Oil Production Operation service
Anton has been engaged in Workover services since 2008. We are able to provide workover, workover & completion tools, workover fluid, program designing and integrated services. There are 26 qualified workover crews authorized by CNPC and 5 international teams.

We owned kinds of Workover rigs and auxiliary equipment to carry out workover integrated services in Tuha, Tarim, Jilin oilfields in China and Iraq, Ethiopia, Pakistan, Chad in overseas area.
Contents

01 Scope of services
02 Equipment and Capability
03 Service teams
04 Qualifications and capacities
05 Performance
Scope of services

Services types

◆ Workover services

◆ Workover & Completion Tools services

◆ Workover Fluid and Technical Services
## Scope of services

### Workover services

#### Workover & Completion services

<table>
<thead>
<tr>
<th>Category</th>
<th>Scope</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workover and Completion service</td>
<td>Overhaul Fishing, complex milling, casing repair, wellbore deepening and other complex operations.</td>
<td>Equipment + Service</td>
</tr>
<tr>
<td>Workover</td>
<td>Maintenance job of oil &amp; gas and water well, pump change, fishing, conversion to water injection, plugging, sand control, paraffin treatment, cleaning up and etc.</td>
<td>Equipment + Service</td>
</tr>
<tr>
<td>Sidetracking</td>
<td>Window opening, forging &amp; milling, wellbore deepening and etc.</td>
<td>Equipment + Service</td>
</tr>
</tbody>
</table>
## Specialized technical services

<table>
<thead>
<tr>
<th>Category</th>
<th>Scope</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workover and Completion program</td>
<td>Workover &amp; Completion strings and BHA design, such as fracturing, acidizing, gas lifting string design and water shut-off, plugging, squeezing, milling and other kinds of tools and BHA designs.</td>
<td>Technical</td>
</tr>
<tr>
<td>Complex workover operation Programs</td>
<td>Providing Complex workover operation tools and Programs, such as downhole hydraulic motors, milling tools, fishing tools, bits, milling shoe, milling taper, washover pipe, spear, overshot, WL grab, WL spear.</td>
<td>Technical</td>
</tr>
</tbody>
</table>
Scope of services

◆ Crews Distribution

- Tarim 5 crews
- Tuha 16 crews
- Chad 1 crew
- Karamay 5 crews
- Iraq 3 crews
- Ethiopia 1 crew
Workover & Completion Tools and Services

Workover & Completion tools and service involves a wide range of tools and services. We can provide high quality, high efficiency and safe operations for clients.

- Workover and completion program, strings & BHA and complex downhole operations design.
- Fishing tools with Kinds of specifications and field technical service.
Scope of services

- **Milling tools and services:** Providing kinds of downhole hydraulic motors, milling tools and related technical services.
- **Plugging tools and services:** All kinds of specifications.
- **Workover and completion tools:** With kinds of specifications and field technical services.

![Taper tap](image1)
![Milling shoe](image2)
![Box tap](image3)
![Spear](image4)
## Scope of services

<table>
<thead>
<tr>
<th>Category</th>
<th>Scope</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workover &amp; completion tools and strings</strong></td>
<td>Workover and completion string designing, such as fracturing, acidizing, gas lifting string, water shut-off, plugging, squeezing, milling and other kinds of tools and BHA designing.</td>
<td>Products + Service</td>
</tr>
<tr>
<td><strong>Milling tools and services</strong></td>
<td>Downhole operation tools and technical services, such as downhole hydraulic motors, milling tools, fishing tools, bits, milling shoe, milling taper, washover pipe, spear, overshot, etc.</td>
<td>Products + Service</td>
</tr>
<tr>
<td><strong>Fishing tools and services</strong></td>
<td>Fishing tools and services: such as spear, overshot, wireline fishing, rope fishing, junks fishing, bumper jars, fishing magnet, impression, etc.</td>
<td>Products + Service</td>
</tr>
<tr>
<td><strong>Plugging tools and services</strong></td>
<td>Plugging tools and services: such as hydraulic packer, slip packer, tail pipe support packer, self-sealing packer, bridge plug and auxiliary tools, etc.</td>
<td>Products + Service</td>
</tr>
</tbody>
</table>
Workover Fluid and Technical Services

Workover fluid: Mainly used in workover and completion wells to reduce or avoid contamination of reservoirs as well as to recover, improve or maintain productivity. We have various workover fluid, such as low-density, high-density, casing protection fluid, etc.
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Equipment and Capability

- 31 sets of XJ350, XJ450, XJ550, XJ750, XJ850 series truck-mounted workover rigs.
- Possess SNC400, SNC700, F-800, F-1300 series pumps.
- 200 sets of auxiliary facilities, including circulation system, well control system and life support system.
Truck-mounted equipment

Antonoil possesses advanced truck-mounted tank and duty room system. It makes the mobilization quick-moving and highly efficient, which is leading ahead both domestically and internationally.
Service teams

- Having global service capability crews are good at management, technology.
Service teams

Workover service team

◆ 31 downhole operation service crews, including 5 overseas.
◆ 16 senior engineers.
◆ 93 professionals.
Service teams

Tools service teams

◆ 8 engineers for tool designing.

◆ 16 technician for tool processing.

◆ 10 engineers to provide on-site technical services.
Workover & Completion fluid service teams

◆ 12 engineers with rich experience in workover and completion fluid field.
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Qualifications and capacities

International technical service qualifications
Qualifications and capacities

Domestical technical service qualifications
In terms of management, technology, operation and other aspects, Antonoil strictly abide by the international quality and technical standards.
Based on international standards and systems, Antonoil establishes 47 management documents and 256 operation procedures to make a scientific control in organization, staff training, safety, process control, equipment management, quality control, etc.

Management Systems

Framework of QHSE management documents

QHSE

Management manual

Program document

Operational document

Logs

Operation specifications

Management documents

Equipment

Technical
Qualifications and capacities

International standards

Operational manual

Management manual

Operational specification

Contents:

- Purpose and Scope
- QHSE Vision, Policy, Values, Commitment
- Appointment Letter of Management Representative
- Announcement Letter of Employee Representative
- QHSE Management System Framework
- 1 Leadership and Commitment
- 2 Policy and Objective
- 3 Organization, Responsibilities, Resources and Documents
- 4 Contractors and Suppliers Management
- 5 Risk Management
- 6 Business Process
- 7 Performance Monitoring and Measurement
- 8 Audit and Management Review

- API-5L1-2002 (Recommended Practice for Railroad Transportation of Line pipe)
- API-6A-2004 (Well head and Christmas Tree Equipment)
- API-8C- Drilling and Production Hoisting Equipment 2012 (PSL1 and PSL2)
- API-17G (Completion Workover Risers)
- API-53 (BOP equipment for drilling well)
- API-510 (In-Service Inspection, Repair, Alteration)
- API-PR-7G (Drill Stem Design and Operating Limits)
- API-RP-576-2009 (Inspection of Pressure-relieving Devices)
Qualifications and capacities

High-efficiency service capacities

◆ Workover operational capacity is up to 800 wells/year.
◆ Workover & Completion fluid technical services capacity is up to 600 wells/year.
◆ Workover & Completion tools technical services capacity is up to 300 wells/year.
◆ High-efficiency resource allocation ability.
◆ Able to provide workover and completion integrated services.
Global resource mobilized ability

Strategic corporation agreement with well-known Engineering service, Equipment manufacturing and oil service companies, we have good international mobilized ability.
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Market distributes in China, Iraq, Ethiopia, Venezuela, Ecuador, Pakistan, Albania, Kazakhstan and etc.
Performance

We provide Workover & Completion technical services safely and continuous operation more than 3500 days, which has been highly regarded by the clients.

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Dear Antooil West Qurna 2 project management,

I’m, as a representative of W/O and Completion department of Lukoil at Rig #2, I would like to express my sincere acknowledgement for the good organization of the Rig Demobilization operation.

Within 2 days, during the period from August 5th to 7th, the Anton team of Rig#2 demobilized the Rig, equipment and Camp from Cluster 8 to Cluster 12. There were 20 trailers, 4 cranes and over 70 workers involved in this operation. Despite the large volume of workload, all the pre-job preparations were planned and prepared properly: prepared all necessary documents: security gate passes, SOC permits for personnel and vehicles, PTWs, the existing problems and possible obstructions was discussed before starting the job and ways found for their mitigation.

During transportation of equipment, the loading of equipment was properly carried out, controlled safe loading and fixation of the transported equipment, the movement of transports along the roads of the field.

Transportation of oversized equipment was carried out in accordance with the requirements of Lukoil, vehicles’s conveying along the traffic route was organized, COSD was properly informed in advance.

As a supervisor of the Workover and Completion department working with team of Rig #2, during six months, I would like to note the increased level of professionalism in planning and organizing this kind of work and thank the team and the management of the company for the work done.

I hope that the Anton would not stop and satisfy with their current level and keep improving their job performance level in the close future.

Evgenii Alachev
Workover supervisor
Well operations department

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To: Whom it may concern,

Subject: Performance Certificate of Antooil TK1004 Cleaning and Maintenance Services in Westen Oil Field

Dear Sir,

CNOCIC Iraq Limited awards this letter to Antooil for excellent performance in TK1004 Cleaning and Maintenance Services (Contract No.: CMIT-PR-16-53-140211-11). All work include Clean, Sand Blasting, Painting, Test, Repaired Leakage bottom head etc. The entire crew worked with high responsibility and diligence, not only completed all the workload successfully, but also reached the goal of ‘Zero accident, Zero injury, Zero pollution’.

Hence, CNOCIC Iraq Limited appreciates the performance of Antooil for their excellent service ability.

Yours sincerely,

CNOCIC Iraq Limited

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东方智慧 全球分享
Oriental wisdom, Global sharing
表扬信

安东石油技术（集团）有限公司:

贵公司多年来在施工项目中的出色表现，我们应该给予高度的评价。特别是在贵公司参与的施工项目中，你们的专业精神和不懈努力，充分展示了贵公司“帮助别人成功”的企业精神，也使我们深感敬佩。

修井项目部全体成员拥有良好的职业道德和职业操守，吃苦耐劳，注重合作，具有高度的工作热情和活力，充分体现了贵公司“帮助别人成功”的企业文化。特别是在近期的施工项目中，你们的敬业精神和团队精神得到了充分的体现。

修井项目部全体成员在施工现场的辛勤工作，充分体现了贵公司“帮助别人成功”的企业精神。在今后的工作中，我们将继续加强与贵公司之间的合作，共同为推动中国石油工业的发展做出更大的贡献。

此致

敬礼

保利协鑫石油天然气集团有限公司

2018年5月1日
Dear Anton Oil management, as a representative of LMEL Well operations department at AT-XJ7502 rig, I would like to express my sincere acknowledgement for the good organization of WQ2-351 well completion activity and mobilization to WQ2-352 well.

WQ2-352 recompletion job done in front of schedule with a perfect timing in 5.33 days without any NPT or unplanned activity. Preparation for the next WQ2-352 well was also finished in very timely manner without any delays and time wasting.

Please see the list of personnel I would like to mark out for their performance:

- Li Yanwu – Rig Manager
- Sun Zhiquang – Workover Engineer
- Yi Weibei – Night Engineer
- Liang Zhi – Tool Pusher
- Li Zhijing – Tool Pusher
- Shi Jiangang – Mechanic
- Da Qingnan – Driller
- Wei Chao – Driller
- Asif Jahangir – HSE Engineer

I hope that Anton Oil would not stop and satisfy with their current level and keep improving their job performance level in the close future. In addition, I hope that their efforts will not be left unappreciated and Anton Oil Company will award AT-XJ7502 crew.

Alexander Sorokin
Stimulation & Rigless Engineer, LMEL Well Operation Department
Workover & Completion technical services

◆ Provide Workover & Completion technical services up to 3100 wells.
◆ Conduct business in China, Iraq, Ethiopia market with risky turn-key project over 79 old wells.

Workover & Completion Tools Services

◆ Completed over 700 wells.
Performance

Workover Fluid and Technical Service

◆ Completed over 600 wells.
THANKS!
Helping others succeed…