



Note: The following report is an English translation of the Japanese-language original.

# **Presentation Meeting of Consolidated Financial Results for the Six Months Ended September 30, 2017**

**November 13 , 2017**

Japan Petroleum Exploration Co .,Ltd.

# Cautionary Statement

Any information contained herein with respect to JAPEX's plans, forecasts, strategies and other statements that are not historical facts are forward-looking statements about the future performance of JAPEX. Readers should be aware that the actual results and events may be different from these projections because of various factors that could occur in the future.

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**Note:** Abbreviations used herein are as follows:

(a) = Actual results

(f) = Forecasts

FY = Fiscal Year (FY3/18, for instance, means 12 months ending March 31, 2018)

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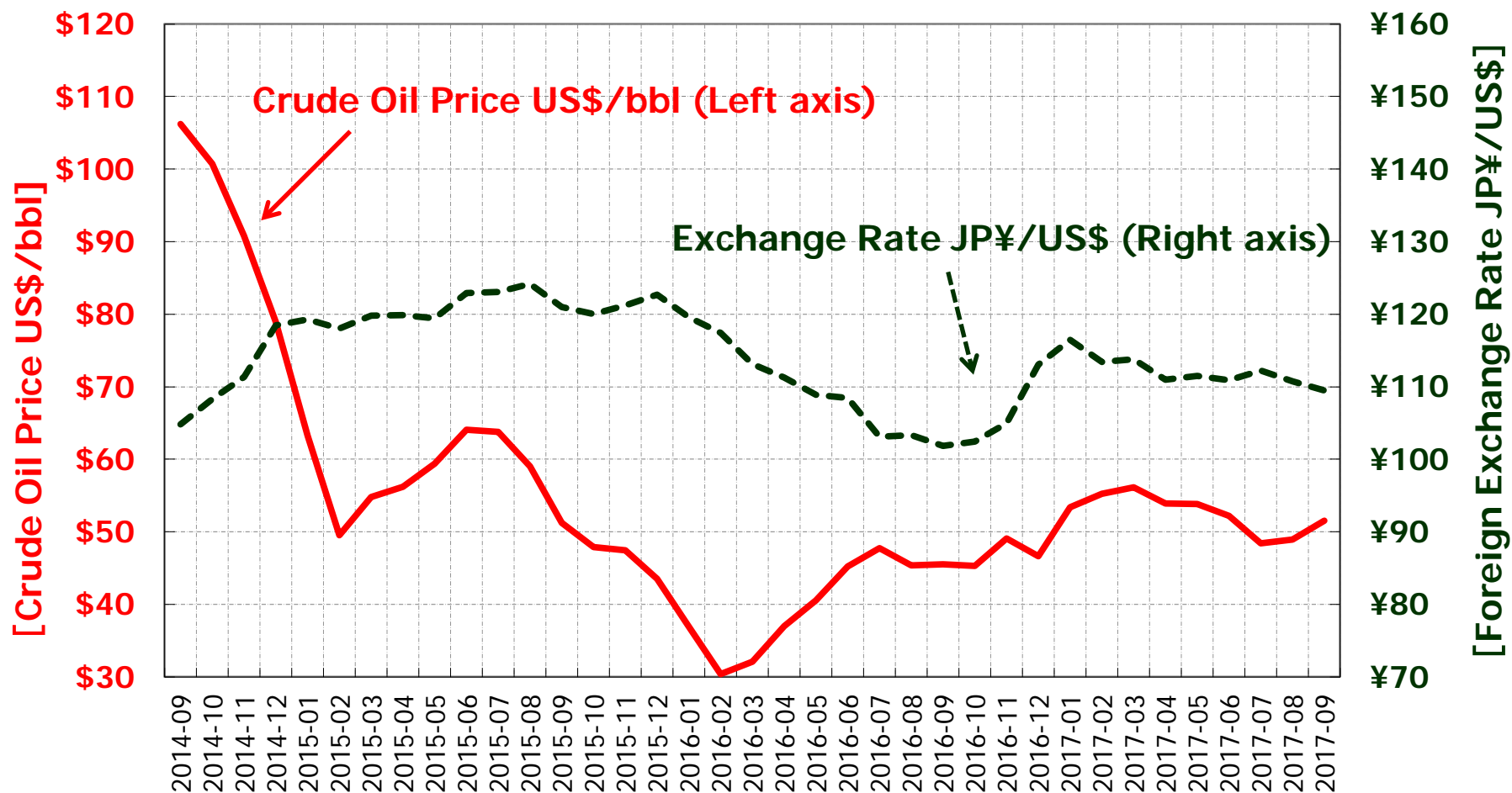
**Managing Executive Officer Michiro Yamashita**

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# I . Business Overview

President  
Hideichi Okada

# Trends in Crude Oil Price and Foreign Exchange Rate



Japan Crude Cocktail (JCC) Price in the first 10 days of October 2017 on a prompt report basis: **US\$ 53.83/bbl** JP¥ 112.07/US\$

# Actual Results for 2Q and Forecasts for FY3/18

## <Highlight>

[Billion JP¥]	FY3/17		FY3/18			Change		
	2Q (a) ①	Full (a) ②	2Q (a) ③	Full (f) Previous forecasts (August 8, 2017) ④	Full (f) Revised forecasts (November 10, 2017) ⑤*	2Q (③-①)	Full (⑤-②)	Full (⑤-④)
Net sales	91.4	207.1	112.3	211.0	213.8	+20.8	+6.6	+2.7
Operating income (loss)	-3.2	0.6	3.4	4.4	4.3	+6.6	+3.6	-0.1
Ordinary income (loss)	-2.2	2.2	8.8	-0.9	0.6	+11.1	-1.5	+1.5
Profit (loss) attributable to owners of parent	-1.2	3.4	7.7	1.2	1.7	+9.0	-1.7	+0.5

### Assumptions

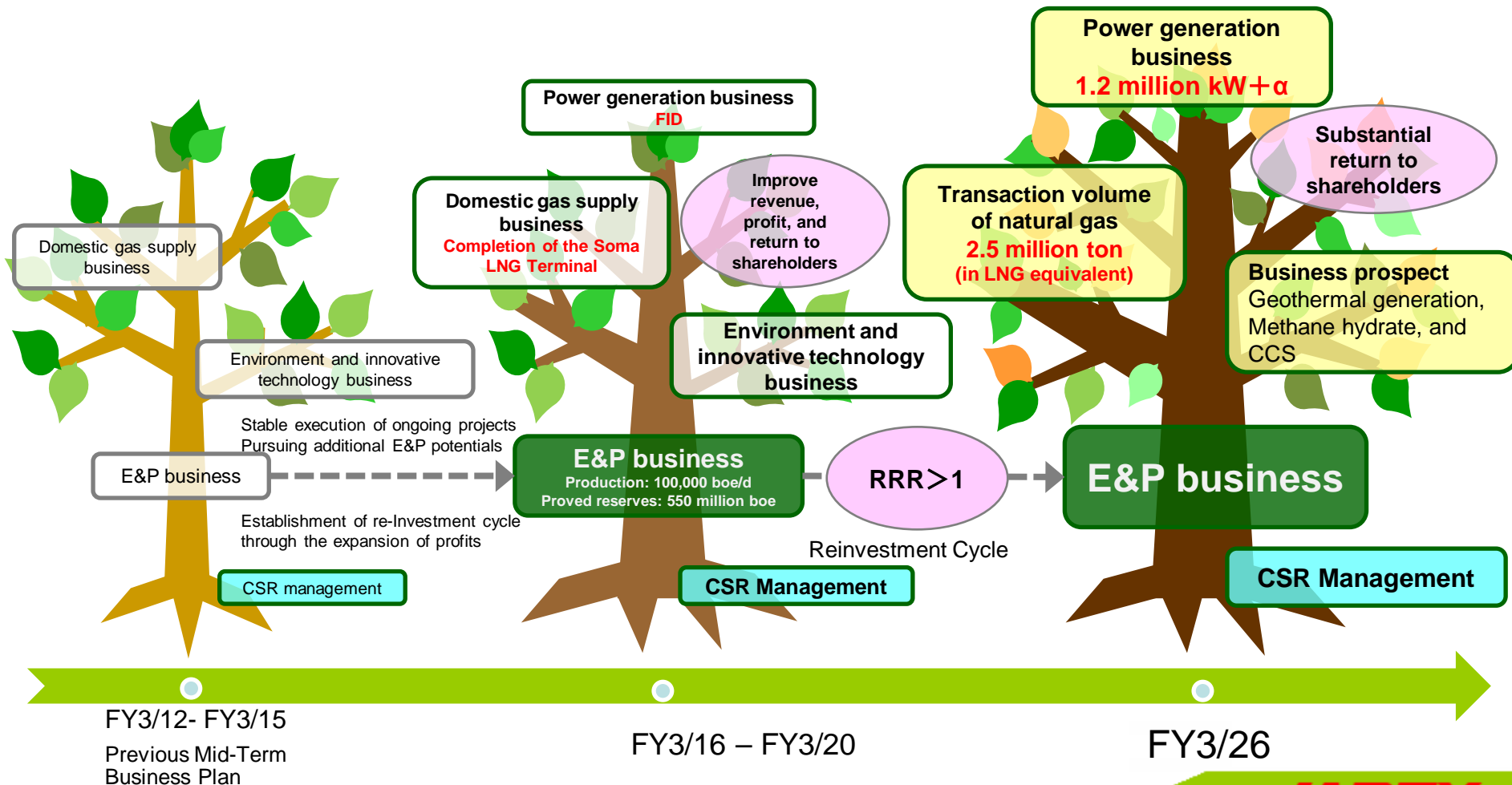
JCC price (US\$/bbl)	41.64	45.60	52.44	51.27	51.25	+10.80	+5.65	-0.02
Exchange rate (JP¥/US\$)	107.67	108.53	111.79	110.62	110.94	+4.12	+2.41	+0.32

\*JAPEX announced the latest forecasts in "Notice of Financial Forecasts Revision" on November 10, 2017, regarding the consolidated financial forecasts of the fiscal year ending March 31, 2018.

# Long-Term Business Vision and Medium-Term Business Plan (2015-)

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

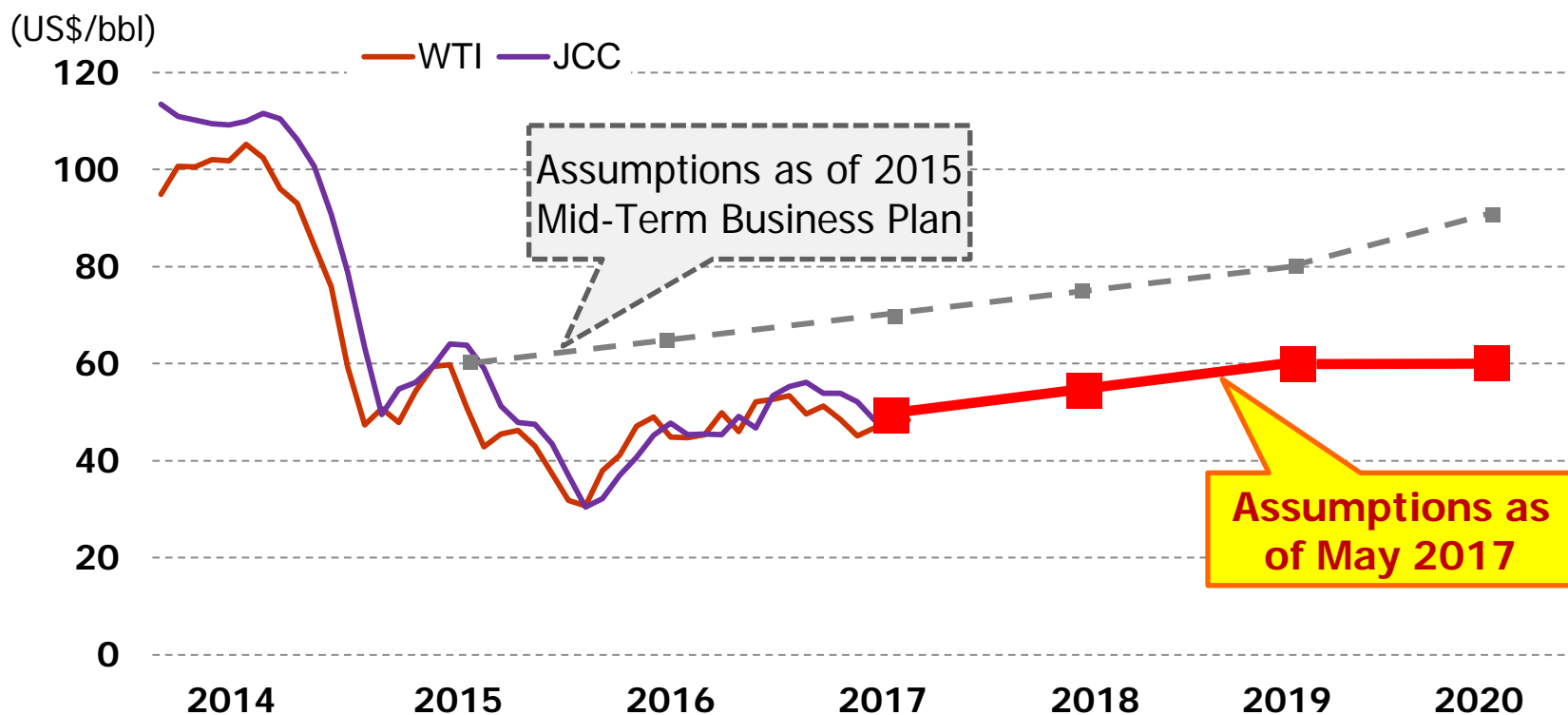
- Regarding our business as the tree, E&P will be “root” and “trunk” and the JAPEX group is pursuing to become a well-balanced integrated company like “the well-proportioned wood”



# Outlook of Business Environment

## Assumptions of Oil Price and Exchange Rate

Although assuming a gentle recovery in the market, range of higher oil price is assumed to be limited



	2017	2018	2019-
Oil Price (US\$/bbl)	51.25*	55	60
Exchange Rate(JP¥/US\$)	110.94*	110	

\*Assumptions as of November 10, 2017



# FY3/18 Overview of Key Projects in Progress

## <Highlights>

### ■ E&P business

#### Hokkaido: Yufutsu Oil and Gas Field

- ✓ Investment decision on commencement of oil development of a shallow reservoir in June 2017

#### Canada: Shale Gas Development and Production Project

- ✓ **Upstream:** Ongoing gas production and sales. revision of the development plan focusing on higher economic area
- ✓ **Midstream:** Decided not to proceed PNWL project in July 2017

#### Canada: Oil Sands Project in Hangingstone Leases

- ✓ Not to re-start production by SAGD process in the Hangingstone Demonstration area
- ✓ Commencement of production in the Hangingstone Joint Venture area in August 2017; expected to reach 20,000 bbl/d in second half of 2018

#### Iraq : Garraf Project

- ✓ Ongoing stable crude oil production of approximately 100,000 bbl/d
- ✓ Under discussion with the government for stage development towards 230,000 bbl/d production

#### Indonesia: Kangean Project

- ✓ Ongoing stable gas production from the Terang Gas Field
- ✓ Under development of the Sirasun and Batur Gas Fields from 2019 2Q

### ■ Domestic Natural Gas Supply Business

#### The Soma LNG Terminal

- ✓ Under construction toward the commercial commencement in March 2018
- ✓ Commencement of operation on the Soma-Iwanuma Gas Pipeline in November 2017

#### Soma Natural Gas-Fired Power Generation Project

- ✓ Made decision of the commercialization in October 2016
- ✓ Signed a contract of the syndicated loan by project finance in March 2017
- ✓ Commencement of construction in October 2017

### ■ Environment and Innovative Technology Business

#### CCS

- ✓ Proceeding of CO2 injection in large-scale CCS demonstration project from April 2016

#### Methane Hydrate

- ✓ Finished the second offshore production test in June 2017

#### Geothermal Power

- ✓ Ongoing study and evaluation work in the project

# Commencement of Oil Development of a Shallow Reservoir of Yufutsu Oil and Gas Field

## Investment decision of commencement of oil development of a shallow reservoir (June 2017)

- Decision to commence oil development of a shallow reservoir named the Takinoue Formation (Shallow reservoir around vertical depth of approximately 1,400m) of the Yufutsu Oil and Gas Field in June 2017
- Although crude oil properties are heavier than the currently produced crude oil (assumed to be used for heavy oil), it is expected to exist widely in the shallow reservoir
- Reduction of the investment amount to several billions of yen by repairing existing wells and practical use of the idle Yufutsu Plant production facilities



## Expectation by the decision of development

- As one of the efforts for maintaining and increasing domestic crude oil production, expecting to commence commercial production at approximately 200kl per day (approximately 1,260 bbl/d) in the second half of 2019
- Continuing evaluation for reserves in shallow reservoir and pursue the possibility of additional development

# E&P Business

## Current status of Canada Shale Gas Development and Production Project

### 【Shale Gas Development and Production Project】

#### Production & sales

- Ongoing shale gas production and sales approximately 400 mmcf/d (approximately 75,000 boe/d) as of September 2017
- Exploring the development plan to maximize the value of the Upstream Project
- Planning to review asset valuation related to the Upstream Project during this fiscal year



Shale gas development, Suppression of investment in 2017

### 【Pacific NorthWest LNG Project】

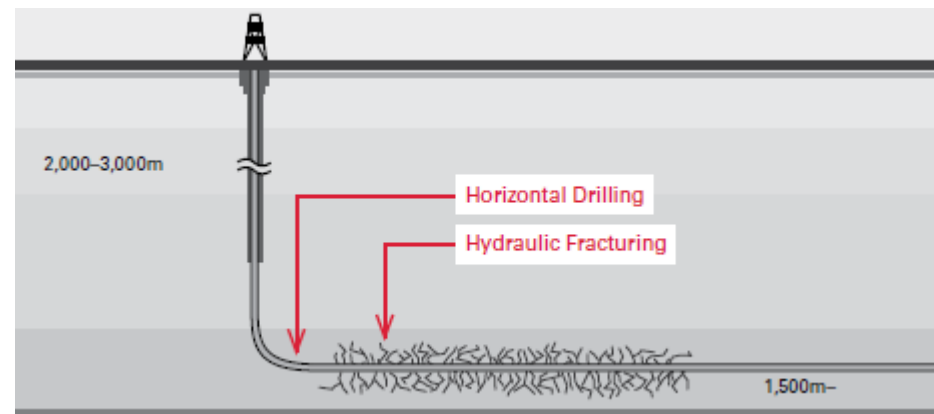
#### Decided not to proceed

- In July 2017, decided not to proceed with the project due to changes in the circumstances surrounding LNG industry
- Planning to post the extraordinary loss (C\$60MM\*) of termination of approximately 900km pipeline construction plan and the non-operating expense as the equity method investment loss (C\$36MM\*) in 3Q financial results
- Recognizing that multiple alternative sources of supply are available for the present procurement of LNG to the Soma LNG Terminal

\*Revised as follows from July 2017 announcement

Extraordinary loss: C\$65MM→C\$60MM

Equity method investment loss: C\$37MM→C\$36MM



Schematic of Shale Gas Development in the Project



# Canada Oil Sands Project ①

## Operator Skills and Experiences for Overseas Business

### JACOS (Japan Canada Oil Sands Limited)

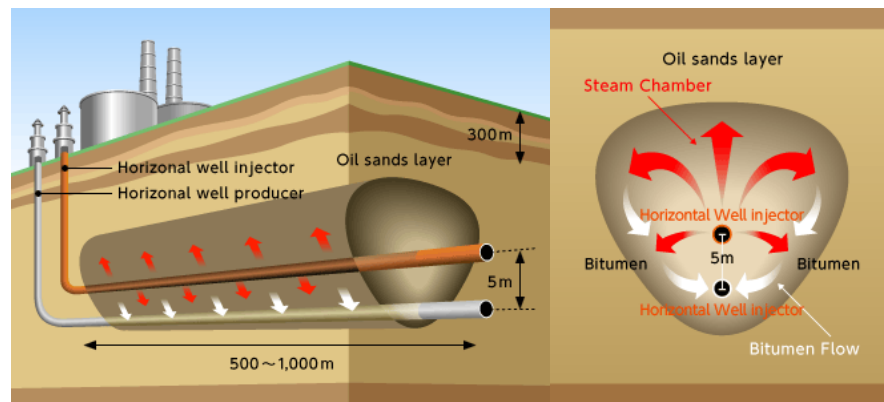
- **Long experience to the oil sands business in Canada since 1970`s**  
Pioneer of producing bitumen using SAGD (steam heating to reduce oil viscosity) process
- **Building a good relationship with local communities**  
Formed "Aboriginal Review Group" with local communities for continuous environmental monitoring
- **Acquiring skills and experiences as overseas operator project**  
Diversity management to employees with a variety of races, cultural backgrounds and others (approximately 170 employees are working)



Central processing facility in the Hangingstone Joint Venture area that started production from August 2017



Approximately 80 staffs involved in the production operations site



SAGD (Steam Assisted Gravity Drainage) process

# Canada Oil Sands Project ②

## Overview of Business

### 【the Hangingstone Demonstration area】

Decision not to re-start production using SAGD process

- 1999: Commencement of test production by SAGD process
- 2003: Commencement of commercial production
- August 2017: Decision not to re-start SAGD production

① Adverse business environment including low oil prices

② Technical risks (Declining reservoir temperature and pressure)

- Planned to amortize US\$69 million in 3Q financial results
- Shifted employees in the Demonstration area to the Joint Venture area



Central processing facility in the Hangingstone Demonstration area

### 【the Hangingstone Joint Venture area】

Commencement of production operations using SAGD process

- August 2017: Commencement of production
- September 2017: First sale of diluted bitumen
- Currently producing approximately 10,000 bbl/d as of November 2017
- Planned to reach peak rate (20,000 bbl/d, for JACOS 15,000 bbl/d, 75% of total production) in the second half of 2018
- Expected to continuous production for over 30 years



Central processing facility in the Hangingstone Joint Venture area that commenced production in August 2017



# Canada Oil Sands Project ③

## Commencement of Production

### Commencement of production in August 2017

December 2012	Final Investment Decision
February 2015	Completion of drilling of horizontal well-pairs
October 2016	Completion of field facility
February 2017	Completion of central processing facility
April 2017	Commencement of steam injection into horizontal well-pairs
August 2017	Commencement of production using SAGD process
Second half-2018	Peak rate (20,000 bbl/d) - Expected to continue production for over 30 years -

- **Diluted to heavy oil equivalency and transported via pipeline for sales**
- **Sufficient to ensure positive operating cash flow in current oil price level**
- **Enhance profitability by stable production of 20,000 bbl/d and improved business plan**

#### **【Improved Business Plan】**

##### Step1: Cost Reduction (currently being implemented)

- ① Reduction of future capital expenditure such as wells and field facilities
- ② Reduction of general and administrative expense and operating expense
- ③ Pursue possibility to reduce transportation cost pursuing sharing facilities with third party

##### Step2: Adoption of a New Technology

Considering to realize “the solvent based SAGD process” that is injecting extra-light oil along with the steam

- ① Reduction of operating costs by reducing fuel gas consumption
- ② Early recovery of investment by accelerating production pace



Rachel Notley, Premier of Alberta (third from the left) celebrating the opening ceremony of production startup

# Progress of Soma Project

## Soma LNG Terminal, Fukushima Natural Gas Power Plant

### Progress of Soma Project

July 2017	Started work at the Soma District Office Building
October 2017	Commencement of construction on the Fukushima Natural Gas Power Plant
November 2017	Commencement of operation on the Soma-Iwanuma Gas Pipeline Completion of construction on the Soma LNG Terminal (planned)
December 2017	Arrival of the first LNG tanker in the Soma Port (planned)
March 2018	Commencement of commercial operation on the Soma LNG Terminal (planned)
Spring of 2020	Commencement of commercial operation on the Fukushima Natural Gas Power Plant (planned)



Started work at the Soma District Office Building



Ceremony for safety of construction work at the Fukushima Natural Gas Power Plant



LNG tank and berth at the Soma LNG Terminal



The Iwanuma Valve Station connecting with the Soma-Iwanuma Gas Pipeline

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# **II . Consolidated Financial Results**

## **for the Six Months Ended September 30, 2017**

**Managing Executive Officer**  
**Michiro Yamashita**



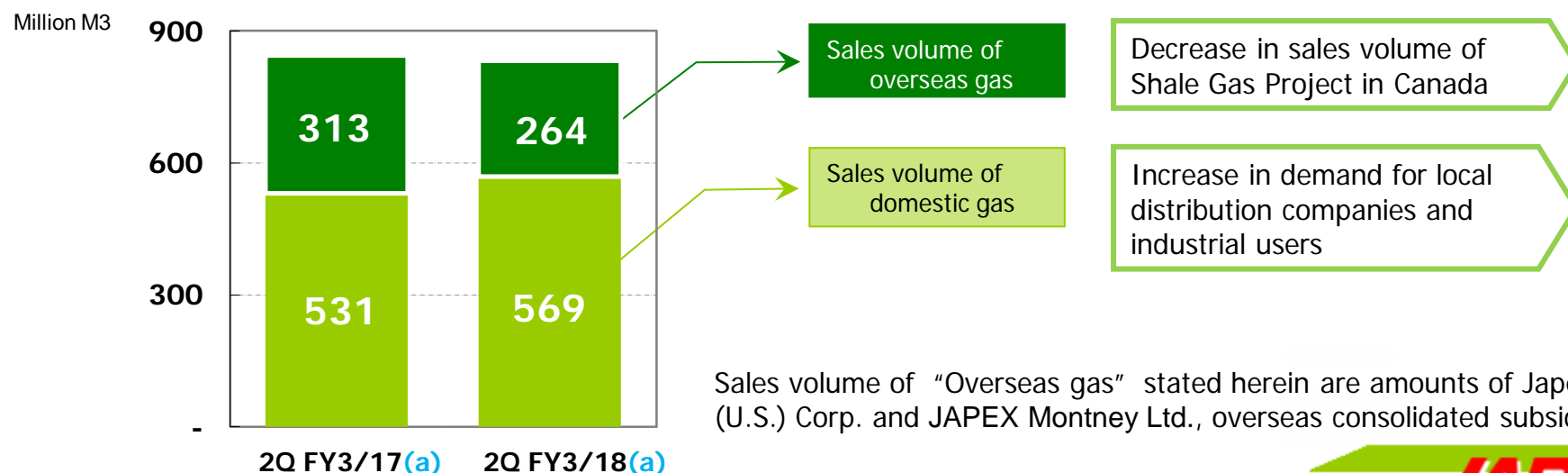
# Actual Sales of Natural Gas in 2Q FY3/18 (year-on-year)

Sales volume : Million M3		FY3/17	FY3/18	Change
Net sales : Million JP¥		2Q (a)	2Q (a)	
Natural gas	Sales volume	<b>845</b>	<b>833</b>	<b>-11</b>
	Net sales	<b>23,184</b>	<b>26,839</b>	<b>+3,654</b>

Rising selling price

## Breakdown

Domestic gas	Sales volume	<b>531</b>	<b>569</b>	<b>+37</b>
(Domestically produced gas)	Sales volume	<i>(324)</i>	<i>(344)</i>	<i>(+19)</i>
Overseas gas	Sales volume	<b>313</b>	<b>264</b>	<b>-49</b>



# Actual Sales of Crude Oil in 2Q FY3/18 (year-on-year)

		FY3/17	FY3/18	Change
Sales volume : Thousand KL				
Net sales : Million JP¥		2Q(a)	2Q(a)	
Crude Oil	Sales volume	<b>1,715</b>	<b>1,548</b>	<b>-167</b>
	Net sales	<b>43,792</b>	<b>53,086</b>	<b>+9,294</b>

Rising selling price

## Breakdown

Domestic crude oil (* )	Sales volume	<b>149</b>	<b>146</b>	<b>-3</b>
	Net sales	<b>4,645</b>	<b>5,713</b>	<b>+1,068</b>
Overseas crude oil (** )	Sales volume	<b>986</b>	<b>809</b>	<b>-176</b>
	Net sales	<b>23,112</b>	<b>25,604</b>	<b>+2,492</b>
Bitumen (***)	Sales volume	<b>91</b>	<b>—</b>	<b>-91</b>
	Net sales	<b>589</b>	<b>—</b>	<b>-589</b>

Decrease in oil sales volume from Garraf Oil Field in Iraq

Bitumen production in the Demonstration area has been suspended from May 2016, decided not to re-start production operations in August 2017

## Assumptions

JCC price	US\$/bbl	<b>41.64</b>	<b>52.44</b>	<b>+10.80</b>
Bitumen price (***)	US\$/bbl	<b>9.94</b>	<b>—</b>	<b>-9.94</b>
Exchange rate	JP¥/US\$	<b>107.67</b>	<b>111.79</b>	<b>+4.12</b>

(\* ) Sales volume and net sales of "Domestic crude oil" stated herein do not include purchased crude oil

(\*\* ) Sales volume and net sales of "Overseas crude oil" stated herein are amounts of 3 overseas subsidiaries (Japex (U.S.) Corp., JAPEX Montney Ltd. and Japex Garraf Ltd.)

(\*\*\*) Royalty is excluded in the net sales and price of Bitumen

# Actual Results for 2Q FY3/18 ( year-on-year )

[ Million JP¥]	FY3/17 2Q (a)	FY3/18 2Q (a)	Change
Net sales	91,494	112,382	+20,887
Gross profit	11,675	17,884	+6,209
Exploration expenses	645	643	-1
SG&A expenses	14,243	13,788	-455
Operating income (loss)	-3,213	3,452	+6,666
Non-operating income (expenses)	975	5,435	+4,460
Ordinary income (loss)	-2,238	8,888	+11,126
Extraordinary income (loss)	-270	-12	+258
Income taxes	414	1,108	+693
Profit (loss) attributable to non-controlling interests	-1,657	10	+1,668
Profit (loss) attributable to owners of parent	-1,267	7,756	+9,023

Main factors for change  
Increase factor (+) / Decrease factor (-)

### Gross profit

Domestic crude oil and natural gas  
+ ¥2.0 billion  
Overseas consolidated subsidiaries  
+ ¥3.7 billion

### Non-operating income (expenses)

Equity in earnings of affiliates  
+ ¥3.2 billion  
Foreign currency translation adjustments on debt,  
foreign currency exchange gains and losses  
(FY3/17) Losses ¥0.4 billion → (FY3/18) Gains ¥0.9 billion  
+ ¥ 1.4 billion

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# **III. Revised Full Year Forecasts for FY3/18**

**Managing Executive Officer  
Michiro Yamashita**

# Revised Forecasts for FY3/18

## [Assumptions]

			2017				2018	Full year
			Jan.-Mar.	Apr.-Jun.	Jul.-Sep.	Oct.-Dec.	Jan.-Mar.	
JCC price	US\$/bbl	Previous forecasts		54.63	50.00	50.00	50.00	51.27
		Revised forecasts		54.63	49.88	50.00	50.00	51.25
Exchange rate	JP¥/US\$	Previous forecasts		112.12	110.00	110.00	110.00	110.62
		Revised forecasts		112.12	111.38	110.00	110.00	110.94
JACOS Bitumen	US\$/bbl	Previous forecasts	-	-	-	-	-	-
		Revised forecasts	-	-	-	-	-	-
JACOS Diluted bitumen	US\$/bbl	Previous forecasts	-	-	32.89	32.83	-	32.84
		Revised forecasts	-	-	37.46	32.83	-	33.15
JML Gas	C\$/mcf	Previous forecasts	2.71	2.62	2.23	2.23	-	2.45
		Revised forecasts	2.71	2.67	1.29	1.94	-	2.21

1. "JACOS Bitumen" stated herein bitumen selling price of Japan Canada Oil Sands Ltd. (Deduction of Royalty). Decided not to re-start operation at the Demonstration area in August 2017 and not estimated FY3/18 sales.
2. "JACOS Diluted bitumen" stated herein diluted bitumen selling price of Japan Canada Oil Sands Ltd. (Deduction of Royalty). Started production operation in the Hangingstone Joint Venture area in August 2017, and started sales thereafter.
3. "JML Gas" stated herein gas selling price of JAPEX Montney Ltd. (Deduction of Royalty)

# Revised Forecasts Natural Gas Sales for FY3/18 (vs Previous Forecasts)

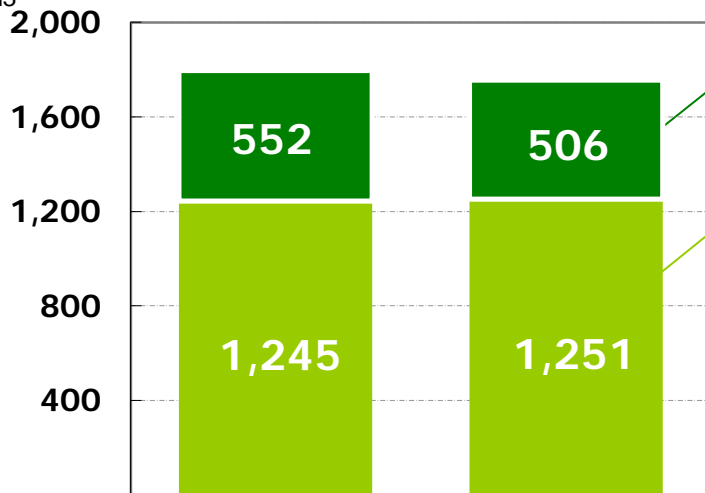
		FY3/18	FY3/18	Change
		Previous forecasts Full (f) August 8, 2017	Revised forecasts Full (f) November 10, 2017	Full
Sales volume : Million M3				
Net sales : Million JP¥				
Natural gas	Sales volume	<b>1,797</b>	<b>1,757</b>	<b>-40</b>
	Net sales	<b>59,128</b>	<b>58,333</b>	<b>-796</b>

Decrease of sales volume,  
decline in selling price

## Breakdown

Domestic gas	Sales volume	<b>1,245</b>	<b>1,251</b>	<b>+5</b>
(Domestically produced gas)	Sales volume	<i>(722)</i>	<i>(723)</i>	<i>(+2)</i>
Overseas gas	Sales volume	<b>552</b>	<b>506</b>	<b>-46</b>

Million M3



Sales volume of  
overseas gas

Decrease in shale gas sales volume  
in Canada

Sales volume of  
domestic gas

Increase in demand for local  
distribution companies and  
industrial users

Sales volume of "Overseas gas" stated herein are amounts of Japex (U.S.) Corp. and JAPEX Montney Ltd., overseas consolidated subsidiaries.

Previous forecasts (f)

Revised forecasts (f)

# Revised Forecasts Crude Oil Sales for FY3/18 (vs Previous Forecasts)

Revised forecasts

		FY3/18	FY3/18	Change
Sales volume : Thousand KL Net sales : Million JP¥		Previous forecasts Full (f) August 8, 2017	Revised forecasts Full (f) November 10, 2017	Full
Crude Oil	Sales volume	2,654	2,603	-51
	Net sales	86,556	87,104	+548

Increase in sales volume

## Breakdown

Domestic crude oil (*)	Sales volume	285	285	—
	Net sales	10,792	10,831	+39
Overseas crude oil (**)	Sales volume	1,160	1,154	-6
	Net sales	35,654	36,790	+1,137
Bitumen (***)	Sales volume	—	—	—
	Net sales	—	—	—
Diluted bitumen (****)	Sales volume	254	210	-44
	Net sales	5,768	4,814	-953

Rising selling price from Garraf Oil Field in Iraq

Decision not to re-start SAGD operation in the Demonstration area

Reduction of sales volume due to revision for the operation plan of the Hangingstone Joint Venture area

## Assumptions

JCC price	US\$/bbl	51.27	51.25	-0.02
Bitumen price (***)	US\$/bbl	—	—	—
Diluted bitumen (****)	US\$/bbl	32.84	33.15	+0.31
Exchange rate	JP¥/US\$	110.62	110.94	+0.32

(\*) Sales volume and net sales of "Domestic crude oil" stated herein do not include purchased crude oil.  
 (\*\*) Sales volume and net sales of "Overseas crude oil" stated herein are amounts of 3 overseas subsidiaries (Japex (U.S.) Corp., JAPEX Montney Ltd. and Japex Garraf Ltd.).  
 (\*\*\*) , (\*\*\*\*) Royalty is excluded in the net sales and price of both Bitumen and Diluted bitumen.

# Revised Forecasts for FY3/18 (vs Previous Forecasts)

Million JP¥	Previous forecasts Full(f) August 8, 2017	Revised forecasts Full(f) November 10, 2017	Change
<b>Net sales</b>	<b>211,025</b>	<b>213,802</b>	<b>+2,777</b>
<b>Gross profit</b>	<b>35,804</b>	<b>35,391</b>	<b>-414</b>
<b>Exploration expenses</b>	<b>1,329</b>	<b>1,362</b>	<b>+34</b>
<b>SG&amp;A expenses</b>	<b>29,987</b>	<b>29,714</b>	<b>-273</b>
<b>Operating income (loss)</b>	<b>4,489</b>	<b>4,314</b>	<b>-175</b>
<b>Non-operating income</b>	<b>-5,399</b>	<b>-3,661</b>	<b>+1,738</b>
<b>Ordinary income (loss)</b>	<b>-910</b>	<b>654</b>	<b>+1,564</b>
<b>Extraordinary income</b>	<b>-5,564</b>	<b>-5,579</b>	<b>-15</b>
<b>Income taxes</b>	<b>-1,361</b>	<b>-720</b>	<b>+640</b>
<b>Profit (loss) attributable to non-controlling interests</b>	<b>-6,333</b>	<b>-5,941</b>	<b>+391</b>
<b>Profit (loss) attributable to owners of parent</b>	<b>1,219</b>	<b>1,737</b>	<b>+518</b>

Main factors for change  
Increase factor (+) / Decrease factor (-)

## Gross profit

Domestic crude oil and natural gas  
- ¥0.2billion

Overseas consolidated subsidiaries  
- ¥0.7billion

Other  
+ ¥0.2billion

## Non-operating income (loss)

Foreign currency translation  
adjustments on debt, foreign  
exchange gains and losses  
(Previous) Gains ¥0.9billion  
→(Current) Gains ¥ 2.0billion  
+ ¥1.1billion



# Revised Forecasts Natural Gas Sales for FY3/18 (year-on-year)

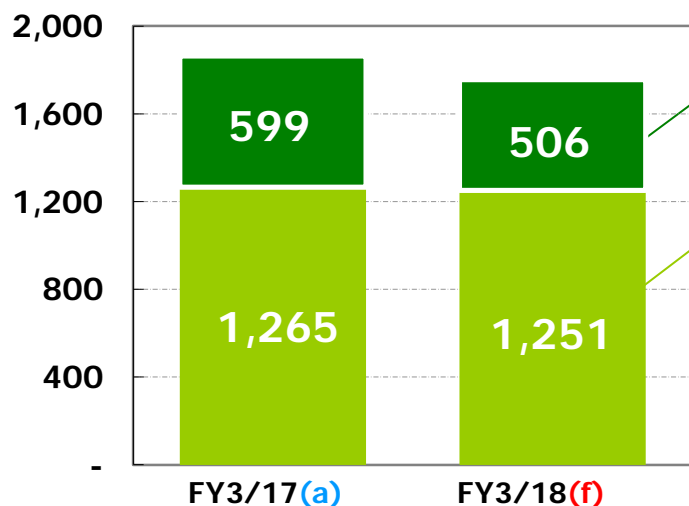
		FY3/17	FY3/18	Change
Sales volume : Million M3				
Net sales : Million JP¥		Full (a)	Revised forecasts Full (f) November 10, 2017	Full
Natural gas	Sales volume	<b>1,864</b>	<b>1,757</b>	<b>-108</b>
	Net sales	<b>55,329</b>	<b>58,333</b>	<b>+3,003</b>

Rising selling price

## Breakdown

Domestic gas	Sales volume	<b>1,265</b>	<b>1,251</b>	<b>-15</b>
(Domestically produced gas)	Sales volume	(744)	(723)	(-22)
Overseas gas	Sales volume	<b>599</b>	<b>506</b>	<b>-94</b>

Million M3



Sales volume of overseas gas

Decrease in shale gas sales volume in Canada

Sales volume of domestic gas

Decrease in sales volume

Sales volume of "Overseas gas" stated herein are amounts of Japex (U.S.) Corp. and JAPEX Montney Ltd., overseas consolidated subsidiaries.

# Revised Forecasts Crude Oil Sales for FY3/18 Revised forecasts

## (year-on-year)

		FY3/17	FY3/18	Change
Sales volume : Thousand KL				
Net sales : Million JP¥				
		Full (a)	Revised forecasts Full (f) November 10, 2017	Full
Crude Oil	Sales volume	2,762	2,603	-159
	Net sales	82,098	87,104	+5,006

Rising selling price

### Breakdown

Domestic crude oil (* )	Sales volume	301	285	-17
	Net sales	10,273	10,831	+558
Overseas crude oil (** )	Sales volume	1,181	1,154	-28
	Net sales	28,653	36,790	+8,137
Bitumen (***)	Sales volume	91	—	-91
	Net sales	669	—	-669
Diluted bitumen (**** )	Sales volume	—	210	+210
	Net sales	—	4,814	+4,814

Rising selling price from Garraf Oil Field in Iraq

Decision not to re-start operation of the Demonstration area

Commencement of production operation of the Hangingstone Joint Venture area

### Assumptions

JCC price	US\$/bbl	45.60	51.25	+5.65
Bitumen price (***)	US\$/bbl	9.94	—	-9.94
Diluted bitumen (**** )	US\$/bbl	—	33.15	+33.15
Exchange rate	JP¥/US\$	108.53	110.94	+2.41

(\*) Sales volume and net sales of "Domestic crude oil" stated herein do not include purchased crude oil.  
 (\*\*\*) Sales volume and net sales of "Overseas crude oil" stated herein are amounts of 3 overseas subsidiaries (Japex (U.S.) Corp., JAPEX Montney Ltd. and Japex Garraf Ltd.).  
 (\*\*\*\*), (\*\*\*\*\*) Royalty is excluded in the net sales and price of both Bitumen and Diluted bitumen.

# Revised Forecasts for FY3/18 (year-on-year)

[Million JP¥]	FY3/17	FY3/18	Change
	Full (a)	Revised forecasts Full (f) November 10, 2017	
Net sales	207,130	213,802	+6,671
Gross profit	32,172	35,391	+3,218
Exploration expenses	1,512	1,362	-150
SG&A expenses	29,975	29,714	-261
Operating income (loss)	685	4,314	+3,629
Non-operating income (expenses)	1,537	-3,661	-5,198
Ordinary income (loss)	2,222	654	-1,569
Extraordinary income (loss)	970	-5,579	-6,549
Income taxes	1,642	-720	-2,363
Profit (loss) attributable to non-controlling interests	-1,892	-5,941	-4,049
Profit (loss) attributable to owners of parent	3,443	1,737	-1,707

Main factors for change  
Increase factor(+) / Decrease factor (-)

### Gross profit

Domestic crude oil and natural gas + ¥0.3 billion  
Overseas consolidated subsidiaries + ¥3.5 billion  
Other - ¥1.0 billion

### Non-operating income (expenses)

Equity in earnings of affiliates + ¥4.3 billion  
(Breakdown: Not proceeding LNG project in Canada - ¥3.2 billion)  
Foreign currency translation adjustments on debt, foreign currency exchange gains and losses (FY3/17)Gains ¥3.4 billion→(FY3/18)Gains ¥2.0 billion - ¥1.3 billion  
Not to re-start production operation in the Demonstration area - ¥7.7 billion

### Extraordinary income (loss)

Not proceeding LNG Project in Canada - ¥5.3 billion  
Decrease in FY3/17 gains on sales of real estate - ¥1.2 billion

### Income taxes adjustments

Tax effect accounting regarding the Demonstration area + ¥1.9 billion

# Assumptions and Impact on Profits [3Q-4Q]

		FY3/17	FY3/18				
		Full(a)	1Q(a)	2Q(a)	3Q(f)	4Q(f)	Full(f)
JCC price	US\$/bbl	45.60	54.63	49.88	50.00	50.00	51.25
Exchange rate	JP¥/US\$	108.53	112.12	111.38	110.00	110.00	110.94
Canadian gas	C\$/mcf	1.95	2.71	2.67	1.29	1.94	2.21

Assumptions	JCC price (3Q-4Q)	Exchange rate (3Q-4Q)	Canadian gas (4Q)
	US\$ 50.00/bbl	110.00 JP¥/US\$	C\$ 2.21/mcf JP¥ 88/C\$

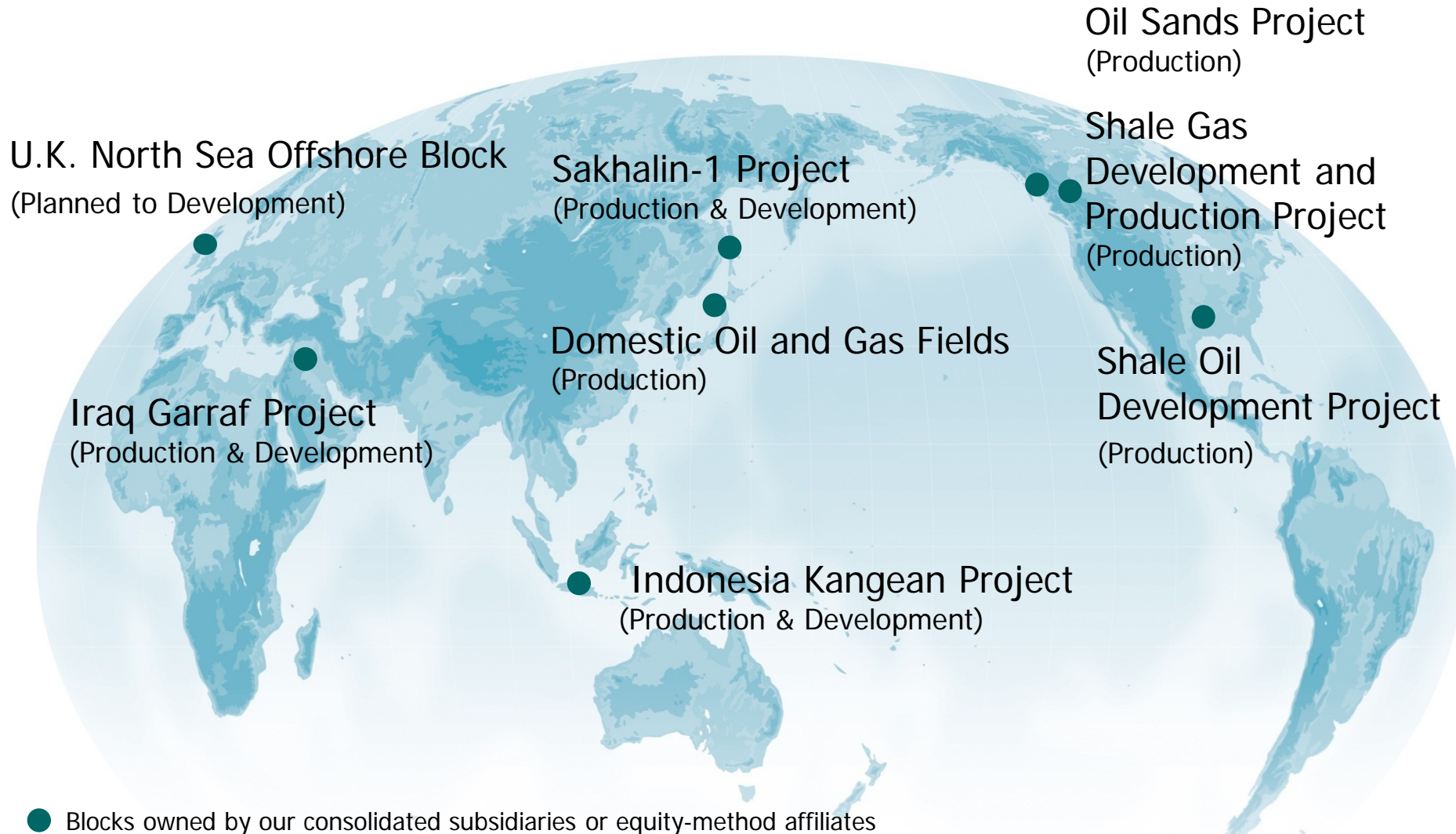
Impact on Profit	US\$ 1/bbl increase in JCC prices would push profits up by...	A weakening in JP¥ 1/US\$ exchange rates would push profits up by...	C\$ 1/mcf increase in Canadian gas prices would push profits up by...
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Operating income	JP¥ 190million	JP¥ 60million	JP¥ 410million
Profit (loss) attributable to owners of parent	JP¥ 130million	-JP¥ 20million	JP¥ 160million

Note: In addition to the impact of exchange rate fluctuations shown on the above, translation adjustments of foreign-currency-denominated receivables and payables also occur.  
Actual profits are influenced by a variety of other factors besides crude oil prices and exchange rates.

# <Appendix>

## E&P Business (1) Projects in Japan and Overseas





# <Appendix>

## E&P Business (2) Domestic Activities

### Domestic exploration

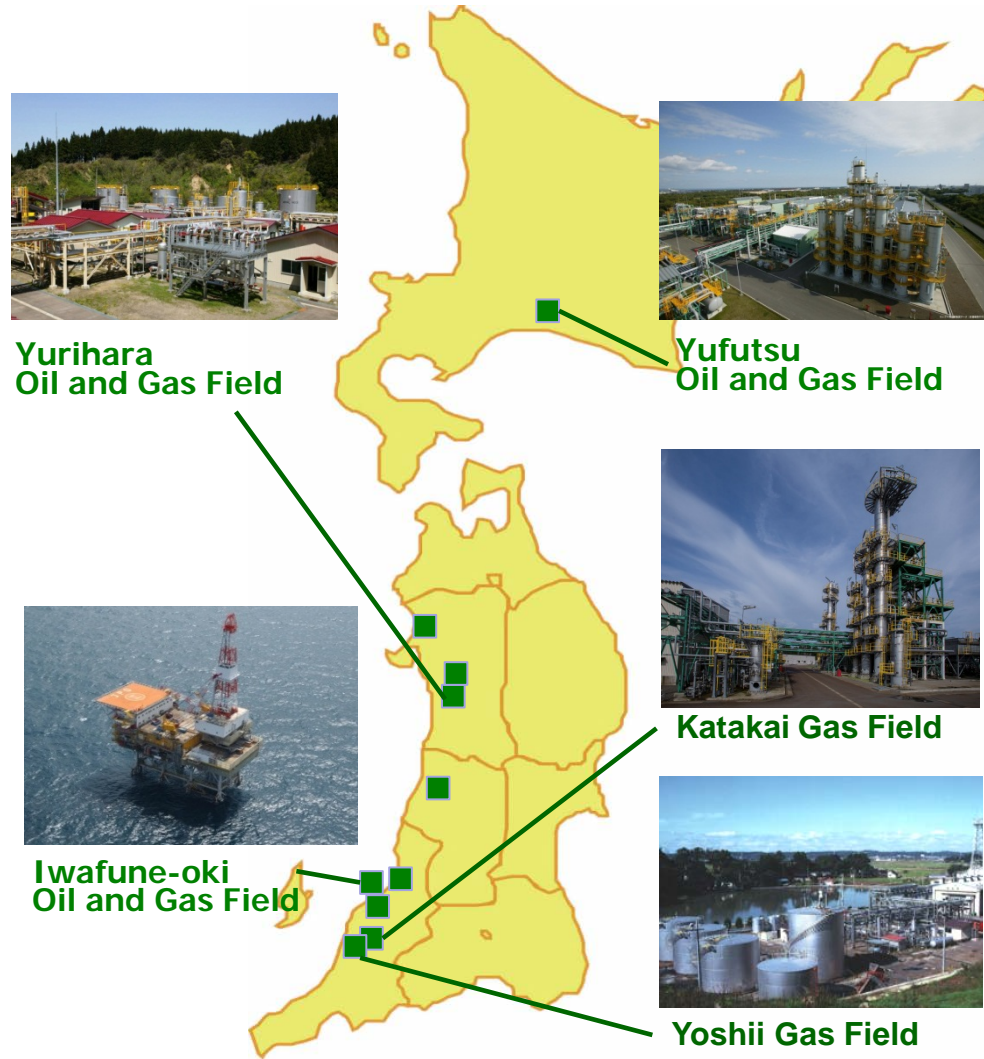
- Domestic exploration (Geophysics, Exploration well) is not planned in FY3/18
- Pursuing additional domestic E&P potential including utilizing government basic surveys

### Domestic development

- Investment decision of oil development of a shallow reservoir of the Yufutsu Oil and Gas Field in June 2017

Pursuing compensation of domestic reserves and maintenance of the production volume

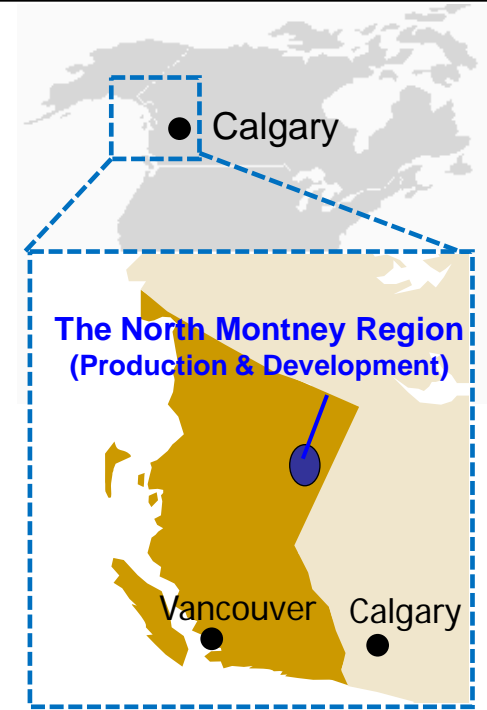
### Operating 10 domestic oil and gas fields



# <Appendix>

## E&P Business (3) Canada Shale Gas Development and Production Project

	Upstream: Shale gas project	Midstream: LNG project
Block / Proposed site	North Montney Area, British Columbia, Canada	Lelu Island, The Port of Prince Rupert, British Columbia, Canada
Interest	10% Interest	10% Equity
Operator	PETRONAS (Including subsidiaries)	PETRONAS (Including subsidiaries)
Current status	<ul style="list-style-type: none"> <li>Ongoing shale gas production and sales of approximately 400 mmcf/d</li> <li>Exploring development plan to maximize the value of the Upstream Project</li> </ul>	Decided not to proceed with the LNG project on July 25, 2017.



Shale gas drilling site

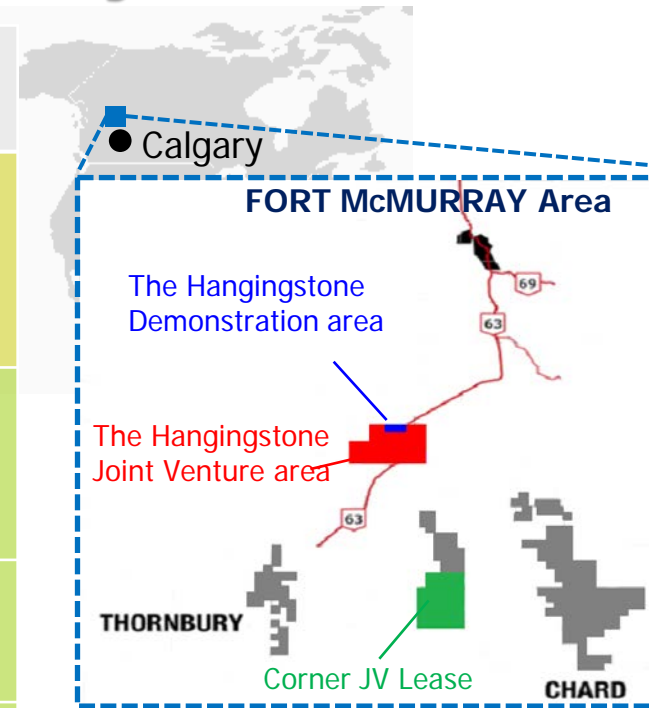
### ■ Project Schedule

April 2013	Signed a contract
September 2016	Approved Environmental Assessment by CEAA
July 2017	Decided not to proceed with the LNG project
Current status	Ongoing revision of the development and production plan

# <Appendix>

## E&P Business (4) Canada Oil Sands Project

Project	Canada Oil Sands Co., Ltd. (CANOS)	
Company	Operator : Japan Canada Oil Sands Ltd. (JACOS)	
Block	The Hangingstone Demonstration area <b>100%</b> interests approximately 5,000 bbl/d (Suspended from May 2016)	Not to re-start operation of SAGD production (Cumulative production : 35.23M bbl as of end of May 2016)
	The Hangingstone Joint Venture area <b>75%</b> interests Gradual increase from 20,000 bbl/d	Producing
	Corner JV Lease <b>12%</b> interests	Undergoing appraisal
	Other bitumen leases (includes Corner, Chard & Thornbury)	Considering future activities



### ■ Schedule of Hangingstone Project

February 2013	Commenced development works (early civil work)
February 2017	Completed construction of facilities
April 2017	Commenced steam injection to horizontal well pairs
August 2017	Commenced production
Second half of 2018 (planned)	Reaching production rate (20,000 bbl/d)

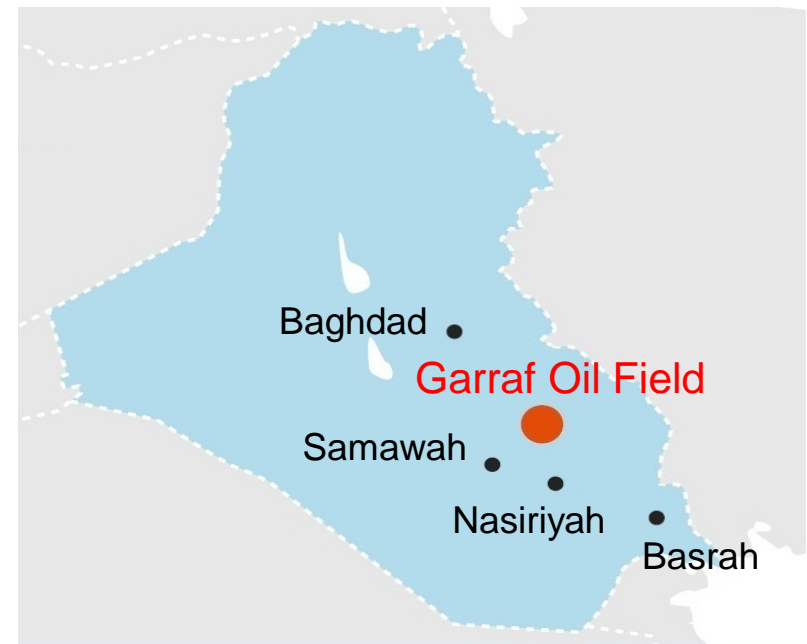


Central processing facility in the Hangingstone Joint Venture area



# <Appendix> E&P Business (5) Iraq : Garraf Project

Project company	Japex Garraf Ltd.	
Interest	30% (cost share 40%) Operator : PETRONAS	
Field	Garraf Oil Field	In Production



2013 2030  
Expected Cumulative Production  
**approximately 1.1 billion bbl**

## ■ Time Schedule

2013	<u>First oil production on August 31</u> average daily production : approximately 64,000 bbl/d
2014 -	Average daily production 2014: approximately 84,000 bbl/d 2017 September: approximately 100,000 bbl/d
<Upcoming plan> Gradual increase from 100,000 bbl/d to 230,000 bbl/d subject to technical and commercial viability	

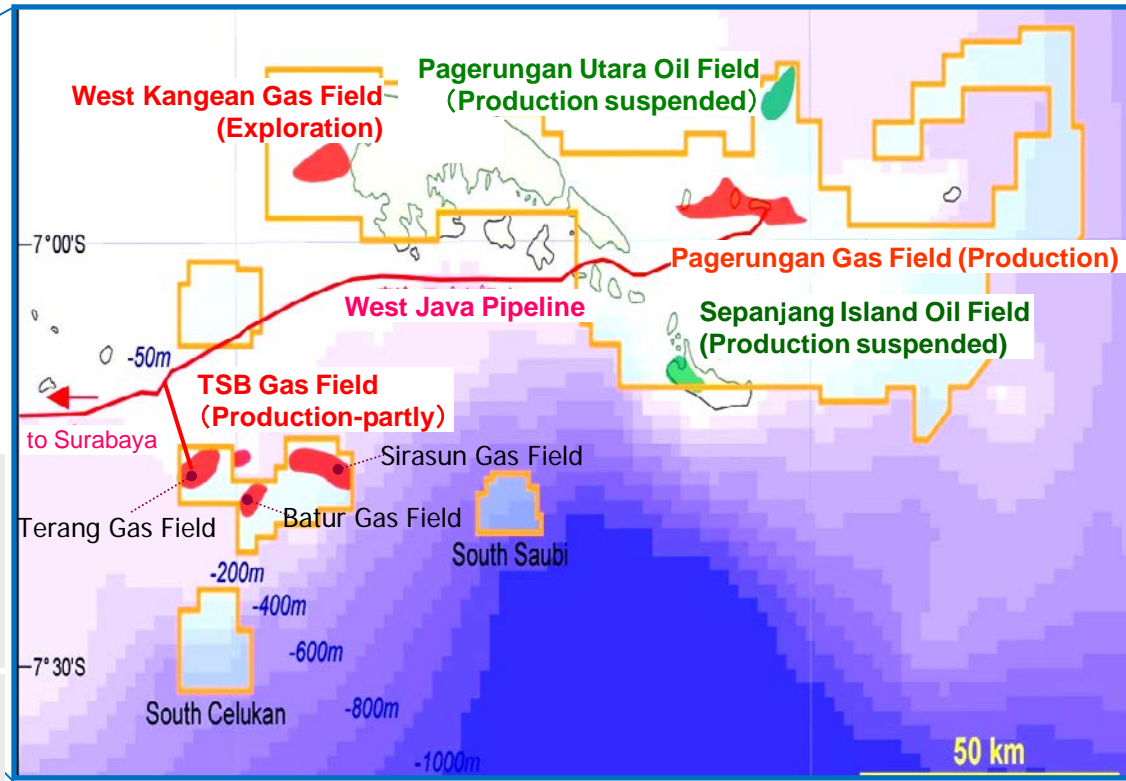


# <Appendix>

## E&P Business (6) Indonesia: Kangean Project



Project Company	Kangean Energy Indonesia Ltd. (KEI) + 2 others, Equity-method affiliate
Interest	<b>25%</b> (Operator : KEI)



Production volume : approximately **40,000 boe/d**

□ the TSB Gas Field

(Phase1: Terang): Production started in end of May 2012

Production rate 0.22 billion cf/d

(approximately 38,000 boe/d)

(Phase2: Sirasun, Batur): Targeting the start of production in 2Q 2019

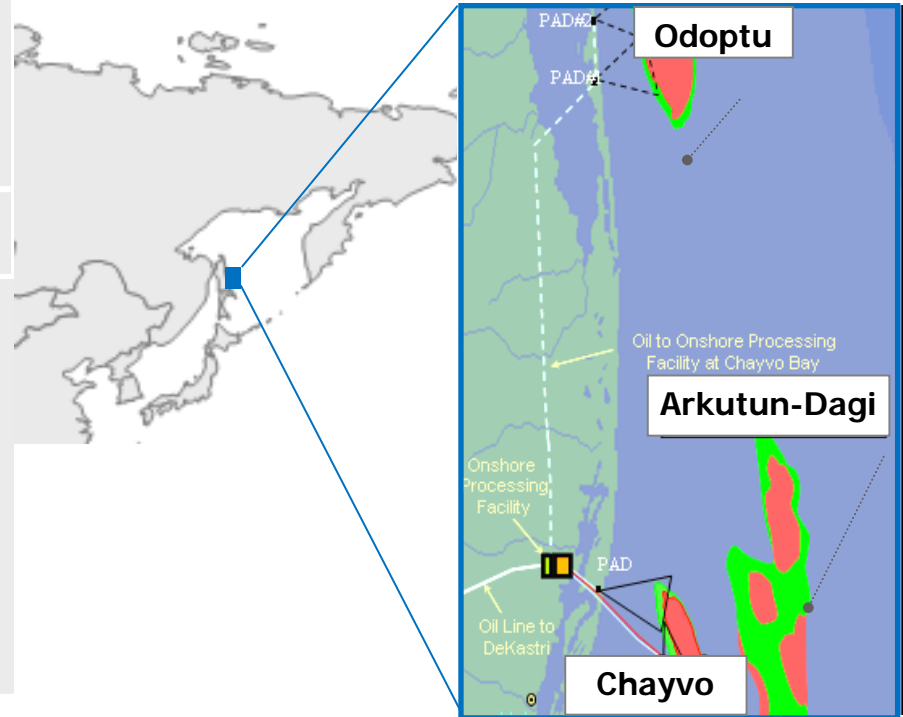
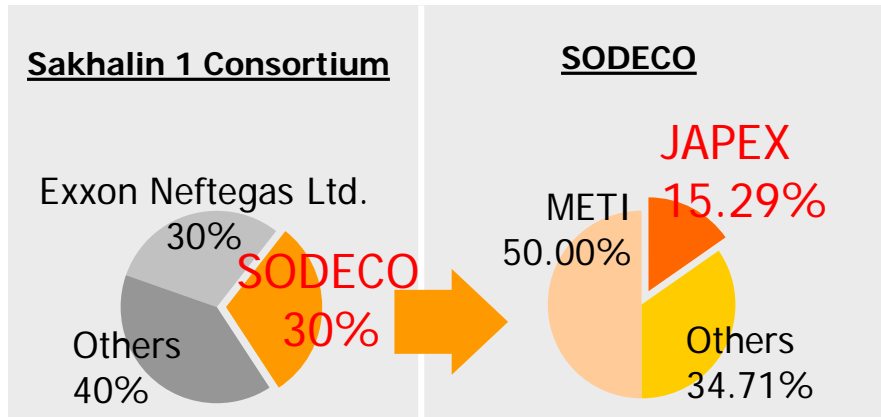


# <Appendix>

## E&P Business (7) Sakhalin-1 Project

<b>Project Company</b>	Sakhalin Oil and Gas Development Co., Ltd. (SODECO) Equity-method affiliate
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<b>Interest</b>	
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Block	Chayvo,	In Production at each fields *The Arkutun-Dagi Oil and Gas Field commenced oil production in January 2015
	Odoptu,	*In 2015, the Chayvo Oil and Gas Field achieved a new world-record of extended reach drilling, at a measured depth of 13,500m
	Arkutun-Dagi	Production volume of crude oil: <b>approximately 180,000 bbl/d</b> *Average production volume per day on 2017, based on JAPEX's estimates





# <Appendix> Domestic Natural Gas Supply Business (1) Construction of the Soma LNG Terminal

## ■ Soma LNG Terminal

Site	Shinchi-Town, Fukushima Pref. (No.4 wharf area of Soma Port)
Capacity	One LNG Tank of Aboveground Style/PC type containing 230,000kl
Receiving Capacity	LNG ocean-going vessel : Full set (maximum 210,000m <sup>3</sup> class) LPG domestic vessel : Full set (maximum 2,500m <sup>3</sup> class)
Vaporizers	Sending power : 7.0MPa 75t/h x2
Shipping Facilities	LNG domestic vessel : maximum 4,800 m <sup>3</sup> class Tanker truck : 5 lanes, 30t/h
Commencement of Operation	March 2018 (Planned)



\*In addition to the above, construction for another LNG vaporization equipment and LNG tank (230,000kl) is ongoing

## ■ the Soma-Iwanuma Gas Pipeline

Starting / End point	Starting point : the Soma LNG terminal End point : the Iwanuma Valve station
Caliber	20B
Pressure	7Mpa
Length	Approximately 40km
Commencement of Operation from the Soma LNG Terminal	March 2018 (Planned)



Rendering of the Soma LNG Terminal and the Fukushima Natural Gas Power Plant

# <Appendix> Domestic Natural Gas Supply Business (2) Natural Gas-Fired Power Generation Project

## ■ The overview of Fukushima Natural Gas Power Plant

Head Office	Fukushima Gas Power Co., Ltd.* (Founded April 2015)
Method	Gas Turbine and Steam Power (Combined Cycle)
Capacity	1.18 million kW (2 units of 0.59 million kW)
Fuel	Natural Gas (Vaporized LNG) Amount 700,000-1,000,000t/y (Utilization Ratio 60%-90%)
Thermal Efficiency	Sending End 60.64% (LHV, Temperature 15°C)
Gas Turbine	1,500°C Class
Steam Turbine	Steam Condition (High-pressure/ Medium-pressure/ Low-pressure) 600/600/284°C 15.6/3.34/0.5MPa
Heat Recovery Boiler	Steam Flow 370/85/50t/h NOx Emission concentration Less than 5ppm

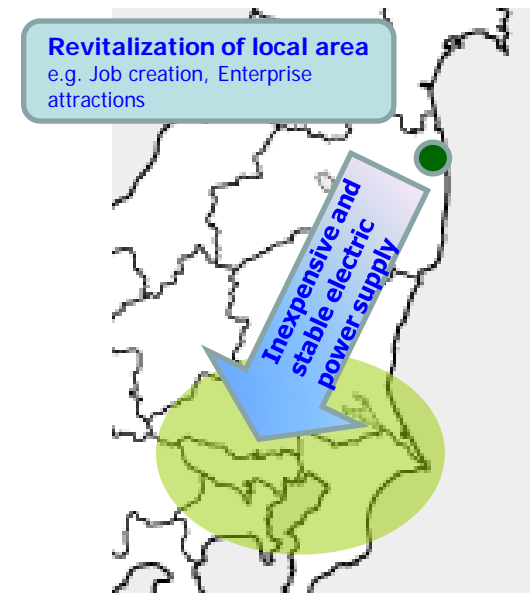
## ■ Schedule

October 2016	FID
June 2017	Approved Environmental Assessment
October 2017	Commencement of construction
2020 Spring	Commencement of commercial operations (planned)

\* Investment ratio: JAPEX 33%, Mitsui & Co., Ltd. 29%, Osaka Gas Co., Ltd. 20%, Mitsubishi Gas Chemical Co., Inc. 9%, Hokkaido Electric Power Co., Inc. 9%



Targeting commencement of electricity supply to Tokyo metropolitan area in 2020



# <Appendix> Environment and Innovative Technology Business Geothermal Power, Methane Hydrate, CCS, Solar Power

## CCS

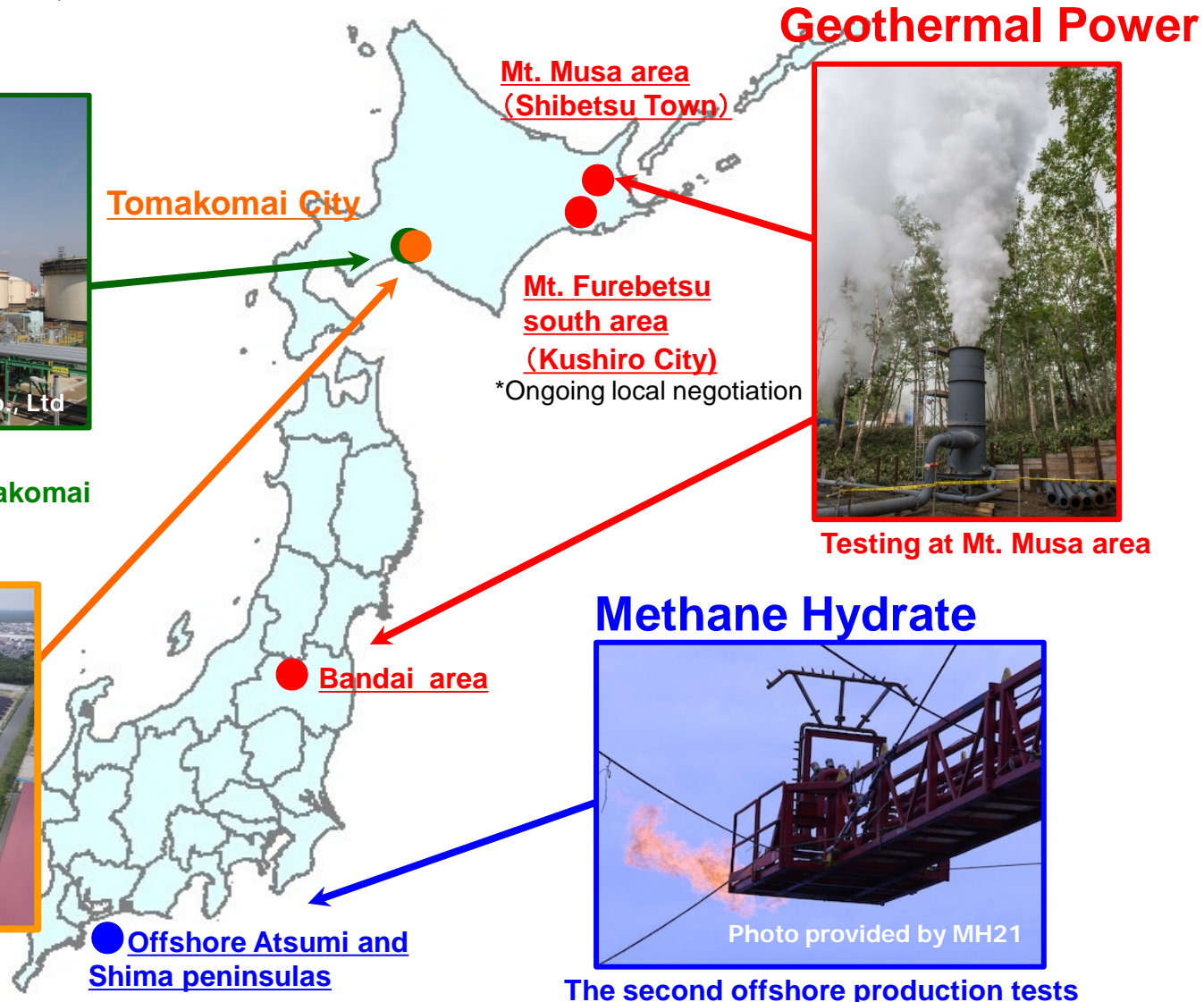


Ground facilities of CCS demonstration project in Tomakomai

## Solar Power



Solar panels at Hokkaido District Office



## Geothermal Power



Testing at Mt. Musa area

## Methane Hydrate



The second offshore production tests

# Abbreviation

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- BOE(/D) Barrels of Oil Equivalent (per Day)
- CCS Carbon dioxide Capture and Storage
- CIF Cost, Insurance and Freight
- COP Conference Of the Parties
- CSR Corporate Social Responsibility
- E&P Exploration and Production
- FID Final Investment Decision
- GHG Greenhouse Gas
- HE Hangingstone Expansion
- HSE Health, Safety and Environment
- IOR (EOR) Improved (Enhanced) Oil Recovery
- JCC Japan Crude Cocktail
- JOGMEC Japan Oil, Gas and Minerals National Corporation
- LNG Liquefied Natural Gas
- MH Methane Hydrate
- P/L Pipeline
- PNWL Pacific North West LNG
- ROE Return on Equity
- RRR Reserves Replacement Ratio
- SODECO Sakhalin Oil & Gas Development Co., Ltd.
- TSB Terang, Sirasun, Batur
- WTI West Texas Intermediate