



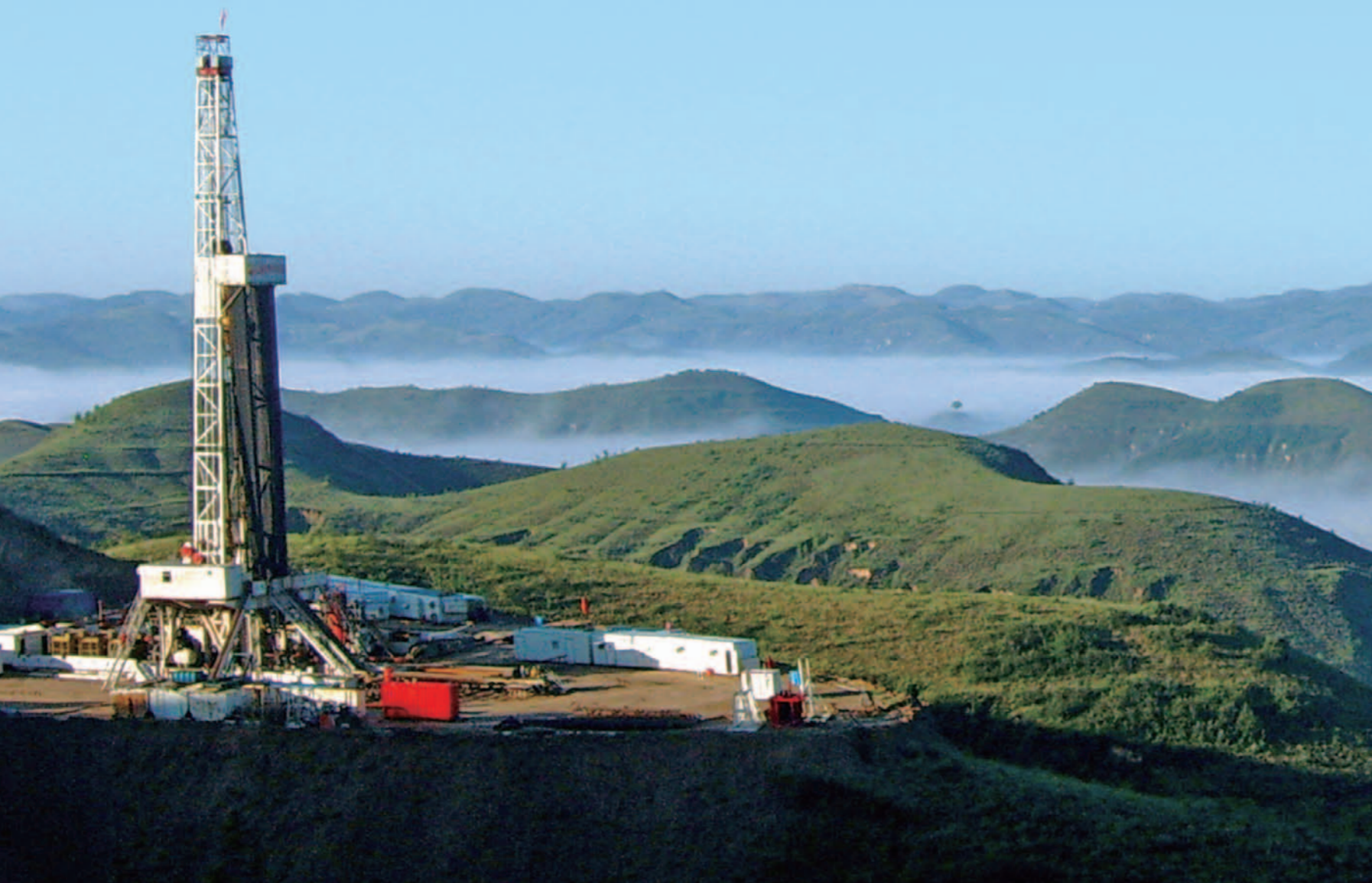
**ENERGIZE · HARMONIZE · REALIZE**

**China National Petroleum Corporation**  
[www.cnpc.com.cn](http://www.cnpc.com.cn)

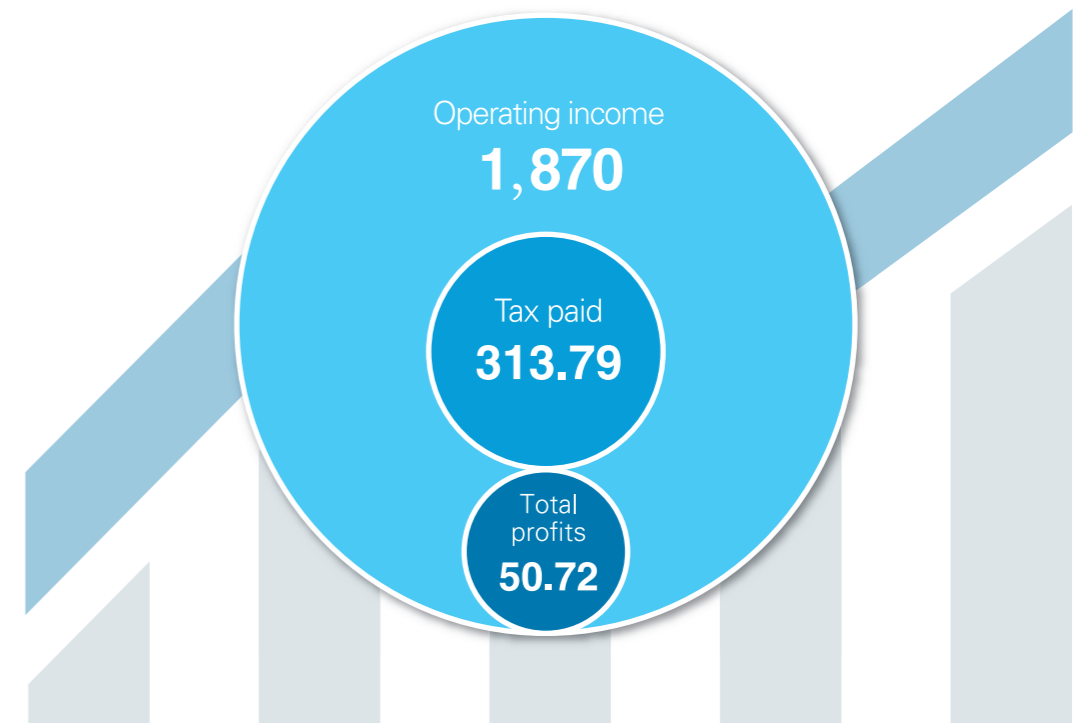
**CNPC**



CNPC is an integrated international energy company, with businesses covering oil and gas operations, oilfield services, engineering and construction, equipment manufacturing, financial services and new energy development.



## 2016 Operation Highlights



Unit: billion RMB yuan



# CNPC is the world's 3rd largest oil company based in China and plays a leading role in China's petroleum industry.

We integrate the business portfolios of both an oil company and an oilfield service provider, with operations covering the entire oil and gas industry value chain.

More than fifty years of development and practice have made CNPC capable of tackling exploration and development difficulties under various geological and geographic complexities through technological innovation.

In China, we operate 14 oil and gas fields and 26 refineries. Our crude production and natural gas production account for about 50% and 70% of the nation's total respectively.

## E&P Operations in China (2016)

649.29 mmt



Newly proven oil in place

541.90 bcm



Newly proven gas in place

105.45 mmt



Oil production

98.11 bcm



Gas production



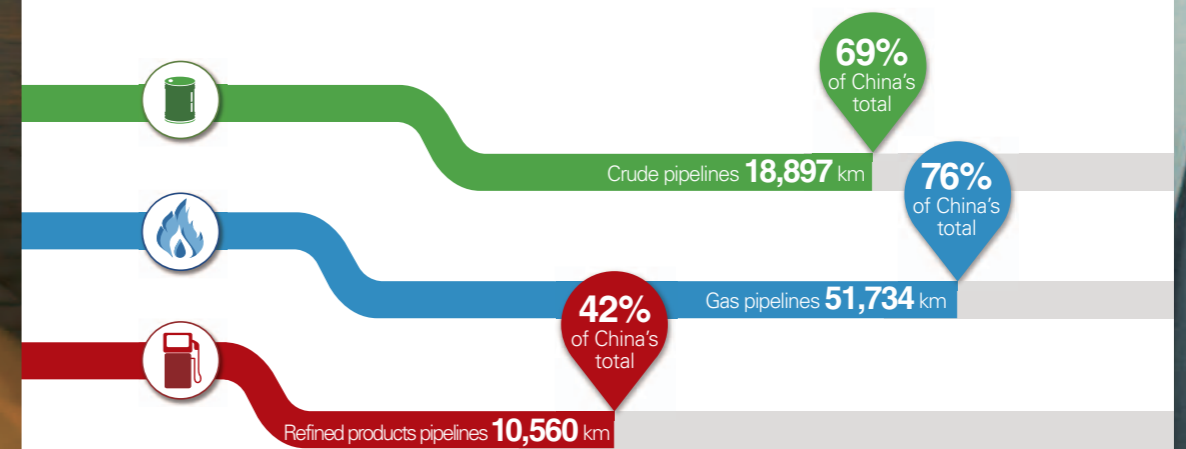




## Pipelines & Transportation in China (2016)

We have built and now operate a 81,191-km long pipeline network, including gas trunk lines such as the West-East, Shaan-Jing, Zhongxian-Wuhan, Sebei-Xining-Lanzhou and Zhongwei-Guiyang supplying natural gas to 32 provinces, municipalities and autonomous regions as well as Hong Kong SAR.

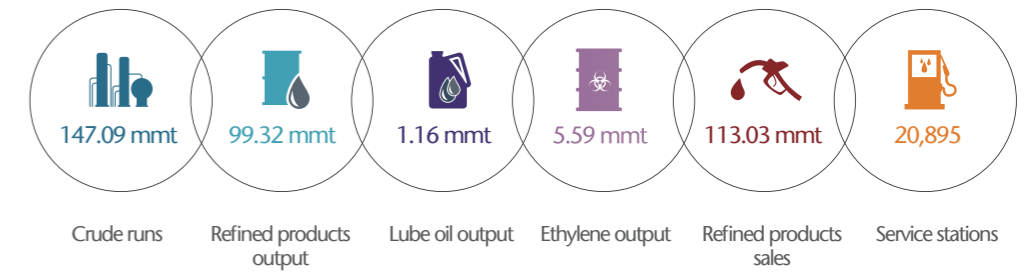
These pipelines are under the control of our Oil & Gas Pipeline Control Center in Beijing for integrated dispatch and monitoring. The center is one of such in the world that manages the operation of most long-distance oil and gas pipelines with the most complete transportation media.







## Refining, Chemicals & Sales in China (2016)



Our 20,895 service stations nationwide provide quality oil products and services to end users.

We have built three LNG terminals in Jiangsu, Dalian and Tangshan. Additionally, we are making progress in exploring more unconventional gas resources such as CBM, tight gas and shale gas.



# International Operations

- ▶ Oil and gas operations in 37 countries
- ▶ Shares in 9 refineries
- ▶ Oil and gas pipelines over 14,500km



Our more than 1,000 crews provide technical services in geophysical prospecting, well drilling, well logging and mud logging in 50 countries.

Our onshore geophysical prospecting services take the largest share in the international market.

We are world's renowned engineering construction contractor in the oil industry. Our petroleum materials and equipment are sold in 82 countries.



## Central Asia-Russia

We operate in Kazakhstan, Turkmenistan, Uzbekistan, Azerbaijan, Russia and Kyrgyzstan, with businesses covering exploration and development, oil and gas storage and transportation, refining and marketing, oil and gas trade, oilfield services, and construction contracting. We have built and put into operation the Central Asia-China Gas Pipeline, Russia-China Crude Pipeline, and Kazakhstan-China Crude Pipeline.



Natural Gas Processing Plant at Amu Darya in Turkmenistan

## Africa

In Tunisia, Algeria, Niger, Chad, Nigeria, Mozambique, Sudan, and South Sudan, we are engaged in oil and gas exploration and development, storage and transportation, refining and petrochemicals, refined products marketing, oil and gas trade, oilfield services, and construction contracting. We have built and put into operation Khartoum Refinery in Sudan, Zinder Refinery in Niger, N'Djamena Refinery in Chad, and SORALCHIN Refinery in Algeria, with the total processing capacity of eight million tons per year.



Gas pipeline in Tanzania



Khartoum Refinery in Sudan





## The Middle East

Our oil and gas operations in Iraq, Iran, Oman, Qatar and UAE include exploration, oilfield development services, refined products trade, oilfield services, and construction contracting.



Halfaya Project in Iraq



Offshore Operation in Peru

## Americas

We operate in Venezuela, Ecuador, Peru, Brazil, Columbia and Canada, with businesses covering oil and gas exploration and development, oil and gas processing, refining, refined products trade, oilfield services, and construction contracting.







Singapore Refinery



### Three International Oil and Gas Operation Centers

### Asia-Pacific

In Indonesia, Myanmar, Thailand, Mongolia, Singapore, Japan and Australia, we are engaged in oil and gas exploration and development, refining, refined products trade, oilfield services, and construction contracting. We have built and put into operation the Myanmar-China Oil and Gas Pipelines.

### Five Cross-border Oil and Gas Supply Channels

- Central Asia-China Gas Pipeline
- Kazakhstan-China Crude Pipeline
- Russia-China Crude Pipeline
- Myanmar-China Oil and Gas Pipelines
- Offshore LNG



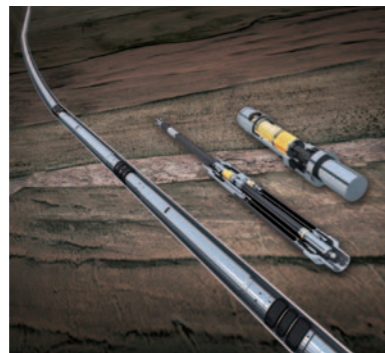
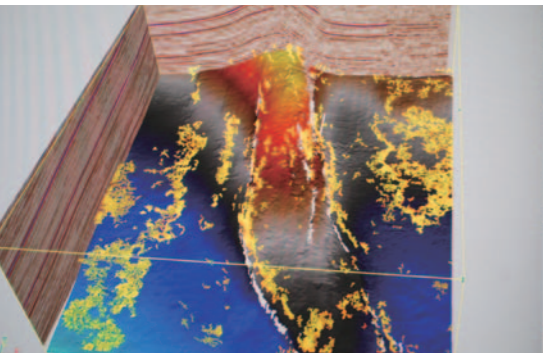
Madaya Island Terminal of the Myanmar-China Oil & Gas Pipelines



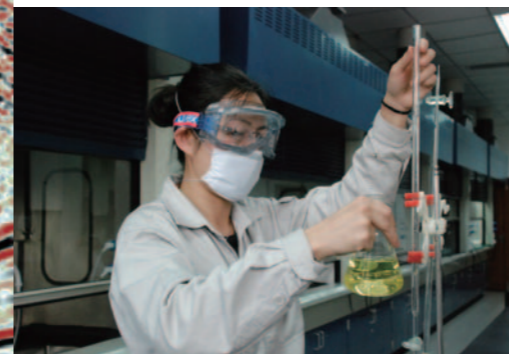
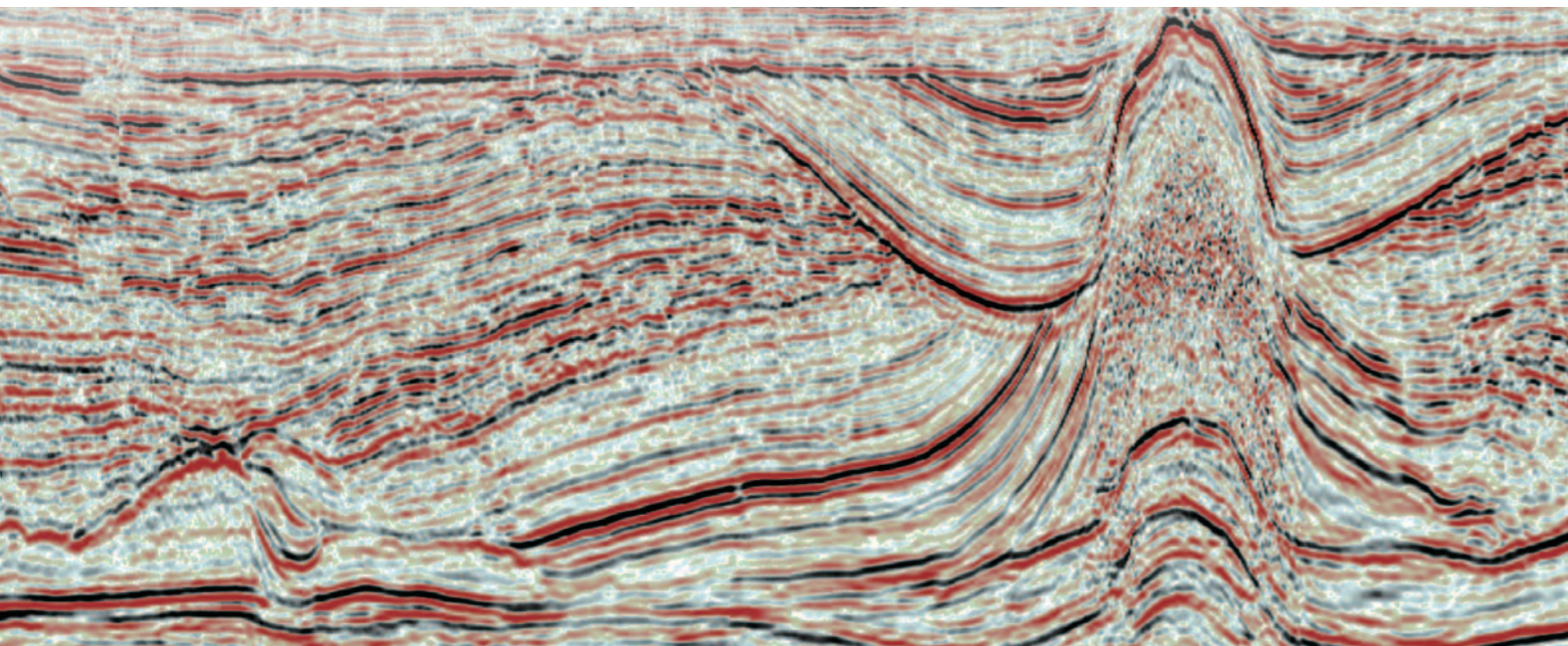
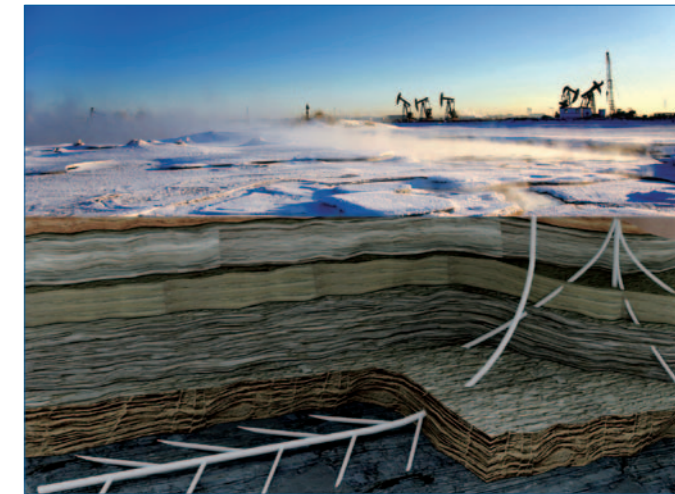


# Advancing with Technology

As an international energy company embracing technology and innovation, CNPC has long been committed to researching and developing sophisticated and practical technologies and solutions in oil and gas exploration and development to boost both reserves and production.



Facing with the end of 'easy' oil and gas, we have to turn to much tougher targets to meet ever increasing energy demand. We focus our R&D efforts on finding and tapping subtle and complex reservoirs, enhancing recovery of mature oilfields, unlocking unconventional hydrocarbons, improving operational safety, and mitigating impact to the environment.





## Exploration and Production

- ⦿ Better understanding on hydrocarbon accumulation geology
- ⦿ Redevelopment of mature oilfields
- ⦿ EOR by chemical flooding in high-water-cut reservoirs
- ⦿ Thermal production of mid-to-deep heavy oil
- ⦿ Development of ultra-deep and ultra-high pressure condensate gas reservoirs
- ⦿ Horizontal drilling, completion and staged fracturing for efficient development of ultra-low permeability reservoirs

## Refining and Chemicals

- ⦿ Inferior heavy oil processing
- ⦿ FCC gasoline hydrodesulphurization
- ⦿ Light gasoline etherification
- ⦿ Synthetic ammonia and urea production with natural gas as feedstock

## Oilfield services

- ⦿ Wide-azimuth, broadband and high-density seismic prospecting
- ⦿ Gas-based underbalanced drilling
- ⦿ Precise pressure controlled drilling
- ⦿ Ultra-deep well drilling
- ⦿ Multi-stage fracturing with coiled tubing during horizontal drilling
- ⦿ Cementing with huge temperature differences
- ⦿ Imaging logging

## Equipment manufacturing

- ⦿ KZ28LFV3 low-frequency vibroseis
- ⦿ 12000-m drilling rig
- ⦿ CP-300 jack-up rig
- ⦿ Coiled tubing unit
- ⦿ X80 large deformation-resistant welded pipe
- ⦿ Top drive casing running device
- ⦿ Heavy-duty diesel engine
- ⦿ U-shaped RAM BOP
- ⦿ Subsea Xmas-tree





*Operate in a responsible manner*  
*Pursue sustainable growth*

We strive for harmonious relationships between operation and safety, energy and the environment, corporate and community interests, and employers and employees.

We are committed to finding more clean energy, maximizing resource utilization, and minimizing environmental impact.

CARING FOR ENERGY, CARING FOR YOU