



**KERUI**  
OILFIELD SERVICES

Add. : 14th Floor, Guangming Tower, No.42, Liangmaqiao Road, Chaoyang District, Beijing, China

Web : [www.keruigroup.com](http://www.keruigroup.com) E-mail : [Globalsales@keruigroup.com](mailto:Globalsales@keruigroup.com)

KRYF-A1-ZH-20-01

MORE  
EFFICIENT  
IN ENERGY  
EXTRACTION

**KERUI**  
OILFIELD SERVICES



ACHIEVING, CREATING AND SHARING , TOGETHER

SHANDONG KERUI OILFIELD SERVICE GROUP CO.,LTD



## CONTENTS

Enterprise Mission, Vision, Values  
Development of the company, QHSE first  
One Center, Four Bases  
Five core business Divisions

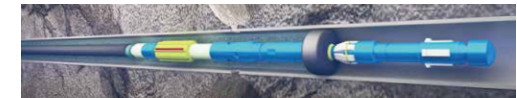
Domestic market layout  
Global market layout  
Technology R&D system  
Global strategic cooperation

Drilling & Workover Services  
Oilfield Stimulation Services (Frac & CT)  
Gas Stimulation Services (N<sub>2</sub>/CO<sub>2</sub>/Natural Gas)  
Oil & gas field Production Integrated Management  
New Energy Development



### Enterprise Mission

**MORE EFFICIENT IN  
ENERGY EXTRACTION**



### Company Vision

**TO BE A FIRST-CLASS ENERGY  
SERVICE COMPANY**



### Company Values

**ACHIEVING, CREATING  
AND SHARING, TOGETHER**



Shandong Kerui oilfield service group is an integrated solution and service provider who is specialized in oilfield stimulation and new energy development. The business lines of the Company comprises oilfield stimulation, reproduction, CBM, shale gas, and geothermal energy development. To be more specific, the Company can deliver customized integrated solution and services of nitrogen and nitrogen foam application, drilling engineering, production engineering, surface engineering, well intervention, fracturing & acidizing, coiled tubing, lateral jetting, oilfield chemical, downhole tools, etc.



## COMPANY VISION

To Be a  
First-class  
Energy Service  
Company



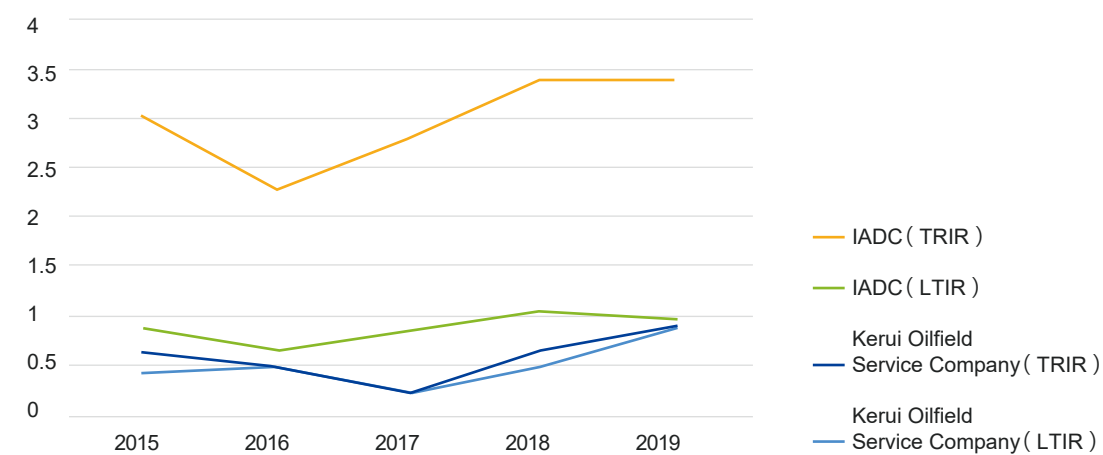
## ENTERPRISE MISSION

More  
Efficient  
in Energy  
Extraction



# DEVELOPMENT OF THE COMPANY, QHSE FIRST

## QHSE Performance



## QHSE Vision

More Safe, Eco-friendly, Efficient in Energy Extraction, Zero-Death, Zero-Pollution, Zero-Complaint, Zero-Loss.

## QHSE Policy

Focus on People: To protect human life and health in any case.

Environment First: To protect environment first during any project execution.

Customer Highest: Customer requirement is our responsibility.

Strive for Excellence: We always strive for outstanding achievement.

## QHSE Commitments

Kerui Oilfield Service Group always believed that QHSE is the core value of company, all employees have responsibility and duty to QHSE. Line managers should communicate, demonstrate and ask all people to abide QHSE manual and Procedures.

## QHSE Certificate



## QHSE management





## COMPANY VALUES

Achieving,  
Creating  
and Sharing,  
Together

# BUSINESS LAYOUT

## ENTERPRISE SPIRIT

Integrity,  
Responsibility  
and  
Excellence



## ONE CENTER , FOUR BASES

### ★ Beijing Center:

Head-office of Shandong Kerui Oilfield Service Group Company

Beijing Ruihuayun Energy Technology Development Co., Ltd. (Integrated management of oil-gas field production)

Beijing YTK Technical Service Co., Ltd. (New energy development technology service)

### ■ Tsingtao Base:

Shandong Ruihengxingyu Petroleum Technology Development Co., Ltd. (Gas stimulation service)

### ■ Xi'an Base:

Shaanxi Richest International Oil & Gas Engineering Technology Service Co., Ltd. (Drilling & Workover Engineering service)

### ■ Chengdu Base:

Sichuan Ruidu Petroleum Engineering Technology Service Co., Ltd. (Fracturing stimulation & Coiled Tubing technical service)

### ■ Dongying Base:

Procurement & Logistic Center

## FIVE BUSINESS DIVISIONS



Drilling & Workover Services



Oilfield Stimulation Services



Gas Stimulation Services



Oil & gas field Production Integrated Management



New Energy Development



COMPANY  
VISION

To Be a First-class  
Energy Service  
Company

# CHINESE MARKET LAYOUT



ENTERPRISE  
MISSION

More  
Efficient in  
Energy Extraction

Market Layout    Drilling    Workover    Fracturing & Coiled Tubing    Nitrogen

## Xinjiang Region

Karamay Oil Field  
Tuha Oil Field  
Tarim Oil Field  
Tahe Oil Field

## East Region

Jilin Oil Field  
Yanchang Oil Field  
Huabei Oil Field  
Dagang Oil Field  
Shengli Oil Field

## West Region

Shanxi  
Changqing Oil Field  
South-West Oil & Gas Field  
Qinghai Oil Field

Over 200 million USD value of sales in china per year from 2017 to 2019

Nitrogen stimulation technology application share in china market is first



# GLOBAL MARKET LAYOUT



## Europe Region

Albania

## Africa Region

Nigeria

Algeria

Gabon

Ethiopia

Chad

Niger

## South America Region

Columbia

Argentina

Ecuador

Over 50 Million USD value in Middle-East, Russia market per year

## Pan-Russian Region

Russia

Kazakhstan

Kyrgyzstan

Turkmenistan

## Middle-East Region

Iraq

Kuwait

Oman

## Pan-Asian Region

Indonesia

Thailand

Market Layout

Drilling

Workover

Fracturing & Coiled Tubing

Nitrogen



## COMPANY VISION

To Be a  
First-class  
Energy Service  
Company



## ENTERPRISE MISSION

More  
Efficient in  
Energy  
Extraction



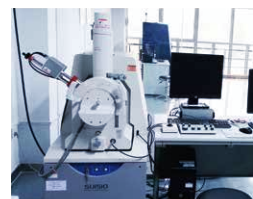
## TECHNOLOGY R&D SYSTEM

Kerui Oilfield Service Group Company have 4 R&D laboratories and 7 Sci & Tech institutes (Foam Fluid Technology Research Center, Oilfield Stimulation Technology Research Center, Well Completion Technology Research Institute, Stimulation Technology Research Institute, Drilling & Workover Technology Development Department, Oil & Gas Development Technology Institute, CBM Integrated Development Technology Center). The Company R&D engineers 78 people, including 49 Chinese engineers and 29 Global engineers, 25% engineers are Ph.D and M.S.. Company have a number of technology patents and Science Prizes, set up long-term strategy partnership with dozens of famous University and Institute. Kerui Oilfield Service Group Company have good experience in exploration, development, production full life-cycle Sci & Tech and R&D, will provide more and more high quality & efficient product and service for customer.

### Four R&D Laboratories



Oilfield Stimulation  
Laboratory



Unconventional Oil & Gas  
Laboratory



South-West University of  
Petroleum Cooperate  
Laboratory



Oilfield Chemistry  
Laboratory

## Patents & Technology

With technology R&D and accumulation of years, Kerui Oilfield Service Group Company have 72 patents, including 17 for inventions, 55 for utility models.



## Achievement Awards

Kerui Oilfield Service Group Company mainly have the following Sci. & Tech awards:

- Second Prize for Sci & Tech Development of the Ministry of Education(2019)
- Frist Prize for Sci & Tech Development of the Sinopec Association(2017)
- Prize for Sci & Tech Development of Dongying City(2016)
- Jinqiao Prize for Sci & Tech Development of the Shandong Province(2013) etc.



## Cooperation of University & Company

Company have close technology cooperation relationship with over 10 energy university and institute, including China University of Petroleum, South-West University of Petroleum, China University of Mining and Technology etc. Company also actively participate in Province/Country class R&D project and some other type technology cooperation with partners.





## GLOBAL STRATEGIC COOPERATION

### Over 46 Global Strategic Partners



Huadong Petroleum  
Engineering Company



Shengli Petroleum  
Engineering Company



Tuha Engineering  
Technology  
Research Institute



CNOOC Enter  
Tech-Drilling &  
Production CO.



CNNC



Shanxi Geology  
and Mineral  
Company

### Over 100 Global Customers



**Schlumberger**





# DRILLING & WORKOVER SERVICES

**KERUI**  
OILFIELD SERVICES

MORE  
EFFICIENT  
IN ENERGY  
DEVELOPMENT



## Introduction

We focus on integrated international drilling and workover engineering services. The company has the capabilities of integrated wellbore engineering services such as pre-drilling, drilling, directional, mud, stimulation, completion, and other wells, which can meet the needs of customer diversity. The business covers more than 10 countries and regions, including China, South America, the Middle East, Africa, Pan-Russia and other regions.

## Main Business Scope



Drilling and workover service



Directional well service



Drilling and completion  
fluid service



Cementing service

## Service Capabilities

**1.2 million meters** cumulative drilling footage.

**6000 well-time** cumulative workover operations.

The deepest well depth of **5896 meters** (Indonesia drilling project).

**118mm** minimum sidetracked hole (Tuha Oilfield).

**105 °** maximum well deviation (Liaohe Oilfield).

The longest horizontal section of **2005m** (Yanchang Oilfield).

**175 °C** historical highest formation temperature (Iraq).

## Established Technique

- Complete process and technology for drilling and completion of oil and gas wells
- Conventional directional and horizontal well drilling technology
- Various types of drilling fluid service technology
- Ultra-high temperature (greater than 150 °C) geothermal well drilling, drilling fluid technology and technology
- Horizontal well geosteering and near-bit service technology
- Various minor repairs, overhauls, sidetracking processes and technologies for oil and gas wells

Shanxi Richest International Oil & Gas Engineering Technology Service Co., Ltd.

Add : Hengshi International Center, Fifth Fengcheng Road, Jingkai District, Xi 'An, Shaanxi, China

Web: [www.keruigroup.com](http://www.keruigroup.com) Email: [richestsales@keruigroup.com](mailto:richestsales@keruigroup.com)

Tel : +86-13772094610 ( Mr. Feng )



To know more information  
Please pay attention  
Kerui Oilfield Service  
WeChat public account

## Typical Case



### Iraq

Drilling and workover services (2014-2020)

3x2000HP drilling rig, 1x1000HP workover rig,

4x750HP workover rig,

Total: 12 wells were drilled and 76 workovers were completed.

(As of early 2020)



### Indonesia

Integrated drilling services (2014-2020)

1X3000HP drilling rig, 1X2000HP drilling rig,

2X250HP workover rig,

Total: 7 exploration wells were drilled and 257 workovers were completed.

(As of early 2020)



### China Tuha Oilfield

Well test, injection well test, reperforate, workover, pump inspection, maintenance, hot wash etc.  
(2015-2020)

10x450 workover rig, 2x550 workover rig,

Total: 2,700 workovers have been completed.

(As of early 2020)

## Commendatory Letter



### China Tuha oilfield workover service project

Excellent partner of the year (2015)

Excellent service team of the year (2016)

Advanced annual well control team of the year (2017)



### SCP Integration drilling service project

Commendatory Letter from Schlumberger Changhe Oil Company (2019)



### Iraq Zubair oilfield workover service project

4th anniversary of continuous production safety award (2019)





**KERUI**  
OILFIELD SERVICES

MORE  
EFFICIENT  
IN ENERGY  
DEVELOPMENT



## Introduction

We focus on the integration of fracturing and coiled tubing stimulation technology and engineering services, and strive to become the most competitive stimulation service company in the field of tight oil and gas, shale gas and coalbed methane in China, and have the ability to carry out stimulation integrated turnkey services in Pan Russia, the Middle East, the Americas and Africa, and strive to become an internationally influential stimulation service provider.

## Main Business Scope



Fracturing stimulation technology



Coiled tubing stimulation technology



Integrated stimulation service

## Service Capabilities

### Fracturing:

**150000HHP** total installed water horsepower.

Annual service capacity exceeds **1800 layers**.

Cumulative operations exceeded **8500 layers**.

Minimum operating temperature **-40°C**(Nyakan, Russia).

Up to **38** fracturing segments at one time (Southwest).

### Coiled tubing:

**13 sets of 100,000LBS** and above equipment.

Annual service capacity exceeds **500 wells**.

Cumulative operations exceeded **2200 wells**.

Undertook the dragging fracturing of coiled tubing of the **first coalbed methane well** in China (Fukang, Xinjiang).

Operated the deepest and most segmented dragging fracturing in China with **5800m** and **35 segments** (Karamay).

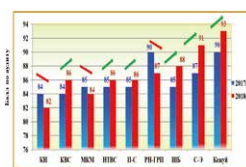
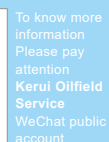
## Established Technique

•**Laboratory evaluation capacity:** Regional geological evaluation, reserves value evaluation, fine reservoir description, residual potential analysis, oil field stimulation capacity evaluation, productivity profile test and production test analysis

•**Fracturing technology:** conventional / unconventional fracturing stimulation technology, old well repeated fracturing stimulation technology, temporary plugging and turning to fracturing stimulation technology, viscosity controlled slick water fracturing transformation technology, online mixing and preparation of clean fracturing fluid technology, factory fracturing stimulation integrated service

•**Coiled tubing technology:** Optical fiber logging technology service, composite bridge plug drilling and grinding technology service, soluble bridge plug drilling and grinding technology service, cement plug drilling and grinding technology service, complex well condition salvage technology service, standardized speed pipe string operation technology service, dragging fracturing operation technology service, absorption well drilling composite bridge plug technology service, coiled tubing unfreezing technology service, casing damaged well drilling soluble bridge plug technology service, casing damaged well drilling composite bridge plug technology, casing absorption well dragging fracturing technology

Tel : +86-18054651553 ( Mr. Cai )







**KERUI**  
OILFIELD SERVICES

MORE  
EFFICIENT  
IN ENERGY  
DEVELOPMENT



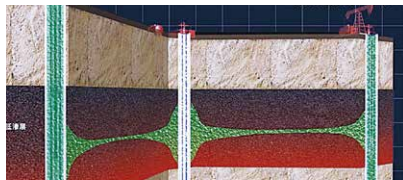
## Introduction

We provide nitrogen & nitrogen foam, carbon dioxide, nature gas technology service to customer for stimulation and EOR, widely used in most oil fields of China and South America, Middle East, Pan-Russia, Europe, Africa regions etc. Company multiple won the Achievement Awards for Sci & tech development of the Ministry of Petroleum and Chemical Industry and the Ministry of Education.

## Main business scopes



Nitrogen and Nitrogen Foam Stimulation Technology and Services



Carbon dioxide / natural gas injection and technical services



Oilfield chemicals sales and technical services

## Service capabilities

**20 years** for construction experience in the field of gas stimulation.

**100+** Nitrogen service teams.

**110+** Total number of equipment.

**99.9%** High purity PSA nitrogen generation equipment.

**70MPa** The world's first ultra-high pressure nitrogen generation equipment.

**1.2bscf** Annual gas injection capacity.

## Technology R & D System

**20+** R&D teams.

**40%** Master 's degree or above Ph.D and M.S..

**60%** Middle and Senior Engineers.

**40%** Researchers with more than 10 years experience.

**3%** R&D investments.

**25** Scientific research achievements.

**12** Patented technologies.

## Core Superior Technologies

### EOR Technologies:

- Nitrogen energization & stimulation technology
- Nitrogen foam oil displacement technology
- Nitrogen / nitrogen foam assisted thermal recovery technology
- Heavy oil viscosity reduction cold recovery technology
- CO<sub>2</sub> huff and puff / CO<sub>2</sub> flooding technology

### Assistive Technologies:

- Nitrogen foam sand-washing technology
- Discharge water gas recovery process technology
- Nitrogen displacement/ sweep technology
- Natural gas pressurize reinjection technology
- Condensate gas reservoir cyclic gas injection technology
- Nitrogen unbalanced drilling technology

Shandong Ruihengxingyu Petroleum Technology Development Co., Ltd.  
 Add : 21th Floor, International Finance Center, No. 485, Changjiang Middle Road,  
 West Coast New District, Tsingtao, Shandong, China.  
 Web : [www.keruigroup.com](http://www.keruigroup.com) Email : [rhxysales@keruigroup.com](mailto:rhxysales@keruigroup.com)  
 Tel : +86-18654643585 ( Mr.Chen )



To know more  
information  
Please pay  
attention  
Kerui Oilfield  
Service  
WeChat public  
account

## Typical Case



### Tahe Oilfield, China

Nitrogen energization & stimulation technology, Single well huff and puff,  
 Well group gas drive ( 2012-2020 )  
 70MPa nitrogen gas generation equipment,  
 The average annual oil increase is about 700,000 tons.  
 ( As of early 2020 )



### Tuha Oilfield, China

Nitrogen foam flooding tertiary oil recovery technology in viscous oil reservoir,  
 Nitrogen foam oil displacement technology ( 2014-2020 )  
 Cumulative oil increase exceeds 100,000 tons,  
 Increased oil recovery by 10%.  
 ( As of early 2020 )



### Albania

Heavy oil viscosity reduction cold recovery technology ( 2017-2020 )  
 Nitrogen + D agentia cold production technology,  
 Effective rate is above 85%,  
 More than 800 tons of oil increase in average single well cycle.  
 ( As of early 2020 )

## Customer Appreciation



### China Energy News

《Kerui' s Nitrogen generation and injection technology has become a new benchmark in the industry》  
 ( 2014 )



### Oil Daily

《Nitrogen stimulation technology of Kerui oilfield service group leads the world》  
 ( 2016 )



### CPCIA

Kerui oil field service group won the first prize of scientific and technological progress  
 ( 2017 )





**KERUI**  
OILFIELD SERVICES

MORE  
EFFICIENT  
IN ENERGY  
DEVELOPMENT



## Introduction

Committed to first-class technology, high quality service, dedicated to the domestic and foreign oil and gas development business to provide integrated and efficient technical services. At present, it has established long-term strategic partnership with more than 20 domestic research units, technology companies and equipment manufacturers to provide integrated technical solutions for efficient development of oil and gas fields at home and abroad with first-class technology and high-quality service.

## Main Business Scope



Engineering Services



Oilfield Facility O&M



Oilfield Production Management

## Service Capabilities

More than **40 engineers** and experts with 10+ years of relevant experience.

**10+** global service construction team.

**2** comprehensive laboratories.

**10+** supporting software for oilfield development.

More than **20** external strategic partners.

**2** total operation and management projects of oil and gas field in operation.

## Established Technique

### Oil and Gas Field Stimulation Technology:

- Tertiary oil recovery
- Water injection development
- Heavy oil exploitation

### O&M Technology of Oilfield Facilities:

- Surface oil and gas system operation
- Surface equipment maintenance and repairing
- Inspection and operation of gathering and transportation pipeline

### Comprehensive Evaluation Technology of Block:

- Seismic data processing, interpretation and evaluation
- Fine geological reservoir researching
- Formulation of oilfield development plan

Beijing Ruihuayun Energy Technology Development Co., Ltd.

Add : 15th floor, guangming building, 42 liangmaqiao road, chaoyang district, Beijing, China

Web: [www.keruigroup.com](http://www.keruigroup.com) Email: [rhysales@keruigroup.com](mailto:rhysales@keruigroup.com)

Tel : +86-18510768118 ( Mr. Xu )



To know more information  
Please pay attention  
Kerui Oilfield Service  
WeChat public account

## Key Business Introduction



### Oil Extraction Technology

**Scope:** Design and execution of artificial lift, water shutoff, profile control, paraffin removal and sand control, oilfield chemical etc.

**Resource:** 20+ engineering professor, 10+ professional software, 6 field operation teams, 1 chemical production base, 300+ related engineer.

**Performance:** Completed more than 20 projects in Middle East, Africa, South America, Russia and other countries and regions.



### Maintenance and Repairing of Oil and Gas Field Equipment

**Business:** key large equipment PM PDM CM, pipeline pigging and intelligent inspection.

**Resources:** 20+ key equipment maintenance manual, cooperation alliance with multiple equipment manufacturers, 2 turbine experts, more than 20 maintenance engineers, pipeline intelligent inspection tools, 1 set of interpretation and analysis software, 3 on-site service teams.

**Performance:** engaged in oil and gas field equipment maintenance and pipeline intelligent inspection services in Sudan, Gabon, Nigeria and the Middle East.



### Field Operation Management

**Business:** Risk Production Increment, oilfield operation, reservoir and geology research support.

**Resources:** 5 sets of standard technical specifications, 1 set of production management system, a multi-professional engineer team and experienced management team.

**Performance:** South American oilfield production and operation project, consisting of 6 platforms, 144 Wells, production around 80000bbl/d.





**KERUI**  
OILFIELD SERVICES

MORE  
EFFICIENT  
IN ENERGY  
DEVELOPMENT



## Introduction

We provide integrated solutions and services for CBM blocks such as drilling engineering, fracturing and acidizing, coiled tubing, workover operations, radial drilling, CBM well production, high-energy nitrogen jets, nitrogen and foam applications, ultrasonic plugging, surface engineering.

## Main Business Scope



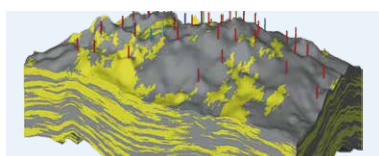
Drilling workover, directional engineering technical services



CBM well fracturing, coiled tubing technical service



Increase production and efficiency services



Geological research and analysis



Integrated operation and maintenance management services

## Service Capabilities

**Rich experience in CBM drilling and mining services** in Shanxi, Xinjiang and other blocks.

Comprehensive evaluation of reservoir by **professional laboratory**.

More than **10** experts in CBM industry.

Master industry-leading technologies such as **CBM well dynamic monitoring system**.

## Established Technique

- Integrated CBM drilling and completion technology
- Short radius sidetracking stimulation technology
- Fracturing technology with centrifugal pump
- Design of cluster wells and horizontal wells
- Fast drilling technology of cluster well
- Geosteering technology for horizontal wells in thin seam
- Efficient plugging drilling fluid technology

Beijing YTK Technical Service Co., Ltd.

Add : 15th Floor, Guangming Building, No.42, Liangmaqiao Road, Chaoyang District, Beijing, China

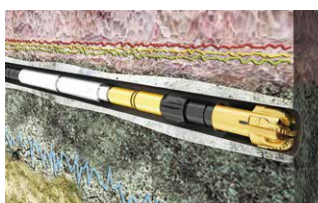
Web : [www.keruigroup.com](http://www.keruigroup.com) Email : [ytkenergy@keruigrup.com](mailto:ytkenergy@keruigrup.com)

Tel : +86-18624502804 ( Mr. Tian )



To know more information  
Please pay attention  
Kerui Oilfield Service  
WeChat public account

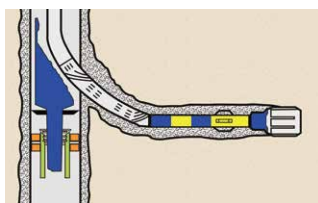
## Key Business Introduction



### Integrated CBM drilling and completion technology

**Service description:** It can provide engineering technical services of drilling, geological guidance, cementing, mud logging, fracturing, horizontal well section modification, drainage and production automation management.

**Technical advantages:** It can meet the geological team, engineer team and equipment capabilities required for integrated services of single-branch horizontal wells, multi-branch horizontal wells, U-shaped wells, and deviated vertical wells, and can independently complete integrated projects.



### Short radius sidetrack horizontal well service

**Service description:** It can provide the design and construction of sidetrack horizontal wells with a slope of less than  $2^{\circ}$  /m, and has complete supporting completion, drainage and coal seam restructuring solutions.

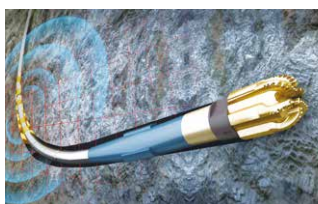
**Technical advantages:** The slope can be up to  $2^{\circ}$  /m, the side can be drilled in the 5" casing, and the borehole can reach 110mm. With the self-developed geosteering equipment, it can effectively ensure the drilling rate of the target layer in the horizontal section.



### Fracturing services

**Service description:** It can provide fracturing services for horizontal wells and deviated vertical wells, as well as various types of horizontal well segmentation transformation processes, including coiled tubing dragging staged fracturing, bridge plug perforation continuous staged fracturing, and hydraulic injection Segmented fracturing, directional perforating fracturing.

**Technical advantages:** the unique high-pressure centrifugal pump fracturing device, supporting the plunger pump fracturing device, can complete the fracturing construction of the CBM well "high displacement, medium and low construction pressure" process characteristics at a lower cost.



### Geosteering service

**Service description:** Provide geological steering engineering construction services for the coalbed methane, tight gas and shale gas industries, including conventional steering, near-bit steering, high-temperature fixed steering ( $>175^{\circ}\text{C}$ ), short-radius sidetracking horizontal well steering and other engineering services.

**Technical advantages:** Excellent geological team, instrument engineer and engineering construction team, familiar with geological attributes such as coal seams, tight sandstone layers, shale, and have rich on-site service experience.



### CBM production stimulation service

**Service description:** It can provide high-energy nitrogen jet plugging and stimulation, ultrasonic plugging and stimulation, high-energy gas fracturing and stimulation, nitrogen foam plugging and stimulation.

**Technical advantages:** excellent geological team and engineering team, equipped with complete construction equipment, can provide a more targeted production increase solution according to the cause of wellbore productivity failure.