

# MORE KERUI PETROLEUM TECHNOLOGY EFFICIENT IN ENERGY EXTRACTION



# ABOUT US

Shandong KERUI Petroleum Technology Co., Ltd. is a technology-driven integrated solution and service provider focused on the stimulation oil and gas fields and innovation of oilfield technologies.

KERUI's business covers technical services for the development of oil and gas fields, clean energy (natural gas, coalbed methane, shale gas, etc.) and new energy (geothermal). We provide integrated solutions and services for customers, such as preparation of exploration and development plans, drilling and workover, fracturing and stimulation, gas injection EOR, oil and gas field DOM (development, operation and maintenance), in-house laboratory investigation, oilfield chemical additives, downhole tools, etc.

Having been devoted to the industry for over 20 years, KERUI has businesses and more than 2000 employees in more than 20 countries worldwide. Over 80% of them in overseas regions are local employees. Holding the value of Customer Fulfillment and Joint Creation and Sharing, we are committed to building a world-class energy service company.



**OUR MISSION**  
**More efficient in energy extraction**



**OUR VISION**  
**Building a world-class energy service company**



**OUR VALUES**  
**Achieving, creating and sharing together**



**OUR CORPORATE SPIRIT**  
**Open Innovation, Struggle and forge ahead,  
Pragmatic and efficient, Shared responsibility  
and win-win**

# DEVELOPMENT HISTORY

2001

Oil and Gas Field Integrated Service Group, Started from nitrogen services.

2005

From China to the World, Entered the international workover projects.

2013

Optimized the industrial chain. Established the acid fracturing and coiled tubing business.

2015

Completed of the entire industrial chain, The integrated oil and gas development group is formed.

2018

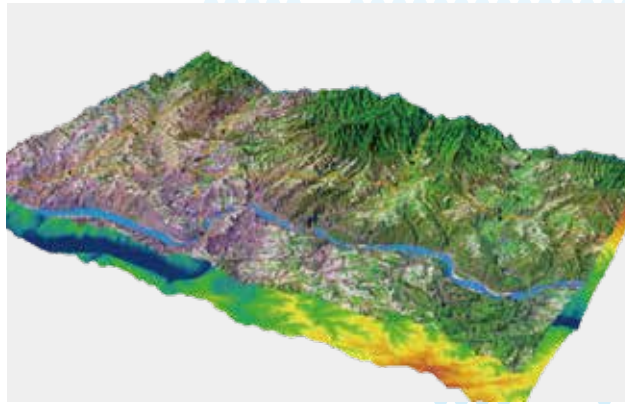
Focused on opening up the oilfield service market in Africa. Initiated drilling and gas EOR projects in several African countries.

2022

Completed the construction of overseas favorable markets. Developed a business pattern in the entire industrial chain in the Middle East region.



## BUSINESS LAYOUT



Preparation of Exploration and Development Plan



Drilling and Workover Engineering Technology Services



Reservoir Stimulation and Coiled Tubing Engineering Technology Services



Gas Injection EOR Technology Services



Oilfield Technology Innovation



Downhole Tools and Oilfield Chemicals



# DOMESTIC MARKET LAYOUT

## Northwest Region ■

Shaanxi Province  
Qinghai Province  
Xinjiang

## Eastern Region ■

Heilongjiang Province  
Shandong Province

## North China Region ■

Shanxi Province  
Hebei Province  
Henan Province  
Inner Mongolia

## Southwest Region ■

Chongqing City  
Guizhou Province  
Sichuan Province



# INTERNATIONAL MARKET LAYOUT





## TECHNICAL CAPABILITIES

KERUI has five laboratories and research institutions (Unconventional Oil and Gas Research and Development Center, Oil and Gas Generation, Migration and Accumulation Research Center, Oilfield Chemical Technology Research and Development Center, Fracture Acidizing Laboratory, and Foam Fluid Technology Research and Development Center). There are 108 technical R&D professionals, including 79 Chinese professionals and 29 international professionals. 50% of them have master's or doctoral degrees or above. KERUI has won several science and technology awards for its patented technologies and has established technical partnerships with well-known universities. Over 100 sets of experimental equipment in the fleet are worth an original asset value of over 30 million Chinese Yuan. KERUI can carry out scientific experiments and research throughout the entire cycle of exploration, development and production, providing customers with more good-quality and high-efficiency products and services.

108

Technical R&amp;D Professionals

50%

Masters and Doctors

## PATENTED TECHNOLOGIES

KERUI has developed 106 patents, including 25 invention patents and 81 utility model patents, after years of technological research and accumulation.



## ACHIEVEMENT AWARDS

Major science and technology awards that KERUI has won include:

Shandong Province Technology Market Association

Golden Bridge Award;

Dongying Science and Technology Award;

High-Tech Enterprise Certificate;

First Prize for Advancement in Science and Technology by CPCIF;

Second Prize for Advancement in Science and Technology by Ministry of Education.



## EXPERT TEAM

1 expert receiving national subsidies and 4 professor-level senior engineers;

6 senior engineers, 10+ doctoral degree holders and 50+ master's degree holders;

Professionalized: 200+ professionals in the industry for 20+ years;

Internationalized: 100+ employees with 20+ years of overseas work experience.







# COMPANY DEVELOPMENT, QHSE PRIORITY

## QHSE STRATEGIC OBJECTIVES

To acquire energy resources in a safer, more environment-friendly and more efficient manner, pursue zero injuries, zero pollution, zero losses and zero complaints, and reach advanced international levels in quality, health, safety, and environmental management.

## QHSE VISION

To win trust and respect from the peers, customers and stakeholders with excellent QHSE performance.

## QHSE CULTURE

Pursuit of safety, people orientation, integrity, respect, initiative and collaboration.

## QHSE POLICIES

- People Orientation
- Environmental Priority
- Prevention Focused
- Total Employee Involvement
- Safety First
- Customer Satisfaction
- Pursuit of Excellence
- Continuous Improvement

## QHSE COMMITMENT

Shandong KERUI Petroleum Technology Co., Ltd. always believes that QHSE is the core value of the company. For the benefit of employees, customers, contractors and communities, we are committed to providing effective QHSE management for all production and business activities and workplaces. Good quality, health, safety, and environmental performance are important elements of the company's commitment.

## QHSE CERTIFICATES



## QHSE MANAGEMENT TOOLS





EQUIPMENT STRENGTH



110+

Nitrogen Equipment  
500m³/h-2400m³/h

90+

Truck-Mounted Fracturing Units  
2000HP-3000HP

29+

Workover Rigs  
350HP-1000HP

12+

Drilling Rigs  
1000HP-2000HP

10+

Coiled Tubing Units  
1.25" - 2.0"

10+

MWD/LWD Systems  
MWD/LWD





# PREPARATION OF EXPLORATION AND DEVELOPMENT PLAN

## MAIN BUSINESS SCOPE

Comprehensive geological research, development plan preparation, drilling and completion engineering, oil recovery engineering, surface engineering, and integrated general contracting of oil and gas gathering, transportation, operation and maintenance;

Oil reservoir geological research, drilling geology, drilling engineering design and general contracting of drilling and completion;

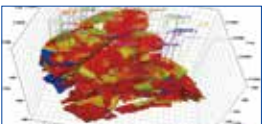
Integrated general contracting of oil reservoir geological research, stimulation process design and construction design.

## SERVICE CAPABILITY



### Program Design for Adjustment of Mature Oilfield

Infill development, layered development, and water injection development.



### Program Design and Evaluation for Integrated Development of New Oilfield

Reservoir engineering design, drilling engineering design, oil recovery process design, surface engineering design and development benefit evaluation.



### Integrated Management Services for Oilfield Development, Operation and Maintenance

Technical professionals of all expertise for oilfield services, Engineering services for the entire oilfield service industrial chain, Cooperation agreement with Shengli Oilfield in personnel output.

## CORE TECHNICAL STRENGTHS

### Program Design and Evaluation for Infill Development of Mature Oilfield

Planar remaining oil identified through numerical simulation, deployment of infill wells in remaining oil enrichment regions, and integrated design and evaluation of drilling, production, and surface engineering.

### Program Design and Evaluation for Layered Development of Mature Oilfield

Planar and longitudinal remaining oil identified through numerical simulation, layered well pattern, and integrated design and evaluation of drilling, production, and surface engineering.

### Program Design and Evaluation for Water Injection Development of Mature Oilfield

Design of well pattern and surface pipeline for injection and production.

### Intergrated Design and Construction of Stimulation Program for Mature Oilfield

Fine water injection technology; Composite cold recovery technology for heavy oil; Composite chemical & thermal recovery technology for heavy oil; High-pressure, rapid mass water injection technology for tight oil reservoirs.

## EXPERIMENTAL STUDY

KERUI has introduced high-end experimental instruments and experienced R&D and testing personnel from home and abroad. For conventional oil and gas reservoirs, shale oil and gas, tight oil and gas, and other unconventional oil and gas reservoirs, our advanced experimental equipment and international cutting-edge testing methods and research methods enable us to provide high-quality experiment services for major oil and gas operators, colleges and universities, and scientific research institutes and to present scientific and reliable experimental data to users for the evaluation, exploration and development of oil and gas resources.



Our fleet of sizeable experimental equipment from home and abroad includes a carbon sulfur analyzer, rock pyrolyzer, chromatography-mass spectrometer, X-ray diffractometer, scanning electron microscope, porosity analyzer, ultra-low permeability tester, laser particle size analyzer, contact angle meter, isothermal adsorption apparatus, triaxial stress gauge, HAAKE rheometer, and multi-functional physical simulation system, etc.

## SERVICE CAPABILITY

Evaluation of hydrocarbon generation potential and oil and gas geochemical characterization of source rock, and correlation of oil and gas and source rock;

Research on sediment source, diagenesis, reserve capacity and permeability, and oil and gas reservoir protection;

Research on oil displacement mechanisms and sweep rules for different reservoir development methods;

Testing and evaluation of fracturing fluid properties, and research and development of new fracturing fluids;

Test for mechanical properties and simulation of in-situ stress field of rocks.

## TYPICAL CASES

Nanjing Center, China Geological Survey: Geological survey of Paleozoic shale gas in the lower Yangtze area - Shale reservoir test and analysis;

Institute of Geomechanics, Chinese Academy of Geological Sciences: Investigation and evaluation on unconventional oil and gas resources in Qaidam Basin and its peripheral areas;

Research Institute of Petroleum Exploration and Development: Testing and evaluation on rock mechanical properties of shale cores in Northeast China.



# DRILLING AND WORKOVER ENGINEERING TECHNOLOGY SERVICES

## BUSINESS INTRODUCTION

We focus on the international integration of drilling and workover services. Our capability of providing wellbore integration services, including pre-drilling, drilling, directional drilling, drilling fluids, stimulation and completion, meets the diverse needs of our customers. We have businesses in China, South America, Central Asia, Africa, and Pan-Russia regions.

## MAIN BUSINESS SCOPE



Drilling and Workover  
Engineering Technical Services



Directional Well Technical  
Services



Drilling and Completion Fluid  
Technical Services



Cementing Technical Services

## SERVICE CAPABILITY

### Drilling Services:

12 drilling rigs in operation, 200,000m footage per year;  
Capability of drilling 70+ wells per year;  
1.7 million meters of cumulative drilling footage;  
Deepest well at 5896m, Longest horizontal section at 2105m;  
Maximum formation temperature at 320°C.

### Workover service:

29 workover rigs in operation with a capability  
of completing 2200 workover jobs per year;  
Cumulatively 13500 workover jobs;  
Minimum sidetracked hole, 118mm.

## CORE TECHNICAL STRENGTHS

- Integrated drilling and completion
- Well intervention, servicing and sidetracking
- Multiple drilling fluid systems
- Horizontal well geosteering and near-bit measurement
- TAML level-I-4 multilateral drilling
- Integrated drilling and completion for ultra-high-temperature (320°C) geothermal wells

## TYPICAL CASES

### IRAQ



#### Drilling and Workover (2014 - present)

1x1000HP, 4x750HP workover rigs;  
Completed 285 workover jobs in Missan Oilfield and Zubayr Oilfield in Iraq with excellent services and high efficiency and won praises from Eni and SLB.

### YANCHANG



#### Integrated Drilling (including the SCP Block) (2014 - present)

4x1500HP drilling rigs and 1ea 1000HP drilling rig completed integrated drilling services for 108 wells cumulatively in Yanchang Oilfield. In the SCP Block, we completed the direction drilling of a 3200m hole within 15 days, setting the fastest ROP record, the deepest well record and the longest horizontal section record in the block.

### JILIN



#### Integrated Drilling (2019 - present)

3x1000HP drilling rigs;  
Cumulatively drilled 62 wells in CNPC's Songyuan Oilfield in Jilin. Rig# 40021 set a fastest ROP record of 927m/day. According to an evaluation by the Evaluation Department of CNPC's Jilin Oilfield, our three drilling rigs ranked top three of the 25 drilling rigs involved in the project.

### ETHIOPIAN GEOTHERMAL



#### Integrated Drilling (2021 - present)

This contract includes the drilling of 8+12 wells.  
Currently, 10 wells have been drilled, making cumulative footage over 30,000 meters. Our excellent project management performance earned us praise from the client during the contract execution period.



# RESERVOIR STIMULATION AND COILED TUBING SERVICES

## BUSINESS INTRODUCTION

We have developed internationally-advanced fracturing technologies and have been equipped with world-class fracturing equipment and tools. This allows us to provide integrated geological and engineering services systematically for oil and gas fields from fracturing engineering design and fracturing treatment to post-fracturing evaluation and reservoir stimulation. We have successively provided engineering services for oil and gas clients in Xinjiang Oilfield (tight oil and shale oil), Qinghai Oilfield, Tuha Oilfield, Yanchang Oilfield, Changqing Oilfield, Jiangsu Oilfield, Guizhou CBM, China Union Coalbed Methane Shanxi CBM, Sichuan & Chongqing shale gas blocks, Missan Oilfield in Iraq, Halfaya Oilfield in Iraq, Marisu Oilfield in Kyrgyzstan, and oilfields in Valyegan.

## MAIN BUSINESS SCOPE



Fracturing Stimulation  
Technology



Coiled Tubing  
Stimulation Technology



Integrated Stimulation Service

## SERVICE CAPABILITY

### Fracture Acidizing:

We have 8 experienced fracturing teams with 131 sets of truck-mounted fracturing units of various specifications and supporting equipment. Our equipment can provide over 250,000 hydraulic horsepower; and pump fluids at 20m<sup>3</sup>/min at a treatment pressure of up to 120MPa. This capability can meet the needs for stimulating conventional and unconventional reservoirs both domestically and internationally. Annually, we are capable of treating about 1600 wells/formations.

### Coiled Tubing:

10 experienced service teams are equipped with injector heads capable of pulling 80,000lbs, 100,000lbs and 140,000lbs.; We are equipped with 8000m 2.375 " coiled tubing drums and 10,000psi and 15,000psi imported BOPs; Our coiled tubing units apply to >7000m high-pressure gas wells.

## CORE COMPETITIVE TECHNOLOGIES

**Fracture Acidizing:** High-strength intensive cluster fracturing, CO<sub>2</sub> prepad/energizing/foam fracturing, highly-efficient nanoemulsion imbibition and displacement, comprehensive treatment of old wells through stimulation and injection, temporary plugging and diverting fracturing, sand jet perforating and CT-conveyed fracturing, multistage fracturing with full-bore multistage sliding sleeves, fracturing with nano viscosity-variable slick water, production profile monitoring with quantum tracer, fiber optic monitoring on fractures and production profiles, and wide-area electromagnetic fracture monitoring.

**Coiled Tubing:** Fiber optic logging, bridge/cement plug millout for high-pressure wells, fishing in complex wells, standard velocity string operation, CT-conveyed fracturing, plug drillout for low-pressure and leaky wells, stuck pipe freeing, sliding sleeve shifting with CT, and CT pickling.

## TYPICAL CASES

### IRAQ



#### Integrated CT Acidizing, Gas Lift and Flowback (2014 - present)

2 sets of coiled tubing units have completed a total of 481 wells.

#### Integrated Fracturing Package Project (2022 - present)

8x2500HHP truck-mounted fracturing units and supporting equipment have completed 30 wells.

### XINJIANG



#### Bridge Plug Millout, CT-conveyed Fracturing, CT Cleanout, Perforating, Sand Flushing and Fishing (2017 - present)

4 sets of coiled tubing units have completed a total of over 612 jobs (as of December 2024). Milled out bridge plugs for multiple high-pressure and high-gas-content wells, completed fishing and well-killing operations for emergency wells, and solved complex borehole problems for over ten wells.

### SOUTHWEST



#### Fracturing, Bridge Plug Millout, Perforating, Logging, Sand Flushing and Fishing (2019 - present)

16 truck-mounted fracturing units and 3 sets of coiled tubing units. Completed a total of over 762 jobs (as of December 2024). Developed the fracturing and coiled tubing stimulation technologies for shale gas wells under high pressure, and established standard operation procedures.



# GAS INJECTION EOR TECHNOLOGY SERVICES

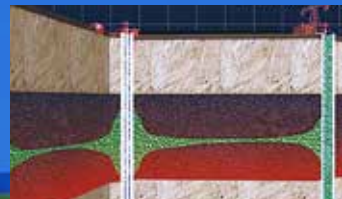
## BUSINESS INTRODUCTION

Since 2001, we have been engaged in the technical research and application of nitrogen, natural gas, carbon dioxide and foam fluids to enhance the oil recovery of mature oilfields. We have independently developed the composite gas EOR technology, covering the energizing and stimulation of carbonatites using nitrogen, low-permeability waterflood stimulation, heavy oil viscosity reduction and cold recovery, temporary plugging and sweep expansion with foam, and liquids unloading for gas recovery. This technology has been applied by 13 oil companies in China, including SINOPEC Northwest Oilfield Branch Company, CNPC Tarim Oilfield Branch Company and Tuha Oilfield Branch Company, as well as 11 countries, such as Colombia, Kazakhstan and Albania.

## MAIN BUSINESS SCOPE



Nitrogen/Nitrogen Foam Stimulation



CO<sub>2</sub>/Natural Gas Injection

## SERVICE CAPABILITY

- 24 years of gas EOR experience
- 90+ nitrogen service teams
- 110+ sets of equipment
- 99.9% high-purity PSA nitrogen generator
- 70MPa (the world's first ultra-high pressure) nitrogen generator
- Annual gas injection capacity of 800 million standard cubic meters

## CORE COMPETITIVE TECHNOLOGIES

### EOR Technology:

Nitrogen energization & stimulation technology; Nitrogen foam flooding technology; Nitrogen (foam) assisted thermal recovery technology; Heavy oil viscosity reduction cold recovery technology; Three-phase ASP flooding technology; Composite-water injection oil recovery technology.

### Production Assistance:

Nitrogen foam sand-washing technology; Water drainage and gas recovery technology; Natural gas reinjection technology service; Nitrogen displacement/purging technology service.

## TYPICAL CASES

### TAHE OILFIELD, CHINA



**Services:** Nitrogen Stimulation, Single-well Huff and Puff and Multi-Well Gas Drive(2012-present)

**Technical Challenges:** (1) As the Tahe Oilfield has progressed into the middle-to-late development stage, the oil-water interface has moved upwards and the residual oil is mainly trapped in the high parts of the structure, existing in the form of "attic oil" with some enriched in micro-fractures and pores. Conventional primary recovery and water-flooding stimulation cannot effectively drive the residual oil. (2) The maximum well depth for operations exceeds 7,000 meters.

**KERUI Solutions:** Independently developed nitrogen injection tertiary oil recovery technology for fracture-cave reservoirs: Independently developed nitrogen generator for operations at 7,000 meters with an output pressure up to 70 MPa.

### TUHA OILFIELD, CHINA



**Services:** Nitrogen Foam Displacement (2014 - present)

**Technical Challenges:** The viscosity of crude oil on surface in the Tuha Lukeqin Oilfield is 9924mPa·s, making the reservoir a deep ordinary heavy oil reservoir. After water flooding takes effect, water content rapidly increases to over 90%. The significant difference in the oil-water mobility ratio leads to a small injection sweep volume, resulting in a low water flooding recovery rate.

**KERUI Solutions:** Independently-developed tertiary oil recovery technology through nitrogen foam flooding for heavy oil reservoirs, using nitrogen foam flooding to increase the sweep volume.

### ALBANIA



**Services:** Heavy Oil Viscosity Reduction and Cold Heavy Oil Production

**Technical Challenges:** Reservoirs in the V Oilfield are fracture-type, carbonate heavy oil reservoirs, with an in-place crude oil viscosity of 2000-10,000mPa·s. In the middle and later stages of development, oil wells in the high parts of the structure have low liquid content and high water content, while oil wells in the middle or low parts are flooded by bottom water, resulting in low oil recovery rate and poor economic benefits.

**KERUI Solutions:** Independently developed cold heavy oil production with nitrogen and Chemical D. Nitrogen increases formation energy and replaces attic oil at the top while Chemical D improves heavy oil flow capacity and suppresses bottom water rise, effectively increasing oil well production and enhancing reservoir recovery.



# DOWNHOLE TOOLS AND CHARACTERISTIC PROCESS TECHNOLOGIES

During the exploration and development of oilfields, the construction and production of wells are the two most important jobs. During the two stages, downhole tools play a crucial role. When production and stimulation measures are implemented in wells, downhole tools and oil recovery tools play a decisive role. Shandong KERUI Petroleum Technology Co., Ltd. has always been focused on the application and development of tools based on production practice, covering downhole tools spanning various stages of oilfield production, such as completion, injection, fracturing, and stimulation, sand control, sand consolidation, drilling acceleration, casing treatment, workover, and downhole fishing. We currently provide four categories and 19 series of tools and technical services, including drilling tools, completion tools, oil recovery tools, reservoir stimulation tools and casing comprehensive treatment tools.

## 1. CT-conveyed Fracturing Tool

Allows for one-trip multistage fracturing.

## 2. Constant-WOB and Constant-Torque Drilling Acceleration Tool

Significantly increases ROP using optimized constant weight on bit.

## 3. Gravel Packing Sand Control Completion

Related sand control tools for circulation GP/ Frac-GP, one trip one zone / one-trip multi-zone.

## 4. One-trip Dropped and Set Directional Whipstock Sidetracking Tool

Runs and disconnects the whipstock and completes sidetracking in one trip.

## 5. Equal-diameter Plunger Pump

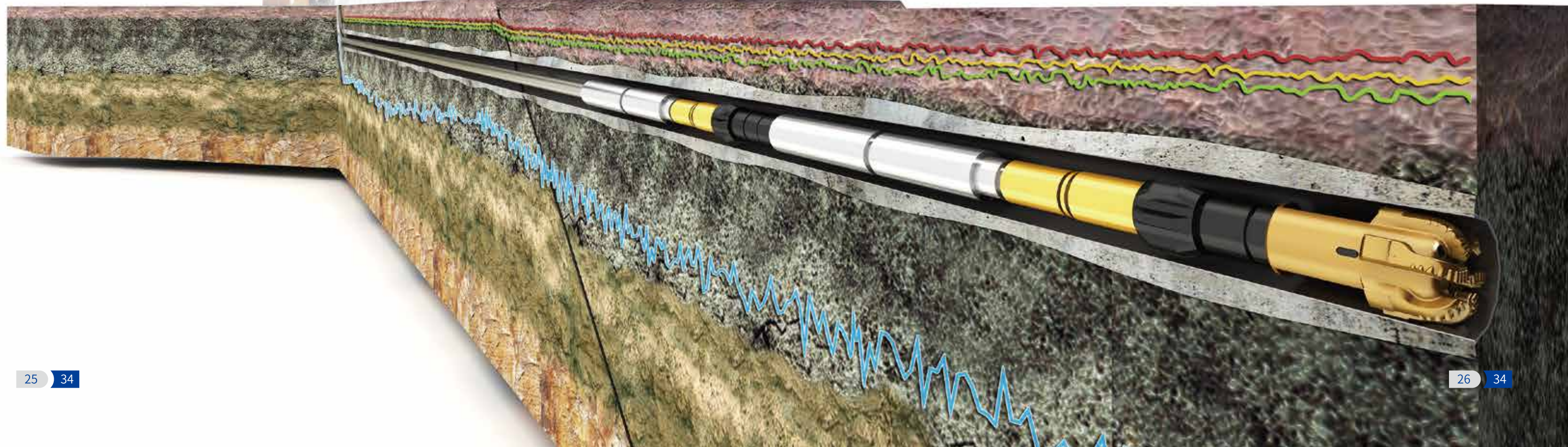
Effectively prevents sand jamming and wearing the plunger, greatly extends the service life of pump and reduces the frequency of pump inspection.

## 6. Rotary Steerable System

Rotary steering system (RSS) is a type of steerable drilling system that features low friction and torsional resistance, high ROP, low cost, short well construction period, smooth wellbore trajectory, ease of control, and ability to extend the length of horizontal sections. RSS is considered the development direction of modern steerable drilling technology.

## 7. Un-Conventional Multi-Stage Frac Tools

One-ball un-limited stages frac-sleeve, Large-Bore un-limited stages frac-sleeve, cemented frac-sleeve etc. special un-conventional tools, for more stimulation techniques.





# CHEMICALS AND SPECIALTY SERVICE TECHNOLOGIES

## CHEMICALS AND UNIQUE TECHNOLOGIES FOR RESERVOIR FRACTURING AND STIMULATION

**Suspending liquid guanidine gum fracturing fluids:** Includes suspending liquid guanidine gum, high-temperature organic borate crosslinker, clay stabilizer, cleanout additive, emulsion preventer, demulsifier, and imbibition extractor. This technology eliminates the inconvenience of on-site mixing of guanidine gum fracturing fluids and allows for mixing of fracturing fluids on the fly, greatly improving the mixing speed and reducing on-site labor intensity.

**Clean polymer fracturing fluid system:** Includes polyacrylamide powder, polyacrylamide suspension, organic titanium and zirconium composite crosslinker, clay stabilizer, cleanout additive, emulsion preventer, demulsifier, and imbibition extractor. Integrated with slick water, low viscosity fluids and cross-linked fluids, this technology applies to the fracturing and stimulation of reservoirs ranging from 80 °C to 160 °C by adjusting the concentration of polymer and cross-linker.

**Temporary plugging agent for fracturing:** Temporary plugging agent in particles, braided balls, and balls. This technology utilizes the refabrication of thermoplastic resins to obtain a series of temperature-controlled, water-soluble temporary plugging agents which can block the perforations and fracture fronts. Temporary plugging increases the stimulated volume and stimulation effect.

## CHEMICALS AND UNIQUE TECHNOLOGIES FOR ACIDIZING AND STIMULATION

**Suspending nano solid retarded acid system:** Nano retarded acid suspension system. This nano retarded acid is an environmental-friendly biopolymer material with zero corrosion and zero pollution. It can release a biological acid under certain temperature conditions, achieving deeply-penetrated acidizing and acid fracturing in limestone reservoirs and delivering good results.

**Biological acid system:** Polyamino acid, phytic acid and malic acid. This acid solution system is mainly made from biological and plant extracts, featuring low reaction speed, low environmental pollution and applicability to the acidizing of limestone containing sandstone and acid fracturing and acidizing of limestone reservoirs.

## CHEMICALS AND UNIQUE TECHNOLOGIES FOR GAS EOR

**Foam agent system:** Conventional foam agents, salt-resistant foam agents, high-temperature foam agents, oil-resistant foam agents, silicone defoamers, crude oil defoamers, and various types of foam stabilizers.

**Viscosity reducer system:** Oil soluble viscosity reducer, water soluble viscosity reducer and foaming viscosity reducer.

**Water shutoff and profile control system:** Shutoff jelly, shutoff gel and shutoff particles.



# OILFIELD TECHNOLOGY INNOVATION



## Digital and Intelligent Applications in Oil and Gas Fields

In order to optimize workforce utilization and enhance operational efficiency and responsiveness, IoT, big data, cloud computing and AI are utilized to enable real-time monitoring, early anomaly warning and remote control of oil or water wells, gathering stations, and oil and gas pipelines.



## Technology for Intelligent Management of DeepOil Equipment

Given the passive operation and maintenance of oilfield equipment, ineffective utilization of operational data, and low operational efficiency, the proposed technology utilizes the software intelligent control platform and hardware devices to realize the intelligent maintenance and management of the equipment. It improves equipment management efficiency, reduces the cost of operation and maintenance and supports the digital transformation of enterprises.

## Green, Low-Carbon Environmental Business in Oil Fields

Including oily wastewater treatment technology and oily sludge treatment technology; processing and utilization of wellhead associated gas and the recovery and reuse of flue gas; a portion of the oil can be recovered to reduce resource waste, decrease greenhouse gas emissions, and lower environmental pollution.



## Pipeline Monitoring Technology

Laser remote sensing monitoring of combustible gases is an effective means of monitoring natural gas pipelines and gas distribution stations. The technology, based on the principle of interaction between laser and gas molecules, can achieve real-time monitoring and leak localization of combustible gas concentration. It features wide applicability, high sensitivity, and rapid response.



## Oil and Gas Field Production and Operations and Maintenance Business

Inspection, monitoring, operation and maintenance, disposal of oil and gas pipelines; cleaning and inspection of oilfield storage tanks; boosting and commingled transportation at oil and gas wells, and gas lift production; technical services for maintenance, renovation and upgrading of surface pipeline systems and gathering stations and storage facilities.



## Coating and Anti-Corrosion Technology

Coating and corrosion protection refers to an anti-corrosion process where a coating is applied to the metal surface to separate it from surrounding medium, thus controlling pipeline corrosion. The coating and corrosion protection business covers internal and external corrosion protection of straight pipes, anti-corrosion coating processing for prefabricated manifolds, special-shaped pipe fittings, and customized products, as well as technical service for fully automatic robotic field joint coating in laying pipelines.





# CUSTOMER APPRECIATION





# 100+

## GLOBAL STRATEGIC COOPERATION & COOPERATIVE CUSTOMERS



East China Petroleum  
Engineering  
Shengli Petroleum  
Engineering



Northwest Oilfield,  
Southwest Oilfield,  
Shengli Oilfield



CCDC, XDEC, GWDC



Tuha Engineering  
Technology Research  
Institute



CNOOC Zhanjiang, CNOOC  
Energy Development, COSL,  
China United Coalbed  
Methane



CNOOC



China University  
of Petroleum



China University  
of Mining and  
Technology



CNNC



China University  
of Geosciences



Southwest Petroleum  
University



GRACO



ADDAX  
PETROLEUM



Weatherford



CNTIC



GAZPROM



1905  
延长石油



GENTING



Eni

Schlumberger



中机公司  
中国机械进出口(集团)有限公司  
CHINA NATIONAL MACHINERY IMP. & EXP. CORP.



HUAWEI



中工国际

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