beneficial owners will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such deposit and defeasance of certain covenants and Events of Default and will be subject to U.S. federal income tax on the same amount and in the same manner and at the same time as would have been the case if such deposit and defeasance had not occurred.

Defeasance and certain other Events of Default

In the event the Company exercises its option to omit compliance with certain covenants and provisions of the Indenture with respect to the Notes as described in the immediately preceding paragraph and the Notes are declared due and payable because of the occurrence of an Event of Default that remains applicable, the amount of cash in U.S. dollars and/or U.S. Government Obligations on deposit with the Trustee will be sufficient to pay amounts due on the Notes at the time of their Stated Maturity but may not be sufficient to pay amounts due on the Notes at the time of the acceleration resulting from such Event of Default. However, the Company and the Subsidiary Guarantors will remain liable for such payments.

Satisfaction and Discharge

The Indenture will be discharged and will cease to be of further effect (except as to surviving rights of registration of transfer or exchange of the Notes, as expressly provided for in the Indenture) as to all outstanding Notes when:

- (1) either:
 - (i) all of the Notes theretofore authenticated and delivered (except lost, stolen or destroyed Notes which have been replaced or paid and Notes for whose payment money has theretofore been deposited in trust by the Company and thereafter repaid to the Company) have been delivered to the Paying Agent for cancellation; or

- (ii) all Notes not theretofore delivered to the Paying Agent for cancellation have become due and payable pursuant to an optional redemption notice or otherwise or will become due and payable within one year, and the Company has irrevocably deposited or caused to be deposited with the Trustee funds, in cash in U.S. dollars, non-callable U.S. Government Obligations or a combination thereof, in an amount sufficient to pay and discharge the entire indebtedness on the Notes not theretofore delivered to the Paying Agent for cancellation, for principal of, premium, if any, and interest on the Notes to the date of deposit together with irrevocable written instructions from the Company directing the Trustee to apply such funds to the payment thereof at maturity or redemption, as the case may be;
- (2) the Company or any Subsidiary Guarantor has paid all other sums payable under the Indenture;
- (3) such deposit will not result in a breach or violation of, or constitute a default under, any instruments to which the Company or any Subsidiary Guarantor is a party or by which the Company or any Subsidiary Guarantor is bound (other than the Indenture or the Notes).

In addition, the Company must deliver to the Trustee an Officers' Certificate stating that all conditions precedent to satisfaction and discharge have been satisfied.

AMENDMENTS AND WAIVER

Amendments without consent of Holders

The Indenture or the Notes may be amended by the Company, the Subsidiary Guarantors and the Trustee, without the consent of any Holder:

- (1) to cure any ambiguity, defect, omission or inconsistency in the Indenture or the Notes;
- (2) to comply with the provisions described under “— Consolidation, Merger and Sale of Assets”;
- (3) to evidence and provide for the acceptance of appointment by a successor Trustee;
- (4) to provide for the issuance of Additional Notes in accordance with the limitations set forth in the Indenture;
- (5) provide collateral or add additional collateral to secure the Notes or any Subsidiary Guarantee;
- (6) effect any change to the Indenture in a manner necessary to comply with the procedures of Euroclear or Clearstream;
- (7) in any other case where a supplemental indenture to the Indenture is required or permitted to be entered into pursuant to the provisions of the Indenture without the consent of any Holder;
- (8) to effect any changes to the Indenture in a manner necessary to comply with the procedures of the relevant clearing system;
- (9) to add any Subsidiary Guarantor or any Subsidiary Guarantee or release any Subsidiary Guarantor from any Subsidiary Guarantee as provided or permitted by the terms of the Indenture;

- (10) to conform the text of the Indenture, the Notes or the Subsidiary Guarantees to any provision of this “Description of the New Notes” to the extent that such provision in this “Description of the New Notes” was intended to be a verbatim recitation of a provision of the Indenture, the Notes or the Subsidiary Guarantees;
- (11) to make any change that would provide any additional right or benefit to Holders or that does not materially and adversely affect the rights of any Holder.

Amendments with consent of Holders

Amendments of the Indenture or the Notes may be made by the Company, the Subsidiary Guarantors and the Trustee with the consent of the Holders of not less than a majority in aggregate principal amount of the outstanding Notes, and the Holders of a majority in principal amount of the outstanding Notes may waive future compliance by the Company with any provision of the Indenture or the Notes; *provided, however*, that no such modification, amendment or waiver may, without the consent of each Holder affected thereby:

- (1) change the Stated Maturity of the principal of, or premium, if any, or any installment of interest on, any Note;
- (2) reduce the principal amount of, or premium, if any, or interest on, any Note;
- (3) change the currency of payment of principal of, or premium, if any, or interest on, any Note;
- (4) impair the right to institute suit for the enforcement of any payment on or after the Stated Maturity (or, in the case of a redemption, on or after the redemption date) of any Note;
- (5) reduce the above-stated percentage of outstanding Notes the consent of whose Holders is necessary to modify or amend the Indenture;
- (6) waive a default in the payment of principal of, premium, if any, or interest on the Notes;
- (7) reduce the percentage or aggregate principal amount of outstanding Notes the consent of whose Holders is necessary for waiver of compliance with certain provisions of the Indenture or for waiver of certain defaults;
- (8) release any Subsidiary Guarantor from its Subsidiary Guarantee, except as provided in the Indenture;
- (9) amend, change or modify any Subsidiary Guarantee in a manner that adversely affects the Holders;
- (10) reduce the amount payable upon a Change of Control Offer or an Offer to Purchase with the Excess Proceeds from an Asset Sale or change the time or manner by which a Change of Control Offer or an Offer to Purchase with the Excess Proceeds from an Asset Sale may be made or by which the Notes must be repurchased pursuant to a Change of Control Offer or an Offer to Purchase with the Excess Proceeds from an Asset Sale, unless such amendment, waiver or modification shall be in effect prior to the occurrence of a Change of Control or the event giving rise to the repurchase of the Notes under “— Limitations on Asset Sales”;
- (11) change the redemption date or the redemption price of the Notes from that stated under “— Optional Redemption” or “— Redemption for Taxation Reasons”;

- (12) amend, change or modify the obligation of the Company or any Subsidiary Guarantor to pay Additional Amounts; or
- (13) amend, change or modify any provision of the Indenture or the related definition affecting the ranking of the Notes or any Subsidiary Guarantee in a manner which adversely affects the Holders.

UNCLAIMED MONEY

Claims against the Company for the payment of principal of, premium, if any, or interest, on the Notes will become void unless presentation for payment is made as required in the Indenture within a period of six years.

NO PERSONAL LIABILITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS, DIRECTORS OR EMPLOYEES

No recourse for the payment of the principal of, premium, if any, or interest on any of the Notes or for any claim based thereon or otherwise in respect thereof, and no recourse under or upon any obligation, covenant or agreement of the Company or any Subsidiary Guarantor in the Indenture, or in any of the Notes or the Subsidiary Guarantees or because of the creation of any Indebtedness represented thereby, shall be had against any incorporator, stockholder, officer, director, employee or controlling person of the Company or any Subsidiary Guarantor or of any successor Person thereof. Each Holder, by accepting the Notes, waives and releases all such liability. The waiver and release are part of the consideration for the issuance of the Notes and the Subsidiary Guarantees. Such waiver may not be effective to waive liabilities under the federal securities laws.

CONCERNING THE TRUSTEE AND THE PAYING AGENT

Citicorp International Limited is to be appointed as Trustee under the Indenture, Citibank, N.A., London Branch (a banking corporation organized and existing under the laws of the State of New York with limited liability) is to be appointed as transfer agent and paying agent (the "Paying Agent") and as registrar (the "Registrar") with regard to the Notes. Except during the continuance of a Default, the Trustee undertakes to perform such duties and only such duties as are specifically set forth in the Indenture or the Notes, as the case may be, and no implied covenant or obligation shall be read into the Indenture and/or the Notes (as the case may be) against the Trustee. If an Event of Default has occurred and is continuing, the Trustee will use the same degree of care and skill in its exercise of the rights and powers vested in it under the Indenture or the Notes (as the case may be) as a prudent person would exercise under the circumstances in the conduct of such person's own affairs. The Trustee will be under no obligation to exercise any of its rights or powers under the Indenture at the request of any Holder, unless such Holder shall have offered to the Trustee indemnity and/or security satisfactory to it against any loss, liability or expense.

Pursuant to the terms of the Indenture or the Notes (as the case may be), the Company and the Subsidiary Guarantors will reimburse the Trustee, the Paying Agent and the Registrar for all reasonable expenses.

Each Holder, by accepting the Notes, will agree for the benefit of the Trustee that it is solely responsible for its own independent appraisal of and investigation into all risks arising under or in connection with the Notes and has not relied on and will not at any time rely on the Trustee in respect of such risks. The Indenture contains limitations on the rights of the Trustee, should it become a creditor of the Company or any of the Subsidiary Guarantors to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claims, as security or otherwise. The Trustee is permitted to engage in other transactions, including normal banking and trustee relationships, with the Company and its Affiliates and shall not be obligated to account for any profits therefrom; *provided, however*, that if it acquires any conflicting interest, it must eliminate such conflict or resign.

BOOK-ENTRY; DELIVERY AND FORM

The Notes will be represented by one or more global notes in registered form without interest coupons attached (the “Global Note”). On the Original Issue Date, the Global Note will be deposited with a common depository and registered in the name of the common depository or its nominee for the accounts of Euroclear and Clearstream.

Global Note

Ownership of beneficial interests in the Global Note (the “book-entry interests”) will be limited to persons that have accounts with Euroclear and/or Clearstream or persons that may hold interests through such participants. Book-entry interests will be shown on, and transfers thereof will be effected only through, records maintained in book-entry form by Euroclear and Clearstream and their participants.

Except as set forth below under “— Individual Definitive Notes,” the book-entry interests will not be held in definitive form. Instead, Euroclear and/or Clearstream will credit on their respective book-entry registration and transfer systems a participant’s account with the interest beneficially owned by such participant. The laws of some jurisdictions may require that certain purchasers of securities take physical delivery of such securities in definitive form. The foregoing limitations may impair the ability to own, transfer or pledge book-entry interests.

So long as the Notes are held in global form, the common depository for Euroclear and/or Clearstream (or its nominee) will be considered the sole holder of the Global Note for all purposes under the Indenture and “holders” of book-entry interests will not be considered the owners or “Holders” of Notes for any purpose. As such, participants must rely on the procedures of Euroclear and Clearstream and indirect participants must rely on the procedures of the participants through which they own book-entry interests in order to transfer their interests in the Notes or to exercise any rights of Holders under the Indenture.

None of the Company, the Subsidiary Guarantors, the Trustee, the Agents or any of their respective agents will have any responsibility or be liable for any aspect of the records relating to the book-entry interests. The Notes are not issuable in bearer form.

Payments on the Global Note

Payments of any amounts owing in respect of the Global Note (including principal, premium, interest and Additional Amounts) will be made to the Paying Agent in U.S. dollars. The Paying Agent will, in turn, make such payments to the common depository for Euroclear and Clearstream, which will distribute such payments to participants in accordance with their procedures. Each of the Company and the Subsidiary Guarantors will make payments of all such amounts without deduction or withholding for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature, except as may be required by law and as described under “— Additional Amounts.”

Under the terms of the Indenture, the Company, any Subsidiary Guarantor, the Trustee and the Agents will treat the registered holder of the Global Note (i.e., the common depository or its nominee) as the owner thereof for the purpose of receiving payments and for all other purposes. Consequently, none of the Company, the Subsidiary Guarantors, the Trustee, the Agents or any of their respective agents has or will have any responsibility or liability for:

- any aspect of the records of Euroclear, Clearstream or any participant or indirect participant relating to or payments made on account of a book-entry interest, for any such payments made by Euroclear, Clearstream or any participant or indirect participants, or for maintaining, supervising or reviewing any of the records of Euroclear, Clearstream or any participant or indirect participant relating to or payments made on account of a book-entry interest; or

- any action or any failure to take action by Euroclear, Clearstream or any participant or indirect participant.

Payments by participants to owners of book-entry interests held through participants are the responsibility of such participants.

Redemption of Global Note

In the event any Global Note, or any portion thereof, is redeemed, the common depositary will distribute the amount received by it in respect of the Global Note so redeemed to Euroclear and/or Clearstream, as applicable, who will distribute such amount to the holders of the book-entry interests in such Global Note. The redemption price payable in connection with the redemption of such book-entry interests will be equal to the amount received by the common depositary, Euroclear or Clearstream, as applicable, in connection with the redemption of such Global Note (or any portion thereof). The Company understands that under existing practices of Euroclear and Clearstream, if fewer than all of the Notes are to be redeemed at any time, Euroclear and Clearstream will credit their respective participants' accounts on a proportionate basis (with adjustments to prevent fractions) or by lot or on such other basis as they deem fair and appropriate; *provided, however*, that no book-entry interest of US\$200,000 principal amount, or less, as the case may be, will be redeemed in part.

Action by Owners of Book-Entry Interests

Euroclear and Clearstream have advised that they will take any action permitted to be taken by a Holder of Notes only at the direction of one or more participants to whose account the book-entry interests in the Global Note are credited and only in respect of such portion of the aggregate principal amount of Notes as to which such participant or participants has or have given such direction. Euroclear and Clearstream will not exercise any discretion in the granting of consents, waivers or the taking of any other action in respect of the Global Note. If there is an Event of Default under the Notes, however, each of Euroclear and Clearstream reserves the right to exchange the Global Note for individual definitive notes in certificated form, and to distribute such individual definitive notes to their participants.

Transfers

Transfers between participants in Euroclear and Clearstream will be effected in accordance with Euroclear and Clearstream's rules and will be settled in immediately available funds. If a Holder requires physical delivery of individual definitive notes for any reason, including to sell the Notes to persons in jurisdictions which require physical delivery of such securities or to pledge such securities, such Holder must transfer its interest in the Global Note in accordance with the normal procedures of Euroclear and Clearstream and in accordance with the provisions of the Indenture.

Book-entry interests in the Global Note will be subject to the restrictions on transfer discussed under "Transfer Restrictions."

Any book-entry interest in a Global Note that is transferred to a person who takes delivery in the form of a book-entry interest in another Global Note will, upon transfer, cease to be a book-entry interest in the first-mentioned Global Note and become a book-entry interest in the other Global Note and, accordingly, will thereafter be subject to all transfer restrictions, if any, and other procedures applicable to book-entry interests in such other Global Note for as long as it retains such a book-entry interest.

Global Clearance and Settlement Under the Book-Entry System

Book-entry interests owned through Euroclear or Clearstream accounts will follow the settlement procedures applicable. Book-entry interests will be credited to the securities custody accounts of Euroclear and Clearstream holders on the business day following the settlement date against payment for value on the settlement date.

The book-entry interests will trade through participants of Euroclear or Clearstream, and will settle in same-day funds. Since the purchaser determines the place of delivery, it is important to establish at the time of trading of any book-entry interests where both the purchaser's and seller's accounts are located to ensure that settlement can be made on the desired value date.

Information Concerning Euroclear and Clearstream

The Company understands as follows with respect to Euroclear and Clearstream:

Euroclear and Clearstream hold securities for participating organizations and facilitate the clearance and settlement of securities transactions between their respective participants through electronic book-entry changes in accounts of such participants. Euroclear and Clearstream provide to their participants, among other things, services for safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream interface with domestic securities markets. Euroclear and Clearstream participants are financial institutions, such as underwriters, securities brokers and dealers, banks and trust companies, and certain other organizations. Indirect access to Euroclear or Clearstream is also available to others such as banks, brokers, dealers and trust companies that clear through or maintain a custodian relationship with a Euroclear or Clearstream participant, either directly or indirectly.

Although the foregoing sets out the procedures of Euroclear and Clearstream in order to facilitate the original issue and subsequent transfers of interests in the Notes among participants of Euroclear and Clearstream, neither Euroclear nor Clearstream is under any obligation to perform or continue to perform such procedures, and such procedures may be discontinued at any time.

None of the Company, the Subsidiary Guarantors, the Trustee, the Agents or any of their respective agents will have responsibility for the performance of Euroclear or Clearstream or their respective participants of their respective obligations under the rules and procedures governing their operations, including, without limitation, rules and procedures relating to book-entry interests.

Individual Definitive Notes

If (1) the common depository or any successor to the common depository is at any time unwilling or unable to continue as a depository for the reasons described in the Indenture and a successor depository is not appointed within 90 days, (2) either Euroclear or Clearstream, or a successor clearing system is closed for business for a continuous period of 14 days (other than by reason of holidays, statutory or otherwise) or announces an intention to permanently cease business or does in fact do so, or (3) any of the Notes has become immediately due and payable in accordance with “— Events of Default” and the Company has received a written request from a Holder, the Company will issue individual definitive notes in registered form in exchange for the Global Note. Upon receipt of such notice from the common depository or a Holder, as the case may be, the Company will use its best efforts to make arrangements with the common depository for the exchange of interests in the Global Note for individual definitive notes and cause the requested individual definitive notes to be executed and delivered to the Registrar in sufficient quantities and authenticated by or on behalf of the Registrar for delivery to Holders. Persons exchanging interests in a Global Note for individual definitive notes will be required to provide the Registrar, through the relevant clearing system, with written instruction and other information required by the Company and the Registrar to complete, execute and deliver such individual definitive notes. In all cases, individual definitive notes delivered in exchange for any Global Note or beneficial interests therein will be registered in the names, and issued in any approved denominations, requested by the relevant clearing system.

Individual definitive notes will not be eligible for clearing and settlement through Euroclear or Clearstream.

NOTICES

All notices or demands required or permitted by the terms of the Notes or the Indenture to be given to or by the Holders are required to be in writing and may be given or served by being sent by prepaid

courier or first-class mail (if intended for the Company or any Subsidiary Guarantor) addressed to the Company at the principal office of the Company located at No. 8, Pingcui West Road, Donghuqu, Chaoyang District, Beijing, China 100102, or such other address as the Company may advise the Trustee in writing from time to time, or (if intended for the Trustee) at the corporate trust office of the Trustee; and (if intended for any Holder) addressed to such Holder at such Holder's last address as it appears in the Note register.

Any such notice or demand will be deemed to have been sufficiently given or served when so sent or deposited and, if to the Holders, so long as the Global Notes are held on behalf of Euroclear or Clearstream, when delivered in accordance with the applicable rules and procedures of the relevant clearing system. Any such notice shall be deemed to have been delivered on the day such notice is delivered to the relevant clearing system or if by mail, when so sent or deposited.

CONSENT TO JURISDICTION; SERVICE OF PROCESS

The Company and each Subsidiary Guarantor will irrevocably (1) submit to the non-exclusive jurisdiction of any U.S. federal or New York state court located in the Borough of Manhattan, The City of New York in connection with any suit, action or proceeding arising out of, or relating to, the Notes, any Subsidiary Guarantee, the Indenture or any transaction contemplated thereby; and (2) designate and appoint National Corporate Research, Ltd. for receipt of service of process in any such suit, action or proceeding.

GOVERNING LAW

Each of the Notes, the Subsidiary Guarantees and the Indenture provides that such instrument will be governed by, and construed in accordance with, the laws of the State of New York.

DEFINITIONS

Set forth below are defined terms used in the covenants and other provisions of the Indenture. Reference is made to the Indenture for other capitalized terms used in this "Description of the New Notes" for which no definition is provided.

"2022 Notes" means the 7.50% senior notes due 2022 issued by the Company on December 2, 2019.

"Acquired Indebtedness" means Indebtedness of a Person existing at the time such Person becomes a Restricted Subsidiary or Indebtedness of a Restricted Subsidiary assumed in connection with an Asset Acquisition by such Restricted Subsidiary whether or not Incurred in connection with, or in contemplation of, the Person merging with or into or becoming a Restricted Subsidiary.

"Adjusted Treasury Rate" means, with respect to any redemption date, (i) the yield, under the heading which represents the average for immediately preceding week, appearing in the most recently published statistical release designated "H.15(519)" or any successor publication which is published weekly by the Board of Governors of the Federal Reserve System and which establishes yields on actively traded United States Treasury securities adjusted to constant maturity under the caption "Treasury Constant Maturities," for the maturity corresponding to the Comparable Treasury Issue (if no maturity is within three (3) months before or after January 26, 2024, yields for the two published maturities most closely corresponding to the Comparable Treasury Issue shall be determined and the Adjusted Treasury Rate shall be interpolated or extrapolated from such yields on a straight line basis, rounding to the nearest month) or (ii) if such release (or any successor release) is not published during the week preceding the calculation date or does not contain such yields, the rate per year equal to the semi-annual equivalent yield to maturity of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such redemption date, in each case calculated on the third Business Day immediately preceding the redemption date.

“Affiliate” means, with respect to any Person, any other Person (1) directly or indirectly controlling, controlled by, or under direct or indirect common control with, such Person; (2) who is a director or officer of such Person or any Subsidiary of such Person or of any Person referred to in clause (1) of this definition; or (3) who is a spouse or any person cohabiting as a spouse, child or step-child, parent or step-parent, brother, sister, step-brother or step-sister, parent-in-law, grandchild, grandparent, uncle, aunt, nephew or niece of a Person described in clause (1) or (2). For purposes of this definition, “control” (including, with correlative meanings, the terms “controlling,” “controlled by” and “under common control with”), as applied to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

“Applicable Premium” means, with respect to a Note at any redemption date, the greater of (1) 1.00% of the principal amount of such Note and (2) the excess of (A) the present value at such redemption date of 104.375% of the principal amount of such Note, plus all required remaining scheduled interest payments due on such Note through January 26, 2024 (but excluding accrued and unpaid interest to the redemption date) computed using a discount rate equal to the Adjusted Treasury Rate plus 100 basis points, over (B) the principal amount of such Note on such redemption date.

“Asset Acquisition” means (1) an Investment by the Company or any Restricted Subsidiary in any other Person pursuant to which such Person shall become a Restricted Subsidiary or shall be merged into or consolidated with the Company or any Restricted Subsidiary; or (2) an acquisition by the Company or any Restricted Subsidiary of the property and assets of any Person other than the Company or any Restricted Subsidiary that constitute substantially all of a division or line of business of such Person.

“Asset Disposition” means the sale or other disposition by the Company or any Restricted Subsidiary (other than to the Company or another Restricted Subsidiary) of (1) all or substantially all of the Capital Stock of any Restricted Subsidiary; or (2) all or substantially all of the assets that constitute a division or line of business of the Company or any Restricted Subsidiary.

“Asset Sale” means any sale, transfer or other disposition (including by way of merger, consolidation or Sale and Leaseback Transaction) of any of its property or assets (including any issuance or sale of Capital Stock of a Subsidiary or issuance of Capital Stock of a Restricted Subsidiary) in one transaction or a series of related transactions by the Company or any Restricted Subsidiary to any Person; *provided* that “Asset Sale” shall not include:

- (1) sales, transfers or other dispositions of inventory, receivables and other current assets in the ordinary course of business;
- (2) sales, transfers or other dispositions of assets constituting a Permitted Investment or Restricted Payment permitted to be made by the covenant described under “— Certain Covenants — Limitation on Restricted Payments”;
- (3) sales, transfers or other dispositions of assets with a Fair Market Value not in excess of US\$1 million (or the Dollar Equivalent thereof) in any transaction or series of related transactions;
- (4) any sale, transfer, assignment or other disposition of any property or equipment that has become damaged, worn out, obsolete or otherwise unsuitable for use in connection with the business of the Company or the Restricted Subsidiaries;
- (5) any transfer, assignment or other disposition deemed to occur in connection with creating or granting any Permitted Lien;
- (6) a transaction covered by the covenant described under “— Consolidation, Merger and Sale of Assets”; and
- (7) a sale, transfer or other disposition by the Company or any Restricted Subsidiary, including the sale or issuance by the Company or any Restricted Subsidiary of any Capital Stock of any Restricted Subsidiary, to the Company or any Restricted Subsidiary.

“Attributable Indebtedness” means, in respect of a Sale and Leaseback Transaction, at the time of determination, the present value, discounted at the interest rate implicit in the Sale and Leaseback Transaction, of the total obligations of the lessee for rental payments during the remaining term of the lease in the Sale and Leaseback Transaction, including any period for which such lease has been extended or may, at the option of the lessor, be extended.

“Average Life” means, at any date of determination with respect to any Indebtedness, the quotient obtained by dividing (1) the sum of the products of (a) the number of years from such date of determination to the dates of each successive scheduled principal payment of such Indebtedness and (b) the amount of such principal payment by (2) the sum of all such principal payments.

“Bank Deposit Secured Indebtedness” means Indebtedness of the Company or any Restricted Subsidiary that is secured by a pledge of cash deposits, bank accounts or other assets of the Company or a Restricted Subsidiary and is used by the Company and its Restricted Subsidiaries to in effect exchange foreign currencies.

“Board of Directors” means the board of directors elected or appointed by the stockholders of the Company to manage the business of the Company or any committee of such board duly authorized to take the action purported to be taken by such committee.

“Board Resolution” means any resolution of the Board of Directors taking an action which it is authorized to take and adopted at a meeting duly called and held at which a quorum of disinterested members (if so required) was present and acting throughout or adopted by written resolution executed by every member of the Board of Directors.

“Business Day” means any day which is not a Saturday, Sunday, legal holiday or other day on which banking institutions in The City of New York, London or Hong Kong (or in any other place in which payments on the Notes are to be made) are authorized or required by law or governmental regulation to close.

“Capital Stock” means, with respect to any Person, any and all shares, interests, participations or other equivalents (however designated, whether voting or non-voting) in equity of such Person, whether outstanding on the Original Issue Date or issued thereafter, including, without limitation, all Common Stock and Preferred Stock, but excluding debt securities convertible into such equity.

“Capitalized Lease” means, with respect to any Person, any lease of any property (whether real, personal or mixed) which, in conformity with GAAP, is required to be capitalized on the balance sheet of such Person.

“Capitalized Lease Obligations” means the discounted present value of the rental obligations under a Capitalized Lease.

“Change of Control” means the occurrence of one or more of the following events:

- (1) the direct or indirect sale, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the properties or assets of the Company and its Restricted Subsidiaries, taken as a whole, to any “person” (within the meaning of Section 13(d) of the Exchange Act), other than one or more Permitted Holders;
- (2) the Company consolidates with, or merges with or into, any Person (other than one or more Permitted Holders), or any Person consolidates with, or merges with or into, the Company, in any such event pursuant to a transaction in which any of the outstanding Voting Stock of the Company or such other Person is converted into or exchanged for cash, securities or other property, other than any such transaction where the Voting Stock of the Company outstanding immediately prior to such transaction is converted into or

exchanged for (or continues as) Voting Stock (other than Disqualified Stock) of the surviving or transferee Person constituting a majority of the outstanding shares of Voting Stock of such surviving or transferee Person (immediately after giving effect to such issuance) and in substantially the same proportion as before the transaction;

- (3) any “person” or “group” (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act) is or becomes the beneficial owner (as such term is used in Rule 13d-3 of the Exchange Act) directly or indirectly, of total voting power of the Voting Stock of the Company greater than such total voting power held beneficially by the Permitted Holders;
- (4) individuals who on the Original Issue Date constituted the Board of Directors, together with any new directors whose election or nomination to the Board of Directors was approved by a vote of at least a majority of the directors then still in office who were either directors on the Original Issue Date or whose election or nomination was previously so approved, cease for any reason to constitute a majority of the Board of Directors then in office; or
- (5) the adoption of a plan relating to the liquidation or dissolution of the Company.

“Change of Control Triggering Event” means the occurrence of both a Change of Control and, *provided* that the Notes are rated by at least one Rating Agency, a Rating Decline.

“Clearstream” means Clearstream Banking S.A.

“Commodity Hedging Agreement” means any commodities swap agreement, commodities cap agreement, commodities floor agreement, commodities futures agreement, commodities option agreement or any other similar agreement or arrangement which may consist of one or more of the foregoing agreements, designed to protect against fluctuations in commodities prices.

“Common Stock” means, with respect to any Person, any and all shares, interests or other participations in, and other equivalents (however designated and whether voting or non-voting) of such Person’s common stock or ordinary shares, whether or not outstanding at the date of the Indenture, and includes, without limitation, all series and classes of such common stock or ordinary shares.

“Comparable Treasury Issue” means the U.S. Treasury security having a maturity comparable to January 26, 2024, that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities with a maturity comparable to January 26, 2024.

“Comparable Treasury Price” means, with respect to any redemption date, if clause (ii) of the Adjusted Treasury Rate is applicable, the average of three, such lesser number as is obtained by the Company, Reference Treasury Dealer Quotations for such redemption date.

“Consolidated Assets” means, with respect to any Restricted Subsidiary at any date of determination, the Company and its Restricted Subsidiaries’ proportionate interest in the total consolidated assets of such Restricted Subsidiary and its Restricted Subsidiaries measured in accordance with GAAP as of the last day of the most recent fiscal quarter for which consolidated financial statements of the Company (which the Company shall use its reasonable best efforts to compile in a timely manner and which may include internal consolidated financial statements) are available.

“Consolidated EBITDA” means, with respect to any Person for any period, Consolidated Net Income of such Person for such period plus, to the extent such amount was deducted in calculating such Consolidated Net Income:

- (1) Consolidated Interest Expense;

- (2) income taxes (other than income taxes attributable to extraordinary and non-recurring gains (or losses) or sales of assets); and
- (3) depreciation expense, amortization expense and all other non-cash items reducing Consolidated Net Income (other than non-cash items in a period which reflect cash expenses paid or to be paid in another period), less all non-cash items increasing Consolidated Net Income;

all as determined on a consolidated basis for such Person and its Restricted Subsidiaries in conformity with GAAP; provided that (i) if any Restricted Subsidiary is not a Wholly Owned Restricted Subsidiary, Consolidated EBITDA shall be reduced (to the extent not otherwise reduced in accordance with GAAP) by any payments, distributions or amounts (including the Fair Market Value of any non-cash payments, distributions or amounts) declared or paid by such Restricted Subsidiary that is not a Wholly Owned Restricted Subsidiary to its shareholders other than the Company or any other Restricted Subsidiary; and (ii) in the case of any PRC CJV (consolidated in accordance with GAAP), Consolidated EBITDA shall be reduced (to the extent not already reduced in accordance with GAAP) by any payments, distributions or amounts (including the Fair Market Value of any non-cash payments, distributions or amounts) required to be made or paid by such PRC CJV to the PRC CJV Partner, or to which the PRC CJV Partner otherwise has a right or is entitled, pursuant to the joint venture agreement governing such PRC CJV.

“Consolidated Fixed Charges” means, with respect to any Person for any period, the sum (without duplication) of (1) Consolidated Interest Expense for such period and (2) all cash and non-cash dividends paid, declared, accrued or accumulated during such period on any Disqualified Stock or Preferred Stock of such Person or any of its Restricted Subsidiaries, except for dividends payable in the Company’s Capital Stock (other than Disqualified Stock) or paid to the Company or to a Wholly-Owned Restricted Subsidiary.

“Consolidated Interest Expense” means, with respect to any Person for any period, the amount that would be included in gross interest expense on a consolidated income statement prepared in accordance with GAAP for such period of such Person and its Restricted Subsidiaries, plus, to the extent not included in such gross interest expense, and to the extent incurred, accrued or payable during such period by such Person and its Restricted Subsidiaries, without duplication, (1) interest expense attributable to Capitalized Lease Obligations and imputed interest with respect to Attributable Indebtedness, (2) amortization of debt issuance costs and original issue discount expense and non-cash interest payments in respect of any Indebtedness, (3) the interest portion of any deferred payment obligation, (4) all commissions, discounts and other fees and charges with respect to letters of credit or similar instruments issued for financing purposes or in respect of any Indebtedness, (5) the net costs associated with Hedging Obligations (including the amortization of fees), (6) interest accruing on Indebtedness of any other Person that is Guaranteed by, or secured by a Lien on any asset of, such Person or any of its Restricted Subsidiaries, only to the extent that such interest is actually paid by the Company or any Restricted Subsidiary and (7) any capitalized interest; *provided* that any interest attributable to lease liabilities arising from any operating lease shall be excluded; and *provided further* that interest expense attributable to interest on any Indebtedness bearing a floating interest rate will be computed on a *pro forma* basis as if the rate in effect on the date of determination had been the applicable rate for the entire relevant period and, for the avoidance of doubt, distributions Incurred or accrued or payments on any Perpetual Security Obligation shall not be included in the calculation of Consolidated Interest Expense.

“Consolidated Net Income” means, with respect to any Person for any period, the aggregate of the net income (or loss) of such Person and its Restricted Subsidiaries for such period, on a consolidated basis, determined in conformity with GAAP; *provided* that the following items shall be excluded in computing Consolidated Net Income (without duplication):

- (1) the net income (or loss) of any Person that is not a Restricted Subsidiary or that is accounted for by the equity method of accounting except that:
 - (a) subject to the exclusion contained in clause (5) below, the Company’s equity in the net income of any such Person for such period shall be included in such

Consolidated Net Income up to the aggregate amount of cash actually distributed by such Person during such period to the Company or a Restricted Subsidiary as a dividend or other distribution (subject, in the case of a dividend or other distribution paid to a Restricted Subsidiary, to the limitations contained in clause (3) below); and

- (b) the Company's equity in a net loss of any such Person for such period shall be included in determining such Consolidated Net Income to the extent funded with cash or other assets of the Company or Restricted Subsidiaries;
- (2) the net income (or loss) of any Person accrued prior to the date it becomes a Restricted Subsidiary or is merged into or consolidated with the Company or any Restricted Subsidiary or all or substantially all of the property and assets of such Person are acquired by the Company or any Restricted Subsidiary;
- (3) the net income (but not loss) of any Restricted Subsidiary to the extent that the declaration or payment of dividends or similar distributions by such Restricted Subsidiary of such net income is not at the time permitted by the operation of the terms of its charter, articles of association or other constitutive document or any agreement, instrument, judgment, decree, order, statute, rule or governmental regulation applicable to such Restricted Subsidiary;
- (4) the cumulative effect of a change in accounting principles;
- (5) any net after tax gains realized on the sale or other disposition of (a) any property or asset of the Company or any Restricted Subsidiary that is not sold in the ordinary course of its business or (b) any Capital Stock of any Person (including any gains by the Company or a Restricted Subsidiary realized on sales of Capital Stock of the Company or of any Restricted Subsidiary);
- (6) any translation gains and losses due solely to fluctuations in currency values and related tax effects; and
- (7) any net after-tax extraordinary or non-recurring gains.

“Consolidated Net Worth” means, at any date of determination, stockholders' equity as set forth on the most recently available quarterly, semiannual or annual consolidated balance sheet of the Company and the Restricted Subsidiaries, plus, to the extent not included, any Preferred Stock of the Company, less any amounts attributable to Disqualified Stock or any equity security convertible into or exchangeable for Indebtedness, the cost of treasury stock and the principal amount of any promissory notes receivable from the sale of the Capital Stock of the Company or any Restricted Subsidiary, each item to be determined in conformity with GAAP.

“Credit Facilities” means one or more of the facilities or arrangements with one or more banks or other lenders or institutions providing for revolving credit loans, term loans, receivables or financings (including without limitation through the sale of receivables or assets to such institutions or to special purpose entities formed to borrow from such institutions against such receivables or assets or the creation of any Liens in respect of such receivables or assets in favor of such institutions), letters of credit or other Indebtedness, in each case, including all agreements, instruments and documents executed and delivered pursuant to or in connection with any of the foregoing, including but not limited to any notes and letters of credit issued pursuant thereto and any guarantee and collateral agreement, patent and trademark security agreement, mortgages or letter of credit applications and other guarantees, pledge agreements, security agreements and collateral documents, in each case as the same may be amended, supplemented, waived or otherwise modified from time to time, or refunded refinanced, restructured, replaced, renewed, repaid, increased or extended from time to time (whether in whole or in part, whether with the original banks,

lenders or institutions or other banks, lenders or institutions or otherwise, and whether provided under any original Credit Facility or one or more other credit agreements, indentures, financing agreements or other Credit Facilities or otherwise). Without limiting the generality of the foregoing, the term “Credit Facility” shall include any agreement (1) changing the maturity of any Indebtedness Incurred thereunder or contemplated thereby, (2) adding Subsidiaries as additional borrowers or guarantors thereunder, (3) increasing the amount of Indebtedness Incurred thereunder or available to be borrowed thereunder (provided that such increase is permitted under the covenant described under “— Certain Covenants — Limitation on Indebtedness”) or (4) otherwise altering the terms and conditions thereof.

“Currency Hedging Agreement” means any currency swap agreement, currency cap agreement, currency floor agreement, currency futures agreement, commodity option agreement or any other similar agreement or arrangement which may consist of one or more of the foregoing agreements, designed to protect against fluctuations in foreign exchange rates.

“Default” means any event that is, or after notice or passage of time or both would be, an Event of Default.

“Disqualified Stock” means any class or series of Capital Stock of any Person that by its terms or otherwise is (1) required to be redeemed prior to the Stated Maturity of the Notes, (2) redeemable at the option of the holder of such class or series of Capital Stock at any time prior to the Stated Maturity of the Notes or (3) convertible into or exchangeable for Capital Stock referred to in clause (1) or (2) above or Indebtedness having a scheduled maturity prior to the Stated Maturity of the Notes; *provided* that any Capital Stock that would not constitute Disqualified Stock but for provisions thereof giving holders thereof the right to require such Person to repurchase or redeem such Capital Stock upon the occurrence of an “asset sale” or “change of control” occurring prior to the Stated Maturity of the Notes shall not constitute Disqualified Stock if the “asset sale” or “change of control” provisions applicable to such Capital Stock are no more favorable to the holders of such Capital Stock than the provisions contained in the “— Limitation on Asset Sales” and “— Repurchase of Notes upon a Change of Control Triggering Event” covenants and such Capital Stock specifically provides that such Person will not repurchase or redeem any such stock pursuant to such provision prior to the Company’s repurchase of such Notes as are required to be repurchased pursuant to the covenants described under “— Certain Covenants — Limitation on Asset Sales” and “— Repurchase of Notes upon a Change of Control Triggering Event.”

“Dollar Equivalent” means, with respect to any monetary amount in a currency other than U.S. dollars, at any time for the determination thereof, the amount of U.S. dollars obtained by converting such foreign currency involved in such computation into U.S. dollars at the base buying rate for the purchase of U.S. dollars with the applicable foreign currency quoted by the Federal Reserve Bank of New York on the date of determination.

“Entrusted Loans” means borrowings by a PRC Restricted Subsidiary from a bank that are secured by a pledge of deposits made by another PRC Restricted Subsidiary to the lending bank as security for such borrowings, *provided* that such borrowings are not reflected as borrowings or indebtedness on the consolidated balance sheet of the Company.

“Equity Offering” means (i) any bona fide public or private offering of Capital Stock (other than Disqualified Stock) of the Company other than to Affiliates of the Company after the Original Issue Date or (ii) any bona fide underwritten secondary public offering or secondary private placement of Capital Stock (other than Disqualified Stock) of the Company beneficially owned by the Permitted Holders, after the Original Issue Date, to the extent that the Permitted Holders or a company controlled by such Persons concurrently with such public offering or private placement purchases in cash an equal amount of Capital Stock (other than Disqualified Stock) from the Company at the same price as the public offering or private placing price; *provided* that (i) the aggregate gross cash proceeds received by the Company as a result of such offering described in clause (i) or (ii) or a combination thereof (excluding gross cash proceeds received from the Company or any of its Subsidiaries) shall be no less than US\$25 million (or the Dollar Equivalent thereof) and (ii) any such offering shall result in such Capital Stock being listed and eligible for dealing on the Stock Exchange of Hong Kong Limited.

“Euroclear” means Euroclear Bank SA/NV.

“Exchange Act” means the U.S. Securities Exchange Act of 1934, as amended.

“Exempted Subsidiary” means any Restricted Subsidiary organized in any jurisdiction other than the PRC that is prohibited by applicable law or regulation to provide a Subsidiary Guarantee; *provided that* (x) the Company shall have failed, upon using commercially reasonable efforts, to obtain any required governmental or regulatory approval or registration with respect to such Subsidiary Guarantee, to the extent that such approval or registration is available under any applicable law or regulation and (y) such Restricted Subsidiary shall cease to be an Exempted Subsidiary immediately upon such prohibition ceasing to be in force or apply to such Restricted Subsidiary or upon the Company having obtained such applicable approval or registration.

“Existing Unrestricted Subsidiaries” means Anton Oilfield Services International Company Limited (安東油田服務國際有限公司), Antonoil Services DMCC, Antonoil Services DMCC Albanial, Antonoil Services DMCC Chad Company, Anton Oilfield Services International Limited Aktrobe Branch, Roxxon Industry Group Limited, Andes Petroleum Company SAS, Antonoil Service Company S.A., Too Petrotech Services KZ, Anton Oilfield Services Africa Co., Ltd., Anton Energy Services Corporation, Antonoil Oilfield Services (PVT) Limited, Anton Oilfield Service South America Co., Ltd., S.A., Anton Oilfield Services DMCC, Anhui International Oil Technology Company Limited (安惠國際石油技術有限公司), Antonoil International FZE, Antonoil International FZE Iraq Branch, Antonoil International DMCC Iraq Branch, DMCC South Sudan Branch, Anton Oilfield Service Sucursal Columbia, Anton Oilfield Services KZ, Anton Specialist Oilfield DMCC, Wabolt Petroleum Ltd. (瓦博石油有限公司), and Anton Bolin Oil Technology (Beijing) Company Limited (安東柏林石油科技(北京)有限公司), and each of their respective Subsidiaries (whether now or in the future).

“Fair Market Value” means the price that would be paid in an arm’s-length transaction between an informed and willing seller under no compulsion to sell and an informed and willing buyer under no compulsion to buy, as determined in good faith by the Board of Directors, whose determination shall be conclusive if evidenced by a Board Resolution.

“Fixed Charge Coverage Ratio” means, on any Transaction Date, the ratio of (1) the aggregate amount of Consolidated EBITDA for the then most recent four fiscal quarters prior to such Transaction Date for which consolidated financial statements of the Company (which the Company shall use its reasonable best efforts to compile in a timely manner and which may include internal consolidated financial statements) are available (the “Four Quarter Period”) to (2) the aggregate Consolidated Fixed Charges during such Four Quarter Period. In making the foregoing calculation:

- (a) *pro forma* effect shall be given to any Indebtedness Incurred, repaid or redeemed during the period (the “Reference Period”) commencing on and including the first day of the Four Quarter Period and ending on and including the Transaction Date (other than Indebtedness Incurred or repaid under a revolving credit or similar arrangement (or under any predecessor revolving credit or similar arrangement) in effect on the last day of such Four Quarter Period), in each case as if such Indebtedness had been Incurred, repaid or redeemed on the first day of such Reference Period; *provided that*, in the event of any such repayment or redemption, Consolidated EBITDA for such period shall be calculated as if the Company or such Restricted Subsidiary had not earned any interest income actually earned during such period in respect of the funds used to repay or redeem such Indebtedness;
- (b) Consolidated Interest Expense attributable to interest on any Indebtedness (whether existing or being Incurred) computed on a *pro forma* basis and bearing a floating interest rate will be computed as if the rate in effect on the Transaction Date (taking into account any Interest Rate Hedging Agreement applicable to such Indebtedness if such Interest Rate Hedging Agreement has a remaining term in excess of 12 months or, if shorter, at least equal to the remaining term of such Indebtedness) had been the applicable rate for the entire period;

- (c) *pro forma* effect will be given to the creation, designation or redesignation of Restricted Subsidiaries and Unrestricted Subsidiaries as if such creation, designation or redesignation had occurred on the first day of such Reference Period;
- (d) *pro forma* effect will be given to Asset Dispositions and Asset Acquisitions (including giving *pro forma* effect to the application of proceeds of any Asset Disposition) that occur during such Reference Period as if they had occurred and such proceeds had been applied on the first day of such Reference Period; and
- (e) *pro forma* effect will be given to asset dispositions and asset acquisitions (including giving *pro forma* effect to the application of proceeds of any asset disposition) that have been made by any Person that has become a Restricted Subsidiary or has been merged with or into the Company or any Restricted Subsidiary during such Reference Period and that would have constituted Asset Dispositions or Asset Acquisitions had such transactions occurred when such Person was a Restricted Subsidiary as if such asset dispositions or asset acquisitions were Asset Dispositions or Asset Acquisitions that occurred on the first day of such Reference Period;

provided that to the extent that clause (d) or (e) of this sentence requires that *pro forma* effect be given to an Asset Acquisition or Asset Disposition (or asset acquisition or asset disposition), such *pro forma* calculation will be based upon the four full fiscal quarters immediately preceding the Transaction Date of the Person, or division or line of business of the Person, that is acquired or disposed for which financial information is available.

“GAAP” means International Financial Reporting Standards as in effect from time to time.

“Guarantee” means any obligation, contingent or otherwise, of any Person directly or indirectly guaranteeing any Indebtedness or other obligation of any other Person and, without limiting the generality of the foregoing, any obligation, direct or indirect, contingent or otherwise, of such Person (1) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other obligation of such other Person (whether arising by virtue of partnership arrangements, or by agreements to keep well, to purchase assets, goods, securities or services, to take-or-pay, or to maintain financial statement conditions or otherwise) or (2) entered into for purposes of assuring in any other manner the obligee of such Indebtedness or other obligation of the payment thereof or to protect such obligee against loss in respect thereof (in whole or in part); *provided* that the term “Guarantee” shall not include endorsements for collection or deposit in the ordinary course of business. The term “Guarantee” used as a verb has a corresponding meaning.

“Hedging Obligation” of any Person means the obligations of such Person pursuant to any Commodity Hedging Agreement, Currency Hedging Agreement or Interest Rate Hedging Agreement.

“Holder” means the Person in whose name a Note is registered in the Note register.

“Incur” means, with respect to any Indebtedness, to incur, create, issue, assume, Guarantee or otherwise become liable for or with respect to, or become responsible for, the payment of, contingently or otherwise, such Indebtedness; *provided* that (1) any Indebtedness of a Person existing at the time such Person becomes a Restricted Subsidiary (or fails to meet the qualifications necessary to remain an Unrestricted Subsidiary) will be deemed to be Incurred by such Restricted Subsidiary at the time it becomes a Restricted Subsidiary and (2) the accretion of original issue discount shall not be considered an Incurrence of Indebtedness. The terms “Incurrence,” “Incurred” and “Incurring” have meanings correlative with the foregoing.

“Indebtedness” means, with respect to any Person at any date of determination (without duplication):

- (1) all indebtedness of such Person for borrowed money;
- (2) all obligations of such Person evidenced by bonds, debentures, notes or other similar instruments;
- (3) all obligations of such Person in respect of letters of credit, bankers’ acceptances or other similar instruments;
- (4) all obligations of such Person to pay the deferred and unpaid purchase price of property or services, except Trade Payables;
- (5) all Capitalized Lease Obligations and Attributable Indebtedness;
- (6) all Indebtedness of other Persons secured by a Lien on any asset of such Person, whether or not such Indebtedness is assumed by such Person; *provided* that the amount of such Indebtedness shall be the lesser of (a) the Fair Market Value of such asset at such date of determination and (b) the amount of such Indebtedness;
- (7) all Indebtedness of other Persons Guaranteed by such Person to the extent such Indebtedness is Guaranteed by such Person;
- (8) to the extent not otherwise included in this definition, Hedging Obligations;
- (9) all Disqualified Stock issued by such Person valued at the greater of its voluntary or involuntary liquidation preference and its maximum fixed repurchase price plus accrued dividends; and
- (10) any Preferred Stock issued by (a) such Person, if such Person is a Restricted Subsidiary or (b) any Restricted Subsidiary of such Person valued at the greater of its voluntary or involuntary liquidation preference and its maximum fixed repurchase price plus accrued dividends.

Notwithstanding the foregoing, Indebtedness shall not include (1) any capital commitments, deferred payment obligations or similar obligations Incurred in the ordinary course of business in connection with the acquisition, development, construction or improvement of personal property (including land use rights) to be used in a Permitted Business, (2) Entrusted Loans; (3) Perpetual Security Obligations or (4) lease liabilities arising from any operating lease; *provided* that such Indebtedness is not reflected on the consolidated balance sheet of the Company and the Restricted Subsidiaries (contingent obligations and commitments referred to in a footnote to financial statements and not otherwise reflected on the balance sheet as borrowings or indebtedness will not be deemed to be reflected on such balance sheet).

The amount of Indebtedness of any Person at any date shall be the outstanding balance at such date of all unconditional obligations as described above and, with respect to contingent obligations, the maximum liability upon the occurrence of the contingency giving rise to the obligation; *provided*

- (1) that the amount outstanding at any time of any Indebtedness issued with original issue discount is the face amount of such Indebtedness less the remaining unamortized portion of the original issue discount of such Indebtedness at such time as determined in conformity with GAAP;
- (2) that money borrowed and set aside at the time of the Incurrence of any Indebtedness in order to prefund the payment of the interest on such Indebtedness shall not be deemed to be “Indebtedness” so long as such money is held to secure the payment of such interest; and

- (3) that the amount of Indebtedness with respect to any Hedging Obligation shall be (i) zero if Incurred pursuant to paragraph 2(e) under the “Limitation on Indebtedness” covenant or (ii) equal to the net amount payable by such Person if the Commodity Hedging Agreement, Currency Hedging Agreement or Interest Rate Hedging Agreement giving rise to such Hedging Obligation were terminated at that time due to default by such Person if not Incurred pursuant to such paragraph.

“Independent Third Party” means any Person that is not an Affiliate of the Company.

“Interest Rate Hedging Agreement” means any interest rate swap agreement, interest rate cap agreement, interest rate floor agreement, interest rate future contract, interest rate option agreement or any other similar agreement or arrangement which may consist of one or more of any of the foregoing agreements, designed to protect against fluctuations in interest rates.

“Investment” means:

- (1) any direct or indirect advance, loan or other extension of credit to another Person;
- (2) any capital contribution to another Person (by means of any transfer of cash or other property to others or any payment for property or services for the account or use of others);
- (3) any purchase or acquisition of Capital Stock (or options, warrants or other rights to acquire such Capital Stock), Indebtedness, bonds, notes, debentures or other similar instruments or securities issued by another Person; or
- (4) any Guarantee of any obligation of another Person.

For the purposes of the provisions of the covenants described under “— Certain Covenants — Designation of Restricted and Unrestricted Subsidiaries” and “— Certain Covenants — Limitation on Restricted Payments”: (1) the Company will be deemed to have made an Investment in an Unrestricted Subsidiary in an amount equal to the Company’s proportionate interest in the Fair Market Value of the assets (net of the Company’s proportionate interest in the liabilities owed to any Person other than the Company or a Restricted Subsidiary and that are not Guaranteed by the Company or a Restricted Subsidiary) of a Restricted Subsidiary that is designated an Unrestricted Subsidiary at the time of such designation, and (2) any property transferred to or from any Person shall be valued at its Fair Market Value at the time of such transfer, as determined in good faith by the Board of Directors.

“Investment Grade” means a rating of “Aaa,” “Aa,” “A” or “Baa,” as modified by a “1,” “2” or “3” indication, or an equivalent rating representing one of the four highest Rating Categories, by Moody’s or any of its successors or assigns, or the equivalent ratings of any internationally recognized rating agency or agencies, as the case may be, which shall have been designated by the Company as having been substituted for Moody’s.

“Lien” means any mortgage, pledge, security interest, encumbrance, lien or charge of any kind (including, without limitation, any conditional sale or other title retention agreement or lease in the nature thereof or any agreement to create any mortgage, pledge, security interest, lien, charge, easement or encumbrance of any kind).

“Listed Subsidiaries” means any Restricted Subsidiary any class of Voting Stock of which is listed on a Qualifying Exchange and any Restricted Subsidiary of a Listed Subsidiary; provided that such Restricted Subsidiary shall cease to be a Listed Subsidiary immediately upon, as applicable, (x) the Voting Stock of such Restricted Subsidiary ceasing to be listed on a Qualifying Exchange, or (y) such Restricted Subsidiary ceasing to be a Restricted Subsidiary of a Listed Subsidiary.

“Measurement Date” means November 6, 2013.

“Minority Joint Venture” means any corporation, association or other business entity that is accounted for by the equity method of accounting in accordance with GAAP by the Company or a Restricted Subsidiary and primarily engaged in the Permitted Businesses, and such Minority Joint Venture’s Subsidiaries.

“Minority Interest Staged Acquisition Agreement” means an agreement between the Company and/or any Restricted Subsidiary on the one hand and an Independent Third Party on the other (x) pursuant to which the Company and/or such Restricted Subsidiary agrees to acquire less than a majority of the Capital Stock of a Person for a consideration that is not more than the Fair Market Value of such Capital Stock at the time the Company and/or such Restricted Subsidiary enters into such agreement and (y) which provides that the payment of the purchase price for such Capital Stock is made in more than one instalment over a period of time.

“Moody’s” means Moody’s Investors Service, Inc. and its successors.

“Net Cash Proceeds” means:

- (1) with respect to any Asset Sale (other than the issuance or sale of Capital Stock), the proceeds of such Asset Sale in the form of cash or Temporary Cash Investments, including payments in respect of deferred payment obligations (to the extent corresponding to the principal, but not interest, component thereof) when received in the form of cash or Temporary Cash Investments and proceeds from the conversion of other property received when converted to cash or Temporary Cash Investments, net of:
 - (a) brokerage commissions and other fees and expenses (including fees and expenses of counsel and investment banks) related to such Asset Sale;
 - (b) provisions for all taxes (whether or not such taxes will actually be paid or are payable) as a result of such Asset Sale without regard to the consolidated results of operations of the Company and the Restricted Subsidiaries, taken as a whole;
 - (c) payments made to repay Indebtedness or any other obligation outstanding at the time of such Asset Sale that either (x) is secured by a Lien on the property or assets sold or (y) is required to be paid as a result of such sale; and
 - (d) appropriate amounts to be provided by the Company or any Restricted Subsidiary as a reserve against any liabilities associated with such Asset Sale, including, without limitation, pension and other post-employment benefit liabilities, liabilities related to environmental matters and liabilities under any indemnification obligations associated with such Asset Sale, all as determined in conformity with GAAP and reflected in an Officers’ Certificate delivered to the Trustee; and
- (2) with respect to any Asset Sale consisting of the issuance or sale of Capital Stock, the proceeds of such issuance or sale in the form of cash or Temporary Cash Investments, including payments in respect of deferred payment obligations (to the extent corresponding to the principal, but not interest, component thereof) when received in the form of cash or Temporary Cash Investments and proceeds from the conversion of other property received when converted to cash or Temporary Cash Investments, net of attorneys’ fees, accountants’ fees, underwriters’ or placement agents’ fees, discounts or commissions and brokerage, consultant and other fees incurred in connection with such issuance or sale and net of taxes paid or payable as a result thereof.

“Offer to Purchase” means an offer to purchase Notes by the Company from the Holders commenced by the Company mailing a notice by first class mail, postage prepaid, to the Trustee and each Holder at its last address appearing in the Note register stating:

- (1) the provision in the Indenture pursuant to which the offer is being made and that all Notes validly tendered will be accepted for payment on a pro rata basis;
- (2) the purchase price and the date of purchase (which shall be a Business Day no earlier than 30 days nor later than 60 days from the date such notice is mailed) (the “Offer to Purchase Payment Date”);
- (3) that any Note not tendered will continue to accrue interest pursuant to its terms;
- (4) that, unless the Company defaults in the payment of the purchase price, any Note accepted for payment pursuant to the Offer to Purchase shall cease to accrue interest on and after the Offer to Purchase Payment Date;
- (5) that Holders electing to have a Note purchased pursuant to the Offer to Purchase will be required to surrender the Note, together with the form entitled “Option of the Holder to Elect Purchase” on the reverse side of the Note completed, to the tender agent (the “Tender Agent”) at the address specified in the notice prior to the close of business on the Business Day immediately preceding the Offer to Purchase Payment Date;
- (6) that Holders will be entitled to withdraw their election if the Tender Agent receives, not later than the close of business on the third Business Day immediately preceding the Offer to Purchase Payment Date, a facsimile transmission or letter setting forth the name of such Holder, the principal amount of Notes delivered for purchase and a statement that such Holder is withdrawing his election to have such Notes purchased; and
- (7) that Holders whose Notes are being purchased only in part will be issued new Notes equal in principal amount to the unpurchased portion of the Notes surrendered; *provided* that each Note purchased and each new Note issued shall be in a principal amount of US\$200,000 or any amount in excess thereof which is an integral multiple of US\$1,000.

One Business Day prior to the Offer to Purchase Payment Date, the Company shall deposit with the Tender Agent money sufficient to pay the purchase price of all Notes or portions thereof to be accepted by the Company for payment on the Offer to Purchase Payment Date. On the Offer to Purchase Payment Date, the Company shall (a) accept for payment on a pro rata basis Notes or portions thereof tendered pursuant to an Offer to Purchase; and (b) deliver, or cause to be delivered, to the Trustee all Notes or portions thereof so accepted together with an Officers’ Certificate specifying the Notes or portions thereof accepted for payment by the Company. The Tender Agent shall promptly mail to the Holders of Notes so accepted payment in an amount equal to the purchase price, and upon receipt of written order of the Company signed by an Officer the Trustee shall promptly authenticate and mail to such Holders a new Note equal in principal amount to any unpurchased portion of the Note surrendered; *provided* that each Note purchased and each new Note issued shall be in a principal amount of US\$200,000 or any amount in excess thereof which is an integral multiple of US\$1,000. The Company will publicly announce the results of an Offer to Purchase as soon as practicable after the Offer to Purchase Payment Date. The Company will comply with Rule 14e-1 under the Exchange Act and any other applicable securities laws and regulations, in the event that the Company is required to repurchase Notes pursuant to an Offer to Purchase.

The materials used in connection with an Offer to Purchase are required to contain or incorporate by reference information concerning the business of the Company and its Subsidiaries which the Company in good faith believes will assist such Holders to make an informed decision with respect to the Offer to Purchase, including a brief description of the events requiring the Company to make the Offer to Purchase, and any other information required by applicable law to be included therein. The offer is required to contain all instructions and materials necessary to enable such Holders to tender Notes pursuant to the Offer to Purchase.

“Officer” means one of the executive officers of the Company or, in the case of a Restricted Subsidiary, one of the directors or officers of such Restricted Subsidiary.

“Officers’ Certificate” means a certificate signed by two Officers; *provided, however*, with respect to an Officers’ Certificate required to be delivered by any Subsidiary Guarantor under the Indenture, Officers’ Certificate means a certificate signed by one Officer if there is only one Officer in such Subsidiary Guarantor at the time such certificate is required to be delivered.

“Opinion of Counsel” means a written opinion from legal counsel reasonably acceptable to the Trustee.

“Original Issue Date” means the date on which the Notes are originally issued under the Indenture.

“Pari Passu Guarantee” means a guarantee by the Company or any Subsidiary Guarantor of Indebtedness of the Company (including Additional Notes) or any Subsidiary Guarantor; *provided that* (1) the Company or such Subsidiary Guarantor was permitted to Incur such Indebtedness under the covenant described under “— Certain Covenants — Limitation on Indebtedness” and (2) such guarantee ranks *pari passu* with the Notes or any outstanding Subsidiary Guarantee of such Subsidiary Guarantor.

“Permitted Businesses” means any business which is the same as or ancillary or complementary to any of the businesses of the Company and the Restricted Subsidiaries on the Original Issue Date.

“Permitted Holders” means any or all of the following:

- (1) Mr Luo Lin;
- (2) any Affiliate (other than an Affiliate as defined in clause (2) or (3) of the definition of Affiliate) of the Person specified in clause (1) of this definition; and
- (3) any Person both the Capital Stock and the Voting Stock of which (or in the case of a trust, the beneficial interests in which) are owned 80% or more by one or more of the Persons specified in clauses (1) and (2) of this definition.

“Permitted Investment” means:

- (1) any Investment in the Company or a Restricted Subsidiary that is primarily engaged in a Permitted Business or a Person which will, upon the making of such Investment, become a Restricted Subsidiary that is primarily engaged in a Permitted Business or will be merged or consolidated with or into, or transfer or convey all or substantially all its assets to, the Company or a Restricted Subsidiary that is primarily engaged in a Permitted Business;
- (2) cash or Temporary Cash Investments;
- (3) payroll, travel and similar advances made in the ordinary course of business to cover matters that are expected at the time of such advances ultimately to be treated as expenses in accordance with GAAP;
- (4) stock, obligations or securities received in satisfaction of judgments;
- (5) an Investment in an Unrestricted Subsidiary consisting solely of an Investment in another Unrestricted Subsidiary;
- (6) any Investment pursuant to a Hedging Obligation designed solely to protect the Company or any Restricted Subsidiary against fluctuations in commodity prices, interest rates or foreign currency exchange rates and not for speculation;

- (7) receivables, trade credits or other current assets owing to the Company or any Restricted Subsidiary, if created or acquired in the ordinary course of business and payable or dischargeable in accordance with customary trade terms;
- (8) Investments consisting of consideration received in connection with an Asset Sale under clause 4(b) of, and made in compliance with, the covenant described under “— Certain Covenants — Limitation on Asset Sales”;
- (9) pledges or deposits (x) with respect to leases or utilities provided to third parties in the ordinary course of business or (y) otherwise described in the definition of “Permitted Liens” or made in connection with Liens permitted under the covenant described under the “Limitation on Liens”;
- (10) loans or advances to vendors, contractors, suppliers or distributors, including advance payments for equipment and machinery made to the manufacturer thereof, of the Company or any Restricted Subsidiary in the ordinary course of business and dischargeable in accordance with customary trade terms within 180 days;
- (11) Investments in existence on the Original Issue Date;
- (12) deposits made in order to comply with statutory or regulatory obligations to maintain deposits for workers’ compensation claims and other purposes specified by statute or regulation from time to time in the ordinary course of business of the Company or any Restricted Subsidiary;
- (13) Investments in securities of trade creditors, trade debtors or customers received pursuant to any plan of reorganization or similar arrangement upon the bankruptcy or insolvency of such trade creditor, trade debtor or customer;
- (14) advances to contractors and suppliers for the acquisition of assets or consumables or services in the ordinary course of business that are recorded as deposits or prepaid expenses on the Company’s consolidated balance sheet;
- (15) any Investment by the Company or any Restricted Subsidiary in any Person, *provided* that:
 - (i) the aggregate of all Investments made under this clause (15) since the Original Issue Date shall not exceed in aggregate an amount equal to 15% of Total Assets. Such aggregate amount of Investments shall be calculated after deducting an amount equal to the net reduction in all Investments made under this clause (15) since the Original Issue Date resulting from:
 - (A) payments of interest on Indebtedness, dividends or repayments of loans or advances made under this clause (15), in each case to the Company or any Restricted Subsidiary (except, in each case, to the extent any such payment or proceeds are included in the calculation of Consolidated Net Income),
 - (B) the unconditional release of a Guarantee provided by the Company or a Restricted Subsidiary after the Original Issue Date under this clause (15) of an obligation of any such Person, or

- (C) to the extent that an Investment made after the Original Issue Date under this clause (15) is sold or otherwise liquidated or repaid for cash, the lesser of (x) cash return of capital with respect to such Investment (less the cost of disposition, if any) and (y) the initial amount of such Investment, not to exceed, in each case, the amount of Investments made by the Company or a Restricted Subsidiary after the Original Issue Date in any such Person pursuant to this clause (15);
- (ii) the Person into which such Investment is made is primarily engaged in the Permitted Businesses;
- (iii) none of the other shareholders or partners in such Person in which such Investment was made pursuant to this clause (15) is a Person described in clauses (x) or (y) of the first paragraph of the covenant under the caption “— Limitation on Transactions with Shareholders and Affiliates” (other than by reason of such shareholder or partner being an officer or director of the Company or a Restricted Subsidiary or by reason of being a Subsidiary or a Minority Joint Venture) or such Investment is permitted under the caption “— Limitation on Transactions with Shareholders and Affiliates”; and
- (iv) no Default has occurred and is continuing or would occur as a result of such Investment.

For the avoidance of doubt, the value of each Investment made pursuant to this clause (15) shall be valued at the time such Investment is made;

- (16) Guarantees permitted by the covenant described under the caption entitled “— Limitation on Indebtedness”; and
- (17) the purchase of Capital Stock of a Person, and payments made, pursuant to a Staged Acquisition Agreement.

“Permitted Liens” means:

- (1) Liens for taxes, assessments, governmental charges or claims that are being contested in good faith by appropriate legal or administrative proceedings promptly instituted and diligently conducted and for which a reserve or other appropriate provision, if any, as shall be required in conformity with GAAP shall have been made;
- (2) statutory and common law Liens of landlords and carriers, warehousemen, mechanics, suppliers, repairmen or other similar Liens arising in the ordinary course of business and with respect to amounts not yet delinquent or being contested in good faith by appropriate legal or administrative proceedings promptly instituted and diligently conducted and for which a reserve or other appropriate provision, if any, as shall be required in conformity with GAAP shall have been made;
- (3) Liens incurred or deposits made to secure the performance of tenders, bids, leases, statutory or regulatory obligations, bankers’ acceptances, surety and appeal bonds, government contracts, performance and return-of-money bonds and other obligations of a similar nature incurred in the ordinary course of business (exclusive of obligations for the payment of borrowed money);
- (4) leases or subleases granted to others that do not materially interfere with the ordinary course of business of the Company and the Restricted Subsidiaries, taken as a whole;

- (5) Liens on property of, or on shares of Capital Stock or Indebtedness of, any Person existing at the time such Person (i) becomes a Restricted Subsidiary or (ii) is merged with or into or consolidated with the Company or any Restricted Subsidiary; *provided* that such Liens do not extend to or cover any property or assets of the Company or any Restricted Subsidiary other than the property or assets of such Person (if such Person becomes a Restricted Subsidiary) or the property or assets acquired by the Company or such Restricted Subsidiary (if such Person is merged with or into or consolidated with the Company or such Restricted Subsidiary); *provided further* that such Liens were not created in contemplation of or in connection with the transactions or series of transactions pursuant to which such Person became a Restricted Subsidiary;
- (6) Liens in favor of the Company or any Restricted Subsidiary;
- (7) Liens arising from the rendering of a final judgment or order against the Company or any Restricted Subsidiary that do not give rise to an Event of Default;
- (8) Liens securing reimbursement obligations with respect to letters of credit, performance and surety bonds and completion guarantees that encumber documents and other property relating to such letters of credit and the products and proceeds thereof;
- (9) Liens existing on the Original Issue Date;
- (10) Liens securing Indebtedness which is Incurred to refinance Secured Indebtedness which is permitted to be Incurred under clause (2)(d) of the covenant described under “— Certain Covenants — Limitation on Indebtedness,” *provided* that such Liens do not extend to or cover any property or assets of the Company or any Restricted Subsidiary other than the property or assets securing the Indebtedness being refinanced;
- (11) Liens securing Hedging Obligations permitted to be Incurred under clause (2)(e) of the covenant described under “— Certain Covenants — Limitation on Indebtedness,” *provided* that (i) Indebtedness relating to any such Hedging Obligation is, and is permitted under the covenant described under “— Certain Covenants — Limitation on Liens” to be, secured by a Lien on the same property securing such Hedging Obligation or (ii) such Liens are encumbering customary initial deposits or margin deposits or are otherwise within the general parameters customary in the industry and incurred in the ordinary course of business;
- (12) easements, rights-of-way, municipal and zoning ordinances or other restrictions as to the use of properties in favor of governmental agencies or utility companies that do not materially adversely affect the value of such properties or materially impair the use for the purposes of which such properties are held by the Company or any Restricted Subsidiary;
- (13) any interest or title of a lessor in the property subject to any operating lease;
- (14) Liens on deposits made in order to comply with statutory obligations to maintain deposits for workers’ compensation claims and other purposes specified by statute made in the ordinary course of business and not securing Indebtedness of the Company or any Restricted Subsidiary;
- (15) Liens on deposits securing trade letters of credit (and reimbursement obligations relating thereto) incurred in the ordinary course;
- (16) Liens securing Indebtedness permitted under clause (2)(k)(ii) of the covenant described under “— Certain Covenants — Limitation on Indebtedness”; *provided* that such Lien (i) covers only the equipment, property or assets acquired, developed, constructed or improved with such Indebtedness and (ii) is created within 180 days of such acquisition or the completion of such development, construction or improvement;

- (17) Liens securing Indebtedness Incurred pursuant to clause (2)(n) of the covenant described under “— Certain Covenants — Limitation on Indebtedness”;
- (18) Liens on one or more bank accounts to secure Bank Deposit Secured Indebtedness permitted to be Incurred under clause 2(p) of the covenant described under “— Limitation on Indebtedness”;
- (19) Liens on the Capital Stock of the Person that is to be acquired under the relevant Staged Acquisition Agreement securing Indebtedness which is permitted to be Incurred under clause (2)(q) of the covenant described under “— Limitation on Indebtedness”;
- (20) Liens incurred or deposits made to secure Entrusted Loans;
- (21) Liens securing Indebtedness Incurred under clause (2)(r), (2)(s) or (2)(t) of the covenant described under “— Certain Covenants — Limitation on Indebtedness”; and
- (22) any interest or title of a lessor under any Capitalized Lease Obligation permitted to be Incurred under the Indenture; *provided, however*, that the Liens do not extend to any property or asset which is not leased property subject to such Capitalized Lease Obligation.

“Permitted Subsidiary Indebtedness” means Indebtedness of the Non-Guarantor Subsidiaries; *provided that*, on the date of Incurrence of such Indebtedness, and after giving effect thereto and the application of the proceeds thereof, the aggregate principal amount outstanding of all such Indebtedness of the Non-Guarantor Subsidiaries taken as a whole (excluding Public Indebtedness and any Indebtedness of any Non-Guarantor Subsidiary permitted under clause (2)(a), (c), (e) or (f) of the covenant described under “— Certain Covenants — Limitation on Indebtedness”) does not exceed an amount equal to 20.0% of Total Assets (or the Dollar Equivalent thereof).

“Perpetual Security Obligation” means perpetual securities that are accounted for as equity in accordance with the relevant generally accepted accounting principles.

“Person” means any individual, corporation, partnership, limited liability company, joint venture, trust, unincorporated organization or government or any agency or political subdivision thereof.

“PRC” means the People’s Republic of China, excluding Hong Kong Special Administrative Region, Macau and Taiwan.

“PRC CJV” means any future Subsidiary that is a Sino-foreign cooperative joint venture enterprise with limited liability, established in the PRC pursuant to the Foreign Investment Law of the People’s Republic of China adopted on January 1, 2020 and the Regulation for Implementing the Foreign Investment Law of the People’s Republic of China adopted on January 1, 2020, as such laws and regulations may be amended from time to time.

“PRC CJV Partner” means with respect to a PRC CJV, the other party or parties to the joint venture agreement relating to such PRC CJV with the Company or any Restricted Subsidiary.

“PRC Restricted Subsidiary” means a Restricted Subsidiary organized under the laws of the PRC.

“Preferred Stock” as applied to the Capital Stock of any Person means Capital Stock of any class or classes that by its term is preferred as to the payment of dividends, or as to the distribution of assets upon any voluntary or involuntary liquidation or dissolution of such Person, over any other class of Capital Stock of such Person.

“Public Indebtedness” means any bonds, debentures, notes or similar debt securities issued in a public offering or a private placement (other than the Notes) to institutional investors.

“Qualifying Exchange” means either (1) The New York Stock Exchange, the London Stock Exchange, The Stock Exchange of Hong Kong Limited, the Nasdaq Stock Market, Singapore Exchange Securities Trading Limited, The Shanghai Stock Exchange or The Shenzhen Stock Exchange or (2) a national securities exchange (as such term is defined in Section 6 of the Exchange Act) or a designated offshore securities market (as such term is defined in Rule 902(b) under the Securities Act).

“Rating Agency” means Moody’s; *provided* that if Moody’s shall not make a rating of the Notes publicly available, a nationally recognized statistical rating organizations (as defined in Section 3(a)(62) of the Exchange Act), as the case may be, selected by the Company, which shall be substituted for Moody’s.

“Rating Category” means (1) with respect to Moody’s, any of the following categories: “Ba,” “B,” “Caa,” “Ca,” “C” and “D” (or equivalent successor categories); and (2) the equivalent of any such category of Moody’s used by another Rating Agency. In determining whether the rating of the Notes has decreased by one or more gradations, gradations within Rating Categories (“1,” “2” and “3” for Moody’s; or the equivalent gradations for another Rating Agency) shall be taken into account (e.g., with respect to Moody’s, a decline in a rating from “Ba1” to “Ba2,” as well as from “Ba1” to “B1,” will constitute a decrease of one gradation).

“Rating Date” means (1) in connection with a Change of Control Triggering Event, that date which is 90 days prior to the earlier of (x) a Change of Control and (y) a public notice of the occurrence of a Change of Control or of the intention by the Company or any other Person or Persons to effect a Change of Control or (2) in connection with actions contemplated under the caption “— Consolidation, Merger and Sale of Assets,” that date which is 90 days prior to the earlier of (x) the occurrence of any such actions as set forth therein and (y) a public notice of the occurrence of any such actions.

“Rating Decline” means (1) in connection with a Change of Control Triggering Event, the occurrence on, or within six months after, the date of the public notice of the occurrence of, a Change of Control or the intention by the Company or any other Person or Persons to effect a Change of Control (which period shall be extended so long as the rating of the Notes is under publicly announced consideration for possible downgrade by the Rating Agency) of any of the events listed below, or (2) in connection with actions contemplated under “— Consolidation, Merger and Sale of Assets,” the notification by the Rating Agency that such proposed actions will result in any of the events listed below:

- (a) in the event the Notes are rated by the Rating Agency on the Rating Date as Investment Grade, the rating of the Notes by the Rating Agency shall be below Investment Grade; or
- (b) in the event the Notes are rated below Investment Grade by the Rating Agency on the Rating Date, the rating of the Notes by the Rating Agency shall be decreased by one or more gradations (including gradations within Rating Categories as well as between Rating Categories).

“Receivable Financing” means any financing transaction or series of financing transactions that have been or may be entered into by the Company or any Restricted Subsidiary pursuant to which the Company or any Restricted Subsidiary may sell, convey or otherwise transfer to another Person, or may grant a security interest in, any of its receivables, mortgages, royalty, other revenue streams or interests therein (including without limitation, all security interests in goods financed thereby (including equipment and property), the proceeds of such receivables, and other assets which are customarily sold or in respect of which security interests are customarily granted in connection with securitization or factoring transactions involving such assets) for credit or liquidity management purposes (including discounting, securitization or factoring transactions) either (i) in the ordinary course of business or (ii) by way of selling by such other Person securities that are, or are capable of being, listed on any stock exchange or in any securities market and are offered using an offering memorandum or similar offering document.

“Receivable Financing Assets” means assets that are underlying and are sold, conveyed or otherwise transferred or pledged in a Receivable Financing.

“Reference Treasury Dealer” means each of any three investment banks of recognized standing that is a primary U.S. Government securities dealer in The City of New York, selected by the Company in good faith.

“Reference Treasury Dealer Quotations” means, with respect to each Reference Treasury Dealer and any redemption date, the average, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing by such Reference Treasury Dealer at 5:00 p.m. (New York City Time) on the third Business Day preceding such redemption date.

“Restricted Subsidiary” means any Subsidiary of the Company other than an Unrestricted Subsidiary.

“S&P” means S&P Global Ratings, a division of S&P Global Inc., and its successors.

“Sale and Leaseback Transaction” means any direct or indirect arrangement relating to property (whether real, personal or mixed), now owned or hereafter acquired whereby the Company or any Restricted Subsidiary transfers such property to another Person and the Company or any Restricted Subsidiary leases it from such Person.

“Secured Indebtedness” means any Indebtedness of the Company or a Restricted Subsidiary secured by a Lien.

“Securities Act” means the U.S. Securities Act of 1933, as amended.

“Securitization Fees” means distributions or payments made directly or by means of discounts with respect to any Receivable Financing Asset or participation interest therein issued or sold in connection with and other fees paid to a Person that is not a Restricted Subsidiary in connection with any Receivable Financing.

“Significant Restricted Subsidiary” means a Restricted Subsidiary that would be a “significant subsidiary” within the meaning of the definition of “significant subsidiary” in Article 1, Rule 1-02(w) of Regulation S-X, promulgated pursuant to the Securities Act; provided that in each instance in such definition in which the term “10 percent” is used, the term “5 percent” shall be substituted therefor.

“Staged Acquisition Agreement” means an agreement between the Company or a Restricted Subsidiary and an Independent Third Party (1) (a) pursuant to which the Company or such Restricted Subsidiary agrees to acquire not less than a majority of the Capital Stock of a Person for a purchase price that is not more than the Fair Market Value of such Capital Stock of such Person at the time the Company or such Restricted Subsidiary enters into such agreement or (b) pursuant to which the Company or such Restricted Subsidiary agrees to acquire less than a majority of the Capital Stock of a Person for a purchase price that is not more than the Fair Market Value of such Capital Stock of such Person at the time the Company or such Restricted Subsidiary enters into such agreement, with the option to, within one year from the date of such acquisition, acquire additional shares of Capital Stock of such Person at a purchase price that is not more than the Fair Market Value of such Capital Stock on the date of such acquisition such that after such acquisition the Company or such Restricted Subsidiary holds not less than a majority of the Capital Stock of such Person, and (2) pursuant to which the Company or such Restricted Subsidiary agrees to make the payment of the purchase price for such Capital Stock in more than one installment over a period of time.

“Stated Maturity” means, (1) with respect to any Indebtedness, the date specified in such debt security as the fixed date on which the final installment of principal of such Indebtedness is due and payable as set forth in the documentation governing such Indebtedness and (2) with respect to any scheduled installment of principal of or interest on any Indebtedness, the date specified as the fixed date on which such installment is due and payable as set forth in the documentation governing such Indebtedness.

“Subordinated Indebtedness” means any Indebtedness of the Company or any Subsidiary Guarantor that is contractually subordinated or junior in right of payment to the Notes or to any Subsidiary Guarantee, as applicable, pursuant to a written agreement to such effect.

“Subsidiary” means, with respect to any Person, any corporation, association or other business entity (i) of which more than 50% of the voting power of the outstanding Voting Stock is owned, directly or indirectly, by such Person and one or more other Subsidiaries of such Person or (ii) of which 50% or less of the voting power of the outstanding Voting Stock is owned, directly or indirectly, by such Person and one or more other Subsidiaries of such Person and in each case which is “controlled” and consolidated by such Person in accordance with GAAP; *provided, however*, that with respect to clause (ii), the occurrence of any event (other than the issuance or sale of Capital Stock) as a result of which such corporation, association or other business entity ceases to be “controlled” by such Person under the GAAP and to constitute a Subsidiary of such Person shall be deemed to be a designation of such corporation, association or other business entity as an Unrestricted Subsidiary by such Person and be subject to the requirements under the second paragraph of “Designation of Restricted and Unrestricted Subsidiaries” covenant.

“Subsidiary Guarantee” means any Guarantee of the obligations of the Company under the Indenture and the Notes by any Subsidiary Guarantor.

“Subsidiary Guarantor” means the initial Subsidiary Guarantors named herein and any other Restricted Subsidiary that Guarantees the obligations of the Company under the Indenture and the Notes; *provided* that “Subsidiary Guarantor” does not include any Person whose Subsidiary Guarantee has been released in accordance with the Indenture and the Notes.

“Temporary Cash Investment” means any of the following:

- (1) direct obligations of the United States of America, the United Kingdom, any state of the European Economic Area, Hong Kong, the PRC or any agency of any of the foregoing or obligations fully and unconditionally Guaranteed by the United States of America, the United Kingdom, any state of the European Economic Area, Hong Kong, the PRC or any agency of any of the foregoing, in each case maturing within one year;
- (2) demand or time deposit accounts, certificates of deposit and money market deposits maturing within 180 days of the date of acquisition thereof issued by a bank or trust company that is organized under the laws of the United States of America, any state thereof, the United Kingdom, any state of the European Economic Area, Hong Kong or the PRC and which bank or trust company has capital, surplus and undivided profits aggregating in excess of US\$100.0 million (or the Dollar Equivalent thereof) and has outstanding debt which is rated “A” (or such similar equivalent rating) or higher by at least one nationally recognized statistical rating organization (as defined in Section 3(a)(62) of the Exchange Act);
- (3) repurchase obligations with a term of not more than 30 days for underlying securities of the types described in clause (1) above entered into with a bank or trust company meeting the qualifications described in clause (2) above;
- (4) commercial paper, maturing not more than 180 days after the date of acquisition thereof, issued by a corporation (other than an Affiliate of the Company) organized and in existence under the laws of the United States of America, any state thereof or any foreign country recognized by the United States of America with a rating at the time as of which any investment therein is made of “P-1” (or higher) according to Moody’s or “A-1” (or higher) according to S&P;
- (5) securities maturing within one year of the date of acquisition thereof, issued or fully and unconditionally Guaranteed by any state, commonwealth or territory of the United States of America, or by any political subdivision or taxing authority thereof, and rated at least “A” by S&P or Moody’s;

- (6) any money market fund that has at least 95.0% of its assets continuously invested in investments of the types described in clauses (1) through (5) above;
- (7) demand or time deposit accounts, certificates of deposit overnight or call deposits or money market deposits with any bank, trust company or other financial institutions organized under the laws of the PRC, Hong Kong or anywhere the Company or any Restricted Subsidiary conducts business operations; and
- (8) structured deposit products that are principal protected with any bank or financial institution organized under the laws of the PRC, Hong Kong or anywhere the Company or any Restricted Subsidiary conducts business operations if held to maturity (which shall not be more than one year) and can be withdrawn at any time with no more than six months' notice.

“Total Assets” means, as of any date, the total consolidated assets of the Company and its Restricted Subsidiaries measured in accordance with GAAP as of the last date of the most recent fiscal quarter for which consolidated financial statements of the Company (which the Company shall use its reasonable best efforts to compile in a timely manner and which may include internal consolidated financial statements) are available; *provided* that with respect to clause (2)(k)(ii) of “Certain Covenants — Limitation on Indebtedness” and the definition of “Permitted Subsidiary Indebtedness,” Total Assets shall be calculated after giving *pro forma* effect to include the cumulative value of all the equipment, property or assets the acquisition, construction or improvement of which requires or required the Incurrence of Indebtedness and calculation of Total Assets thereunder in each case as of such date, as measured by the purchase price or cost therefor or budgeted cost provided in good faith by the Company or any Restricted Subsidiary to the bank or other similar financial institutional lender providing such Indebtedness.

“Trade Payables” means, with respect to any Person, any accounts payable or any other indebtedness or monetary obligation to trade creditors created, assumed or Guaranteed by such Person or any of its Subsidiaries arising in the ordinary course of business in connection with the acquisition of goods or services.

“Transaction Date” means, with respect to the Incurrence of any Indebtedness, the date such Indebtedness is to be Incurred and, with respect to any Restricted Payment, the date such Restricted Payment is to be made.

“UAE” means the United Arab Emirates.

“Unrestricted Subsidiary” means (1) subject to any redesignations under the caption “— Certain Covenants — Designation of Restricted and Unrestricted Subsidiaries,” each of the Existing Unrestricted Subsidiaries and their respective Subsidiaries; (2) any Subsidiary of the Company that at the time of determination shall be designated an Unrestricted Subsidiary by the Board of Directors in the manner provided in the Indenture; and (3) any Subsidiary of an Unrestricted Subsidiary.

“U.S. Government Obligations” means securities that are (1) direct obligations of the United States of America for the payment of which its full faith and credit is pledged or (2) obligations of a Person controlled or supervised by and acting as an agency or instrumentality of the United States of America the payment of which is unconditionally Guaranteed as a full faith and credit obligation by the United States of America, which, in either case, are not callable or redeemable at the option of the issuer thereof at any time prior to the Stated Maturity of the Notes, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such U.S. Government Obligation or a specific payment of interest on or principal of any such U.S. Government Obligation held by such custodian for the account of the holder of a depository receipt; *provided* that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depository receipt from any amount received by the custodian in respect of the U.S. Government Obligation or the specific payment of interest on or principal of the U.S. Government Obligation evidenced by such depository receipt.

“Voting Stock” means, with respect to any Person, Capital Stock of any class or kind ordinarily having the power to vote for the election of directors, managers or other voting members of the governing body of such Person.

“Wholly Owned” means, with respect to any Subsidiary of any Person, the ownership of all of the outstanding Capital Stock of such Subsidiary (other than any director’s qualifying shares or Investments by foreign nationals mandated by applicable law) by such Person or one or more Wholly Owned Subsidiaries of such Person; provided that Subsidiaries that are PRC CJVs shall not be considered Wholly Owned Subsidiaries unless such Person or one or more Wholly Owned Subsidiaries of such Person are entitled to 95% or more of the economic benefits distributable by such Subsidiary.

TAXATION

The following summary of certain Cayman Islands, British Virgin Islands, Hong Kong and PRC tax consequences of the purchase, ownership and disposition of New Notes is based upon applicable laws, regulations, rulings and decisions in effect as of the date of this offering memorandum, all of which are subject to change (possibly with retroactive effect). This discussion does not purport to be a comprehensive description of all the tax considerations that may be relevant to a decision to purchase, own or dispose of the New Notes and does not purport to deal with consequences applicable to all categories of investors, some of which may be subject to special rules. Persons considering the purchase of New Notes should consult their own tax advisers concerning the tax consequences of the purchase, ownership and disposition of New Notes.

Cayman Islands

Payments of interest and principal on the New Notes will not be subject to taxation in the Cayman Islands and no withholding will be required on the payment of interest and principal to any holder of the New Notes, nor will gains derived from the disposal of the New Notes be subject to Cayman Islands income or corporation tax. The Cayman Islands currently has no income, corporation or capital gains tax and no estate duty, inheritance tax or gift tax.

No stamp duty is payable in respect of the issue of the New Notes. An instrument of transfer in respect of a New Note is stampable if executed in or brought into the Cayman Islands.

In accordance with the provision of section 6 of The Tax Concessions Act (As Revised), the Governor in Cabinet undertakes with the Company:

- That no law which is hereafter enacted in the Cayman Islands imposing any tax to be levied on profits, income, gains or appreciations shall apply to the Company or its operations; and
- In addition, that no tax to be levied on profits, income, gains or appreciations or which is in the nature of estate duty or inheritance tax shall be payable, on or in respect of the shares, debentures or other obligations of the Company, or by way of the withholding, in whole or part, of any relevant payment as defined in Section 6(3) of the Tax Concessions Act (As Revised).

These concessions shall be for a period of 20 years from August 14, 2007.

British Virgin Islands

Payments of interest and principal on the New Notes or payments the Subsidiary Guarantors may make under the Subsidiary Guarantees will not be subject to taxation in the British Virgin Islands and no withholding will be required on the payment of interest and principal to any holder of the New Notes, nor will gains derived from the disposal of the New Notes be subject to British Virgin Islands income or corporation tax, provided that the payments are made to persons who are not resident in the British Virgin Islands. No estate, inheritance, succession or gift tax, rate, duty, levy or other charge is payable by persons who are not resident in the British Virgin Islands with respect to the New Notes. There are currently no withholding taxes or exchange control regulations in the British Virgin Islands applicable to the Company.

Hong Kong

Withholding Tax

No withholding tax in Hong Kong is payable on payments of principal (including any premium payable on redemption of the New Notes) and interest in respect of the New Notes.

Profits Tax

Hong Kong profits tax is charged on every person carrying on a trade, profession or business in Hong Kong in respect of assessable profits arising in or derived from Hong Kong from such trade, profession or business.

Under the Inland Revenue Ordinance (Chapter 112 of the Laws of Hong Kong) (the “Inland Revenue Ordinance”) as it is currently applied, Hong Kong profits tax may be charged on revenue profits arising on the sale, disposal or redemption of the New Notes where such sale, disposal or redemption is or forms part of a trade, profession or business carried on in Hong Kong.

Interest on the New Notes will be subject to Hong Kong profits tax where such interest has a Hong Kong source, and is received by or accrues to:

- a financial institution (as defined in the Inland Revenue Ordinance) and arises through or from the carrying on by the financial institution of its business in Hong Kong; or
- a corporation carrying on a trade, profession or business in Hong Kong; or
- a person, other than a corporation, carrying on a trade, profession or business in Hong Kong and such interest is in respect of the funds of the trade, profession or business.

Although no tax is imposed in Hong Kong in respect of capital gains, Hong Kong profits tax may be chargeable on trading gains arising on the sale, redemption or disposal of the New Notes where such transactions are or form part of a trade, profession or business carried on in Hong Kong.

Stamp Duty

No Hong Kong stamp duty will be chargeable upon the issue, redemption or transfer of the New Notes as the New Notes are not denominated in H.K. dollars and not redeemable in H.K. dollars.

PRC

Under the PRC EIT Law and its Implementation Rules, enterprises established outside the PRC whose “de facto management bodies” are located in China are considered as “PRC Tax resident enterprises.” The Implementation Rules define the term “de facto management body” as a management body that exercises full and substantial control and management over the business, production, personnel, accounts and properties of an enterprise. Specifically, in April 22, 2009, the PRC State Administration of Taxation published the Circular on Issues Relevant to Foreign-registered Chinese-invested Holding Enterprises Determined as Resident Enterprises in Accordance with Actual Management Organisation Standard (國家稅務總局關於境外註冊中資控股企業依據實際管理機構標準認定為居民企業有關問題的通知) (the “Circular 82”). Circular 82 was effective from January 1, 2008 and was further amended on December 29, 2017. Circular 82 provides, among other things, if a foreign-registered Chinese-invested company whose de facto management bodies are located within the PRC and it satisfies the following conditions, it shall be determined as a PRC resident enterprise and be liable to pay corporate tax at the rate of 25% in the PRC in respect of its global income in: (i) places within the PRC where its top managers and top management departments who are responsible for the production, management and operation of the company, perform their duties; (ii) places within the PRC where the financial decisions (such as

borrowing, lending, financing and financial risk management) and the personnel decisions (such as appointment, dismissal and remuneration payment) of the company are made or approved; (iii) places within the PRC where its primary properties, accounting books, company seals, summaries archives of the board meetings and shareholders meetings are kept; and (iv) places within the PRC where one-half or more of the company's directors or top managers having rights to vote shall frequently reside. According to Circular 82, a foreign-registered Chinese-invested company shall mean a company that is registered and established outside of PRC in accordance with the laws of a foreign country with companies within the PRC as its major equity investors.

The Company holds some of its shareholders' meetings and Board meetings outside China and keeps its shareholders' list and books of account outside China. However, most of the Company's directors and senior management are currently based inside China. The above elements may be relevant for the tax authorities to determine whether the Company is a PRC resident enterprise for tax purposes.

Although it is unclear under PRC tax law whether the Company has a "de facto management body" located in China for PRC tax purposes, it currently intends to take the position that it is not PRC resident enterprise for tax purpose. The Company cannot assure you that tax authorities will respect this position. The Company's PRC counsel, Tian Yuan Law Firm, has advised the Company that if it is deemed to be a PRC resident enterprise for enterprise income purpose, among other things, the Company would be subject to the PRC enterprise income tax at the rate of 25% on its worldwide income, possibly excluding dividends from PRC subsidiaries. Furthermore, if the Company were treated as a PRC resident enterprise, the Company would be obligated to withhold PRC income tax from payments of interest on the New Notes to investors that are non-resident enterprises, generally at the rate of 10%, if the interest is regarded as derived from sources within the PRC. If the Company fails to do so, it may be subject to fines and other penalties. In addition, if the Company were treated as a PRC resident enterprise, any gain realized by such non-resident enterprise investors from the transfer of the New Notes may be regarded as derived from sources within the PRC and accordingly may be subject to PRC income tax at a rate of 10%, unless an applicable treaty provides otherwise. In the case of income or gain of individuals, the tax (including withholding tax) rate would generally be 20%, unless an applicable treaty provides otherwise. More specifically, the PRC income tax at the rate of 10% would be withheld at source from interest paid by the Issuer to investors that are non-resident enterprises if such non-resident enterprise investors do not have an establishment or place of business in China or if, despite the existence of such establishment or place of business in China, the relevant income is not effectively connected with such establishment or place of business in China. Any PRC taxes may be reduced under applicable tax treaties. However, if the Company is not considered as a PRC resident enterprise for enterprise income purposes, non-resident enterprise investors would not be subject to PRC income tax on any interest received on the New Notes or any gains realized from the transfer of the New Notes.

PLAN OF DISTRIBUTION

Subject to the terms and conditions stated in the purchase agreement dated the date of this offering memorandum between us, the Subsidiary Guarantors and the Initial Purchasers, we have agreed to sell to the Initial Purchasers, and each of the Initial Purchasers has agreed, severally but not jointly to purchase from us, the principal amount of the New Notes set forth opposite its name below.

Initial Purchasers	Principal Amount of the New Notes
Nomura International plc	US\$44,097,000
Admiralty Harbour Capital Limited.....	US\$44,000,000
Total	US\$88,097,000

The purchase agreement provides that the obligation of the Initial Purchasers to purchase the New Notes is subject to the approval of certain legal matters by their counsel and other conditions. The Initial Purchasers must purchase all the New Notes if they purchase any of the New Notes. The purchase agreement may be terminated by the Initial Purchasers in certain circumstances prior to the delivery and payment of the New Notes. The Initial Purchasers reserve the right to withdraw, cancel or modify offers to investors and to reject orders in whole or in part.

The Initial Purchasers propose to resell the New Notes at the offering price set forth on the cover page of this offering memorandum only to non-U.S. persons (as defined in Regulation S) outside the United States in reliance on Regulation S. See “Transfer Restrictions.” The price at which the New Notes are offered may be changed at any time without notice. We will pay the Initial Purchasers customary fees and commissions in connection with the offering and will reimburse the Initial Purchasers for certain expenses incurred in connection with the offering.

We have agreed with the Initial Purchasers that we will pay a commission to certain private banks in connection with the distribution of the New Notes to their clients. This commission will be based on the principal amount of the New Notes so distributed, and may be deducted from the purchase price for the New Notes payable by such private banks upon settlement.

The New Notes and the Subsidiary Guarantees have not been and will not be registered under the Securities Act or any state securities laws and may not be offered or sold within the United States except in transactions exempt from, or not subject to, the registration requirements of the Securities Act. See “Transfer Restrictions.”

Application will be made to The Hong Kong Stock Exchange for the listing of, and permission to deal in, the New Notes by way of debt issues to Professional Investors only as described in this offering memorandum. However, we cannot assure you that we will ultimately obtain such listing or that we will be able to maintain such listing. The Initial Purchasers have advised us that they presently intend to make a market in the New Notes as permitted by applicable law. However, the Initial Purchasers are not obligated to do so and may discontinue any market-making activities with respect to the New Notes at any time without any notice. Accordingly, we cannot assure you as to the liquidity of, or the trading market for, the New Notes.

In connection with the offering, the Initial Purchasers may purchase and sell New Notes in the open market. Purchases and sales in the open market may include short sales, purchases to cover short positions and stabilizing purchases.

- Short sales involve secondary market sales by the Initial Purchasers of a greater number of New Notes than they are required to purchase in the offering.
- Covering transactions involve purchases of New Notes in the open market after the distribution has been completed in order to cover short positions.
- Stabilizing transactions involve bids to purchase New Notes so long as the stabilizing bids do not exceed a specified maximum.

Purchases to cover short positions and stabilizing purchases, as well as other purchases by the Initial Purchasers for their respective accounts, may have the effect of preventing or retarding a decline in the market price of the New Notes. They may also cause the price of the New Notes to be higher than the price that would otherwise exist in the open market in the absence of these transactions. The Initial Purchasers may conduct these transactions in the over-the-counter market or otherwise. If any of the Initial Purchasers commences any of these transactions, it may discontinue them at any time.

We expect to deliver the New Notes against payment for the New Notes on or about the date specified in the last paragraph of the cover page of this offering memorandum, which will be the fifth business day following the date of the pricing of the New Notes. Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade New Notes on the date of pricing or the next three succeeding business days will be required, by virtue of the fact that the New Notes initially will settle in T+5, to specify alternative settlement arrangements to prevent a failed settlement. Purchasers of the New Notes who wish to trade the New Notes on the date of pricing or the next three succeeding business days should consult their own adviser.

Each of the Initial Purchasers is a full service financial institution engaged in various activities, which may include securities trading, investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. The Initial Purchasers or certain of their respective affiliates have in the past performed investment banking and advisory services for us from time to time for which they have received customary fees and reimbursement of expenses and may, from time to time, engage in transactions with and perform services for us in the ordinary course of their business for which they may receive customary fees and reimbursement of expenses. In the ordinary course of their various business activities, the Initial Purchasers or certain of their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. We may enter into hedging or other derivative transactions as part of our risk management strategy with the Initial Purchasers, which may include transactions relating to our obligations under the New Notes. Our obligations under these transactions may be secured by cash or other collateral.

In connection with this offering of the New Notes, the Initial Purchasers or certain of their respective affiliates may act as an investor for its own account and may take up New Notes in the offering and in that capacity may retain, purchase or sell for its own account such securities and any of our other securities or related investments and may offer or sell such securities or other investments otherwise than in connection with the offering of the New Notes. Accordingly, references herein to the New Notes being offered should be read as including any offering of the New Notes to the Initial Purchasers or their respective affiliates acting in such capacity. Such persons do not intend to disclose the extent of any such investment or transactions otherwise than in accordance with any legal or regulatory obligation to do so.

We have agreed to indemnify the Initial Purchasers against certain liabilities, including liabilities under the Securities Act, or to contribute to payments that the Initial Purchasers may be required to make because of any of those liabilities.

No action has been taken or will be taken in any country or jurisdiction by us or the Initial Purchasers that would permit a public offering of the New Notes, or the possession, circulation or distribution of this offering memorandum or any other offering material relating to the New Notes or this offering, in any jurisdiction where action for any such purpose may be required. Accordingly, the New Notes may not be offered or sold, directly or indirectly, and neither this offering memorandum nor such other material may be distributed or published, in or from any country or jurisdiction except in compliance with any applicable rules and regulations of such country or jurisdiction.

Notice to Prospective Investors in the United States

The New Notes and the Subsidiary Guarantees have not been and will not be registered under the U.S. Securities Act, and may not be offered or sold in the United States, or to, or for the account or benefit of, U.S. persons, except to non-U.S. persons in offshore transactions in reliance on Regulation S. Each of the Initial Purchasers has agreed that it has not offered or sold, and will not offer or sell, any New Notes within the United States or to, or for the account or benefit of, U.S. persons (i) as part of their distribution at any time or (ii) otherwise until 40 days after the later of the commencement of the offering and the date of the closing of the offering except in accordance with Rule 903 of Regulation S under the U.S. Securities Act. Terms used in this section have the meanings given to them by Regulation S. Resale of the New Notes is restricted as described under “Transfer Restrictions.”

In addition, until 40 days following the commencement of this offering, an offer or sale of the New Notes within the United States by a dealer (whether or not participating in the offering) may violate the registration requirements of the U.S. Securities Act unless the dealer makes the offer or sell in compliance with an exemption from registration under the U.S. Securities Act.

Notice to Prospective Investors in the European Economic Area

Prohibition of Sales to EEA Retail Investors

The New Notes may not be offered, sold or otherwise made available to any retail investor in the EEA. For the purposes of this provision, the expression “retail investor” means a person who is one (or more) of the following:

- (a) a retail client as defined in point (11) of Article 4(1) of MiFID II; or
- (b) a customer within the meaning of the Insurance Distribution Directive, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II.

Notice to Prospective Investors in the United Kingdom

Prohibition of Sales to UK Retail Investors – The New Notes may not be offered, sold or otherwise made available to any retail investor in the United Kingdom. For the purposes of this provision, the expression “retail investor” means a person who is one (or more) of the following:

- (a) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law of the United Kingdom by virtue of the EUWA; or
- (b) a customer within the meaning of the provisions of the FSMA and any rules or regulations made under the FSMA to implement the Insurance Distribution Directive, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law of the United Kingdom by virtue of the EUWA.

Other Regulatory Restrictions in the United Kingdom – Any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) in connection with the issue or sale of the New Notes may only be communicated or caused to be communicated in circumstances in which Section 21(1) of the FSMA does not apply to the Company or the Subsidiary Guarantors.

All applicable provisions of the FSMA must be complied with in respect to anything done by any person in relation to the New Notes in, from or otherwise involving the United Kingdom.

Notice to Prospective Investors in the British Virgin Islands

No invitation will be made directly or indirectly to any person resident in the British Virgin Islands to subscribe for any of the New Notes.

Notice to Prospective Investors in the Cayman Islands

No invitation, whether directly or indirectly, may be made to the public in the Cayman Islands to subscribe for the New Notes.

Notice to Prospective Investors in Hong Kong

The New Notes may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32, Laws of Hong Kong), or (ii) to “professional investors” as defined in the SFO and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32, Laws of Hong Kong) and no advertisement, invitation or document relating to the New Notes has been issued or may be issued or had been in the possession of or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the New Notes which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the SFO and any rules made thereunder.

Notice to Prospective Investors in Japan

The New Notes have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948) (as amended) (the “FIEL”), and disclosure under the FIEL has not been made with respect to the New Notes. Accordingly, the New Notes may not be offered or sold, directly or indirectly, in Japan or to, or for the account of, any resident of Japan, or to others for re-offering or re-sale, directly or indirectly in Japan or to, or for the benefit of, any resident of Japan, except pursuant to any exemption from the registration requirements of the FIEL and otherwise in compliance with the FIEL and other applicable provisions of Japanese laws and regulations. As used in this paragraph, “resident of Japan” means any person residing in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

This offering memorandum has not been and will not be registered as a prospectus with the Monetary Authority of Singapore under the Securities and Futures Act, Chapter 289 of Singapore (the “SFA”). Accordingly, this offering memorandum and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the New Notes may not be circulated or distributed, nor may the New Notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor under Section 274 of the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the New Notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities or securities-based derivatives contracts (each term as defined in the SFA) of that

corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the New Notes pursuant to an offer made under Section 275 of the SFA except:

- (1) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- (2) where no consideration is or will be given for the transfer;
- (3) where the transfer is by operation of law;
- (4) as specified in Section 276(7) of the SFA; or
- (5) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018 of Singapore.

Notification under Section 309B(1)(c) of the SFA – the Company has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the New Notes are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Notice to Prospective Investors in the PRC

This offering memorandum does not constitute a public offer of the New Notes, whether by way of sale or subscription, in the PRC. Except to the extent consistent with applicable laws and regulations in the PRC, the New Notes are not being offered and may not be offered or sold, directly or indirectly, in the PRC to or for the benefit of, legal or natural persons of the PRC. According to the laws and regulatory requirements of the PRC, except to the extent consistent with applicable laws and regulations in the PRC, the New Notes may, subject to the laws and regulations of the relevant jurisdictions, only be offered or sold to non-PRC natural or legal persons in any country other than the PRC.

TRANSFER RESTRICTIONS

Because of the following restrictions, prospective investors are advised to consult legal counsel prior to making any offer, sale, resale, pledge or other transfer of the New Notes.

The New Notes and the Subsidiary Guarantees have not been and will not be registered under the Securities Act and may not be offered, sold or delivered within the United States or to, or for the account or benefit of, U.S. persons (as defined in Regulation S), except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act.

By purchasing the New Notes, you will be deemed to have made the following acknowledgements, representations to, and agreements with, us and the Initial Purchasers:

1. You understand and acknowledge that:
 - the New Notes have not been and will not be registered under the Securities Act or any other applicable securities laws;
 - the New Notes are being offered for resale in transactions that do not require registration under the Securities Act or any other securities laws;
 - the New Notes are being offered and sold only to non-U.S. persons (as defined in Regulations S under the Securities Act) outside the United States in offshore transactions in reliance on Regulation S under the Securities Act; and
 - unless so registered, the New Notes may not be sold or otherwise transferred except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act or any other applicable securities laws.
2. You represent that you are not an affiliate (as defined in Rule 144 under the Securities Act) of ours, that you are not acting on our behalf, that you are not a U.S. person (as defined in Regulation S under the Securities Act) or purchasing for the account or benefit of a U.S. person and you are purchasing the New Notes in an offshore transaction in accordance with Regulation S.
3. You acknowledge that none of us, the Initial Purchasers or any person representing us or the Initial Purchasers has made any representation to you with respect to us or the offering of the New Notes, other than the information contained in this offering memorandum. You represent that you are relying only on this offering memorandum in making your investment decision with respect to the New Notes. You agree that you have had access to such financial and other information concerning us and the New Notes as you have deemed necessary in connection with your decision to purchase the New Notes, including an opportunity to ask questions of and request information from us.
4. You represent that you are acquiring New Notes for your own account, or for one or more investor accounts for which you are acting as a fiduciary or agent, in each case not with a view to, or for offer or sale in connection with, any distribution of the New Notes in violation of the Securities Act.

5. You acknowledge that each New Note will contain a legend substantially to the following effect:

THIS NEW NOTE AND THE GUARANTEES RELATED TO THIS NEW NOTE (TOGETHER, THIS "SECURITY") HAVE NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT") OR THE SECURITIES LAWS OF ANY STATE OR OTHER JURISDICTION. NEITHER THIS SECURITY NOR ANY INTEREST OR PARTICIPATION HEREIN MAY BE REOFFERED, SOLD, ASSIGNED, TRANSFERRED, PLEDGED, ENCUMBERED OR OTHERWISE DISPOSED OF IN THE ABSENCE OF SUCH REGISTRATION OR UNLESS SUCH TRANSACTION IS EXEMPT FROM, OR NOT SUBJECT TO, SUCH REGISTRATION.

THE HOLDER OF THIS SECURITY, BY ITS ACCEPTANCE HEREOF, AGREES ON ITS OWN BEHALF AND ON BEHALF OF ANY INVESTOR ACCOUNT FOR WHICH IT HAS PURCHASED SECURITIES, TO OFFER, SELL OR OTHERWISE TRANSFER SUCH SECURITY, PRIOR TO THE DATE (THE "RESALE RESTRICTION TERMINATION DATE") THAT IS 40 DAYS AFTER THE LATER OF THE ORIGINAL ISSUE DATE HEREOF AND THE LAST DATE ON WHICH THE COMPANY OR ANY AFFILIATE OF THE COMPANY WAS THE OWNER OF THIS SECURITY (OR ANY PREDECESSOR OF SUCH SECURITY), ONLY (A) TO THE COMPANY, (B) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT, (C) PURSUANT TO OFFERS AND SALES THAT OCCUR OUTSIDE THE UNITED STATES WITHIN THE MEANING OF REGULATIONS UNDER THE SECURITIES ACT, OR (D) PURSUANT TO ANOTHER AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT, SUBJECT TO THE COMPANY'S AND THE TRANSFER AGENT'S RIGHT PRIOR TO ANY SUCH OFFER, SALE OR TRANSFER PURSUANT TO CLAUSE (D) TO REQUIRE THE DELIVERY OF AN OPINION OF COUNSEL, CERTIFICATION AND/OR OTHER INFORMATION SATISFACTORY TO EACH OF THEM. THIS LEGEND WILL BE REMOVED UPON THE REQUEST OF THE HOLDER AFTER THE RESALE RESTRICTION TERMINATION DATE. BY ITS ACQUISITION HEREOF, THE HOLDER HEREOF REPRESENTS THAT IT IS NOT A U.S. PERSON NOR IS IT PURCHASING FOR THE ACCOUNT OF A U.S. PERSON AND IS ACQUIRING THIS SECURITY IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH REGULATIONS UNDER THE SECURITIES ACT.

6. You acknowledge that we, the Initial Purchasers, the Trustee, the Paying and Transfer Agent, the Registrar and others will rely upon the truth and accuracy of the above acknowledgments, representations and agreements. You agree that if any of the acknowledgments, representations or agreements you are deemed to have made by your purchase of the New Notes is no longer accurate, you will promptly notify us, the Trustee, the Paying and Transfer Agent, the Registrar and the Initial Purchasers. If you are receiving any New Notes as a fiduciary or agent for one or more investor accounts, you represent that you have sole investment discretion with respect to each of those accounts and that you have full power to make the above acknowledgments, representations and agreements on behalf of each account.

RATINGS

We have been assigned a long-term corporate credit rating of B1 with a negative outlook by Moody's. The New Notes are expected to be rated B1 by Moody's. The ratings reflect the rating agencies' assessment of the likelihood of timely payment of the principal of and interest on the New Notes. The ratings do not address the payment of any additional amounts and do not constitute recommendations to purchase, hold or sell the New Notes inasmuch as such ratings do not comment as to market price or suitability for a particular investor. We cannot assure you that the ratings will remain in effect for any given period or that the ratings will not be revised by such rating agencies in the future if in their judgment circumstances so warrant. Each such rating should be evaluated independently of any other rating on the New Notes, on other of our securities, or on us.

LEGAL MATTERS

Certain legal matters with respect to the New Notes will be passed upon for us by Sidley Austin as to matters of United States federal and New York law and Hong Kong Law, Maples and Calder (Hong Kong) LLP as to matters of Cayman Islands law and British Virgin Islands law and Tian Yuan Law Firm as to matters of PRC law. Certain legal matters will be passed upon for the Initial Purchasers by Shearman & Sterling as to matters of United States federal and New York law and Jingtian & Gongcheng as to matters of PRC law.

AUDITOR

The published consolidated financial statements as of and for the years ended December 31, 2018, 2019 and 2020 reproduced in this offering memorandum have been audited by Deloitte Touche Tohmatsu, certified public accountants, as stated in their reports appearing herein, and in our annual reports for the years ended December 31, 2019 and 2020.

For the purpose of the offers and sales outside the United States in reliance on Regulation S under the Securities Act, Deloitte Touche Tohmatsu has acknowledged the references to their names and the inclusion of their reports in the form and context in which they are respectively included in this offering memorandum.

GENERAL INFORMATION

Consents

We have obtained all necessary consents, approvals and authorizations in the Cayman Islands, the British Virgin Islands and Hong Kong in connection with the issue and performance of the New Notes and the Subsidiary Guarantees. The entering into of the Indenture governing the New Notes and the issue of the New Notes have been authorized by a resolution of our Board of Directors dated July 6, 2021.

Litigation

Except as disclosed in this offering memorandum, there are no legal or arbitration proceedings against or affecting us, any of our subsidiaries or any of our assets, nor are we aware of any pending or threatened proceedings, which are or might be material in the context of the issue of the New Notes or the Subsidiary Guarantees.

No Material Adverse Change

There has been no adverse change, or any development reasonably likely to involve an adverse change, in the condition (financial or otherwise) of our general affairs since December 31, 2020 that is material in the context of the issue of the New Notes or the Subsidiary Guarantees.

Documents Available

For so long as any of the New Notes are outstanding, copies of the Indenture governing the New Notes may be inspected free of charge during normal business hours on any weekday (except public holidays) at the corporate trust office of the Trustee.

For so long as any of the New Notes are outstanding, copies of our audited financial statements for the past two fiscal years, if any, may be obtained during normal business hours on any weekday (except public holidays) at the principal office of the Company.

Clearing System and Settlement

The New Notes have been accepted for clearance through the facilities of Euroclear and Clearstream. Certain trading information with respect to the New Notes is set forth below:

	<u>ISIN</u>	<u>Common Code</u>
New Notes	XS2364121645	236412164

Only New Notes evidenced by a Global Note have been accepted for clearance through Euroclear and Clearstream.

Listing of the New Notes

Application will be made to the SEHK for the listing of, and permission to deal in, the New Notes by way of debt issues to Professional Investors only as described in this offering memorandum. The SEHK takes no responsibility for the correctness of any statements made on opinions or reports contained in this offering memorandum. Admission of the New Notes to the official list of the SEHK is not to be taken as an indication of the merits of the New Notes or us.

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Notes:

- (1) The audited consolidated financial statements set out herein have been reproduced from the Company’s annual report for the year ended December 31, 2020, and page references are references to pages set forth in such report.
- (2) The audited consolidated financial statements set out herein have been reproduced from the Company’s annual report for the year ended December 31, 2019, and page references are references to pages set forth in such report.



INDEPENDENT AUDITOR'S REPORT

Deloitte.

INDEPENDENT AUDITOR'S REPORT

TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP

(incorporated in the Cayman Islands with limited liability)

德勤

OPINION

We have audited the consolidated financial statements of Anton Oilfield Services Group (the "Company") and its subsidiaries (collectively referred to as the "Group") set out on pages 67 to 154, which comprise the consolidated statement of financial position as at 31 December 2020, and the consolidated statement of profit or loss, consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2020, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRSs") issued by the International Accounting Standards Board ("IASB") and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing ("ISAs"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (the "IESBA Code"), and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.



INDEPENDENT AUDITOR'S REPORT

INDEPENDENT AUDITOR'S REPORT TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP *(Continued)* *(incorporated in the Cayman Islands with limited liability)*

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How our audit addressed the key audit matter
<p>Revenue recognition from provision of services</p> <p>We identified revenue recognition from provision of services as a key audit matter due to the significance of revenue generated from provision of services and the inherent risk of manipulating revenue recognition from provision of services by the management.</p> <p>As disclosed in Note 22, the Group is mainly engaged in provision of services through contracts with its customers. Revenue from provision of services amounting to RMB2,802,448,000 for the year ended 31 December 2020 accounted for 90.8% of the Group's total revenue in the consolidated statement of profit or loss.</p> <p>Revenue performance from provision of services is a key performance indicator of the Group which affects the management's reward and also is a focus of investors.</p> <p>Details of revenue recognition from provision of services and its accounting policies are set out in Note 22 and Note 3, respectively, to the consolidated financial statements.</p>	<p>Our procedures in relation to revenue recognition from provision of services included:</p> <ul style="list-style-type: none">• understanding and evaluating the key internal controls relevant to the audit on revenue recognition from provision of services;• examining, on a sample basis, the key terms set out in the Group's contracts with its customers governing the performance obligations and the associated revenue recognition;• obtaining confirmations for the services provided to the selected major customers; and• inspecting, on a sample basis, the customer acceptance documents, the contracts and invoices evidencing that the performance obligations of services were satisfied and control was transferred.

INDEPENDENT AUDITOR'S REPORT
TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP *(Continued)*
(incorporated in the Cayman Islands with limited liability)

OTHER INFORMATION

The directors of the Company are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF DIRECTORS AND THOSE CHARGED WITH GOVERNANCE FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRSs issued by the IASB and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.



INDEPENDENT AUDITOR'S REPORT

INDEPENDENT AUDITOR'S REPORT TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP *(Continued)* *(incorporated in the Cayman Islands with limited liability)*

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion solely to you, as a body, in accordance with our agreed terms of engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.



INDEPENDENT AUDITOR'S REPORT

INDEPENDENT AUDITOR'S REPORT **TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP** *(Continued)* *(incorporated in the Cayman Islands with limited liability)*

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in the independent auditor's report is Mak Chi Lung.

Deloitte Touche Tohmatsu
Certified Public Accountants
Hong Kong
28 March 2021



CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AS AT 31 DECEMBER 2020

(Amounts expressed in thousands of Renminbi ("RMB"), unless otherwise stated)

	Notes	As at 31 December 2020	2019
ASSETS			
Non-current assets			
Property, plant and equipment	6	2,099,390	2,137,866
Right-of-use assets	7	137,951	189,901
Goodwill	8	242,004	242,004
Intangible assets	9	273,652	259,986
Interest in a joint venture		3,949	3,808
Interest in an associate		2,000	2,000
Prepayments and other receivables	12	66,428	155,696
Deferred income tax assets	21	21,993	34,637
		2,847,367	3,025,898
Current assets			
Inventories	10	930,618	765,496
Trade and notes receivables	11	2,133,789	2,200,247
Contract assets	22(ii)(a)	30,618	75,519
Prepayments and other receivables	12	605,475	648,048
Restricted bank deposits	13	454,169	368,730
Cash and cash equivalents	13	879,085	2,422,874
		5,033,754	6,480,914
Total assets		7,881,121	9,506,812

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AS AT 31 DECEMBER 2020

(Amounts expressed in thousands of Renminbi ("RMB"), unless otherwise stated)

	Notes	As at 31 December 2020	2019
EQUITY			
Capital and reserves attributable to the owners of the Company			
Share capital	14	268,179	276,273
Reserves	15	2,357,933	2,625,865
		2,626,112	2,902,138
Non-controlling interests		137,609	55,525
Total equity		2,763,721	2,957,663
LIABILITIES			
Non-current liabilities			
Long-term bonds	16	1,855,625	2,028,423
Long-term borrowings	17	131,388	202,426
Lease liabilities	18	31,771	69,259
Deferred income tax liabilities	21	9,998	10,219
		2,028,782	2,310,327
Current liabilities			
Short-term borrowings	17	763,953	497,749
Current portion of long-term bonds	16	11,034	2,116,445
Current portion of long-term borrowings	17	163,639	92,174
Trade and notes payables	19	1,403,295	957,406
Accruals and other payables	20	534,581	404,528
Lease liabilities	18	34,384	45,834
Contract liabilities		37,982	13,976
Current income tax liabilities		139,750	110,710
		3,088,618	4,238,822
Total liabilities		5,117,400	6,549,149
Total equity and liabilities		7,881,121	9,506,812

The consolidated financial statements on pages 67 to 154 were approved and authorised for issue by the Board of Directors on 28 March 2021 and were signed on its behalf by:

Chairman
Luo Lin

Executive Director
Pi Zhifeng



CONSOLIDATED STATEMENT OF PROFIT OR LOSS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

	Notes	Year ended 31 December	
		2020	2019
Revenue			
Goods and services	22	2,823,638	3,328,839
Rental	22	264,014	260,658
Total revenue	22	3,087,652	3,589,497
Cost of sales	23	(2,277,830)	(2,308,042)
Gross profit		809,822	1,281,455
Other gains, net	24	40,279	176
Impairment losses under expected credit loss model, net of reversal	23, 25	(83,437)	(87,693)
Selling expenses	23	(175,487)	(193,298)
Administrative expenses	23	(198,959)	(215,403)
Research and development expenses	23	(56,327)	(51,682)
Sales tax and surcharges	23	(11,360)	(13,973)
Operating profit		324,531	719,582
Interest income	26	18,760	3,367
Finance expenses	26	(312,693)	(298,500)
Finance costs, net	26	(293,933)	(295,133)
Share of profit of a joint venture		141	762
Profit before income tax		30,739	425,211
Income tax expense	28	(114,499)	(142,791)
(Loss)/profit for the year		(83,760)	282,420
(Loss)/profit attributable to:			
Owners of the Company		(95,844)	268,583
Non-controlling interests		12,084	13,837
		(83,760)	282,420
(Loss)/earnings per share attributable to the owners of the Company for the year (expressed in RMB per share)			
– Basic	29	(0.0322)	0.0894
– Diluted	29	(0.0322)	0.0889

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

	Notes	Year ended 31 December	
		2020	2019
(Loss)/profit for the year		(83,760)	282,420
Other comprehensive income/(expense), net of tax: <i>Items that may be reclassified subsequently to profit or loss</i>			
Net investment hedge	15(b)	111,612	(30,239)
Financial instruments measured at fair value through other comprehensive income		(7,512)	-
Currency translation differences	15(a)	(269,051)	16,859
Other comprehensive expense for the year, net of tax		(164,951)	(13,380)
Total comprehensive (expense)/income for the year		(248,711)	269,040
Total comprehensive (expense)/income attributable to:			
- Owners of the Company		(260,795)	255,203
- Non-controlling interests		12,084	13,837
		(248,711)	269,040



CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

	Notes	Attributable to the owners of the Company						Subtotal	Non-controlling interests	Total equity
		Share capital	Share premium	Capital reserve	Statutory reserve	Retained earnings	Other reserves			
Balance at 1 January 2019		275,959	1,076,529	416,485	76,900	819,796	(19,795)	2,645,874	48,688	2,694,562
Comprehensive income										
Profit for the year		-	-	-	-	268,583	-	268,583	13,837	282,420
Other comprehensive income/(expense)										
Net investment hedge	15(b)	-	-	-	-	-	(30,239)	(30,239)	-	(30,239)
Currency translation differences	15(a)	-	-	-	-	-	16,859	16,859	-	16,859
Total comprehensive income		-	-	-	-	268,583	(13,380)	255,203	13,837	269,040
Share option scheme	14(i)	-	-	29,167	-	-	-	29,167	-	29,167
Share option exercised	14	314	3,148	(1,461)	-	-	-	2,001	-	2,001
Dividends	30	-	(30,107)	-	-	-	-	(30,107)	(7,000)	(37,107)
Total transactions with owners, recognised directly in equity		314	(26,959)	27,706	-	-	-	1,061	(7,000)	(5,939)
Balance at 31 December 2019		276,273	1,049,570	444,191	76,900	1,088,379	(33,175)	2,902,138	55,525	2,957,663
Balance at 1 January 2020		276,273	1,049,570	444,191	76,900	1,088,379	(33,175)	2,902,138	55,525	2,957,663
Comprehensive (expense)/income										
(Loss)/profit for the year		-	-	-	-	(95,844)	-	(95,844)	12,084	(83,760)
Other comprehensive (expense)/income										
Net investment hedge	15(b)	-	-	-	-	-	111,612	111,612	-	111,612
Financial instruments measured at fair value through other comprehensive income		-	-	-	-	-	(7,512)	(7,512)	-	(7,512)
Currency translation differences	15(a)	-	-	-	-	-	(269,051)	(269,051)	-	(269,051)
Total comprehensive (expense)/income		-	-	-	-	(95,844)	(164,951)	(260,795)	12,084	(248,711)
Repurchase of ordinary shares	14(ii)	(8,094)	(24,506)	-	-	-	-	(32,600)	-	(32,600)
Share option scheme	14(i)	-	-	17,369	-	-	-	17,369	-	17,369
Capital injection from a non-controlling interest		-	-	-	-	-	-	-	70,000	70,000
Total transactions with owners, recognised directly in equity		(8,094)	(24,506)	17,369	-	-	-	(15,231)	70,000	54,769
Balance at 31 December 2020		268,179	1,025,064	461,560	76,900	992,535	(198,126)	2,626,112	137,609	2,763,721

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2020

(Amounts expressed in thousands of RMB, unless otherwise stated)

	Notes	Year ended 31 December	
		2020	2019
Cash flows from operating activities			
Net cash inflows from operations	31	859,642	684,514
Interest received	26	18,760	3,367
Income tax paid		(73,036)	(77,631)
Net cash generated from operating activities		805,366	610,250
Cash flows from investing activities			
Purchase of property, plant and equipment		(138,485)	(86,105)
Proceeds from disposal of property, plant and equipment		7,558	21,461
Purchase of intangible assets		(38,992)	(35,240)
Investment in an associate		-	(2,000)
Net cash used in investing activities		(169,919)	(101,884)
Cash flows from financing activities			
Proceeds from short-term borrowings		993,653	865,147
Repayments of short-term borrowings		(728,194)	(1,246,543)
Proceeds from long-term borrowings		147,000	100,000
Repayments of long-term borrowings		(146,915)	(135,714)
Proceeds from long-term bonds		-	2,037,836
Repayments of long-term bonds		(685,367)	-
Repurchase of long-term bonds		(1,418,078)	-
Repayments of lease liabilities		(43,535)	(45,094)
Net cash paid to non-controlling interests for additional interest in subsidiaries		-	(920)
Proceeds from share options exercised	14(i)	-	2,001
Capital injection from a non-controlling interest		70,000	-
Interest paid		(325,568)	(269,584)
Repurchase of ordinary shares		(32,600)	-
Dividends distribution		-	(92,818)
Placement of restricted bank deposits		-	(10,260)
Withdrawal of restricted bank deposits		10,260	-
Net cash (used in)/generated from financing activities		(2,159,344)	1,204,051
Net (decrease)/increase in cash and cash equivalents		(1,523,897)	1,712,417
Cash and cash equivalents at beginning of the year		2,422,874	686,636
Exchange (loss)/gain on cash and cash equivalents		(19,892)	23,821
Cash and cash equivalents at end of the year		879,085	2,422,874



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

1. GENERAL INFORMATION

Anton Oilfield Services Group (the "Company") was incorporated in the Cayman Islands on 3 August 2007 as an exempted company with limited liability under the Companies Law of Cayman Islands. The address of its registered office is PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands.

The Company is an investment holding company. The Company and its subsidiaries (the "Group") are mainly engaged in providing oilfield technology services, manufacturing and trading of related products in the People's Republic of China (the "PRC") and other overseas countries. The Company listed its shares on the Main Board of The Stock Exchange of Hong Kong Limited (the "Stock Exchange") on 14 December 2007.

The directors of the Company (the "Directors") regard Pro Development Holdings Corp., a company incorporated in British Virgin Islands, as the immediate and ultimate holding company of the Company, which is controlled by Mr. Luo Lin, the Company's controlling shareholder.

The consolidated financial statements are presented in RMB, which is also the functional currency of the Company.

2. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRSs")

Amendments to IFRSs that are mandatorily effective for the current year

In the current year, the Group has applied the *Amendments to References to the Conceptual Framework in IFRS Standards* and the following amendments to IFRSs issued by the International Accounting Standards Board ("IASB") for the first time, which are mandatorily effective for the annual period beginning on or after 1 January 2020 for the preparation of the consolidated financial statements:

Amendments to IAS 1 and IAS 8	<i>Definition of Material</i>
Amendments to IFRS 3	<i>Definition of a Business</i>
Amendments to IFRS 9, IAS 39 and IFRS 7	<i>Interest Rate Benchmark Reform</i>

The application of the *Amendments to References to the Conceptual Framework in IFRS Standards* and the amendments to IFRSs in the current year has had no material impact on the Group's financial positions and performance for the current and prior years and/or on the disclosures set out in these consolidated financial statements.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

2. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRSs") (Continued)

New and amendments to IFRSs in issue but not yet effective

The Group has not early applied the following new and amendments to IFRSs that have been issued but are not yet effective:

IFRS 17	<i>Insurance Contracts and the related Amendments¹</i>
Amendment to IFRS 16	<i>Covid-19-Related Rent Concessions⁴</i>
Amendments to IFRS 3	<i>Reference to the Conceptual Framework²</i>
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16	<i>Interest Rate Benchmark Reform-Phase 2⁵</i>
Amendments to IFRS 10 and IAS 28	<i>Sale or Contribution of Assets between an Investor and its Associate or Joint Venture³</i>
Amendments to IAS 1	<i>Classification of Liabilities as Current or Non-current¹</i>
Amendments to IAS 1 and IFRS Practice Statement 2	<i>Disclosure of Accounting Policies¹</i>
Amendments to IAS 8	<i>Definition of Accounting Estimates¹</i>
Amendments to IAS 16	<i>Property, Plant and Equipment: Proceeds before Intended Use²</i>
Amendments to IAS 37	<i>Onerous Contracts – Cost of Fulfilling a Contract²</i>
Amendments to IFRS Standards	<i>Annual Improvements to IFRS Standards 2018-2020²</i>

¹ Effective for annual periods beginning on or after 1 January 2023

² Effective for annual periods beginning on or after 1 January 2022

³ Effective for annual periods beginning on or after a date to be determined

⁴ Effective for annual periods beginning on or after 1 June 2020

⁵ Effective for annual periods beginning on or after 1 January 2021

The Directors anticipate that the application of all new and amendments to IFRSs will have no material impact on the consolidated financial statements in the foreseeable future.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES

Statement of compliance

The consolidated financial statements of the Group have been prepared in accordance with IFRSs issued by IASB. For the purpose of preparation of the consolidated financial statements, information is considered material if such information is reasonably expected to influence decisions made by primary users. In addition, the consolidated financial statements include applicable disclosures required by the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("Listing Rules") and by the Hong Kong Companies Ordinance ("CO").

Basis of preparation

The consolidated financial statements have been prepared on the historical cost basis at the end of each reporting period, as explained in the accounting policies set out below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of IFRS 2 *Share-based Payment*, leasing transactions that are accounted for in accordance with IFRS 16 *Leases*, and measurements that have some similarities to fair value but are not fair value, such as net realisable value in IAS 2 *Inventories*, or value in use in IAS 36 *Impairment of Assets*.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

The principal accounting policies are set out below.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Basis of consolidation

A subsidiary is an entity over which the Group has control. The Group controls an entity when the Group has the power over the entity, is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

Profit or loss and each item of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Intra-group transactions, balances and unrealised gains on transactions between group companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. When necessary, amounts reported by subsidiaries have been adjusted to conform with the Group's accounting policies.

Non-controlling interests in subsidiaries are presented separately from the Group's equity therein, which represent present ownership interests entitling their holders to a proportionate share of net assets of the relevant subsidiaries upon liquidation.

Changes in the Group's ownership interests in existing subsidiaries

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity. The carrying amounts of the Group's relevant components of equity and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries, including re-attribution of relevant reserves between the Group and non-controlling interests according to the Group's and the non-controlling interests' proportionate interests.

When the Group loses control of a subsidiary, the assets and liabilities of that subsidiary and non-controlling interest (if any) are derecognised. A gain or loss is recognised in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the carrying amount of the assets (including goodwill), and liabilities of the subsidiary attributable to the owners of the Company. All amounts previously recognised in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets or liabilities of the subsidiary (i.e. reclassified to profit or loss or transferred to another category of equity as specified/permitted by applicable IFRSs). The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under IFRS 9 *Financial Instruments* or, when applicable, the cost on initial recognition of an investment in an associate or a joint venture.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Basis of consolidation *(Continued)*

Separate financial statements

Investments in subsidiaries are accounted for at cost less impairment. Cost also includes direct attributable costs of investment. The results of subsidiaries are accounted for by the Company on the basis of dividend and receivable.

Impairment testing of the investments in subsidiaries is required upon receiving dividends from these investments if the dividend exceeds the total comprehensive income of the subsidiary in the period the dividend is declared or if the carrying amount of the investment in the separate financial statements exceeds the carrying amount in the consolidated financial statements of the investee's net assets including goodwill.

Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the chief executive officer, executive vice presidents and directors who make strategic decisions.

Foreign currency translation

Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the functional currency. The financial statements are presented in RMB, which is the Company's functional currency.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the consolidated statement of profit or loss, except when deferred in other comprehensive income as qualifying net investment hedge.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Foreign currency translation *(Continued)*

Group companies

The results and financial position of all the Group entities (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- (i) assets and liabilities for each consolidated statement of financial position presented are translated at the closing rate at the end of the financial period;
- (ii) income and expenses for each consolidated statement of profit or loss are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rate on the dates of the transactions); and
- (iii) all resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate. Exchange differences arising are recognised in other comprehensive income.

Property, plant and equipment

Property, plant and equipment, other than construction in progress, are stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Construction-in-progress represents property, plant and equipment under construction and is stated at cost. This includes the costs of construction, machinery and other expenditures necessary for the purpose of preparing the construction-in-progress for its intended use and those borrowing costs incurred before the assets ready for intended use that are eligible for capitalisation. Construction-in-progress is not depreciated until such time as the relevant asset is completed and ready for its intended use.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to the statement of profit or loss during the financial period in which they are incurred.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Property, plant and equipment *(Continued)*

Depreciation of property, plant and equipment is calculated using the straight-line method except for drill pipes are depreciated using unit-of-production method, to allocate their costs to their residual values over their estimated useful lives, as follows:

	Estimated useful life
Buildings	5-50 years
Machinery and equipment	5-10 years
Motor vehicles	5-10 years
Furniture, fixtures, leasehold improvements and others	3-5 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of the financial period.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised within "other gains, net", in the consolidated statement of profit or loss.

Goodwill

Goodwill arises on the acquisition of subsidiaries, and represents the excess of the consideration transferred over the Group's interest in net fair value of the net identifiable assets, liabilities and contingent liabilities of the acquiree and the fair value of the non-controlling interest in the acquiree.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash generating units ("CGUs"), or groups of CGUs, that is expected to benefit from the synergies of the combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes and not larger than an operating segment.

Goodwill impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of the CGU containing the goodwill is compared to the recoverable amount, which is the higher of value in use and the fair value less costs to sell. Any impairment is recognised immediately as an expense and is not subsequently reversed.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Intangible assets

Computer software

Computer software are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. These costs are amortised over their estimated useful lives of 5 to 10 years.

Patents

Patents are initially recorded at actual cost incurred to acquire and amortised on a straight-line basis over their estimated useful lives, ranging from 3 to 10 years. Development costs that are directly attributable to the design, development and application of patents are recognised as intangible assets when the following criteria are met:

- It is technically feasible to complete the patents so that it will be available for use;
- Management intends to complete the patents and use or sell it;
- There is an ability to use or sell the patents;
- It can be demonstrated how the patents will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development and to use or sell the patents are available; and
- The expenditure attributable to the patents during its development can be reliably measured.

Directly attributable costs that are capitalised as part of the patent include material costs, patent development employee costs and an appropriate portion of relevant overheads. Other development expenditures that do not meet these criteria are recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Impairment on property, plant and equipment, right-of-use assets and intangible assets other than goodwill

At the end of the reporting period, the Group reviews the carrying amounts of its property, plant and equipment, right-of-use assets, intangible assets with finite useful lives to determine whether there is any indication that these assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the relevant asset is estimated in order to determine the extent of the impairment loss (if any).

The recoverable amount of property, plant and equipment, right-of-use assets and intangible assets are estimated individually. When it is not possible to estimate the recoverable amount individually, the Group estimates the recoverable amount of the CGU to which the asset belongs.

In addition, the Group assesses whether there is indication that corporate assets may be impaired. If such indication exists, corporate assets are also allocated to individual CGU, when a reasonable and consistent basis of allocation can be identified, or otherwise they are allocated to the smallest group of CGUs for which a reasonable and consistent allocation basis can be identified.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset (or a CGU) for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or a CGU) is reduced to its recoverable amount. For corporate assets or portion of corporate assets which cannot be allocated on a reasonable and consistent basis to a CGU, the Group compares the carrying amount of a group of CGUs, including the carrying amounts of the corporate assets or portion of corporate assets allocated to that group of CGUs, with the recoverable amount of the group of CGUs. In allocating the impairment loss, the impairment loss is allocated first to reduce the carrying amount of any goodwill (if applicable) and then to the other assets on a pro-rata basis based on the carrying amount of each asset in the unit or the group of CGUs. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if measurable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro rata to the other assets of the unit or the group of CGUs. An impairment loss is recognised immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a CGU or a group of CGUs) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or a CGU or a group of CGUs) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments

Financial assets and financial liabilities are recognised when a group entity becomes a party to the contractual provisions of the instrument. All regular way purchases or sales of financial assets are recognised and derecognised on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the market place.

Financial assets and financial liabilities are initially measured at fair value except for trade receivables arising from contracts with customers which are initially measured in accordance with IFRS 15 *Revenue from Contracts with Customers*. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets or financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognised immediately in profit or loss.

The effective interest method is a method of calculating the amortised cost of a financial asset or financial liability and of allocating interest income and interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Financial assets

Classification and subsequent measurement of financial assets

Financial assets that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to collect contractual cash flows; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets that meet the following conditions are subsequently measured at FVTOCI:

- the financial asset is held within a business model whose objective is achieved by both selling and collecting contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Classification and subsequent measurement of financial assets *(Continued)*

(i) Amortised cost and interest income

Interest income is recognised using the effective interest method for financial assets measured subsequently at amortised cost. Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognised by applying the effective interest rate to the amortised cost of the financial asset from the next reporting period. If the credit risk on the credit-impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognised by applying the effective interest rate to the gross carrying amount of the financial asset from the beginning of the reporting period following the determination that the asset is no longer credit impaired.

(ii) Debt instruments/receivables classified as at FVTOCI

Subsequent changes in the carrying amounts for debt instruments/receivables classified as at FVTOCI as a result of interest income calculated using the effective interest method are recognised in profit or loss. All other changes in the carrying amount of these debt instruments/receivables are recognised in other comprehensive income and accumulated under the heading of other reserves. Impairment allowances are recognised in profit or loss with corresponding adjustment to other comprehensive income without reducing the carrying amounts of these debt instruments/receivables. When these debt instruments/receivables are derecognised, the cumulative gains or losses previously recognised in other comprehensive income are reclassified to profit or loss.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Impairment of financial assets and other items subject to impairment assessment under IFRS 9

The Group performs impairment assessment under expected credit loss (“ECL”) model on financial assets (including trade receivables from goods and services, notes receivable, other receivables, restricted bank deposits and cash and cash equivalents), and other items (lease receivables and contract assets) which are subject to impairment assessment under IFRS 9. The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. In contrast, 12-month ECL (“12m ECL”) represents the portion of lifetime ECL that is expected to result from default events that are possible within 12 months after the reporting date. Assessment are done based on the Group’s historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group always recognises lifetime ECL for trade receivables from goods and services, contract assets and lease receivables. For trade receivables from goods and services, contract assets and lease receivables with significant balances mainly from large multinational and state-owned oil companies, the ECL are assessed individually. For trade receivables from goods and services from private and relatively small customers, the ECL are assessed collectively using a provision matrix with appropriate groupings.

For all other instruments, the Group measures the loss allowance equal to 12m ECL, unless when there has been a significant increase in credit risk since initial recognition, in which case the Group recognises lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Impairment of financial assets and other items subject to impairment assessment under IFRS 9 *(Continued)*

(i) Significant increase in credit risk

In assessing whether the credit risk has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;
- significant deterioration in external market indicators of credit risk, e.g. a significant increase in the credit spread, the credit default swap prices for the debtor;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor;
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

Irrespective of the outcome of the above assessment, the Group presumes that the credit risk has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Impairment of financial assets and other items subject to impairment assessment under IFRS 9 *(Continued)*

(ii) Definition of default

For internal credit risk management, the Group considers an event of default occurs when information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collaterals held by the Group).

Irrespective of the above, the Group considers that default has occurred when a financial asset is more than 90 days past due unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

(iii) Credit-impaired financial assets

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

- significant financial difficulty of the issuer or the borrower;
- a breach of contract, such as a default or past due event;
- the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;
- it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or
- the disappearance of an active market for that financial asset because of financial difficulties; or
- the purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses.

(iv) Write-off policy

The Group writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Impairment of financial assets and other items subject to impairment assessment under IFRS 9 *(Continued)*

(v) Measurement and recognition of ECL

The measurement of ECL is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data and forward-looking information. Estimation of ECL reflects an unbiased and probability-weighted amount that is determined with the respective risks of default occurring as the weights.

Generally, the ECL is the difference between all contractual cash flows that are due to the Group in accordance with the contract and the cash flows that the Group expects to receive, discounted at the effective interest rate determined at initial recognition. For a lease receivable, the cash flows used for determining the ECL is consistent with the cash flows used in measuring the lease receivable in accordance with IFRS 16.

Where ECL is measured on a collective basis or cater for cases where evidence at the individual instrument level may not yet be available, the financial instruments are grouped on the following basis:

- Nature of financial instruments (i.e. the Group's trade receivables from goods and services from private and relatively small customers are assessed as a separate group. Other financial instruments and other items are assessed for expected credit losses on an individual basis);
- Past-due status;
- Nature, size and industry of debtors; and
- External credit ratings where available.

The grouping is regularly reviewed by management to ensure the constituents of each group continue to share similar credit risk characteristics.

Interest income is calculated based on the gross carrying amount of the financial asset unless the financial asset is credit impaired, in which case interest income is calculated based on amortised cost of the financial asset.

The Group recognises an impairment gain or loss in profit or loss for all financial instruments by adjusting their carrying amount, with the exception of trade receivables from goods and services, other receivables, contract assets and lease receivables where the corresponding adjustment is recognised through a loss allowance account.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognised in other comprehensive income and accumulated in equity is recognised in profit or loss.

Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the statement of financial position when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the group entity or the counterparty.

Financial liabilities and equity

Classification as debt or equity

Debt and equity instruments issued by a group entity are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Financial liabilities at amortised cost

Financial liabilities including long-term borrowings, current portion of long-term borrowings, short-term borrowings, long-term bonds, current portion of long-term bonds, trade and notes payables and part of accruals and other payables are subsequently measured at amortised cost, using the effective interest method.

Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial liabilities and equity *(Continued)*

Non-substantial modifications of financial liabilities

For non-substantial modifications of financial liabilities that do not result in derecognition, the carrying amount of the relevant financial liabilities will be calculated at the present value of the modified contractual cash flows discounted at the financial liabilities' original effective interest rate. Transaction costs or fees incurred are adjusted to the carrying amount of the modified financial liabilities and are amortised over the remaining term. Any adjustment to the carrying amount of the financial liability is recognised in profit or loss at the date of modification.

Hedging activities

The Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedging transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items.

Assessment of hedging relationship and effectiveness

For hedge effectiveness assessment, the Group considers whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes that result from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio but the risk management objective for that designated hedging relationship remains the same, the Group adjusts the hedge ratio of the hedging relationship (i.e. rebalances the hedge) so that it meets the qualifying criteria again.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Hedging activities *(Continued)*

Net investment hedge

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in other comprehensive income. The gain or loss relating to the ineffective portion is recognised in profit or loss.

Gains and losses accumulated in equity are included in the profit or loss when the foreign operation is partially disposed of or sold.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted average method. The cost of project-in-progress comprises design costs, raw materials, direct labour, other direct costs and related production overheads (based on normal operating capacity). Net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

Cash and cash equivalents

In the consolidated statement of cash flows, cash and cash equivalents include cash on hand and bank deposits.

Share capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds. The difference between the aggregate considerations paid for repurchase of shares and the deduction of share capital is recognised in share premium.

Borrowing costs

All borrowing costs are recognised in profit or loss in the period in which they are incurred.

Current and deferred income tax

The tax expense for the period comprises current and deferred tax. Tax is recognised in the consolidated statement of profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case the tax is also recognised in other comprehensive income or directly in equity, respectively.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Current and deferred income tax *(Continued)*

Current income tax

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of the financial period in the countries where the Company's subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax

Deferred income tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted by the end of financial period and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax liabilities are provided on temporary differences arising from investments in subsidiaries, a joint venture and an associate, except for deferred income tax liability where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax assets are recognised on deductible temporary differences arising from investments in subsidiaries, a joint venture and an associate only to the extent that it is probable the temporary difference will reverse in the future and there is sufficient taxable profit available against which the temporary difference can be utilised.

For the purposes of measuring deferred tax for leasing transactions in which the Group recognises the right-of-use assets and the related lease liabilities, the Group first determines whether the tax deductions are attributable to the right-of-use assets or the lease liabilities.

For leasing transactions in which the tax deductions are attributable to the lease liabilities, the Group applies IAS 12 *Income Taxes* requirements to the lease transaction as a whole. Temporary differences relating to right-of-use assets and lease liabilities are assessed on a net basis. Excess of depreciation on right-of-use assets over the lease payments for the principal portion of lease liabilities resulting in net deductible temporary differences.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Current and deferred income tax *(Continued)*

Offsetting

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied to the same taxable entity by the same taxation authority.

Employee benefits

Pension and other social obligations

The Group has various defined contribution plans for pensions, housing fund and other social obligations in accordance with the local conditions and practices in the municipalities and provinces in which they operate. A defined contribution plan is a pension and/or other social benefits plan under which the Group pays fixed contributions into a separate publicly administered pension and/or other social insurance plan on mandatory bases. The Group will have no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees benefits relating to employee service in the current and prior periods. The contributions are recognised as employee benefit expenses when incurred.

Share-based compensation

The Group operates a number of equity-settled share-based compensation plans, under which the Group receives services from employees as consideration for equity instruments (options) of the Group. The fair value of the employee services received in exchange for the grant of the options is recognised as an expense. The total amount to be expensed is determined by reference to the fair value of the options granted at the grant date:

- Including any market performance conditions;
- Excluding the impact of any service and non-market performance vesting conditions (for example, profitability, sales growth targets and remaining an employee of the entity over a specified time period); and
- Including the impact of any non-vesting conditions.

Non-market vesting conditions are included in assumptions about the number of options that are expected to vest. The total expense is recognised over the vesting period, which is the period over which all of the specified vesting conditions are to be satisfied. At the end of each reporting period, the Group revises its estimates of the number of options that are expected to vest based on the non-marketing vesting conditions. It recognises the impact of the revision to original estimates, if any, in the consolidated statement of profit or loss, with a corresponding adjustment to equity.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Employee benefits *(Continued)*

Share-based compensation *(Continued)*

When the options are exercised, the cash subscribed for the shares issued is credited to share capital (nominal value) and share premium, net of any directly attributable transaction costs; and the amount previously recognised in capital reserve will be transferred to share premium. When the share options are forfeited after the vesting date or are still not exercised at the expiry date, the amount previously recognised in capital reserve will continue to be held in capital reserve.

The grant by the Company of options over its equity instruments to the employees of subsidiary undertakings in the Group is treated as a capital contribution. The fair value of employee services received, measured by reference to the grant date fair value, is recognised over the vesting period as an increase to investment in subsidiary undertakings, with a corresponding credit to equity in the parent entity accounts.

Revenue from contracts with customers

The Group recognises revenue when (or as) a performance obligation is satisfied, i.e. when “control” of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good and service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group’s performance as the Group performs;
- the Group’s performance creates and enhances an asset that the customer controls as the Group performs; or
- the Group’s performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

A contract asset represents the Group’s right to consideration in exchange for goods or services that the Group has transferred to a customer that is not yet unconditional. It is assessed for impairment in accordance with IFRS 9. In contrast, a receivable represents the Group’s unconditional right to consideration, i.e. only the passage of time is required before payment of that consideration is due.

A contract liability represents the Group’s obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer.

A contract asset and a contract liability relating to the same contract are accounted for and presented on a net basis.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Revenue from contracts with customers *(Continued)*

Contracts with multiple performance obligations (including allocation of transaction price)

For contracts that contain more than one performance obligations, typically drilling technology service and well completion service (within oilfield technology services) in one contract, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis.

The stand-alone selling price of the distinct good or service underlying each performance obligation is determined at contract inception. It represents the price at which the Group would sell a promised good or service separately to a customer. If a stand-alone selling price is not directly observable, the Group estimates it using appropriate techniques such that the transaction price ultimately allocated to any performance obligation reflects the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer.

Over time revenue recognition: measurement of progress towards complete satisfaction of a performance obligation

Output method

The progress towards complete satisfaction of a performance obligation is measured based on output method, which is to recognise revenue on the basis of direct measurements of the value of the goods or services transferred to the customer to date relative to the remaining goods or services promised under the contract, that best depict the Group's performance in transferring control of goods or services.

Interest income

Interest income is recognised on a time-proportion basis using the effective interest method.

Leases

Definition of a lease

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified on or after the date of initial application, the Group assesses whether a contract is or contains a lease based on the definition under IFRS 16 at inception or modification date. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Leases *(Continued)*

The Group as a lessee

Short-term leases and leases of low-valued assets

The Group applies the short-term lease recognition exemption to leases of buildings and equipment that have a lease term of 12 months or less from the commencement date and do not contain a purchase option. It also applies the recognition exemption for lease of low-value assets. Lease payments on short-term leases and leases of low-value assets are recognised as expense on a straight-line basis or another systematic basis over the lease term.

Right-of-use assets

The cost of right-of-use assets includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received;
- any initial direct costs incurred by the Group; and
- an estimate of costs to be incurred by the Group in dismantling and removing the underlying assets, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities.

Right-of-use assets in which the Group is reasonably certain to obtain ownership of the underlying leased assets at the end of the lease term is depreciated from commencement date to the end of the useful life. Otherwise, right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

The Group presents right-of-use assets as a separate line item on the consolidated statement of financial position.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Leases *(Continued)*

The Group as a lessee *(Continued)*

Lease liabilities

At the commencement date of a lease, the Group recognises and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The lease payments include:

- fixed payments (including in-substance fixed payments) less any lease incentives receivable;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable by the Group under residual value guarantees;
- the exercise price of a purchase option if the Group is reasonably certain to exercise the option; and
- payments of penalties for terminating a lease, if the lease term reflects the Group exercising an option to terminate the lease.

After the commencement date, lease liabilities are adjusted by interest accretion and lease payments.

The Group remeasures lease liabilities (and makes a corresponding adjustment to the related right-of-use assets) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the related lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the date of reassessment.
- the lease payments change due to changes in market rental rates following a market rent review/ expected payment under a guaranteed residual value, in which cases the related lease liability is remeasured by discounting the revised lease payments using the initial discount rate.

The Group presents lease liabilities as a separate line item on the consolidated statement of financial position.



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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Leases *(Continued)*

The Group as a lessor

Classification and measurement of leases

Leases for which the Group is a lessor are classified as operating leases. Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease. Rental income which are derived from the Group's ordinary course of business are presented as revenue.

Sublease

The Group leases certain drilling equipment from its suppliers and then leases to its customers. When the Group is an intermediate lessor, it accounts for the head lease and the sublease as two separate contracts. The sublease is classified as a finance or operating lease by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset.

Government grants

Grants from the government are recognised at fair value where there is reasonable assurance that the grant will be received and the Group will comply with all attached conditions.

Government grants related to cost are deferred and recognised in the consolidated statement of profit or loss over the period necessary to match them with the related costs that they are intended to compensate.

Dividend distribution

Dividend distribution to the Company's shareholders is recognised as a liability in the Group's financial statements in the period in which the dividends are approved by the Company's shareholders.



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4. KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, which are described in Note 3, the Directors are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual result may differ from these estimates.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

(a) Provision of ECL for trade receivables from goods and services

The impairment of trade receivables from goods and services under ECL model is determined by the management based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group uses provision matrix to calculate ECL for the trade receivables from goods and services from private and relatively small customers. The provision rates are based on past due analysis as groupings of various debtors that have similar loss patterns. The provision matrix is based on the Group's historical default rates taking into consideration forward-looking information that is reasonable and supportable available without undue costs or effort. At every reporting date, the historical observed default rates are reassessed and changes in the forward-looking information are considered. In addition, trade receivables from goods and services with significant balances from large multinational and state-owned oil companies or credit impaired are assessed for ECL individually.

The provision of ECL is sensitive to changes in estimates. In estimating the provision of ECL, the management is required to consider all relevant factors with reasonable and supportable assumptions to make significant accounting estimations. As at 31 December 2020, the carrying amount of trade receivables was RMB1,852,706,000 (31 December 2019: RMB2,020,032,000), already net of accumulated expected credit loss of RMB268,490,000 (31 December 2019: RMB185,053,000). The information about the ECL and the Group's trade receivables from goods and services are disclosed in Note 34.2(b)(i) and Note 11.

(b) Impairment of inventory

Inventories are reviewed for impairment whenever events or changes in circumstances cause their cost to exceed their net realisable value. Cost is determined on the weighted average basis. The determination of net realisable value of the inventories requires the use of estimates. Net realisable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale. Where the actual outcome or expectation in future is different from the original estimate, such difference will have an impact on the cost of inventories and a provision may be made or reversed in the year in which these estimates have been changed. As at 31 December 2020, the carrying amount of inventories was RMB930,618,000 (31 December 2019: RMB765,496,000), already net of accumulated impairment loss of RMB103,203,000 (31 December 2019: RMB83,232,000).



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4. KEY SOURCES OF ESTIMATION UNCERTAINTY *(Continued)*

(c) Estimated impairment of goodwill

Determining whether goodwill is impaired requires an estimation of the value in use of the CGU to which goodwill has been allocated. The value in use calculations require the Group to estimate the future cash flows expected to arise from the CGU and a suitable discount rate in order to calculate the present value. Where the actual future cash flows are less than expected, or change in facts and circumstances which results in downward revision of future cash, a material impairment loss may arise. As at 31 December 2020 and 2019, the carrying amount of goodwill was RMB242,004,000, already net of accumulated impairment loss of RMB26,325,000. Details of the key assumptions used by the management in goodwill impairment assessment are set out in Note 8.

(d) Estimated impairment of property, plant and equipment

Property, plant and equipment is stated at cost less subsequent accumulated depreciation and impairment losses, if any. The carrying amount is reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use.

In estimating the recoverable amount, management is required to consider all relevant factors with reasonable and supportable assumptions to make significant accounting estimations. In estimating the recoverable amounts of assets, major assumptions, including future cash flow projections associated with forecast revenue, forecast gross margin and a discount rate, are made. If future events do not correspond to such assumptions, the recoverable amounts will need to be revised, and this may have an impact on the Group's financial position and results of operations.

The aggregate carrying amount of property, plant and equipment as at 31 December 2020 was RMB2,099,390,000 (31 December 2019: RMB2,137,866,000) (Note 6).

5. SEGMENT INFORMATION

The chief executive officer, president, executive vice presidents and Directors are the Group's chief operating decision makers (the "CODM"). Management has determined the operating segments based on the information reviewed by the CODM for the purposes of allocating resources and assessing performance.

The Group's reportable segments are entity or group of entities that offer different products and services, which is the basis by which the CODM make decisions about resources to be allocated to the segments and assesses their performance. Financial information of these entities has been separated to present discrete segment information to be reviewed by the CODM.

The CODM assess performance of three reportable segments: drilling technology, well completion and oil production services.

All of the three reportable segments include a number of direct service provision operations in various cities in China and overseas countries, each of which is considered as a separate operating segment by the CODM. For segment reporting, these individual operating segments have been aggregated into three single reportable segments based on their sharing of similar economic characteristics, including similar nature of the services and products, type of customer for their services and products and the method used to provide their services and distribute their products.

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5. SEGMENT INFORMATION *(Continued)*

The measurement of profit or loss, assets and liabilities of the operating segments are the same as those described in the summary of significant accounting policies in Note 3. The CODM evaluate the performance of the operating segments based on profit before income tax expense, certain depreciation and amortisation, interest income, finance expenses, share of profit of a joint venture, asset impairment provisions and corporate overheads ("EBITDA"). The corporate overheads and corporate assets are the general management expenses incurred and assets held by the headquarters of the Group.

	Drilling technology	Well completion	Oil production services	Total
For the year ended 31 December 2020				
Revenue (Note)	1,303,840	749,986	1,033,826	3,087,652
EBITDA	412,548	276,457	376,534	1,065,539
Depreciation and amortisation	(186,957)	(121,574)	(31,047)	(339,578)
Asset impairment provision of				
- Inventories	(6,598)	(10,646)	(2,727)	(19,971)
- Trade receivables	(64,552)	(16,616)	(2,269)	(83,437)
Interest income	232	2,631	4	2,867
Finance expenses	(11,578)	(6,322)	(7,857)	(25,757)
Share of profit of a joint venture	141	-	-	141
Income tax expense	(28,380)	(17,697)	(68,422)	(114,499)
For the year ended 31 December 2019				
Revenue (Note)	1,624,203	836,028	1,129,266	3,589,497
EBITDA	684,516	352,190	468,693	1,505,399
Depreciation and amortisation	(169,923)	(125,119)	(26,803)	(321,845)
Asset impairment provision of				
- Inventories	(16,559)	(15,380)	(5,050)	(36,989)
- Trade receivables	(26,122)	(17,812)	(18,999)	(62,933)
- Other receivables	(10,327)	(14,433)	-	(24,760)
Interest income	269	1,372	508	2,149
Finance expenses	(8,536)	(6,418)	(6,122)	(21,076)
Share of profit of a joint venture	762	-	-	762
Income tax expense	(50,332)	(30,976)	(61,483)	(142,791)

Note: Sales between segments, with details set out in Note 22, are carried out at terms mutually agreed between relevant group entities. The revenue from external parties reported to the CODM is measured in a manner consistent with that in the consolidated statement of profit or loss.



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5. SEGMENT INFORMATION *(Continued)*

	Drilling technology	Well completion	Oil production services	Total
As at 31 December 2020				
Total assets	2,573,139	2,533,969	920,734	6,027,842
Total assets include:				
Capital expenditures	186,049	101,779	49,523	337,351
As at 31 December 2019				
Total assets	2,304,384	2,786,231	712,727	5,803,342
Total assets include:				
Capital expenditures	122,618	65,984	32,106	220,708

Disclosure of liabilities has not been included here because these liabilities balances are not allocated to segments.

A reconciliation of total EBITDA to profit before income tax is provided as follows:

	Year ended 31 December	
	2020	2019
EBITDA for reportable segments	1,065,539	1,505,399
Corporate overheads	(569,065)	(615,496)
Depreciation		
– Property, plant and equipment	(271,744)	(255,815)
– Right-of-use assets	(39,570)	(38,224)
Amortisation	(28,264)	(27,806)
Asset impairment provisions	(103,408)	(124,682)
Interest income	2,867	2,149
Finance expenses	(25,757)	(21,076)
Share of profit of a joint venture	141	762
Profit before income tax	30,739	425,211

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5. SEGMENT INFORMATION *(Continued)*

Reportable segments' assets are reconciled to total assets as follows:

	As at 31 December	
	2020	2019
Assets for reportable segments	6,027,842	5,803,342
Corporate assets for general management	1,853,279	3,703,470
Total assets	7,881,121	9,506,812

Note:

During the current year, certain buildings previously occupied for corporate management were allocated to operating segments for business use, and the management of deposits to large state-owned oil company customers was delegated to operating segments.

The Group allocates revenue on the basis of the location in which the sales are originated.

Geographical Information

	Revenue		Non-current assets	
	Year ended 31 December		As at 31 December	
	2020	2019	2020	2019
PRC	1,832,837	1,683,365	1,938,609	2,069,023
Republic of Iraq ("Iraq")	961,079	1,419,755	723,292	741,214
Other countries	293,736	486,377	163,473	167,524
Total	3,087,652	3,589,497	2,825,374	2,977,761

Client information

For the year ended 31 December 2020, revenues of approximately RMB1,465,289,000 (2019: RMB1,666,245,000) were derived from two external independent customers, which contributed 31.40% and 16.06% (2019: 32.17% and 14.25%) to the total revenue respectively. These revenues were mainly attributable to drilling technology and well completion segments (2019: drilling technology and well completion segments).



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6. PROPERTY, PLANT AND EQUIPMENT

	Buildings	Machinery and equipment	Motor vehicles	Furniture, fixtures, leasehold improvements and others	Construction-in-progress	Total
As at 1 January 2019						
Cost	729,077	2,445,099	53,027	124,424	109,074	3,460,701
Accumulated depreciation	(104,313)	(993,332)	(39,667)	(67,584)	-	(1,204,896)
Carrying values	624,764	1,451,767	13,360	56,840	109,074	2,255,805
Year ended 31 December 2019						
As at 1 January 2019	624,764	1,451,767	13,360	56,840	109,074	2,255,805
Additions	-	43,971	315	15,046	133,757	193,089
Transfer in/(out)	5,564	34,914	2,590	10,697	(53,765)	-
Depreciation charge	(36,872)	(226,213)	(2,836)	(18,268)	-	(284,189)
Disposals	-	(40,021)	(328)	(310)	-	(40,659)
Currency translation differences	2,151	9,640	110	348	1,571	13,820
As at 31 December 2019	595,607	1,274,058	13,211	64,353	190,637	2,137,866
As at 31 December 2019						
Cost	737,310	2,473,968	54,626	149,550	190,637	3,606,091
Accumulated depreciation	(141,703)	(1,199,910)	(41,415)	(85,197)	-	(1,468,225)
Carrying values	595,607	1,274,058	13,211	64,353	190,637	2,137,866
Year ended 31 December 2020						
As at 1 January 2020	595,607	1,274,058	13,211	64,353	190,637	2,137,866
Additions	-	21,983	439	318	269,792	292,532
Transfer in/(out)	50,476	112,429	4,378	6,112	(173,395)	-
Depreciation charge	(31,306)	(219,850)	(2,913)	(20,651)	-	(274,720)
Disposals	(3,316)	(6,728)	(70)	(375)	-	(10,489)
Currency translation differences	(7,985)	(22,074)	(334)	(1,294)	(14,112)	(45,799)
As at 31 December 2020	603,476	1,159,818	14,711	48,463	272,922	2,099,390
As at 31 December 2020						
Cost	772,651	2,413,947	57,604	147,323	272,922	3,664,447
Accumulated depreciation	(169,175)	(1,254,129)	(42,893)	(98,860)	-	(1,565,057)
Carrying values	603,476	1,159,818	14,711	48,463	272,922	2,099,390



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020

(Amounts expressed in thousands of RMB, unless otherwise stated)

6. PROPERTY, PLANT AND EQUIPMENT *(Continued)*

During the year ended 31 December 2020, the depreciation charges of the Group were recorded in cost of sales with an amount of RMB225,396,000 (2019: RMB233,583,000), selling, general and administrative expenses with an amount of RMB28,426,000 (2019: RMB30,904,000), and cost of inventories which remained unsold as at year end with an amount of RMB20,898,000 (2019: RMB19,702,000), respectively.

As at 31 December 2020, long-term borrowings were secured by certain equipment with a carrying value of RMB240,791,000 (31 December 2019: RMB277,924,000) and certain buildings with a carrying value of RMB87,341,000 (31 December 2019: RMB63,362,000) (Note 17(a)).

As at 31 December 2019, short-term borrowings were secured by the Group's buildings with a carrying value of RMB46,815,000 (Note 17(b)), which has been fully repaid in 2020.

As a result of the changes in the current economic environment related to the COVID-19 pandemic and the plunge in oil price, the Group is experiencing negative conditions including decreased revenues. During the year ended 31 December 2020, management has determined that the property, plant and equipment within one of the CGUs related to well completion services have impairment indicators. An impairment test has been performed on the CGU to which the property, plant and equipment are allocated after taking into account the Group's future operating plans and the outlook for the industry. The recoverable amount of the CGU has been determined based on value-in-use calculations through discounting the estimated future cash flows generated from the CGU to the present value. In estimating the recoverable amounts of assets, major assumptions, including future cash flow projections associated with forecast revenue, forecast gross margin and a discount rate, are made. As a result of the impairment test, management determined that no impairment charge was required for the property, plant and equipment of the CGU in year 2020.



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6. PROPERTY, PLANT AND EQUIPMENT *(Continued)*

The Group as lessor

The Group leases out a number of equipment under operating leases. The leases typically run for an initial period of 3 to 24 months. None of the leases includes variable lease payments. The disaggregation of the equipment under operating leases included within "machinery and equipment" and the reconciliation of the carrying amount at the beginning and end of the period are set out as below:

Year ended 31 December 2019	
As at 1 January 2019	178,447
Additions	–
Disposals	(12,926)
Depreciation charge	(35,023)
As at 31 December 2019	130,498
As at 31 December 2019	
Cost	222,025
Accumulated depreciation	(91,527)
Carrying values	130,498
Year ended 31 December 2020	
As at 1 January 2020	130,498
Additions	3,961
Disposals	(5,761)
Depreciation charge	(23,542)
As at 31 December 2020	105,156
As at 31 December 2020	
Cost	206,549
Accumulated depreciation	(101,393)
Carrying values	105,156

Furthermore, the Group leases certain drilling equipment from its suppliers and then leases to its customers. The Group accounts for the head lease and the sublease as two separate contracts. The sublease is classified as operating leases by reference to the right-of-use asset or expenses relating to short-term leases arising from the head lease, not with reference to the underlying asset.

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7. RIGHT-OF-USE ASSETS

	Leasehold lands	Equipment	Buildings	Total
Year ended 31 December 2019				
As at 1 January 2019	77,567	-	28,463	106,030
Additions	-	110,456	13,791	124,247
Depreciation charge	(1,932)	(28,073)	(10,371)	(40,376)
Carrying values				
As at 31 December 2019	75,635	82,383	31,883	189,901
Year ended 31 December 2020				
As at 1 January 2020	75,635	82,383	31,883	189,901
Additions	-	-	4,602	4,602
Terminations of leases previously entered	-	(16,852)	-	(16,852)
Depreciation charge	(1,932)	(22,866)	(14,902)	(39,700)
Carrying values				
As at 31 December 2020	73,703	42,665	21,583	137,951

During the current and prior years, the Group entered into new lease agreements for the use of buildings and equipment for 2 to 5 years with extension and termination options. The Group is required to make fixed quarterly, semi-annually or annually payments during the contract periods. On lease commencement, the Group recognised RMB4,602,000 (2019: RMB124,247,000) of right-of-use assets and RMB4,602,000 (2019: RMB124,247,000) lease liabilities. Lease terms are negotiated on an individual basis and contain a range of different terms and conditions. In determining the lease term and assessing the length of the non-cancellable period, the Group applies the definition of a contract and determines the period for which the contract is enforceable. In addition, the lease agreements do not impose any covenants other than the security interests in the leased assets that are held by the lessor. Leased assets except for the leasehold lands may not be used as security for borrowing purposes.

For termination options, the Group assesses at lease commencement date that it is reasonably certain not to exercise. For extension options in lease contracts of equipment, the Group assesses at lease commencement date that it is reasonably certain not to exercise since those equipment is used to certain service projects with a limited duration. For extension options in lease contracts of buildings, the Group assesses at lease commencement date that it is not reasonably certain to exercise and the Directors consider the potential future lease payments for lease contracts of buildings not included in lease liabilities are immaterial and hence, no further disclosure is made.

During the year ended 31 December 2020, the depreciation charges of the Group were recorded in cost of sales with an amount of RMB37,418,000 (2019: RMB38,224,000) and cost of inventories which remained unsold as at year end with an amount of RMB2,282,000 (2019: RMB2,152,000), respectively.

During the year ended 31 December 2020, the expense relating to short-term leases and other leases with lease terms end within 12 months amounts to RMB123,933,000 (2019: RMB152,548,000).



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7. RIGHT-OF-USE ASSETS (Continued)

During the year ended 31 December 2020, the total cash outflow for leases amounts to RMB199,131,000 (2019: RMB160,146,000), consisting of RMB43,535,000 (2019: RMB45,094,000) paid for lease liabilities and RMB155,596,000 (2019: RMB115,052,000) paid for short-term leases and other leases with lease terms end within 12 months.

The Group has obtained the land use right certificates for all leasehold lands.

As at 31 December 2020, the outstanding lease commitment relating to short-term leases of certain equipment and buildings is RMB25,306,000 (2019: RMB39,777,000).

As at 31 December 2020, certain long-term borrowings were secured by right-of-use assets (leasehold lands) with a carrying value of RMB5,548,000 (31 December 2019: 3,281,000) (Note17(a)).

As at 31 December 2019, certain short-term borrowings were secured by right-of-use assets (leasehold lands) with a carrying value of RMB2,423,000 (Note17(b)).

8. GOODWILL

As at 1 January 2019, 31 December 2019 and 2020

Cost	268,329
Accumulated impairment	(26,325)
Carrying value	242,004

An operating segment-level summary of the goodwill allocation is presented below.

As at 31 December 2020 and 2019	Drilling technology	Well completion	Total
Shandong Precede Petroleum Technology Co., Ltd. (山東普瑞思德石油技術有限公司, "Shandong Precede")	-	132,486	132,486
Beijing Haineng Haite Petroleum Technology Development Co., Ltd. (北京海能海特石油科技 發展有限公司, "Beijing Haineng Haite")	-	106,886	106,886
Anton Machinery and Meter Testing Co., Ltd. (安東儀器儀表檢測服務有限公司, "Anton Testing", formerly 四川誠量檢測服務有限公司)	2,632	-	2,632
	2,632	239,372	242,004

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8. GOODWILL (Continued)

Goodwill is allocated to the CGUs of the Group identified according to their operations.

The recoverable amount of the CGUs is determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on financial budgets approved by management covering a five-year period. The Company expects cash flow beyond the five-year period will be similar to that of the fifth year based on existing production capacity. Cash flows beyond the five-year period are extrapolated using 2% growth rates after considering the inflation factor. Based on the assessments, no goodwill was further impaired as at 31 December 2020.

The key assumptions used for value-in-use calculations in 2020 are as follows:

As at 31 December 2020	Shandong Precede	Beijing Haineng Haite	Anton Testing
Gross margin	16.72%	18.82%	13.92%
Discount rate	14.50%	16.07%	16.77%
As at 31 December 2019	Shandong Precede	Beijing Haineng Haite	Anton Testing
Gross margin	18.52%	20.50%	12.23%
Discount rate	14.38%	15.87%	16.70%

Management determined budgeted gross margin based on past performance and its expectations of market development. The discount rates used are pre-tax long-term weighted average costs of capital, which are based on the management's best estimation of the investment returns that market participants would require for the relevant assets.

Except for the accumulated impairment loss already recognised, management believed that any reasonably possible change in any of these assumptions would not cause the aggregate carrying amount of the above CGUs to exceed their recoverable amount as of 31 December 2020.



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9. INTANGIBLE ASSETS

As at 31 December 2020 and 2019	Patents	Computer software	Total
As at 1 January 2019			
Cost	368,842	81,440	450,282
Accumulated amortisation	(156,369)	(41,199)	(197,568)
Carrying value	212,473	40,241	252,714
Year ended 31 December 2019			
As at 1 January 2019	212,473	40,241	252,714
Additions	38,122	2,384	40,506
Amortisation charge	(28,287)	(4,947)	(33,234)
As at 31 December 2019	222,308	37,678	259,986
As at 31 December 2019			
Cost	406,964	83,824	490,788
Accumulated amortisation	(184,656)	(46,146)	(230,802)
Carrying value	222,308	37,678	259,986
Year ended 31 December 2020			
As at 1 January 2020	222,308	37,678	259,986
Additions	44,698	121	44,819
Amortisation charge	(26,229)	(4,924)	(31,153)
As at 31 December 2020	240,777	32,875	273,652
As at 31 December 2020			
Cost	451,662	83,945	535,607
Accumulated amortisation	(210,885)	(51,070)	(261,955)
Carrying value	240,777	32,875	273,652

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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10. INVENTORIES

	As at 31 December 2020	2019
Project materials, spare parts and other materials	626,384	478,679
Project-in-progress	304,234	286,817
	930,618	765,496

Movements of provision for inventory obsolescence during the year are analysed as follows:

	2020	2019
As at 1 January	(83,232)	(135,510)
Addition	(19,971)	(36,989)
Write-off	-	89,267
As at 31 December	(103,203)	(83,232)

11. TRADE AND NOTES RECEIVABLES

	As at 31 December 2020	2019
Trade receivables, net (a)		
- contracts with customers	1,803,419	1,944,361
- lease receivables	49,287	75,671
	1,852,706	2,020,032
Notes receivable (e)	281,083	180,215
	2,133,789	2,200,247

Notes:

(a) Ageing analysis of carrying value of trade receivables at the reporting date was as follows:

	As at 31 December 2020	2019
1 - 6 months	921,222	1,233,147
6 months - 1 year	396,445	362,996
1 - 2 years	335,267	390,047
2 - 3 years	199,772	33,842
	1,852,706	2,020,032



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11. TRADE AND NOTES RECEIVABLES *(Continued)*

Notes: *(Continued)*

(b) Most of the Group's past-due trade receivables were those receivables aged over one year. As at 31 December 2020, included in the Group's trade receivables balance are debtors with aggregate carrying amount of RMB369,932,000 (31 December 2019: RMB423,889,000) which are past due but not considered as in default as at the reporting date because the management considered such long ageing items were receivables from customers with good cooperation and would be collected subsequently.

(c) Most of the trade receivables are with credit terms of one year or less. The maximum exposure to credit risk at the reporting date is the carrying value of the trade receivables.

As at 31 December 2020, trade receivables of RMB754,199,000 (31 December 2019: RMB265,986,000) were pledged as security for short-term borrowings of RMB500,189,000 (31 December 2019: RMB128,263,000) (Note 17(b)).

As at 31 December 2020, trade receivables from a customer up to RMB282,420,000 (31 December 2019: RMB282,420,000) were pledged as security for long-term borrowings of RMB97,213,000 (31 December 2019: RMB99,217,000) (Note 17(a)).

(d) Movements of impairment of trade receivables are as follows:

	2020	2019
As at 1 January	(185,053)	(122,120)
Addition	(83,437)	(62,933)
As at 31 December	(268,490)	(185,053)

Details of impairment assessment of trade receivables and notes receivable for the year ended 31 December 2020 and 2019 are set out in Note 34.2(b)(i) and Note 34.2(b)(iii) respectively.

(e) As at 31 December 2020, total notes received amounting to RMB281,083,000 (31 December 2019: RMB180,215,000) are held by the Group as settlement of corresponding trade receivables. During the current year, in order to more effectively manage the overall cashflows under COVID-19, the Group further endorsed certain notes for settlement of trade payables and a new business model was adopted by the management whose objective is achieved by both selling and collecting contractual cash flows; therefore, notes receivable was subsequently measured at fair value through other comprehensive income from 1 July 2020 (31 December 2019: amortised cost). All notes received by the Group are with a maturity period of less than one year.

(f) Trade and notes receivables were denominated in the following currencies:

	As at 31 December 2020	2019
RMB	1,163,195	1,071,422
United States dollar ("US\$")	954,609	975,246
Others	15,985	153,579
	2,133,789	2,200,247

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12. PREPAYMENTS AND OTHER RECEIVABLES

	As at 31 December	
	2020	2019
Current		
Advances to suppliers	236,422	262,148
Deposits and other receivables	346,388	375,200
Value-added tax recoverable	22,665	10,700
	605,475	648,048
Non-current		
Value-added tax recoverable	40,358	30,051
Advances to engineering equipment suppliers	26,070	112,145
Deposits and other receivables (a)	-	13,500
	66,428	155,696

Ageing analysis of the current portion of prepayments and other receivables at the reporting date was disclosed as follows:

	As at 31 December	
	2020	2019
1 – 6 months	337,259	401,411
6 months – 1 year	107,453	93,888
1 – 2 years	104,521	81,388
2 – 3 years	53,009	72,913
Over 3 years	48,864	44,079
	651,106	693,679
Less: allowance for impairment (b)	(45,631)	(45,631)
Prepayments and other receivables, net	605,475	648,048

Notes:

- (a) The amount as at 31 December 2020 was included in current portion of other receivables.
(b) Movements of allowance for impairment are as follows:

	2020	2019
As at 1 January	(45,631)	(20,871)
Addition	-	(24,760)
As at 31 December	(45,631)	(45,631)

Details of impairment assessment of other receivables for the year ended 31 December 2020 and 2019 are set out in Note 34.2(b)(ii).



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13. CASH AND BANK

	As at 31 December 2020	2019
Restricted bank deposits (a)	454,169	368,730
Cash and cash equivalents		
- Cash on hand	19,431	19,743
- Deposits in bank	859,654	2,403,131
	1,333,254	2,791,604

Notes:

(a) As at 31 December 2020, bank deposits amounting to RMB454,169,000 (31 December 2019: RMB358,470,000) were held as securities for letter of guarantee and issuance of notes payable, and bank deposits amounting to RMB Nil (31 December 2019: RMB10,260,000) were held as securities for securing short-term bank borrowings (Note 17(b)). The restricted bank deposits carried a fixed interest rate at 0.30% per annum as at 31 December 2020 (2019: 0.35% per annum).

(b) Cash and bank were denominated in the following currencies:

	As at 31 December 2020	2019
RMB	892,050	750,915
US\$	411,981	1,980,611
Hong Kong dollar ("HK\$")	2,875	20,392
Others	26,348	39,686
	1,333,254	2,791,604

(c) As at 31 December 2020, cash and cash equivalents were bank deposits mainly bearing market interest rate at 0.3% per annum (31 December 2019: 0.35% per annum).

(d) Details of impairment assessment of restricted bank deposits and cash and cash equivalents for the year ended 31 December 2020 and 2019 are set out in Note 34.2(b)(iii).

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14. SHARE CAPITAL AND SHARE OPTIONS

	Number of shares issued and fully paid of HK\$0.1 each (thousands)	Share capital	
		HK\$' 000	RMB' 000
Ordinary shares issued and fully paid:			
As at 1 January 2019	3,002,923	300,292	275,959
Exercise of share options (i)	3,640	364	314
As at 31 December 2019	3,006,563	300,656	276,273
Repurchase of ordinary shares (ii)	(95,226)	(9,522)	(8,094)
As at 31 December 2020	2,911,337	291,134	268,179

Notes:

(i) Share options

During the year ended 31 December 2020, options to subscribe for 113,440,000 shares at the exercise price of HK\$0.495 have been conditionally granted to key employees (2019: 95,000,000 shares at the exercise price of HK\$0.790 have been conditionally granted to three independent non-executive directors, other executive directors and certain key employees). 113,440,000 shares have a 3-year vesting period, 33.33% each exercisable per year, on the premises of achieving the performance conditions of the Group set out in the share option scheme. The options have an option period of 6 years.

Movements in the number of share options outstanding and their related weighted average exercise prices are as follows:

	Average exercise price in HK\$ per share	Number of share options (thousands)
As at 1 January 2019		264,168
Granted (on 07 January 2019)	0.790	95,000
Forfeited	0.874	(7,907)
Exercised	0.758	(3,640)
Expired	5.692	(1,434)
As at 1 January 2020		346,187
Granted (on 01 April 2020)	0.495	113,440
Forfeited	0.834	(18,202)
As at 31 December 2020		441,425



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14. SHARE CAPITAL AND SHARE OPTIONS *(Continued)*

Notes: *(Continued)*

(i) Share options *(Continued)*

Share options outstanding (in thousands) at the end of the year have the following expiry dates and exercise prices:

Expiry date	Exercise price HK\$ per share	Number of share options (thousands) As at 31 December 2020
23 February 2022	0.740	78,510
31 March 2022	0.800	6,300
1 December 2022	1.100	2,216
22 May 2023	0.810	91,692
2 April 2024	1.020	62,483
6 Jan 2025	0.790	86,784
31 March 2026	0.495	113,440
		441,425

The exercise price of the granted options is equal to the highest of (i) the closing price of the shares of the Company in the daily quotation sheet issued by the Stock Exchange on the date of grant; (ii) the average closing price of the shares as stated in the daily quotation sheets issued by the Stock Exchange for the five business days immediately preceding the date of grant; and (iii) the par value of the shares. Options are conditional on the employee completing one to three years' service (the vesting period) and have a contractual option term of six years. The Group has no legal or constructive obligation to repurchase or settle the options in cash.

As of 31 December 2020, out of the 441,425,000 options (31 December 2019: 346,187,000 options), 249,301,000 options (31 December 2019: 150,497,000 options) were exercisable. Options exercised in 2019 resulted in 3,640,000 shares being issued at a weighted average price of HK\$0.758 each. The related weighted average share price at the time of exercise was HK\$1.066 per share in 2019.

The fair value of the options granted during the year ended 31 December 2020 was determined using the Binomial Option Pricing Model. The major assumptions used in the pricing model for options granted on 1 April 2020 were the exercise prices shown above and other parameters are shown below:

Parameters	Options granted in 2020	Options granted in 2019
Share price as of the valuation date (HK\$)	0.495	0.790
Expected dividend yield	-	-
Forfeiture rate	0.30%	0.34%
Exercise multiples	3.33	3.38-3.39
Maturity years	6.0	6.0
Risk free rate	0.61%	1.79%
Annualised volatility	57.24%	59.54%

The weighted average fair value of options granted during the year determined using the Binomial valuation model was HK\$0.251 per option (2019: HK\$0.422 per option). The volatility measured at the standard deviation of continuously compounded share returns is derived from historical volatility of the share price over the last 6 years.

The total expense recognised in the consolidated statement of profit or loss for the year ended 31 December 2020 for share options amounted to RMB17,369,000 (31 December 2019: RMB29,167,000), with a corresponding amount credited in capital reserve (Note 15).

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14. SHARE CAPITAL AND SHARE OPTIONS *(Continued)*

Notes: *(Continued)*

(ii) Repurchase of ordinary shares

During July to November this year, the Company repurchased 95,226,000 of its own ordinary shares through The Stock Exchange of Hong Kong Limited, with the price per share from HK\$0.330 to HK\$0.490. The aggregate consideration paid was RMB32,600,000.

15. RESERVES

	Share premium	Capital reserve(d)	Statutory reserve(c)	Retained earnings	Other reserves	Total
As at 1 January 2019	1,076,529	416,485	76,900	819,796	(19,795)	2,369,915
Profit for the year	-	-	-	268,583	-	268,583
Net investment hedge (b)	-	-	-	-	(30,239)	(30,239)
Currency translation differences (a)	-	-	-	-	16,859	16,859
Share option exercised	3,148	(1,461)	-	-	-	1,687
Share option scheme (Note14 (i))	-	29,167	-	-	-	29,167
Dividends (Note 30)	(30,107)	-	-	-	-	(30,107)
As at 31 December 2019	1,049,570	444,191	76,900	1,088,379	(33,175)	2,625,865
Balance at 1 January 2020	1,049,570	444,191	76,900	1,088,379	(33,175)	2,625,865
Loss for the year	-	-	-	(95,844)	-	(95,844)
Repurchase of ordinary shares	(24,506)	-	-	-	-	(24,506)
Net investment hedge (b)	-	-	-	-	111,612	111,612
Financial instruments measured at fair value through other comprehensive income	-	-	-	-	(7,512)	(7,512)
Currency translation differences (a)	-	-	-	-	(269,051)	(269,051)
Share option scheme (Note14 (i))	-	17,369	-	-	-	17,369
As at 31 December 2020	1,025,064	461,560	76,900	992,535	(198,126)	2,357,933



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15. RESERVES (Continued)

Notes:

(a) Translation reserve

	2020	2019
Items that may be reclassified subsequently to profit or loss:		
At 1 January	100,712	83,853
Currency translation differences	(269,051)	16,859
At 31 December	(168,339)	100,712

Currency translation differences relating to the translation of the Group's foreign operations from their functional currencies to the Group's presentation currency are recognised directly in other comprehensive income and accumulated in the translation reserve which is shown in other reserves. Currency translation differences accumulated in the translation reserve are reclassified to profit or loss on the disposal/partial disposal of the foreign operations.

(b) Hedging reserve

	2020	2019
Items that may be reclassified subsequently to profit or loss:		
At 1 January	(148,664)	(118,425)
Net investment hedge	111,612	(30,239)
At 31 December	(37,052)	(148,664)

The net investment hedging reserve represents the cumulative effective portion of gains and losses arising on changes in exchange rate of hedging instruments entered into for net investment hedge. The cumulative gain and loss arising on changes in exchange rate of the hedging instrument that are recognised and accumulated under the heading of net investment hedging reserve which is further shown in other reserves will be reclassified to profit or loss on the disposal/partial disposal of the foreign operations.

During the year ended 31 December 2020, a proportion of the Group's US\$ denominated long-term bonds amounting to US\$243,291,000 (2019: US\$265,889,000) has been designated as hedging instrument for the US\$ denominated net investment in the Group's overseas subsidiaries. For the year ended 31 December 2020, foreign exchange translation gain of RMB111,612,000 (2019: loss of RMB30,239,000) on the hedging instrument was recognised in other comprehensive income as deduction in other reserves.

(c) Statutory reserve

Subsidiaries established in the PRC shall appropriate 10% of their annual statutory net profit (after offsetting any prior years' losses) to the statutory reserve fund account in accordance with the PRC Company Law and their articles of association. When the balance of such reserve fund reaches 50% of each entity's paid capital, any further appropriation is optional. The statutory reserve fund can be utilised to offset prior years' losses or increase capital after approval. However, except for offsetting prior years' losses, the statutory reserve fund must be maintained at a minimum of 25% of paid capital after such usage.

(d) Capital reserve

Capital reserve represents share-based payments reserve and capital injection before listing by shareholders. As at 31 December 2020, included in the balance of capital reserve, there is RMB226,098,000 (31 December 2019: RMB208,729,000) share-based payments reserve and RMB235,462,000 (31 December 2019: RMB235,462,000) capital injection before listing by shareholders.

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16. LONG-TERM BONDS

Issue date	Par value	Coupon rate	As at 31 December 2020	As at 31 December 2019	Effective interest rate
5 December 2017 (a)	US\$176.4 million	9.75%	-	1,247,484	8.31%
5 December 2017 (a)	US\$123.6 million	9.75%	-	856,725	11.62%
2 December 2019 (b)	US\$300.0 million	7.50%	1,866,659	2,040,659	8.91%
Subtotal			1,866,659	4,144,868	
Less: Current portion			(11,034)	(2,116,445)	
			1,855,625	2,028,423	

Notes:

- (a) The Company issued US\$300 million senior notes with the coupon rate of 9.75% at discount of par value on 5 December 2017 with direct transaction costs amounting to RMB39,989,000, in which US\$176.4 million were arranged to exchange the senior notes issued on 31 October 2013 in the amount of US\$172.2 million during the year ended 31 December 2017. The exchange was accounted as a non-substantial modification of financial liabilities. During the period ended 31 December 2020, US\$176.4 million and US\$19.0 million were repurchased out of US\$176.4 million and US\$123.6 million respectively. The notes mature in 3 years from the issue date at their nominal value. Interest is payable on a semi-annually basis. As at the due date, the Company fully repaid the remaining principal amount of US\$104.6 million for all rest outstanding notes.
- (b) The Company issued US\$300 million senior notes with the coupon rate of 7.50% at discount of par value on 2 December 2019 with direct transaction costs amounting to RMB45,359,000, in which US\$10.1 million were repurchased during the year ended 31 December 2020. The notes mature in 3 years from the issue date at their nominal value. Interest is payable on a semi-annually basis. As at 31 December 2020, interest payable amounted to approximately RMB11.0 million (31 December 2019: RMB12.2 million).

17. BORROWINGS

	As at 31 December			
	2020 Amount	2020 Interest Rate	2019 Amount	2019 Interest Rate
Long-term borrowings				
- Secured or guaranteed				
- RMB denominated (a)	295,027	4.25%-9.70%	294,600	7.10%-9.70%
Less: Current portion	(163,639)		(92,174)	
	131,388		202,426	
Short-term bank borrowings				
- Unsecured and unguaranteed				
- RMB denominated	-		80,406	5.44%-6.09%
- Secured or guaranteed				
- RMB denominated (b)	631,628	3.50%-6.00%	329,600	4.70%-6.79%
- USD denominated (b)	82,035	3.02%	87,743	4.70%-4.77%
Other short-term borrowings				
- Unsecured and unguaranteed				
- RMB denominated (c)	50,290	5.65%	-	
	763,953		497,749	



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17. BORROWINGS (Continued)

	As at 31 December	
	2020	2019
The carrying amounts of the above borrowings are repayable:		
- Within one year	927,592	589,923
- More than one year but not exceeding two years	131,388	202,426
	1,058,980	792,349
Less: Amount due for settlement within one year and shown under current liabilities	(927,592)	(589,923)
Amount due after one year	131,388	202,426

The exposure of the Group's borrowings are as follows:

	As at 31 December	
	2020	2019
Fixed-rate borrowings	957,293	546,873
Variable-rate borrowings	101,687	245,476
	1,058,980	792,349

The ranges of effective interest rates (which are also equal to contracted interest rates) on the Group's borrowings are as follows:

	Year ended 31 December	
	2020	2019
Effective interest rate:		
Fixed-rate borrowings	3.02%-6.90%	4.70%-7.10%
Variable-rate borrowings	4.25%-9.70%	6.09%-9.70%



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17. BORROWINGS (Continued)

Notes:

- (a) As at 31 December 2020, secured long-term borrowings of RMB56,425,000 (31 December 2019: RMB146,341,000) represented borrowings from China Railway Construction Financial Leasing Co., Ltd., a third party, which will mature in July 2021 (31 December 2019: July 2021), and secured by the Group's equipment with a carrying value of RMB240,791,000 (31 December 2019: RMB277,924,000) (Note 6). Secured long-term bank borrowings of RMB96,184,000 (31 December 2019: RMB49,042,000) were secured by the Group's buildings with a carrying value of RMB87,341,000 (31 December 2019: RMB63,362,000) (Note 6) and right-of-use assets (leasehold lands) with a carrying value of RMB5,548,000 (31 December 2019: RMB3,281,000) respectively (Note 7). Secured long-term bank borrowings of RMB97,213,000 (31 December 2019: RMB99,217,000) were secured by the Group's trade receivables amounting to RMB282,420,000 (31 December 2019: RMB282,420,000) (Note 11(c)).

Long-term bank borrowings of RMB45,205,000 (31 December 2019: Nil) were guaranteed by Beijing Zhongguancun Sci-tech Guaranty Co., Ltd. (北京中關村科技融資擔保有限公司), a third party.

- (b) As at 31 December 2020, secured short-term bank borrowings of RMB500,189,000 (31 December 2019: RMB128,263,000) were secured by the Group's trade receivables amounting to RMB754,199,000 (31 December 2019: RMB265,986,000) (Note 11(c)). RMB denominated short-term bank borrowings of RMB131,439,000 (31 December 2019: RMB50,575,000) and US\$ denominated short-term bank borrowings of RMB82,035,000 (31 December 2019: RMB87,743,000) were guaranteed by Mr. Luo Lin, the Company's ultimate controlling shareholder (Note 35(b)).

As at 31 December 2019, secured short-term bank borrowings of RMB40,021,000 were secured by the Group's buildings with a carrying value of RMB46,815,000 (Note 6) and right-of-use assets (leasehold lands) with a carrying value of RMB2,423,000 (Note 7) respectively.

As at 31 December 2019, short-term bank borrowings of RMB100,741,000 were guaranteed by Beijing Zhongguancun Sci-tech Guaranty Co., Ltd. (北京中關村科技融資擔保有限公司), a third party.

As at 31 December 2019, secured short-term bank borrowings of RMB10,000,000 were secured by the bank deposits amounting to RMB10,260,000 (Note 13(a)).

- (c) As at 31 December 2020, other short-term borrowings represented a loan borrowed by Anton Oilfield Services (Group) Ltd. from Beijing Zhongguancun Sci-tech Guaranty Co., Ltd. (北京中關村科技融資擔保有限公司), a third party.
- (d) As at 31 December 2020, the undrawn bank borrowing facilities of the Group of approximately RMB930 million (31 December 2019: RMB706 million), with expiry dates up to 8 July 2022 (31 December 2019: 8 July 2022), were unsecured (31 December 2019: unsecured).



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18. LEASE LIABILITIES

	As at 31 December 2020	As at 31 December 2019
Lease liabilities payable:		
Within one year	34,384	45,834
One to two years	21,858	49,829
Two to five years	9,913	19,430
	66,155	115,093
Less: Amount due for settlement with 12 months shown under current liabilities	(34,384)	(45,834)
Amount due for settlement after 12 months shown under non-current liabilities	31,771	69,259

19. TRADE AND NOTES PAYABLES

	As at 31 December 2020	2019
Trade payables	590,670	546,945
Notes payable	812,625	410,461
	1,403,295	957,406

Ageing analysis of trade and notes payables at the reporting date was as follows:

	As at 31 December 2020	2019
Less than 1 year	1,195,605	790,866
1 – 2 years	98,618	77,348
2 – 3 years	50,903	30,371
Over 3 years	58,169	58,821
	1,403,295	957,406

Trade and notes payables were denominated in the following currencies:

	As at 31 December 2020	2019
RMB	1,285,721	868,702
US\$	103,241	80,105
Others	14,333	8,599
	1,403,295	957,406

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20. ACCRUALS AND OTHER PAYABLES

	As at 31 December 2020	2019
Payroll and welfare payables	43,256	28,125
Taxes other than income taxes payable	12,506	22,364
Payables to equipment vendors	273,437	220,353
Others	205,382	133,686
	534,581	404,528

21. DEFERRED INCOME TAX

For the purpose of presentation in the consolidated statement of financial position, certain deferred income tax assets and liabilities have been offset. The following is the analysis of the deferred income tax balances for financial reporting purposes:

	As at 31 December 2020	2019
Deferred income tax assets	21,993	34,637
Deferred income tax liabilities	9,998	10,219
	11,995	24,418

Deferred tax assets:

	Taxable losses	Impairment provision of receivables and inventories	Unrealised profit	Total
As at 1 January 2019	31,305	13,789	6,982	52,076
(Debited)/credited to the consolidated statement of profit or loss	(12,150)	1,693	(6,982)	(17,439)
As at 31 December 2019	19,155	15,482	-	34,637
(Debited)/credited to the consolidated statement of profit or loss	(12,143)	(501)	-	(12,644)
As at 31 December 2020	7,012	14,981	-	21,993



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21. DEFERRED INCOME TAX *(Continued)*

Deferred income tax assets are recognised to the extent that the realisation of the related tax benefit through future taxable profits is probable. As at 31 December 2020, the Group did not recognise deferred income tax assets of RMB129,868,000 (31 December 2019: RMB107,334,000) in respect of accumulated tax losses and temporary difference amounting to RMB454,720,000 (31 December 2019: RMB392,641,000) that can be carried forward against taxable income as the Group is going to dissolve the subsidiaries or the losses are considered as unrecoverable in 5 years.

22. REVENUE

	Year ended 31 December	
	2020	2019
Sales of goods	21,190	163,157
Provision of services	2,802,448	3,165,682
Rental	264,014	260,658
	3,087,652	3,589,497

(i) Disaggregation of revenue

Segments	For the year ended 31 December 2020		
	Drilling technology	Well completion	Oil production services
Types of goods or service			
Sales of goods	410	20,780	-
Provision of services	1,067,264	701,358	1,033,826
Total	1,067,674	722,138	1,033,826
Geographical markets			
PRC	879,630	561,441	127,752
Iraq	117,804	119,166	724,109
Other countries	70,240	41,531	181,965
Total	1,067,674	722,138	1,033,826
Timing of revenue recognition			
A point in time	1,067,674	722,138	209,655
Over time	-	-	824,171
Total	1,067,674	722,138	1,033,826

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22. REVENUE (Continued)

(i) Disaggregation of revenue (Continued)

Set out below is the reconciliation of the revenue from contracts with customers with segment information.

	For the year ended 31 December 2020		
	Drilling technology	Well completion	Oil production services
Revenue disclosed in segment information			
External customers	1,303,840	749,986	1,033,826
Inter-segment	1,064,901	668,212	795,287
Total	2,368,741	1,418,198	1,829,113
Adjustments and eliminations	(1,064,901)	(668,212)	(795,287)
Rental income	(236,166)	(27,848)	-
Revenue from contracts with customers	1,067,674	722,138	1,033,826

	For the year ended 31 December 2019		
Segments	Drilling technology	Well completion	Oil production services
Types of goods or service			
Sales of goods	44,151	90,858	28,148
Provision of services	1,321,231	743,333	1,101,118
Total	1,365,382	834,191	1,129,266
Geographical markets			
PRC	750,566	519,826	152,315
Iraq	336,910	212,894	869,951
Other countries	277,906	101,471	107,000
Total	1,365,382	834,191	1,129,266
Timing of revenue recognition			
A point in time	1,365,382	834,191	310,954
Over time	-	-	818,312
Total	1,365,382	834,191	1,129,266



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22. REVENUE *(Continued)*

(i) Disaggregation of revenue *(Continued)*

Set out below is the reconciliation of the revenue from contracts with customers with segment information.

	For the year ended 31 December 2019		
	Drilling technology	Well completion	Oil production services
Revenue disclosed in segment information			
External customers	1,624,203	836,028	1,129,266
Inter-segment	978,903	614,249	731,062
Total	2,603,106	1,450,277	1,860,328
Adjustments and eliminations	(978,903)	(614,249)	(731,062)
Rental income	(258,821)	(1,837)	-
Revenue from contracts with customers	1,365,382	834,191	1,129,266

(ii) Performance obligations for contracts with customers

a. Provision of oilfield technology services (excluding operation and maintenance services)

The Group provides oilfield technology services (excluding operation and maintenance services) which include drilling technology, well completion and part of oil production services to customers like large multinational and state-owned oil companies.

Such services are each recognised as a performance obligation in different stages of a contract, with transaction price allocated to the different and separate performance obligations on a relative stand-alone price basis. Revenue will be recognised for each of these performance obligations when control over the corresponding services is transferred to the customer. Since the services are expected to meet certain specified technological criteria which are not simply based on size and weight characteristics, the Group cannot objectively determine that the services provided to the customer are in accordance with the agreed-upon specifications in the contract and then the Group would not be able to conclude that the customer has obtained control until it receives the customer's acceptance. Therefore, the revenue from oilfield technology services (excluding operation and maintenance services) is recognised at a point when the customer acceptance is concluded.

The Group's contracts for such services include the Group's entitlement to payment which requires customer acceptance.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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22. REVENUE *(Continued)*

(ii) Performance obligations for contracts with customers *(Continued)*

a. Provision of oilfield technology services (excluding operation and maintenance services) *(Continued)*

The contract assets (retention money receivables from large multinational and state-owned oil companies), net of contract liabilities related to the same contract, primarily relate to the Group's right to consideration for services completed and not billed because the rights are conditioned on the Group's achieving specified milestones as stipulated in the contracts at the reporting date. The contract assets are transferred to trade receivables when the rights become unconditional. The Group typically agrees to a one-year retention period for 5% of the transaction price for certain customers like some large multinational and state-owned oil companies. This amount is included in contract assets until the end of the retention period as the Group's entitlement to this final payment is conditional on achieving specified milestones as stipulated in the contracts. The Group classifies these contract assets as current because the Group expects to realise them in its normal operating cycle. The Group typically bills the retention money receivables in one year after the completion of relevant services when trade receivables will be recognised.

b. Provision of oilfield-related operation and maintenance services

The Group provides oilfield-related operation and maintenance services which include oil production services to customers.

Such services are recognised as a performance obligation satisfied over time as the customer simultaneously receives and consumes the benefits during the course of operation and maintenance services provided by the Group based on the fact that these services are routine with no complicated processes involved and customer acceptance is a formality. Revenue from these services is recognised based on hours and unit labour cost using output method.

Payment of the transaction price will be settled monthly over the period of service.

c. Sales of oilfield-related goods

The Group sells oilfield-related goods, such as drilling tools, tubing and casing to customers.

Since the goods are not self-manufactured and the Group is not entitled to payment until the customer receives and accepts the goods, revenue will be recognised at a point when control over the corresponding goods is transferred to the customer.

The Group's contracts for such sales of goods include payment in the normal credit term granted to customers.



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22. REVENUE *(Continued)*

(iii) Transaction price allocated to the remaining performance obligation for contracts with customers

The transaction price allocated to the remaining performance obligations (unsatisfied or partially unsatisfied) as at 31 December 2020 and the expected timing of recognising revenue are as follows:

	PRC	Iraq	Other countries
Within one year	2,138,123	1,152,292	183,416
More than one year but not more than two years	543,576	769,502	272,616
More than two years	-	379,207	30,477
	2,681,699	2,301,001	486,509

The transaction price allocated to the remaining performance obligations (unsatisfied or partially unsatisfied) as at 31 December 2019 and the expected timing of recognising revenue are as follows:

	PRC	Iraq	Other countries
Within one year	1,705,460	1,634,561	231,619
More than one year but not more than two years	208,903	959,039	155,709
More than two years	60,423	681,998	158,685
	1,974,786	3,275,598	546,013

(iv) Leases

	Year ended 31 December 2020	Year ended 31 December 2019
For operating leases:		
Lease payments that are fixed or depend on an index or a rate	264,014	260,658
Total revenue arising from leases	264,014	260,658

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23. EXPENSE BY NATURE

Operating profit is arrived at after charging the following:

	Year ended 31 December	
	2020	2019
Materials and services purchased	1,020,668	1,010,288
Staff costs	738,742	768,784
In which:		
- Salaries and other staff expenses	721,373	739,617
- Share-based compensation (Note 14(i))	17,369	29,167
Depreciation	336,274	341,805
In which:		
- Property, plant and equipment (Note 6)	294,422	301,429
- Right-of-use assets (Note 7)	41,852	40,376
Less: Capitalised in inventories (Note 6) (Note 7)	(23,180)	(21,854)
	313,094	319,951
Amortisation	34,744	36,226
Less: Capitalised in inventories	(3,810)	(3,591)
	30,934	32,635
In which:		
- Cost of sales	26,370	26,490
- Administrative expenses	189	160
- Selling expenses	19	18
- Research and development expenses	4,356	5,967
Sales tax and surcharges	11,360	13,973
Auditor's remuneration		
- Audit and related services	4,700	4,600
- Other services	300	300
Other operating expenses	683,602	719,560
In which:		
- Impairment of receivables	83,437	87,693
- Impairment of inventories	19,971	36,989



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24. OTHER GAINS, NET

	Year ended 31 December	
	2020	2019
Government grants and subsidies (a)	6,057	1,283
Loss on disposal of property, plant and equipment	(2,931)	(973)
Gains on repurchase of long-term bonds (Note 16) (Note 31)	33,375	-
Others	3,778	(134)
	40,279	176

Note:

(a) Government grants and subsidies of RMB6,057,000 (2019: RMB1,283,000) were received in the current year towards awarding of research and development expenditures.

25. IMPAIRMENT LOSSES UNDER EXPECTED CREDIT LOSS MODEL, NET OF REVERSAL

	Year ended 31 December	
	2020	2019
Impairment losses recognised on:		
- Trade receivables - goods and services	83,437	62,933
- Other receivables	-	24,760
	83,437	87,693

Details of impairment assessment for the year ended 31 December 2020 and 2019 are set out in Note 34.2(b).

26. FINANCE COSTS, NET

	Year ended 31 December	
	2020	2019
Interest expenses		
- on bank borrowings	(56,932)	(77,667)
- on bonds	(300,126)	(219,534)
- on lease liabilities	(6,847)	(7,477)
Exchange gain, net	85,270	19,334
Others	(34,058)	(13,156)
Finance expenses	(312,693)	(298,500)
Interest income	18,760	3,367
	(293,933)	(295,133)

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27. STAFF COSTS

	Year ended 31 December	
	2020	2019
Wages, salaries and allowances	630,604	652,246
Housing subsidies (a)	13,036	12,888
Contributions to pension plans (b)	24,207	23,705
Share option costs		
– equity settled share-based payment (Note 14(i))	17,369	29,167
Welfare and other expenses	53,526	50,778
	738,742	768,784

Notes:

- (a) Housing subsidies mainly include the Group's contributions to government-sponsored housing funds, at rates ranging from 5% to 12% of the employees' salaries for the Group's Chinese employees in the PRC.
- (b) This represents the Group's contributions to defined contribution plans or schemes organised by relevant government authorities or authorised entities in accordance with the requirements in the locations where the Group operates.

The Group has no other material obligations for the payment of pensions and other post-retirement benefits of employees or retirees other than those disclosed above.

- (c) Five highest paid individuals

The five individuals whose emoluments were the highest in the Group for the year included three (2019: three) Directors whose emoluments are reflected in the analysis shown in Note 38. The emolument payable to the other two (2019: two) individuals during the year were as follows:

	Year ended 31 December	
	2020	2019
Basic salaries, housing allowances, other allowances and benefits-in-kind	2,871	3,114
Contributions to pension schemes	96	100
	2,967	3,214

The emoluments fell within the following bands:

	Number of individuals	
	2020	2019
Emoluments bands		
HK\$1,500,001 – HK\$2,000,000	2	2
	2	2

- (d) During the years ended 31 December 2020 and 2019, no Directors or the five highest paid individuals of the Group waived any emoluments and no emoluments were paid by the Group to any of the Directors or the five highest paid individuals of the Group as an inducement to join or upon joining the Group or as compensation for loss of office.



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28. INCOME TAX EXPENSE

	Year ended 31 December	
	2020	2019
Current income tax		
- PRC enterprise income tax	28,394	20,681
- Iraq corporate income tax	67,275	98,289
- Others	6,407	6,603
Deferred income tax (Note 21)	12,423	17,218
	114,499	142,791

The Company is incorporated in the Cayman Islands as an exempted company with limited liability under the Companies Law of the Cayman Islands and, accordingly, is exempted from payment of Cayman Islands income tax.

PRC enterprise income tax ("EIT") is provided on the basis of estimated taxable profits of PRC established subsidiaries at applicable tax rate of 25% in 2020 (2019: 25%), based on the relevant PRC tax laws and regulations. Certain subsidiaries have been granted a preferential rate of 15% as high technology enterprises or as enterprises set up in western area of the PRC.

The corporate income tax of Iraq entities is levied at the higher of 7% on the total turnover, or 35% on the net taxable profit.

The taxation of the Group's profit before income tax differs from the theoretical amount that would arise using applicable tax rates of the Group companies as follows:

	Year ended 31 December	
	2020	2019
Profit before income tax	30,739	425,211
Tax calculated at applicable tax rates	83,654	123,614
Income not subject to taxation	(7,357)	(3,593)
Expenses not deductible for taxation purposes	861	1,283
Additional deduction of research and development expense	(5,030)	(4,468)
Tax losses and deductible temporary difference for which no deferred income tax was recognised	33,968	32,109
Utilisation of unused deductible tax losses previously not recognised as deferred income tax	(8,515)	(6,405)
Reversal of the deferred tax assets from prior years	14,387	-
Effect of share of profit of a joint venture	(21)	(114)
Others	2,552	365
	114,499	142,791

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29. (LOSS)/EARNINGS PER SHARE

(a) Basic

Basic (loss)/earnings per share is calculated by dividing the (loss)/profit attributable to the owners of the Company by the weighted average number of ordinary shares in issue during the year.

	Year ended 31 December 2020	2019
(Loss)/profit attributable to the owners of the Company	(95,844)	268,583
Weighted average number of ordinary shares in issue (thousands of shares)	2,977,620	3,005,255
Basic (loss)/earnings per share (expressed in RMB per share)	(0.0322)	0.0894

(b) Diluted

Diluted (loss)/earnings per share is calculated adjusting the weighted average number of ordinary shares outstanding to assume conversion of all dilutive potential ordinary shares. For the year ended 31 December 2019, the only dilutive factor of the Company was the outstanding share options.

	Year ended 31 December 2020	2019
(Loss)/profit attributable to the owners of the Company	(95,844)	268,583
Weighted average number of ordinary shares in issue (thousands of shares)	2,977,620	3,005,255
Adjustments for assumed conversion of share options (thousands of shares)	-	17,260
Weighted average number of ordinary shares for computation of diluted (loss)/earnings per share (thousands of shares)	2,977,620	3,022,515
Diluted (loss)/earnings per share (expressed in RMB per share)	(0.0322)	0.0889

30. DIVIDENDS

No dividend was declared or paid for ordinary shareholders of the Company during 2020 (2019: RMB30,107,000).

The Directors have determined that no dividend will be proposed in respect of the current year (Year ended 31 December 2019: Nil).



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31. NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

Reconciliation of profit for the year to net cash inflows generated from operations:

	Note	Year ended 31 December 2020	2019
(Loss)/profit for the year		(83,760)	282,420
Adjustments for:			
Property, plant and equipment			
- Depreciation charge		273,524	281,727
- Loss on disposals		2,931	973
Gains on repurchase of long-term bonds	24	(33,375)	-
Depreciation of right-of-use assets		39,570	38,224
Amortisation of intangible assets		30,934	32,635
Addition of impairment of receivables		83,437	87,693
Addition of impairment of inventories		19,971	36,989
Charge of share option scheme		17,369	29,167
Share of profit of a joint venture		(141)	(762)
Net foreign exchange gain		(85,270)	(19,334)
Interest income		(18,760)	(3,367)
Interest expenses		363,905	304,678
Income tax expense		114,499	142,791
Operating cash flows before movements in working capital		724,834	1,213,834
Changes in working capital:			
- Inventories		(183,548)	(22,913)
- Trade and notes receivables		(217,650)	(289,604)
- Contract assets		44,901	(16,940)
- Prepayments and other receivables and value-added tax recoverable		45,766	(230,099)
- Trade and notes payables		440,063	70,099
- Accruals and other payables		76,969	12,497
- Contract liabilities		24,006	(24,838)
- Restricted bank deposits		(95,699)	(27,522)
Net cash inflows from operations		859,642	684,514

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32. RECONCILIATION OF ASSETS AND LIABILITIES ARISING FROM FINANCING ACTIVITIES

The table below details changes in the Group's assets and liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the Group's consolidated statement of cash flows as cash flows from financing activities.

	Borrowings Note 17	Long-term bonds Note 16	Accruals and other payables	Prepayments and other receivables Note 12(a)	Restricted bank deposits Note 13(a)	Lease liabilities Note 18	Total
As at 1 January 2020	792,349	4,144,868	-	(13,500)	(10,260)	115,093	5,028,550
Financing cash flows	209,699	(2,373,168)	-	-	10,260	(43,535)	(2,196,744)
New leases entered (Note 7)	-	-	-	-	-	4,602	4,602
Terminations of leases previously entered (Note 7)	-	-	-	-	-	(16,852)	(16,852)
Currency translation differences	-	(171,792)	-	-	-	-	(171,792)
Interest expenses	56,932	300,126	-	-	-	6,847	363,905
Gains on repurchase of long-term bonds (Note 24) (Note 31)	-	(33,375)	-	-	-	-	(33,375)
As at 31 December 2020	1,058,980	1,866,659	-	(13,500)	-	66,155	2,978,294

	Borrowings	Long-term bonds	Accruals and other payables	Prepayments and other receivables	Restricted bank deposits	Lease liabilities	Total
As at 31 December 2018	1,204,747	2,065,901	56,631	(13,500)	-	-	3,313,779
Adjustment upon application of IFRS 16	-	-	-	-	-	28,463	28,463
As at 1 January 2019	1,204,747	2,065,901	56,631	(13,500)	-	28,463	3,342,242
Financing cash flows	(490,065)	1,841,207	(93,738)	-	(10,260)	(45,094)	1,202,050
Dividends	-	-	37,107	-	-	-	37,107
New leases entered	-	-	-	-	-	124,247	124,247
Currency translation differences	-	18,226	-	-	-	-	18,226
Interest expenses	77,667	219,534	-	-	-	7,477	304,678
As at 31 December 2019	792,349	4,144,868	-	(13,500)	(10,260)	115,093	5,028,550



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33. COMMITMENTS

Capital commitments

Capital commitments related to investments in property, plant and equipment at the reporting date but not yet provided for in the consolidated statement of financial position were as follows:

	As at 31 December 2020	2019
Contracted but not provided for	79,586	71,142

34. FINANCIAL RISK MANAGEMENT

34.1 Categories of financial instruments

	As at 31 December 2020	2019
Financial assets		
Amortised cost		
– Cash and cash equivalents	879,085	2,422,874
– Restricted bank deposits	454,169	368,730
– Included in trade and notes receivables	1,803,419	2,124,576
– Included in prepayments and other receivables	309,974	347,888
Fair value through other comprehensive income		
– Notes receivable	281,083	–
	3,727,730	5,264,068

	As at 31 December 2020	2019
Financial liabilities		
Amortised cost		
– Trade and notes payables	1,403,295	957,406
– Included in accruals and other payables	515,543	381,331
– Borrowings	1,058,980	792,349
– Long-term bonds	1,866,659	4,144,868
	4,844,477	6,275,954



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
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34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.2 Financial risk factors

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk and cash flow and fair value interest rate risk), credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The Group uses non-derivative financial instruments (part of US\$ denominated long-term bonds) (Note 15(b)) to hedge certain foreign currency risk exposure.

(a) Market risk

(i) Foreign exchange risk

The Group mainly operates in the PRC with most of the transactions denominated and settled in RMB, while the Group also has purchases from and sales to overseas parties. During the year ended 31 December 2020, the Group developed its businesses overseas with most of the transactions denominated and settled in US\$. Foreign exchange risk also arise from certain bank deposits, borrowings and long-term bonds denominated in US\$. The Group is exposed to foreign currency exchange risk primarily with respect to US\$.

As at 31 December 2020, if RMB had strengthened/weakened by 3% against the US\$ with all other variables held constant, loss after income tax for the year would have been RMB4,786,000 lower/higher and equity reserves would have been RMB57,716,000 lower/higher, mainly as a result of foreign exchange gains/losses on translation of US\$-denominated cash and bank, trade and other receivables, trade and other payables, borrowings, long-term bonds and net investment hedge of foreign operations.

As at 31 December 2019, if RMB had strengthened/weakened by 3% against the US\$ with all other variables held constant, profit after income tax for the year would have been RMB11,540,000 higher/lower and equity reserves would have been RMB1,623,000 higher/lower, mainly as a result of foreign exchange gains/losses on translation of US\$-denominated cash and bank, trade and other receivables, trade and other payables, borrowings, long-term bonds and net investment hedge of foreign operations.



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34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.2 Financial risk factors *(Continued)*

(a) Market risk *(Continued)*

(ii) Cash flow and fair value interest rate risk

The Group's interest rate risk arises from long-term bonds, long-term borrowings and short-term borrowings. Borrowings obtained at variable rates expose the Group to cash flow interest rate risk. Long-term bonds, long-term borrowings and lease liabilities obtained at fixed rates expose the Group to fair value interest rate risk.

Based on the balance of floating interest borrowings as at 31 December 2020, if interest rates on these borrowings for the year had been higher/lower by 100 basis points, profit before income tax for the year would have been RMB1,017,000 lower/higher.

Based on the balance of floating interest borrowings as at 31 December 2019, if interest rates on these borrowings for the year had been higher/lower by 100 basis points, profit before income tax for the year would have been RMB2,455,000 lower/higher.

(b) Credit risk and impairment assessment

As at 31 December 2020, the maximum exposure to credit risk of the Group is the carrying value of financial assets. The Group does not hold any collateral or other credit enhancements to cover its credit risks associated with its financial assets.

Trade receivables, contract assets and other receivables

The Group has policies in place to ensure that sales of products and services and other transactions are made to customers or counterparties with an appropriate credit history after internal approvals and follow-up action is taken to recover overdue debts. In addition, the Group performs impairment assessment under ECL model on trade receivables, contract assets and other receivables individually or based on provision matrix. In the regards, the Directors consider that the Group's credit risk is significantly reduced and are of the opinion that adequate provision for uncollectible receivables has been made in the consolidated financial statements.

A considerable portion of sales were made to several major oilfield operators of the PRC and their affiliates, which are state-owned entities with good credit reputation, therefore the trade receivables of the Group had concentration risk (Note 5).

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34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

Notes receivable, restricted bank deposits and cash and cash equivalents

The credit risks on notes receivable, restricted bank deposits and cash equivalents are limited because the counterparties are banks with high credit ratings assigned by international credit-rating agencies. The Group performs impairment assessment under 12m ECL model on notes receivable, restricted bank deposits and cash and cash equivalents. The Directors does not expect any losses from non-performance by these counterparties.

Most of the Group's restricted bank deposits and cash and cash equivalents were placed with state-owned banks in the PRC and Hong Kong, the relevant credit risk is relatively low.

The tables below detail the credit risk exposures of the Group's financial assets (including trade receivables from goods and services, notes receivable, other receivables, restricted bank deposits and cash and cash equivalents), and other items (lease receivables and contract assets) which are subject to ECL assessment:

2020	Notes	External credit rating	Internal credit rating	12m or lifetime ECL	Gross carrying amount
Financial assets at amortised cost					
Trade receivables – goods and services	11	N/A	Note (i)	Lifetime ECL (provision matrix) Lifetime ECL (individually, not credit-impaired) Lifetime ECL (individually, credit-impaired)	610,166 1,135,898 325,845
Other receivables	12	N/A	Note (ii)	12m ECL Lifetime ECL (credit-impaired)	309,974 45,631
Restricted bank deposits	13	A1	N/A	12m ECL	454,169
Cash and cash equivalents	13	A1	N/A	12m ECL	879,085
Financial assets at FVTOCI					
Notes receivable	11	A1	N/A	12m ECL	281,083
Other items					
Contract assets – goods and services	22(ii)(a)	N/A	Note (i)	Lifetime ECL (individually, not credit-impaired)	30,618
Lease receivables – operating leases	11	N/A	Note (i)	Lifetime ECL (individually, not credit-impaired)	49,287



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34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

Notes receivable, restricted bank deposits and cash and cash equivalents *(Continued)*

2019	Notes	External credit rating	Internal credit rating	12m or lifetime ECL	Gross carrying amount
Financial assets at amortised cost					
Trade receivables - goods and services	11	N/A	Note (i)	Lifetime ECL (provision matrix) Lifetime ECL (individually, not credit-impaired) Lifetime ECL (individually, credit-impaired)	669,758 1,386,775 72,881
Other receivables	12	N/A	Note (ii)	12m ECL Lifetime ECL (not credit-impaired) Lifetime ECL (credit-impaired)	276,339 75,273 41,907
Notes receivable	11	A1	N/A	12m ECL	180,215
Restricted bank deposits	13	A1	N/A	12m ECL	368,730
Cash and cash equivalents	13	A1	N/A	12m ECL	2,422,874
Other items					
Contract assets - goods and services	22(ii)(a)	N/A	Note (i)	Lifetime ECL (individually, not credit-impaired)	75,519
Lease receivables - operating leases	11	N/A	Note (i)	Lifetime ECL (individually, not credit-impaired)	75,671

Notes:

- (i) Trade receivables and contract assets from goods and services and lease receivables

For trade receivables and contract assets from goods and services and lease receivables, the Group has applied the simplified approach in IFRS 9 to measure the loss allowance at lifetime ECL. Except for debtors with significant outstanding balances or credit-impaired, the Group determines the expected credit losses on these items by using a provision matrix, grouped by past due status.

As part of the Group's credit risk management, the Group uses debtors' ageing to assess the impairment for part of its customers in relation to its oilfield technology services, oilfield related operation and maintenance services and sales of oilfield-related goods operation because these customers consist of a large number of small customers with common risk characteristics that are representative of the customers' abilities to pay all amounts due in accordance with the contractual terms. The following table provides information about the exposure to credit risk for trade receivables from goods and services from private and relatively small customers which are assessed based on provision matrix as at 31 December 2020 within lifetime ECL (not credit impaired). Trade receivables from goods and services with significant outstanding balances from large multinational and state-owned oil companies and credit impaired with gross carrying amounts of RMB1,135,898,000 (2019: RMB1,386,775,000) and RMB325,845,000 (2019: RMB72,881,000) respectively as at 31 December 2020 were assessed individually.

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34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

Notes: *(Continued)*

(i) Trade receivables and contract assets from goods and services and lease receivables *(Continued)*

Trade receivables from goods and services from private and relatively small customers

31/12/2020

	Average loss rate	Gross carrying amount	Impairment loss allowance
Current (not past due)	3.49%	355,025	12,389
Within 1 year past due	22.80%	172,689	39,372
1-2 years past due	67.20%	82,452	55,407
		610,166	107,168

31/12/2019

	Average loss rate	Gross carrying amount	Impairment loss allowance
Current (not past due)	4.18%	461,256	19,286
Within 1 year past due	22.04%	138,892	30,615
1-2 years past due	85.61%	69,610	59,595
		669,758	109,496

The estimated loss rates are estimated based on historical observed default rates over the expected life of the debtors and are adjusted for forward-looking information that is available without undue cost or effort. The grouping is regularly reviewed by management to ensure relevant information about specific debtors is updated.

During the year ended 31 December 2020, the Group provided RMB27,942,000 (2019: RMB62,105,000) impairment allowance for trade receivables from goods and services from private and relatively small customers based on the provision matrix. Impairment reversal of RMB1,069,000 (2019: allowance of RMB828,000) were made on trade receivables from goods and services with significant balances from large multinational and state-owned oil companies. Impairment allowance of RMB56,564,000 were made on credit impaired debtors.

For contract assets (the retention money receivables) and lease receivables which are arising from large multinational and state-owned oil companies, the Group performed impairment assessment and conclude that the probability of defaults of the counterparties are insignificant and accordingly, no allowance for credit losses is provided.



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34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

Notes: *(Continued)*

- (i) Trade receivables and contract assets from goods and services and lease receivables *(Continued)*

The following table shows the movements in lifetime ECL that has been recognised for trade receivables from goods and services under the simplified approach:

	Lifetime ECL (not credit- impaired)	Lifetime ECL (credit- impaired)	Total
As at 1 January 2019	65,645	56,475	122,120
Changes due to financial instruments recognised as at 1 January 2019:			
– Impairment losses recognised, net of reversal	42,483	–	42,483
– Transfer to credit-impaired	(16,406)	16,406	–
New originated or purchased	20,450	–	20,450
As at 31 December 2019	112,172	72,881	185,053
Changes due to financial instruments recognised as at 1 January 2020:			
– Impairment losses recognised, net of reversal	14,484	56,564	71,048
– Transfer to credit-impaired	(31,293)	31,293	–
New originated or purchased	12,389	–	12,389
As at 31 December 2020	107,752	160,738	268,490

Changes in the loss allowance for trade receivables from goods and services are mainly due to trade debtors with a gross carrying amount of RMB222,694,000 (2019: RMB16,406,000) defaulted and transferred to credit-impaired.

The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the debtor has been placed under liquidation or has entered into bankruptcy proceedings.

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34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

Notes: *(Continued)*

(ii) Other receivables

For the purposes of internal credit risk management, the Group uses past due information to assess whether credit risk has increased significantly since initial recognition.

	Past due	Not past due/ No fixed repayment terms	Total
31/12/2020			
Other receivables	45,631	309,974	355,605
31/12/2019			
Other receivables	41,907	351,612	393,519

The following tables show reconciliation of loss allowances that has been recognised for other receivables:

	12m ECL	Lifetime ECL (not credit- impaired)	Lifetime ECL (credit- impaired)	Total
As at 1 January 2019	-	6,481	14,390	20,871
Changes due to financial instruments recognised as at 1 January 2019:				
- Impairment losses recognised	-	-	24,760	24,760
- Transfer to credit-impaired	-	(2,757)	2,757	-
New originated or purchased	-	-	-	-
As at 31 December 2019	-	3,724	41,907	45,631
Changes due to financial instruments recognised as at 1 January 2020:				
- Impairment losses recognised	-	-	-	-
- Transfer to credit-impaired	-	(3,724)	3,724	-
New originated or purchased	-	-	-	-
As at 31 December 2020	-	-	45,631	45,631

Changes in the loss allowance for other receivables are mainly due to debtors with a gross carrying amount of RMB Nil (2019: RMB24,760,000) defaulted and being credit-impaired under lifetime ECL.

(iii) Notes receivable, restricted bank deposits and cash and cash equivalents

At the end of the reporting period, the Directors have performed impairment assessment under 12m ECL model for notes receivable, restricted bank deposit, and cash and cash equivalents, and concluded that there has been no significant increase in credit risk since initial recognition. Since the counterparties are banks with high credit ratings assigned by international credit-rating agencies, the probability of defaults of the counterparties are insignificant and accordingly, no allowance for credit losses is provided for these financial assets.



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.2 Financial risk factors *(Continued)*

(c) Liquidity risk

The liquidity risk of the Group is controlled by maintaining sufficient cash and cash equivalents, which is generated primarily from operating and financing activities.

The table below analyses the Group's financial liabilities that will be settled into relevant maturity groupings based on the remaining period at the end of the financial period to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

31/12/2020

	Weighted average interest rate	On demand or less than 1 year	1-5 years	Total undiscounted cash flows	Carrying amount
Non-derivative financial liabilities					
Trade and notes payables	-	1,403,295	-	1,403,295	1,403,295
Included in accruals and other payables	-	515,543	-	515,543	515,543
Lease liabilities	8.738%	59,172	28,262	87,434	66,155
Short-term borrowings	5.116%	782,206	-	782,206	763,953
Long-term borrowings	7.001%	171,594	135,454	307,048	295,027
Long-term bonds	8.907%	174,010	2,104,280	2,278,290	1,866,659
		3,105,820	2,267,996	5,373,816	4,910,632

31/12/2019

	Weighted average interest rate	On demand or less than 1 year	1-5 years	Total undiscounted cash flows	Carrying amount
Non-derivative financial liabilities					
Trade and notes payables	-	957,406	-	957,406	957,406
Included in accruals and other payables	-	381,331	-	381,331	381,331
Lease liabilities	8.700%	48,964	71,753	120,717	115,093
Short-term borrowings	5.825%	511,740	-	511,740	497,749
Long-term borrowings	8.609%	112,090	211,745	323,835	294,600
Long-term bonds	9.288%	2,481,078	2,406,789	4,887,867	4,144,868
		4,492,609	2,690,287	7,182,896	6,391,047

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.3 Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The Group monitors capital on the basis of the gearing ratio. This ratio is calculated as total borrowings divided by total capital. Total borrowings include borrowings, bonds, lease liabilities and trade and notes payables, as shown in the consolidated statement of financial position. Total capital is calculated as equity, as shown in the consolidated statement of financial position, plus total borrowings.

The gearing ratios at 31 December 2020 and 2019 were as follows:

	As at 31 December 2020	2019
Total borrowings	4,395,089	6,009,716
Total equity	2,763,721	2,957,663
Total capital	7,158,810	8,967,379
Gearing ratio	61%	67%

34.4 Fair value estimation

During the current year, in order to more effectively manage the overall cashflows under COVID-19, the Group further endorsed certain notes for settlement of trade payables and a new business model was adopted by the management whose objective is achieved by both selling and collecting contractual cash flows; therefore, notes receivable was subsequently measured at fair value through other comprehensive income from 1 July 2020 (31 December 2019: amortised cost).

The fair value of notes receivable is determined (in particular, the valuation technique and inputs used), as well as the level of the fair value hierarchy into which the fair value measurements are categorised (Level 3) based on the degree to which the inputs to the fair value measurements is observable.

– Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset that are not based on observable market data (unobservable inputs).



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.4 Fair value estimation *(Continued)*

The Group measures its following financial instruments at fair value at the end of the reporting period:

Financial asset	Fair value as at 31 December 2020	Fair value hierarchy	Valuation technique and key input	Significant unobservable input
Notes receivable	281,083,000	Level 3	Fair value is estimated based on the present value of the contracted cash inflow at the discount rate that reflects the market credit risk.	Discount rate: 5.12%

Reconciliation of Level 3 fair value measurements of notes receivable

	Notes receivable
At 1 January 2020	-
Addition	480,030
Disposals	(191,435)
Fair value change recognised in other comprehensive income	(7,512)
At 31 December 2020	281,083

Included in other comprehensive income is an amount of RMB7,512,000 loss related to notes receivable at FVTOCI held at the end of current reporting period (Year ended 31 December 2019: Nil).

Fair value of the financial assets and liabilities that are not measured at fair value on a recurring basis

The carrying amounts of long-term borrowings and long-term bonds approximated their fair values as the fluctuation of comparable interest rates with similar terms is relatively low.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

34. FINANCIAL RISK MANAGEMENT *(Continued)*

34.4 Fair value estimation *(Continued)*

Financial liabilities

As at 31 December 2020	Carrying value	Fair value
Long-term borrowings (non-current)	96,184	93,281
Long-term bonds (non-current)	1,855,625	1,879,291
	1,951,809	1,972,572
<hr/>		
As at 31 December 2019	Carrying value	Fair value
Long-term borrowings (non-current)	99,217	96,143
Long-term bonds (non-current)	2,028,423	2,041,349
	2,127,640	2,137,492

35. RELATED PARTY TRANSACTIONS

Parties are considered to be related if one party has the ability, directly or indirectly, control the other party or exercise significant influence over the other party in making financial and operation decisions. Parties are also considered to be related if they are subject to common control. Members of key management of the Group are also considered as related parties.

(a) The following party is related party of the Group during the year ended 31 December 2020:

Name of related party	Nature of relationship
Mr. Luo Lin	The ultimate controlling shareholder of the Company



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

35. RELATED PARTY TRANSACTIONS *(Continued)*

(b) Short-term bank borrowings guaranteed by related party

	As at 31 December 2020	2019
Short-term borrowings		
Mr. Luo Lin (Note 17(b))	213,474	138,318

(c) Notes payable guaranteed by related party

	As at 31 December 2020	2019
Notes payable		
Mr. Luo Lin	-	50,000

(d) Key management compensation

	Year ended 31 December 2020	2019
Salaries and other short-term employee benefits	10,456	13,876
Pension scheme	263	350
Share-based payments	5,035	5,830
	15,754	20,056

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

36. SUBSIDIARIES

(a) The following is a list of principal subsidiaries in which the Company directly or indirectly holds equity interests as at 31 December 2020 and 2019:

Company name	Place and date of incorporation/ establishment	Registered capital	Equity interest and voting power held by the Group	Principal activities
Directly held:				
Anton Oilfield Services Company Limited	Hong Kong, 17 August 2007	HK\$100	100%	Investment holding
Anton Oilfield Services Company International Limited	Hong Kong, 17 July 2008	HK\$100	100%	Investment holding
Indirectly held:				
Anton Oilfield Services (Group) Ltd. (安東石油技術(集團)有限公司)	Beijing, the PRC, 28 January 2002	US\$151,000,000	100%	Oilfield services and sales of equipment
Xinjiang Tong'ao Oilfield Services Co., Ltd. (新疆通奧油田技術服務有限公司, "Xinjiang Tong'ao")	Xinjiang Uygur Autonomous Region, the PRC, 21 February 2002	RMB51,000,000	100%	Oilfield services
Anton Tong'ao Technological Products Co., Limited (安東通奧科技產業股份有限公司, "Anton Tong'ao")	Xinjiang Uygur Autonomous Region, the PRC, 15 December 2005	RMB90,000,000	90%	Manufacturing of rod casing
Shandong Precede	Shandong Province, the PRC, 2 September 2008	RMB55,000,000	100%	Oilfield services and sales of equipment
Anton International FZE ("Anton Dubai")	The United Arab Emirates, 12 April 2009	US\$7,300,000	100%	Oilfield services



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

36. SUBSIDIARIES (Continued)

(a) The following is a list of principal subsidiaries in which the Company directly or indirectly holds equity interests as at 31 December 2020 and 2019: (Continued)

Company name	Place and date of incorporation/ establishment	Registered capital	Equity interest and voting power held by the Group	Principal activities
Sichuan Anton Oil Gas Engineering and Technology Services Co., Ltd. (四川安東油氣工程技術服務有限公司, "Sichuan Anton")	Sichuan Province, the PRC, 14 July 2009	RMB400,000,000	100%	Oilfield services and sales of equipment
Anton Oilfield Services DMCC	The United Arab Emirates, 28 March 2011	US\$54,462,150	100%	Oilfield services
Sichuan Tongsheng Drilling Technology Co., Ltd. (四川通盛鑽探工程有限公司, "Sichuan Tongsheng")	Sichuan Province, the PRC, 13 February 2012	RMB100,000,000	100%	Construction and drilling services, sales of drilling product
Xinjiang Anton Oilfield Services Co., Ltd. (新疆安東石油技術服務有限責任公司, "Xinjiang Anton")	Xinjiang Uygur Autonomous Region, the PRC, 24 February 2012	RMB80,000,000	100%	Oilfield services
Sichuan Anxiang Oil Engineering and Technology Co., Ltd. (四川安香石油工程技術有限公司, "Sichuan Anxiang")	Sichuan Province, the PRC, 22 December 2020	US\$41,236,000	74%	Oilfield services

The above table lists the subsidiaries of the Company which, in the opinion of the Directors, principally affected the results or assets of the Group. To give details of other subsidiaries would, in the opinion of the Directors, result in particulars of excessive length.

None of the subsidiaries had issued any debt securities at the end of the year.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

36. SUBSIDIARIES (Continued)

(b) Material non-controlling interests

The total non-controlling interest as at 31 December 2020 was RMB137,609,000 (31 December 2019: RMB55,525,000), of which RMB70,000,000 (31 December 2019: Nil) was attributable to Sichuan Anxiang Oil Engineering and Technology Co., Ltd. ("Sichuan Anxiang") and RMB41,956,000 (31 December 2019: RMB36,725,000) was attributable to Anton Tong'ao. The non-controlling interests in respect of other subsidiaries are not material.

Set out below are the summarised financial information for Sichuan Anxiang and Anton Tong'ao that have non-controlling interests that are material to the Group.

Summarised statement of financial position

	Sichuan Anxiang As at 31 December 2020	Anton Tong'ao As at 31 December 2020	2019
Current			
Assets	269,350	866,503	845,650
Liabilities	-	(340,618)	(689,360)
Total net current assets	269,350	525,885	156,290
Non-current			
Assets	-	252,781	274,334
Liabilities	-	(359,106)	(63,375)
Total net non-current assets	-	(106,325)	210,959
Net assets	269,350	419,560	367,249
Net assets attributable to non-controlling interests	70,000	41,956	36,725



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

36. SUBSIDIARIES *(Continued)*

(b) Material non-controlling interests *(Continued)*

Summarised statement of profit or loss and other comprehensive income

	Sichuan Anxiang Year ended 31 December 2020	Anton Tong'ao Year ended 31 December 2020	2019
Revenue	-	501,949	563,457
Profit before income tax	-	64,458	87,365
Income tax expense	-	(8,557)	(12,179)
Post-tax profit	-	55,901	75,186
Other comprehensive expense	-	-	-
Total comprehensive income	-	55,901	75,186
Total comprehensive income attributable to non-controlling interests	-	5,590	7,519
Dividends paid to non-controlling interests	-	-	7,000

Summarised statement of cash flows

	Sichuan Anxiang Year ended 31 December 2020	Anton Tong'ao Year ended 31 December 2020	2019
Cash flows from operating activities			
Cash (used in)/generated from operations	-	(339,976)	89,415
Income tax paid	-	(13,444)	(1,509)
Net cash (used in)/generated from operating activities	-	(353,420)	87,906
Net cash (used in)/generated from investing activities	(140,554)	(46,141)	3,207
Net cash generated from/(used in) financing activities	269,350	364,505	(26,095)
Net increase/(decrease) in cash and cash equivalents	128,796	(35,056)	65,018
Cash and cash equivalents at beginning of year		93,644	28,624
Exchange (loss)/gain on cash and cash equivalents	-	(269)	2
Cash and cash equivalents at end of year	128,796	58,319	93,644

The information above is the amount before inter-company eliminations.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

37. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY

	As at 31 December	
	2020	2019
Assets		
Non-current assets		
Investments in subsidiaries	4,979,725	4,979,725
Current assets		
Trade and notes receivables	-	73,192
Prepayments and other receivables	298,218	1,821,205
Cash and cash equivalents	9,173	234,491
	307,391	2,128,888
Total assets	5,287,116	7,108,613
Equity and liabilities		
Equity		
Share capital	268,179	276,273
Other reserves (a)	3,060,304	2,591,196
Total equity	3,328,483	2,867,469
Liabilities		
Non-current liabilities		
Long-term bonds	1,855,625	2,028,423
Current liabilities		
Current portion of long-term bonds	11,034	2,116,445
Trade and notes payables	13,247	-
Accruals and other payables	78,727	96,276
	103,008	2,212,721
Total liabilities	1,958,633	4,241,144
Total equity and liabilities	5,287,116	7,108,613



NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

37. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY *(Continued)*

Note:

(a) Reserve movements of the Company

	Share premium	Capital reserve	Accumulated losses	Total
Balance at 1 January 2019	1,076,529	3,043,455	(1,262,452)	2,857,532
Loss for the year	-	-	(267,083)	(267,083)
Share option scheme	-	29,167	-	29,167
Share option exercised	3,148	(1,461)	-	1,687
Dividends	(30,107)	-	-	(30,107)
At 31 December 2019	1,049,570	3,071,161	(1,529,535)	2,591,196
Balance at 1 January 2020	1,049,570	3,071,161	(1,529,535)	2,591,196
Profit for the year	-	-	476,245	476,245
Repurchase of ordinary shares	(24,506)	-	-	(24,506)
Share option scheme	-	17,369	-	17,369
At 31 December 2020	1,025,064	3,088,530	(1,053,290)	3,060,304

38. BENEFITS AND INTERESTS OF DIRECTORS

Directors' and chief executive's emoluments

The remuneration of every director and the chief executive is set out below:

For the year ended 31 December 2020:

Name	Fees	Salary	Discretionary bonuses	Housing allowance	Estimated money value of other benefits (i)	Employer's contribution to a retirement benefit scheme	Remunerations paid or receivable in respect of office as director	Emoluments paid or receivable in respect of director's other services in connection with the management of the affairs of the Company or its subsidiary undertaking	Total
Executive Directors									
Mr. Luo Lin	-	1,911	624	-	45	48	-	-	2,628
Mr. Pi Zhifeng (chief executive)	-	1,336	20	-	71	48	-	-	1,475
Mr. Fan Yonghong	-	1,522	200	-	71	48	-	-	1,841
Non-executive Director									
Mr. John William Chisholm (iii)	-	282	-	-	-	-	-	-	282
Mr. Huang Song (iii)	-	-	-	-	-	-	-	-	-
Independent Non-executive Directors									
Mr. Zhang Yongyi (ii)	143	-	-	-	-	-	-	-	143
Mr. Zhu Xiaoping (ii)	287	-	-	-	-	-	-	-	287
Dato Wee Yaw Hin (i)	689	-	-	-	-	-	-	-	689

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020
(Amounts expressed in thousands of RMB, unless otherwise stated)

38. BENEFITS AND INTERESTS OF DIRECTORS (Continued)

Directors' and chief executive's emoluments (Continued)

For the year ended 31 December 2019:

Name	Fees	Salary	Discretionary bonuses	Housing allowance	Estimated money value of other benefits (i)	Employer's contribution to a retirement benefit scheme	Remunerations paid or receivable in respect of office as director	Emoluments paid or receivable in respect of director's other services in connection with the management of the affairs of the Company or its subsidiary undertaking	Total
Executive Directors									
Mr. Luo Lin	-	2,472	-	-	31	50	-	-	2,553
Mr. Pi Zhifeng (chief executive)	-	1,873	-	-	69	50	-	-	1,992
Mr. Fan Yonghong	-	1,829	-	-	69	50	-	-	1,948
Non-executive Director									
Mr. John William Chisholm	-	689	-	-	-	-	-	-	689
Independent Non-executive Directors									
Mr. Zhang Yongyi (ii)	287	-	-	-	-	-	-	-	287
Mr. Zhu Xiaoping (ii)	287	-	-	-	-	-	-	-	287
Dato Wee Yaw Hin (ii)	689	-	-	-	-	-	-	-	689

Notes:

- (i) Other benefits include other insurance premium.
- (ii) No share options in aggregate was granted to three independent non-executive directors during the year ended 31 December 2020 (2019: 2,100,000 share options), and the total expense recognised in the consolidated statement of profit or loss for year ended 31 December 2020 amounted to RMB259,000 (31 December 2019: RMB1,019,000), the same amount for each independent non-executive director which are not included in this summary.
- (iii) Mr. John William Chisholm resigned in May 2020 and Mr. Huang Song was appointed as the non-executive director in December 2020.

INDEPENDENT AUDITOR'S REPORT



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**INDEPENDENT AUDITOR'S REPORT
TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP**
(incorporated in the Cayman Islands with limited liability)

OPINION

We have audited the consolidated financial statements of Anton Oilfield Services Group (the "Company") and its subsidiaries (collectively referred to as the "Group") set out on pages 67 to 156, which comprise the consolidated statement of financial position as at 31 December 2019, and the consolidated statement of profit or loss, consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2019, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRSs") issued by the International Accounting Standards Board ("IASB") and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing ("ISAs"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (the "IESBA Code"), and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

INDEPENDENT AUDITOR'S REPORT



INDEPENDENT AUDITOR'S REPORT TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP *(Continued)* *(incorporated in the Cayman Islands with limited liability)*

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How our audit addressed the key audit matter
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Revenue recognition from provision of services

We identified revenue recognition from provision of services as a key audit matter due to the significance of revenue generated from provision of services and the inherent risk of manipulating revenue recognition from provision of services by the management.

As disclosed in Note 23, the Group has different revenue streams and is mainly engaged in provision of services through contracts with its customers. Revenue from provision of services amounting to RMB3,165,682,000 for the year ended 31 December 2019 accounted for 88.2% of the Group's total revenue in the consolidated statement of profit or loss.

Revenue performance from provision of services is a key performance indicator of the Group which affects the management's reward and also is a focus of investors.

Details of revenue recognition from provision of services and its accounting policies are set out in Note 23 and Note 3, respectively, to the consolidated financial statements.

Our procedures in relation to revenue recognition from provision of services included:

- understanding and evaluating the key internal controls relevant to the audit on revenue recognition from provision of services;
- examining, on a sample basis, the key terms set out in the Group's contracts with its customers governing the performance obligations and the associated revenue recognition;
- obtaining confirmations for the services provided to the selected major customers; and
- inspecting, on a sample basis, the customer acceptance documents, the contracts and invoices evidencing that the performance obligations of services were satisfied and control was transferred.

INDEPENDENT AUDITOR'S REPORT

INDEPENDENT AUDITOR'S REPORT TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP *(Continued)* *(incorporated in the Cayman Islands with limited liability)*

OTHER INFORMATION

The directors of the Company are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF DIRECTORS AND THOSE CHARGED WITH GOVERNANCE FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRSs issued by the IASB and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

INDEPENDENT AUDITOR'S REPORT



INDEPENDENT AUDITOR'S REPORT TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP *(Continued)* *(incorporated in the Cayman Islands with limited liability)*

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion solely to you, as a body, in accordance with our agreed terms of engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

INDEPENDENT AUDITOR'S REPORT

INDEPENDENT AUDITOR'S REPORT
TO THE SHAREHOLDERS OF ANTON OILFIELD SERVICES GROUP *(Continued)*
(incorporated in the Cayman Islands with limited liability)

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in the independent auditor's report is Mak Chi Lung.

Deloitte Touche Tohmatsu
Certified Public Accountants
Hong Kong
31 March 2020

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AS at 31 December 2019

(Amounts expressed in thousands of Renminbi ("RMB"), unless otherwise stated)

	Notes	As at 31 December 2019	2018
ASSETS			
Non-current assets			
Property, plant and equipment	6	2,137,866	2,255,805
Right-of-use assets	7	189,901	-
Prepaid lease payments	8	-	75,635
Goodwill	9	242,004	242,004
Intangible assets	10	259,986	252,714
Interest in a joint venture		3,808	3,046
Interest in an associate		2,000	-
Prepayments and other receivables	13	155,696	112,810
Other non-current assets		-	8,375
Deferred income tax assets	22	34,637	52,076
		3,025,898	3,002,465
Current assets			
Inventories	11	765,496	774,359
Prepaid lease payments	8	-	1,932
Trade and notes receivables	12	2,200,247	1,948,030
Contract assets	23(ii)(a)	75,519	58,579
Prepayments and other receivables	13	648,048	437,958
Current portion of other non-current assets		-	5,694
Restricted bank deposits	14	368,730	330,948
Cash and cash equivalents	14	2,422,874	686,636
		6,480,914	4,244,136
Total assets		9,506,812	7,246,601

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AS at 31 December 2019

(Amounts expressed in thousands of RMB, unless otherwise stated)

	Notes	As at 31 December 2019	2018
EQUITY			
Capital and reserves attributable to the owners of the Company			
Share capital	15	276,273	275,959
Reserves	16	2,625,865	2,369,915
		2,902,138	2,645,874
Non-controlling interests		55,525	48,688
Total equity		2,957,663	2,694,562
LIABILITIES			
Non-current liabilities			
Long-term bonds	17	2,028,423	2,051,403
Long-term borrowings	18	202,426	243,341
Lease liabilities	19	69,259	-
Deferred income tax liabilities	22	10,219	10,440
		2,310,327	2,305,184
Current liabilities			
Short-term borrowings	18	497,749	879,192
Current portion of long-term bonds	17	2,116,445	14,498
Current portion of long-term borrowings	18	92,174	82,214
Trade and notes payables	20	957,406	714,091
Accruals and other payables	21	404,528	455,278
Lease liabilities	19	45,834	-
Contract liabilities		13,976	38,814
Current income tax liabilities		110,710	62,768
		4,238,822	2,246,855
Total liabilities		6,549,149	4,552,039
Total equity and liabilities		9,506,812	7,246,601

The consolidated financial statements on pages 67 to 156 were approved and authorised for issue by the Board of Directors on 31 March 2020 and were signed on its behalf by:

Chairman
Luo Lin

Executive Director
Pi Zhifeng

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)



	Notes	Year ended 31 December	
		2019	2018
Revenue			
Goods and services	23	3,328,839	2,875,197
Rental	23	260,658	60,691
Total revenue	23	3,589,497	2,935,888
Cost of sales	24	(2,308,042)	(1,821,615)
Gross profit		1,281,455	1,114,273
Other gains, net	25	176	11,932
Impairment losses under expected credit loss model, net of reversal	24, 26	(87,693)	(75,201)
Selling expenses	24	(193,298)	(171,152)
Administrative expenses	24	(215,403)	(197,241)
Research and development expenses	24	(51,682)	(28,002)
Sales tax and surcharges	24	(13,973)	(10,346)
Operating profit		719,582	644,263
Interest income	27	3,367	2,565
Finance expenses	27	(298,500)	(300,019)
Finance costs, net	27	(295,133)	(297,454)
Share of profit of a joint venture		762	355
Profit before income tax		425,211	347,164
Income tax expense	29	(142,791)	(96,443)
Profit for the year		282,420	250,721
Profit attributable to:			
Owners of the Company		268,583	222,423
Non-controlling interests		13,837	28,298
		282,420	250,721
Earnings per share for profit attributable to the owners of the Company for the year (expressed in RMB per share)			
– Basic	30	0.0894	0.0792
– Diluted	30	0.0889	0.0783

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)

	Notes	Year ended 31 December	
		2019	2018
Profit for the year		282,420	250,721
Other comprehensive income/(expense), net of tax:			
<i>Items that may be reclassified subsequently to profit or loss</i>			
Net investment hedge	16(b)	(30,239)	(84,932)
Currency translation differences	16(a)	16,859	87,425
Other comprehensive (expense)/income for the year, net of tax		(13,380)	2,493
Total comprehensive income for the year		269,040	253,214
Total comprehensive income attributable to:			
- Owners of the Company		255,203	224,889
- Non-controlling interests		13,837	28,325
		269,040	253,214

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)



Notes	Attributable to the owners of the Company							Non-controlling interests	Total equity
	Share capital	Share premium	Capital reserve	Statutory reserve	Retained earnings	Other reserves	Subtotal		
Balance at 1 January 2018	246,271	813,243	395,229	76,900	597,373	360,260	2,489,276	388,953	2,878,229
Comprehensive income									
Profit for the year	-	-	-	-	222,423	-	222,423	28,298	250,721
Other comprehensive income/ (expense)									
Net investment hedge	16(b)	-	-	-	-	(64,317)	(64,317)	(20,615)	(84,932)
Currency translation differences	16(a)	-	-	-	-	66,783	66,783	20,642	87,425
Total comprehensive income					222,423	2,466	224,889	28,325	253,214
Issue of ordinary shares	15(ii)	28,936	256,064	-	-	-	285,000	-	285,000
Share option scheme	15(i)	-	-	24,094	-	-	24,094	-	24,094
Share option exercised	15	752	7,222	(2,838)	-	-	5,136	-	5,136
Acquisition of non-controlling interests of subsidiaries		-	-	-	-	(382,521)	(382,521)	(368,590)	(751,111)
Total transactions with owners, recognised directly in equity		29,688	263,286	21,256	-	(382,521)	(68,291)	(368,590)	(436,881)
Balance at 31 December 2018	275,959	1,076,529	416,485	76,900	819,796	(19,795)	2,645,874	48,688	2,694,562
Balance at 1 January 2019	275,959	1,076,529	416,485	76,900	819,796	(19,795)	2,645,874	48,688	2,694,562
Comprehensive income									
Profit for the year	-	-	-	-	268,583	-	268,583	13,837	282,420
Other comprehensive income/ (expense)									
Net investment hedge	16(b)	-	-	-	-	(30,239)	(30,239)	-	(30,239)
Currency translation differences	16(a)	-	-	-	-	16,859	16,859	-	16,859
Total comprehensive income					268,583	(13,380)	255,203	13,837	269,040
Share option scheme	15(i)	-	-	29,167	-	-	29,167	-	29,167
Share option exercised	15	314	3,148	(1,461)	-	-	2,001	-	2,001
Dividends	31, 37(b)	-	(30,107)	-	-	-	(30,107)	(7,000)	(37,107)
Total transactions with owners, recognised directly in equity		314	(26,959)	27,706	-	-	1,061	(7,000)	(5,939)
Balance at 31 December 2019	276,273	1,049,570	444,191	76,900	1,088,379	(33,175)	2,902,138	55,525	2,957,663

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2019

(Amounts expressed in thousands of RMB, unless otherwise stated)

	Notes	Year ended 31 December	
		2019	2018
Cash flows from operating activities			
Net cash inflows from operations	32	684,514	481,069
Interest received	27	3,367	2,565
Income tax paid		(77,631)	(63,626)
Net cash generated from operating activities		610,250	420,008
Cash flows from investing activities			
Purchase of property, plant and equipment		(86,105)	(36,005)
Proceeds from disposal of property, plant and equipment		21,461	968
Purchase of intangible assets		(35,240)	(63,159)
Investment in an associate		(2,000)	-
Net cash used in investing activities		(101,884)	(98,196)
Cash flows from financing activities			
Proceeds from short-term borrowings		865,147	1,505,850
Repayments of short-term borrowings		(1,246,543)	(1,509,571)
Repayments of lease liabilities		(45,094)	-
Proceeds from long-term borrowings		100,000	357,280
Repayments of long-term borrowings		(135,714)	(197,204)
Proceeds from long-term bonds		2,037,836	-
Repayments of long-term bonds		-	(490,893)
Net cash paid to non-controlling interests for additional interest in subsidiaries		(920)	(165,191)
Proceeds from share options exercised	15(i)	2,001	5,136
Interest paid		(269,584)	(278,452)
Dividends distribution	(a)	(92,818)	-
Placement of restricted bank deposits		(10,260)	-
Withdrawal of restricted bank deposits		-	30,000
Cash paid relating to other financing activities		-	(52,500)
Net cash generated from/(used in) financing activities		1,204,051	(795,545)
Net increase/(decrease) in cash and cash equivalents			
Cash and cash equivalents at beginning of the year		686,636	1,133,097
Exchange gain on cash and cash equivalents		23,821	27,272
Cash and cash equivalents at end of the year		2,422,874	686,636

Note (a):

During the year of 2018, pursuant to the agreement signed between the Group and China Oil HBP Science & Technology Co., Ltd. ("China Oil HBP"), trade receivables due from China Oil HBP amounting to RMB136,042,000 has been collected through the exemption of the payment of dividend due to China Oil HBP amounting to RMB136,042,000. Such non-cash transaction has been excluded from the operating activities and financing activities of the consolidated statement of cash flows above.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)



1. GENERAL INFORMATION

Anton Oilfield Services Group (the "Company") was incorporated in the Cayman Islands on 3 August 2007 as an exempted company with limited liability under the Companies Law of Cayman Islands. The address of its registered office is PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands.

The Company is an investment holding company. The Company and its subsidiaries (the "Group") are mainly engaged in providing oilfield technology services, manufacturing and trading of related products in the People's Republic of China (the "PRC") and other overseas countries. The Company listed its shares on the Main Board of The Stock Exchange of Hong Kong Limited (the "Stock Exchange") on 14 December 2007.

The directors of the Company (the "Directors") regard Pro Development Holdings Corp., a company incorporated in British Virgin Islands, as the immediate and ultimate holding company of the Company, which is controlled by Mr. Luo Lin, the Company's controlling shareholder.

The consolidated financial statements are presented in RMB, which is also the functional currency of the Company.

2. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRSs")

New and Amendments to IFRSs that are mandatorily effective for the current year

In the current year, the Group has applied the following new and amendments to IFRSs issued by the International Accounting Standards Board ("IASB") that are mandatorily effective for an accounting period that begins on or after 1 January 2019.

IFRS 16	<i>Leases</i>
IFRIC 23	<i>Uncertainty over Income Tax Treatments</i>
Amendments to IAS 19	<i>Plan Amendment, Curtailment or settlement</i>
Amendments to IAS 28	<i>Long-term Interests in Associates and Joint Ventures</i>
Amendments to IFRSs	<i>Annual Improvements to IFRSs 2015-2017 Cycle</i>

Except as described below, the application of the new and amendments to IFRSs in the current year has had no material impact on the Group's financial performance and positions for the current and prior years and/or on the disclosures set out in these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)

2. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS *(Continued)*

New and Amendments to IFRSs that are mandatorily effective for the current year *(Continued)*

2.1 IFRS 16 Leases

The Group has applied IFRS 16 for the first time in the current year. IFRS 16 superseded IAS 17 *Leases* ("IAS 17"), and the related interpretations.

Definition of a lease

The Group has elected the practical expedient to apply IFRS 16 to contracts that were previously identified as leases applying IAS 17 and IFRIC 4 *Determining whether an Arrangement contains a Lease* and not apply this standard to contracts that were not previously identified as containing a lease. Therefore, the Group has not reassessed contracts which already existed prior to the date of initial application.

For contracts entered into or modified on or after 1 January 2019, the Group applies the definition of a lease in accordance with the requirements set out in IFRS 16 in assessing whether a contract contains a lease. The application of new definition of a lease has had no material impact on those contracts that were previously identified as leases applying IAS 17 and IFRIC 4 *Determining whether an Arrangement contains a Lease*.

As a lessee

The Group has applied IFRS 16 retrospectively with the cumulative effect recognised at the date of initial application, 1 January 2019.

As at 1 January 2019, the Group recognised additional lease liabilities and right-of-use assets at amounts equal to the related lease liabilities adjusted by any prepaid lease payments by applying IFRS 16.C8(b) (ii) transition. Any difference at the date of initial application is recognised in the opening retained profits and comparative information has not been restated.

When applying the modified retrospective approach under IFRS 16 at transition, the Group applied the following practical expedients to leases previously classified as operating leases under IAS 17, on lease-by-lease basis, to the extent relevant to the respective lease contracts:

- i. relied on the assessment of whether leases are onerous by applying IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* as an alternative of impairment review;
- ii. elected not to recognise right-of-use assets and lease liabilities for leases with lease term ends within 12 months of the date of initial application;
- iii. excluded initial direct costs from measuring the right-of-use assets at the date of initial application;
- iv. applied a single discount rate to a portfolio of leases with a similar remaining terms for similar class of underlying assets in similar economic environment. Specifically, discount rate for certain leases of buildings and equipment in the PRC was determined on a portfolio basis; and
- v. used hindsight based on facts and circumstances as at date of initial application in determining the lease term for the Group's leases with extension and termination options.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)



2. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS *(Continued)*

New and Amendments to IFRSs that are mandatorily effective for the current year *(Continued)*

2.1 IFRS 16 Leases *(Continued)*

As a lessee *(Continued)*

When recognising the lease liabilities for leases previously classified as operating leases, the Group has applied incremental borrowing rates of the relevant group entities at the date of initial application. The weighted average lessee's incremental borrowing rates applied by the relevant group entities range from 8.41% to 9.70%.

	Note	At 1 January 2019
Operating lease commitments disclosed as at 31 December 2018		39,173
Lease liabilities discounted at relevant incremental borrowing rates		34,942
Less: Recognition exemption – short-term leases		6,479
Lease liabilities relating to operating leases recognised upon application of IFRS 16 as at 1 January 2019	(a)	28,463
Analysed as		
Current		8,692
Non-current		19,771
		28,463

The carrying amount of right-of-use assets as at 1 January 2019 comprises the following:

	Note	Right-of- use assets
Right-of-use assets relating to operating leases recognised upon application of IFRS 16		28,463
Reclassified from prepaid lease payments	(b)	77,567
		106,030
By class:		
Leasehold lands		77,567
Buildings		28,463
		106,030

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)

2. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS *(Continued)*

New and Amendments to IFRSs that are mandatorily effective for the current year *(Continued)*

2.1 IFRS 16 Leases *(Continued)*

As a lessee *(Continued)*

Notes:

- (a) Upon application of IFRS 16, the Group recognised and measured the lease liabilities at the present value, using the incremental borrowing rate, of lease payments that were unpaid after excluding short-term leases. In addition, the Group reclassified the lease liabilities as current and non-current liabilities respectively at 1 January 2019 based on settlement term.
- (b) Upfront payments for leasehold lands in the PRC were classified as prepaid lease payments as at 31 December 2018. Upon application of IFRS 16, the current and non-current portion of prepaid lease payments amounting to RMB1,932,000 and RMB75,635,000 respectively were reclassified to right-of-use assets.

As a lessor

In accordance with the transitional provisions in IFRS 16, the Group is not required to make any adjustment on transition for leases in which the Group is a lessor but account for these leases in accordance with IFRS 16 from the date of initial application and comparative information has not been restated.

Upon application of IFRS 16, new lease contracts entered into but commence after the date of initial application relating to the same underlying assets under existing lease contracts are accounted as if the existing leases are modified as at 1 January 2019. The application has had no impact on the Group's consolidated statement of financial position at 1 January 2019. However, effective 1 January 2019, lease payments relating to the revised lease term after modification are recognised as income on straight-line basis over the extended lease term.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)



2. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS *(Continued)*

New and Amendments to IFRSs that are mandatorily effective for the current year *(Continued)*

2.1 IFRS 16 Leases *(Continued)*

There is no material impact of transition to IFRS 16 on retained earnings at 1 January 2019.

The following adjustments were made to the amounts recognised in the consolidated statement of financial position at 1 January 2019. Line items that were not affected by the changes have not been included.

	Notes	Carrying amounts previously reported at 31 December 2018	Adjustments	Carrying amounts under IFRS 16 at 1 January 2019
Non-current Assets				
Right-of-use assets	(b)	-	106,030	106,030
Prepaid lease payments	(b)	75,635	(75,635)	-
Current Assets				
Prepaid lease payments	(b)	1,932	(1,932)	-
Non-current Liabilities				
Lease liabilities	(a)	-	19,771	19,771
Current Liabilities				
Lease liabilities	(a)	-	8,692	8,692

For the purpose of reporting cash flows from operating activities under indirect method for the year ended 31 December 2019, movements in working capital have been computed based on opening consolidated statement of financial position as at 1 January 2019 as disclosed above.

There is no material impact of applying IFRS 16 as a lessor on the Group's consolidated statement of financial position as at 31 December 2019 and its consolidated statement of profit or loss and other comprehensive income and cash flows for the year.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)

2. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS *(Continued)*

New and amendments to IFRSs in issue but not yet effective

The Group has not early applied the following new and amendments to IFRSs that have been issued but are not yet effective:

IFRS 17	<i>Insurance Contracts</i> ³
Amendments to IFRS 3	<i>Definition of a Business</i> ²
Amendments to IFRS 10 and IAS 28	<i>Sale or Contribution of Assets between an Investor and its Associate or Joint Venture</i> ⁵
Amendments to IAS 1	<i>Classification of Liabilities as Current or Non-current</i> ⁴
Amendments to IAS 1 and IAS 8	<i>Definition of Material</i> ¹
Amendments to IFRS 9, IAS 39 and IFRS 7	<i>Interest Rate Benchmark Reform</i> ¹

¹ Effective for annual periods beginning on or after 1 January 2020

² Effective for business combinations and asset acquisitions for which the acquisition date is on or after the beginning of the first annual period beginning on or after 1 January 2020

³ Effective for annual periods beginning on or after 1 January 2021

⁴ Effective for annual periods beginning on or after 1 January 2022

⁵ Effective for annual periods beginning on or after a date to be determined

In addition to the above new and amendments to IFRSs, a revised Conceptual Framework for Financial Reporting was issued in 2018. Its consequential amendments, *the Amendments to References to the Conceptual Framework in IFRS Standards*, will be effective for annual periods beginning on or after 1 January 2020.

Except for the new and amendments to IFRSs mentioned below, the Directors anticipate that the application of all other new and amendments to IFRSs will have no material impact on the consolidated financial statements in the foreseeable future.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)



2. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS *(Continued)*

New and amendments to IFRSs in issue but not yet effective *(Continued)*

Amendments to IAS 1 and IAS 8 *Definition of Material*

The amendments provide refinements to the definition of material by including additional guidance and explanations in making materiality judgements.

- include the concept of “obscuring” material information in which the effect is similar to omitting or misstating the information;
- replace threshold for materiality influencing users from “could influence” to “could reasonably be expected to influence”; and
- include the use of the phrase “primary users” rather than simply referring to “users” which was considered too broad when deciding what information to disclose in the financial statements.

The amendments also align the definition across all IFRSs and will be mandatorily effective for the Group’s annual period beginning on 1 January 2020. The application of the amendments is not expected to have significant impact on the financial position and performance of the Group but may affect the presentation and disclosures in the consolidated financial statements.

Conceptual Framework for Financial Reporting 2018 (the “New Framework”) and the Amendments to References to the Conceptual Framework in IFRS Standards

The New Framework:

- reintroduces the terms stewardship and prudence;
- introduces a new asset definition that focuses on rights and a new liability definition that is likely to be broader than the definition it replaces, but does not change the distinction between a liability and an equity instrument;
- discusses historical cost and current value measures, and provides additional guidance on how to select a measurement basis for a particular asset or liability;
- states that the primary measure of financial performance is profit or loss, and that only in exceptional circumstances other comprehensive income will be used and only for income or expenses that arise from a change in the current value of an asset or liability; and
- discusses uncertainty, derecognition, unit of account, the reporting entity and combined financial statements.

Consequential amendments have been made so that references in certain IFRSs have been updated to the New Framework, whilst some IFRSs are still referred to the previous versions of the framework. These amendments are effective for annual periods beginning on or after 1 January 2020, with earlier application permitted. Other than specific standards which still refer to the previous versions of the framework, the Group will rely on the New Framework on its effective date in determining the accounting policies especially for transactions, events or conditions that are not otherwise dealt with under the accounting standards.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)

3. SIGNIFICANT ACCOUNTING POLICIES

Statement of compliance

The consolidated financial statements of the Group have been prepared in accordance with IFRSs issued by IASB. In addition, the consolidated financial statements include applicable disclosures required by the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("Listing Rules") and by the Hong Kong Companies Ordinance ("CO").

Basis of preparation

The consolidated financial statements have been prepared on the historical cost basis at the end of each reporting period, as explained in the accounting policies set out below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of IFRS 2 *Share-based Payment*, leasing transactions that are accounted for in accordance with IFRS 16 (since 1 January 2019) or IAS 17 (before application of IFRS 16), and measurements that have some similarities to fair value but are not fair value, such as net realisable value in IAS 2 *Inventories*, or value in use in IAS 36 *Impairment of Assets*.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

The principal accounting policies are set out below.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019
(Amounts expressed in thousands of RMB, unless otherwise stated)



3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Basis of consolidation

A subsidiary is an entity over which the Group has control. The Group controls an entity when the Group has the power over the entity, is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

Profit or loss and each item of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Intra-Group transactions, balances and unrealised gains on transactions between Group companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. When necessary, amounts reported by subsidiaries have been adjusted to conform with the Group's accounting policies.

Non-controlling interests in subsidiaries are presented separately from the Group's equity therein, which represent present ownership interests entitling their holders to a proportionate share of net assets of the relevant subsidiaries upon liquidation.

Changes in the Group's ownership interests in existing subsidiaries

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity. The carrying amounts of the Group's relevant components of equity and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries, including re-attribution of relevant reserves between the Group and non-controlling interests according to the Group's and the non-controlling interests' proportionate interests.

When the Group loses control of a subsidiary, the assets and liabilities of that subsidiary and non-controlling interest (if any) are derecognised. A gain or loss is recognised in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the carrying amount of the assets (including goodwill), and liabilities of the subsidiary attributable to the owners of the Company. All amounts previously recognised in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets or liabilities of the subsidiary (i.e. reclassified to profit or loss or transferred to another category of equity as specified/permitted by applicable IFRSs). The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under IFRS 9/IAS 39 or, when applicable, the cost on initial recognition of an investment in an associate or a joint venture.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Basis of consolidation *(Continued)*

Separate financial statements

Investments in subsidiaries are accounted for at cost less impairment. Cost also includes direct attributable costs of investment. The results of subsidiaries are accounted for by the Company on the basis of dividend and receivable.

Impairment testing of the investments in subsidiaries is required upon receiving dividends from these investments if the dividend exceeds the total comprehensive income of the subsidiary in the period the dividend is declared or if the carrying amount of the investment in the separate financial statements exceeds the carrying amount in the consolidated financial statements of the investee's net assets including goodwill.

Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the chief executive officer, executive vice presidents and directors who make strategic decisions.

Foreign currency translation

Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the functional currency. The financial statements are presented in RMB, which is the Company's functional currency.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the consolidated statement of profit or loss, except when deferred in other comprehensive income as qualifying net investment hedge.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Foreign currency translation *(Continued)*

Group companies

The results and financial position of all the Group entities (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- (i) assets and liabilities for each consolidated statement of financial position presented are translated at the closing rate at the end of the financial period;
- (ii) income and expenses for each consolidated statement of profit or loss are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rate on the dates of the transactions); and
- (iii) all resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate. Exchange differences arising are recognised in other comprehensive income.

Property, plant and equipment

Property, plant and equipment, other than construction in progress, are stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Construction-in-progress represents property, plant and equipment under construction and is stated at cost. This includes the costs of construction, machinery and other expenditures necessary for the purpose of preparing the construction-in-progress for its intended use and those borrowing costs incurred before the assets ready for intended use that are eligible for capitalisation. Construction-in-progress is not depreciated until such time as the relevant asset is completed and ready for its intended use.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to the statement of profit or loss during the financial period in which they are incurred.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Property, plant and equipment *(Continued)*

Depreciation of property, plant and equipment is calculated using the straight-line method except for drill pipes are depreciated using unit-of-production method, to allocate their costs to their residual values over their estimated useful lives, as follows:

	Estimated useful life
Buildings	5-50 years
Machinery and equipment	5-10 years
Motor vehicles	5-10 years
Furniture, fixtures, leasehold improvements and others	3-5 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of the financial period.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised within "other gains, net", in the consolidated statement of profit or loss.

Goodwill

Goodwill arises on the acquisition of subsidiaries, and represents the excess of the consideration transferred over the Group's interest in net fair value of the net identifiable assets, liabilities and contingent liabilities of the acquiree and the fair value of the non-controlling interest in the acquiree.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash generating units ("CGUs"), or groups of CGUs, that is expected to benefit from the synergies of the combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes and not larger than an operating segment.

Goodwill impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of the CGU containing the goodwill is compared to the recoverable amount, which is the higher of value in use and the fair value less costs to sell. Any impairment is recognised immediately as an expense and is not subsequently reversed.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Intangible assets

Computer software

Computer software are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. These costs are amortised over their estimated useful lives of 5 to 10 years.

Patents

Patents are initially recorded at actual cost incurred to acquire and amortised on a straight-line basis over their estimated useful lives, ranging from 3 to 10 years. Development costs that are directly attributable to the design, development and application of patents are recognised as intangible assets when the following criteria are met:

- It is technically feasible to complete the patents so that it will be available for use;
- Management intends to complete the patents and use or sell it;
- There is an ability to use or sell the patents;
- It can be demonstrated how the patents will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development and to use or sell the patents are available; and
- The expenditure attributable to the patents during its development can be reliably measured.

Directly attributable costs that are capitalised as part of the patent include material costs, patent development employee costs and an appropriate portion of relevant overheads. Other development expenditures that do not meet these criteria are recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Impairment on property, plant and equipment, right-of-use assets and intangible assets other than goodwill

At the end of the reporting period, the Group reviews the carrying amounts of its property, plant and equipment, right-of-use assets, intangible assets with finite useful lives to determine whether there is any indication that these assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the relevant asset is estimated in order to determine the extent of the impairment loss (if any).

The recoverable amount of property, plant and equipment, right-of-use assets and intangible assets are estimated individually. When it is not possible to estimate the recoverable amount individually, the Group estimates the recoverable amount of the CGU to which the asset belongs.

In addition, the Group assesses whether there is indication that corporate assets may be impaired. If such indication exists, corporate assets are also allocated to individual CGU, when a reasonable and consistent basis of allocation can be identified, or otherwise they are allocated to the smallest group of CGUs for which a reasonable and consistent allocation basis can be identified.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset (or a CGU) for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or a CGU) is reduced to its recoverable amount. For corporate assets or portion of corporate assets which cannot be allocated on a reasonable and consistent basis to a CGU, the Group compares the carrying amount of a group of CGUs, including the carrying amounts of the corporate assets or portion of corporate assets allocated to that group of CGUs, with the recoverable amount of the group of CGUs. In allocating the impairment loss, the impairment loss is allocated first to reduce the carrying amount of any goodwill (if applicable) and then to the other assets on a pro-rata basis based on the carrying amount of each asset in the unit or the group of CGUs. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if measurable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro rata to the other assets of the unit or the group of CGUs. An impairment loss is recognised immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a CGU or a group of CGUs) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or a CGU or a group of CGUs) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments

Financial assets and financial liabilities are recognised when a group entity becomes a party to the contractual provisions of the instrument. All regular way purchases or sales of financial assets are recognised and derecognised on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the market place.

Financial assets and financial liabilities are initially measured at fair value except for trade receivables arising from contracts with customers which are initially measured in accordance with IFRS 15. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets or financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognised immediately in profit or loss.

The effective interest method is a method of calculating the amortised cost of a financial asset or financial liability and of allocating interest income and interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Financial assets

Classification and subsequent measurement of financial assets

Financial assets that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to collect contractual cash flows; and
 - the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.
- (i) Amortised cost and interest income

Interest income is recognised using the effective interest method for financial assets measured subsequently at amortised cost. Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognised by applying the effective interest rate to the amortised cost of the financial asset from the next reporting period. If the credit risk on the credit-impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognised by applying the effective interest rate to the gross carrying amount of the financial asset from the beginning of the reporting period following the determination that the asset is no longer credit impaired.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Impairment of financial assets and other items subject to impairment assessment under IFRS 9

The Group performs impairment assessment under expected credit loss ("ECL") model on financial assets (including trade receivables from goods and services, notes receivable, other receivables, restricted bank deposits and cash and cash equivalents), and other items (lease receivables and contract assets) which are subject to impairment under IFRS 9. The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. In contrast, 12-month ECL ("12m ECL") represents the portion of lifetime ECL that is expected to result from default events that are possible within 12 months after the reporting date. Assessment are done based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group always recognises lifetime ECL for trade receivables from goods and services, contract assets and lease receivables. For trade receivables from goods and services, contract assets and lease receivables with significant balances mainly from large multinational and state-owned oil companies, the ECL are assessed individually. For trade receivables from goods and services from private and relatively small customers, the ECL are assessed collectively using a provision matrix with appropriate groupings.

For all other instruments, the Group measures the loss allowance equal to 12m ECL, unless when there has been a significant increase in credit risk since initial recognition, the Group recognises lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Impairment of financial assets and other items subject to impairment assessment under IFRS 9 *(Continued)*

(i) Significant increase in credit risk

In assessing whether the credit risk has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;
- significant deterioration in external market indicators of credit risk, e.g. a significant increase in the credit spread, the credit default swap prices for the debtor;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor;
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

(ii) Definition of default

For internal credit risk management, the Group considers an event of default occurs when information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collaterals held by the Group).

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Impairment of financial assets and other items subject to impairment assessment under IFRS 9 *(Continued)*

(iii) Credit-impaired financial assets

A financial asset is credit-impaired when one or more events of default that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

- significant financial difficulty of the issuer or the borrower;
- a breach of contract, such as a default or past due event;
- the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;
- it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or
- the disappearance of an active market for that financial asset because of financial difficulties; or
- the purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses.

(iv) Write-off policy

The Group writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Impairment of financial assets and other items subject to impairment assessment under IFRS 9 *(Continued)*

(v) Measurement and recognition of ECL

The measurement of ECL is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information. Estimation of ECL reflects an unbiased and probability-weighted amount that is determined with the respective risks of default occurring as the weights.

Generally, the ECL is the difference between all contractual cash flows that are due to the Group in accordance with the contract and the cash flows that the Group expects to receive, discounted at the effective interest rate determined at initial recognition. For a lease receivable, the cash flows used for determining the ECL is consistent with the cash flows used in measuring the lease receivable in accordance with IFRS 16 (since 1 January 2019) or IAS 17 (prior to 1 January 2019).

Where ECL is measured on a collective basis or cater for cases where evidence at the individual instrument level may not yet be available, the financial instruments are grouped on the following basis:

- Nature of financial instruments (i.e. the Group's trade receivables from goods and services from private and relatively small customers are assessed as a separate group. Other financial instruments and other items are assessed for expected credit losses on an individual basis);
- Past-due status;
- Nature, size and industry of debtors; and
- External credit ratings where available.

The grouping is regularly reviewed by management to ensure the constituents of each group continue to share similar credit risk characteristics.

Interest income is calculated based on the gross carrying amount of the financial asset unless the financial asset is credit impaired, in which case interest income is calculated based on amortised cost of the financial asset.

The Group recognises an impairment gain or loss in profit or loss for all financial instruments by adjusting their carrying amount, with the exception of trade receivables from goods and services, other receivables, contract assets and lease receivables where the corresponding adjustment is recognised through a loss allowance account.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial assets *(Continued)*

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognised in other comprehensive income and accumulated in equity is recognised in profit or loss.

Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the statement of financial position when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the group entity or the counterparty.

Financial liabilities and equity

Classification as debt or equity

Debt and equity instruments issued by a group entity are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Financial liabilities at amortised cost

Financial liabilities including long-term borrowings, current portion of long-term borrowings, short-term borrowings, long-term bonds, current portion of long-term bonds, trade and notes payables and part of accruals and other payables are subsequently measured at amortised cost, using the effective interest method.

Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Financial instruments *(Continued)*

Financial liabilities and equity *(Continued)*

Non-substantial modifications of financial liabilities

For non-substantial modifications of financial liabilities that do not result in derecognition, the carrying amount of the relevant financial liabilities will be calculated at the present value of the modified contractual cash flows discounted at the financial liabilities' original effective interest rate. Transaction costs or fees incurred are adjusted to the carrying amount of the modified financial liabilities and are amortised over the remaining term. Any adjustment to the carrying amount of the financial liability is recognised in profit or loss at the date of modification.

Hedging activities

The Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedging transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items.

Assessment of hedging relationship and effectiveness

For hedge effectiveness assessment, the Group considers whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes that result from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio but the risk management objective for that designated hedging relationship remains the same, the Group adjusts the hedge ratio of the hedging relationship (i.e. rebalances the hedge) so that it meets the qualifying criteria again.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Hedging activities *(Continued)*

Net investment hedge

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in other comprehensive income. The gain or loss relating to the ineffective portion is recognised in profit or loss.

Gains and losses accumulated in equity are included in the profit or loss when the foreign operation is partially disposed of or sold.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted average method. The cost of project-in-progress comprises design costs, raw materials, direct labour, other direct costs and related production overheads (based on normal operating capacity). Net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

Cash and cash equivalents

In the consolidated statement of cash flows, cash and cash equivalents include cash on hand and bank deposits.

Share capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

Borrowing costs

All borrowing costs are recognised in profit or loss in the period in which they are incurred.

Current and deferred income tax

The tax expense for the period comprises current and deferred tax. Tax is recognised in the consolidated statement of profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case the tax is also recognised in other comprehensive income or directly in equity, respectively.

Current income tax

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of the financial period in the countries where the Company's subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Current and deferred income tax *(Continued)*

Deferred income tax

Deferred income tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted by the end of financial period and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax liabilities are provided on temporary differences arising from investments in subsidiaries, a joint venture and an associate, except for deferred income tax liability where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax assets are recognised on deductible temporary differences arising from investments in subsidiaries, a joint venture and an associate only to the extent that it is probable the temporary difference will reverse in the future and there is sufficient taxable profit available against which the temporary difference can be utilised.

For the purposes of measuring deferred tax for leasing transactions in which the Group recognises the right-of-use assets and the related lease liabilities, the Group first determines whether the tax deductions are attributable to the right-of-use assets or the lease liabilities.

For leasing transactions in which the tax deductions are attributable to the lease liabilities, the Group applies IAS 12 *Income Taxes* requirements to the lease transaction as a whole. Temporary differences relating to right-of-use assets and lease liabilities are assessed on a net basis. Excess of depreciation on right-of-use assets over the lease payments for the principal portion of lease liabilities resulting in net deductible temporary differences.

Offsetting

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied to the same taxable entity by the same taxation authority.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Employee benefits

Pension and other social obligations

The Group has various defined contribution plans for pensions, housing fund and other social obligations in accordance with the local conditions and practices in the municipalities and provinces in which they operate. A defined contribution plan is a pension and/or other social benefits plan under which the Group pays fixed contributions into a separate publicly administered pension and/or other social insurance plan on mandatory bases. The Group will have no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees benefits relating to employee service in the current and prior periods. The contributions are recognised as employee benefit expenses when incurred.

Share-based compensation

The Group operates a number of equity-settled share-based compensation plans, under which the Group receives services from employees as consideration for equity instruments (options) of the Group. The fair value of the employee services received in exchange for the grant of the options is recognised as an expense. The total amount to be expensed is determined by reference to the fair value of the options granted at the grant date:

- Including any market performance conditions;
- Excluding the impact of any service and non-market performance vesting conditions (for example, profitability, sales growth targets and remaining an employee of the entity over a specified time period); and
- Including the impact of any non-vesting conditions.

Non-market vesting conditions are included in assumptions about the number of options that are expected to vest. The total expense is recognised over the vesting period, which is the period over which all of the specified vesting conditions are to be satisfied. At the end of each reporting period, the Group revises its estimates of the number of options that are expected to vest based on the non-marketing vesting conditions. It recognises the impact of the revision to original estimates, if any, in the consolidated statement of profit or loss, with a corresponding adjustment to equity.

When the options are exercised, the cash subscribed for the shares issued is credited to share capital (nominal value) and share premium, net of any directly attributable transaction costs; and the amount previously recognised in capital reserve will be transferred to share premium. When the share options are forfeited after the vesting date or are still not exercised at the expiry date, the amount previously recognised in capital reserve will continue to be held in capital reserve.

The grant by the Company of options over its equity instruments to the employees of subsidiary undertakings in the Group is treated as a capital contribution. The fair value of employee services received, measured by reference to the grant date fair value, is recognised over the vesting period as an increase to investment in subsidiary undertakings, with a corresponding credit to equity in the parent entity accounts.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Revenue from contracts with customers

The Group recognises revenue when (or as) a performance obligation is satisfied, i.e. when “control” of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good and service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met

- the customer simultaneously receives and consumes the benefits provided by the Group’s performance as the Group performs;
- the Group’s performance creates and enhances an asset that the customer controls as the Group performs; or
- the Group’s performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

A contract asset represents the Group’s right to consideration in exchange for goods or services that the Group has transferred to a customer that is not yet unconditional. It is assessed for impairment in accordance with IFRS 9. In contrast, a receivable represents the Group’s unconditional right to consideration, i.e. only the passage of time is required before payment of that consideration is due.

A contract liability represents the Group’s obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer.

A contract asset and a contract liability relating to the same contract are accounted for and presented on a net basis.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Revenue from contracts with customers *(Continued)*

Contracts with multiple performance obligations (including allocation of transaction price)

For contracts that contain more than one performance obligations, typically drilling technology service and well completion service (within oilfield technology services) in one contract, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis.

The stand-alone selling price of the distinct good or service underlying each performance obligation is determined at contract inception. It represents the price at which the Group would sell a promised good or service separately to a customer. If a stand-alone selling price is not directly observable, the Group estimates it using appropriate techniques such that the transaction price ultimately allocated to any performance obligation reflects the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer.

Over time revenue recognition: measurement of progress towards complete satisfaction of a performance obligation

Output method

The progress towards complete satisfaction of a performance obligation is measured based on output method, which is to recognise revenue on the basis of direct measurements of the value of the goods or services transferred to the customer to date relative to the remaining goods or services promised under the contract, that best depict the Group's performance in transferring control of goods or services.

Interest income

Interest income is recognised on a time-proportion basis using the effective interest method.

Leases

Definition of a lease (upon application of IFRS 16 in accordance with transitions in Note 2)

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified on or after the date of initial application, the Group assesses whether a contract is or contains a lease based on the definition under IFRS 16 at inception or modification date. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Leases *(Continued)*

The Group as a lessee (upon application of IFRS 16 in accordance with transitions in Note 2)

Short-term leases and leases of low-valued assets

The Group applies the short-term lease recognition exemption to leases of buildings and equipment that have a lease term of 12 months or less from the commencement date and do not contain a purchase option. It also applies the recognition exemption for lease of low-value assets. Lease payments on short-term leases and leases of low-value assets are recognised as expense on a straight-line basis or another systematic basis over the lease term.

Right-of-use assets

The cost of right-of-use asset includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received;
- any initial direct costs incurred by the Group; and
- an estimate of costs to be incurred by the Group in dismantling and removing the underlying assets, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities.

Right-of-use assets in which the Group is reasonably certain to obtain ownership of the underlying leased assets at the end of the lease term is depreciated from commencement date to the end of the useful life. Otherwise, right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

The Group presents right-of-use assets as a separate line item on the consolidated statement of financial position.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Leases *(Continued)*

The Group as a lessee (upon application of IFRS 16 in accordance with transitions in Note 2) *(Continued)*

Lease liabilities

At the commencement date of a lease, the Group recognises and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The lease payments include:

- fixed payments (including in-substance fixed payments) less any lease incentives receivable;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable by the Group under residual value guarantees;
- the exercise price of a purchase option if the Group is reasonably certain to exercise the option; and
- payments of penalties for terminating a lease, if the lease term reflects the Group exercising an option to terminate the lease.

After the commencement date, lease liabilities are adjusted by interest accretion and lease payments.

The Group remeasures lease liabilities (and makes a corresponding adjustment to the related right-of-use assets) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the related lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the date of reassessment.
- the lease payments change due to changes in market rental rates following a market rent review/ expected payment under a guaranteed residual value, in which cases the related lease liability is remeasured by discounting the revised lease payments using the initial discount rate.

The Group presents lease liabilities as a separate line item on the consolidated statement of financial position.

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3. SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Leases *(Continued)*

The Group as a lessee (prior to 1 January 2019)

The Group leases certain property, plant and equipment.

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the consolidated statement of profit or loss on a straight-line basis over the period of the lease.

The Group as a lessor

Classification and measurement of leases

Leases for which the Group is a lessor are classified as operating leases. Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease. Rental income which are derived from the Group's ordinary course of business are presented as revenue.

The Group as a lessor (upon application of IFRS 16 in accordance with transitions in Note 2)

Sublease

The Group leases certain drilling equipment from its suppliers and then leases to its customers. When the Group is an intermediate lessor, it accounts for the head lease and the sublease as two separate contracts. The sublease is classified as a finance or operating lease by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset.

Government grants

Grants from the government are recognised at fair value where there is reasonable assurance that the grant will be received and the Group will comply with all attached conditions.

Government grants related to cost are deferred and recognised in the consolidated statement of profit or loss over the period necessary to match them with the related costs that they are intended to compensate.

Dividend distribution

Dividend distribution to the Company's shareholders is recognised as a liability in the Group's financial statements in the period in which the dividends are approved by the Company's shareholders.

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4. KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, which are described in Note 3, the Directors are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual result may differ from these estimates.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

(a) Provision of ECL for trade receivables from goods and services

The impairment of trade receivables from goods and services under ECL model is determined by the management based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group uses provision matrix to calculate ECL for the trade receivables from goods and services from private and relatively small customers. The provision rates are based on past due analysis as groupings of various debtors that have similar loss patterns. The provision matrix is based on the Group's historical default rates taking into consideration forward-looking information that is reasonable and supportable available without undue costs or effort. At every reporting date, the historical observed default rates are reassessed and changes in the forward-looking information are considered. In addition, trade receivables from goods and services with significant balances from large multinational and state-owned oil companies or credit impaired are assessed for ECL individually.

The provision of ECL is sensitive to changes in estimates. In estimating the provision of ECL, the management is required to consider all relevant factors with reasonable and supportable assumptions to make significant accounting estimations. The information about the ECL and the Group's trade receivables from goods and services are disclosed in Note 35.2(b)(i) and Note 12.

(b) Impairment of inventory

Inventories are reviewed for impairment whenever events or changes in circumstances cause their cost to exceed their net realisable value. Cost is determined on the weighted average basis. The determination of net realisable value of the inventories requires the use of estimates. Net realisable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale. Where the actual outcome or expectation in future is different from the original estimate, such difference will have an impact on the cost of inventories and a provision may be made or reversed in the year in which these estimates have been changed. As at 31 December 2019, the carrying amount of inventories was RMB765,496,000 (31 December 2018: RMB774,359,000), already net of accumulated impairment loss of RMB83,232,000 (31 December 2018: RMB135,510,000).

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4. KEY SOURCES OF ESTIMATION UNCERTAINTY *(Continued)*

(c) Estimated impairment of goodwill

Determining whether goodwill is impaired requires an estimation of the value in use of the CGU to which goodwill has been allocated. The value in use calculations require the Group to estimate the future cash flows expected to arise from the CGU and a suitable discount rate in order to calculate the present value. Where the actual future cash flows are less than expected, or change in facts and circumstances which results in downward revision of future cash, a material impairment loss may arise. As at 31 December 2019 and 2018, the carrying amount of goodwill was RMB242,004,000, already net of accumulated impairment loss of RMB26,325,000. Details of the key assumptions used by the management in goodwill impairment assessment are set out in Note 9.

5. SEGMENT INFORMATION

The chief executive officer, president, executive vice presidents and Directors are the Group's chief operating decision makers (the "CODM"). Management has determined the operating segments based on the information reviewed by the CODM for the purposes of allocating resources and assessing performance.

The Group's reportable segments are entity or group of entities that offer different products and services, which is the basis by which the CODM make decisions about resources to be allocated to the segments and assesses their performance. Financial information of these entities has been separated to present discrete segment information to be reviewed by the CODM.

The CODM assess performance of three reportable segments: drilling technology, well completion and oil production services.

All of the three reportable segments include a number of direct service provision operations in various cities in China and overseas countries, each of which is considered as a separate operating segment by the CODM. For segment reporting, these individual operating segments have been aggregated into three single reportable segments based on their sharing of similar economic characteristics, including similar nature of the services and products, type of customer for their services and products and the method used to provide their services and distribute their products.

The measurement of profit or loss, assets and liabilities of the operating segments are the same as those described in the summary of significant accounting policies in Note 3. The CODM evaluate the performance of the operating segments based on profit before income tax expense, certain depreciation and amortisation, interest income, finance expenses, share of profit of a joint venture, asset impairment provisions and corporate overheads ("EBITDA"). The corporate overheads and corporate assets are the general management expenses incurred and assets held by the headquarters of the Group.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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5. SEGMENT INFORMATION *(Continued)*

	Drilling technology	Well completion	Oil production services	Total
For the year ended 31 December 2019				
Revenue (Note)	1,624,203	836,028	1,129,266	3,589,497
EBITDA	684,516	352,190	468,693	1,505,399
Depreciation and amortisation	(169,923)	(125,119)	(26,803)	(321,845)
Asset impairment provision of				
- Inventories	(16,559)	(15,380)	(5,050)	(36,989)
- Trade receivables	(26,122)	(17,812)	(18,999)	(62,933)
- Other receivables	(10,327)	(14,433)	-	(24,760)
Interest income	269	1,372	508	2,149
Finance expenses	(8,536)	(6,418)	(6,122)	(21,076)
Share of profit of a joint venture	762	-	-	762
Income tax expense	(50,332)	(30,976)	(61,483)	(142,791)
For the year ended 31 December 2018				
Revenue (Note)	1,339,850	741,820	854,218	2,935,888
EBITDA	624,858	329,273	360,792	1,314,923
Depreciation and amortisation	(125,947)	(122,784)	(24,896)	(273,627)
Asset impairment provision of				
- Inventories	(6,599)	(2,282)	(7,472)	(16,353)
- Trade receivables	(25,962)	(29,346)	(3,148)	(58,456)
- Other receivables	(9,518)	(7,015)	(212)	(16,745)
Interest income	136	211	421	768
Finance expenses	(5,335)	(5,452)	(3,934)	(14,721)
Share of profit of a joint venture	355	-	-	355
Income tax expense	(17,807)	(32,058)	(46,578)	(96,443)

Note: Sales between segments, with details set out in Note 23, are carried out at terms mutually agreed between relevant group entities. The revenue from external parties reported to the CODM is measured in a manner consistent with that in the consolidated statement of profit or loss.

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5. SEGMENT INFORMATION (Continued)

	Drilling technology	Well completion	Oil production services	Total
As at 31 December 2019				
Total assets	2,304,384	2,786,231	712,727	5,803,342
Total assets include:				
Capital expenditures	122,618	65,984	32,106	220,708
As at 31 December 2018				
Total assets	2,082,006	2,679,875	545,808	5,307,689
Total assets include:				
Capital expenditures	117,318	64,179	31,228	212,725

Disclosure of liabilities has not been included here because these liabilities balances are not allocated to segments.

A reconciliation of total EBITDA to profit before income tax is provided as follows:

	Year ended 31 December	
	2019	2018
EBITDA for reportable segments	1,505,399	1,314,923
Corporate overheads	(615,496)	(588,980)
Depreciation	(294,039)	(243,388)
Amortisation	(27,806)	(30,239)
Asset impairment provisions	(124,682)	(91,554)
Interest income	2,149	768
Finance expenses	(21,076)	(14,721)
Share of profit of a joint venture	762	355
Profit before income tax	425,211	347,164

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5. SEGMENT INFORMATION *(Continued)*

Reportable segments' assets are reconciled to total assets as follows:

	As at 31 December 2019	2018
Assets for reportable segments	5,803,342	5,307,689
Corporate assets for general management	3,703,470	1,938,912
Total assets	9,506,812	7,246,601

The Group allocates revenue on the basis of the location in which the sales are originated.

Geographical Information

	Revenue		Non-current assets	
	Year ended 31 December 2019	2018	As at 31 December 2019	2018
PRC	1,683,365	1,083,690	2,069,023	2,025,979
Republic of Iraq ("Iraq")	1,419,755	1,170,562	741,214	706,029
Other countries	486,377	681,636	167,524	204,881
Total	3,589,497	2,935,888	2,977,761	2,936,889

Client information

For the year ended 31 December 2019, revenues of approximately RMB1,666,245,000 (2018: RMB1,208,999,000) were derived from two external independent customers, which contributed 32.17% and 14.25% (2018: 25.59% and 15.59%) to the total revenue respectively. These revenues were mainly attributable to drilling technology and well completion segments (2018: drilling technology and well completion segments).

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6. PROPERTY, PLANT AND EQUIPMENT

	Buildings	Machinery and equipment	Motor vehicles	Furniture, fixtures, leasehold improvements and others	Construction-in-progress	Total
As at 1 January 2018						
Cost	627,914	2,246,553	45,696	105,927	238,893	3,264,983
Accumulated depreciation	(68,158)	(774,026)	(35,203)	(56,025)	-	(933,412)
Carrying values	559,756	1,472,527	10,493	49,902	238,893	2,331,571
Year ended 31 December 2018						
As at 1 January 2018	559,756	1,472,527	10,493	49,902	238,893	2,331,571
Additions	6,766	43,904	1,082	2,841	94,466	149,059
Transfer in/(out)	88,088	116,377	6,097	17,261	(227,823)	-
Depreciation charge	(35,289)	(210,148)	(4,590)	(12,485)	-	(262,512)
Disposals	-	(183)	(22)	(1,451)	-	(1,656)
Currency translation differences	5,443	29,290	300	772	3,538	39,343
As at 31 December 2018	624,764	1,451,767	13,360	56,840	109,074	2,255,805
As at 31 December 2018						
Cost	729,077	2,445,099	53,027	124,424	109,074	3,460,701
Accumulated depreciation	(104,313)	(993,332)	(39,667)	(67,584)	-	(1,204,896)
Carrying values	624,764	1,451,767	13,360	56,840	109,074	2,255,805
Year ended 31 December 2019						
As at 1 January 2019	624,764	1,451,767	13,360	56,840	109,074	2,255,805
Additions	-	43,971	315	15,046	133,757	193,089
Transfer in/(out)	5,564	34,914	2,590	10,697	(53,765)	-
Depreciation charge	(36,872)	(226,213)	(2,836)	(18,268)	-	(284,189)
Disposals	-	(40,021)	(328)	(310)	-	(40,659)
Currency translation differences	2,151	9,640	110	348	1,571	13,820
As at 31 December 2019	595,607	1,274,058	13,211	64,353	190,637	2,137,866
As at 31 December 2019						
Cost	737,310	2,473,968	54,626	149,550	190,637	3,606,091
Accumulated depreciation	(141,703)	(1,199,910)	(41,415)	(85,197)	-	(1,468,225)
Carrying values	595,607	1,274,058	13,211	64,353	190,637	2,137,866

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6. PROPERTY, PLANT AND EQUIPMENT *(Continued)*

During the year ended 31 December 2019, the depreciation charges of the Group were recorded in cost of sales with an amount of RMB233,583,000 (2018: RMB221,414,000), selling, general and administrative expenses with an amount of RMB30,904,000 (2018: RMB23,858,000), and cost of inventories which remained unsold as at year end with an amount of RMB19,702,000 (2018: RMB17,240,000), respectively.

As at 31 December 2019, long-term borrowings were secured by certain equipment with a carrying value of RMB277,924,000 (31 December 2018: RMB319,311,000) and certain buildings with a carrying value of RMB63,362,000 (31 December 2018: RMB93,618,000) (Note 18(a)).

As at 31 December 2019, short-term borrowings were secured by the Group's buildings with a carrying value of RMB46,815,000 (31 December 2018: Nil) (Note 18(b)).

As at 31 December 2019 and 2018, none of the Group's property, plant and equipment were pledged as security of undrawn bank borrowing facilities.

The Group as lessor

The Group leases out a number of equipment under operating leases. The leases typically run for an initial period of 1 to 2 years. None of the leases includes variable lease payments. The disaggregation of the equipment under operating leases included within "machinery and equipment" and the reconciliation of the carrying amount at the beginning and end of the period are set out as below:

Year ended 31 December 2019	
As at 1 January 2019	178,447
Additions	-
Disposals	(12,926)
Depreciation charge	(35,023)
As at 31 December 2019	130,498
As at 31 December 2019	
Cost	222,025
Accumulated depreciation	(91,527)
Carrying values	130,498

Furthermore, the Group leases certain drilling equipment from its suppliers and then leases to its customers. The Group accounts for the head lease and the sublease as two separate contracts. The sublease is classified as operating leases by reference to the right-of-use asset or expenses relating to short-term leases arising from the head lease, not with reference to the underlying asset.

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7. RIGHT-OF-USE ASSETS

	Leasehold lands	Equipment	Buildings	Total
Year ended 31 December 2019				
As at 1 January 2019	77,567	-	28,463	106,030
Additions	-	110,456	13,791	124,247
Depreciation charge	(1,932)	(28,073)	(10,371)	(40,376)
As at 31 December 2019	75,635	82,383	31,883	189,901
As at 31 December 2019				
Cost	77,567	110,456	42,254	230,277
Accumulated depreciation	(1,932)	(28,073)	(10,371)	(40,376)
Carrying values	75,635	82,383	31,883	189,901

During the current year, the Group entered into new lease agreements for the use of buildings and equipment for 2 to 5 years with extension and termination options. The Group is required to make fixed quarterly, semi-annually or annually payments depending on the usage of the assets during the contract periods. On lease commencement, the Group recognised RMB124,247,000 of right-of-use assets and RMB124,247,000 lease liabilities. Lease terms are negotiated on an individual basis and contain a range of different terms and conditions. In determining the lease term and assessing the length of the non-cancellable period, the Group applies the definition of a contract and determines the period for which the contract is enforceable. In addition, the lease agreements do not impose any covenants other than the security interests in the leased assets that are held by the lessor. Leased assets except for the leasehold lands may not be used as security for borrowing purposes.

For termination options, the Group assesses at lease commencement date that it is reasonably certain not to exercise. For extension options in lease contracts of equipment, the Group assesses at lease commencement date that it is reasonably certain not to exercise since those equipment is used to certain service projects with a limited duration. For extension options in lease contracts of buildings, the Group assesses at lease commencement date that it is not reasonably certain to exercise; however, except for the lease liabilities recognised as at 31 December 2019 for lease contracts of buildings, the Directors consider the potential future lease payments for lease contracts of buildings not included in lease liabilities are immaterial and hence, no further disclosure is made.

During the year ended 31 December 2019, the depreciation charges of the Group were recorded in cost of sales with an amount of RMB38,224,000 and cost of inventories which remained unsold as at year end with an amount of RMB2,152,000, respectively.

During the year ended 31 December 2019, the expense relating to short-term leases and other leases with lease terms end within 12 months of the date of initial application of IFRS 16 amounts to RMB152,548,000.

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7. RIGHT-OF-USE ASSETS *(Continued)*

During the year ended 31 December 2019, the total cash outflow for leases amounts to RMB160,146,000, consisting of RMB45,094,000 paid for lease liabilities and RMB115,052,000 paid for short-term leases and other leases with lease terms end within 12 months of the date of initial application of IFRS 16.

The Group has obtained the land use right certificates for all leasehold lands.

As at 31 December 2019, the outstanding lease commitment relating to short-term leases of certain equipment and buildings is RMB39,777,000.

As at 31 December 2019, certain long-term borrowings were secured by the right-of-use assets (leasehold lands) with a carrying value of RMB3,281,000 (Note 18(a)), and certain short-term borrowings were secured by the right-of-use assets (leasehold lands) with a carrying value of RMB2,423,000 (Note 18(b)).

8. PREPAID LEASE PAYMENTS

Year ended 31 December 2018

As at 1 January 2018	79,499
Amortisation charge	(1,932)
As at 31 December 2018	77,567
As at 31 December 2018	
Cost	89,581
Accumulated amortisation	(12,014)
Carrying value	77,567

Analysed for reporting purpose as:

	As at 31 December 2018
Current asset	1,932
Non-current asset	75,635
Closing carrying amount	77,567

Prepaid lease payments represent the Group's prepayments for the leasehold lands located in the PRC.

As at 31 December 2018, prepaid lease payments with carrying amount of RMB5,860,000 were pledged as guarantee for certain long-term borrowings (Note 18(a)).

As at 31 December 2018, none of the prepaid lease payments were pledged as security of undrawn bank borrowing facilities.

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9. GOODWILL

As at 1 January 2018, 31 December 2018 and 2019

Cost	268,329
Accumulated impairment	(26,325)
Carrying value	242,004

An operating segment-level summary of the goodwill allocation is presented below.

As at 31 December 2019 and 2018	Drilling technology	Well completion	Total
Shandong Precede Petroleum Technology Co., Ltd. (山東普瑞思德石油技術有限公司, "Shandong Precede")	-	132,486	132,486
Beijing Haineng Haite Petroleum Technology Development Co., Ltd. (北京海能海特石油科技發展有限公司, "Beijing Haineng Haite")	-	106,886	106,886
Anton Machinery and Meter Testing Co., Ltd. (安東儀器儀表檢測服務有限公司, "Anton Testing", formerly 四川誠量檢測服務有限公司)	2,632	-	2,632
	2,632	239,372	242,004

Goodwill is allocated to the CGUs of the Group identified according to their operations.

The recoverable amount of the CGUs is determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on financial budgets approved by management covering a five-year period. The Company expects cash flow beyond the five-year period will be similar to that of the fifth year based on existing production capacity. Cash flows beyond the five-year period are extrapolated using 2% growth rates after considering the inflation factor. Based on the assessments, no goodwill was further impaired as at 31 December 2019.

The key assumptions used for value-in-use calculations in 2019 are as follows:

As at 31 December 2019	Shandong Precede	Beijing Haineng Haite	Anton Testing
Gross margin	18.52%	20.50%	12.23%
Discount rate	14.38%	15.87%	16.70%
As at 31 December 2018	Shandong Precede	Beijing Haineng Haite	Anton Testing
Gross margin	21.58%	15.05%	16.42%
Discount rate	12.70%	12.70%	13.50%

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9. GOODWILL (Continued)

Management determined budgeted gross margin based on past performance and its expectations of market development. The discount rates used are pre-tax long-term weighted average costs of capital, which are based on the management's best estimation of the investment returns that market participants would require for the relevant assets.

Except for the accumulated impairment loss already recognised, management believed that any reasonably possible change in any of these assumptions would not cause the aggregate carrying amount of the above CGUs to exceed their recoverable amount as of 31 December 2019.

10. INTANGIBLE ASSETS

As at 31 December 2019 and 2018	Patent	Computer software	Total
As at 1 January 2018			
Cost	314,993	71,623	386,616
Accumulated amortisation	(125,653)	(36,678)	(162,331)
Carrying value	189,340	34,945	224,285
Year ended 31 December 2018			
As at 1 January 2018	189,340	34,945	224,285
Additions	53,849	9,817	63,666
Amortisation charge	(30,716)	(4,521)	(35,237)
As at 31 December 2018	212,473	40,241	252,714
As at 31 December 2018			
Cost	368,842	81,440	450,282
Accumulated amortisation	(156,369)	(41,199)	(197,568)
Carrying value	212,473	40,241	252,714
Year ended 31 December 2019			
As at 1 January 2019	212,473	40,241	252,714
Additions	38,122	2,384	40,506
Amortisation charge	(28,287)	(4,947)	(33,234)
As at 31 December 2019	222,308	37,678	259,986
As at 31 December 2019			
Cost	406,964	83,824	490,788
Accumulated amortisation	(184,656)	(46,146)	(230,802)
Carrying value	222,308	37,678	259,986

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11. INVENTORIES

	As at 31 December 2019	2018
Project materials, spare parts and other materials	478,679	531,476
Project-in-progress	286,817	242,883
	765,496	774,359

Movements of provision for inventory obsolescence during the year are analysed as follows:

	2019	2018
As at 1 January	(135,510)	(119,157)
Addition	(36,989)	(16,353)
Write-off	89,267	-
As at 31 December	(83,232)	(135,510)

12. TRADE AND NOTES RECEIVABLES

	As at 31 December 2019	2018
Trade receivables, net (a)		
- contracts with customers (b)	1,944,361	1,896,066
- lease receivables	75,671	-
	2,020,032	1,896,066
Notes receivable (f)	180,215	51,964
	2,200,247	1,948,030

Notes:

(a) Ageing analysis of carrying value of trade receivables at the reporting date was as follows:

	As at 31 December 2019	2018
1 - 6 months	1,233,147	1,242,571
6 months - 1 year	362,996	427,329
1 - 2 years	390,047	198,697
2 - 3 years	33,842	27,469
	2,020,032	1,896,066

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12. TRADE AND NOTES RECEIVABLES *(Continued)*

Notes: *(Continued)*

- (b) As at 31 December 2019 and 31 December 2018, trade receivables from contracts with customers amounted to RMB1,944,361,000 and RMB1,896,066,000 respectively.
- (c) Most of the Group's past-due trade receivables were those receivables aged over one year. As at 31 December 2019, included in the Group's trade receivables balance are debtors with aggregate carrying amount of RMB423,889,000 (31 December 2018: RMB226,166,000) which are past due but not considered as in default as at the reporting date because the management considered such long ageing items were receivables from customers with good cooperation and would be collected subsequently.
- (d) Most of the trade receivables are with credit terms of one year or less. The maximum exposure to credit risk at the reporting date is the carrying value of the trade receivables.

As at 31 December 2019, trade receivables of RMB265,986,000 (31 December 2018: RMB357,123,000) were pledged as security for short-term borrowings of RMB128,263,000 (31 December 2018: RMB268,235,000) (Note 18(b)).

As at 31 December 2019, trade receivables of RMB282,420,000 (31 December 2018: Nil) were pledged as security for long-term borrowings of RMB99,217,000 (31 December 2018: Nil) (Note 18(a)).

- (e) Movements of impairment of trade receivables are as follows:

	2019	2018
As at 1 January	(122,120)	(63,664)
Addition	(62,933)	(65,645)
Reversal	-	7,189
As at 31 December	(185,053)	(122,120)

Details of impairment assessment of trade receivables and notes receivable for the year ended 31 December 2019 and 2018 are set out in Note 35.2(b)(i) and Note 35.2(b)(iii) respectively.

- (f) As at 31 December 2019, total notes received amounting to RMB180,215,000 (31 December 2018: RMB51,964,000) as settlement of corresponding trade receivables. As at 31 December 2019 and 2018, notes receivable are all bank acceptance bills with maturity dates within 1 year.
- (g) Trade and notes receivables were denominated in the following currencies:

	As at 31 December 2019	2018
RMB	1,071,422	755,673
United States dollar ("US\$")	975,246	978,961
Others	153,579	213,396
	2,200,247	1,948,030

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13. PREPAYMENTS AND OTHER RECEIVABLES

	As at 31 December	
	2019	2018
Current		
Advances to suppliers	262,148	130,809
Other receivables	375,200	291,580
Value-added tax recoverable	10,700	15,569
	648,048	437,958
Non-current		
Value-added tax recoverable	30,051	35,620
Advances to engineering equipment suppliers	112,145	63,690
Other receivables (Note 33)	13,500	13,500
	155,696	112,810

Ageing analysis of the current portion of prepayments and other receivables at the reporting date was disclosed as follows:

	As at 31 December	
	2019	2018
1 – 6 months	401,411	284,845
6 months – 1 year	93,888	24,223
1 – 2 years	81,388	86,206
2 – 3 years	72,913	30,730
Over 3 years	44,079	32,825
	693,679	458,829
Less: allowance for impairment (a)	(45,631)	(20,871)
Prepayments and other receivables, net	648,048	437,958

Note:

(a) Movements of allowance for impairment are as follows:

	2019	2018
As at 1 January	(20,871)	(4,126)
Addition	(24,760)	(16,745)
As at 31 December	(45,631)	(20,871)

Details of impairment assessment of other receivables for the year ended 31 December 2019 and 2018 are set out in Note 35.2(b)(ii).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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14. CASH AND BANK

	As at 31 December 2019	2018
Restricted bank deposits (a)	368,730	330,948
Cash and cash equivalents		
- Cash on hand	19,743	8,680
- Deposits in bank	2,403,131	677,956
	2,791,604	1,017,584

Notes:

(a) As at 31 December 2019, bank deposits amounting to RMB358,470,000 (31 December 2018: RMB330,948,000) were held as securities for letter of guarantee and issuance of notes payable, and bank deposits amounting to RMB10,260,000 (31 December 2018: Nil) were held as securities for securing short-term bank borrowings (Note 18(b)). The restricted bank deposits carried a fixed interest rate at 0.35% per annum as at 31 December 2019 (2018: 0.35% per annum).

(b) Cash and bank were denominated in the following currencies:

	As at 31 December 2019	2018
RMB	750,915	486,999
US\$	1,980,611	467,522
Hong Kong dollar ("HK\$")	20,392	13,132
Others	39,686	49,931
	2,791,604	1,017,584

(c) As at 31 December 2019, cash and cash equivalents were bank deposits mainly bearing market interest rate at 0.35% per annum (31 December 2018: 0.35% per annum).

(d) Details of impairment assessment of restricted bank deposits and cash and cash equivalents for the year ended 31 December 2019 and 2018 are set out in Note 35.2(b)(iii).

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15. SHARE CAPITAL AND SHARE OPTIONS

	Number of shares issued and fully paid of HK\$0.1 each (thousands)	Share capital	
		HK\$' 000	RMB' 000
Ordinary shares issued and fully paid:			
As at 1 January 2018	2,660,234	266,023	246,271
Issue of new shares (ii)	334,225	33,423	28,936
Exercise of share options (i)	8,464	846	752
As at 31 December 2018	3,002,923	300,292	275,959
Exercise of share options (i)	3,640	364	314
As at 31 December 2019	3,006,563	300,656	276,273

Notes:

(i) Share options

During the year ended 31 December 2019, options to subscribe for 95,000,000 shares at the exercise price of HK\$0.790 (2018: 70,000,000 shares at the exercise price of HK\$1.020) have been conditionally granted to three independent non-executive directors, other executive directors and certain key employees. 2,100,000 shares granted to independent non-executive directors have a 2-year vesting period, 50% each exercisable per year and the other 92,900,000 shares have a 3-year vesting period, 33.33% each exercisable per year, on the premises of achieving the performance conditions of the Group set out in the share option scheme. The options have an option period of 6 years.

Movements in the number of share options outstanding and their related weighted average exercise prices are as follows:

	Average exercise price in HK\$ per share	Number of share options (thousands)
As at 1 January 2018		204,972
Granted (on 03 April 2018)	1.020	70,000
Forfeited	0.801	(2,340)
Exercised	0.751	(8,464)
As at 1 January 2019		264,168
Granted (on 07 Jan 2019)	0.790	95,000
Forfeited	0.874	(7,907)
Exercised	0.758	(3,640)
Expired	5.692	(1,434)
As at 31 December 2019		346,187

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15. SHARE CAPITAL AND SHARE OPTIONS *(Continued)*

Notes: *(Continued)*

(i) Share options *(Continued)*

Share options outstanding (in thousands) at the end of the year have the following expiry dates and exercise prices:

Expiry date	Exercise price HK\$ per share	Number of share options (thousands) As at 31 December 2019
23 February 2022	0.740	83,258
31 March 2022	0.800	6,300
1 December 2022	1.100	2,216
22 May 2023	0.810	95,200
2 April 2024	1.020	66,813
6 Jan 2025	0.790	92,400
		346,187

The exercise price of the granted options is equal to the highest of (i) the closing price of the shares of the Company in the daily quotation sheet issued by the Stock Exchange on the date of grant; (ii) the average closing price of the shares as stated in the daily quotation sheets issued by the Stock Exchange for the five business days immediately preceding the date of grant; and (iii) the par value of the shares. Options are conditional on the employee completing one to three years' service (the vesting period) and have a contractual option term of six years. The Group has no legal or constructive obligation to repurchase or settle the options in cash.

As of 31 December 2019, out of the 346,187,000 options (31 December 2018: 264,168,000 options), 150,497,000 options (31 December 2018: 96,702,000 options) were exercisable. Options exercised in 2019 resulted in 3,640,000 shares (31 December 2018: 8,464,000 shares) being issued at a weighted average price of HK\$0.758 (31 December 2018: HK\$0.751) each. The related weighted average share price at the time of exercise was HK\$1.066 per share in 2019 (2018: HK\$1.221).

The fair value of the options granted during the year ended 31 December 2019 was determined using the Binomial Option Pricing Model. The major assumptions used in the pricing model for options granted on 7 Jan 2019 were the exercise prices shown above and other parameters are shown below:

Parameters	Options granted in 2019	Options granted in 2018
Share price as of the valuation date (HK\$)	0.79	1.02
Expected dividend yield	-	-
Forfeiture rate	0.34%	0.50%
Exercise multiples	3.38-3.39	3.39-3.54
Maturity years	6	6
Risk free rate	1.79%	1.83%
Annualised volatility	59.54%	58.95%

The weighted average fair value of options granted during the year determined using the Binomial valuation model was HK\$0.422 per option (2018: HK\$0.540 per option). The volatility measured at the standard deviation of continuously compounded share returns is derived from historical volatility of the share price over the last 6 years.

The total expense recognised in the consolidated statement of profit or loss for the year ended 31 December 2019 for share options amounted to RMB29,167,000 (31 December 2018: RMB24,094,000), with a corresponding amount credited in capital reserve (Note 16).

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15. SHARE CAPITAL AND SHARE OPTIONS *(Continued)*

Notes: *(Continued)*

- (ii) On 22 December 2017, the Company, Anton Oilfield Services Company International Limited ("Anton International") and Anton Oilfield Services DMCC ("DMCC") entered into an agreement with China Oil HBP Science & Technology Co., Ltd. ("China Oil HBP") and Hong Kong Huihua Global Technology Limited ("Huihua"), a wholly-owned subsidiary of China Oil HBP, pursuant to which the Group will acquire from Huihua 40% of the issued share capital of DMCC for the consideration of RMB735,000,000. The consideration for the acquisition was settled as to RMB450,000,000 by cash and as to RMB285,000,000 by the issuance of an aggregate of 334,224,599 new shares of the Company to Huihua at the issue price of HK\$1.014 per share. The issuance of new shares was completed on 27 July 2018. The issuance shares represent approximately 12.54% of the then existing issued share capital of the Company and approximately 11.14% of the Company's then issued share capital as enlarged by the issuance, respectively. The new shares rank pari passu with other existing shares in all respects.

16. RESERVES

	Share premium	Capital reserve (d)	Statutory reserve (c)	Retained earnings	Other reserves	Total
As at 1 January 2018	813,243	395,229	76,900	597,373	360,260	2,243,005
Profit for the year	-	-	-	222,423	-	222,423
Net investment hedge (b)	-	-	-	-	(64,317)	(64,317)
Currency translation differences (a)	-	-	-	-	66,783	66,783
Issue of ordinary shares (Note 15 (ii))	256,064	-	-	-	-	256,064
Share option exercised	7,222	(2,838)	-	-	-	4,384
Share option scheme (Note 15 (i))	-	24,094	-	-	-	24,094
Acquisition of non-controlling interests	-	-	-	-	(382,521)	(382,521)
As at 31 December 2018	1,076,529	416,485	76,900	819,796	(19,795)	2,369,915
Balance at 1 January 2019	1,076,529	416,485	76,900	819,796	(19,795)	2,369,915
Profit for the year	-	-	-	268,583	-	268,583
Net investment hedge (b)	-	-	-	-	(30,239)	(30,239)
Currency translation differences (a)	-	-	-	-	16,859	16,859
Share option exercised	3,148	(1,461)	-	-	-	1,687
Share option scheme (Note 15 (i))	-	29,167	-	-	-	29,167
Dividends (Note 31)	(30,107)	-	-	-	-	(30,107)
As at 31 December 2019	1,049,570	444,191	76,900	1,088,379	(33,175)	2,625,865

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16. RESERVES (Continued)

Notes:

(a) Translation reserve

	2019	2018
Items that may be reclassified subsequently to profit or loss:		
At 1 January	83,853	17,070
Currency translation differences	16,859	66,783
At 31 December	100,712	83,853

Currency translation differences relating to the translation of the Group's foreign operations from their functional currencies to the Group's presentation currency are recognised directly in other comprehensive income and accumulated in the translation reserve which is shown in other reserves. Currency translation differences accumulated in the translation reserve are reclassified to profit or loss on the disposal/partial disposal of the foreign operations.

(b) Hedging reserve

	2019	2018
Items that may be reclassified subsequently to profit or loss:		
At 1 January	(118,425)	(54,108)
Net investment hedge	(30,239)	(64,317)
At 31 December	(148,664)	(118,425)

The net investment hedging reserve represents the cumulative effective portion of gains and losses arising on changes in exchange rate of hedging instruments entered into for net investment hedge. The cumulative gain and loss arising on changes in exchange rate of the hedging instrument that are recognised and accumulated under the heading of net investment hedging reserve which is further shown in other reserves will be reclassified to profit or loss on the disposal/partial disposal of the foreign operations.

During the year ended 31 December 2019, a proportion of the Group's US\$ denominated long-term bonds amounting to US\$265,889,000 (2018: US\$256,364,000) has been designated as hedging instrument for the US\$ denominated net investment in the Group's overseas subsidiaries. For the year ended 31 December 2019, foreign exchange translation loss of RMB30,239,000 (2018: loss of RMB64,317,000) on the hedging instrument was recognised in other comprehensive income as deduction in other reserves.

(c) Statutory reserve

Subsidiaries established in the PRC shall appropriate 10% of their annual statutory net profit (after offsetting any prior years' losses) to the statutory reserve fund account in accordance with the PRC Company Law and their articles of association. When the balance of such reserve fund reaches 50% of each entity's paid capital, any further appropriation is optional. The statutory reserve fund can be utilised to offset prior years' losses or increase capital after approval. However, except for offsetting prior years' losses, the statutory reserve fund must be maintained at a minimum of 25% of paid capital after such usage.

(d) Capital reserve

Capital reserve represents share-based payments reserve and capital injection before listing by shareholders. As at 31 December 2019, included in the balance of capital reserve, there is RMB208,729,000 (31 December 2018: RMB181,023,000) share-based payments reserve and RMB235,462,000 (31 December 2018: RMB235,462,000) capital injection before listing by shareholders.

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17. LONG-TERM BONDS

Issue date	Par value	Coupon rate	As at 31 December 2019	As at 31 December 2018	Effective interest rate
5 December 2017 (a)	US\$176.4 million	9.75%	1,247,484	1,234,145	8.31%
5 December 2017 (a)	US\$123.6 million	9.75%	856,725	831,756	11.62%
2 December 2019 (b)	US\$300.0 million	7.50%	2,040,659	-	8.91%
Subtotal			4,144,868	2,065,901	
Less: Current portion			(2,116,445)	(14,498)	
			2,028,423	2,051,403	

Notes:

- (a) The Company issued US\$300 million 9.75% senior notes at discount of par value on 5 December 2017 with direct transaction costs amounting to RMB39,989,000, in which US\$176.4 million were arranged to exchange the senior notes issued on 31 October 2013 in the amount of US\$172.2 million during the year ended 31 December 2017. The exchange is accounted as a non-substantial modification of financial liabilities. The notes mature in 3 years from the issue date at their nominal value. Interest is payable on a semi-annually basis. As at 31 December 2019, interest payable amounted to approximately RMB15.0 million (31 December 2018: RMB14.5 million).
- (b) The Company issued US\$300 million 7.50% senior notes at discount of par value on 2 December 2019 with direct transaction costs amounting to RMB45,359,000. The notes mature in 3 years from the issue date at their nominal value. Interest is payable on a semi-annually basis. As at 31 December 2019, interest payable amounted to approximately RMB12.2 million (31 December 2018: Nil).

18. BORROWINGS

	As at 31 December			
	2019 Amount	2019 Interest Rate	2018 Amount	2018 Interest Rate
Long-term borrowings				
- Secured				
- RMB denominated (a)	294,600	7.10%-9.70%	325,555	8.41%-9.70%
Less: Current portion	(92,174)		(82,214)	
	202,426		243,341	
Short-term bank borrowings				
- Unsecured				
- RMB denominated	80,406	5.44%-6.09%	248,393	5.66%-6.53%
- Secured				
- RMB denominated (b)	329,600	4.70%-6.79%	444,408	5.22%-7.50%
- USD denominated (b)	87,743	4.70%-4.77%	85,720	4.70%
Other short-term borrowings				
- Unsecured				
- RMB denominated (c)	-		100,671	5.66%
	497,749		879,192	

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18. BORROWINGS (Continued)

	As at 31 December	
	2019	2018
The carrying amounts of the above borrowings are repayable:		
- Within one year	589,923	961,406
- More than one year but not exceeding two years	202,426	89,915
- More than two years but not exceeding five years	-	153,426
	792,349	1,204,747
Less: Amount due for settlement within one year and shown under current liabilities	(589,923)	(961,406)
Amount due after one year	202,426	243,341

The exposure of the Group's borrowings are as follows:

	As at 31 December	
	2019	2018
Fixed-rate borrowings	546,873	509,152
Variable-rate borrowings	245,476	695,595
	792,349	1,204,747

The ranges of effective interest rates (which are also equal to contracted interest rates) on the Group's borrowings are as follows:

	Year ended 31 December	
	2019	2018
Effective interest rate:		
Fixed-rate borrowings	4.70%-7.10%	4.70%-7.50%
Variable-rate borrowings	6.09%-9.70%	5.22%-9.70%

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18. BORROWINGS (Continued)

Notes:

- (a) As at 31 December 2019, secured long-term borrowings of RMB146,341,000 (31 December 2018: RMB228,306,000) represented borrowings from China Railway Construction Financial Leasing Co., Ltd., a third party, which will mature in 2 years, and secured by the Group's equipment with a carrying value of RMB277,924,000 (31 December 2018: RMB319,311,000) (Note 6).

Secured long-term borrowings of RMB49,042,000 (31 December 2018: RMB97,249,000), represented borrowings from banks and secured by the Group's buildings with a carrying value of RMB63,362,000 (31 December 2018: RMB93,618,000) (Note 6) and right-of-use assets (leasehold lands) with a carrying value of RMB3,281,000 (Note 7) (31 December 2018: prepaid lease payments with carrying amount of RMB5,860,000) (Note 8), respectively.

Secured long-term borrowings of RMB99,217,000 (31 December 2018: Nil) represented borrowings from banks and secured by the Group's trade receivables amounting to RMB282,420,000 (31 December 2018: Nil) (Note 12(d)).

- (b) As at 31 December 2019, secured short-term bank borrowings of RMB100,741,000 (31 December 2018: RMB80,536,000) were guaranteed by Beijing Zhongguancun Sci-tech Guaranty Co., Ltd. (北京中關村科技融資擔保有限公司), a third party. Secured short-term bank borrowings of RMB128,263,000 (31 December 2018: RMB268,235,000) were secured by the Group's trade receivables amounting to RMB265,986,000 (31 December 2018: RMB357,123,000) (Note 12(d)). Secured US\$ denominated short-term bank borrowings of RMB87,743,000 (31 December 2018: RMB85,720,000) and secured RMB denominated short-term bank borrowings of RMB50,575,000 (31 December 2018: RMB95,637,000) were guaranteed by Mr. Luo Lin, the Company's ultimate controlling shareholder (Note 36(b)).

Secured short-term bank borrowings of RMB40,021,000 (31 December 2018: Nil) were secured by the Group's buildings with a carrying value of RMB46,815,000 (31 December 2018: Nil) (Note 6) and right-of-use assets (leasehold lands) with a carrying value of RMB2,423,000 (31 December 2018: Nil) (Note 7) respectively.

Secured short-term bank borrowing of RMB10,000,000 (31 December 2018: Nil) were secured by the bank deposits amounting to RMB10,260,000 (31 December 2018: Nil) (Note 14(a)).

- (c) As at 31 December 2018, other unsecured short-term borrowings represented a loan borrowed by Anton Oilfield Services (Group) Ltd. from Beijing Zhongguancun Sci-tech Guaranty Co., Ltd. (北京中關村科技融資擔保有限公司), a third party.
- (d) As at 31 December 2019, the undrawn bank borrowing facilities of the Group of approximately RMB706 million (31 December 2018: RMB583 million), with maturity dates up to 8 July 2022 (31 December 2018: 9 December 2019), were unsecured (31 December 2018: unsecured).

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19. LEASE LIABILITIES

	As at 31 December 2019
Lease liabilities payable:	
Within one year	45,834
One to two years	49,829
Two to five years	19,430
	115,093
Less: Amount due for settlement with 12 months shown under current liabilities	(45,834)
Amount due for settlement after 12 months shown under non-current liabilities	69,259

20. TRADE AND NOTES PAYABLES

	As at 31 December 2019	2018
Trade payables	546,945	481,391
Notes payable	410,461	232,700
	957,406	714,091

Ageing analysis of trade and notes payables at the reporting date was as follows:

	As at 31 December 2019	2018
Less than 1 year	790,866	596,564
1 - 2 years	77,348	43,527
2 - 3 years	30,371	34,465
Over 3 years	58,821	39,535
	957,406	714,091

Trade and notes payables were denominated in the following currencies:

	As at 31 December 2019	2018
RMB	868,702	607,052
US\$	80,105	80,536
Others	8,599	26,503
	957,406	714,091

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21. ACCRUALS AND OTHER PAYABLES

	As at 31 December 2019	2018
Payroll and welfare payables	28,125	33,406
Taxes other than income taxes payable	22,364	14,053
Payables to equipment vendors	220,353	226,969
Dividend payable	-	55,711
Others	133,686	125,139
	404,528	455,278

22. DEFERRED INCOME TAX

For the purpose of presentation in the consolidated statement of financial position, certain deferred income tax assets and liabilities have been offset. The following is the analysis of the deferred income tax balances for financial reporting purposes:

	As at 31 December 2019	2018
Deferred income tax assets	34,637	52,076
Deferred income tax liabilities	10,219	10,440
	24,418	41,636

Deferred tax assets:

	Taxable losses	Impairment provision of receivables and inventories	Unrealised profit	Total
As at 1 January 2018	54,474	6,280	2,989	63,743
(Debited)/credited to the consolidated statement of profit or loss	(23,169)	7,509	3,993	(11,667)
As at 31 December 2018	31,305	13,789	6,982	52,076
(Debited)/credited to the consolidated statement of profit or loss	(12,150)	1,693	(6,982)	(17,439)
As at 31 December 2019	19,155	15,482	-	34,637

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22. DEFERRED INCOME TAX *(Continued)*

Deferred income tax assets are recognised to the extent that the realisation of the related tax benefit through future taxable profits is probable. As at 31 December 2019, the Group did not recognise deferred income tax assets of RMB110,976,000 (31 December 2018: RMB85,272,000) in respect of accumulated tax losses and temporary difference amounting to RMB395,894,000 (31 December 2018: RMB298,947,000) that can be carried forward against taxable income as the Group is going to dissolve the subsidiaries or the losses are considered as unrecoverable in 5 years.

Deferred tax liabilities:

	Fair value adjustment from acquisition of subsidiaries	Withholding tax on investment income	Total
As at 1 January 2018	6,944	3,717	10,661
Credited to the consolidated statement of profit or loss	(221)	-	(221)
As at 31 December 2018	6,723	3,717	10,440
Credited to the consolidated statement of profit or loss	(221)	-	(221)
As at 31 December 2019	6,502	3,717	10,219

As at 31 December 2019, deferred income tax liabilities of RMB39,604,000 (31 December 2018: RMB33,515,000) have not been recognised for the withholding tax relating to the unremitted earnings of subsidiaries. Deferred income tax liability is not recognised where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

23. REVENUE

	Year ended 31 December	
	2019	2018
Sales of goods	163,157	238,636
Provision of services	3,165,682	2,636,561
Rental	260,658	60,691
	3,589,497	2,935,888

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23. REVENUE (Continued)

(i) Disaggregation of revenue

Segments	For the year ended 31 December 2019		
	Drilling technology	Well completion	Oil production services
Types of goods or service			
Sales of goods	44,151	90,858	28,148
Provision of services	1,321,231	743,333	1,101,118
Total	1,365,382	834,191	1,129,266
Geographical markets			
PRC	750,566	519,826	152,315
Iraq	336,910	212,894	869,951
Other countries	277,906	101,471	107,000
Total	1,365,382	834,191	1,129,266
Timing of revenue recognition			
A point in time	1,365,382	834,191	310,954
Over time	-	-	818,312
Total	1,365,382	834,191	1,129,266

Set out below is the reconciliation of the revenue from contracts with customers with segment information.

	For the year ended 31 December 2019		
	Drilling technology	Well completion	Oil production services
Revenue disclosed in segment information			
External customers	1,624,203	836,028	1,129,266
Inter-segment	978,903	614,249	731,062
Total	2,603,106	1,450,277	1,860,328
Adjustments and eliminations	(978,903)	(614,249)	(731,062)
Rental income	(258,821)	(1,837)	-
Revenue from contracts with customers	1,365,382	834,191	1,129,266

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23. REVENUE (Continued)

(i) Disaggregation of revenue (Continued)

Segments	For the year ended 31 December 2018		
	Drilling technology	Well completion	Oil production services
Types of goods or service			
Sales of goods	90,374	115,515	32,747
Provision of services	1,190,277	624,813	821,471
Total	1,280,651	740,328	854,218
Geographical markets			
PRC	529,454	378,773	114,772
Iraq	309,772	202,626	658,164
Other countries	441,425	158,929	81,282
Total	1,280,651	740,328	854,218
Timing of revenue recognition			
A point in time	1,280,651	740,328	307,529
Over time	-	-	546,689
Total	1,280,651	740,328	854,218

Set out below is the reconciliation of the revenue from contracts with customers with segment information.

	For the year ended 31 December 2018		
	Drilling technology	Well completion	Oil production services
Revenue disclosed in segment information			
External customers	1,339,850	741,820	854,218
Inter-segment	1,421,758	901,348	241,938
Total	2,761,608	1,643,168	1,096,156
Inter-segment eliminations	(1,421,758)	(901,348)	(241,938)
Rental income	(59,199)	(1,492)	-
Revenue from contracts with customers	1,280,651	740,328	854,218

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23. REVENUE *(Continued)*

(ii) Performance obligations for contracts with customers

a. Provision of oilfield technology services (excluding operation and maintenance services)

The Group provides oilfield technology services (excluding operation and maintenance services) which include drilling technology, well completion and part of oil production services to customers like large multinational and state-owned oil companies.

Such services are each recognised as a performance obligation in different stages of a contract, with transaction price allocated to the different and separate performance obligations on a relative stand-alone price basis. Revenue will be recognised for each of these performance obligations when control over the corresponding services is transferred to the customer. Since the services are expected to meet certain specified technological criteria which are not simply based on size and weight characteristics, the Group cannot objectively determine that the services provided to the customer are in accordance with the agreed-upon specifications in the contract and then the Group would not be able to conclude that the customer has obtained control until it receives the customer's acceptance. Therefore, the revenue from oilfield technology services (excluding operation and maintenance services) is recognised at a point when the customer acceptance is concluded.

The Group's contracts for such services include the Group's entitlement to payment which requires customer acceptance.

The contract assets (retention money receivables from large multinational and state-owned oil companies), net of contract liabilities related to the same contract, primarily relate to the Group's right to consideration for services completed and not billed because the rights are conditioned on the Group's achieving specified milestones as stipulated in the contracts at the reporting date. The contract assets are transferred to trade receivables when the rights become unconditional. The Group typically agrees to a one-year retention period for 5% of the transaction price for certain customers like some large multinational and state-owned oil companies. This amount is included in contract assets until the end of the retention period as the Group's entitlement to this final payment is conditional on achieving specified milestones as stipulated in the contracts. The Group classifies these contract assets as current because the Group expects to realise them in its normal operating cycle. The Group typically bills the retention money receivables in one year after the completion of relevant services when trade receivables will be recognised.

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23. REVENUE (Continued)

(ii) Performance obligations for contracts with customers (Continued)

b. Provision of oilfield-related operation and maintenance services

The Group provides oilfield-related operation and maintenance services which include oil production services to customers.

Such services are recognised as a performance obligation satisfied over time as the customer simultaneously receives and consumes the benefits during the course of operation and maintenance services provided by the Group based on the fact that these services are routine with no complicated processes involved and customer acceptance is a formality. Revenue from these services is recognised based on hours and unit labour cost using output method.

Payment of the transaction price will be settled monthly over the period of service.

c. Sales of oilfield-related goods

The Group sells oilfield-related goods, such as drilling tools, tubing and casing to customers.

Since the goods are not self-manufactured and the Group is not entitled to payment until the customer receives and accepts the goods, revenue will be recognised at a point when control over the corresponding goods is transferred to the customer.

The Group's contracts for such sales of goods include payment in the normal credit term granted to customers.

(iii) Transaction price allocated to the remaining performance obligation for contracts with customers

The transaction price allocated to the remaining performance obligations (unsatisfied or partially unsatisfied) as at 31 December 2019 and the expected timing of recognising revenue are as follows:

	PRC	Iraq	Other countries
Within one year	1,705,460	1,634,561	231,619
More than one year but not more than two years	208,903	959,039	155,709
More than two years	60,423	681,998	158,685
	1,974,786	3,275,598	546,013

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23. REVENUE (Continued)

(iii) Transaction price allocated to the remaining performance obligation for contracts with customers (Continued)

The transaction price allocated to the remaining performance obligations (unsatisfied or partially unsatisfied) as at 31 December 2018 and the expected timing of recognising revenue are as follows:

	PRC	Iraq	Other countries
Within one year	488,499	1,391,645	152,434
More than one year but not more than two years	406,347	1,233,367	44,500
More than two years	118,594	484,798	30,146
	1,013,440	3,109,810	227,080

(iv) Leases

	Year ended 31 December 2019
For operating leases:	
Lease payments that are fixed or depend on an index or a rate	260,658
Total revenue arising from leases	260,658
	Year ended 31 December 2018
For operating leases:	
Operating lease income - equipment	60,691
Total revenue arising from leases	60,691

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24. EXPENSE BY NATURE

Operating profit is arrived at after charging the following:

	Year ended 31 December	
	2019	2018
Materials and services purchased	1,010,288	835,697
Staff costs	768,784	576,029
In which:		
- Salaries and other staff expenses	739,617	551,935
- Share-based compensation (Note 15(i))	29,167	24,094
Depreciation	341,805	278,817
In which:		
- Property, plant and equipment (Note 6)	301,429	278,817
- Right-of-use assets (Note 7)	40,376	-
Less: Capitalised in inventories (Note 6) (Note 7)	(21,854)	(17,240)
	319,951	261,577
Amortisation	36,226	39,434
Less: Capitalised in inventories	(3,591)	(2,992)
	32,635	36,442
In which:		
- Cost of sales	26,490	29,030
- Administrative expenses	160	2,006
- Selling expenses	18	-
- Research and development expenses	5,967	5,406
Sales tax and surcharges	13,973	10,346
Auditor's remuneration		
- Audit and related services	4,600	4,200
- Other services	300	200
Other operating expenses	719,560	579,066
In which:		
- Impairment of receivables	87,693	75,201
- Impairment of inventories	36,989	16,353

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25. OTHER GAINS, NET

	Year ended 31 December	
	2019	2018
Government grants and subsidies (a)	1,283	3,155
Loss on disposal of property, plant and equipment	(973)	(688)
Others	(134)	9,465
	176	11,932

Note:

(a) Government grants and subsidies of RMB1,283,000 (2018: RMB3,155,000) were received in the current year towards awarding of research and development expenditures.

26. IMPAIRMENT LOSSES UNDER EXPECTED CREDIT LOSS MODEL, NET OF REVERSAL

	Year ended 31 December	
	2019	2018
Impairment losses recognised on:		
- Trade receivables - goods and services	62,933	58,456
- Other receivables	24,760	16,745
	87,693	75,201

Details of impairment assessment for the year ended 31 December 2019 and 2018 are set out in Note 35.2(b).

27. FINANCE COSTS, NET

	Year ended 31 December	
	2019	2018
Interest expenses		
- on bank borrowings	(77,667)	(83,977)
- on bonds	(219,534)	(200,755)
- on lease liabilities	(7,477)	-
Exchange gain, net	19,334	1,401
Others	(13,156)	(16,688)
Finance expenses	(298,500)	(300,019)
Interest income	3,367	2,565
	(295,133)	(297,454)

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28. STAFF COSTS

	Year ended 31 December	
	2019	2018
Wages, salaries and allowances	652,246	483,983
Housing subsidies (a)	12,888	11,960
Contributions to pension plans (b)	23,705	23,695
Share option costs		
– equity settled share-based payment (Note 15(i))	29,167	24,094
Welfare and other expenses	50,778	32,297
	768,784	576,029

Notes:

- (a) Housing subsidies mainly include the Group's contributions to government-sponsored housing funds, at rates ranging from 5% to 12% of the employees' salaries for the Group's Chinese employees in the PRC.
- (b) This represents the Group's contributions to defined contribution plans or schemes organised by relevant government authorities or authorised entities in accordance with the requirements in the locations where the Group operates.

The Group has no other material obligations for the payment of pensions and other post-retirement benefits of employees or retirees other than those disclosed above.

- (c) Five highest paid individuals

The five individuals whose emoluments were the highest in the Group for the year included three (2018: two) Directors whose emoluments are reflected in the analysis shown in Note 40. The emolument payable to the other two (2018: three) individuals during the year were as follows:

	Year ended 31 December	
	2019	2018
Basic salaries, housing allowances, other allowances and benefits-in-kind	3,114	6,057
Contributions to pension schemes	100	166
	3,214	6,223

The emoluments fell within the following bands:

	Number of individuals	
	2019	2018
Emoluments bands		
HK\$1,500,001 – HK\$2,000,000	2	-
HK\$2,000,001 – HK\$2,500,000	-	2
HK\$2,500,001 – HK\$3,000,000	-	1
	2	3

- (d) During the years ended 31 December 2019 and 2018, no Directors or the five highest paid individuals of the Group waived any emoluments and no emoluments were paid by the Group to any of the Directors or the five highest paid individuals of the Group as an inducement to join or upon joining the Group or as compensation for loss of office.

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29. INCOME TAX EXPENSE

	Year ended 31 December	
	2019	2018
Current income tax		
- PRC enterprise income tax	20,681	2,297
- Iraq corporate income tax	98,289	80,562
- Others	6,603	2,138
Deferred income tax (Note 22)	17,218	11,446
	142,791	96,443

The Company is incorporated in the Cayman Islands as an exempted company with limited liability under the Companies Law of the Cayman Islands and, accordingly, is exempted from payment of Cayman Islands income tax.

PRC enterprise income tax ("EIT") is provided on the basis of estimated taxable profits of PRC established subsidiaries at applicable tax rate of 25% in 2019 (2018: 25%), based on the relevant PRC tax laws and regulations. Certain subsidiaries have been granted a preferential rate of 15% as high technology enterprises or as enterprises set up in western area of the PRC.

The corporate income tax of Iraq entities is levied at the higher of 7% on the total turnover, or 35% on the net taxable profit.

The taxation of the Group's profit before income tax differs from the theoretical amount that would arise using applicable tax rates of the Group companies as follows:

	Year ended 31 December	
	2019	2018
Profit before income tax	425,211	347,164
Tax calculated at applicable tax rates	123,614	77,857
Income not subject to taxation	(3,593)	(62)
Expenses not deductible for taxation purposes	1,283	6,048
Additional deduction of research and development expense	(4,468)	(1,568)
Tax losses and deductible temporary difference for which no deferred income tax was recognised	32,109	21,018
Utilisation of unused deductible tax losses previously not recognised as deferred income tax	(6,405)	(6,390)
Effect of share of profit of a joint venture	(114)	(53)
Others	365	(407)
	142,791	96,443

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30. EARNINGS PER SHARE

(a) Basic

Basic earnings per share is calculated by dividing the profit attributable to the owners of the Company by the weighted average number of ordinary shares in issue during the year.

	Year ended 31 December	
	2019	2018
Profit attributable to the owners of the Company	268,583	222,423
Weighted average number of ordinary shares in issue (thousands of shares)	3,005,255	2,807,453
Basic earnings per share (expressed in RMB per share)	0.0894	0.0792

(b) Diluted

Diluted earnings per share is calculated adjusting the weighted average number of ordinary shares outstanding to assume conversion of all dilutive potential ordinary shares. For the year ended 31 December 2019 and 2018, the only dilutive factor of the Company was the outstanding share options.

	Year ended 31 December	
	2019	2018
Profit attributable to the owners of the Company	268,583	222,423
Weighted average number of ordinary shares in issue (thousands of shares)	3,005,255	2,807,453
Adjustments for assumed conversion of share options (thousands of shares)	17,260	34,154
Weighted average number of ordinary shares for computation of diluted earnings per share (thousands of shares)	3,022,515	2,841,607
Diluted earnings per share (expressed in RMB per share)	0.0889	0.0783

31. DIVIDENDS

During the current year, a final dividend of RMB1 cent per share, with the aggregate amount of RMB30,107,000, in respect of the year ended 31 December 2018 was declared and paid to the owners of the Company (2018: Nil).

The Directors have determined that no dividend will be proposed in respect of the current year (Year ended 31 December 2018: RMB30,107,000).

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32. NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

(a) Reconciliation of profit for the year to net cash inflows generated from operations:

	Year ended 31 December	
	2019	2018
Profit for the year	282,420	250,721
Adjustments for:		
Property, plant and equipment		
– Depreciation charge	281,727	261,577
– Loss on disposals	973	688
Depreciation of right-of-use assets	38,224	–
Amortisation of prepaid lease payments	–	1,932
Amortisation of intangible assets	32,635	34,510
Amortisation of long-term deferred and prepaid expenses	–	5,694
Addition of impairment of receivables	87,693	75,201
Addition of impairment of inventories	36,989	16,353
Charge of share option scheme	29,167	24,094
Share of profit of a joint venture	(762)	(355)
Net foreign exchange gain	(19,334)	(1,401)
Interest income	(3,367)	(2,565)
Interest expenses	304,678	284,732
Income tax expense	142,791	96,443
Operating cash flows before movements in working capital	1,213,834	1,047,624
Changes in working capital:		
– Inventories	(22,913)	(173,247)
– Trade and notes receivables	(289,604)	(345,468)
– Contract assets	(16,940)	(58,579)
– Prepayments and other receivables and value-added tax recoverable	(230,099)	2,797
– Trade and notes payables	70,099	(89,725)
– Accruals and other payables	12,497	4,666
– Contract liabilities	(24,838)	38,814
– Restricted bank deposits	(27,522)	54,187
Net cash inflows from operations	684,514	481,069

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33. RECONCILIATION OF ASSETS AND LIABILITIES ARISING FROM FINANCING ACTIVITIES

The table below details changes in the Group's assets and liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the Group's consolidated statement of cash flows as cash flows from financing activities.

	Borrowings Note 18	Long-term bonds Note 17	Accruals and other payables Note (i)	Prepayments and other receivables Note 13	Restricted bank deposits Note 14(a)	Lease liabilities Note 19	Total
As at 31 December 2018	1,204,747	2,065,901	56,631	(13,500)	-	-	3,313,779
Adjustment upon application of IFRS 16 (Note 2.1)	-	-	-	-	-	28,463	28,463
As at 1 January 2019	1,204,747	2,065,901	56,631	(13,500)	-	28,463	3,342,242
Financing cash flows	(490,065)	1,841,207	(93,738)	-	(10,260)	(45,094)	1,202,050
Dividends (Note 31) (Note 37(b))	-	-	37,107	-	-	-	37,107
New leases entered (Note 7)	-	-	-	-	-	124,247	124,247
Currency translation differences	-	18,226	-	-	-	-	18,226
Interest expenses	77,667	219,534	-	-	-	7,477	304,678
As at 31 December 2019	792,349	4,144,868	-	(13,500)	(10,260)	115,093	5,028,550

	Borrowings	Long-term bonds	Accruals and other payables Note (i)	Prepayments and other receivables	Other non-current assets	Restricted bank deposits	Total
As at 1 January 2018	1,057,642	2,416,175	270,418	(14,000)	(299,229)	(30,000)	3,401,006
Financing cash flows	63,128	(650,453)	(78,665)	500	(165,191)	30,000	(800,681)
Acquisition of non-controlling Interests	-	-	920	-	465,191	-	466,111
Currency translation differences	-	99,424	-	-	(771)	-	98,653
Interest expenses	83,977	200,755	-	-	-	-	284,732
Other changes (Note ii)	-	-	(136,042)	-	-	-	(136,042)
As at 31 December 2018	1,204,747	2,065,901	56,631	(13,500)	-	-	3,313,779

Notes:

- (i) Included in the balance of accruals and other payables, dividend payable (Note 21), other payables in relation to acquisition of non-controlling interests and direct transaction costs of issuance of long-term bonds are liabilities arising from financing activities.
- (ii) Other changes mainly represent the non-cash transaction of decrease of those liabilities arising from financing activities. For detailed non-cash transaction information, please refer to Note (a) of the consolidated statement of cash flows.

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34. COMMITMENTS

(a) Capital commitments

Capital commitments related to investments in property, plant and equipment at the reporting date but not yet provided for in the consolidated statement of financial position were as follows:

	As at 31 December 2019	2018
Contracted but not provided for	71,142	20,887

(b) Operating lease commitments - where the Group as lessee

The Group leases various offices and warehouses under non-cancellable operating lease agreements.

The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

	As at 31 December 2018
No later than 1 year	17,511
1 to 5 years	21,662
	39,173

35. FINANCIAL RISK MANAGEMENT

35.1 Categories of financial instruments

	As at 31 December 2019	2018
Financial assets		
Amortised cost		
- Cash and cash equivalents	2,422,874	686,636
- Restricted bank deposits	368,730	330,948
- Included in trade and notes receivables	2,124,576	1,948,030
- Included in prepayments and other receivables	347,888	280,446
	5,264,068	3,246,060

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35. FINANCIAL RISK MANAGEMENT *(Continued)*

35.1 Categories of financial instruments *(Continued)*

	As at 31 December	
	2019	2018
Financial liabilities		
Amortised cost		
– Trade and notes payables	957,406	714,091
– Included in accruals and other payables	381,331	441,225
– Borrowings	792,349	1,204,747
– Long-term bonds	4,144,868	2,065,901
	6,275,954	4,425,964

35.2 Financial risk factors

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk and cash flow and fair value interest rate risk), credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The Group uses non-derivative financial instruments (part of US\$ denominated long-term bonds) (Note 16(b)) to hedge certain foreign currency risk exposure.

(a) Market risk

(i) Foreign exchange risk

The Group mainly operates in the PRC with most of the transactions denominated and settled in RMB, while the Group also has purchases from and sales to overseas parties. During the year ended 31 December 2019, the Group developed its businesses overseas with most of the transactions denominated and settled in US\$. Foreign exchange risk also arise from certain bank deposits, borrowings and long-term bonds denominated in US\$. The Group is exposed to foreign currency exchange risk primarily with respect to US\$.

As at 31 December 2019, if RMB had strengthened/weakened by 3% against the US\$ with all other variables held constant, profit after income tax for the year would have been RMB11,514,000 higher/lower and equity reserves would have been RMB1,623,000 higher/lower, mainly as a result of foreign exchange gains/losses on translation of US\$-denominated cash and bank, trade and other receivables, trade and other payables, borrowings, long-term bonds and net investment hedge of foreign operations.

As at 31 December 2018, if RMB had strengthened/weakened by 3% against the US\$ with all other variables held constant, profit after income tax for the year would have been RMB8,050,000 higher/lower and equity reserves would have been RMB19,369,000 higher/lower, mainly as a result of foreign exchange gains/losses on translation of US\$-denominated cash and bank, trade and other receivables, trade and other payables, borrowings, long-term bonds and net investment hedge of foreign operations.

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35. FINANCIAL RISK MANAGEMENT *(Continued)*

35.2 Financial risk factors *(Continued)*

(a) Market risk *(Continued)*

(ii) Cash flow and fair value interest rate risk

The Group's interest rate risk arises from long-term bonds, long-term borrowings and short-term borrowings. Borrowings obtained at variable rates expose the Group to cash flow interest rate risk which is partially offset by cash held at variable rates. Long-term bonds, long-term borrowings and lease liabilities obtained at fixed rates expose the Group to fair value interest rate risk.

Based on the balance of floating interest borrowings as at 31 December 2019, if interest rates on these borrowings for the year had been higher/lower by 100 basis points, profit before income tax for the year would have been RMB2,455,000 lower/higher.

Based on the balance of floating interest borrowings as at 31 December 2018, if interest rates on these borrowings for the year had been higher/lower by 100 basis points, profit before income tax for the year would have been RMB6,956,000 lower/higher.

(b) Credit risk and impairment assessment

As at 31 December 2019, the maximum exposure to credit risk of the Group is the carrying value of financial assets. The Group does not hold any collateral or other credit enhancements to cover its credit risks associated with its financial assets.

Trade receivables, contract assets and other receivables

The Group has policies in place to ensure that sales of products and services and other transactions are made to customers or counterparties with an appropriate credit history after internal approvals and follow-up action is taken to recover overdue debts. In addition, the Group performs impairment assessment under ECL model on trade receivables, contract assets and other receivables individually or based on provision matrix. In the regards, the Directors consider that the Group's credit risk is significantly reduced and are of the opinion that adequate provision for uncollectible receivables has been made in the consolidated financial statements.

A considerable portion of sales were made to several major oilfield operators of the PRC and their affiliates, which are state-owned entities with good credit reputation, therefore the trade receivables of the Group had concentration risk (Note 5).

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35. FINANCIAL RISK MANAGEMENT *(Continued)*

35.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

Notes receivable, restricted bank deposits and cash and cash equivalents

The credit risks on notes receivable, restricted bank deposits and cash equivalents are limited because the counterparties are banks with high credit ratings assigned by international credit-rating agencies. The Group performs impairment assessment under 12m ECL model on notes receivable, restricted bank deposits and cash and cash equivalents. The Directors does not expect any losses from non-performance by these counterparties.

Most of the Group's restricted bank deposits and cash and cash equivalents were placed with state-owned banks in the PRC and Hong Kong, the relevant credit risk is relatively low.

The tables below detail the credit risk exposures of the Group's financial assets (including trade receivables from goods and services, notes receivable, other receivables, restricted bank deposits and cash and cash equivalents), and other items (lease receivables and contract assets) which are subject to ECL assessment:

2019	Notes	External credit rating	Internal credit rating	12m or lifetime ECL	Gross carrying amount
Financial assets at amortised cost					
Trade receivables - goods and services	12	N/A	Note (i)	Lifetime ECL (provision matrix) Lifetime ECL (individually, not credit-impaired) Lifetime ECL (individually, credit-impaired)	669,758 1,386,775 72,881
Other receivables	13	N/A	Note (ii)	12m ECL Lifetime ECL (not credit-impaired) Lifetime ECL (credit-impaired)	276,339 75,273 41,907
Notes receivable	12	A1	N/A	12m ECL	180,215
Restricted bank deposits	14	A1	N/A	12m ECL	368,730
Cash and cash equivalents	14	A1	N/A	12m ECL	2,422,874
Other items					
Contract assets - goods and services	23(ii)(a)	N/A	Note (i)	Lifetime ECL (individually, not credit-impaired)	75,519
Lease receivables - operating leases	12	N/A	Note (i)	Lifetime ECL (individually, not credit-impaired)	75,671

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35. FINANCIAL RISK MANAGEMENT *(Continued)*

35.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

2018	Notes	External credit rating	Internal credit rating	12m or lifetime ECL	Gross carrying amount
Financial assets at amortised cost					
Trade receivables – goods and services	12	N/A	Note (i)	Lifetime ECL (provision matrix) Lifetime ECL (individually, not credit-impaired) Lifetime ECL (individually, credit-impaired)	824,040 1,137,671 56,475
Other receivables	13	N/A	Note (ii)	12m ECL Lifetime ECL (not credit-impaired) Lifetime ECL (credit-impaired)	192,000 94,927 14,390
Notes receivable	12	A1	N/A	12m ECL	51,964
Restricted bank deposits	14	A1	N/A	12m ECL	330,948
Cash and cash equivalents	14	A1	N/A	12m ECL	686,636
Other item					
Contract assets – goods and services	23(ii)(a)	N/A	Note (i)	Lifetime ECL (individually, not credit-impaired)	58,579

Notes:

(i) Trade receivables and contract assets from goods and services and lease receivables

For trade receivables and contract assets from goods and services and lease receivables, the Group has applied the simplified approach in IFRS 9 to measure the loss allowance at lifetime ECL. Except for debtors with significant outstanding balances or credit-impaired, the Group determines the expected credit losses on these items by using a provision matrix, grouped by past due status.

As part of the Group's credit risk management, the Group uses debtors' ageing to assess the impairment for part of its customers in relation to its oilfield technology services, oilfield related operation and maintenance services and sales of oilfield-related goods operation because these customers consist of a large number of small customers with common risk characteristics that are representative of the customers' abilities to pay all amounts due in accordance with the contractual terms. The following table provides information about the exposure to credit risk for trade receivables from goods and services from private and relatively small customers which are assessed based on provision matrix as at 31 December 2019 within lifetime ECL (not credit impaired). Trade receivables from goods and services with significant outstanding balances from large multinational and state-owned oil companies and credit impaired with gross carrying amounts of RMB1,386,775,000 (2018: RMB1,137,671,000) and RMB72,881,000 (2018: RMB56,475,000) respectively as at 31 December 2019 were assessed individually.

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35. FINANCIAL RISK MANAGEMENT *(Continued)*

35.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

Notes: *(Continued)*

- (i) Trade receivables and contract assets from goods and services and lease receivables *(Continued)*

Trade receivables from goods and services from private and relatively small customers

31/12/2019

	Average loss rate	Gross carrying amount	Impairment loss allowance
Current (not past due)	4.18%	461,256	19,286
Within 1 year past due	22.04%	138,892	30,615
1-2 years past due	85.61%	69,610	59,595
		669,758	109,496

31/12/2018

	Average loss rate	Gross carrying amount	Impairment loss allowance
Current (not past due)	4.28%	650,492	27,815
Within 1 year past due	11.46%	152,554	17,477
1-2 years past due	77.00%	10,821	8,332
More than 2 years past due	100.00%	10,173	10,173
		824,040	63,797

The estimated loss rates are estimated based on historical observed default rates over the expected life of the debtors and are adjusted for forward-looking information that is available without undue cost or effort. The grouping is regularly reviewed by management to ensure relevant information about specific debtors is updated.

During the year ended 31 December 2019, the Group provided RMB62,105,000 (2018: RMB63,797,000) impairment allowance for trade receivables from goods and services from private and relatively small customers based on the provision matrix. Impairment allowance of RMB828,000 (2018: RMB1,848,000) and impairment reversal of RMB Nil (2018: RMB7,189,000) were made on trade receivables from goods and services with significant balances from large multinational and state-owned oil companies and credit impaired debtors respectively.

For contract assets (the retention money receivables) and lease receivables which are arising from large multinational and state-owned oil companies, the Group performed impairment assessment and conclude that the probability of defaults of the counterparties are insignificant and accordingly, no allowance for credit losses is provided.

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35. FINANCIAL RISK MANAGEMENT *(Continued)*

35.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

Notes: *(Continued)*

- (i) Trade receivables and contract assets from goods and services and lease receivables *(Continued)*

The following table shows the movements in lifetime ECL that has been recognised for trade receivables from goods and services under the simplified approach:

	Lifetime ECL (not credit- impaired)	Lifetime ECL (credit- impaired)	Total
As at 1 January 2018	-	63,664	63,664
Changes due to financial instruments recognised as at 1 January 2018:			
- Impairment losses recognised	36,380	-	36,380
- Impairment losses reversed	-	(7,189)	(7,189)
New originated or purchased	29,265	-	29,265
As at 31 December 2018	65,645	56,475	122,120
Changes due to financial instruments recognised as at 1 January 2019:			
- Impairment losses recognised	42,483	-	42,483
- Transfer to credit-impaired	(16,406)	16,406	-
New originated or purchased	20,450	-	20,450
As at 31 December 2019	112,172	72,881	185,053

Changes in the loss allowance for trade receivables from goods and services are mainly due to impairment losses recognised under lifetime ECL and trade debtors with a gross carrying amount of RMB16,406,000 (2018: Nil) defaulted and transferred to credit-impaired.

The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the debtor has been placed under liquidation or has entered into bankruptcy proceedings.

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35. FINANCIAL RISK MANAGEMENT *(Continued)*

35.2 Financial risk factors *(Continued)*

(b) Credit risk and impairment assessment *(Continued)*

Notes: *(Continued)*

(ii) Other receivables

For the purposes of internal credit risk management, the Group uses past due information to assess whether credit risk has increased significantly since initial recognition.

	Past due	Not past due/ No fixed repayment terms	Total
31/12/2019			
Other receivables	41,907	351,612	393,519
31/12/2018			
Other receivables	29,860	271,457	301,317

The following tables show reconciliation of loss allowances that has been recognised for other receivables:

	12m ECL	Lifetime ECL (not credit- impaired)	Lifetime ECL (credit- impaired)	Total
As at 1 January 2018	-	-	4,126	4,126
Changes due to financial instruments recognised as at 1 January 2018:				
- Impairment losses recognised	-	6,481	10,264	16,745
New originated or purchased	-	-	-	-
As at 31 December 2018	-	6,481	14,390	20,871
Changes due to financial instruments recognised as at 1 January 2019:				
- Impairment losses recognised	-	-	24,760	24,760
- Transfer to credit-impaired	-	(2,757)	2,757	-
New originated or purchased	-	-	-	-
As at 31 December 2019	-	3,724	41,907	45,631

Changes in the loss allowance for other receivables are mainly due to debtors with a gross carrying amount of RMB24,760,000 (2018: RMB10,264,000) defaulted and being credit-impaired under lifetime ECL.

(iii) Notes receivable, restricted bank deposits and cash and cash equivalents

At the end of the reporting period, the Directors have performed impairment assessment under 12m ECL model for notes receivable, restricted bank deposit, and cash and cash equivalents, and concluded that there has been no significant increase in credit risk since initial recognition. Since the counterparties are banks with high credit ratings assigned by international credit-rating agencies, the probability of defaults of the counterparties are insignificant and accordingly, no allowance for credit losses is provided for these financial assets.

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35. FINANCIAL RISK MANAGEMENT (Continued)

35.2 Financial risk factors (Continued)

(c) Liquidity risk

The liquidity risk of the Group is controlled by maintaining sufficient cash and cash equivalents, which is generated primarily from operating and financing activities.

The table below analyses the Group's financial liabilities that will be settled into relevant maturity groupings based on the remaining period at the end of the financial period to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

31/12/2019

	Weighted average interest rate	On demand or less than 1 year	1-5 years	Total undiscounted cash flows	Carrying amount
Non-derivative financial liabilities					
Trade and notes payables	-	957,406	-	957,406	957,406
Included in accruals and other payables	-	381,331	-	381,331	381,331
Lease liabilities	8.700%	48,964	71,753	120,717	115,093
Short-term borrowings	5.825%	511,740	-	511,740	497,749
Long-term borrowings	8.609%	112,090	211,745	323,835	294,600
Long-term bonds	9.288%	2,481,078	2,406,789	4,887,867	4,144,868
		4,492,609	2,690,287	7,182,896	6,391,047

31/12/2018

	Weighted average interest rate	On demand or less than 1 year	1-5 years	Total undiscounted cash flows	Carrying amount
Non-derivative financial liabilities					
Trade and notes payables	-	714,091	-	714,091	714,091
Included in accruals and other payables	-	441,225	-	441,225	441,225
Short-term borrowings	5.740%	903,207	-	903,207	879,192
Long-term borrowings	9.315%	108,539	259,989	368,528	325,555
Long-term bonds	9.643%	215,247	2,259,709	2,474,956	2,065,901
		2,382,309	2,519,698	4,902,007	4,425,964

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35. FINANCIAL RISK MANAGEMENT *(Continued)*

35.3 Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The Group monitors capital on the basis of the gearing ratio. This ratio is calculated as total borrowings divided by total capital. Total borrowings include borrowings, bonds, lease liabilities and trade and notes payables, as shown in the consolidated statement of financial position. Total capital is calculated as equity, as shown in the consolidated statement of financial position, plus total borrowings.

The gearing ratios at 31 December 2019 and 2018 were as follows:

	As at 31 December 2019	2018
Total borrowings	6,009,716	3,984,739
Total equity	2,957,663	2,694,562
Total capital	8,967,379	6,679,301
Gearing ratio	67%	60%

35.4 Fair value estimation

The carrying amounts of long-term borrowings and long-term bonds approximated their fair values as the fluctuation of comparable interest rates with similar terms is relatively low.

Financial liabilities

As at 31 December 2019	Carrying value	Fair value
Long-term borrowings (non-current)	99,217	96,143
Long-term bonds (non-current)	2,028,423	2,041,349
	2,127,640	2,137,492

As at 31 December 2018	Carrying value	Fair value
Long-term borrowings (non-current)	–	–
Long-term bonds (non-current)	2,051,403	2,083,529
	2,051,403	2,083,529

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36. RELATED PARTY TRANSACTIONS

Parties are considered to be related if one party has the ability, directly or indirectly, control the other party or exercise significant influence over the other party in making financial and operation decisions. Parties are also considered to be related if they are subject to common control. Members of key management of the Group are also considered as related parties.

(a) The following party is related party of the Group during the year ended 31 December 2019:

Name of related party	Nature of relationship
Mr. Luo Lin	The ultimate controlling shareholder of the Company

(b) Short-term bank borrowings guaranteed by related party

	As at 31 December 2019	2018
Short-term borrowings		
Mr. Luo Lin (Note 18(b))	138,318	181,357

(c) Notes payable guaranteed by related party

	As at 31 December 2019	2018
Notes payable		
Mr. Luo Lin	50,000	-

(d) Key management compensation

	Year ended 31 December 2019	2018
Salaries and other short-term employee benefits	13,876	17,623
Pension scheme	350	400
Share-based payments	5,830	5,235
	20,056	23,258

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37. SUBSIDIARIES

(a) The following is a list of principal subsidiaries in which the Company directly or indirectly holds equity interests as at 31 December 2019 and 2018:

Company name	Place and date of incorporation/ establishment	Registered capital	Equity interest and voting power held by the Group	Principal activities
Directly held:				
Anton Oilfield Services Company Limited	Hong Kong, 17 August 2007	HK\$100	100%	Investment holding
Anton International	Hong Kong, 17 July 2008	HK\$100	100%	Investment holding
Indirectly held:				
Anton Oilfield Services (Group) Ltd. (安東石油技術(集團)有限公司)	Beijing, the PRC, 28 January 2002	US\$151,000,000	100%	Oilfield services and sales of equipment
Xinjiang Tong'ao Oilfield Services Co., Ltd. (新疆通奧油田技術服務有限公司, "Xinjiang Tong'ao")	Xinjiang Uygur Autonomous Region, the PRC, 21 February 2002	RMB51,000,000	100%	Oilfield services
Anton Tong'ao Technological Products Co., Limited (安東通奧科技產業股份有限公司, "Anton Tong'ao")	Xinjiang Uygur Autonomous Region, the PRC, 15 December 2005	RMB90,000,000	90%	Manufacturing of rod casing
Shandong Precede	Shandong Province, the PRC, 2 September 2008	RMB55,000,000	100%	Oilfield services and sales of equipment
Anton International FZE ("Anton Dubai")	The United Arab Emirates, 12 April 2009	US\$7,300,000	100%	Oilfield services

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37. SUBSIDIARIES (Continued)

(a) The following is a list of principal subsidiaries in which the Company directly or indirectly holds equity interests as at 31 December 2019 and 2018: (Continued)

Company name	Place and date of incorporation/ establishment	Registered capital	Equity interest and voting power held by the Group	Principal activities
Sichuan Anton Oil Gas Engineering and Technology Services Co., Ltd. (四川安東油氣工程技術服務有限公司, "Sichuan Anton")	Sichuan Province, the PRC, 14 July 2009	RMB400,000,000	100%	Oilfield services and sales of equipment
DMCC	The United Arab Emirates, 28 March 2011	US\$54,462,150	100%	Oilfield services
Sichuan Tongsheng Drilling Technology Co., Ltd. (四川通盛鑽探工程有限公司, "Sichuan Tongsheng")	Sichuan Province, the PRC, 13 February 2012	RMB100,000,000	100%	Construction and drilling services, sales of drilling product
Xinjiang Anton Oilfield Services Co., Ltd. (新疆安東石油技術服務有限責任公司, "Xinjiang Anton")	Xinjiang Uygur Autonomous Region, the PRC, 24 February 2012	RMB80,000,000	100%	Oilfield services

The above table lists the subsidiaries of the Company which, in the opinion of the Directors, principally affected the results or assets of the Group. To give details of other subsidiaries would, in the opinion of the Directors, result in particulars of excessive length.

None of the subsidiaries had issued any debt securities at the end of the year.

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37. SUBSIDIARIES (Continued)

(b) Material non-controlling interests

The total non-controlling interest as at 31 December 2019 was RMB55,525,000 (31 December 2018: RMB48,688,000), of which RMB36,725,000 (31 December 2018: RMB36,206,000) was attributable to Anton Tong'ao. The non-controlling interests in respect of other subsidiaries are not material.

Set out below are the summarised financial information for Anton Tong'ao that has non-controlling interests that are material to the Group.

Summarised statement of financial position

	Anton Tong'ao As at 31 December	
	2019	2018
Current		
Assets	845,650	806,901
Liabilities	(689,360)	(715,002)
Total net current assets	156,290	91,899
Non-current		
Assets	274,334	333,566
Liabilities	(63,375)	(63,401)
Total net non-current assets	210,959	270,165
Net assets	367,249	362,064
Net assets attributable to non-controlling interests	36,725	36,206

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37. SUBSIDIARIES (Continued)

(b) Material non-controlling interests (Continued)

Summarised statement of profit or loss and other comprehensive income

	Anton Tong'ao	
	Year ended 31 December	
	2019	2018
Revenue	563,457	322,702
Profit before income tax	87,365	16,091
Income tax expense	(12,179)	(2,311)
Post-tax profit	75,186	13,780
Other comprehensive expense	-	-
Total comprehensive income	75,186	13,780
Total comprehensive income attributable to non-controlling interests	7,519	1,378
Dividends paid to non-controlling interests	7,000	-

Summarised statement of cash flows

	Anton Tong'ao	
	Year ended 31 December	
	2019	2018
Cash flows from operating activities		
Cash generated from/(used in) operations	89,415	(33,741)
Income tax paid	(1,509)	(3,448)
Net cash generated from/(used in) operating activities	87,906	(37,189)
Net cash generated from/(used in) investing activities	3,207	(22,325)
Net cash (used in)/generated from financing activities	(26,095)	58,444
Net increase/(decrease) in cash and cash equivalents	65,018	(1,070)
Cash and cash equivalents at beginning of year	28,624	29,642
Exchange gain on cash and cash equivalents	2	52
Cash and cash equivalents at end of year	93,644	28,624

The information above is the amount before inter-company eliminations.

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38. EVENTS AFTER THE REPORTING PERIOD

The outbreak of novel coronavirus ("COVID-19") continues to spread across the world, and the international oil price plummeted in March. The management of the Group has kept an in-time communication with its management teams running businesses globally and its oil company customers through information platforms to timely follow the market change and evaluate the affection to its businesses. The Group will continue closely monitoring the development of COVID-19 situation and the market uncertainty caused by recent plunge in oil price, and ensure the stable operations. By the date of this announcement, the impact of COVID-19 and the market uncertainty caused by recent plunge in oil price on the Group's subsequent operating results is still under assessment.

39. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY

	As at 31 December 2019	2018
Assets		
Non-current assets		
Investments in subsidiaries	4,979,725	5,397,857
Current assets		
Trade and notes receivables	73,192	70,754
Prepayments and other receivables	1,821,205	180
Cash and cash equivalents	234,491	60,283
	2,128,888	131,217
Total assets	7,108,613	5,529,074
Equity and liabilities		
Equity		
Share capital	276,273	275,959
Other reserves (a)	2,591,196	2,857,532
Total equity	2,867,469	3,133,491
Liabilities		
Non-current liabilities		
Long-term bonds	2,028,423	2,051,403
Current liabilities		
Current portion of long-term bonds	2,116,445	14,498
Trade and notes payables	-	1,600
Accruals and other payables	96,276	328,082
	2,212,721	344,180
Total liabilities	4,241,144	2,395,583
Total equity and liabilities	7,108,613	5,529,074

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39. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY (Continued)

Note:

(a) Reserve movements of the Company

	Share premium	Capital reserve	Accumulated losses	Total
Balance at 1 January 2018	813,243	3,022,199	(979,256)	2,856,186
Loss for the year	-	-	(283,196)	(283,196)
Share option scheme	-	24,094	-	24,094
Issue of ordinary shares	256,064	-	-	256,064
Share option exercised	7,222	(2,838)	-	4,384
At 31 December 2018	1,076,529	3,043,455	(1,262,452)	2,857,532
Balance at 1 January 2019	1,076,529	3,043,455	(1,262,452)	2,857,532
Loss for the year	-	-	(267,083)	(267,083)
Share option scheme	-	29,167	-	29,167
Share option exercised	3,148	(1,461)	-	1,687
Dividends	(30,107)	-	-	(30,107)
At 31 December 2019	1,049,570	3,071,161	(1,529,535)	2,591,196

40. BENEFITS AND INTERESTS OF DIRECTORS

(a) Directors' and chief executive's emoluments

The remuneration of every director and the chief executive is set out below:

For the year ended 31 December 2019:

Name	Fees	Salary	Discretionary bonuses	Housing allowance	Estimated money value of other benefits (i)	Employer's contribution to a retirement benefit scheme	Remunerations paid or receivable in respect of accepting office as director	Emoluments paid or receivable in respect of director's other services in connection with the management of the affairs of the Company or its subsidiary undertaking	Total
Executive Directors									
Mr. Luo Lin	-	2,472	-	-	31	50	-	-	2,553
Mr. Pi Zhifeng (chief executive)	-	1,873	-	-	69	50	-	-	1,992
Mr. Fan Yonghong	-	1,829	-	-	69	50	-	-	1,948
Non-executive Director									
Mr. John William Chisholm	-	689	-	-	-	-	-	-	689
Independent Non-executive Directors									
Mr. Zhang Yongyi (ii)	287	-	-	-	-	-	-	-	287
Mr. Zhu Xiaoping (ii)	287	-	-	-	-	-	-	-	287
Mr. Wee Yiaw Hin (ii)	689	-	-	-	-	-	-	-	689

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40. BENEFITS AND INTERESTS OF DIRECTORS (Continued)

(a) Directors' and chief executive's emoluments (Continued)

The remuneration of every director and the chief executive is set out below: (Continued)

For the year ended 31 December 2018:

Name	Fees	Salary	Discretionary bonuses	Housing allowance	Estimated money value of other benefits (i)	Employer's contribution to a retirement benefit scheme	Remunerations paid or receivable in respect of office as director	Emoluments paid or receivable in respect of director's other services in connection with the management of the affairs of the Company or its subsidiary undertaking	Total
Executive Directors									
Mr. Luo Lin	-	2,348	1,368	-	30	55	-	-	3,801
Mr. Pi Zhifeng (chief executive)	-	1,894	352	-	65	55	-	-	2,366
Mr. Wu Di	-	898	-	-	17	13	-	-	928
Non-executive Director									
Mr. John William Chisholm	-	663	-	-	-	-	-	-	663
Independent Non-executive Directors									
Mr. Zhang Yongyi (i)	287	-	-	-	-	-	-	-	287
Mr. Zhu Xiaoping (ii)	287	-	-	-	-	-	-	-	287
Mr. Wee Yfaw Hin (ii)	663	-	-	-	-	-	-	-	663

Notes:

- (i) Other benefits include other insurance premium.
- (ii) 2,100,000 share options in aggregate were granted to three independent non-executive directors during the year ended 31 December 2019 (2018: 2,100,000 share options), and the total expense recognised in the consolidated statement of profit or loss for year ended 31 December 2019 amounted to RMB1,019,000 (31 December 2018: RMB921,000), the same amount for each independent non-executive director which are not included in this summary.

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