

## Corporate Report 2016

For the Year Ended March 31, 2016

### **Corporate Vision**

JAPEX is committed to contributing to local communities through a stable supply of energy. To this end, we will undertake the following activities:

- Explore for, develop, produce and deliver oil and natural gas in Japan and overseas.
- Further enhance the natural gas supply chain, supported by our own domestic infrastructures, through aggressive introduction of LNG business.
- Leverage our existing technology and expertise to develop and commercialize new technology.
   Make stakeholder trust our first priority while striving to achieve sustainable growth and maximize corporate value.

## **JAPEX Group Code of Conduct**

To put Corporate Vision in practice, the JAPEX Group's directors, officers and employees shall act based on the following "JAPEX Group Code of Conduct" that represents our key values:

- Comply with applicable laws and regulations of the countries and regions where our business
  operations are based, respect international norms, and take actions by taking the stakeholders'
  interests into consideration;
- Put the top priority on paying due attentions to HSE (health, safety and environment);
- Respect human rights and do not engage in discriminations or harassments;
- Engage in fair, transparent and free competition as well as appropriate trading practices;
- Keep sound and normal relationships with the politicians, political parties and government officials/agencies;
- Resolutely confront antisocial forces and sever all relations with such individuals and groups;
- Pay careful attentions to managing and protecting confidential information and personal/ customer data;
- Have a strong will for innovative change from the status quo and energetically engage in tasks with flexible mindset and originality; and
- Be more responsive to information and engage in tasks in the professional manner.

## Contents

Corporate

#### **Editorial Policy**

Until now we have published both annual reports, which focus on management policy and strategies, business results, and the Company's financial position, and CSR reports, which highlight social and environmental efforts geared toward achieving a sustainable society.

As of this year, with our *Corporate Report*, we are combining the two to offer an easy-to-understand overview of our activities over the year from business, social, and environmental perspectives and to gain understanding of our entire activities as a global company, aiming for the integrated promotion of growth strategies and CSR activities.

We view this report as an important communications tool for connecting with all of our stakeholders.

#### Information Disclosure Sources

This report presents important information with the aim of gaining understanding of the Company. More-detailed information is available on our website.

#### **Financial Information**



Corporate Report

Non-financial Information

Website: CSR http://www.japex.co.jp/english/csr/

Reference Guidelines
 GRI, "Sustainability Reporting Guidelines Ver. 4 (G4)

## Organizations Covered by this Report

This report covers Japan Petroleum Exploration Co., Ltd (JAPEX), and its 25 consolidated subsidiaries and other Group companies. Environmental performance data are for JAPEX and Japex Offshore Ltd.

#### Reporting Period

AN

Fiscal 2015 started on April 1, 2015 and ended March 31, 2016.

Some statements include data before March 31, 2015 or after April 1, 2016.

• Issuing Date December 2016 (Next issue: October 2017)

#### Disclaimer

This report includes past and current facts about JAPEX and its affiliate firms, their plans and prospects as of the issuing date, as well as forecasts based on their business plans and corporate management policies. These forecasts represent management's assumptions or decisions based on information currently available. Readers should be aware that actual results may be different from these forecasts due to changes in the business environment.

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## The JAPEX Group's Evolution

## Over 60 years of continuous growth, JAPEX has sought to contribute to the development of local communities through the stable supply of energy

Since JAPEX establishment, we have been undertaking business in Japan and overseas spanning crude oil and natural gas exploration and development, production, transportation, and sales. Having started out with no crude oil or natural gas reserves, we have over the past six decades consolidated our business foundations through repeated discoveries of new oil and gas fields. We remain committed to ensuring the sustainable long-term stable supply of energy essential to society through securing reserves and expanding production.

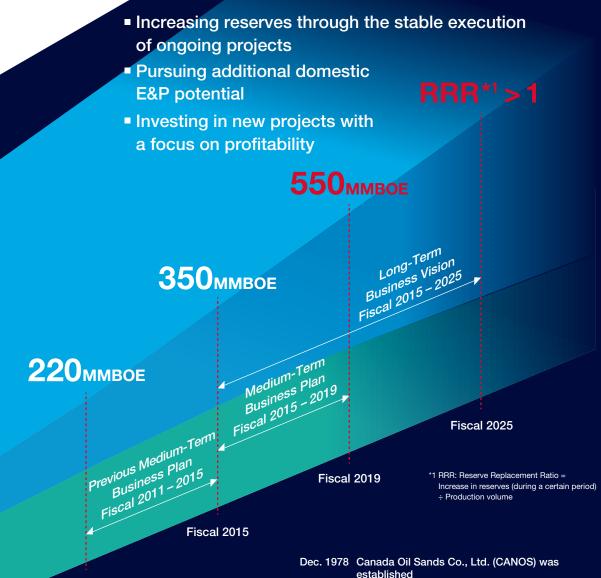
**Overseas proved reserves** 

JAPEX's Growth Trajectory

### **Domestic proved reserves**

Dec. 1955	5 As a government-owned company, Japan Petroleum Exploration Co., Ltd. was established to improve national petroleum self-sufficiency			
Mar. 1958	Mitsuke Oil Field (Niigata) was c	liscovered		
Jul.	Sarukawa Oil Field (Akita) was discovered			
Jun. 1959	Higashi-Niigata Gas Field (Niigata) was discovered			
Mar. 1960	Amarume Oil Field (Yamagata) was discovered			
Dec.	Katakai Gas Field (Niigata) was discovered			

1955



Fiscal 2011

1				
	Mar. 1962	Kumoide Gas Field (Niigata) was discovered		
	Jun.	JAPEX SKS Corporation was established		
	Aug.	Shiunji Gas Field (Niigata) was discovered		
	Nov. 1964	Fujikawa Gas Field (Niigata) was discovered		
	May 1965	An operation range expanded to overseas by revision of the articles of association		
	Feb. 1966	Established subsidiary North Sumatra Offshore Petroleum Exploration Co., Ltd. (NOSOPEX), presently known as INPEX		
	Oct. 1967	With the establishment of the governmental Japan Petroleum Development Corporation (JPDC), JAPEX was integrated into JPDC as an E&P operating body		
	Apr. 1968	Yoshii Gas Field (Niigata) was discovered		
	Apr. 1970	Reorganized as a private E&P company, Japan Petroleum Exploration Co., Ltd. was separated from JPDC		
	May 1971	Japex Offshore Ltd. was established		
	Oct.	SK Engineering Co., Ltd. was established		
	Mar. 1972	Agaoki Oil and Gas Field (Niigata) was discovered		

- Jun. 1976 Yurihara Oil and Gas Field (Akita) was discovered
- established Oct. 1980 Japex (U.S.) Corp. was established Apr. 1983 JGI, Inc. was established Jun. Iwafune-oki Oil and Gas Field (Niigata) was discovered Mar. 1989 Yufutsu Oil and Gas Field (Hokkaido) was discovered Ayukawa Oil and Gas Field (Akita) was Nov. discovered Mar. 1995 Japex Pipeline Ltd. was established Oct. 2003 Shirone Gas Co., Ltd. was established Dec. JAPEX was listed on the Tokyo Stock Exchange May 2007 JAPEX acquired equity stake in Energi Mega Pratama Inc. Mar. 2010 Japex Garraf Ltd. was established Mar. 2013 JAPEX Montney Ltd. was established Mar. 2014 JAPEX UK E&P Ltd. was established JAPEX UK E&P Sep. **CENTRAL Ltd. was**

established

## The JAPEX Group's Value Creation Process

## **Evolving into an Integrated Energy Company** centered on the Oil and Natural Gas E&P Business

The JAPEX Group aims to raise corporate value by attaining targets for business development on the pillars of the E&P Business, the Domestic Natural Gas Supply Business, the Environment and Innovative Technology Business, and CSR Management. We are guided by our Long-Term Business Vision, which targets earnings growth from businesses centering on oil and gas E&P (exploration, development, production) but reaching beyond the bounds of conventional E&P.

# Domestic natural gas supply business **Business Activities**

CSR Management

E&P DUSINESS

## **Sources of Value Creation**

frastructure

INFERSE

## Value Creation Target

Power generation

#### Value Provided

Image of Leap toward 2025

Transformation to an Integrated Energy Company with a Focus on Oil and Gas E&P

> ■ E&P Business RRR>1

Stable Energy Supply

Clean Energy

 Contribution to Stakeholders

Transaction Volume of Natural Gas 2.5 million tons (in LNG equivalent)

> Soma Power Generation (1.2 million kW+α)

> > Environment and Innovative Technology Business On track for commercialization

> > > ■ Improve Revenue and Profit and Shareholder Return



## Exploration

Geological Survey

Geophysical

Survey

Appraisal Wells and

of Reserves

JAPEX surveys and analyzes the exposed layer on the surface and estimates the underground geology and reserves of oil and natural gas.

We measure reflected waves from subsurface structures induced by artificial seismic vibrations to ascertain the presence of geological structures.

Based on the information obtained from geological surveys and geo-physical surveys, JAPEX then drills wells in locations that look promising for oil and natural gas production.

We drill appraisal wells to confirm the extent and shape of the oil or gas well and the size of the reserves. A comprehensive decision on whether or not to advance to commercial production is made based on the results of appraisal wells.



Drilling plans are prepared taking into careful consideration the impact on local communities and the environment.

## Developr

Drilling of Production Wells

Construction Production Facilities

Production



We make every eff conditions through

## Acquisition of Interests

## Gathering of

JAPEX gathers various kinds of information using specialized databases and shared information with other oil companies.

Preliminary Survey

Before investing in an interest, we review and consider technical evaluations, the regulatory systems and political and economic stability of each subject region as well as strategies relating to the selection of partners and other activities.

JAPEX acquires interests by applying and bidding for mineral rights and exploration and development rights.

Acquisition

# ovative technology busines Sales

Refiners Others

(LDCs) Industrial users

Gas-fired power plants Local distribution companies

### **Receiving Terminal/Transportation** (Crude Oil, Natural Gas, LNG)

## Crude Oil

Crude oil produced from oil and gas fields is sold and delivered via ocean transportation using oil tankers and land transportation using pipelines.

## LNG

Natural gas is supplied and sold to electrical power and city gas provid-ers as well as industrial and other users via pipelines. In areas where there are no pipeline facilities, LNG is transported via LNG ships, tank



We provide stable transportation and supplies of natural gas, monitoring flow volumes and pressure 24 hours a day.

## nent and Production

If an oil or gas field is deemed to have commercial-scale reserves, a front-end engineering and design (FEED) for field development and production is formulated.

Production wells are then drilled in accordance with optimal production plans.

After constructing facilities for processing, storing, and transporting oil and natural gas, we commence production.

The output is separated into oil and natural gas. This is then followed by various procedures including the removal of impurities.



ort to ensure the safe occupational HSE training programs for staff.

## Value chain from acquisition of interests through to sale

The JAPEX Group's operations in Japan and overseas span the acquisition of interests through oil and gas exploration, development, production, transportation, and sale. The period from undertaking preliminary surveys through to the start of production involves various processes and takes from between a few years to around a decade. Once started, the production of oil and gas subsequently continues over several decades.

trucks, and railway containers.

## **Financial and Non-financial Highlights**

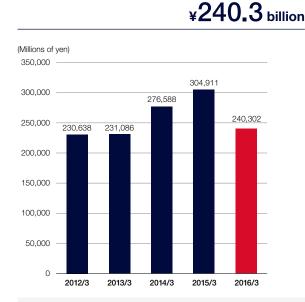
		2009/3	2010/3	
For Fiscal Year (Millions of	yen)			
Net sales		202,127	179,752	
Cost of sales		134,447	125,467	
Exploration expenses		15,352	10,396	
Selling, general and admini	strative expenses	32,237	30,769	
Operating income		20,090	13,119	
Profit (loss) attributable to c	owners of parent	12,560	17,939	
Cash flows from operating	activities	36,381	38,948	
Cash flows from investing a	activities	(23,342)	(29,300)	
Cash flows from financing a	activities	(477)	(4,054)	
At Fiscal Year-End (Millions	of yen)			
Total assets		500,444	521,009	
Net assets		378,227	398,747	
Long-term loans payable		25,325	24,471	
Per Share Data (Yen)				
Net assets per share		6,486.85	6,839.05	
Basic earnings (loss) per sh	nare	219.77	313.88	
Cash dividends per share (	full-year)	40.00	40.00	
Production Volume in the F (10 thousand boe/d)	iscal Year (daily)*₁			
Natural gas		2.21	2.15	
Crude oil		2.20	1.76	
Total		4.41	3.91	
Proved Reserve Volume in	the Fiscal Year (daily) (Million boe)			
Overseas		59	49	
Domestic		213	205	
Total		272	254	
Non-financial Data			· · · · · ·	
	Frequency rate*2	0.73	1.41	
Occupational safety	Severity rate*3	0.00	0.00	
Greenhouse gas emissions (t-CO2)		292,384	324,714	
Energy consumption (TJ)		3,458.7	3,566.5	
	Consolidated	1,678	1,735	
Number of employees	Non-consolidated	833	869	
Women in management pc	ositions (%)	1.4	1.4	
Employees with disabilities		1.70	1.65	

\*1 Figures for crude oil include bitumen (an extra-heavy crude oil extracted from oil sands). From FY2011/3, these figures included production volumes of equity-method affiliates. \*2 Frequency rate = (Number of deaths and injuries caused by occupational accidents/Number of hours worked) x 1,000,000 \*3 Severity rate = (Number of days of work lost/Number of hours worked) x 1,000

Fiscal years ended Mar					
2016/3	2015/3	2014/3	2013/3	2012/3	2011/3
240,302	304,911	276,588	231,086	230,638	199,651
193,022	234,649	210,460	172,075	174,359	144,919
6,516	4,489	9,800	13,086	7,805	9,798
32,426	33,625	31,692	32,017	33,426	31,084
8,336	32,146	24,634	13,906	15,045	13,849
2,090	29,567	29,015	(865)	17,027	10,010
57,659	78,666	45,226	34,254	37,172	34,284
(125,771)	(63,031)	(131,600)	(14,836)	(13,950)	(24,282)
54,816	18,475	71,680	(7,177)	9,856	(521)
707,601	736,862	663,038	525,172	532,890	516,098
495,317	540,647	496,915	403,625	406,773	393,689
130,030	20,726	21,636	24,197	26,198	26,898
7,366.40	8,055.59	7,389.62	6,691.58	6,869.27	6,743.83
36.58	517.35	507.68	(15.14)	297.92	175.16
50.00	50.00	50.00	40.00	40.00	40.00
3.40	3.23	2.64	2.33	2.28	2.55
3.97	4.21	2.18	1.33	1.58	1.50
7.37	7.44	4.83	3.66	3.86	4.06
255	203	193	160	38	49
94	110	112	147	185	208
349	313	305	307	223	257
1.15	1.02	0.84	0.00	0.80	1.59
0.02	0.03	0.10	0.00	0.00	0.00
230,825	244,491	251,121	267,446	256,561	303,146
2,543.8	2,698.8	2,975.1	3,168.0	3,329.3	3,475.7
1,847	1,818	1,782	1,747	1,743	1,728
902	886	874	882	880	867
4.5	3.6	3.1	3.3	2.0	2.1
2.21	2.03	1.57	1.75	1.89	1.53

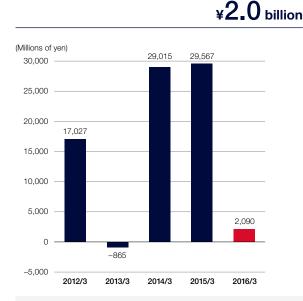
boe/d: barrels of oil equivalent per day

**Net Sales** 

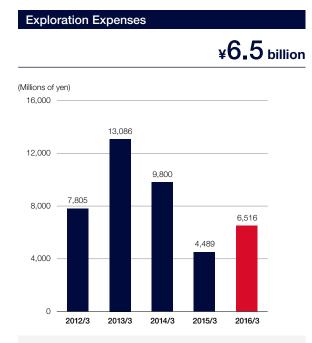


Net sales comprise sales in Japan and overseas of crude oil and natural gas (including LNG and bitumen), orders for contract service-related operations (including drilling and geological surveys), sales of LNG and heavy oil and other petroleum products, and revenues from the contract handling and transportation of natural gas and other contract business.

Profit (loss) Attributable to Owners of Parent

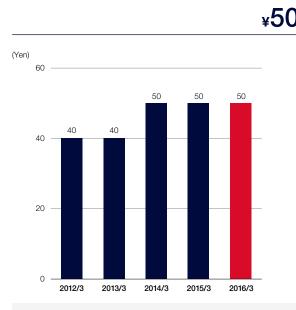


Profit attributable to owners of parent in FY2016/3 fell to ¥2.0 billion from the previous fiscal year, owing to such factors as declines in selling prices, lower sales volumes of domestically produced crude oil, higher exploration expenses, lower equity method investment gains, and foreign exchange losses after gains in the previous fiscal year.



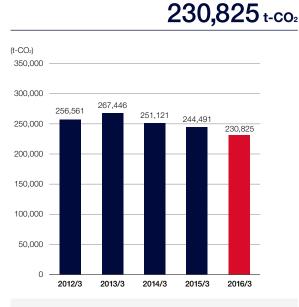
JAPEX undertakes exploration activities in Japan and overseas in order to secure reserves of crude oil and natural gas. Exploration expenses included expenses related to geological surveys, geophysical surveys, and exploratory drilling work.

#### Cash Dividends per Share (full year)



JAPEX has the basic policy on profit distribution to maintain long-term and stable dividends for shareholders. In FY2016/3, we paid dividends of ¥50 per share, comprising interim and year-end dividends of ¥25 each.

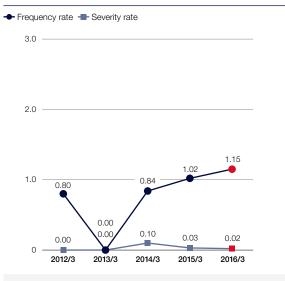
#### Greenhouse Gas Emissions



JAPEX has been participating in the Japan Petroleum Development Association's "Commitment to a Low Carbon Society" while also pursuing companywide efforts to reduce greenhouse gas emissions. In FY2016/3 we reduced emission by 5.6% compared with the previous fiscal year. See P. 46

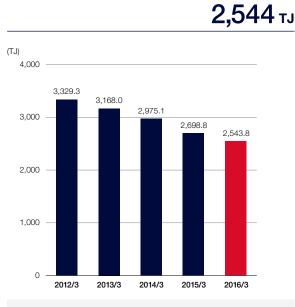
#### Occupational Safety (frequency rate and severity rate)

## Frequency rate **1.15**



JAPEX has been striving to prevent occupational accidents based on its HSE policy. In FY2013/3, we achieved frequency and severity rates of zero. We are determined to continue to step up our HSE activities geared toward the prevention of occupational accidents.

#### **Energy Consumption**



JAPEX has been pursuing wide-ranging companywide measures to reduce energy consumption supported by our HSE (health, safety, and environment) Management system for promoting energy-saving activities. Through these efforts, we have managed to achieve annual savings of around 5% every fiscal year since FY2011/3, with savings in FY2016/3 of 5.7% year on year. See P. 46



1 \_\_\_\_\_\_ 0 \_\_\_\_\_\_ 2012/3 2013/3 2014/3 2015/3 2016/3

JAPEX has established a "JAPEX Diversity Policy" under which we aim by 2020 to triple the percentage of female managers from 3.4% as of October 2014. In FY2016/3, we raised the percentage to 4.5%.

## **Greetings from the New President**

It was an honor to be appointed President and Chief Executive Officer of JAPEX in June 2016.

Since its establishment, JAPEX's operations have centered on the crude oil and natural gas exploration and production (E&P) business. This business spans exploration, development, production, and sales as JAPEX seeks to deliver on its mission of ensuring the stable, long-term supply of crude oil and natural gas that are essential to our daily life while contributing to local communities. The role JAPEX must play is hugely important, given the country's lack of natural resources.

The business environment in which we operate has become increasingly challenging, amid steep declines in crude oil prices since the year before last and intensifying competition in the Japanese natural gas business in the wake of deregulation. To overcome these difficulties and achieve sustainable growth, it is vital that we transform ourselves into an integrated energy company while maintaining our focus on crude oil and natural gas E&P business.

Through the steady implementation of our Long-Term Business Vision and Medium-Term Business Plan, we will actively engage in operations in fields related to crude oil and natural gas supply including power generation, as well as new businesses compatible with the Group's E&P expertise, thereby aiming to broaden our revenues beyond those from conventional E&P business and maximizing our corporate value.

We seek the support and understanding of all our stakeholders in our determined efforts to strengthen and broaden our business operations.

In the following pages, I offer a brief overview of the business environment and our growth strategies.

Corporate Value of JAPEX

Hideichi Okada President, Chief Executive Officer

## **Business Environment**

Within the context of our Long-Term Business Vision and Medium-Term Business Plan designed to move us toward their realization, announced in May 2015, four key developments in our external business environment should be highlighted: (1) the emergence of significant international crude oil price volatility risk, (2) geopolitical risks centering particularly on Middle Eastern and North African countries, (3) intensifying competition in the domestic natural gas business, and (4) international moves to address global environmental issues.

Crude oil prices, which began falling in summer 2014, have since shown no signs of recovery, and while the price environment for crude oil and natural gas remains severe, there have also been shifts in the external environment that had heretofore not been widely anticipated, such as the adoption at the end of 2015 of

the Paris Agreement on measures to combat climate change and the growing possibility of accelerated moves to tighten regulations on the use of fossil fuels.

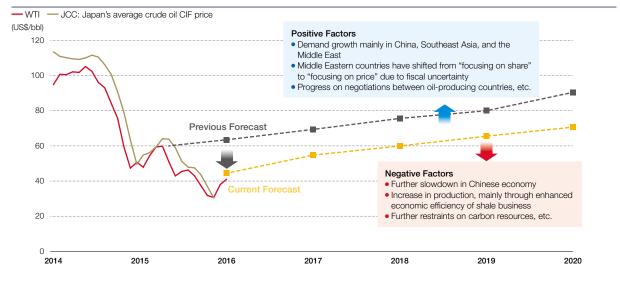
Although a careful watch is needed on these developments, there is no significant change in our basic understanding that crude oil and natural gas will continue to play key roles as primary international energy sources over the long term, given concerns over future supply shortages associated with current suppressed investment trends in the E&P industry, and expectations of growth in emerging-economy demand.

Against this backdrop, and while taking steps to deal with low crude oil prices, we are determined to move forward with measures set out in our Long-Term Business Vision and Medium-Term Business Plan.

#### **Oil Price/Exchange Rate**

Revision of oil price and exchange rate forecast based on the decline in oil prices from the time the plan was unveiled (Announced in May 2016)





#### Base Case (figures in parentheses are fiscal 2015 forecasts)

		2016	2017	2018	2019	2020
Oil Price	US\$/bbl	<b>45</b> (65)	<b>55</b> (70)	<b>60</b> (75)	<b>65</b> (80)	<b>70</b> (90)
Exchange Rate		¥115/US\$ (120); ¥80/C\$ (105)				

Note: As of April 5, 2016, the 2016 assumptions for the price of oil and the exchange rate were revised to US\$46.87/bbl and ¥106.10/US\$1.00, respectively

## Medium-Term Business Plan

#### E&P Business

Placing the highest priority of our E&P business on the steady execution of large-scale projects currently in progress, we are advancing our efforts to increase future production volumes and reserves, and securing investment return and earnings in the Pacific NorthWest LNG and Hangingstone Oil Sands Expansion projects in Canada, the Garraf Oil Field development project in Iraq, and the Kangean Project in Indonesia.

In the fiscal year ended March 31, 2016, the JAPEX Group's crude oil and natural gas production volume declined around 1% year on year to 73,000 barrels of oil equivalent per day (boe/d). While production volumes of shale gas in Canada increased, domestic output fell slightly and the Group's economic interest in the Garraf Project declined in association with progress in cost recovery.

The JAPEX Group's proved reserves as of March 31, 2016 amounted to 349 million barrels of crude oil equivalent (boe), an increase of around 12% year on year. Growth overseas—underpinned by progress in shale gas development in Canada and the booking of additional reserves on a reevaluation of expanded oil sands development in Canada—offset a decline in Japan.

Looking forward, we aim to achieve the targets set out in our Medium-Term Business Plan (production volumes of 100,000 barrels of crude oil equivalent per day and reserves of 550 million barrels of crude oil equivalent) by making further headway in shale gas development in Canada and development of the Garraf oil field.

#### **Domestic Natural Gas Supply Business**

In the domestic natural gas supply business, we will strive to build out our Integrated Natural Gas Operation and Supply System (Gas Integration), diversify both our supply methods and procurement sources and ensure a stable supply, while increasing our LNG transaction volume. Construction of the Soma LNG Terminal has been moving forward according to plan and we have begun to put in place the

internal company organizational systems to support smooth operations following its projected start of operations in March 2018. We are also undertaking environmental assessment and other procedures with a natural gas thermal power plant at a site adjacent to the Soma LNG Terminal, which we see as a source of earnings sheltered from fluctuations in crude oil prices.

#### Environment and Innovative Technology Business

In the environment and innovative technology business, we have been participating in demonstration tests in

our priority areas: methane hydrate, CCS (carbon capture and storage), and geothermal generation.

#### Measures in Response to Low Crude Oil Prices

In light of recent low levels of crude oil and natural gas prices, we have been undertaking risk analysis of key projects and our financial position and preparing countermeasures based on such analysis. This has led to an exhaustive cost-cutting drive throughout the Company and moves to suppress investment levels. By implementing such measures in response to prevailing conditions, we intend to continue to progress our key large-scale projects amid changes in the global energy market environment, and even in situations where crude oil prices remain at low levels.

## **Long-Term Business Vision**

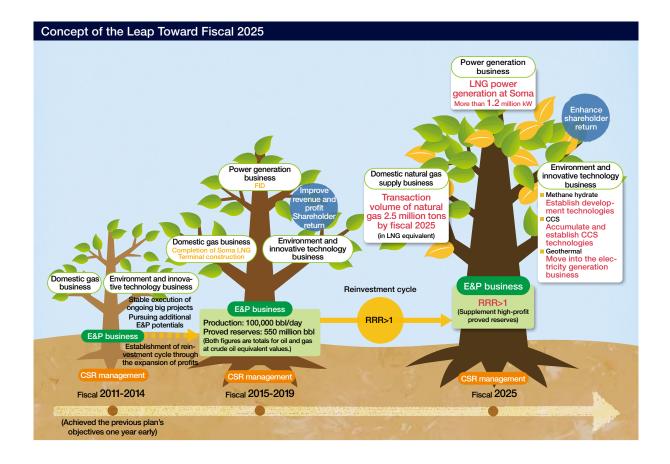
#### Business Diversification: Transformation into an Integrated Energy Company

Our Long-Term Business Vision sets out what we aim to become as a company by 2025.

While continuing to focus on E&P business in Japan and overseas as our core business, we are also committed to building out and maintaining our natural gas supply infrastructure in Japan. Even in the event our domestic gas fields become depleted and our natural gas production volumes decline, we plan to maintain stable supplies to our customers in Japan as well as secure revenues through growth in transaction volumes by sourcing LNG from overseas and making optimal use of our existing natural gas supply infrastructure.

We are also keenly aware of the crucial importance of building a stable business foundation by expanding business operations that are sheltered from the direct impact of fluctuations in crude oil prices. With that in mind, we aim to transform our operations from those of a specialist E&P company into an integrated energy company by aggressively expanding our business scope into related domains including power generation and businesses in the periphery of LNG terminals.

To this end, it is important to move steadily ahead with our major overseas projects currently in progress, while securing their economic viability. We aim to expand shareholder returns by ensuring we recoup our investment following the start-up of each project and capturing future contributions to earnings when crude oil prices recover.



## Toward Sustainable Growth: Promoting CSR through SHINE

In our Long-Term Business Vision, we have established as our core CSR themes the "SHINE" initiatives, which we position as a key aspect of CSR management underpinning business expansion.

SHINE sets out a variety of themes in such aspects as the environment, contributing to society, and governance. Our vision places particular emphasis on the recruitment and training of diverse human resources, and seeks to raise the percentage of female managers from 3.4% in 2014 to triple that percentage by 2020. Diversity is essential to reinforcing our corporate competitiveness. From the standpoint of ensuring agile responsiveness to changes in the business environment, we are making concerted efforts to provide staff training to broaden the capabilities of each individual and augment specialist knowledge. In addition, since last year we have committed ourselves to applying the principles of Japan's Corporate Governance Code. We had already appointed two independent outside directors, and we raised that number to three at the General Meeting of Shareholders held in June 2016. I expect the appointment of outside directors to support sustained growth by ensuring highly transparent management through their strict supervision. We will advance our business operations by speedy decision making based upon a robust governance structure.

Mileich Oleada

President, Chief Executive Officer



## **Directors and Audit & Supervisory Board Members**

As of June 24, 2016





#### Directors

Chairman

1 Osamu Watanabe

President Chief Executive Officer



**Director Vice President** Executive Officer

#### 5 Nobuyuki Ogura

President of SK Engineering Co., Ltd.

Managing Director Executive Officer

## 9 Yasuhiro Masui

President of Americas & Russia Project Division

Senior Managing Director Executive Officer

#### 6 Kazuo Nakayama Human Resources Dept.

Managing Director Executive Officer

#### 10 Kazuhiko Ozeki

Corporate Strategy Dept., Media & Investor Relations Dept., Business Solution Office

**Executive Vice President Executive Officer** 

#### 3 Shoichi Ishii

Advisor to President (corporate), President of Soma Project Division, Gas Pipeline Transportation Dept.

Senior Managing Director Executive Officer

#### 7 Hikaru Fukasawa

Vice President of Soma Project Division, Inter-regional Gas Supply Office

#### **Executive Vice President Executive Officer**

#### 4 Kiyoshi Ogino

Advisor to President (technical), President of Technical Division, Corporate HSE, Canada Oil Sands Project, President of Canada Oil Sands Co., Ltd.

Senior Managing Director Executive Officer

#### 8 Yosuke Higai

President of Marketing & Sales Division, Vice President of Soma Project Division, Secretary Office, Procurement Dept.



Managing Director Executive Officer

#### 11 Takahisa Inoue

President of Domestic Project Division, Vice President of Soma Project Division

Outside Director

#### 14 Yoriko Kawaguchi

Managing Director Executive Officer

#### 12 Hajime Ito

Vice President of Americas & Russia Project Division, Advisor to President of Canada Oil Sands Project

Outside Director



Managing Director Executive Officer

13 Hirotaka Tanaka President of Asia & Oceania

Project Division

Outside Director



Audit & Supervisory Board Members

Audit & Supervisory Board Member

Nobuaki Moritani

Audit & Supervisory Board Member

Morio Ishizeki

Outside Audit & Supervisory Board Member

Hiroyasu Watanabe

Outside Audit & Supervisory Board Member

Norio Nakajima

## Key Competencies for Continuous Growth

## **1** Comprehensive Technical Capabilities of the JAPEX Group

#### Technology Strength in E&P Business

The upstream sector of the oil and gas industry, which is commonly referred to as exploration and production (E&P), requires comprehensive technical capabilities that combine and utilize various specialized fields such as geology, geophysics, petrophysics, drilling engineering, production engineering, reservoir engineering, and facility engineering. Since its founding, JAPEX, as a leading E&P company in Japan, through its experience in numerous projects in Japan and abroad, has acquired and amassed knowledge and technology in the abovementioned broad range of fields. While many other E&P companies must outsource work in some of these fields, JAPEX possesses the entire suite of E&P technical capabilities within JAPEX Group companies.



#### JAPEX as a Frontrunner

Through our pioneering challenges and energetic efforts, JAPEX has successfully established a steadfast position as a frontrunner in a number of E&P technologies.

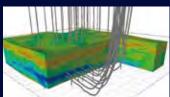
Featured Technologies	Summary of Our Achievements
High-Precision Imaging of Seismic Data in Difficult Terrain Areas	JAPEX is developing technology to optimize seismic surveys in areas where the terrain is mountainous with volcanic outcrops or in land-marine transition zones. In addition, the technology to extract and analyze weak reflections under various kinds of noise, and achieve high-quality 3D visualization of the subsurface structure is being pursued (Figure 1).
High-Precision 3D Reservoir Modeling	Comprehensive application of techniques such as seismic attribute analysis, sedimentological/geomorphological analysis, and multi-point geostatistics is conducted to grasp the distribution of oil and gas layers and behavior of liquids in order to maximize the recovery of oil/gas from the subsurface (Figure 2).
Oil Sands Development	JAPEX was a pioneer in adopting Steam-Assisted Gravity Drainage (SAGD), an economic and efficient technology in enhancing recovery from bitumen, and has advanced oil sands development in Canada. (Figure 3) See P. 31
EOR (Enhanced Oil Recovery)	JAPEX has applied "water flooding" and "gas flooding" to its fields, significantly improving the recovery factor. In addition, JAPEX is continuing its efforts to develop innovative technologies such as Water Alternating Gas (WAG), microbubble carbon dioxide injection, and Microbial EOR.
Tight Oil/Shale Oil Development	JAPEX is the first Japanese E&P company to apply tight oil devel- opment technology, which is attracting attention both domesti- cally and abroad. At the forefront of the first commercial tight oil development in Japan, JAPEX is continuing its efforts to enhance this technology.



(Figure 1)



(Figure 2)



(Figure 3)

#### Applications in Environment and Innovative Technology Business

Applying the technologies and experience nurtured in the E&P business, we have been promoting the development of renewable energy technologies such as geothermal power and CCS—technologies that are countermeasures against global warming. In new energy fields such as methane hydrate development and investigation into next-generation ocean resources, we have also been actively establishing leading-edge technologies and moving toward their practical application.

#### Project Management Know-how

JAPEX has over the years handled many oil and gas field development projects in Japan and overseas and has a record of sound operations free of major incidents or accidents. Through that experience we have honed the management skills essential for the execution of large-scale projects, and are also applying that knowledge in construction projects underway in relation to the Soma LNG Terminal and the Somalwanuma Gas Pipeline. See P. 22

## 2. Powerful Domestic Infrastructure

#### Expanding Area Supplied via Natural Gas Pipelines

JAPEX supplies natural gas to customers through its own natural gas pipeline network, with a total length of more than 800 km. The pipelines represent infrastructure able to support stable supplies, as they are a mode of delivery that is not influenced by such factors as the weather and transport problems. Through the Soma Project, we will extend our natural gas pipeline network and further enhance our natural gas supply capabilities.

#### 2 Underground Storage of Natural Gas Produced in Japan

Depleted natural gas reservoirs can serve as ideal gas "storage tanks" that require very little maintenance. JAPEX stores domestically produced natural gas underground at a gas field in Niigata Prefecture, which we use to respond flexibly to fluctuations in demand for natural gas owing to seasonal and other factors. Underground storage of natural gas also helps us to ensure reliable supplies of natural gas by functioning as emergency reserves.

## **3** Relationships of Trust with Stakeholders

Good relations with local communities are essential to developing oil and gas fields and operating them over the long term. JAPEX has been operating oil and gas fields in various regions across Japan for around 60 years, a track record made possible through gaining the understanding and cooperation of all stakeholders, including local authorities and residents. We have been able to alleviate concerns over our oil and gas development business by paying close attention to environmental and safety measures and carefully explaining our plans and listening closely to all concerned. We have also been winning the confidence of local communities through active involvement in regional activities. These relationships of trust form the foundation of all our domestic operations.

Overseas, too, we have been raising our profile in the countries in which we operate by undertaking joint development, welcoming technology researchers from abroad and providing them with financial assistance based on a careful assessment of needs in oil- and gasproducing countries, and building cooperative relationships particularly with aboriginal communities to help resolve environmental and social issues.

## **Special Feature: Soma Project**

## **Building an Integrated Supply Structure for Natural Gas**

The domestic natural gas supply business is one of JAPEX's core businesses. JAPEX is implementing various initiatives to reinforce the natural gas supply chain. These extend from gas field development and production (upstream) through pipelines and other means of transportation (midstream) to the supply to electric power plants and city gas providers and industrial customers (downstream).

Through maintaining the existing supply infrastructure and further raising supply capacity by building new infrastructure and diversifying natural gas sources, JAPEX intends to ensure stable energy supplies of competitively priced natural gas over the long term.

Photo: Soma LNG Terminal Panoramic view of the LNG tank and construction site (Soma Port, Fukushima Prefecture)



Before reclamation and LNG terminal construction work

Novembe 2013 Final investment decision on construction of Soma LNG Terminal and connecting pipeline

Timetable until start of commercial operations **Overview of the Soma Project** 

JAPEX is building an LNG receiving terminal (the Soma Prefecture as well as a connecting pipeline (the Somareceived at the terminal through to our natural gas pipe-

terminals on the Japan Sea side and the Pacific Ocean side will be connected by pipeline. This will not only enable the stable supply of natural gas to Japan's Tohoku Pacific coast area, including Fukushima, Miyagi, and Iwate prefectures, where post-quake reconstruction demand is expected, but will also provide enhanced

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We have also taken the decision on commercializasite adjacent to the Soma LNG Terminal. While contributing to stable business operations by adding power generation to our business portfolio, we expect this also to contribute to the stable supply of power to the greater Tokyo region.





Scheduled commencement of commercial operations of natural gas-fired electric power generation plant



November

2017

Scheduled mechanical completion of Soma-Iwanuma Gas Pipeline

2020

Block locations

Canada



Novembe

2017

Scheduled mechanical completion of Soma LNG Terminal



#### LNG Coastal tankers

Gas Received from Canada Shale Gas/ LNG Project

Japan

Soma LNG Terminal (under construction)



Candidate site for LNG plant (North Montney area)

(Prince Rupert)

JAPEX CORPORATE REPORT 2016 23

## Soma LNG Terminal

The Soma LNG Terminal consists of one LNG storage tank with a capacity of 230,000 kiloliters, one of the largest in the world, an LNG vaporization facility, a shipping facility for tank lorries, a mooring berth for ocean tankers, and a shipping facility for coastal ships. It will be the first LNG receiving terminal in Fukushima Prefecture. Construction is now under way with a view to beginning operations in March 2018. It will be an LNG receiving base for LNG sourced from overseas, including shale gas and LNG projects in Canada in which we are participating. Plans call for the terminal to supply vaporized gas to our gas pipeline network through the Soma-Iwanuma Gas Pipeline as well as for satellite supplies through tank lorries and coastal ships.

Site	Shinchi Town, Fukushima Prefecture (No. 4 wharf area of Soma Port)		
Capacity	One aboveground PC-type LNG storage tank with a capacity of 230,000kL (about 100,000 tons)		
Receiving facilities	LNG ocean vessel: one (maximum 210,000m <sup>a</sup> class) LPG coastal vessel: one (maximum 2,500m <sup>a</sup> class)		
Vaporizers	Capacity: 150t/h×7.0MPa		
Shipping facilities	LNG coastal vessel: maximum 4,800m <sup>3</sup> class		

Photo: Soma LNG Terminal construction site (Som Port, Fukushima Prefecture) Berth construction hoisting work using 3,0 class cranes

> Timetable until start of commercial operations

March 2018

Scheduled

operations

commencement of

November 2017 Scheduled mechanical completion

November Commencement of 2014

## Column

## Helping Bear the Burden of Post-Quake Reconstruction through Building LNG Terminal

With the Soma Project, I am responsible for LNG tank construction work. The construction involves many people. We have managed to secure staff with indepth knowledge of the different work processes. In handling the project, we are paying the utmost attention to safety so as to avoid any accidents or incidents.

Before beginning construction work, we made every effort to explain the project to the local community. The interest of the local people and their help in many ways makes me feel a strong sense of responsibility to see the project through to a successful conclusion to meet their expectations.

I look forward to seeing the project contribute to revitalizing the region following its completion in many ways, including creating employment opportunities with a wide range of work that will be needed to operate the terminal.



Kazuhiro Uwai Senior Manager of LNG Tank Construction Group Shinchi Office Soma Project Division

I participated in reconstruction following the Iraq War with the development of oil fields in the country and I now have the opportunity to contribute to post-quake reconstruction. I am glad and proud to have this chance to support local communities in this way.



## Soma-Iwanuma Gas Pipeline

02

The Soma-Iwanuma Gas Pipeline is a new pipeline about 39 kilometers long that will connect with JAPEX's existing Niigata-Sendai Gas Pipeline. Completion is scheduled for November 2017. The end point of the Iwanuma Valve Station functions as the relay point for JAPEX's gas pipeline network linking Sendai, Niigata, and Koriyama, and after the start of operations it will enable the reciprocal supply of gas from the Pacific Ocean side to the Sea of Japan side of Japan. The new pipeline will reinforce our network, greatly enhancing our ability to ensure stable natural gas supplies while also providing security in times of crisis.

Start/End points	End point: Iwanuma Valve Station (Iwanuma City, Miyagi Prefecture)
Diameter	20 inches
Design pressure	7MPa
Length	About 39 km

Scheduled commencement of operations

The same and the state of the state of the

March

2018

ves for Value Creation

November 2017 Scheduled mechanical completion

October 2015 Commencement of construction

Timetable until start of commercial operations

## Iwanuma Valve Station Shiroishi Valve Station Soma-Iwanuma Gas Pipeline Shinchi Town Shinchi Soma LNG

#### **A Robust and Safe Pipeline**

At the time of the Great East Japan Earthquake in 2011, we were able to promptly resume gas supplies to users in the affected area in Niigata Prefecture through our Niigata-Sendai Gas Pipeline, in a testament to the outstanding quake resistance of our pipeline network.

Natural gas channeled to customers is monitored 24-hours a day using dedicated circuits and satellite lines. A monitoring center and individual supply stations are equipped with remote display units through which gas pressure and flows are centrally monitored and controlled.

Other safety systems include emergency shutdown valves (ESDVs) and vent stacks for the safe release of gas into the atmosphere as and when required. Every precaution is taken to secure safety, including patrols and regular inspections along the entire length of pipelines and the use of security tags and sign posts. 

## Natural Gas-Fired Electric Power Generation Plant

We have decided to operate a natural gas-fired electric power generation plant using natural gas vaporized at the Soma LNG Terminal. Demand for electricity from the Tokyo metropolitan area is expected to continue to grow following the summer of 2020. We aim to help meet that demand and contribute to the stable supply of low-environmental load electricity with highly efficient combined cycle power generation facilities with output of around 1,200,000 kW. Through building the power plant and beginning commercial production, we also intend to contribute to the revitalization of the local quake-affected area through creating jobs and attracting business enterprises to the region.

> Planned start of commercial operations

2020

2016 Decision to undertake commercial operations

2017

Establishment of Fukushima Gas Power Co., Ltd.

April

2015

Timetable until start of

commercial operations

o: M701F5-type gas turbine Provided by Mitsubishi Hitachi Power Systems, Ltd

Planned completion of environmental assessment

procedures and start of

construction

日立ステーション

#### **Pushing Ahead with Natural Gas-Fired Power Generation Project**

We began to look closely at the specifics of the natural gas-fired power generation project following the establishment of Fukushima Gas Power Co., Ltd. in April 2015. A formal decision was taken to proceed with commercialization in October 2016. We are now moving ahead with work toward building the power plant and expanding the scale of the Soma LNG Terminal facilities.

A "scoping document" was prepared setting out how the survey, forecast, and evaluation of the environmental impact assessment (EIA) were completed in response to an October 2015 directive from the Minister of Economy, Trade and Industry. Subsequently a draft environmental impact statement (EIS) was prepared and submitted to the Minister of Economy, Trade and Industry in September 2016 and made available for general inspection. Following screening based on the relevant laws, we expect to compile a final EIS by mid-2017 and then begin construction of the power plant.

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#### Column



## Heading Toward the Future Hand in Hand with JAPEX as a Key Partner

Mayor Norio Kato Shinchi Town, Fukushima Prefecture

Shinchi Town suffered severe damage from the tsunami during the Great East Japan Earthquake. Over the past five years, we have placed top priority on rebuilding the homes of people affected by the disaster, and today, more than 95% of those people are living in new homes. Steady progress has also been made in restoring transportation infrastructure; the Joban Expressway, for example, was fully reopened in March 2015 and services on the section of the JR Joban line between Soma Station and Hamayoshida Station are due to resume in December 2016.

On the other hand, with regard to agriculture, some areas have yet to see an indication of restoration owing to subsidence in areas washed away during the tsunami, as well as the aging of the farming population. The fishing industry, too, has yet to return to full-scale operations.

Against this backdrop, the regional energy project of which JAPEX is a key member—part of a symbolic project to restore the infrastructure around Shinchi Station—is a pioneering model venture revolving around the concept of producing energy locally for local consumption. We are proceeding with the evaluation of an energy utilization plan wherein the heat and electricity produced by a cogeneration system will supply local users such as hotels, hot spring facilities and factories, and are seeking support at the national and prefectural level.

I am confident that JAPEX's Soma Project, which involves the construction of an LNG terminal at Soma Port and a pipeline linking Soma and Iwanuma, will become a significant driving force for restoration not only in Shinchi Town but also for Fukushima Prefecture and the Tohoku Pacific region, and open up a whole range of diverse opportunities for the next generation.

The Soma Project also promises benefits in terms of transport infrastructure and stimulating industry as it supports the stable supply of natural gas to the Tohoku Pacific region. This in turn should help attract businesses to Shinchi Town and surrounding areas, thereby contributing to our goal of "the renaissance of an eco-town with industry and the environment in harmony," resulting in an increase in population. JAPEX has been and will be a key partner for Shinchi Town, and we look forward to walking hand in hand with JAPEX to promote this "eco-town renaissance."



Stable and Sustainable Energy Supply

## **Overview of Projects**

## **E&P Business**

## Effective E&P and the Discovery of New Oil and Gas Reserves

The E&P business is at the heart of the JAPEX Group's operations. It is important that the Group expands its framework for ensuring the stable, long-term supply of crude oil and natural gas by maintaining and expanding reserves that become depleted by production and sales. To this end, the JAPEX Group seeks to identify prospective opportunities and to discover secure new oil and gas reserves by engaging in effective exploration and production both in Japan and overseas.

#### North Sea

↓ U.K. North Sea Offshore Block ▶ P. 34

ondon representative office

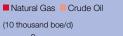
Middle East

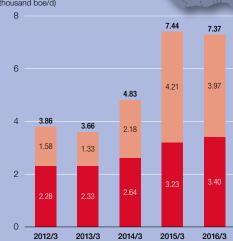
Iraq: Garraf Project 🕨 P. 32

#### Production Volume of Crude Oil and Natural Gas

Average net production volume for FY2016/3 for the JAPEX Group was 39,700 boe/d of crude oil, including bitumen, and 34,000 boe/d of natural gas for an aggregate total of 73,700 boe/d.

#### **Total Production Volume**





Dubai

representative office

## **Overseas E&P Business**

#### **Overseas E&P Business is Fundamental to Our Growth Strategy**

JAPEX is investing in the pursuit and development of new projects in its focus areas: Southeast Asia, Canada, the Middle East, the U.K. North Sea, and Russia (Sakhalin). Also, in order to achieve stability in production, reserves and revenue, JAPEX aims to build an investment portfolio that combines the acquisition of producing assets, undeveloped discoveries, and exploration acreage.

At the moment, we are working to increase production volumes and reserves through the steady execution of large-scale projects overseas. We are also making efforts to secure earnings on future investments as well as establish a cycle of reinvestment (e.g., investments in new projects). In addition, as part of our vision<sup>\*1</sup> we have adopted the goal of maintaining a long-term RRR > 1 and are expanding our businesses in accordance with this goal. <sup>\*1</sup> Long-Term Business Vision and Medium-Term Business Plan (announced May 12, 2015)

> Sakhalin, Russia Sakhalin-1 Project P. 34

Beijing representative office

#### Canada

**Development Project** 

Canada Oil Sands Project P. 31 Pacific NorthWest LNG Project

United States: Shale Oil

Houston representative office

Southeast Asia Indonesia: Sanga Sanga Block Indonesia: Kangean Project P. 33

- Jakarta representative office

Major block, and oil and gas fields
 Overseas representative offices

## **Overseas E&P Business**

Canada

## Pacific NorthWest LNG Project



JAPEX has been participating in a shale gas and LNG project in British Columbia, Canada implemented by PETRONAS, a Malaysian state-owned oil company, since acquiring a 10% interest in April 2013 through consolidated subsidiary JAPEX Montney Ltd.

Reserves and production volume have steadily increased in the upstream business of shale gas development in the North Montney area of British Columbia, and we expect to continue to expand shale gas output. We are moving forward with midstream business plans, including pipeline and plant construction, to transport the shale gas by pipeline to Prince Rupert on the west coast of the province for export following liquefaction at a planned LNG plant. Plans call for a plant with annual production capacity of 12 million tons of LNG. We intend to supply our share of the produced LNG (10% interest: 1.2 million tons per year\*1) to customers in Japan through the Soma LNG Terminal, now under construction, and other terminals.

This project is structured such that each partner has an identical equity interest in every phase of the operation from the development of shale gas, through production and liquefaction, to the offtake of LNG, ensuring stable and efficient project operation. The partners are all Asian companies, and the all-Asian project will play an important role in the supply of energy to the fast-growing Asian region. <sup>\*1</sup> Including the participating interests of other shareholders



#### Shale Gas Development & Production Project (Upstream)

Block	North Montney Area, British Columbia, Canada	
Project Company	JAPEX Montney Ltd. (incorporated in the province of Alberta, Canada)	
Interest	PETRONAS Group (Operator)	62%
	Sinopec Group	15%
	JAPEX Group	10%
	Indian Oil Group	10%
	Petroleum Brunei Group	3%

#### LNG Project (Midstream)

Proposed Plant Location	Lelu Island, Prince Rupert, British Columbia, Canada	
Interest	PETRONAS Group (Operator)	62%
	Sinopec Group	15%
	JAPEX Group	10%
	Indian Oil Group	10%
	Petroleum Brunei Group	3%

#### Canada

### **Canada Oil Sands Project**



Expansion projects are currently under way in an adjacent undeveloped area. We have adopted a phased development concept for these projects, with production in the initial phase of approximately 20,000 barrels per day due to begin from the first half of 2017. After the start of initial production, we will examine production behavior and make a decision on facilities expansion to increase production to a maximum of 30,000 barrels per day.

#### Schematic of the SAGD Process

#### m and 1,000 m are drilled at an exact distance of 5 m between the upper and lower wells. The extracting process involves heating the oil sands layer by continuously injecting high-temperature, high-pressure steam into the upper well to provide liquidity to the bitumen, which in turn flows down to the lower well and is recovered along with hot water.

JACOS, while making a significant contribution to realizing the commercial application of the SAGD process, has been achieving operational efficiencies that minimize freshwater consumption by recycling at least 90% of the hot water produced.

In SAGD, two wells with horizontal sections of between 500

expansion area (Interest) Nexen Energy 25% JACOS has 100% participating interests in Undeveloped areas some of the leases, while other leases are held (Corner, Chard, and with partners (Suncor, Nexen Energy, Imperial Thornbury) (Interest) Oil). Participating interests differ in each block.

In addition to the Hangingstone area, JACOS owns oil sands areas that have yet to be developed in the Athabasca region.

Thornbury

🔶 Hangingstone

🔶 Oil field

Oil and gas field

Lake Athabasca

Corne

Hangingstone, Undeveloped Areas

Canada Oil Sands Co., Ltd.

(local subsidiary: JACOS)

JACOS (Operator)

JACOS (Operator)

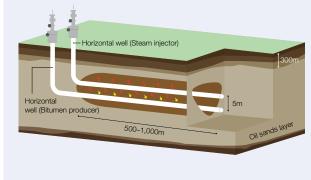
Fort McMurray

Chard

100%

75%

Gas field





Block

Project Company

(commonly known as

the 3.75 section area)

Hangingstone

Hangingstone

(Interest)



#### Stable and sustainable energy supply

## **Overseas E&P Business**

Iraq

## **Garraf Project**



The second international petroleum licensing round was held by the Iraqi Ministry of Oil in December 2009. JAPEX, along with PETRONAS, a Malaysian state-owned oil company, jointly secured the winning bid and acquired the development and production service contract to the Garraf Oil Field, located in Southern Iraq. In March 2010, JAPEX established Japex Garraf Ltd. as the project company to conduct the development of the Garraf Oil Field. Along with the operator, PETRONAS, we are moving ahead with development and production work at the Garraf Oil Field.

These efforts enabled us to commence production, at around 35,000 barrels per day, in August 2013. The following November, the Iraqi Ministry of Oil approved commercial production at the Garraf Oil Field. In February 2014, we made the first shipment of crude oil corresponding to Japex Garraf's interest. As of August 2016, a total of 14 shipments, totaling approximately 21.03 million barrels of crude oil, had been made. We plan to make one shipment of crude oil each quarter. The funds recovered through crude oil shipments are being re-invested in further development of the Garraf Oil Field, with any surplus being distributed to the shareholders of Japex Garraf Ltd.

As of September 2016, average daily production at the Garraf Oil Field remains steady at around 100,000 barrels. In the same month, total production volume since the commencement of production reached 100 million barrels. Preparations are under way at the Garraf Oil Field to commence further development work, with a view to full-fledged production of 230,000 barrels per day. Every effort will be channeled toward expanding production



volume, engaging in safe and stable operations, and undertaking the regular shipment and sale of crude oil in order to contribute to the financial status of JAPEX.

Field	Garraf Oil Field		
Project Company	Japex Garraf Ltd.		
Contract Type	Development and Production Service Contract		
Contract Term	20 years (with optional 5-year extension)		
Remuneration	US\$1.49 per barrel o	f crude oil production	
	2013: Commenced initial production		
Production Schedule	2017: Planned production target of 230,000 b/d (plateau production target)		
Aggregate Production Volume (during the contract)	Approximately 1.3 billion barrels		
Contracting Party	South Oil Company (under the Iraqi Ministry of Oil)		
Development Contractors	Project Share	Cost Share	
PETRONAS Carigali Iraq Holding B.V.	45%	60%	
Japex Garraf Ltd.	30%	40%	
North Oil Company (under the Iragi Ministry of Oil)	25%	_*1	

\*1 JAPEX and PETRONAS are to provide the North Oil Company's share of costs, which will be recovered from the produced oil.



First Commercial Production Facility



#### Indonesia

#### **Kangean Project**



An equity-method affiliate of JAPEX, Energi Mega Pratama Inc., holds a 100% working interest in the Kangean Block offshore East Java, Indonesia through subsidiaries Kangean Energy Indonesia Ltd. (KEI) and EMP Exploration (Kangean) Ltd.

Within this block, we are producing natural gas and crude oil from the Pagerungan Gas Field and the Terang Gas Field, part of the Terang, Sirasun, and Batur (TSB) gas fields.

Commercial production at the Terang Gas Field, located 90 km offshore (at a water depth of 90 m) north of Bali, began in May 2012. Peak production from the

field is 300 million cubic feet of natural gas per day (equivalent to 50 thousand barrels of crude oil per day). After processing using a subsea production system at a floating production unit (FPU), the gas is sold to a governmentoperated power company in a suburb of Surabaya, East Java, a fertilizer plant, and other customers via the East Java pipeline. In May 2016, cumulative production reached 60 million barrels of crude oil equivalent.

Currently, JAPEX is proceeding with further exploration and development work within the block. In the Sirasun and Batur Gas Fields, part of the TSB gas fields complex, we have begun Phase 2



development work aimed at starting production in 2019. In addition, we have been conducting exploratory drilling in the South Saubi Structure and evaluation activities in the West Kangean Gas Field in 2016.

Block	Kangean Block	
Project Company	Energi Mega Pratama Inc.	
late we at	KEI (Operator)	60%
Interest	EMP Exploration (Kangean) Ltd.	40%

Schematic of the Terang Gas Field Subsea Production System

## FPU (Floating Production Unit) TSB Phase 1 (Terang Development) TEO-1-5 Wells

for Value Cre

## **Overseas E&P Business**

Russia

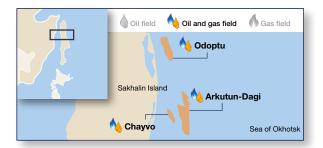
### Sakhalin-1 Project



#### U.K. North Sea

## U.K. North Sea Offshore Block

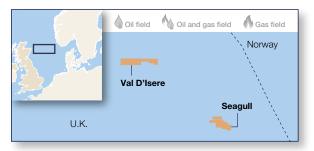




JAPEX equity-method affiliate Sakhalin Oil and Gas Development Co., Ltd. (SODECO) is participating in the Sakhalin-1 Project, a crude oil and natural gas exploration and development project in three offshore fields northeast of Sakhalin Island in Russia: Chayvo, Odoptu, and Arkutun-Dagi.

Since 2005, crude oil and natural gas have been produced from the Chayvo Field. In 2015, the project set the world record for measured depth of 13,500 meters using extended reach drilling. Crude oil production commenced in 2010 at the Odoptu Oil and Gas Field and in 2015 at the Arkutun-Dagi Oil and Gas Field.

Block	Chayvo, Odoptu and Arkutun-Dagi	
Project Company	Sakhalin Oil and Gas Development Co., Ltd.	
Interest	Sakhalin Oil and Gas Development Co., Ltd.	30%
	Exxon Neftegas Ltd. (Operator)	30%
	ONGC Videsh Ltd.	20%
	Sakhalinmorneftegas-Shelf	11.5%
	RN-Astra	8.5%



JAPEX has engaged in exploration and evaluation since 2014 in a block located approximately 300 km offshore of Aberdeen in the U.K. through consolidated subsidiaries JAPEX UK E&P Ltd. and JAPEX UK E&P CENTRAL Ltd.

At the Seagull discovery, we succeeded in producing crude oil and natural gas in tests at an appraisal well in 2015. The above picture was taken during those tests. We are currently undertaking evaluation work based on the results of those tests. We plan to drill an exploration well in the Val D'Isere prospect from 2017 onwards.

Block	Seagull Prospect and Val D'Isere Prospect	
Project Company	JAPEX UK E&P Ltd. JAPEX UK E&P CENTRAL Ltd.	
Seagull Prospect (Interest)	Apache North Sea Ltd. (Operator)	35%
	Repsol Sinopec Resources UK Ltd.	50%
	JAPEX UK E&P Ltd.	15%
Val D'Isere Prospect (Interest)	Apache North Sea Ltd. (Operator)	72.5%
	Euroil Exploration Ltd.	17.5%
	JAPEX UK E&P CENTRAL Ltd.	10%

## **Domestic E&P Business**

#### Foundation of Stable Supply

JAPEX currently operates 10 domestic oil and gas fields onshore and offshore of Hokkaido, Akita, Yamagata, and Niigata prefectures.

To maintain and expand its oil and natural gas reserves, JAPEX is systematically and actively pursuing exploration and development. Our aim is to discover additional exploration opportunities in Japanese waters by utilizing government basic surveys while continuing exploration to expand reserves in existing oil and gas fields, mainly in Hokkaido, Akita, and Niigata prefectures.

## Oil field 🔥 Oil and gas field 🍈 Gas field





⁄oshii Gas Field azaki Ci Prefecti covered: 1968 mmenced production:



## Katakai Gas Field

Ojiya Cify, Niigata Prefecture Discovered: 1960 <u>Commenced production:</u>





Akita

Yamagata

Jiigata



Hokkaido

Yufutsu Oil and





# Ayukawa Oil and



# Yurihara Oil and Gas Field Yurihonjo City, Akita Prefecture Discovered: 1976 Commenced production: 1984



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## Proved Reserves «

Proved reserves owned by JAPEX and its consolidated subsidiaries as of March 31, 2016, along with our investment equivalent in proved reserves of equity-method affiliates are presented in the following table.

#### Proved Reserves of the JAPEX Group

		JAPEX and consolidated subsidiaries							Equity-method				
	Jap	ban		Overseas			Subtotal		affili	ates		Total	
Proved Reserves	Crude oil	Gas	Crude oil	Bitumen	Gas	Crude oil	Bitumen	Gas	Crude oil	Gas	Crude oil	Bitumen	Gas
	Thousand kL	Million m <sup>3</sup>	Thousand kL	Thousand kL	Million m <sup>3</sup>	Thousand kL	Thousand kL	Million m <sup>3</sup>	Thousand kL	Million m <sup>3</sup>	Thousand kL	Thousand kL	Million m <sup>3</sup>
As of March 31, 2015	3,675	14,270	2,265	17,070	7,547	5,940	17,070	21,817	2,463	3,256	8,403	17,070	25,073
Increase due to expansion or discovery	-	-	943	-	4,112	943	-	4,112	-	-	943	-	4,112
Change due to revision of evaluation standard	∆ 354	∆ 1,019	483	5,392	207	129	5,392	∆812	68	208	197	5,392	∆ 604
Change due to acquisition and/or divestiture	-	-	4	-	153	4	-	153	-	-	4	-	153
Decrease due to production	∆ 338	∆ 833	∆ 1,256	∆ 301	∆ 532	∆ 1,594	∆ 301	∆ 1,365	∆411	∆ 676	∆ 2,005	∆ 301	∆ 2,041
As of March 31, 2016	2,983	12,418	2,439	22,161	11,487	5,422	22,161	23,905	2,120	2,788	7,542	22,161	26,693

Notes: 1. Proved reserves of the following consolidated companies include reserves held by minority interests. (Figures in parentheses are minority interests' percentage.) Japan: Japax Offshore Ltd. (29.39%)

Overseas: Canada Oil Sands Co., Ltd. (5.95%), JAPEX Montney Ltd. (55.00%), Japex Garraf Ltd. (45.00%)

2. Consolidated subsidiary Japex Garraf Ltd. commenced development operations in accordance with the Preliminary Development Plan (PDP) approved on January 19, 2011. While based on the future submission and approval of the appropriate Final Development Plan (FDP), evaluated reserves of crude oil held by the company as of March 31, 2016 stand at 11,018 thousand kL; this information has not been included in the table above. This is because an FDP has not at this stage been submitted or approved. The company's share of the fiscal 2016 scheduled production amount has been calculated as the amount of reserves. FDP submission and approval are expected from 2016 onwards.

The above proved reserves are figures based on our own evaluation using the definition of proved reserves in PRMS (Petroleum Resource Management System 2007).
 Of the proved reserves as of March 31, 2016 in the data in the table above, a portion equivalent to about 85% has received a third party evaluation.

#### Proved Reserves of the JAPEX Group: Crude Oil Equivalent (For Reference)

			JAPEX	and consol	idated subs	sidiaries			Equity-	method		Tetel		
Proved Reserves	Jap	ban		Overseas			Subtotal		affili	ates		Total		
Proved Reserves	Crude oil	Gas	Crude oil	Bitumen	Gas	Crude oil	Bitumen	Gas	Crude oil	Gas	Crude oil	Bitumen	Gas	
	Million bbl	Million boe	Million bbl	Million bbl	Million boe	Million bbl	Million bbl	Million boe	Million bbl	Million boe	Million bbl	Million bbl	Million boe	
As of March 31, 2015	23	87	14	107	46	37	107	133	15	20	53	107	153	
AS OF MAICH ST, 2015	23	07	14	107	40	57	107	100	15	20	313			
Increase due to expansion or discovery	-	-	6	-	25	6	-	25	0	0	6	-	25	
Change due to revision of evaluation standard	∆2	∆6	3	34	1	1	34	∆5	0	1	1	34	∆4	
Change due to acquisition and/or divestiture	-	-	0	-	1	0	-	1	-	-	0	-	1	
Decrease due to production	∆2	∆5	∆8	∆2	∆3	∆10	∆2	∆8	∆3	∆4	∆ 13	∆2	∆ 12	
As of Marsh 21, 0016	10	76	15	139	70		139	140	10	17	47	139	163	
As of March 31, 2016	19	76	15	139	70	34	139	146	13	17		349		



H I N E

## **Domestic Natural Gas Supply Business**

The domestic natural gas supply business is one of JAPEX's core operations. We are implementing various initiatives to establish an integrated supply structure for natural gas (gas integration), focusing on the supply and sale to domestic customers, from gas field development and production (upstream) through pipelines and other means of transportation (midstream) to the supply to electric power providers and local distribution companies, as well as the supply to industrial customers (downstream). Through these initiatives, JAPEX intends to further enhance its capability to provide stable supplies of natural gas over the long term, realize competitive prices, and enhance security capabilities in times of emergency.

We believe that further measures to expand and upgrade supply infrastructure and increase the scale of supply are necessary to compensate for a decline in domestic gas production and to maintain a stable supply, and are therefore diversifying both supply methods and procurement sources. We aim to increase the volume of natural gas we handle (LNG equivalent) in stages to 1.5 million tons in fiscal 2019 and 2.5 million tons in 2025.



Niigata-Senda Gas Pipeline

Koriyama North

Gas Pipeline

Shiroishi-Koriyama Gas Pipeline

Yamagata Natural Gas Pipeline (TOHOKU NATURAL GAS Co., Inc.)

Soma-Iwanuma Gas Pipeline (under construction)

LNG

Yufutsu-Sapporo Gas Pipeline

8-9 day voyage to Japan

🔥 Oil field, oil and gas field, gas field

LNG tank truck transportation

cific NorthWest IG Project in

LNG terminal

Coastal tankers

= LNG rail transportation

Pipeline

## **Environment and Innovativ Technology** Business

The crude oil and natural gas E&P business relies on geology, geophysics, exploration technology, drilling engineering, reservoir engineering, and information technology. The JAPEX Group as a company with a fully comprehensive crude oil and natural gas development business boasts the competitive advantage of accumulated technologies essential for exploration, development, production, and transport.

Through the Environment and Innovative Technology Projects Division, we are leveraging the technologies and knowledge acquired in the crude oil and natural gas development business and promoting the renewable energy business as a way of combating global warming. JAPEX has positioned the Environment and Innovative Technology Business as one of three major basic policies for the expansion of its business and is focusing particularly on accumulating new technologies and knowledge in the areas of methane hydrate, CCS, and geothermal power generation.

JAPEX is pursuing solutions on a global scale in these and other new energy fields by contributing technology, knowledge, and demonstration research, aiming for commercialization of these technologies as businesses and core sources of earnings.



Geothermal Power



ed by Ja

Short-term flow test at Mt Musa

#### Methane Hydrate



The first offshore production tests

#### Stable and sustainable energy supply

## Environment and Innovative Technology Business

## **Methane Hydrate**

Methane hydrate (MH) is an ice-like crystalline solid formed by methane and water that exists in highly pressurized, low-temperature environments, such as below the seabed at deep depths or permafrost layers in the polar regions. For this reason, it is not easy to produce MH. The depressurization method has been confirmed as an effective way of extracting methane gas from the MH layer. In Japan, this substance is known to exist in two types, sand-layer porefilling type (sand-layer type) and shallow-type.

It is estimated that approximately 1.1 trillion m<sup>3\*1</sup> of original MH resources exist in the eastern area of the Nankai Trough, offshore from Shizuoka to Wakayama. This is equivalent to about 11 years of Japan's annual LNG import volume (2015).\*<sup>2</sup>

Surface layer-type MH is also known to exist under the Sea of Japan. A three-year survey of the resources since fiscal 2013 has confirmed gas chimney structures where MH could exist in 1,742 locations.\*<sup>3</sup>

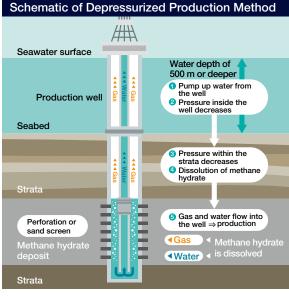
#### Research into Methane Hydrate Development Technology

In March 2013, the first offshore production test was conducted by the government using *CHIKYU*, a deep-sea scientific drilling vessel, targeting sand-layer type MH at the Daini Atsumi Knoll, located between Atsumi Peninsula and Shima Peninsula off the coast of Japan. As a result, we succeeded in the continuous production of methane gas from an undersea MH period (over six days with an average production volume of 20,000 m<sup>3</sup> per day, and cumulative production of approximately 120,000 m<sup>3\*4</sup>) from a methane layer using the depressurization method. This was a world first for offshore operations.

Based on these results, the government is monitoring the international situation and promoting technological development so commercial production of sand-layer type MH led by the private sector can begin in the mid-2020s.\*5

#### **JAPEX's Involvement**

JAPEX was quick to recognize the potential of MH and provide technology, experience, and know-how cultivated in oil and gas development to Japan's MH development and R&D. We also contributed to the project as commissioned operator for the first offshore production tests.



Based on a diagram from MH21 Research Consortium

In October 2014, we were one of the 11 companies, including E&P and engineering firms, to jointly establish Japan Methane Hydrate Operating Co., Ltd. (JMH). This company, in which JAPEX is the leading shareholder, aims to conduct offshore MH production tests, operating efficiently, effectively, and smoothly as an organization of entirely Japanese companies and sharing the expertise of numerous private-sector companies.

JMH in May and June 2016 undertook drilling work for Japan Oil, Gas and Metals national Corporation (JOGMEC) on a total of five exploration, observation, and production wells at the Daini Atsumi Knoll, located between Atsumi Peninsula and Shima Peninsula off the coast of Japan. Production tests are scheduled to be undertaken in the first half of 2017.

With surface layer-type MH, too, for which a survey of the resources is currently under way, JAPEX plans to examine the possibility of participating in surveys, R&D, and other activities relating to resource recovery technologies and exploration technologies.

Going forward, JAPEX aims to contribute to offshore production tests via JMH while continuing to pursue efforts to promote the development of MH as a clean energy resource in Japan.

- \*1 From an MH21 Research Consortium pamphlet (published in 2014)
- \*2 LNG imports of Japan (2015): 102.0 billion m<sup>3</sup> (*Trade Statistics*, Ministry of Finance) \*3 Ministry of Economy, Trade and Industry news releases, December 25, 2014 and January 22, 2016
- \*4 JOGMEC news release, March 19, 2013
- \*5 Offshore Energy and Mineral Resource Development Plan announced on December 24, 2013, by the Ministry of Economy, Trade and Industry

## Environment and Innovative Technology Business Carbon Dioxide Capture and Storage (CCS)

CCS is one method that has been proposed for reducing CO<sub>2</sub> emissions. It involves storing CO<sub>2</sub> by directly injecting it into depleted oil and gas reservoirs, coal reservoirs, or aquifers and is considered to be highly practical, reliable, and safe. It is estimated that up to approximately 146 billion tons of CO<sub>2</sub> could be stored in underground geological formations in Japan. Detailed analysis has been under way since 2014 based on estimates from existing basic data.

#### **Applying Core E&P Technologies**

JAPEX possesses cutting-edge technologies cultivated over half a century of experience in petroleum development, such as those used for investigating underground structures, estimating petrophysical properties and conducting drilling, production, and fluid migration simulation, as well as underground monitoring centered on seismic surveys. Our E&P technologies constitute an indispensable core technology for CCS.

#### **E&P** Technologies Essential for CCS

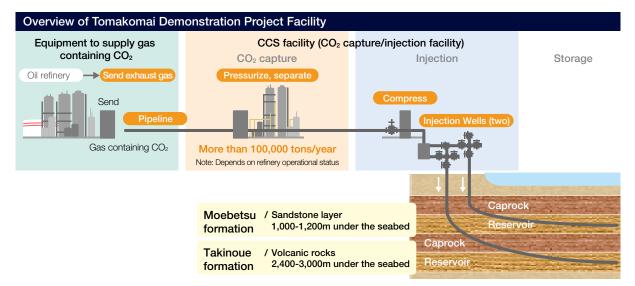
- Technologies for identifying subsurface structures and estimating petrophysical properties
- Technologies for drilling extended reach wells at depths and horizontal distances of several thousand meters
- Geophysical logging technologies
- Technologies for producing crude oil and natural gas safely.
- Fluid movement simulation technologies
- Underground monitoring technologies

## Establishing Technologies for Commercialization of CCS

With the aim of commercializing CCS technology, JAPEX jointly established Japan CCS Co., Ltd. (JCCS) with other private-sector companies in May 2008. In accordance with its 2014 Basic Energy Plan, the Japanese government aims to commercialize CCS technology by 2020. Under the commissioning of Japan's Ministry of Economy, Trade and Industry (METI), JCCS has been implementing a CCS demonstration project since April 2012, of which JAPEX has been contracted to undertake part of the preparatory work. Since April 2016, JCCS has commenced injection of CO<sub>2</sub> into offshore sub-seabed reservoirs.

In April 2016, JAPEX established the Geological Carbon dioxide Storage Technology Research Association together with the Research Institute of Innovative Technology for the Earth (RITE), the National Institute of Advanced Industrial Science and Technology (AIST), and private sector companies. This research association has been entrusted by METI to develop safety management technologies for large-scale CCS and effective injection technologies for large-scale subsurface storage.

Through the establishment of technologies geared toward the commercialization of CCS, JAPEX aims to contribute to the prevention of global warming.



Based on materials from Japan CCS Co., Ltd.



#### Stable and sustainable energy supply



Geothermal power extracts steam and hot water from deep underground for power generation. Currently, there are geothermal power stations, including small-scale stations, operating in over 30 areas in Japan. A land of volcances, Japan has abundant geothermal resources and is the third richest country in terms of geothermal energy. Geothermal energy is a clean energy with less greenhouse gas emission. Also, geothermal energy is stable and able to generate electricity continuously day and night.

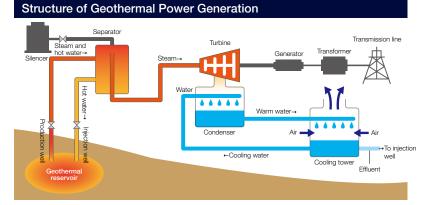
There are high expectations for geothermal development. To promote such development, the Japanese government has introduced 1) deregulation for its development in national parks and 2) a FIT system (feed-in tariffs with fixed prices), which offers long-term contracts to renewable energy producers.



Drilling operation of geothermal exploratory well in June 2015

#### **New Geothermal Development**

JAPEX has been moving toward realizing the commercialization of geothermal power generation, making use of its accumulated technologies and experience. We have been conducting drilling surveys in the Mt. Musa area (Shibetsu Town, Hokkaido) and undertook trials at a second geothermal exploratory well to confirm geological structure underground in June 2015. Preparatory work is now in progress for the drilling of a third exploratory well. Planning is also under way for the drilling of a second geothermal exploratory well in the Bandai area of Fukushima Prefecture in fiscal 2016. JAPEX is examining potential sources of geothermal energy in many other areas, too, including the Mt. Furebetsu south area (Kushiro City, Hokkaido).



## **Solar Power**

Solar power generation plants with a capacity over 1,000 kW are known as mega-solar power plants. JAPEX is involved in operating two mega-solar power plants in Tomakomai City in Hokkaido. The Tomakomai area has long daylight hours, little snowfall, and low air temperature, making it one of Japan's most suitable places for solar power. As such, we expect the plants to be a stable source of solar power.

A mega-solar power plant built on our Hokkaido District Office premises commenced commercial operation in August 2014.

In addition, the mega-solar power plant of Solar Power Tomakomai Co., Ltd., a company established by the Sumitomo Corporation Group and JAPEX, commenced commercial operation in November 2014.



The mega-solar power plant located within the Hokkaido District Office site

	Installed Capacity	Site Area
Within the Hokkaido District Office site	1,800kW	39,000m²
Solar Power Tomakomai Co., Ltd.	13,000kW	300,000m <sup>2</sup>

## CSR Activities within the JAPEX Group

JAPEX has a Corporate Vision that "JAPEX is committed contributing to local communities through a stable supply of energy." We consider our business activities in "a stable supply of energy" in themselves to be an important CSR priority.

Since deciding to pursue CSR activities systematically

on a companywide basis in 2012, we have promoted CSR activities using the PDCA cycle under which we identify core CSR themes for the JAPEX Group and formulate CSR action plans and targets, while seeking the diverse opinions of our stakeholders through dialogue.

## Process of Identifying Core CSR Themes

#### 1. Evaluating present status, undertaking analysis, and identifying issues

We examined the CSR activities of JAPEX Group companies in accordance with guidelines set out in ISO 26000 to grasp the status of CSR activities at that time and gain a comprehensive understanding of related issues.

### 2. Survey regarding CSR

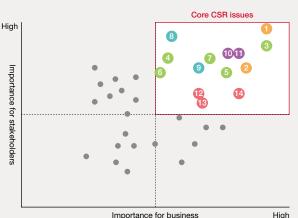
To gain a comprehensive understanding of the key issues (materiality) with respect to the Company's CSR activities, we conducted surveys of all personnel covering three categories: (1) economy, governance, and compliance; (2) products, services, society, and labor; and (3) the environment.

## 3. Identification of core CSR themesPreparing a list of topics

We extracted a list of 56 topics that could become core themes based on the survey results of (1) and (2) and taking into account our Corporate Vision and the JAPEX Group Code of Conduct.

#### 2 Giving relative weightings to the topics

Next, we prioritized these topics according to the relative importance of their impact on stakeholders and our business activities. We then produced a materiality matrix based on the above.



Materiality matrix

Numbers 1-14 correspond to the individual issues in the chart on the right

#### Holding workshops

We held workshops on the JAPEX Group's core CSR themes with participants from a wide cross-section of the Company to discuss how best to address them.

#### 4 Management review

After discussion in the CSR Committee and elsewhere, we identified 14 individual topics and 43 detailed topics, from which we organized and summarized five core CSR themes as priorities that the Company needed to address.



## Five Core CSR Themes as "SHINE" Initiatives

By linking our process for setting action plans and targets for five core CSR themes ("SHINE" initiatives we position as a key aspect of CSR management underpinning business expansion) and our process for setting business objectives, we are looking to gain awareness of the CSR themes in every business unit as they are integral to our business objectives. In doing so, we aim to raise the effectiveness of our CSR management.

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Initial	JAPEX core CSR themes	CSR goals	Individual issues
S	Stable and sustainable energy supply P. 22	<ul> <li>Achieve a stable supply of energy by maintaining stable supply sources and infrastructure for crude oil and natural gas, efficient and safe operations, and ensuring the quality and safety of its products.</li> <li>Secure diverse sources of supply by actively participating in the development of geothermal, solar, and other renewable energy sources, as well as unconventional energy sources such as shale oil gas and methane hydrate, while contributing to the development of related technologies such as carbon dioxide capture and storage (CCS).</li> </ul>	<ol> <li>Stable energy supply</li> <li>Development of new technologies</li> </ol>
н	HSE as our culture ▶ P. 44	<ul> <li>Secure occupational health and safety, develop various risk management policies and systems, including security risks, and firmly establish a corporate culture that places top priority on occupational health, safety, and the environment (HSE).</li> <li>In conducting its business, strive for energy conservation and the efficient use of natural resources to prevent global warming and ensure the sustainability of resources.</li> <li>Reduce the environmental impact of its activities by preventing water, air, and soil pollution and taking care of our ecosystem.</li> </ul>	<ol> <li>Occupational health and safety</li> <li>Risk management</li> <li>Measures to prevent global warming</li> <li>Preserving biodiversity and ecosystems</li> <li>Pollution prevention and resource recycling</li> </ol>
ı	Integrity and governance P. 48	<ul> <li>Practice highly efficient and transparent management under its governance structure.</li> <li>Establish a compliance system that prevents the occurrence of improper activities and legal violations.</li> <li>Foster employee awareness to promote steadfast work practices that are aligned with our Corporate Vision.</li> </ul>	<ul><li><sup>8</sup> Governance</li><li><sup>9</sup> Compliance</li></ul>
N	Being a good Neighbor ▶ P. 54	<ul> <li>Through open and sound communication with stakeholders, gain an accurate understanding of the requirements society places on the JAPEX Group.</li> <li>By creating employment in regions where the Group operates and pursuing fair business practices, achieve co-existence and growth with its business partners, clients, and oil- and gas-producing countries.</li> <li>Respect local cultures and maintain good relationships with local communities through social contribution and funding initiatives outside our business activities.</li> </ul>	<ul> <li>Growing together with local communities</li> <li>Building good relationships with stakeholders</li> </ul>
E	The Employer of choice P.58	<ul> <li>Establish a friendly workplace where all its employees — encompassing a wide range of nationalities, academic qualifications, and careers — recognize the diversity of each other's attributes, fulfill their individual potential, receive appropriate evaluation and remuneration, improve their technical skills and knowledge, and are able to grow.</li> <li>As a global company, provide an attractive work environment where talented people choose to work.</li> </ul>	<ol> <li>Respecting employee diversity</li> <li>Creating a fair and rewarding workplace</li> <li>Human resources development and training</li> </ol>

## HSE as Our Culture

Under the HSE management system, we are nurturing a corporate culture that places top priority on occupational safety, health, and environmental protection.

CSR Action Plans and	Targets	(abstract)
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Individual Issues	Fiscal 2015 Action Plans and Targets	Fiscal 2015 Achievements	Evaluation
Occupational health and safety	<ul> <li>Conduct awareness activities for related departments of HSE activities (zero accidents causing injury or death, zero accidents causing damage to property, zero acci- dents affecting the public and zero accidents caused by illegal activities)</li> </ul>	<ul> <li>Occupational accidents: 4 (down by two from fiscal 2014), accidents causing damage to property: 2 (down by 1 from fiscal 2014), of which one was an accident affecting the public, up one from fiscal 2014; accidents caused by illegal activities: 2 (same as in fiscal 2014)</li> </ul>	
Risk management	<ul> <li>Gradually conduct drills on overseas security measures</li> </ul>	<ul> <li>Initiatives for safe work practices overseas: establishment of tele- phone communications training overseas (8 bases)</li> </ul>	0
Measures to prevent	* Monitor greenhouse gas emissions based on the Japan Petroleum Development Association's "Commitment to a Low Carbon Society," and monitor greenhouse gasses	* Reporting fiscal 2014 emission results to the Japan Petroleum Development Association	0
global warming	<ul> <li>Analyze operational data, hold exergy workshops (within the jurisdiction of the Akita District Office and the JPO Niigata District Office), verify energy conservation measures (Niigata District Office, Katagai District Office)</li> </ul>	Exploration Co., Ltd, Niigata Office), investigation into energy-saving	0
Preserving	* Plan and implement tasks that take account of the	Implementing study to assess impact of construction of LNG lique- faction base on biodiversity under Pacific NorthWest LNG Project	0
biodiversity and ecosystems	impact on biodiversity	* JACOS's wildlife and other natural environment monitoring activities	0
		Continuous wildlife impact surveys in Mt. Musa area	0
Pollution prevention and resource recycling	<ul> <li>Reduce benzene, toluene, and xylene (BTX) emissions from production operations</li> </ul>	* Environmental targets were met at most sites, though some not met	

## Overview of HSE-MS

JAPEX is committed to conducting its business in a manner that protects occupational health, safety, and the environment. To implement this policy, we have put in place an HSE Management System (HSE-MS) and have since 2014 been pursuing HSE activities in our projects and those of overseas operators.

We constantly seek to improve our HSE-MS based on repeated PDCA (Plan-Do-Check-Act) cycles covering the HSE-MS, risk assessment methods, objectives and targets, training, operational (work and activities) management, HSE audits, and management reviews.

#### **JAPEX HSE Policy**

JAPEX is committed to conducting its business in a manner that protects occupational health, safety, and the environment. Our HSE standards will not be compromised by other business priorities. To accomplish this, JAPEX will:

• Fully comply with all applicable laws and regulations.

- Provide and maintain safe and healthy working conditions to create an incident-free workplace.
- Ensure that adequate medical support is provided to our employees.
- Identify and assess the hazards arising from activities and control any associated risks.
- Provide training to enable employees to work in a healthy and safe manner and foster awareness of protecting the environment.
- Regularly review HSE performance in order to demonstrate continuous improvement of our HSE practices.
- Strive to reduce waste and the consumption of materials, fuels and energy.
- Minimize adverse environmental effects associated with our activities.
- Require contractors to manage HSE in line with this policy.

The policy is implemented through the application of the HSE management system, which is an integral part of JAPEX's overall management approach.

HSE as our culture

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## Occupational Health and Safety Initiatives

#### **HSE Training**

We undertake carefully organized and planned HSE training programs to support hygienic and safe working practices among all our staff. For staff with key roles in our HSE operation, including HSE administrators, work supervisors, site workers, and staff responsible for onsite safety in our gas business, we set both legal and voluntary qualification requirements. We help staff attain those qualifications through providing for training programs both within and outside the Company while also encouraging staff to obtain specific qualifications. We also support staff in their efforts to obtain qualifications by incorporating them into our compensation system. We also undertake activities to raise HSE awareness among staff throughout the Company, including sharing information on accidents and inviting outside instructors

to give lectures on environmental issues.



Technology training (Production Operator Training Center)

#### **HSE-MS** Audits

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We undertake HSE-MS audits at business sites in Japan and overseas. These assess how HSE-related laws and regulations are being carried out and the status of HSE-MS implementation. In addition, they check on the status of HSE activities across diverse fields, including risk assessment and the implementation status of HSE training.

The HSE audit of the Kangean Project in fiscal 2015 covered audits of work offices and also involved actual visits to the Pagerungan Gas Field. Based on this audit, we confirmed that activities were being undertaken in accordance with our HSE-related manuals. We also confirmed the status of HSE compliance at the construction site being undertaken by JACOS at the Hangingstone Expansion areas. This led to recommendations for improvements in a number of areas, which JACOS has

been addressing. In our HSE-MS audit activities, we

audit activities, we also hold regular training programs for auditors.



HSE-MS audits (Pagerungan Gas Field)

## Crisis Management

#### Initiatives for Safe Work Practices Overseas

In the operation of overseas businesses, it is most important to ensure employees' safety. At JAPEX, the HSSE Committee is tasked with formulating basic policies on overseas safety and security and deliberating important matters. The Overseas Security Measures Working Group, consisting of managers from relevant departments, gathers information, makes decisions on the advisability of sending employees overseas, and engages in other overseas security-related activities on a daily basis.

Fiscal 2015 saw expanding terrorist activities perpetrated by ISIL<sup>\*1</sup> in Europe, the U.S., Asia, and elsewhere. In our business activities, we had to cope with both the direct and indirect impact of terrorist action not only in Iraq, but also with such incidents as bombings in Jakarta and serial terror attacks in Paris and Belgium. In response to growing tensions in the Middle East and North Africa (MENA), meanwhile, we participated actively in external seminars and the exchange of information with other companies through, for example, attending seminars held by the Institute of Energy Economics, Japan, on the economic, political, and security position in MENA.

Seeking to enhance our crisis management effectiveness, we also implemented communications training programs in overseas areas thought to be at risk from emergencies. In addition, we conducted trials of our emergency contact system linking different overseas bases.

\*1 ISIL: Islamic State in Iraq and the Levant

Main Overseas Security Measures (Fiscal 2015)						
Activity	Frequency	Remarks				
HSSE Committee (on overseas security-related issues)	2	On work conditions in Iraq				
Discussions by the Overseas Security Measures Working Group (discussions concerning sending employees overseas)	70	Includes discussion papers				
Discussions by the Overseas Security Measures Working Group (other issues)	6	Working conditions in Iraq, report on training with respect to safety measures, etc.				
Outside seminars, exchanges of views	9					
Training overseas crisis emergency contact system	8	Between headquarters and overseas bases				

## Initiatives to Tackle Global Warming

Reduction of Greenhouse Gas Emissions 
Graph 1

Since 2013, we have been participating in the Japan Business Federation's "Commitment to a Low Carbon Society" initiative under its voluntary action plan. Under the plan's guidelines, we are striving to achieve the Japan Petroleum Development Association's target for cutting greenhouse gas emissions by 2020 and its target (newly set in 2015) for 2030. In concrete terms, we set annual goals in our CSR execution plans and targets that are based on the medium- and long-term goals, and are undertaking a wide range of activities in our daily activities, such as energy saving, making effective use of abandoned low-pressure gas, and reviewing how we handle flare gas. We will continue to implement measures to prevent global warming, such as promoting environmentally friendly technologies including carbon dioxide capture and storage (CCS) and geothermal power.

Our efforts to reduce emissions resulted in greenhouse gas emissions (excluding Scope 3)<sup>\*1</sup> of 219 kilotons-CO<sub>2</sub> in fiscal 2015, a reduction of 13 kilotons-CO<sub>2</sub> (5.5%) compared with the previous fiscal year.

\*1 The calculation and reporting of greenhouse gas emissions and energy consumption are made for each scope of the Greenhouse Gas Protocol Standards. Internationally, the Greenhouse Gas Protocol is the most widely applied set of standards used to calculate and report greenhouse gas emissions.

#### Promotion of Energy-Saving Activities Graph 2

As an integral part of our efforts to reduce greenhouse gas emissions, we are actively undertaking energy-saving activities throughout all of our sites. We have been deploying energy-saving consultants since 2011 and completed establishing energy-saving management standards at all of the Company's sites in fiscal 2013.

In fiscal 2015, we continued to undertake evaluations of energy-saving potential at all our production sites and plants using the concept of exergy (efficient energy) that we adopted in fiscal 2014. We also continued to implement efforts to optimize office lighting and turn off room lighting during lunch hours. As a result, our energy consumption in fiscal 2015 (excluding Scope 3) amounted to 2,374TJ, a 142TJ (5.7%) reduction compared with the previous fiscal year.

#### **Afforestation Programs**

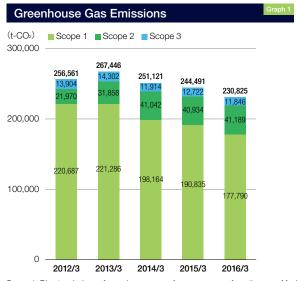
As part of our efforts in combating global warming and reducing CO<sub>2</sub> emissions, JAPEX has been carrying out afforestation and forest management programs since fiscal 2005. These programs are currently being implemented in Hokkaido, Akita, and Niigata prefectures, where we have business operations. After the comple-

tion of planting, we are putting our efforts into growing the trees and managing their development to restore the forests.

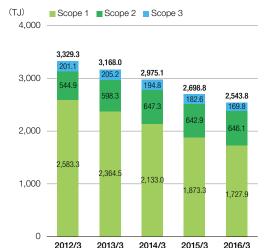
**Energy Consumption Trends** 



Afforestation Festival (Nagaoka City, Niigata Prefecture)



Scope 1: Direct emissions of greenhouse gases from a company from the use of fuel and processes Scope 2: Indirect emissions of greenhouse gases from the use of electricity or heating supplied by another company Scope 3: Other indirect emissions from company's contracting of transportation services for the company's products



Greenhouse Gas Emissions

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## Preserving Biodiversity and Ecosystems

When JAPEX conducts any crude oil and natural gas exploration, development and production, as well as other projects in Japan and overseas, in addition to statutory surveys the Company formulates plans for voluntary environmental assessments. We also conduct regular reviews and monitoring to minimize our impact on biodiversity and ecosystems.

#### Main Activities in Fiscal 2015 (JACOS)

We conducted monitoring surveys for endangered species such as the woodland caribou, as well as other

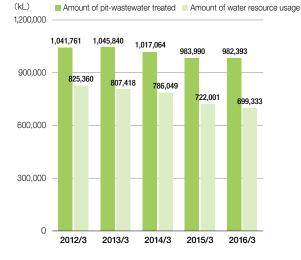
Pollution Prevention, Resource Recycling

#### Preservation of Water Resources and Treatment of Pit-Wastewater Straph 3

At our production sites and plants, we are promoting the recycling and reuse of water used as a coolant in processing facilities and natural gas cleaning, and also as boiler water in order to preserve water resources by reducing the volume of water we use. Specifically, we are (1) using systems to recycle water used as a coolant in well drilling and (2) using rainwater in muddy water used during drilling operation. In fiscal 2015, we used approximately 699,000kL of water in Japan, a reduction of 23,000kL (3.1%) compared with the previous fiscal year.

#### Reduction of VOC Emissions Graph 4

Volatile organic compounds (VOCs) are said to be the causative agent of suspended particulate matter (SPM) and



## Amount of Water Resources Usage and Pit-Wastewater Treated

wild animals, as part of our efforts to minimize our impact on their living environment, as well as to restore habitat lost due to human activities and forest fires.

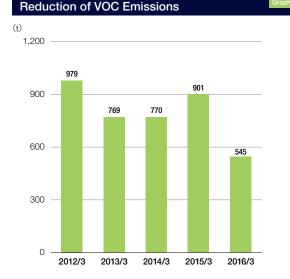


Caribou Provided by Chris kolaczan/ Shutterstock.com

In addition, we held regular consultations with local indigenous people who are familiar with the natural environment and conducted joint field surveys to draw up vegetation restoration plans for development sites.

photochemical oxidants in the atmosphere. Most VOCs are volatile hydrocarbons, excluding methane, which is released from crude oil storage tanks and in the course of gas processing, such as removing water contained in the gas, and they include Pollutant Release and Transfer Register (PRTR) substances such as benzene, toluene, and xylene (BTX). Measures to limit VOC emissions generally consist of sealing crude oil storage tanks and the incineration and recovery and disposal of VOCs discharged from gas processing facilities.

As part of our ongoing drive to reduce VOC emissions, JAPEX has been participating in a voluntary action plan as a member of the Japan Natural Gas Association since fiscal 2005. In fiscal 2015, our VOC emissions amounted to 545t, a 356t (39.5%) reduction compared with the previous fiscal year, through improvements to worksite VOC incineration treatment facilities and raising operating rates.



We are striving to enhance corporate governance by respecting the objectives and intentions of the Corporate Governance Code introduced in June 2015.

#### **Basic Policy**

JAPEX is committed to contributing to local communities through the stable supply of energy. In order to fulfill this commitment, we need to maximize corporate value in the medium to long term, bearing in mind that our main business is crude oil and natural gas E&P, which is a high-risk business with long lead times, and also considering our historical background and Japan's energy policy. Against this backdrop, we believe that our path to sustainable growth over the long term lies in efficient and transparent management and building relationships of trust by fulfilling our responsibilities for accountability to shareholders and other stakeholders. We regard corporate governance as a vital bedrock to support that growth.

#### **Corporate Governance Overview**

As of June 24, 2016	
Organizational Structure	Company with Audit & Supervisory Board
Executive Officer System	Yes
Number of Directors Provided for Under Articles of Incorporation	18
Number of Directors	16 (includes 3 outside directors)
Chairman of the Board of Directors	President
Number of Audit & Supervisory Board Members Provided for Under the Articles of Incorporation	4
Number of Audit & Supervisory Board Members	4 (includes 2 outside Audit & Supervisory Board members)

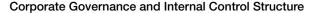
### Corporate Governance Structure

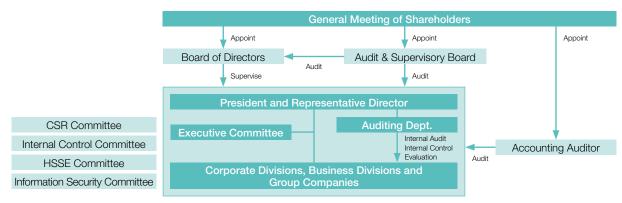
The Board of Directors meets regularly once per month and retains decision-making authority over important decisions. It also serves in a supervisory role by receiving reports on the status of operations submitted by directors and executive officers.

To strengthen the supervisory functions of the Board of Directors, three outside directors have been appointed. These outside directors, being independent from the management team, actively provide opinions and advice regarding proposals and deliberations, supporting lively debate at the Board of Directors.

Furthermore, from the perspective of faster decision making, an Executive Committee composed of directors and other executives based at the headquarters has been established to make decisions on matters that are not the responsibility of the Board of Directors and to conduct discussions to support the decision making of the Board of Directors. The Executive Committee meets in principle twice per month but will also meet at other times when necessary.

Recognizing that fulfilling corporate social responsibility (CSR) is essential to our sustainable development, JAPEX has established the CSR Committee, chaired by the president, as well as the Internal Control Committee, HSSE Committee, and Information Security Committee. JAPEX systematically promotes CSR activities in accordance with basic policies instituted by these committees.





Integrity and governance

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## Outside Directors and Outside Audit & Supervisory Board Members

JAPEX has appointed three outside directors and two outside Audit & Supervisory Board members, all of whom meet the Tokyo Stock Exchange's criteria for independent members of the Board.

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#### Reasons for Appointment of Outside Directors and Backgrounds

	Name	Reasons for appointment and backgrounds
Outside Directors	Yoriko Kawaguchi	Yoriko Kawaguchi has been appointed outside director, as JAPEX expects her to successfully facilitate the execution of its business through the supervision of management and the offering of wide-ranging proposals based on her in-depth insights and extensive experience as Minister of State and in other government positions, as well as her career in the private sector. In fiscal 2015, Ms. Kawaguchi attended nine out of 10 Board meetings. She has been raising appropriate questions and provided advice in discussions on various proposals from a perspective independent from the corporate management engaged in business execution.
	Akira Kojima	Akira Kojima has been appointed outside director, as JAPEX expects him to successfully facilitate the execution of its business through the supervision of management and the offering of wide-ranging proposals based on his in-depth insights and extensive experience in business management at a newspaper publisher and at other organizations. In fiscal 2015, Mr. Kojima attended all 10 Board meetings. He has been raising appropriate questions and provided advice in discussions on various proposals from a perspective independent from the corporate management engaged in business execution.
	Tetsuo Ito	Tetsuo Ito has been appointed outside director, as JAPEX expects him to successfully facilitate the execution of its business through the supervision of management and the offering of wide-ranging proposals based on his in-depth insights and extensive experience as a legal specialist. Mr. Ito assumed the position of outside director in June 2016.
Outside Audit &	Hiroyasu Watanabe	Hiroyasu Watanabe has been appointed outside corporate auditor, as JAPEX judged that he would provide appropriate audits from an objective position independent from the corporate management engaged in business execution based on his in-depth insights and extensive experience as an administrator at the Ministry of Finance and at other organizations and as a professor at a graduate school. In fiscal 2015, Mr. Watanabe attended nine out of 10 Board meetings and eight out of nine meetings of the Audit & Supervisory Board. He has been raising appropriate questions and provided advice in discussions on various proposals.
Supervisory Board Members	Norio Nakajima	Norio Nakajima has been appointed outside corporate auditor, as JAPEX judged that he would provide appropriate audits from an objective position independent from the corporate management engaged in business execution based on his distinguished insights and extensive experience though his positions in financial institutions. In fiscal 2015, Mr. Nakajima attended all 14 meetings of the Board of Directors and all 13 meetings of the Audit & Supervisory Board. He has been raising appropriate questions and provided advice in discussions on various proposals.

#### Note:

JAPEX has signed agreements with all outside directors and outside Audit & Supervisory Board members whereby liability indemnity is limited as specified in Article 423, Paragraph 1 of the Companies Act. Under those agreements, remuneration shall be limited to the amount provided for under the Act, provided that the director or Audit & Supervisory Board member has performed his or her duties in good faith and without gross negligence.

## Internal Audits and Audits Performed by Audit & Supervisory Board Members

#### **Internal Audits**

Internal audits of JAPEX are conducted by the Auditing Department under the direct management of the president. The Auditing Department conducts internal audits to confirm whether the business operations of each department are carried out in accordance with laws and internal regulations. The Auditing Department reports the results of each audit to the president, and provides guidance and advice to the relevant business departments where necessary.

#### Audit & Supervisory Board Members

Audit & Supervisory Board members, based on the audit policies determined by the Audit & Supervisory Board and their designated duties, collect information for and attend the meetings of the Board of Directors, the Executive Committee, and other important committees. They confirm requests for management approval documents and undertake audits to ensure that directors comply with the relevant laws and the Articles of Incorporation in the execution of their duties. Audit & Supervisory Board members also hold regular meetings with audit & supervisory board members of major subsidiaries where they exchange information and views.

Audit & Supervisory Board members also seek to raise the efficiency of audits based on reports on audits undertaken by the Auditing Department and information provided periodically by accounting auditors and the Auditing Department. They also coordinate closely with outside directors through a special committee established for the purpose of providing information to, and exchanging information with, outside directors and outside Audit & Supervisory Board members, and explaining proposals submitted to the Board of Directors ahead of its meetings.

## Internal Control Systems and Risk Management Structure

#### Internal Control Systems

JAPEX has an Internal Control Committee that deliberates on policies regarding the internal control system and formulates basic internal control plans. The Auditing Department is in charge of assessing improvements and operations based on these plans and periodically reports progress to the committee. In this way, systems to ensure appropriate duties are inspected and improved, with the results disclosed through internal control reports.

#### **Risk Management Structure**

Regarding business decision making, the Executive Committee and, where necessary, the Board of Directors make decisions on the basis of evaluations of business risks (risks related to planning, strategy, finance, and credit) by the director and executive officer responsible for each department. In the case of particularly important investment projects, the risks and appropriateness of the investment are assessed by the Investment Evaluation Committee and a submission is made to the Executive Committee determining whether or not to proceed with the project as well as conditions and other matters.

After it has been decided to move ahead with a particular project, the Project Total Management Committee, especially with major projects, monitors the progress of the project regularly and, where necessary, considers comprehensive and companywide response measures.

Based on this phased process, projects are undertaken based on a process of consensual decision making, various manuals are prepared for business execution across the different implementation stages, and structures are put in place to manage business risks.

In addition, the Auditing Department prepares a "risk map" taking into account the different specific business risks and deliberates on the risk management structure.

## Director Remuneration

Monthly remuneration for directors is determined based on resolutions by the General Meeting of Shareholders, in conjunction with the approval of the president and the Board of Directors, while remuneration for corporate auditors is determined through discussions by the Audit & Supervisory Board.

Regarding bonuses, directors' bonuses are determined based on resolutions by the Board of Directors. Audit & Supervisory Board members' bonuses are determined through discussions by the Audit & Supervisory Board following the approval of resolutions at the General Meeting of Shareholders held each fiscal year, which deliberates on the total amounts to be paid to both directors and Audit & Supervisory Board members.

### Strategic Shareholdings

JAPEX holds strategic holdings on a highly selective basis where we deem that the relevant partner is likely to contribute to raising our corporate value after a comprehensive assessment of the cooperative relationship, including the promotion of business and business policies.

With such strategic shareholdings, we examine the rationale behind each holding each year at meetings of

#### Remuneration of Directors and Audit & Supervisory Board Members

Unit: Millions of yen

Director portion	Total amount	Base pay	Bonus	Retirement benefits
Directors (excluding outside directors) (15)	504	439	44	20
Audit & Supervisory Board members (excluding outside Audit & Supervisory Board members) (2)	51	44	4	2
Outside directors and outside Audit & Supervisory Board members (5)	49	48	_	1

Notes

 The number of officers above includes three directors and one Audit & Supervisory Board member who retired at the conclusion of the Company's 45th Annual General Meeting of Shareholders, held on June 24, 2015.

 The amount of retirement benefits is with respect to the period between April 2015 and when the related system was abolished.

the Board of Directors in terms of the objectives behind the holding of such shares and decide whether or not to continue holding the shares.

Regarding the exercise of voting rights, we decide on whether or not to exercise the voting rights after considering the purpose of our shareholding and the appropriateness of resolutions on an individual basis.

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## Accounting Auditor

The accounting auditor who conducts the audit of the Company's financial statements and the internal control practices has been Ernst & Young ShinNihon LLC. Remuneration paid to the accounting auditor has been determined after extensive discussions with certified public accountants, taking into account the number of days required to undertake the audit and other considerations.

#### Composition of remuneration paid to certified public accountants and others

As of April 1, 2016	
Accounting firm	Ernst & Young ShinNihon LLC
Certified public accountants	Hiroaki Kosugi, Satoshi Takahashi, Takeshi Yoshida
Breakdown of assistants to the audit	8 certified public accountants, 14 other assistants
Remuneration based on audit and attestation services	¥90 million (JAPEX: ¥65 million, consolidated subsidiaries: ¥25 million)
Remuneration for non-audit and attestation services	¥0 million

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## Information Disclosure and Investor Relations/Shareholder Relations (IR/SR) Activities

#### Information Disclosure

JAPEX discloses information on the company's business and other matters to shareholders, investors, and other stakeholders fairly, appropriately, and timely in accordance with laws and regulations as well as the Timely Disclosure Rules of the Tokyo Stock Exchange. In addition to these obliged disclosures, we provide additional disclosure materials and other resources on our website and publish various information including the Corporate Report issued once a year and the Business Report for shareholders issued twice a year. We also provide and publish English-translated versions of many of our disclosure materials and other publications for foreign shareholders and investors.

#### **IR and SR Activities**

Through our IR activities geared towards institutional investors and securities analysts and in our SR activities geared towards individual shareholders and other general investors, we are having dialogue with investors in order to gain a deeper understanding of our business. Opinions and information received through these activities are fed back appropriately to senior management.

#### Main IR and SR Activities

- Holding results briefings for institutional investors and securities analysts
- Holding one-on-one meetings with institutional investors and securities analysts
- Participation in events (such as IR conferences) for overseas institutional investors
- Participation in briefings for individual investors held by securities companies
- Holding site visits for shareholders



A results briefing for institutional investors and securities analysts

## Compliance

The JAPEX Group complies with all applicable laws and regulations relating to its business and with conventional wisdom and social norms. To ensure that compliance is firmly entrenched in its corporate culture, the JAPEX Group also calls upon all its directors, officers, and employees to act ethically and with integrity in both their personal and professional lives.

#### **Compliance Systems and Training**

The JAPEX Group has a compliance manual ("Compliance Manual") and an explanatory supplement including case studies, which are disseminated to its directors, officers and employees, and it further increases or improves their awareness of compliance through compliance trainings. In particular, "CSR," "Compliance," and "Prevention of Insider Trading" are considered as its important topics or issues about which its directors, officers, and employees must be aware in the course of their daily business operations. JAPEX's new employees and employees at appropriate stages in their careers will be required to take compliance training courses. In addition, the JAPEX Group has compliance-related reporting and consulting systems. When a violation related to compliance occurs, the Internal Control Committee investigates it and formulates preventive measures against recurrence. Whether the measures continue to be operated or not will be reviewed, monitored, or confirmed through internal audits or other activities.

#### **Respect for Human Rights**

The JAPEX Group Code of Conduct sets out respect for international rules, models, or norms, and rules for behavior in areas where stakeholder awareness is particularly high, including respect for human rights and prevention of discrimination and harassment. Based on this Code of Conduct, the Compliance Manual gives concrete instructions, and training courses.

The JAPEX Group regards the rights of indigenous

peoples and the respect for their cultures and customs as extremely important. JACOS has put in place a system that incorporates the views of aboriginal people and pursues business in cooperation with them. In recognition of these efforts, in 2014 the Canadian Association of Petroleum Producers presented JACOS with the Responsible Energy Award. No reports or consultations with regard to human rights have been received during the fiscal year of 2015.

#### Prevention of Bribery and Corruption

Countries in North America and Europe have in recent years been taking an increasingly strict approach to the prevention of bribery. Developing countries also have been introducing related laws and regulations in tandem with economic growth and there have also been growing calls for strict adherence to those laws and regulations.

The JAPEX Group Code of Conduct calls for its directors, officers, and employees to keep sound and normal relationships with politicians, political parties, and government officials/agencies. Based on this Code of Conduct, the Compliance Manual gives concrete instructions therefor and each of its directors, officers, and employees are required to comply therewith.

In line with growing awareness in recent years of the need to prevent bribery in Japan and overseas, in April 2016 the JAPEX Group established and introduced "Prevention of Bribery Guidelines" in order to ensure strict compliance with related applicable laws and regulations. In addition, political contributions are not to be made.

#### **Reporting and Consultation Systems**

The JAPEX Group has internal contact points for compliance-related reporting and consulting systems. The JAPEX Group has also designated its company attorney as an external contact point. No reports or consultations have been received during the fiscal year of 2015.



#### Diagram of Contact Point for Report and Consultation

## Messages from Outside Directors

Japan's sustained development is predicated on the stable and efficient supply of energy resources—and that is precisely what JAPEX is committed to providing. In its nature, resource and energy development takes place over a long time and requires large-scale funding. It also entails great risks, as prices are determined not only by the basis of the supply-demand relationship, but also by international political and economic dynamics.

While recognizing JAPEX's distinctive position comprising aspects that fall outside those of a private company, my focus as an outside director is naturally on such governance issues as the efficient use of funds as demanded of a private-sector company, ensuring the transparency of decision-making processes, and promoting the interests of shareholders. At the same time, I believe it is essential to take a longer-term perspective and to gain solid knowledge and understanding of domestic and international political and economic developments.

I have now entered my second year as a JAPEX outside director. While constantly asking myself if I am adequately playing my role from the perspectives noted above, I am determined to focus my mind on gaining a deeper understanding on the base of my experience in diplomacy, economics, and environmental issues.

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Companies generate sustainable value and corporate profits by benefiting society through the added value they create in fulfilling their social missions and roles. To that end, company managers need to be imaginative, take a broad view, and look at things from both short- and long-term perspectives.

My aim is to contribute to raising sustainable corporate value and profits through evaluating domestic and overseas policies based on my activities as a journalist for the Nikkei newspaper and my research with the Japan Center for Economic Research. Any organization tends to be inward-looking and lose track of the broader picture with regard to the trends of the times and society. The business environment is in the midst of great change—an unprecedented tectonic structural shift—and that is bringing a growing number of new risks.

However, risks are not only something that must be averted. The word "risk" originates from the Italian "risicare," which means "to challenge with courage." With that in mind, I believe companies should not look to steer clear of all risks, but rather to evaluate the different risks, select those worth taking, and then manage them carefully to make the most of the opportunities they present.

I have recently been appointed an outside director. I take great pride in becoming a member of a company that has the hugely important mission of ensuring the stable supply of energy, a mission that underpins the Japanese nation and society as a whole. At the same time, it is with great sadness and regret that I note the passing of the late Mr. Kazuo Kawakami, a teacher who served as an outside director with deep insight into social and economic developments in a period of upheaval. I am keenly aware of my heavy responsibility as I follow in his footsteps.

I served as a prosecutor for about 36 years before becoming an attorney, my role for the past six years. As an attorney, I have been responsible not so much for individual cases, but have served rather as an outside auditor and director on various boards and committees of companies and organizations. My main focus has been on the areas of compli-

ance, risk management, and crisis management. At JAPEX, too, I hope to contribute to maximizing corporate value by effectively monitoring and providing candid advice based on the knowledge and experience I have gained throughout my career.

My motto is "one eye on distant history, one eye on the ground beneath my feet," to give a rough rendering of a saying by the philosopher Shinzo Mori. What this amounts to is steadily tackling themes before our eyes while never losing sight of the big picture.



Yoriko Kawaguchi Outside Director



Akira Kojima Outside Director





Tetsuo Ito Outside Director

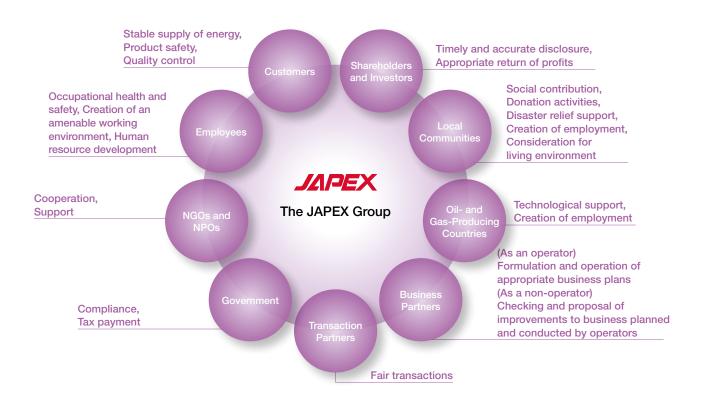
As a corporate citizen, JAPEX endeavors to be a company that earns the trust of society through various contribution activities and continuous dialog with local communities.

#### CSR Action Plans and Targets

Individual Issues	Fiscal 2015 CSR Action Plans and Targets	Fiscal 2015 Achievements	Evaluation
	<ul> <li>Contribute to local communities and engage in social activities in regions where we operate and conduct overseas projects</li> </ul>	<ul> <li>Conducted activities at each district office and overseas project company</li> </ul>	0
Growing together with local communities	<ul> <li>In conjunction with the Soma Project, attract industries to the region and promote job creation         <ul> <li>Contribute to community revitalization through the Shinchi Reconstruction Institution Committee project aiming to "the renaissance of an eco-town with industry and the enviroment in harmony."</li> </ul> </li> </ul>	<ul> <li>Undertook new recruitment locally related to the Soma Project</li> <li>Cooperated with the Smart Community Initiative promoted by Shinchi Town</li> </ul>	0
	<ul> <li>Create "scoping document" for environmental impact assessment of the natural gas-fired power generation project at Soma Port</li> </ul>	Submitted "scoping document" setting out how the survey, forecast, and evaluation of the environmental impact assessment (EIA) would be handled to the Minister of Economy, Trade and Industry	0
Building good	Promote proactive external communications in line with     information disclosure	<ul> <li>Made efforts to reinforce relationships with mass media outlets and held site visits three times during the year</li> </ul>	0
relationships with stakeholders	<ul> <li>Formulate policies related to the establishment of systems and initiatives for promoting constructive dialogue with shareholders</li> </ul>	<ul> <li>Set out policies in Corporate Governance Report and prepared internal company guidelines for promotion of constructive dialogue with shareholders</li> </ul>	0

## Stakeholder Relations

We aim to build and reinforce trust-based relationships with all our diverse stakeholders. Through our business activities, we seek to contribute to local communities, cooperate closely with them, and gain their understanding.



Being a good **N**eighbor

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## Relationship with Local Communities and Oil- and Gas-Producing Countries

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#### Initiatives in Canada (JACOS)

In our development of oil sands in Canada, we seek to gain understanding of our operations through constant dialogue with local communities. We also make every effort to build cooperative relationships with local communities by participating in and supporting local events and through donations and creating employment opportunities.

With development work with the Hangingstone Oil Sands Expansion project, the Aboriginal Review Group (ARG) was established to share knowledge and ideas on environmental protection. It continues to address environmental issues together with the local community. The environmental impact assessments and monitoring activities of ARG have won acclaim from the Canadian government and the energy industry for the independence of the ARG's participation-based process.

To help promote business opportunities for aboriginal-owned business, JACOS provides information on areas where it believes there is insufficient capacity to fulfil its future requirements. By doing so, it helps the aboriginal communities develop new

businesses such as environmental monitoring and reclamation that are expected to offer opportunities for stable and long-term growth.



Joint field study with the ARG on the development site

#### Initiatives in Iraq (Japex Garraf Ltd.)

JAPEX, together with PETRONAS, Operator of the Garraf Oil Field Development Project, has been undertaking community support activities for people living near the areas of petroleum operations.

Our efforts to support education have included building and repairing primary and secondary school buildings, repairing desks and chairs, and distributing school supplies. In addition, the Garraf Vocational Training Center (GVTC), which was built using Grant Assistance for Grass-Roots Human Security Projects provided by Japan's Ministry of Foreign Affairs, has been providing vocational training for young people and has held seminars for primary school students and teachers on science and mathematics.

In the field of infrastructure, where there have been many requests for improvements in the Garraf Oil Field area, we have paved access roads to local villages, installed small water purification facilities, and also supplied water to villages using water trucks.

As part of our efforts to build good ties with the local

community, we have also provided food for the Eid al-Adha festival and in the month of Ramadan in the Islamic calendar.



An attentive audience of primary school children

#### Initiatives in Indonesia (KEI)

Through Kangean Energy Indonesia Ltd. (KEI), we have been engaging in a wide range of activities to contribute to local communities in Pagerungan Island and other nearby islands to build good relations with the people in the area.

In 2015 we installed a power plant and electricity supply facilities, as well as upgrading infrastructure such as building water towers and roads and repairing a mosque, improving island residents' housing, providing training and subsidies to students and teachers, supplying sports goods, and providing nutritional supplements for infants.

In 2016, we will keep up our efforts to build even better relations with the local community through ongoing support in education, health, economy, environment, and infrastructure areas.



Installing power generation equipment

### Commitment to Customers

#### Policy on Product Responsibility

JAPEX is dedicated to the safe and stable supply of products that customers can use with peace of mind. We pay the closest attention to safety and quality control with our products based on in-depth understanding of their characteristics, and we provide all necessary information to customers and people in local communities. Should an emergency arise, we deal with the situation in close cooperation with inside and outside concerned parties while promptly providing information to our customers.

#### **Product Quality Control**

We carry out exhaustive checks to see that our products satisfy all laws and regulations, sales contract terms, and our own voluntary standards for quality and safety. Water and other impurities are removed from crude oil and natural gas by processing plants at production sites. We regularly analyze samples to ensure required levels of safety and quality are maintained. We also issue safety data sheets, which provide customers with information regarding hazardous materials, their constituents, and how they should be handled. We have built a safety management system to prevent leakage at every stage, including production, storage, and transport. We regularly conduct drills involving the tanker trucks and ships

## Commitment to Shareholders

#### **Shareholder Site Visits**

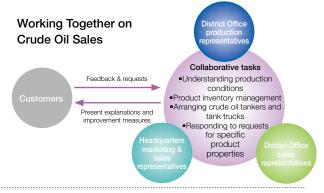
Aiming to gain deeper shareholder understanding of and interest in our operations, we hold site visits for shareholders every year.

In fiscal 2015, in addition to our established annual tour of the JAPEX Research Center, we hosted a site visit to the Soma LNG Terminal now under construction. The visit was attended by 52 shareholders and their companions selected by lottery because of the number of applications.

used to transport crude oil and LNG, as well as natural gas pipelines. We also prepare manuals on accident prevention, provide outsourced transportation companies with information on transport safety, and work with other companies to ensure supply stability through the mutual exchange of products in the event of an emergency.

#### Working Together to Understand Customers' Needs

We not only strive to provide stable supplies and ensure the highest level of safety management, but we also make every endeavor to explain the Group's products and business activities to customers. Such efforts include providing information and hosting tours of oil and gas fields and facilities. Looking to supply products that satisfy customers, we respond to customer feedback by making prompt and appropriate improvements and sharing information among the relevant offices and representatives.



The visit was very well received by participants. We plan to offer further events, which we see as a vital

opportunity for



Shareholder visit to the JAPEX Research Center

direct communication with shareholders.

## Participation in National Policies

Development of crude oil and natural gas is one of the highest-priority national policy issues. We are actively involved in discussions on national policies through our participation in such industry groups as the Japan Petroleum Development Association and the Japan Natural Gas Association and in government study groups and advisory councils.

In fiscal 2015, JAPEX, through industry groups, submitted

a number of documents to the Agency for Natural Resources and Energy, such as a "Policy and Budget Request Submission" and "Tax System Submission." With a view to ensuring the stable and inexpensive supply of energy, we also submitted proposals on making Japan's gas business regulation more effective and efficient to the government committee tasked with reforming it.

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## Commitment to Transaction Partners

#### Fair Trade with Suppliers and Contractors

JAPEX undertakes fair and impartial procurement activities in accordance with the basic procurement principles set out below.

#### **Providing Fair Opportunities**

We conduct procurement through fair and impartial competitions on the principle of providing opportunities not only to suppliers and contractors who have worked with us but also to those who have a good reputation and the potential to become partners in the future. In choosing suppliers and contractors, we fairly and comprehensively compare and evaluate quality, prices, delivery times, technical abilities, reliability, financial conditions, and other considerations to make economically sound decisions.

#### Balancing between Competition and Cooperation

We aim at mutually beneficial relationships with suppliers and contractors through fair and impartial procurement activities. With actual business transactions, we carefully assess the dependability of delivery and work times as well as materials and work process management with a view to maintaining good and stable longterm relationships with business partners.

#### Compliance

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In our procurement activities, we comply with relevant laws and regulations, their spirit, and social ethics and norms, and we ask suppliers and contractors to do the same. We do not make any business deal which is contrary and harmful to maintaining the trust of society. We seek to maintain a stable and safe business environment in cooperation with our business partners.

#### **Green Procurement**

We are committed to our Green Procurement Basic Policy stated below, and procure as much as possible "green" products and services, which have lower environmental impacts. We have set a target of 100% use of green printing/copying paper and stationery in the headquarters and site admin offices, and achieved 100% and 99.9%, respectively, in fiscal 2015.

#### Green Procurement Basic Policy

- 1 Consider thoroughly the necessity of products, services, and construction before purchasing or starting them.
- 2 Give priority to environmentally friendly products and services as much as practicably possible. In construction work, make every effort to reduce environmental impact.
- 3 Actively cooperate and engage with suppliers and contractors to preserve local and global environment.

#### Column

#### Hand in Hand with Local Communities: Volunteer Activities

Staff from our Akita District Office has been participating in volunteer activities every year since the Great East Japan Earthquake. In fiscal 2015, we visited the disasteraffected region of Minami-Sanriku Town, Miyagi Prefecture to support local fisheries by gathering dried kelp.



At first I found the work very difficult but soon got the knack of it and by the end I thought I was doing pretty well. At lunch, we were treated to delicious local fish. I listened to the experiences of the locals in the quake and heard about the reconstruction activities. I came Chinatsu Miyamoto away very impressed by their bright and positive attitude.



Administration Dept. Akita District Office

On our way back we stopped off at the Minami Sanriku San-San temporary shopping street to buy local souvenirs. I left the town hoping that it will quickly become a bustling area once again.

To create a base of an organization with diverse human resources that generates value through global business activities, we aim to create a workplace where a variety of people can work energetically.

#### **CSR** Action Plans and Targets

Individual Issues	Fiscal 2015 Action Plans and Targets	Fiscal 2015 Achievements	Evaluation
	* Formulate diversity policy	* Formulated diversity policy	0
Respecting employee diversity	<ul> <li>Increase diversity among managers and business staff employees (raise percentage of women, foreign- ers, and people with disabilities to 9.0% or higher (Fiscal 2016 target: 10%))</li> </ul>	• Achieved target (9.0% at end-March 2016)	0
	<sup>•</sup> Increase ratio of female managers to 4.5% or higher (2020 year-end target: 10%)	Achieved target (4.5% at end-March 2016)	0
Creating a fair and	Reduce number of people on long-term leave compared with previous fiscal year	• Examined reasons for people taking long-term leave and provided support for return to work (two fewer staff on long-term leave)	0
rewarding workplace	<ul> <li>Conduct awareness campaign related to preventing or reducing long working hours, raise the rate taking annual paid leave to 70% or higher</li> </ul>	<ul> <li>Implemented summer work style reform campaign</li> <li>Announced company recommended dates for paid</li> <li>leave (ration of staff taking annual paid leave: 72%)</li> </ul>	0
	<ul> <li>Make a list of knowledge and skills necessary to exercise capabilities in each specialized field (job category)</li> </ul>	<ul> <li>Updated a part of knowledge and skills list</li> </ul>	Δ
Human resource development and training	<ul> <li>To improve management capabilities of managerial staff, improve training before and after promotion to managerial positions</li> </ul>	<ul> <li>Raised management effectiveness scores through use of external management promotion assessment</li> <li>Promoted management-related e-learning seminars</li> </ul>	0
		<ul> <li>Implemented staff training through exchange programs with staff of overseas group companies</li> </ul>	0

#### Awarded "Nadeshiko Brand" Designation

In recognition of our efforts to promote women, JAPEX was awarded the "Nadeshiko Brand" designation in 2015. This designation is awarded jointly by the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange (TSE) to companies listed on the first and second section of the TSE and the TSE Mothers and JASDAQ that are exceptional in encouraging women's success in the workplace (selected on the basis of (1) conducting career support for women and (2) supporting women in balancing work and family). The award has been presented since 2012.





Fiscal 2015 Nadeshiko Brand Award Ceremony JAPEX's Executive Vice President Kiyoshi Ogino is fifth from the left in the second row

#### The Employer of choice

## Respecting Employee Diversity

JAPEX aims to be more competitive by fostering a work environment in which everyone can perform to the best of their ability and grow their professional career, regardless of gender, age, nationality, career orientation, or work style. As such, we welcome diversity and seek to harness its full benefits, believing that the ongoing active, self-driven efforts and continued development of all personnel help to reinforce our corporate competitiveness.

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#### **Diversity Promotion**

Since fiscal 2013 we have been holding courses offered by companies that are successful in promoting diversity and continued to provide training related to childcare and nursing care. In addition, in March 2015 we established a new group in the HR department, the Diversity Promotion Group, which is dedicated to promoting activities related to corporate diversification. Besides ongoing efforts to recruit and promote women, foreigners, and other diverse human resources, we are working to foster skills among all employees. To this end, we have revised our human resource systems. We also conduct training on diversity, work-life balance, and career development, hold awareness events, and conduct activities aimed at promoting a corporate culture that respects diversity.

#### Seminars for managers who have female subordinates

In March 2016, we invited an external lecturer to provide training seminars geared toward managers who have female subordinates. The seminars covered such issues as different features of communications between men and women and ideas for motivational training of subordinate staff, and included exchanges of views among participants.

#### Recruitment

In recent years, we have been recruiting approximately 30 new graduates annually. We endeavor to recruit outstanding graduates irrespective of gender or nationality. With the expansion of our business, we are also hiring mid-career employees throughout the year.

In fiscal 2013, our employment of people with disabilities fell below the statutory employment rate. However, as the result of proactive recruiting efforts since fiscal 2014, this figure rose to 2.21% as of March 31, 2016.

			Ne	w gradua	tes	Mic	Total		
				Female	Subtotal		Female	Subtotal	TOLAI
	Business staff	Administrative Div.	6	3	9	10	1	11	20
		Exploration Div.	4	1	5	0	0	0	5
	stan	Development Div.	13	1	14	9	0	9	23
I	Associate staff		0	4	4	0	0	0	4
		Total	23	9	32	19	1	20	52

## Efforts to Recruit Women to Management Positions

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In October 2014, we set a target of tripling the percentage of women in management positions by 2020 from 3.4% as of October 2014. In fiscal 2015, we held "Woman@J" career sessions every month between October 2015 and February 2016, at which female managers and women who had changed careers discussed their experiences in terms of career development and how they balanced work and their private lives.

The sessions at headquarters were relayed live through a video conferencing system to the Hokkaido, Akita, and Nagaoka district offices and many female staff and male managers with female subordinates took part.



Career session Woman@J

#### Management Position Ratios (JAPEX)

As of the end of March in each fiscal ye								
		2013	2014	2015				
Male	(persons)	317	317	321				
Female	(persons)	10	12	15				
Total	(persons)	327	329	336				
Percentage of Women	(%)	3.1	3.6	4.5				

## Number of Employees Hired over the Last Three Years and Employees Taking Retirement for Personal Reasons (JAPEX)

Fiscal year er	2013	2014	2015	
University & Graduate	Business staff	22	23	20
Schools	Associate staff	0	0	0
Vocational Schools	Business staff	3	6	8
vocational Schools	Associate staff	2	2	4
	Total	27	31	32
Retirees for personal re	easons	0	0	0

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## Creating a Fair and Rewarding Workplace

We have introduced flexible ways of working and a range of support structures to promote the career advancement of staff who face constraints on when and where they work, owing to, for example, raising children, looking after people in need of care, and disabilities. In doing so, we seek to create a working environment that encourages all staff to achieve their full potential.

#### Work-Life Balance

During the three months from July through September 2015, we ran a "summer workstyle campaign" to improve working efficiency. In response to employee's positive voices to the "Allowing voluntary choice of early morning work hours" in the 2015 campaign, we introduced a flextime system on a trial basis in July 2016. In addition, we invited outside lecturers to hold seminars on time management in 2015 and 2016, which were attended by a total of 231 people over the two years. In fiscal 2016, we are also offering time management seminars through our "e-learning" system.



Time to call it a day ...

## Number of Days of Annual Paid Leave Taken (Includes Special Leave) (JAPEX)

		2013	2014	2015
Annual paid leave per year	(days/person)	12.6	12.9	13.8
Uptake	(%)	63.0	66.5	72.0

#### **Re-employment Rate**

(Includes Re-employment of JAPEX Retirees in Group Companies)

		2013	2014	2015
At mandatory retirement age	(persons)	19	25	14
Re-employed	(persons)	17	24	12
Re-employment rate	(%)	89.5	96.0	85.7

#### Changes in the Employment Rate of People with Disabilities (JAPEX) As of end of March in each fiscal year

		2013	2014	2015
Employees	(persons)	13	19	19
Employment rate	(%)	1.57	2.03	2.21

#### **Campaign Content**

- Allowing voluntary choice of early morning work hours
- In principle, prohibiting work after 9 p.m.
- 3 Encouraging communication and concentration times
- Encouraging people to take paid leave days by establishing recommended Company holidays
- 6 Holding time management seminars
- 6 Setting up an in-house blog related to working styles

#### Management by Objectives System

JAPEX is reforming its human resources system to create a fair and rewarding workplace, and we have revised our personnel systems to this end.

As part of this effort, in fiscal 2014 we introduced a management by objectives system. This system invigorates communication between superior and subordinate and encourages an autonomous and proactive approach to achieving goals, with employees making a strong commitment to attaining their own challenging objectives. We are working to provide systems that foster individual skills and contribute to career development through using the PDCA cycle. The PDCA cycle confirms whether objectives have been realized, and where necessary provides support for improvements and early intervention.

## Use of Supportive Measures for Childcare and Nursing Care (JAPEX)

		2013	2014	2015
Childcare leave	(persons)	10	15	13
Percentage returning to work	(%)	100	100	100
Retention Rate	(%)	100	100	100
Reduced working hours for childcare	(persons)	16	22	22
Nursing care leave for	(persons)	37	55	71
children	(day)	104.5	196.5	242.0
Staggered office hours for childcare	(persons)	0	1	0
Nursing care leave	(persons)	0	0	0
Reduced working hours for nursing care	(persons)	0	0	0
Days off for nursing care	(persons)	5	6	11
Days on for hursing care	(day)	19.0	26.0	37.5
Staggered office hours for nursing care	(persons)	_	0	0

Percentage returning to work = The number of employees returning to work after taking childcare leave during a fiscal year / The number of people expecting to return to work during a fiscal year after taking childcare leave × 100 Retention rate = Out of the employees returning to work in the previous fiscal year after taking childcare leave, the number who remained employed as of March 31 of the current fiscal year / The number of employees returning to work after childcare leave in the previous fiscal year × 100

The Employer of choice

## Human Resources Development and Training

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#### **Policy and Career Development System**

JAPEX introduced a career development system in fiscal 2014 to support individual employees' efforts toward personal skill development and the development of an effective skill set. To reinforce our operations in Japan and overseas, this system targets personnel development in three main categories: global leaders, who formulate strategy and promote business; business leaders, who manage function-specific organizations; and advanced specialists, who contribute to business through expertise in specialized fields. Based on career development guidelines, these personnel meet periodically with their superiors for career development consultations and select career development courses designed to help them achieve their personal goals. This system is designed as an employee-driven educational initiative with supervisor support to gain experience and education.

By encouraging highly skilled human resources through such initiatives, we aim to leverage the strengths of all our staff to help drive business expansion.

#### include career design training, in which employees set their own future career goals; career stage training to enhance the awareness of employee roles at each level of employment; and courses on logical thinking, presentations. In such ways, we offer staff the opportunity to broaden their knowledge and enhance business skills to help them improve job performance.

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We are also implementing many initiatives aimed at building global human resource foundations to accommodate the overseas shift of our operations. These include overseas assignments such as study programs at graduate schools in the U.S. and training at overseas offices and educational institutions. We also provide training covering topics such as contracts, negotiation skills, finance, and project case studies, as well as English language training to strengthen our personnel capabilities for conducting business overseas.

#### Number of Staff Participating in Courses in Fiscal 2015

	Total number of people
Overseas study or training	28
English language training	530
Career stage training	135
Educational programs for overseas employees	288

#### **Educational Programs**

We support individual career development through training programs for all employees. Our programs

#### Training System Overview (Excludes Specialist Training Provided by Each Division)

	Classroom lect	ure progran	n for all em	ployees	IT ec	lucatior	n progra	m such as	e-learning t	for all emplo	oyees	Selective e	educatio	n program	ı (partly	includ	ling publicly-offere	ed programs)
	Career d semir		Ca	reer sta	ige tra	uining			Busine	ss skills	training		Eng	lish lan trainir		e	Overseas st training	
Prospective employees									١	Work basic	s			kype, Eng conversat				
				mployee ning				Thinking skills	Fundamental knowledge	CSR	Human skills	Management		Group training/ Training at school		Ċ	Study and Training abroad, Business trip for overseas seminars	Overseas OJT
Career-track employees	Career seminar at age 30	Career/life train	Player training	Main player training	Sub m		Seminar for introduction of mid-career employees	Logical thinking ability challenges	dge Excel, Word, Basic corporate accounting, Contract/Legal a	Compliance/Protection of private management, Risk management	Communication, Coaching,	Labor legal affairs, Mar of employee evaluation	Internet-based Skype English conversation	E-mail/Report/Busines affairs and contracts, (	TOEIC, SW, Bridge	Intensive language training abroac	Doctoral course, Master course, Researcher, Private educational organization, etc.	Project company (office, operation), etc.
	Career seminar at age 40	Career/life training for women	0		Sub manager training	Manager training	of mid-career employees	Logical thinking ability. Ability to resolve problems, Ability to cope with challenges	accounting, fairs, Preser	Complance/Protection of private information/Harassment, Time management, Risk management	hing, Team management, Negotiation	nagement strategy, Trainir ר ו	English conversation	E-mai/Report/Business writing/Presentation/Negotiation/Business legal affairs and contracts, etc.		aining abroad		
Managerial staff	Career seminar at age 53	seminar	General manager training			raining		ns, Ability to cope with	Advanced corporate tation	arassment, Time	, Negotiation	Labor legal affairs, Management strategy, Training for personnel in charge of employee evaluation		gotiation/Business legal				

## Principal Consolidated Subsidiaries and Equity-Method Affiliates

(As of March 31, 2016)

Consolidated Subsidiaries	Principal Business Activities	Paid-in Capital or Subscription Amount (Millions of yen)	Percentage of Voting Rights Held (%)
Akita Natural Gas Pipeline Co., Ltd.	Pipeline transport of natural gas in Akita Prefecture	250	100.00
SK Engineering Co., Ltd.	Contract engineering and well drilling	300	100.00
JAPEX SKS Corporation	Manufacture and sales of petroleum products, real estate manage- ment and insurance agent services	90	100.00
North Japan Oil Co., Ltd.	Refining, processing and sales of crude oil, recycling of waste oil, and contract handling and transportation of LNG and crude oil	80	100.00
Shirone Gas Co., Ltd. *1	Manufacturing, supply and sales of gas in Niigata City and Tsubame City	3,000	100.00
Japex Pipeline Ltd.	Pipeline management and maintenance	80	100.00
JGI, Inc. *1	Contract geophysical surveys and development of geophysical exploration technologies	2,100	100.00
Geophysical Surveying Co., Ltd.	Geophysical surveys and contract mud logging operations	446	100.00
Japex (U.S.) Corp. *1	Exploration, development and production of petroleum in the United States, and investment in an LNG project in Malaysia	33,000 (Thousands of U.S. dollars)	100.00
Japan Canada Oil Sands Limited $*_{1, *_3, *_6}$	Exploration, development and production of oil sands in Canada under a block lease agreement	553,456 (Thousands of U.S. dollars)	100.00 (100.00)
Canada Oil Sands Co., Ltd. *1, *3	Invests in oil sands exploration and development through Japan Canada Oil Sands Limited	21,167	94.58 (1.34)
JAPEX Montney Ltd. *1	Exploration, development and production of shale gas in Canada	918,583 (Thousands of Canadian dollars)	45.00
JAPEX UK E&P Ltd. *1	Exploration, development and production of offshore petroleum in the U.K.'s North Sea	31,700 (Thousands of British pounds)	100.00
JAPEX UK E&P CENTRAL Ltd. *1	Exploration, development and production of offshore petroleum in the U.K.'s North Sea	22,770 (Thousands of British pounds)	50.94
North Japan Security Service Co., Ltd.	Disaster protection for industrial facilities and security services	30	89.42
Japex Offshore Ltd. *1	Exploration, development and production of offshore petroleum from the continental shelf in the Sea of Japan	5,963	70.61
GEOSYS, Inc. *3	Contract geophysical exploration operations and sales of geophysical exploration devices and equipment	49	57.82 (57.82)
Japex Block A Ltd. *1	Exploration, development and production of petroleum on the island of Sumatra in Indonesia	2,998	100.00
Japex Energy Co., Ltd. *7	Purchasing and sales of LNG and petroleum products	90	90.00
Japex Garraf Ltd. *1	Exploration, development and production of petroleum in the Garraf Oil Field in Iraq	20,930	55.00

Equity-Method Affiliates	Principal Business Activities	Paid-in Capital or Subscription Amount (Millions of yen)	Percentage of Voting Rights Held (%)
TOHOKU NATURAL GAS Co., Inc.	Purchasing and sales of natural gas in the Tohoku region of Japan	300	45.00
JJI S&N B.V.	Development and production of offshore petroleum in the Persian Gulf	36,883 (Thousands of euros)	41.67
TELNITE CO., LTD.	Manufacture and sales of drilling mud for well drilling and the provision of mud services	98	47.00
Universe Gas & Oil Company, Inc.	Exploration, development and production of petroleum in the eastern onshore region of Kalimantan Island	5,080	33.43
Sakhalin Oil and Gas Development Co., Ltd.	Exploration, development and production of petroleum in Sakhalin in Russia	22,592	15.29
Japan Drilling Co., Ltd. *5	Contract offshore well drilling for petroleum	7,572	30.98
Energi Mega Pratama Inc.	Exploration, development and production of petroleum on the east coast of Java in Indonesia	52,000 (Thousands of U.S. dollars)	25.00
Kangean Energy Indonesia Ltd. *2.*4	Exploration, development and production of petroleum on the east coast of Java in Indonesia	10 (Thousands of U.S. dollars)	[100.00]
EMP Exploration (Kangean) Ltd. *2, *4	Exploration, development and production of petroleum on the east coast of Java in Indonesia	100 (British pounds)	[100.00]
Diamond Gas Netherlands B.V. *3	Invests in a project operated by Malaysian LNG producer Malaysia LNG Tiga	5,536 (Thousands of U.S. dollars)	20.00 (20.00)

Notes:

\*1 Specified subsidiaries.

\*2 Square brackets appearing in the voting rights column indicate the voting rights of individuals close to the Company or individuals agreeing with the Company and are excluded from the total.

\*3 Parentheses appearing in the voting rights column indicate indirect voting rights which are included in the total.
\*4 Although shareholdings in Kangean Energy Indonesia Ltd. and EMP Exploration (Kangean) Ltd. amount to less than 20%, the Company considers the two to be affiliated companies because the Company essentially holds control of both.

\*5 Company that produces Annual Securities Reports.

\*6 Functional currency has been changed from CAD to USD as of the third quarter of fiscal 2016.

\*7 Company whose net sales exceeds 10% of consolidated net sales.

## Corporate Data

#### Corporate Information (As of March 31, 2016)

Company Name Established	Japan Petroleum Exploration Co., Ltd. (Abbreviation: JAPEX) April 1, 1970	Main Offices	Headquarters (see below), Hokkaido, Akita, Nagaoka, Research Center (Chiba), London, Dubai, Houston, Beijing, Jakarta	
Established	Арпі 1, 1970	Headquarters	SADIA Tower 1 7 12 Marupouchi, Chivada ku	
Paid-In Capital	¥14,288,694,000	neauquarters	SAPIA Tower, 1-7-12 Marunouchi, Chiyoda-ku, Tokyo 100-0005, Japan TEL: +81-3-6268-7000 FAX: +81-3-6268-7300	
Fiscal Year	April 1 to March 31 of the following year	URL: http://www.japex.co.jp/english/index.h		
Number of Employees	1,847 (Consolidated)			
Principal Businesses	Exploration, development and sales of oil, natural gas, and other energy resources and contract			

#### Directors, Audit & Supervisory Board Members and Officers (As of June 24, 2016)

service-related operations such as drilling

Chairman	Osamu Watanabe	Audit & Supervisory Board Members	Nobuaki Moritani Morio Ishizeki	Fellows	Satoru Yokoi Amane Waseda	
President Chief Executive Officer	Hideichi Okada	Outside Audit & Supervisory Board	Hiroyasu Watanabe Norio Nakajima	Notes: 1. Outside Directors Yoriko Kawaguchi, Akira		
Executive Vice Presidents		Members	Kojima and Tetsuo Ito are outside directors as stipulated under Article 2-15 of the			
Executive Officers	Kiyoshi Ogino	Special Advisor	Ajay Singh	Companies Act. 2. Outside Audit & Supervisory Board memb		
Director Vice President Executive Officer	Nobuyuki Ogura	Managing Executive Officers	<b>3 3 3</b>	Hiroyasu Watanabe and Norio Nakajima are outside Audit & Supervisory Board members		
Senior Managing	Kazuo Nakayama			as stipulated under Article 2-16 of the Companies Act. 3. Fellows support directors and management through their high degree of expertise in their		
Directors Executive Officers	Hikaru Fukasawa Yosuke Higai	Executive Officers	cutive Officers Yoya Murahashi Yasushi Hamada Yoshitaka Ishii Akihisa Takahashi Tamio Wachi Ryuhei Murayama Hideaki Ishii Kenji Uchida Senichiro Kaku Minoru Kuniyasu Yasuo Takehana			
Managing Directors Executive Officers	Yasuhiro Masui Kazuhiko Ozeki Takahisa Inoue Hajime Ito Hirotaka Tanaka			specialized fields.		
Outside Directors	Yoriko Kawaguchi Akira Kojima Tetsuo Ito					

#### Stock Information (As of March 31, 2016)

Number of Shareholders 15,558

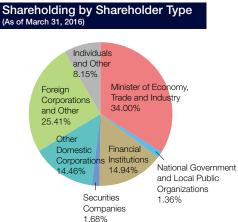
Exchange Listing	Tokyo Stock Exchange, First Section (Securities Code Number: 1662)
Common Stock (Authorized)	120,000,000 shares
Common Stock (Issued)	57,154,776 shares

Transfer Agent and Registrar Inquiries

Mizuho Trust & Banking Co., Ltd.

Mizuho Trust & Banking Co., Ltd., Stock Transfer Agency Division 8-4 Izumi 2-chome, Suginami-ku, Tokyo 168-8507, Japan TEL: 0120-288-324 (Toll-free in Japan)

Number of Voting Rights Shares (%) Major Shareholders Shares Minister of Economy, Trade and Industry 19,432,724 34.00 INPEX CORPORATION 2,852,212 4.99 JFE Engineering Corporation 1,848,012 3.23 The Master Trust Bank of Japan, Ltd. (Trust) 1,436,700 2.51 STATE STREET BANK AND TRUST COMPANY 1,236,309 2.16 JX Holdings, Inc. 1,149,984 2.01 Japan Trustee Services Bank, Ltd. (Trust) 1,089,600 1.91 BNY GCM CLIENT ACCOUNT JPRD AC ISG (FE-AC) 989,775 1.73 Japan Trustee Services Bank, Ltd. (Trust 4) 810,400 1.42 DEUTSCHE MORGAN GRENFELL (C. I.) 777,952 1.36 LIMITED - GENERAL CLIENT A/C



#### Inquiries:

Japan Petroleum Exploration Co., Ltd. Investor Relations Group, Media and Investor Relations Dept.

TEL: +81-3-6268-7111 FAX: +81-3-6268-7302

**Cover photo:** Iwafune-oki Oil and Gas Field



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