# **Segment Overview** Asia & Oceania ▶p. 16 Number of countries Number of projects -In production Under development Preparation for development Under exploration Other Reserves/Production Proved reserves (million BOE) Net production (thousand BOED) 2013 2014 2015 2016 Net sales/Operating income Net sales (¥ million) -Operating income (¥ million)



2017

2012

2013

2014

2015

2017

2016

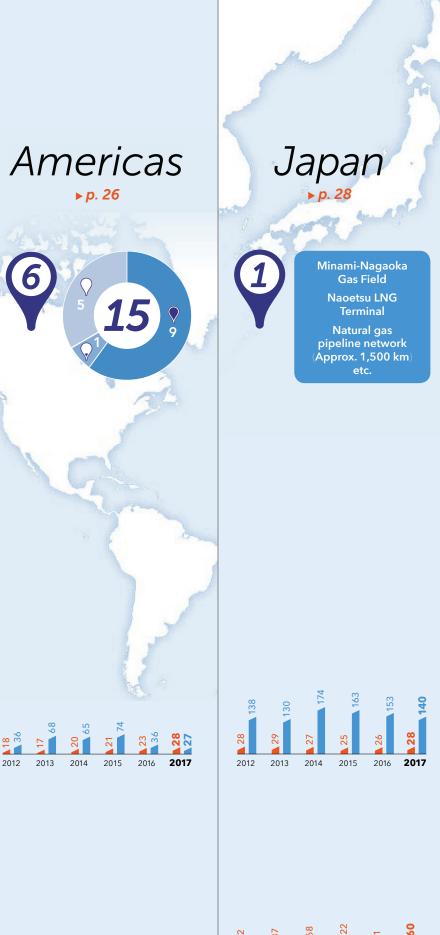
2013

2014

2015

# Middle East & Africa ▶p. 24







# Project Overview by Region

# Asia & Oceania

In the Asia and Oceania region, INPEX holds participating interests in the Offshore Mahakam Block in Indonesia, which is contributing significantly to earnings, and the large-scale Ichthys and Abadi LNG projects, where development and preparatory development activities are under way as the operator. The Company is also actively advancing more than 20 exploration projects with growth potential across the region.



#### Offshore Mahakam Block and Attaka Unit

INPEX entered into a production sharing contract (PSC) with the Indonesian Government in October 1966, at that time acquiring a 100% interest in the Offshore Mahakam Block. The Attaka Unit was established in April 1970 through the unitization of part of the adjacent blocks owned by INPEX and Unocal (now Chevron), with each company taking a 50% interest. Production of crude oil and natural gas has continued since 1972. INPEX farmed out 50% of its interest in the Offshore Mahakam Block to CFP (now TOTAL) in July 1970. This venture subsequently made a series of discoveries in the

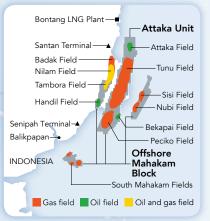
Bekapai (oil), Handil (oil), Tambora (oil and gas), Tunu (gas), Peciko (gas), Sisi and Nubi (gas) fields, as well as the South Mahakam Gas Fields (gas), each of which has continued to produce crude oil and natural gas. The crude oil and condensate produced from these fields are shipped mainly to oil refineries and power companies in Japan by tanker from the Santan and Senipah terminals. Most of the natural gas is supplied to the Bontang LNG Plant, and then shipped as LNG to customers in Japan and elsewhere.

The Offshore Mahakam Block has begun to see output decline after more

than 40 years of production. In 2012, impediments at production wells led to a large drop in output, in addition to natural attrition. Thereafter, successful steps were taken to control the decline in production by advancing efforts to counter sand problems and accelerate the pace at which the Company undertakes development well drilling. Despite these endeavors, production is still expected to decrease gradually in the future. INPEX has been in discussions with Pertamina and TOTAL concerning Participation in the block after 2018.

			Venture company (established)	Interest owned (*Operator)
Offshore Mahakam		Crude oil: 68 Mbbld Natural gas: 1,362 MMcf/d	INPEX CORPORATION	INPEX 50% TOTAL* 50%
Attaka Unit In production	LPG: 7 Mbbld	(February 21, 1966)	INPEX 50% Chevron* 50%	









1: Booster station 2: Offshore platform during well drilling work

## Sebuku Block Ruby Gas Field



Offshore production facility in the Ruby Gas Field

In September 2010, INPEX obtained a 15% interest in the Sebuku Block off the shore of South Makassar, Indonesia. Thereafter, work began to develop the Ruby Gas Field in the block, and production of natural gas followed in October 2013. The natural gas produced here is transported from offshore production facilities via undersea pipeline to onshore storage facilities that receive products from the Offshore Mahakam Block. The natural gas is then mainly sent via inland pipeline to a fertilizer plant in East Kalimantan.



Contract area (block)	Project status (production on the basis of all fields and average rate of FY2016)	Venture company (established)	Interest owned (*Operator)
Sebuku	In production (Natural gas: 77 MMcf/d)	INPEX South Makassar, Ltd. (May 17, 2010)	INPEX South Makassar 15% PEARL OIL (Sebuku) Ltd.* 70% TOTAL 15%

#### 3 Abadi LNG Project

INPEX acquired a 100% interest in the Masela Block in November 1998 through an open bid conducted by the Indonesian government and subsequently went about exploratory activities as the operator, discovering the Abadi Gas Field through the first exploratory well drilled in 2000. The Company subsequently drilled two appraisal wells in 2002 and four in 2007-2008, all of which confirmed the presence of gas and condensate reservoirs.

In December 2010, Indonesian authorities approved the initial plan of development (POD-1) deploying a floating LNG (FLNG) plant with an annual processing capacity of 2.5 million tons, and from November 2012 to November 2014, INPEX undertook SURF (subsea, umbilical, riser and flowline) and FLNG FEED work.

INPEX drilled three more appraisal wells in 2013 and 2014 with the aim of expanding the volume of recoverable reserves, confirming a greater volume of natural gas reserves that were certified by the Indonesian authorities. Having revised its concept

selection studies to factor in this increased volume of reserves, INPEX decided it would be optimal to center development on a large-scale FLNG. The Company submitted a revised plan for the development based on an FLNG plant with an annual LNG processing capacity of 7.5 million tons to the Indonesian authorities in September 2015. In April 2016, however, the Company received a notification from the Indonesian authorities instructing it to re-propose a plan of development based on onshore LNG. The Company's policy of aiming for the early start-up of development and implementing the project in the most economically and technically rational way in alignment with the policies of the Indonesian government remains unchanged. In accordance with this policy, based on the constructive discussions with the Indonesian government regarding the development of the project based on an onshore LNG development scheme, INPEX has begun preparations for the commencement of Pre-FEED work.

Contract area (block)	Project status	Venture company (established)	Interest owned (*Operator)
Masela	Preparation for development	INPEX Masela, Ltd. (December 2, 1998)	INPEX Masela* 65% Shell 35%





Drillship for the Abadi LNG Project

## The Ichthys LNG Project and Surrounding Blocks

#### Status of Development Work

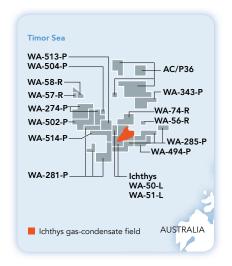
Regarding the status of offshore facilities, construction work has finished on a floating central processing facility (CPF) and a floating production, storage and offloading (FPSO) facility. A naming ceremony for the facilities was held in the South Korean shipyards in February 2017, naming the CPF "Ichthys Explorer" and the FPSO "Ichthys Venturer." At the end of April 2017, the CPF sailed away from the South Korean shipyard following the completion of commissioning and preparation work, arrived at the Ichthys gas-condensate field at the end of May, and mooring was completed in late June. Plans call for the FPSO to set sail for the project site soon. In other offshore-related work, installation work was finished

in January 2017 on almost all of the subsea infrastructure and equipment needed to produce natural gas and condensate. The drilling of production wells is ongoing. With regard to the onshore LNG plant, INPEX has basically finished construction work on the main facilities and is currently carrying out connection work for the delivered and installed modules, as well as is making steady progress with commissioning. Looking ahead at the production schedule, installation and commissioning work will be undertaken and production from the wellhead will commence. Thereafter, the Ichthys LNG Project will, during the current fiscal year (ending March 31, 2018), begin production of condensate, liquefied natural gas (LNG) and liquefied petroleum gas (LPG) in sequence and then ship these products.

#### **Surrounding Exploration Blocks**

INPEX holds 14 exploration blocks in the vicinity of the Ichthys gas-condensate field and is currently engaging in exploration activities. Of this total, exploration work has led to the discovery of gas at eight blocks (WA-56-R, WA-57-R, WA-58-R, WA-74-R, WA-281-P, WA-274-P, WA-513-P, and WA-514-P). Evaluation work is now being performed on these discoveries. In the event that substantial amounts of crude oil and natural gas are confirmed as a result of this exploration and evaluation activity, synergies and other effects with the Ichthys LNG Project are expected to further expand business.

Contract area (block)	Project status	<b>Venture company</b> (established)	Interest owned (*Operator)
WA-50-L	Under development	INPEX Ichthys Pty. Ltd.	INPEX Ichthys Pty* 62.245%
WA-51-L	Under development	(April 5, 2011)	TOTAL 30.000% CPC 2.625% Tokyo Gas 1.575% Osaka Gas 1.200%
WA-285-P	Under exploration		Kansai Electric Power 1.200% JERA 0.735% Toho Gas 0.420%
WA-343-P			INPEX Browse E&P Pty* 60% TOTAL 40%
WA-56-R	Under exploration (Oil/gas reservoirs confirmed)		INPEX Browse E&P Pty* 60% TOTAL 40%
AC/P36	Under exploration	INPEX Browse E&P Pty. Ltd. (October 21, 2013)	INPEX Browse E&P Pty* 50% Murphy 50%
WA-494-P			INPEX Browse E&P Pty* 100%
WA-274-P			INPEX Browse E&P Pty 20% Santos* 30%
WA-58-R			
WA-74-R			Chevron 50%
WA-281-P	Under exploration (Oil/gas reservoirs confirmed)	(	INPEX Browse E&P Pty 20.0000% Santos* 47.8306% Chevron 24.8300% Beach 7.3394%
WA-57-R			INPEX Browse E&P Pty 20% Santos* 30% Chevron 50%
WA-502-P	Under evaluation		INPEX Browse E&P Pty 40% Santos* 60%
WA-504-P	Under exploration		INPEX Browse E&P Pty 40% Santos* 60%
WA-513-P	Under exploration		INPEX Browse E&P Pty 40% Santos* 60%
WA-514-P	(Oil/gas reservoirs confirmed)		INPEX Browse E&P Pty 40% Santos* 60%





Naming ceremony of FPSO Ichthys Venturer



 ${\sf CPF\ lchthys\ Explorer\ after\ arriving\ at\ lchthys\ gas-condensate\ field}$ 

#### 5 Prelude FLNG Project (WA-44-L)

In June 2012, we acquired from Shell a 17.5% interest in the Prelude FLNG Project, which is located in WA-44-L, approximately 475 km north-northeast of Broome, off the coast of Western Australia. A production, liquefaction and shipment project using FLNG, the

Prelude FLNG Project consists of the Prelude and Concerto gas fields and will approximately produce 3.6 million tons per year of LNG, 400 thousand tons per year of LPG at peak and approximately 36 thousand barrels per day of condensate at peak.

Shell (the operator) made the FID on the Prelude FLNG Project in May 2011. Development of the Prelude FLNG Project is currently under way. The Project is expected to begin contributing to the campany's financial performance, including its cash flow, in 2018.





The Prelude FLNG sail away

Con	ntract area (block)	Project status	Venture company (established)	Interest owned (*Operator)
WA	\-44-L	Under development		INPEX Oil & Gas Australia 17.5% Shell* 67.5% KOGAS 10.0% OPIC 5.0%

## 6 Tangguh LNG Project (Berau Block)

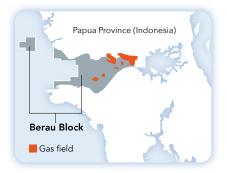
MI Berau B.V., jointly established by INPEX and Mitsubishi Corporation, acquired an interest in the Berau Block in October 2001. In October 2007, MI Berau Japan Ltd., a joint venture with Mitsubishi Corporation, acquired a stake in KG Berau Petroleum Ltd., effectively increasing the Company's interest to around 7.79% in the Tangguh

LNG Project.

In March 2005, the Indonesian Government approved an extension of the production sharing contract (PSC) and project development plans for the Tangguh LNG Project through 2035. Development work commenced thereafter, and the first shipments of LNG began in July 2009.

The FID for expanding the Tangguh LNG Project was announced in July 2016. The Tangguh Expansion Project will add a third LNG process train with 3.8 million tons per annum (mtpa) of production capacity to the existing two trains with 7.6 mtpa of production capacity. Plans call for production to commence in 2020.





Shipping facility

Contract area (block)	Project status (production on the basis of all fields and average rate of FY2016)	Venture company (established)	Interest owned (*Operator)
Berau	/ Canada asta / Malahala	MI Berau B.V. (August 14, 2001)	Ml Berau 22.856% BP* 48.000% Nippon Oil Exploration (Berau) 17.144% KG Berau 12.000%
Tangguh Unit	In production ( Crude oil: 6 Mbbld Natural gas: 1,023 MMcf/d )		MI Berau 16.30% *BP 40.22% CNOOC 13.90% Nippon Oil Exploration (Berau) 12.23% KG Berau 8.56% LNG Japan 7.35% KG Wiriagar 1.44%

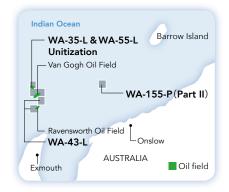
## Van Gogh Oil Field, Ravensworth Oil Field and Others



Van Gogh FPSO vessel

Contract area (block)	Project status (production on the basis of all fields and average rate of FY2016)	Venture company (established)	Interest owned (*Operator)
WA-35-L (Van Gogh Oil Field)	an Gogh Oil Field)		INPEX Alpha 47.499% Quadrant* 52.501%
WA-35-L & WA-55-L Unitization area	In production (Crude oil: 10 Mbbld)	INPEX Alpha, Ltd. (February 17, 1989)	INPEX Alpha 47.499% Quadrant* 52.501%
WA-43-L (Ravensworth Oil Field)	In production (Crude oil: 6 Mbbld)		INPEX Alpha 28.500% BHPBP* 39.999% Quadrant 31.501%
WA-155-P (PartII)	Under exploration		INPEX Alpha 18.670% Quadrant* 40.665% OMV 27.110% JX 7.000% Tap 6.555%

INPEX acquired interests in offshore Western Australia WA-155-P (Part I) in July 1999, after which the Van Gogh and Ravensworth oil fields were discovered. The Australian Government granted production licenses for the above oil fields as the WA-35-L and WA-43-L blocks, at which oil production commenced in February and August of 2010, respectively. The development of the Coniston Oil Field, which saddles WA-35-L and WA-55-L, was started in December 2011, and crude oil production commenced in May 2015.



# 8 Bayu-Undan Project (JPDA03-12)

In April 1993, INPEX acquired an interest in JPDA03-12, a contract area located in the Timor Sea JPDA, which is jointly managed by Australia and East Timor. Exploration within this contract area resulted in the discovery

INDONESIA

Abadi Gas Field

Timor Sea
Joint Petroleum Development Area

Darwin Gas Pipeline

Bayu-Undan
Gas-Condensate Field

AUSTRALIA

Gas field

Oil field

of oil and gas fields. Of these, studies revealed that the Undan structure and the Bayu structure in the adjacent JPDA03-13 contract area were a single structure. The interest holders unitized both contract areas in 1999, allowing

joint development of the Bayu-Undan Gas-Condensate Field to proceed. The commercial production and shipment of condensate and LPG started in 2004 and LNG in February 2006.



Bayu-Undan offshore facility

Contract area (block)	Project status (production on the basis of all fields and average rate of FY2016)	Venture company (established)	Interest owned (*Operator)
JPDA03-12	/ Crude oil: 20 Mbbld \	INPEX Sahul, Ltd. (March 30, 1993)	INPEX Sahul 19.2458049% ConocoPhillips* 61.3114766% Santos 19.4427185%
Bayu-Undan Unit	In production (Natural gas: 561 MMcf/d LPG: 13 Mbbld		INPEX Sahul 11.378120% ConocoPhillips* 56.943372% Eni 10.985973% Santos 11.494535% Tokyo Timor Sea Resources (JERA/Tokyo Gas) 9.198000%



# Eurasia

In the Eurasia region, INPEX has large-scale crude oil projects in Azerbaijan (ACG) and Kazakhstan (Kashagan). Having acquired exploration projects in the Far East region of Russia, the Company has partially transitioned to the development and production stages.





RUSSIA



## Offshore North Caspian Sea Contract Area (Kashagan Oil Field and Others)

In September 1998, INPEX acquired an interest in the Offshore North Caspian Sea Contract Area in Kazakhstan's territorial waters. The Offshore North Caspian Sea Contract Area consists of two blocks: the East Block is about 4,300 km² and the West Block is about 1,275 km² in area (for a total of about 5,575 km²). The Kashagan Oil Field, which is in the East Block, is located in the Caspian Sea at depths of 3-5 m and is approximately 75 km southeast of Atyrau, Kazakhstan.

Since the first exploratory well was drilled in September 1999, the Kashagan Oil Field was confirmed in 2000 and commercial discoveries were announced in 2002. After development work, the Kashagan Oil Field began

producing crude oil in September 2013. Production was temporarily halted due to a pipeline gas leak, but production resumed shortly thereafter. Shipments of crude oil commenced in October 2016. Besides the Kashagan field, the presence of hydrocarbon reserves

was also confirmed in the surrounding Kalamkas, Aktote and Kairan structures. Appraisal of these three structures is continuing in parallel with the development of the main Kashagan field with a view to expanding the total production of the contract area.



Offshore facility

Contract area (block)	<b>Project status</b> (production on the basis of all fields and average rate of FY2016)	Venture company (established)	Interest owned
Offshore	In production (Crude oil: 55 MbbId	INPEX North Caspian Sea, Ltd.	INPEX North Caspian Sea 7.56% Eni 16.81% ExxonMobil 16.81% KMG 16.87% Shell 16.81% TOTAL 16.81% CNPC 8.33%
North Caspian Sea	Natural gas: 96 MMcf/d)	(August 6, 1998)	

# **2** ACG Oil Fields



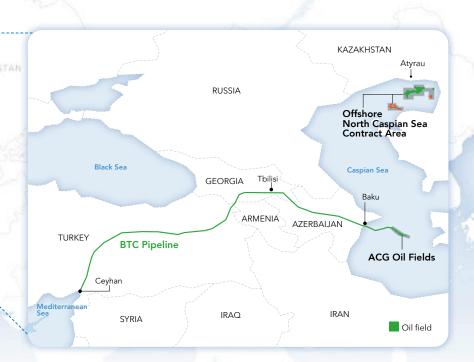
Offshore production facilities

INPEX acquired an interest in the Azeri-Chirag-Gunashli (ACG) Oil Fields in a region of the south Caspian Sea in Azerbaijan in April 2003. At the ACG

Oil Fields, oil is being produced at the Chirag, the Central Azeri, the West Azeri, the East Azeri, the Deepwater Gunashli and the West Chirag.

Contract area (block)	Project status (production on the basis of all fields and average rate of FY2016)	Venture company (established)	Interest owned (*Operator)
ACG	In production (Crude oil: 609 Mbbld)	INPEX Southwest Caspian Sea, Ltd. (January 29, 1999)	INPEX Southwest Caspian Sea 10.96% BP* 35.78% Chevron 11.27% SOCAR 11.65% Statoil 8.56% ExxonMobil 8.00% TPAO 6.75% Itochu 4.30% ONGC 2.77%







DIICCIA

# 3 BTC Pipeline Project

The 1,770-km BTC pipeline stretches from Baku in Azerbaijan on the coast of the Caspian Sea to Ceyhan in Turkey. Full-scale operation commenced in

June 2006. Total transportation capacity stands at 1.2 million barrels per day, mainly for crude oil produced in the ACG Oil Fields in Azerbaijan.

Contract area (block) Venture company (established)		Interest owned (*Operator)	
BTC Pipeline	INPEX BTC Pipeline, Ltd. (October 16, 2002)	INPEX BTC Pipeline 2.50% BP* 30.10% Azerbaijan (BTC) Limited 25.00% Chevron 8.90% Statoil 8.71% TPAO 6.53% Eni 5.00% TOTAL 5.00% Itochu 3.40% CIECO 2.50% ONGC 2.36%	



Shipping terminal

# Middle East & Africa

In the Middle East, the ADMA Block offshore Abu Dhabi in the United Arab Emirates and the onshore ADCO Block, in which INPEX acquired a participating interest from April 2015, are contributing substantially to the Company's oil production capacity. In Africa, oil production is ongoing at various locations including the Offshore Angola Block 14.



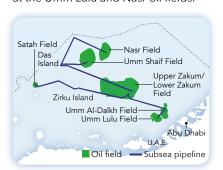
#### ADMA Block



Zirku Island

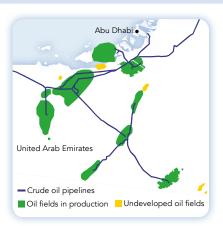
In May 2004, INPEX made Japan Oil Development Co., Ltd. (JODCO), a wholly owned subsidiary by acquiring all of the JODCO shares held by Japan National Oil Corporation (at that time) through a share exchange. JODCO owns an interest in the ADMA Block located offshore Abu Dhabi in the United Arab Emirates. Oil production currently spans seven fields in the block.

In addition, a number of development projects are under way to maintain and expand oil output, such as redevelopment of the Upper Zakum Oil Field involving the use of artificial islands, as well as Phase 2 development and other work, with the aim of engaging in overall production at the Umm Lulu and Nasr oil fields.



Contract area (block)	Project status	Venture company (established)	Interest owned
Umm Shaif Field, Lower Zakum Field, Umm Lulu Field, Nasr Field		Japan Oil Development Co., Ltd.	JODCO 12.00% ADNOC 60.00% BP 14.67% TOTAL 13.33%
Upper Zakum Field	In production	(JODCO) (February 22, 1973)	JODCO 12.00% ADNOC 60.00% ExxonMobil 28.00%
Umm Al-Dalkh Field			JODCO 12.00% ADNOC 88.00%
Satah Field			JODCO 40.00% ADNOC 60.00%

#### 2 ADCO Onshore Concession



Through its wholly owned subsidiary, Japan Oil Development Co., Ltd. (JODCO), INPEX acquired a 5% interest in the ADCO Onshore Concession in Abu Dhabi in April 2015 following its participation bid. The Company also concluded a 40-year agreement with the Supreme Petroleum Council of the Emirate of Abu Dhabi and Abu Dhabi National Oil Company (ADNOC)

that came into effect on January 1, 2015. The concession is one of the world's largest deposits of oil and is made up of 15 principal onshore oil fields in Abu Dhabi of which 11 are currently in production and four remain undeveloped. Steps are being taken to pursue development work with the aim of increasing oil production capacity to 1.8 million barrels per day.

Contract area (block)	Project status	Venture company (established)	Interest owned
ADCO	In production	JODCO Onshore Limited (April 15, 2015)	JODCO 5% ADNOC 60% TOTAL 10% BP 10% CNPC 8% CEFC 4 % GS 3%





Concession agreement signing ceremony held in April 2015

Onshore pipeline

# 3 Angola Block 14



Production facility

Participating through a joint venture company with TOTAL S.A., INPEX acquired a 9.99% indirect interest in the oil-producing Angola Block 14 in February 2013. Located approximately 100 km offshore from Cabinda, Angola, Block 14 includes discovered and undeveloped fields. Crude oil is currently being produced from four development areas, and steps are being taken to pursue exploration potential within the block.

Angola Block 14	CONGO Atlantic Ocean The State of Cabinda	Democratic Republic of Congo
		ANGOLA

Contract area (block)	Project status (production on the basis of all fields and average rate of FY2016)	Venture company (established)	Interest owned (*Operator)
Offshore Angola Block 14	In production (Crude oil: 104 Mbbld)		Angola Block 14 B.V. 20.00% (including 9.99% of INPEX's interest) Chevron* 31.00% Sonangol 20.00% Eni 20.00% Galp 9.00%

# **Americas**

In Canada, INPEX participates in shale gas projects and others. The Company is also engaged in projects including a major deepwater exploration project in the U.S. Gulf of Mexico (Lucius) and offshore oil projects in Brazil.



## Shale Gas Project in Canada

In August 2012, INPEX acquired a 40% interest in the shale gas projects in the Horn River, Cordova and Liard basins in British Columbia, Canada, from Nexen Inc.

Some production is under way, and INPEX is examining whether to perform more development work and implement studies to consider commercialization to export shale gas as LNG from the Canadian west coast.



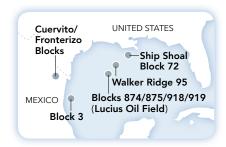
Contract area (block)	Project status	Venture company (established)	Interest owned (*Operator)
Horn River, Cordova and Liard areas	In production (partly)	INPEX Gas British Columbia Ltd. (November 28, 2011)	INPEX Gas British Columbia 40% Nexen* 60%

#### 2 Gulf of Mexico Projects and Others

In August 2012, INPEX joined the deepwater Lucius Oil Field in the Gulf of Mexico and acquired a 7.2% interest from U.S.-based Anadarko Petroleum Corporation. Oil and gas production at the Lucius Oil Field has proceeded steadily since its commencement in January 2015.

In December 2016, INPEX, Chevron

Energía de Mexico, S de R.L. de C.V. (Chevron) and Pemex Exploración y Producción (Pemex) made a successful joint bid for the first round of deepwater exploration of Block 3 located in the Perdido Fold Belt in the Mexican sector of the northern Gulf of Mexico. INPEX holds a 33.3333% participating interest, and is conducting exploration activities.



Contract area (block)	Project status (production on the basis of all fields and average rate of FY2016)	Venture company (established)	Interest owned (*Operator)
Blocks 874/875/918/919 (Lucius Oil Field)	In production (Crude oil: 73 Mbbld Natural gas: 75 MMcf/d)	Teikoku Oil (North America) Co., Ltd. (May 30, 2003)	Teikoku Oil (North America) 7.8% Anadarko* 23.8% Other 68.4%
Mexican sector of the northern Gulf of Mexico Block 3	Under exploration	INPEX E&P Mexico S.A. de C.V. (January 25, 2017)	INPEX E&P Mexico 33.3333% Chevron* 33.3334% Pemex 33.3333%

## 3 Brazil (Frade Project and Others)

A joint venture established by INPEX and Sojitz Corporation, Frade Japão Petróleo Limitada (FJPL) acquired an interest in the Frade Project in Brazil's offshore Northern Campos basin in July 1999. Commercial production started in June 2009. Crude oil production was temporarily suspended in March 2012 due to the presence of a small oil sheen but safely resumed at the end of April 2013.

Having also acquired a 15% inter-

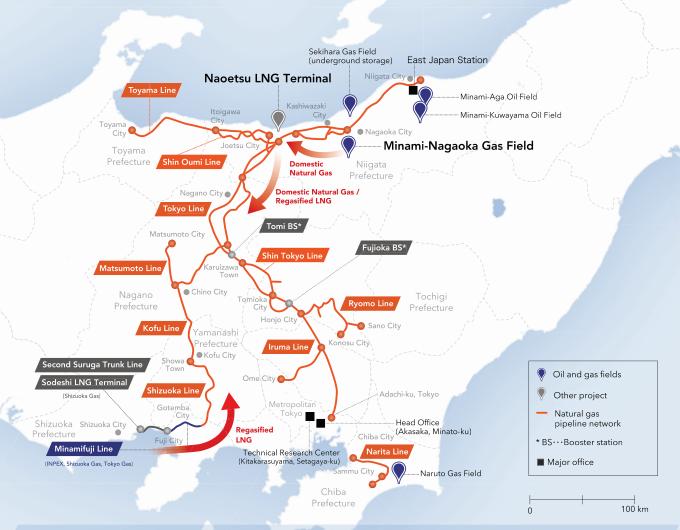
est in the BM-ES-23 concession in the Espírito Santo Basin off the southeast coast of Brazil in February 2010, the Company is advancing exploration activities together with other companies, including the operator, Petrobras. The presence of quality oil and gas deposits has been confirmed at the same concession as a result of exploratory and appraisal well drilling. Evaluation work continues.



Contract	Project status		Interest owned
area (block)	(production on the basis of all fields and average rate of FY2016)		(*Operator)
Frade	In production (Crude oil: 22 Mbbld	Frade Japão Petróleo Limitada	Frade Japão Petróleo 18.2609%
Project	Natural gas: 2 MMcf/d)	(FJPL) (July 5, 1999)	Chevron* 51.7391% Petrobras 30.0000%
BM-ES-23	Under exploration (Oil/gas reservoirs confirmed)	INPEX Petróleo Santos Ltda. (January 19, 2007)	INPEX Petróleo Santos 15% Petrobras* 65% PTTEP 20%

# Japan

INPEX is active in the Minami-Nagaoka Gas Field in Niigata Prefecture, one of the largest of its kind in Japan, and participates in other oil and natural gas projects. In addition, the Company operates a domestic trunk pipeline network. INPEX also commenced operation the Naoetsu LNG Terminal in December 2013.



#### Natural Gas Business in Japan

In the natural gas business in Japan, the natural gas produced from the Company-held Minami-Nagaoka Gas Field (Niigata Prefecture), as well as the LNG and other products received at the Naoetsu LNG Terminal (Niigata Prefecture), which commenced operations in December 2013, is transported through a trunk pipeline network of approximately 1,500 km stretching across the Kanto, Koshinetsu and Hokuriku regions,

and sold to customers including city gas companies and large-scale plants along the aforementioned network.

INPEX has experienced steady growth in sales of natural gas volume due to efforts to expand its supply infrastructure, as well as the highly environmentally friendly attributes of natural gas. Natural gas is expected to be used for a wide variety of applications, not only as a fuel for thermal energy

but also as a fuel for onsite power generation and co-generation, as well as a fuel for natural gas electric power plants and a raw material for chemical products. INPEX is targeting annual sales of 2.5 billion m³ by the early 2020s and as much as 3.0 billion m³ over the long term. In October 2016, the Company marked the full-scale opening of the Toyama Line, a natural gas trunk pipeline stretching from Itoigawa City,

Yabase Oil Field

Akita Prefecture

Niigata Prefecture, to Toyama City, Toyama Prefecture, that had been under construction since 2012.

Alongside the full deregulation of the electric power market since April 2016, INPEX has responded to growing demand from gas-fired electric power plants and is engaged in the electric power wholesale business with partner Chubu Electric Power Co., Inc., for the supply of electric power to city gas

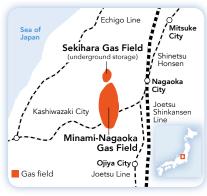
Natural Gas Sales Volume in Japan (100 million Nm³/year) Note: 41.86MJ per 1m³

17.2 17.6 17.5 18.0 17.9 17.5

2011/3 2012/3 2013/3 2014/3 2015/3 2016/3 2017/3

companies. Moreover, in light of the full deregulation of the gas retail market from April 2017, INPEX undertook a reorganization of relevant areas with the objective of enhancing marketing capabilities and advancing business strategies suited for the entire domestic gas business, in order to precisely address changes in the business environment, including changes in the competitive landscape in the domestic gas market, as well as the creation and strengthening of demand as companies shift to natural gas in the Company's gas wholesale service areas.

At the Naruto Gas Field in Chiba Prefecture, natural gas is being produced from water-soluble gas fields. In addition, after extracting the natural gas from underground water (brine water), the brine water is used to produce iodine, which is exported to Europe, the United States and elsewhere.





Natural gas pipeline crossing a river (Shibumi River, Niigata Prefecture)

#### Renewable Energy and Other Initiatives

#### **Power Generation Business in Japan**

In March 2013, the Company began generating electricity at INPEX Mega Solar Joetsu, a solar power plant with a maximum output of 2 MW, located on the former site of an oil refinery that it shut down in Joetsu City, Niigata Prefecture. In 2014, through cooperation between Group companies, a new 2MW solar power plant was built next to the original site. Power generation began in July 2015. It is estimated that these two solar power plants will generate around 5,330,000 kWh annually, enough electricity to power 1,600 homes.

In addition, INPEX constructed a high-efficiency gas turbine combined cycle thermal power plant with an output of about 55,000 kW next to its Koshijihara plant in Niigata Prefecture and has been supplying electricity on a wholesale basis to power producers and suppliers (now retail electricity providers) since May 2007.

#### **Geothermal Development**

Geothermal power is the generation of electricity with turbines powered by steam produced from the thermal energy of magma underground.

With a view toward geothermal power generation, INPEX and Idemitsu Kosan Co., Ltd., have jointly conducted geothermal surveys in the Amemasudake region of Hokkaido Prefecture and the Oyasu region of Akita Prefecture since 2011. Joined by Mitsui Oil Exploration Co., Ltd., in 2012, the companies undertook geothermal resource surveys by drilling a total of five survey wells in the Amemasudake region and six more survey wells in the Oyasu region from 2013 to 2016.

In fiscal 2017, we plan to continue conducting geothermal resource surveys by drilling at one of the Amemasudake survey wells and at one of the Oyasu wells.

Also a member of the geothermal resource survey group in Fukushima Prefecture, INPEX has been conducting land surveys in areas surrounding Mt. Bandaisan since September 2013. Having conducted geophysical surveys from 2014 to 2015, two survey wells were drilled in the Bandai region in 2016. We plan to continue evaluation work based on the results of the drillings.

Moreover, INPEX took steps to participate in the Sarulla Geothermal Independent Power Producer (IPP) Project in Indonesia from June 2015. The project involves constructing a world-class geothermal power plant in the Sarulla Geothermal Field located in the island province of North Sumatra, and plans call for providing generated power to Indonesia's government-owned electricity company over a period of 30 years. Construction of the power generation plant began in 2014. In March 2017, commercial operations were launched with 110 MW of electricity being generated by the first unit. We are proceeding with construction and other work on the plant's second and third units with the aim of commencing commercial operations in sequence, and expect the amount of power generated to be increased to 330 MW in stages.



Sarulla Geothermal IPP Project