Environmentally Friendly and Green Demonstration

Clean Energy, Chinese Dream

Community Communication and Harmonious Development

Corporate Governance and Safe Operations

SINOPEC CORP.

REPORT ON ENVIRONMENT, SOCIETY, GOVERNANCE IN SHALE GAS DEVELOPMENT

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The discovery and development of the Fuling shale gas field, China’ s first-ever large-scale shale gas field, symbolizes a significant strategic breakthrough in shale gas development in China and a much earlier entry than scheduled into large-scale commercial development, which would otherwise have taken 10 years according to the original plan.

During this process, Sinopec Corp. has achieved a number of major breakthroughs in its resource evaluation and drilling technology as well as in R&D and in the manufacturing of fracturing equipment. The successful implementation of these advances in Fuling gives us great confidence in our ability to extend our new expertise to other projects around the nation. Given China’ s abundant shale gas resources, we believe these breakthroughs will strongly support and accelerate the implementation of China’ s shale gas strategy, and significantly increase the supply of green energy, while optimizing the structure of energy consumption and promoting energy conservation, emissions reduction and air quality control in China.

Fu Chengyu
Chairman of Sinopec Corp.
Address at Sinopec Corp. 2013 Annual Result Conference in March, 2014

SINOPEC CORP.

Preface

The large-scale commercial development of North American shale gas has set off a revolution in global energy, bringing forward a host of new issues in the field of environment, society and governance (ESG). Many international investment institutions and rating agencies have initiated research on oil and gas companies' ESG performance related to shale gas development in order to improve both ESG and information disclosure.

As a leader of shale gas exploration and development in China, and following our March 2014 announcement of the development plans for our major shale gas discovery in Fuling, Sinopec won the 2014 International Pioneer Award at the Fifth World Shale Oil and Gas Summit. Many domestic and overseas stakeholders have communicated with us about our progress, hoping to learn more about our ESG performance in shale gas development.

We present this report to help our stakeholders better understand our progress in this field. We hope that your close reading of the report and your feedback to us will help us further improve our ESG performance, and that you continue to follow and support the development of Sinopec Corp.

01

Clean Energy, Chinese Dream

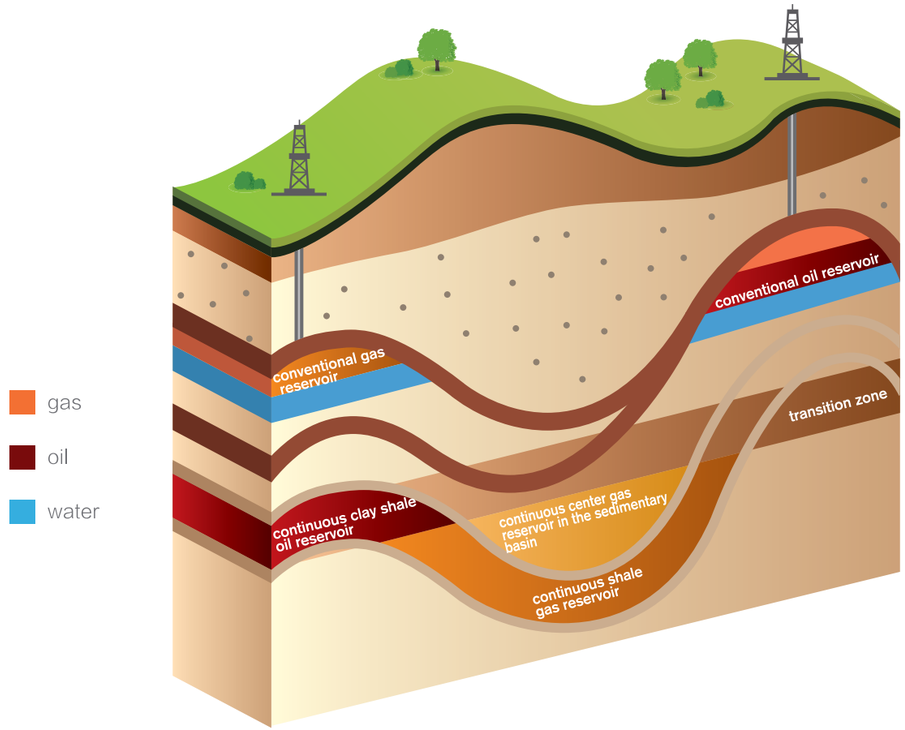
The Shale Gas Revolution

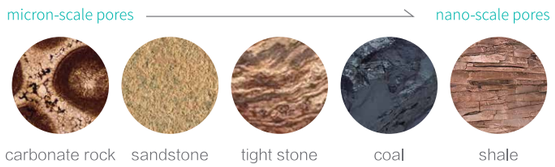
1 What is Shale Gas?

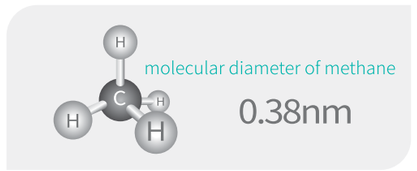
Shale gas is an abundant unconventional source of natural gas trapped as adsorbed or free states in shale gas formations thousands of meters underground. Its content is mainly methane, a clean and highly efficient energy source and chemical feedstock.

Compared with conventional oil and gas resources, shale gas has a very different accumulation mechanism, occurrence state and distribution pattern, and its exploration and development requires special technology. Shale gas formations are self-generated, self-accumulated and self-sealed, in effect functioning as the source, reserve and trap of a petroleum hydrocarbon reservoir system. The hydrocarbons are held in shale formations and mainly adsorbed onto the organic material and rock particle surfaces, with no migrations, or only minor primary migrations, of generated petroleum hydrocarbons. Normally, the wide distribution, relative thickness and high total organic content of black high-carbon-content clay shale source rock present the best conditions for the formation of shale gas in the sedimentary basin.

Usually, conventional petroleum resources must undergo a process of generation, accumulation and trapping, with biological catalysis, thermal degradation and thermal cracking of the source leading to the generation of petroleum hydrocarbons. The hydrocarbons then progress via primary and secondary migrations into the reservoir stratum due to its superior porosity and permeability, thus forming the hydrocarbon reservoir. Formation of the reservoir depends on the presence above it of an impermeable stratum, also known as the seal, to prevent hydrocarbons from escaping.







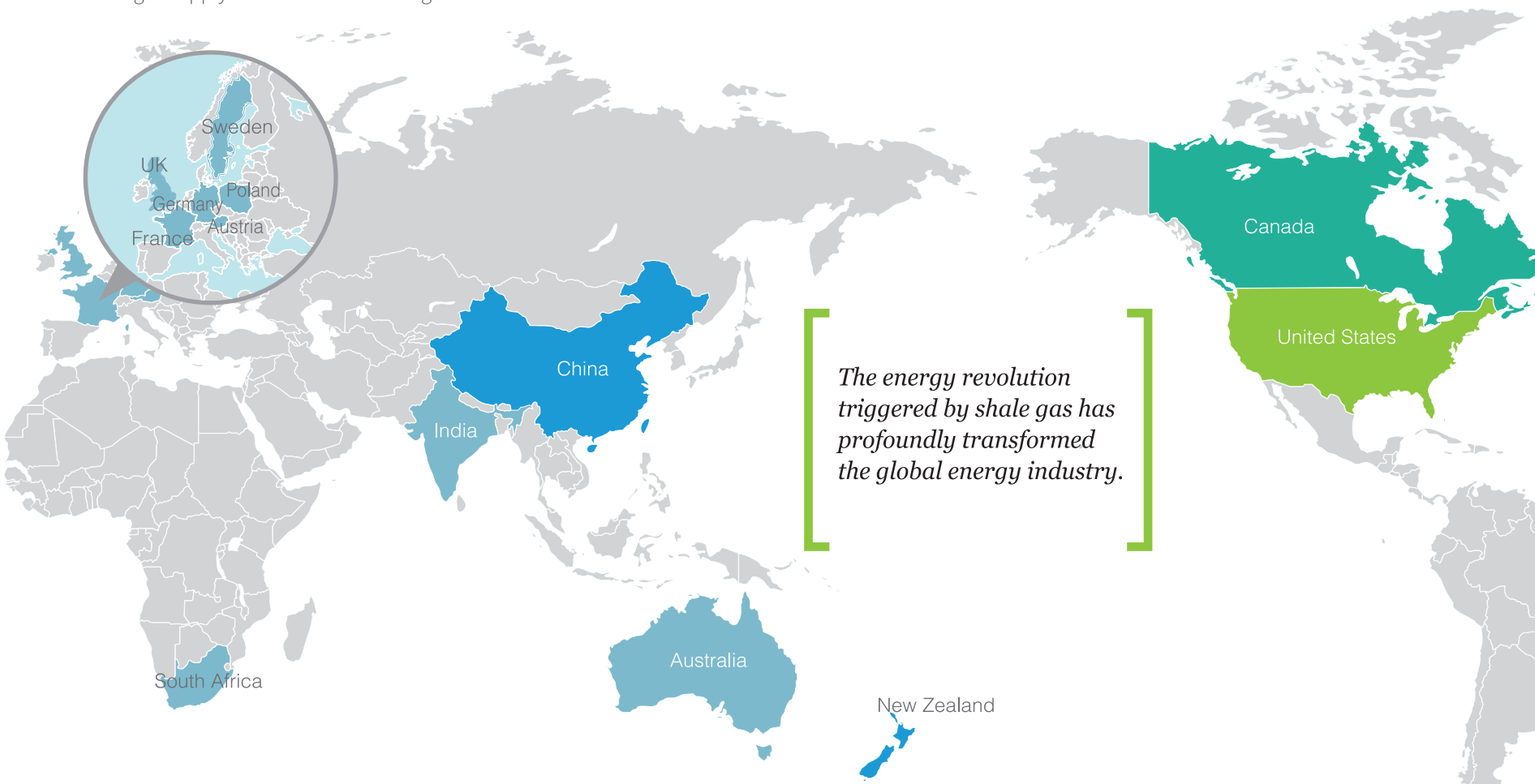
Micro Nano-scale Shale Pores and the Comparison of Different Objects

Continuous and even distribution and abundant resources are two major distinguishing characteristics of shale gas reservoirs. However, the production of shale gas is difficult and requires sophisticated techniques. Achieving commercial production capacities for shale gas necessitates the implementation of horizontal drilling and hydraulic fracturing technologies to create fractures, or networks, in shale formations, also known as artificial gas reservoirs.

> *Under the Jaoshiba area, the shale formations are just like a duvet, with abundant shale gas wrapped inside.*
>
> Mr. Xia Weishu
> Sinopec Exploration Company, Geologist

2 Shale Gas Development Overseas

Shale gas was first extracted in the United States nearly 200 years ago. But it was not until the 1970s that the country began to value and mass-develop shale gas, achieving commercial production by the late 1990s. Since the start of this century, due to breakthroughs in exploration and development theory, engineering technology and large-scale production, the U.S. shale gas industry has grown with increasing speed. Production has increased sharply every year, with the annual average growth rate exceeding 25% in the last 10 years. In 2013, the annual production of U.S. shale gas reached 302.5 billion cubic meters (bcm). The rapid growth of shale gas production put an end to the decline of U.S. natural gas production, and by 2009 the United States was ahead of Russia as the world's largest gas producing country. The U.S. government's Energy Information Administration predicts that by 2035, 49% of the U.S. natural gas supply will come from shale gas.



The energy revolution triggered by shale gas has profoundly transformed the global energy industry.

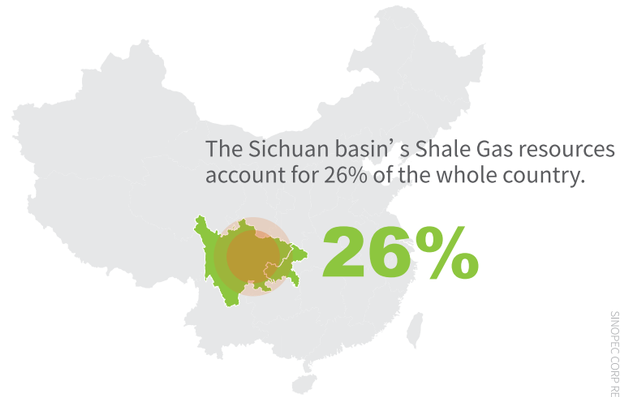
Progress of Shale Gas Exploration and Development

- Main producting region
- Producting region
- Single well breakthrough region
- Research and assessment region

3 Shale Gas Development in China

China' s shale gas resources are widely distributed in many geological areas. According to figures for 2012 from the Ministry of Land and Resources, China has 134.42 trillion cubic meters of shale gas in its reserves, of which 25.08 trillion cubic meters are recoverable. The Sichuan basin' s shale gas resources account for 26% of the whole country.

The Chinese government strongly supports the exploration and production of shale gas resources, and has made it part of the National Energy Strategy.



China Strongly Supports the Exploration and Production of Shale Gas Resources

President Xi Jinping has called for greater efforts to revolutionize the country's energy production and consumption habits.
Premier Li Keqiang: Promoting the development of unconventional oil and gas resources, including shale gas.

2005 — The Ministry of Land and Resources organized research into shale gas resources

2008 — The Ministry of Science and Technology set up a series of research projects on keytechniques in shale gas exploration and development

2009 — Exploration was launched for shale gas in Chongqing

2011 — Mar. The State Council agreed to accelerate up shale oil and gas exploration and development

2012 — The Shale Gas Development Plan (2011-2015) was released; a "National Assessment of Resource and Favorable Area Selection" was completed

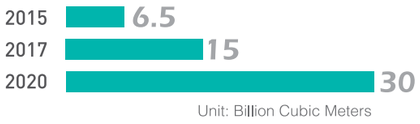
Sep. China's first open bidding for exploration rights for shale gas began

2013 — Oct.30 The National Energy Administration released China's first "shale gas industry policy"

2014 — Apr.17 The Ministry of Land and Resources issued "technical specifications for the shale gas resources and reserves calculation and evaluation"

By July 2014, China had made breakthroughs in shale gas development in Fuling, Changning, Weiyuan, Zhaotong and Ordos with a combined capacity of 1.5 billion cubic meters and an aggregate annual production of 680 million cubic meters.

According to the forecast of the Ministry of Land and Resources, China's shale gas production is expected to reach or exceed the planning objective of 6.5 billion cubic meters in 2015 and 15 billion cubic meters in 2017, and most likely will reach as high as 30 billion cubic meters in 2020. According to BP Energy Outlook 2035, China is the most promising country for shale gas growth outside North America, accounting for 13% of projected world shale gas growth; China and North America will together account for 81% of shale gas by 2035.



Well Jiaoye 1 Named Meritorious Well for Development of Shale Gas

Sinopec Corp. in Fuling, Chongqing

Apr. 2006
Initiated research and analysis of China's shale gas early resource potential

2008
Completed the preliminary evaluation of block selection areas and applied for the registration of blocks

2010
Optimized the testing of old well and prepared for drilling

Aug. 2011
Formally presented the plans to accelerate large-scale development of shale gas and oil

Sep. 2011
Initiated specific research for resource evaluation and block selection areas for Sinopec shale gas and oil

Jul. 2012
Production test of the Pengye 1HF well reached 25 kcm/day

Nov. 2012
Production test of the Jiaoye 1HF well reached 203 kcm/day, which was the milestone of the marine shale gas commercial development in Fuling area

2013
With a production rate of 60 kcm/day, the Jiaoye 1HF well was put marked the beginning of commercial test production in the Jiaoshiba shale gas block of the Fuling area

Sinopec has focused on the development of shale gas since 2006, with activity progressing in three areas: research, evaluation of area selection and implementation.

At present, Sinopec' s shale gas exploration license covers an area of 65,400 sq. km, with 11 tcm marine shale gas resources in Sichuan basin.

65,400 sq. km

Sinopec' s shale gas exploration license covering area

11 tcm

Marine shale gas resources in Sichuan basin

Chairman Fu Chengyu of Sinopec Corp. announced the breakthrough of the shale gas exploration at 2013 Annual Result Conference in March, 2014

As of October 31, 2014, the proved reserves of the Fuling shale gas field were 106.75 bcm; 110 wells were completed, of which 45 were in production; accumulated production was 1,024 million cubic meters; and the cumulative sales volume was 980 million cubic meters.

Sinopec Corp. has established the theory, technology, management practices and equipment manufacturing systems necessary for shale gas exploration and development in China, including the state-of-the-art drilling and staged fracturing techniques used in Fuling.

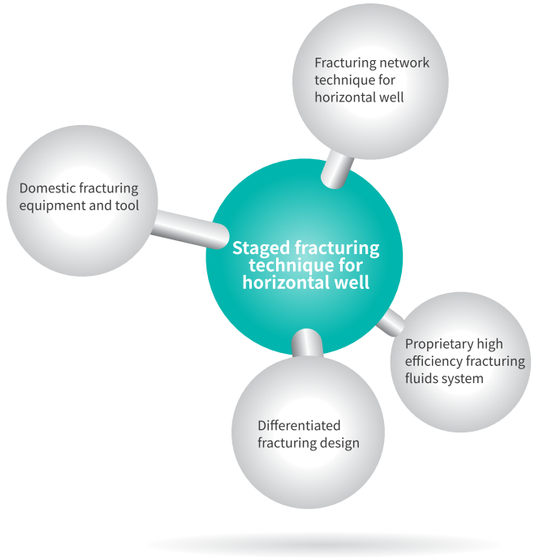
"In China, a family of three persons cooking with natural gas will consume 0.5 cubic meters per day. The average production per well in the Fuling shale gas field is 100 thousand cubic meters per day, enough to meet the natural gas needs of 150 thousand families."

——Wang Zhigang, board director
and senior vice president of Sinopec Corp.

On November 5, 2014, Sinopec Corp. was granted the International Pioneer Award by the Fifth International Shale Oil and Gas Summit for the first significant commercial shale gas discovery outside North America.

In shale gas exploration and development, optimized drilling and staged fracturing techniques can improve the permeability of shale, enhance the flowing capability of oil and gas and increase single well production.

Fracturing fluid: Fluid injected into a well as part of stimulation operations in fracturing in the development of shale gas.



02

Corporate Governance and Safe Operations

Our Commitment

As a responsible integrated energy and chemical company, Sinopec Corp. has always been committed to promoting harmonious development— balancing the interests of enterprises, the economy, society and the environment while providing clean energy to meet the basic needs of the people. We have established a Social Responsibility Management Committee under the board of directors, and we have made green, low-carbon development one of our sustainable development strategies, with the aim of enhancing environmental awareness throughout all levels of the company in accordance with the key principal of environmental protection—never to compromise the environment in exchange for temporary economic growth. We have promised not to deduct a penny from the expenditures necessary to achieve these objectives, to undertake no actions infringing environmental protection and to derive no benefit from any action that pollutes or harms the environment. We adhere to the basic tenet that development must not come at the cost of human life, and we repudiate any growth, benefit or timesaving derived from unsafe operations.

During the development and construction of the Fuling shale gas field, we have always given the highest priority to safety, environmental protection, and our green and low-carbon strategy, promoting resource development in an ecologically sensitive manner. We have upgraded our system for health, safety and the environment (HSE) and made improvements to its management and staff, in part by establishing the HSE Coordination Committee, which is responsible for the drafting of technical specifications for safety and environmental protection and conforming to the requirements of the regulatory authorities. Through regular meetings on safety, targeted safety inspections and HSE performance appraisals, we have instituted a long-term mechanism for HSE management.inspection and performance appraisal on HSE, we have set up a long term mechanism on HSE management.

Board director and Senior Vice President Wang Zhigang visits Fuling shale gas field

Vice President Jiao Fangzheng visits Fuling shale gas field

Standardized Operations

To standardize the engineering practices and technology necessary for the exploration and development of unconventional oil and gas, Sinopec must undertake feasibility studies in a number of areas, including geological exploration, geophysical physics, oil and gas field development, drilling and completion, logging, downhole operations, oil gas production, construction and other ground engineering. We have established 805 standards at all levels for unconventional oil and gas, providing a basis for accelerating the development and implementation of standards for unconventional oil and gas exploration by China's petrochemical industry, while also providing technical support for unconventional oil and gas exploration and development.

Quality, Health, Safety and Environment: We have improved our methodology for analyzing the safety of environmental risks and developed a set of leading standards in accordance with ISO9000 and ISO14000. Furthermore, we have followed those standards in the construction of the Fuling shale gas field, effectively preventing the occurrence of safety and environmental incidents.

Well Control Management.

We have established a comprehensive and integrated well management model that includes provisions for drilling, logging, downhole operations and control of oil and gas development wells.

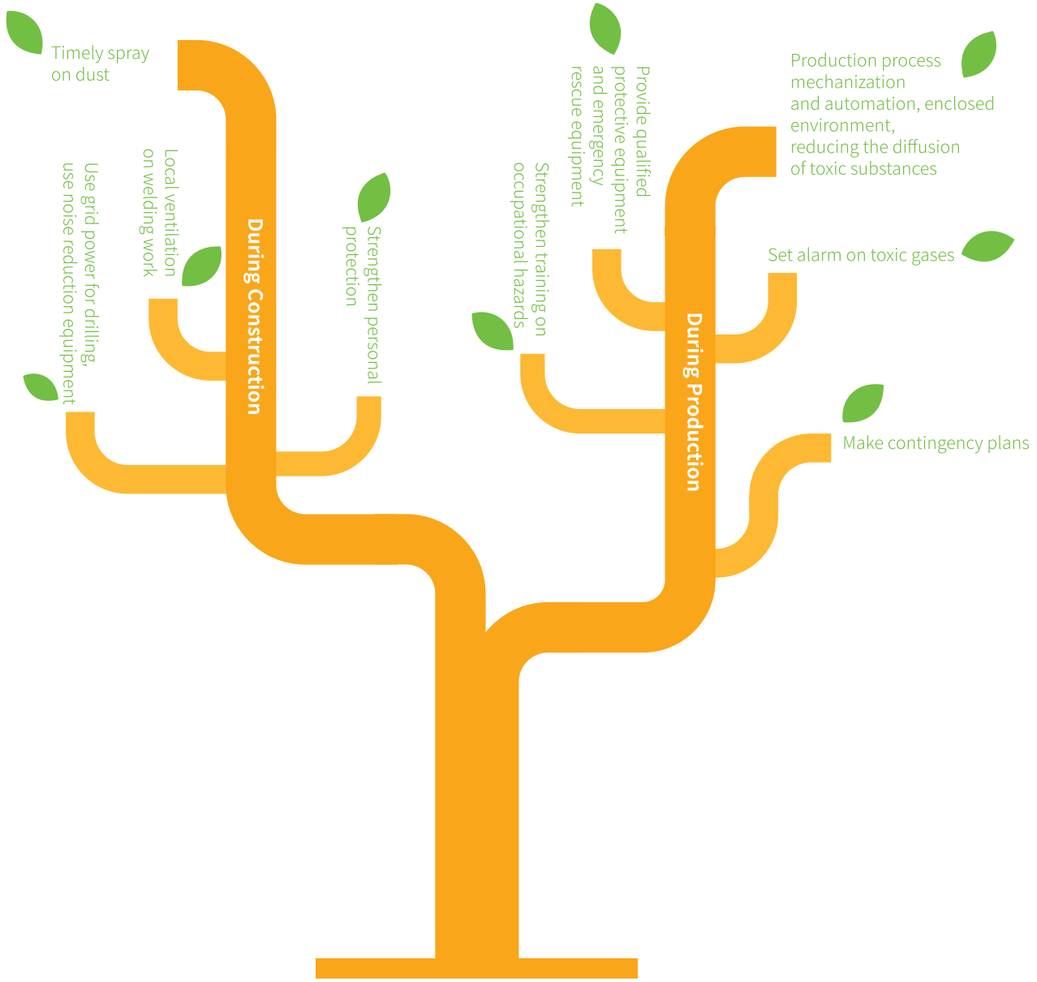
- Strengthen control and management through the entire process of exploration and development of oil and gas wells.
- Dynamic tracking of key operational elements
- Timely coordination and problems solving for issues arising in the field
- Accrediting on-site supervision staff for all drilling, logging, testing gas and other operations.

Emergency Management.

As part of the Fuling shale gas emergency plan, we carry out comprehensive emergency drills every quarter and joint emergency exercises with local government every six months.

Occupational Health Protection Measures

To safeguard our workforce, we insist on synchronizing the introduction of occupational protective equipment with the design, construction and roll-out of productive capacity. Our occupational health service center evaluates occupational hazards in project development and operational processes and formulates measures for occupational disease prevention and protection for staff and management, minimizing the risk of occupational hazards.



Occupational Disease Prevention and Control Measures

Commitment

we repudiate any growth, benefit or timesaving derived from unsafe operations.

03

Environmentally Friendly and Green Demonstration

Before commencing shale gas exploration and development, we employ a qualified third party to draw up an environmental impact report, which must be approved by the government's environmental protection department. During the exploration and development process, we strictly comply with the proposed measures of the environmental impact statement and government approval documents, and we undertake all activities necessary to satisfy these requirements.

Water Utilization and Protection

The public has focused great attention on the potential hazards of underground water contamination and intensive water withdrawal in the hydraulic fracturing process. Sinopec Corp. places great importance on these concerns over the risks to the underground water supply associated with hydraulic fracturing and applies appropriate measures to reduce these risks and protect underground water.

1 Underground Water Protection during Drilling

To isolate drilling activities from the underground water environment and avoid changes to the underground water supply, we have implemented the following measures:

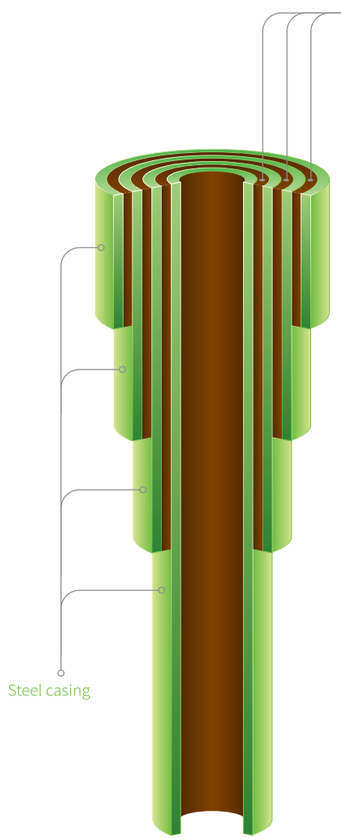
Before building the drilling platform, we carry out hydrologic exploration to investigate subsurface streams and karst cave distribution within 100 meters of the drilling site underground, with the aim of optimizing well-site location to prevent contamination of underground water during drilling activities. Based on ground conditions, we construct wastewater ponds, flaring pools, provisional oil-based cutting ponds, wastewater distributary channels, interception channels and other structures, and we conduct seepage and pressure tests before putting a well into operation.

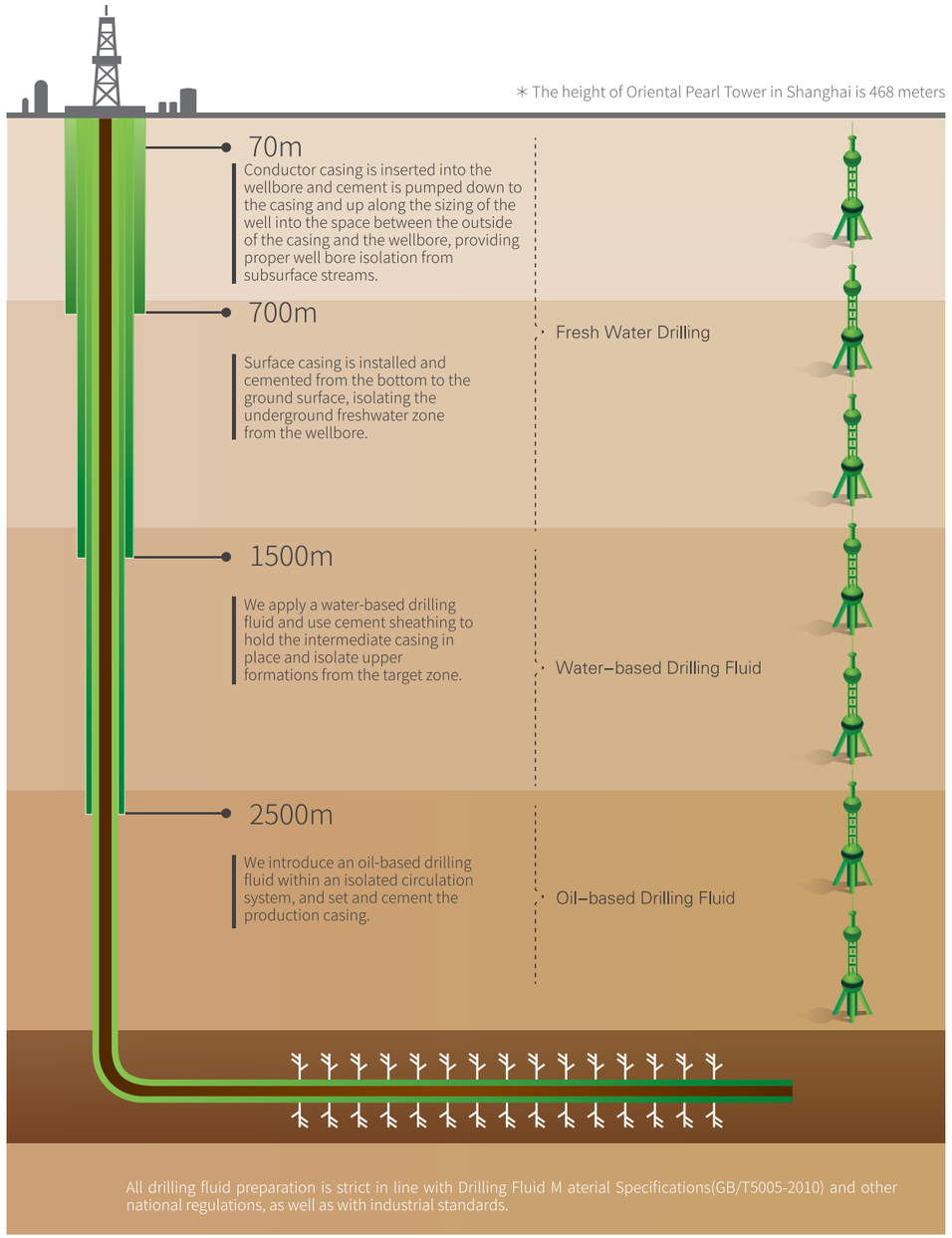
For wellbore structure design, we employ four layers of steel casing and cement sheathing >>>

Compared with air drilling and foam drilling, fresh-water drilling is fairly slow, but can prevent the contamination of underground water. We would rather do it slower and steadier, but without polluting the environment.

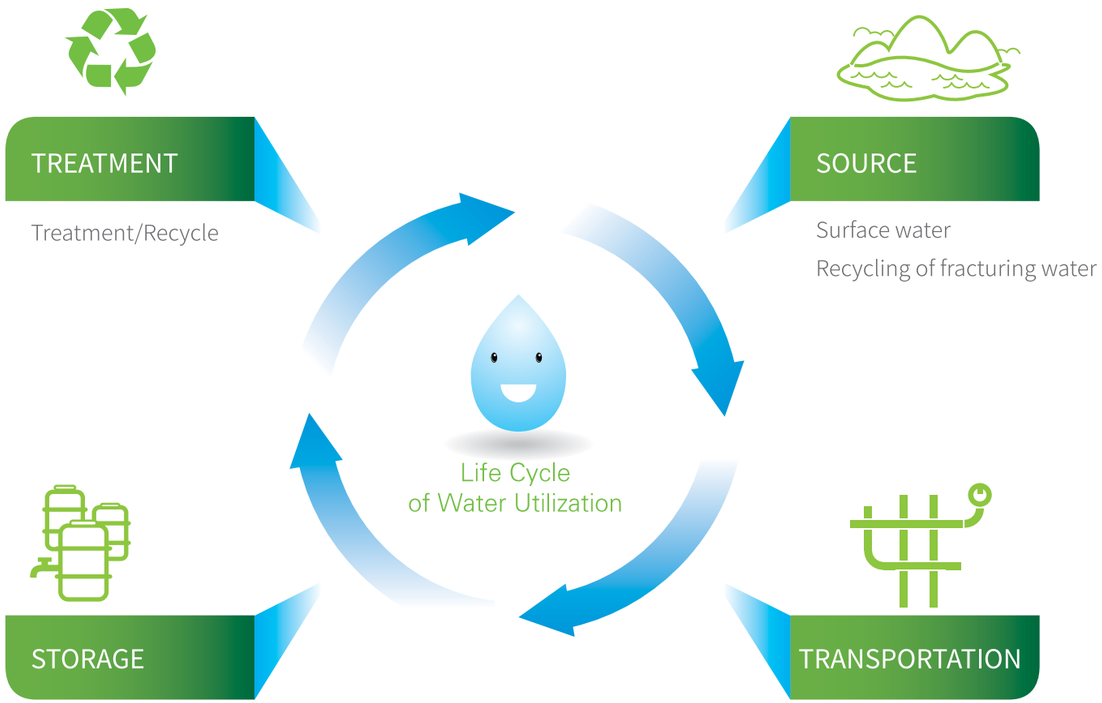
—Sinopec 50785 drilling crew manager Xiao Jianghong.

Choosing high-quality steel casing and cement sheathing, using the bottom-to-surface cementing method and enforcing quality detection measures for cementing will satisfy the requirements for unconventional horizontal well-cementing technology (Q/ SH0440-2011). The wellbore is effectively isolated from underground water and shallow formations.





2 Water Withdrawal, Transportation and Recycle



Shale gas development requires hydraulic fracturing, which is a water-intensive process. To avoid undue effects on local residential water use, we transport the fracturing water for the Fuling shale gas field from Wujiang Industrial Park 20 kilometers away, delivering it to the fracturing sites though the company-built water-gathering pipeline system.

During the development process, we place great importance on conducting clean operations, and we apply wastewater recycling and water-saving measures to reduce wastewater discharge. We have achieved a 100% recycling rate for discharged water by collecting and processing wastewater from the drilling fluid, fracturing flowback water and associated water. We then blend the treated water with fresh water in a specified proportion for re-use in fracturing operations.

3 Recycle of Fracturing Fluid

The fracturing fluid system developed by Sinopec Corp. contains no heavy metal elements, toxic organic compounds or high-risk materials, and it produces no corrosivity or residues. With these features, the liquid can perform stably and harmlessly. After fracturing, flowback water is treated and qualified for re-use, and is then prepared as fracturing fluid for subsequent well operations.

Greenhouse Gas Emissions and Treatment

The main content of shale gas is methane, which, though a clean energy source, is also a major greenhouse gas.

The primary greenhouse emission of shale gas development is escaped methane from production testing activities,with other emissions arising directly or indirectly from drilling and fracturing operations.

> *Switching diesel rigs to electric rigs can reduce noise and emissions, which gives us a more comfortable working environment. The local people around the sites are happy too.*
>
> —On-Site Drilling Engineer Zhou Song.

We attempt to reduce greenhouse gas emissions through the application of clean technologies.

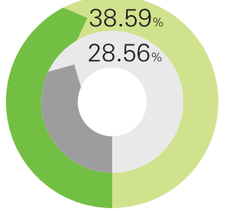
In the past year, we set out to minimize the production testing period by implementing test and production operations simultaneously. By the end of the reporting period, the flaring volume of vented gas per well had decreased by more than 50% compared with the same period in 2013. Sinopec' s Shale Gas Ground Process Testing System has been granted a national patent.

The fracturing flowback fluid is treated with a gas-liquid separator; the separated gas is then transported into the pipeline network.

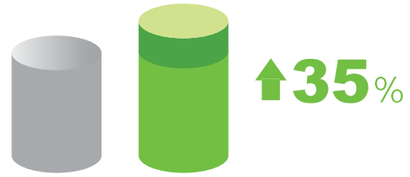
We replaced diesel-powered rigs with electric rigs powered by the local grid to reduce energy consumption, greenhouse gas emissions, particulate matter and sulfur emissions.

Comparison of Natural Gas and Coal

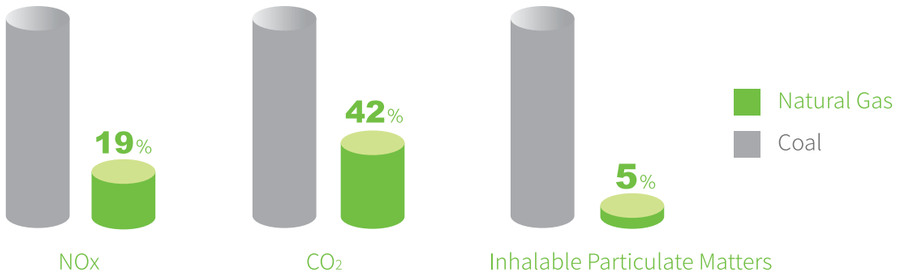
Natural gas is an efficient and clean energy source for electricity generation, heating supplies, transportation, industrial fuel and petrochemical feedstock, among other uses. In power generation, taking into account raw material production, transportation and power generation over the entire energy life cycle, the efficiency level of gas-generated electricity is about 40%, while the efficiency level of coal-generated electricity is about 30%, giving gas an energy efficiency advantage of about 35% over coal. In greenhouse emissions, use of natural gas can reduce the levels of a variety of pollutants and carbon dioxide. Compared with the equivalent calorific value of coal, every thousand cubic meters of natural gas generates 4.33 tonnes less carbon dioxide and 48.3 kilograms less sulfur dioxide, and the discharged emissions do not contain lead dust, sulfur, PM2.5 or other harmful substances. Emissions of nitric dioxide, carbon dioxide and inhalable particulate matter associated with gas-generated electricity are only about 19%, 42% and 5%, respectively, of the emissions associated with coal-generated electricity.



Energy Efficiency Comparison in Whole Life Cycle



Energy Efficiency Comparison in Power Generating



Greenhouse Emission Reduction

Disposal and Recycling of Oil-Based Drill Cuttings

To prevent well collapses during shale gas horizontal well drilling within clay shale formations, specially prepared oil-based drilling fluid must be used.

We collect oil-based cuttings during exploration and development operations, and we employ a professional pollution disposal company to treat the solid waste by pyrolysis and recycle the residue oil. In order to reduce solid pollutants and dispose of oil-based drill cuttings in a fully harmless manner, we are studying a variety of related technologies, including those associated with brick and cement manufacturing, so that we can reclaim all of the drill cuttings as a resource.

Strengthening Environmental Monitoring and Supervision

All relevant departments have approved the Fuling shale gas field environmental monitoring plan, and we are now jointly implementing the plan with monitoring institutions at all levels. We have established an environmental monitoring station that provides gas-field data daily. We are also overseeing the implementation of environmental protection measures for gas-field development in accordance with the environmental impact assessment report and its approved documents.

04

Community Communication and Harmonious Development

Little Town, Great Era

Fuling is located in the Wuling Mountain region at the junction of the Yangtze and Wujiang Rivers. Jiaoshi, one of the most remote towns in Fuling, is of a typical karst landform. The seemingly fire-burnt black stones that surround the mountain give the town its name, with the term jiaoshi meaning. Before the discovery of shale gas, Jiaoshi' s economy was mainly administrative and agricultural, with pickles, medicinal herbs, flue-cured tobacco, pigs and off-season vegetables as the main products.

The exploration and development of shale gas and the construction of the pipeline network have brought new business opportunities to the local community along with a convenient energy source. We have established joint ventures with the local government to share in the benefits of shale gas production; to date, 25 local suppliers have participated in project construction. We also supply gas for local enterprises, including the local gas companies, to meet demand for energy, and we provide jobs for local residents in construction and equipment operation.

According to local government statistics, by November 30, 2014, Fu Qi (Fuling shale gas with the same pronunciation of "lucky gas") had increased GDP of Fuling area by 1.5%.

"I figured out that for each shale gas well, our village gains 200,000 to 500,000 yuan in revenue."

— said Sheng Hongchao, local village officer of the town

Harmony in Community

- Through optimizing the location of our facilities, we try to avoid operating in ecologically sensitive areas. We also seek to minimize the felling of trees and the destruction of vegetation, and to protect groundwater resources. After finishing construction, we will strictly enforce our reclamation plan, which includes restoration of vegetation, conservation of soil and water, and rehabilitation of land.

- Our goal is to use land intensively. By implementing cluster well design, the factory model of construction, standardized facility design, unmanned station locations, and the construction of the same platform for gas collection and transportation of gas production platforms, we have reduced land occupation for a single drilling well by 30% compared with conventional wells.

- In order to control noise effectively, we strictly limit construction time and use electric rigs powered by the local grid. In order to reduce dust, we use sprinklers to spray water at regular intervals. We constantly seek greener chemicals and fracturing technologies to minimize environmental impact, and we put great emphasis on safety, strictly managing our vehicles to ensure safe operations in traffic.

- We also place great emphasis on communication. We have established a standing department with the local community to deal with issues related to shale gas development. We document complaints from local residents in a timely manner and follow them till resolved. To build mutual trust, we seek the opinions of local residents in many forms, including public meetings, disclosures of risk and door-to-door canvassing. Since the beginning of 2014, we have organized visits to the field by 110 investors from 83 institutions at home and abroad. At the same time, we have invited domestic and foreign media and nearly one hundred experts to conduct field surveys. We have worked with the China Youth Daily to organize the National University School media reporters training camp, inviting students from Tsinghua University and more than 20 students from Taiwan's Tamkang University to conduct on-the-spot interviews.

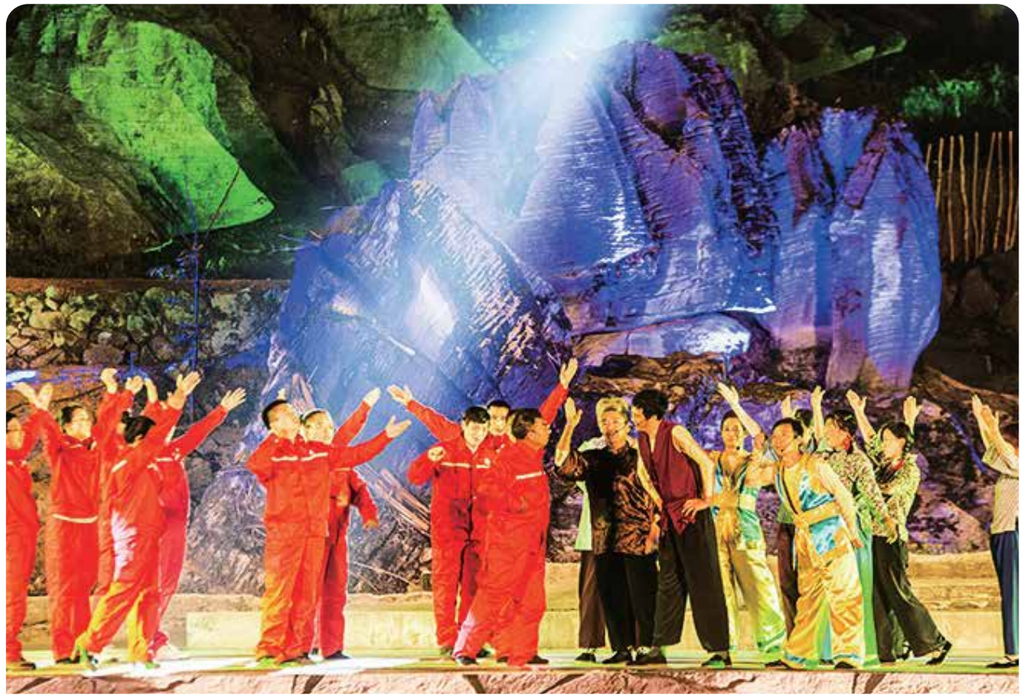
- To support public welfare, we have invested funds to build nearly 30 kilometers of roads with the local government. We have also built water tanks and reservoirs for nearby residents. In the dry seasons, we help send water to the villagers via water-wheel. During the spring festival, we visit families with financial difficulties in the surrounding townships. For these measures, we have won praise from community residents.

"Once we were the poorest village. Our fiscal revenue was only about 200,000 RMB last year. We didn't have enough money to build roads," said village head Long Shaobin. "But today the road has been built, we can sell all our ducks, our citrus will never rot on the ground. The village is experiencing a significant change."

– The village head Long Shaobin said.

Epilogue

The Jiaoshi folk song is part of the intangible cultural heritage of Chongqing. In this year' s folk song festival, there is a splash of bright red; the festival organizers have specially invited Sinopec' s exploration team. After more than a year of contact, local residents and Sinopec staff are no longer strangers. On stage, as they trade verses of witty antiphonal songs, the enthusiastic residents and the Sinopec staff become friends.



In 1965, the Song of the Explorers won universal praise across China. After more than fifty years, the song is still a vivid representation of the human impulse to seek out natural treasures—constantly innovating, marching ahead bravely.

With the wind of the valley that whips our flag,
In the furious rain that lashes our tents,
Our passion is fire that vanquishes cold and fatigue.
Gear on our backs, we ascend through the mountains,
Full of infinite hope for the treasure we seek for our country.

Is that the star? For we have lit the lamp;
Is that the forest bird, calling the dawn?
Our passion is fire that vanquishes cold and fatigue.
Gear on our backs, we ascend through the mountains,
Full of infinite hope for the treasure we seek for our country.