

INPEX CORPORATION: The First 10 Years

Merger, Challenges and the Future

INPEX

Merger, Challenges and the Future

We had our dreams,
of managing large-scale LNG projects on our own,
of maintaining the ties in oil-producing countries and concessions that our predecessors developed through their untiring efforts,
of dramatically expanding our gas business.
To make these dreams come true, we chose to merge and integrate our businesses.
Before we realized, our thoughts united as we joined forces to tackle major challenges.
Joining the groundswell, people gathered from around the world under the INPEX flag,
achieving great things over these past 10 years.
Our future vision is for INPEX to become a global energy company.



The road to INPEX's birth



A note from the Chairman

Toshiaki Kitamura
Representative Director & Chairman



October 1, 2018 marked the 10th anniversary of the foundation of INPEX CORPORATION through the merger of the former INPEX, Teikoku Oil and INPEX Holdings. I would like to extend my sincere gratitude to all our customers, shareholders and business partners as well as our directors and employees, both past and present, and their families for their support and guidance, which have allowed us to reach this important milestone.

The merger also allowed INPEX CORPORATION to be enriched by the addition of numerous employees with diverse backgrounds from organizations like Japan Oil Development Co., Ltd. (JODCO) and the former Japan National Oil Corporation (JNOC), in addition to the three companies mentioned earlier, turning INPEX CORPORATION into the powerhouse it is today.

The last decade has been a period of turmoil not just for us but for the entire oil and gas industry. In 2008, the year of our foundation, we witnessed a global economic recession precipitated by the collapse of Lehman Brothers. 2014 saw the beginning of a significant downturn in crude oil prices brought on by the US shale revolution. But even during these challenging times, INPEX employees collectively strove to improve efficiencies across the company, which resulted in the strengthening of our business foundations and robust resilience to oil price fluctuations.

In terms of our projects, the Ichthys LNG Project in Australia commenced production in 2018. The knowledge and experience we have gained through Ichthys as Japan's first ever operator of a large-scale LNG project are invaluable assets that we will draw upon in the planning and execution of the Abadi LNG Project in Indonesia as well as other future projects, and that will contribute to our long-term growth as a company.

Another significant achievement was the acquisition and extension of oil field concessions offshore Abu Dhabi in the United Arab Emirates. Over many years, we had been engaged in negotiations with the government and authorities of Abu Dhabi. These negotiations came to fruition as we successfully secured the acquisition and extension of major oil field concessions both onshore and offshore between 2014 and 2018. Furthermore, our solutions to technical issues concerning crude oil development and production won the recognition of the authorities, leading to our appointment as Asset Leader of the Lower Zakum Oil Field, a giant offshore oil field. As Asset Leader, we will lead efforts to pursue development activities and further enhance the oil field's production capacity.

Meanwhile, in Japan, where we continue to produce stably, we have recently fortified our business management capabilities by enhancing our natural gas supply infrastructure including facilities such as the Naoetsu LNG Terminal and the Toyama Line extension of our natural gas trunk pipeline network and significantly expanding our gas supply volume.

I believe that through such proactive initiatives, INPEX has successfully laid the foundations to realize the business targets laid out in VISION 2040 formulated in May 2018.

I look forward to your continued support.

April 2019

Greetings from the CEO

Takayuki Ueda
Representative Director, President & CEO



On the occasion of the 10th anniversary of the foundation of INPEX CORPORATION through the merger of the former INPEX, Teikoku Oil and INPEX Holdings, I would like to sincerely thank all our stakeholders for their unwavering support and understanding of our challenging endeavors. I would also like to thank all our current and former employees for their hard work and efforts in laying the foundations of our company.

Over the last decade, I believe we have navigated a tumultuous period punctuated by volatile oil price fluctuations in a remarkable manner, leveraging the benefits and advantages of the merger. The publication of this archive, which contains corporate highlights and key events from the last 10 years, is intended to remind us of our beginnings so that we may always be mindful of our roots.

This 10th anniversary and the commencement of production of the Ichthys LNG Project have set a new stage in the journey of our company.

The future is becoming increasingly difficult to predict. However, we will continue to remain true to our roots while striving to grow further as one unified company in a new era without becoming complacent about our past achievements, in the hope that doing so will bring us progressively closer to realizing our mission of contributing to the creation of a brighter future for society through the stable supply of energy.

This publication provides a comprehensive outlook of our history and our business strategies, and will hopefully serve as a medium through which our stakeholders may deepen their understanding of our causes.

I also hope that the publication will provide all directors and employees with a source of pride and motivation to succeed over the coming decades. I sincerely look forward to your continued support.

April 2019

Contents

Frontispiece

The road to INPEX's birth

A note from the Chairman Toshiaki Kitamura Representative Director & Chairman

Greetings from the CEO Takayuki Ueda Representative Director, President & CEO

Part I History of company's predecessors and moves toward company integration2

Profound changes in the oil exploration project landscape in Japan and overseas
Two sets of hopes
Former INPEX and Teikoku Oil make stealthy moves toward business integration
Integration proceeds under utmost secrecy
Fusion of two companies establishes INPEX Holdings, Inc.
Full integration begins a new journey
A look back on our business integration 7
Naoki Kuroda, Senior Corporate Advisor
10 years from the merger 7
Masatoshi Sugioka, Senior Corporate Advisor

Part II First 10 years after merger

Preface 8

◆ **2008-09** 10
Frade Field offshore Campos, Brazil commences oil production
Tangguh LNG Project commences LNG shipment
INPEX discontinues oil production at Griffin oil fields offshore Western Australia

◆ **2010** 13
INPEX commences oil production at multiple oil fields offshore Western Australia
INPEX withdraws from Azadegan development project
INPEX decommissions offshore Iwaki platform
INPEX formulates Corporate HSE Medium-term Plan

◆ **2011** 17
INPEX joins Great East Japan Earthquake relief and recovery efforts

INPEX launches joint study in preparation for first commercial geothermal power generation project
Ichthys LNG Project finalizes sales agreements covering all LNG to be produced

◆ **2012** 20
Ichthys LNG Project announces financial investment decision (FID)
INPEX acquires stake in Prelude FLNG Project
INPEX acquires stakes in deepwater exploration blocks offshore Sabah, Malaysia
INPEX establishes MEDIUM- TO LONG-TERM VISION

◆ **2013** 23
INPEX completes construction of Naoetsu LNG Terminal
INPEX commences Mega Solar Joetsu photovoltaic power generation in Joetsu, Niigata
Construction begins on LNG tankers to service Ichthys LNG Project

◆ **2014** 25
INPEX awarded extension on Upper Zakum Oil Field concession offshore Abu Dhabi
INPEX joins Japanese government-sanctioned methane hydrate survey
INPEX discovers new gas and condensate reservoirs offshore southern Vietnam

◆ **2015** 27
Lucius Oil Field in US Gulf of Mexico commences oil production
INPEX awarded ADCO Onshore Concession in Abu Dhabi
INPEX discovers new oil reservoir at Minami-Kuwayama Oil Field, Japan

◆ **2016** 29
Kashagan Oil Field in Kazakh sector of North Caspian Sea commences full-scale production
INPEX completes Toyama Line (natural gas trunk pipeline extension)
INPEX drills Shimane-Yamaguchi Oki exploratory well commissioned by Japanese government

◆ **2017** 31
INPEX discovers oil reservoir at Exploration Block 10 in Iraq
INPEX commences compressor plant operations at Koshijihara Plant, Minami-Nagaoka Gas Field, Japan
Production sharing agreement for ACG oil fields in Caspian Sea, Azerbaijan, extended by 25 years
Sarulla Geothermal Independent Power Producer Project commences commercial operations

◆ **2018** 34
INPEX acquires exploration licenses in Mexico and Norway
Abadi LNG Project enters Pre-FEED
INPEX appointed asset leader of Lower Zakum Oil Field offshore Abu Dhabi
Ichthys LNG Project celebrates operational commencement

Feature 1

INPEX, bringing forth the bounty of Ichthys 38

Discovery of the Ichthys Gas-condensate Field
Wanting to develop on its own
But the road to development was not easy
Gaining support and beginning the journey
FEED work includes series of thorough investigations
Approvals acquired for FID
Capital increase and project financing
Despite an adverse situation, INPEX secures buyers through ongoing serious dialogue
Arranging the largest ever construction insurance
FID obtained with everyone's cooperation
Design and construction work begins around the world
First ship sets sail on a new era for INPEX
Epilogue
Project Development Concept
Major construction and instruction works around the world

Feature 2

Bonds of trust with Abu Dhabi lead to a bright future..... 48

Technical strengths a decisive factor in the extension of the Upper Zakum concession
Participating interest in ADCO Onshore Concession acquired through successful bid
Abu Dhabi offshore oil field concessions acquired and extended amid tough competition
Social contribution activities help build trusting relationships

Feature 3

Aiming for greater heights with a more robust gas supply chain 53

Preparing for the strong demand of natural gas construction of an LNG receiving terminal
Construction of the cherished Naoetsu LNG Terminal
Completion of a major gas supply chain
Cultivating new demand:Construction of the Toyama Pipeline
New business opportunities due to gas deregulation

Part III

Future outlook

1. Interview with Takayuki Ueda, President & CEO 58

2. Vision 2040 and the Medium-term Business Plan 2018–2022 62

Supplementary materials

1. Overview, access & management 66

2. Organizational chart..... 67

3. Mission and CSR Principles and INPEX Values 68

4. List of senior management's terms 70

5. Segment overview 72

6. Trend of business results 74

Editor's note: 75

History of company's predecessors and moves toward company integration

Profound changes in the oil exploration project landscape in Japan and overseas

From the end of the 1990s, major petroleum companies (“Oil Majors”) outside Japan began a series of restructurings through mergers and acquisitions, leaving five key players in the industry—ExxonMobil, Chevron, BP, Royal Dutch Shell and Total. Exploration opportunities that could be developed at low cost became few and far between, and it became necessary for oil companies to boldly pursue and challenge frontier, ultra-deep and so-called unconventional development projects in order to secure new reserves. Taking on such projects required advanced technical capabilities as well as significant financial resources. Meanwhile, the economies of China and other emerging countries of Asia were growing rapidly, which created a continually expanding demand for oil and gas and the beginnings of international competition for resources.

In Japan, on the other hand, an accumulation of bad debts from overseas oil exploration projects resulted in upheaval within the Japan National Oil Corporation (JNOC) in June 1998. This caused a ripple effect that attracted criticism from all quarters, including the National Diet, about the public corporation’s management and accounting procedures, project assessment and management capabilities, and information disclosure, etc. In response, the JNOC Reconstruction Committee was established. Based on the committee’s report a number of companies involved in national projects, including Arctic Petroleum Corporation of Japan and Japan China Oil Development Corp., were dissolved. In August 2000, the Ministry of Economy, Trade and Industry Petroleum Council Basic Policy Subcommittee published an interim report promoting oil and gas development projects led by the private sector while proposing targeted political support to develop a necessary core industry group to take on this role. With moves to reform special corporations being a key part of administrative and financial reforms of the Koizumi Administration, which came to power in April 2001, cabinet decided in December 2001 to abolish JNOC. In July 2002, it established the Act Concerning the Abolishment of the Japan National Oil Act and the Metal Mining Agency of Japan Act, and the Act on the Japan Oil, Gas and Metals National Corporation, Independent Administrative Agency, which was established as the special purpose vehicle.

In the midst of this upheaval both inside and outside the oil exploration environment, the former INPEX and Teikoku Oil were continually searching for ways to enhance their corporate infrastructure and achieve sustainable growth.

Two sets of hopes

In joint projects with major petroleum companies and others, the former INPEX held good resources in oil and gas fields in East Kalimantan. It also participated in an international consortium that would go on to discover and develop the vast Kashagan Oil Field in Kazakhstan, and conducted other successful businesses to expand its area of operation. However, with little experience as an operator, its greatest wish was to move into this area to achieve even greater growth.

The company faced a turning point. With its untiring efforts finally bearing fruit, in its role as exploration operator in 2000, the company discovered the Ichthys Gas-Condensate Field in its WA-285-P concession off the coast of West Australia, and the Abadi Gas Field in its Masela concession in Indonesia. Full development of these two gas-condensate fields by itself was expected to guarantee great progress for INPEX. However, because the former INPEX was operating many different non-operator projects with limited personnel, and was involved in other projects in Abu Dhabi offshore oil fields, the Kashagan Oil Field and elsewhere, it found itself too short of human and financial resources to manage development and production of this new large project as an operator.

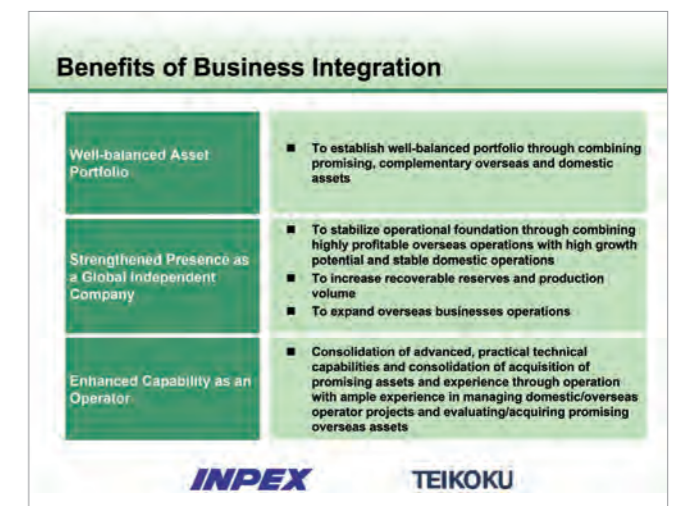
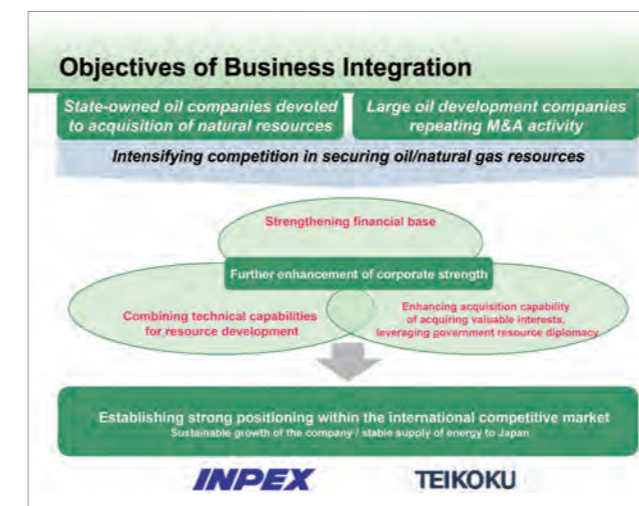
It was about this time that Teikoku Oil itself faced the urgent challenge of having to secure new oil and gas reserves as part of efforts to build up its gas business infrastructure domestically. Because there are only limited areas showing promise in Japan, the company was busy selecting core areas in Latin America and North Africa for growing its exploration and development business overseas. As resource competition heated

up though, it found itself limited in what it could achieve alone.

Former INPEX and Teikoku Oil make stealthy moves toward business integration

Since about 2004, when the former INPEX listed publicly, Kunihiko Matsuo, President and CEO of the former INPEX, and Akira Isono, President and CEO of Teikoku Oil, frequently chatted at monthly meetings of the Japan Petroleum Development Association. With Mr. Matsuo being appointed as Chairman of the Association in September 2003, and Mr. Isono being appointed as its Policy Promotion Committee Chairman in July 2004, the pair needed to discuss lots of matters in their positions directing the future of the industry, so it was only natural that they ended up in serious discussions of the future. As international resource competition started to intensify, they focused their attention on understanding how to overcome this problem and survive.

At this point, the topic of a business integration between the former INPEX and Teikoku Oil came up. As each one learned more about the condition and value of the other’s company, they started to feel that each company would complement the other. On the one hand, the former INPEX held good assets in many locations, from Asia and Oceania to the Middle East and Eurasia, and had acquired considerable knowledge and experience through working relationships with Oil Majors and the various national oil companies of oil-producing countries. And on the other hand, Teikoku Oil had experience working as an operator in Japan and overseas, and had engineers



with the know-how to put this into practice. Both companies were also financially sound, and together could create an ideal balanced portfolio without any duplication of operations across their core overseas regions.

They felt that, in addition to being able to act as operator for development and production of the Ichthys and Abadi fields, combining the strengths of these two companies would result in a powerful oil exploration and production company with the ability to meet international competition on an equal standing in terms of technologies and finances. Also, they anticipated that connecting LNG from Ichthys and other fields to the domestic pipeline network in Japan would realize a gas supply chain model capable of integrated management and operation, from gas production through to sales. They were confident that a marriage of the two companies would create synergies that were greater than the sum of the two.

At the same time, they were confident that joining forces would give the two companies the strength to achieve sustainable growth while also making a significant contribution to the important mission of creating a stable energy supply for Japan into the future.

Teikoku Oil also had the DNA to back Mr. Isono's decision. In the past, Teikoku Oil employed many engineers in the restoration and management of oil fields in Southeast Asia, with that DNA remaining part of the company even today. While it is mainly focused on domestic business these days, it has always maintained a strong desire to become involved some time in projects overseas.

In December 2004, Mr. Matsuo and Mr. Isono agreed to begin concrete negotiations toward a business integration.

Integration proceeds under utmost secrecy

With the agreement of both presidents, the two companies embarked on top secret preparations for concrete negotiations.

In January 2005, representatives from both companies secretly met outside the companies to start practical discussions. Preparations for the integration covered a lot of ground, but one of the more critical tasks was evaluating the business assets of each company. Reserving a room adjoining the president's office under another project name, the document collection work proceeded in a nighttime library after confirming employees had gone home for the day. The asset evaluations proceeded under the strictest care, with efforts including always changing the location for discussions between representatives

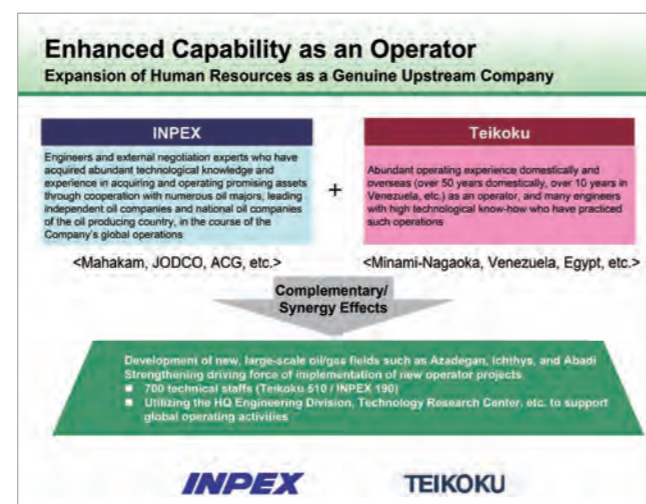
from each company and meetings with advisors, and utilizing the chat function of Skype for internal meetings.

In this way, preparations made steady progress until the end of October 2005 when, just prior to the business integration announcement, the companies began briefing shareholders and other stakeholders. As explained above, they felt the decision would be supported because it was clear that a union between the two companies would generate great strength, but a range of circumstances meant that they could not proceed easily. While senior management of both companies were explaining the integration to stakeholders, Extraordinary Meetings of the Board of Directors of both companies were held on November 5, 2005. The business integration was decided and announced on the same day.

However just after the announcement, Nippon Oil



Press conference discussing the business integration
From left: Then President Naoki Kuroda and Chairman Kunihiko Matsuo, INPEX CORPORATION
Then Chairman Akira Isono and President Masatoshi Sugioka, Teikoku Oil Co., Ltd.



Corporation (currently JXTG Nippon Oil & Energy Corporation), the largest shareholder of Teikoku Oil, expressed a cautious stance toward the integration and the former INPEX was dragged into discussions. The discussions among Nippon Oil Corporation, that was considering a business integration covering upstream, midstream and downstream processes, and Teikoku Oil, that was focused only on upstream business, and the former INPEX continued for more than a month. Finally, in mid-December, the issue was resolved by agreeing to consider collaborations on new oil exploration and production projects when it was considered to be beneficial, while at the same time respecting the autonomy of each company's management.

Fusion of two companies establishes INPEX Holdings, Inc.

Approval was obtained at the January 2006 Extraordinary General Meeting of Shareholders and Class Meeting of Shareholders, and then the two companies jointly established INPEX Holdings, Inc. in April 2006, with capital of ¥30 billion and Naoki Kuroda as President & CEO. Establishment of the holding company was just the first step in the process, with the second step being a merger of INPEX Holdings, the former INPEX and Teikoku Oil, and the final objective being a full integration.

"I want us all to work together to leverage the good parts of INPEX's and Teikoku Oil's company cultures, to fix the parts that need fixing, to change the parts that need changing, and to become a great group company with a new company culture. I want us to develop an attitude that enables positive communication between each other, that enables us to perform our duties through teamwork, and that enables us to move forward as a single outward-looking team," said Mr. Kuroda to employees of both companies.

To achieve a successful merger of the companies, not only was the unwavering resolve of senior management required, but the persistent effort of everyone from executives to frontline employees was also required. Above all, although the merger was a mutual collaboration to operate oil exploration projects, not only were the company histories, corporate cultures and employee makeups significantly different, but the former INPEX had just added many new employees, immediately prior to listing on the stock exchange, through transfers from Japan Oil Development Co., Ltd. when it was integrated and from JNOC. Entrusted by Mr. Matsuo and Mr. Isono with steering the merger, Mr. Kuroda identified the urgent challenges

within this environment of boosting morale in light of difficult targets, and cultivating a sense of unity within the company. While enforcing the basic policy of no staff reductions through retrenchments, he launched the company-wide efforts toward integration.

When INPEX Holdings was established, efforts were made to actively achieve mutual understanding and information sharing with both management and employees, at the same time as integrating systems and structures while INPEX Holdings employees took on duties from both the former INPEX and Teikoku Oil. In addition, steady efforts were made to convey the significance of the business integration, which was to become an internationally competitive growth company, to everyone, including employees in the field. This also included improving morale when faced with this objective, and cultivating uniform values and awareness. Care was also taken



Listing notice and commemorative shield for INPEX Holdings, Inc. Listed on the First Section of the Tokyo Stock Exchange on April 3, 2006



Mining-mura kara no Tabi-dachi (New Beginnings from a Mining Village) publication produced to promote mutual understanding between former INPEX, Teikoku Oil and Japan Oil Development

to obtain the understanding and cooperation of labor unions at each company.

Preparations required a range of practical work including designing structures and systems, building human resources systems, complying with the Japanese SOX Act, and developing internal control systems. In May 2006, the company's Mission and CSR Principles were established as policies for implementing the management vision after full integration, and as CSR initiatives for the whole Group. Then in June 2006, the Health, Safety and Environmental Policy was established in accordance with the Mission and CSR Principles as a basic philosophy. This basic policy was also passed on to the new company after the full integration.

With the addition of Teikoku Oil technical experts through the business integration, there are now 700 experts across the whole Group. Forming mixed teams, they have also started working on new exploration projects in Libya and Brazil.

In April 2007, INPEX Holdings accepted its first intake of new employees to lead the company into the future.

Full integration begins a new journey

In August 2006, Akasaka Biz Tower was selected to house the new post-integration entity. Then in April 2008, the former INPEX and Teikoku Oil entered into an agreement to merge with INPEX Holdings as of October 1, 2008. Approval for the merger was obtained at INPEX Holdings' June 2008 Annual General Meeting of Shareholders and Class Meeting of Shareholders, where it was also decided to name the new company INPEX CORPORATION (INPEX).

Then finally the day arrived. After four years in the making, on October 1, 2008, an international company was born with the ability to meet international resource competition on an equal standing. With involvement in 72 projects in 26 different countries worldwide, it had a tremendous balanced portfolio of project regions, contract types, work stages (exploration, development and production), and oil and gas with proved reserves and provable reserves of 1.645 billion BOE and 2.721 billion BOE respectively as of March 31, 2008.

INPEX established three fundamental strategies: (1) Sustainable expansion of the upstream business, (2) Establishment of a gas supply chain and proactive expansion of the gas business, and (3) Evolvement into a company that offers diversified forms of energy. It aims to raise the daily net production level



Head Office located within Akasaka Biz Tower in Minato-ku, Tokyo

up to 800,000 to 1 million barrels by 2020, and to establish a firm position as an upstream company with global competitiveness. As a company with a mission to provide a stable supply of energy to Japan, INPEX has begun a new journey into the future.

A look back on our business integration

Naoki Kuroda, Senior Corporate Advisor

It is now 10 years since our merger in 2008, and I believe that the integration of the two companies has proceeded very well with many positive outcomes. This is due to the understanding and cooperation of all directors and employees, and I would like to extend my appreciation to all.

I was appointed as the president of the former INPEX in 2005 at a time when confidential discussions concerning the integration were taking place. A year later, I became the president of INPEX Holdings and, eventually, the president of the newly established INPEX CORPORATION following the merger in 2008.

The few years following the integration were a particularly challenging period for INPEX as several key projects poised to shape the future of the company, including the Ichthys and Abadi LNG Projects as well as the Azadegan Project in Iran, were in critical stages of development at a time when the company was undergoing multiple organizational restructurings.

Prior to the merger, the former INPEX consisted of about 400 employees, a size not nearly sufficient to effectively execute such mega projects as operator.

Although we could expect to tap into the resources of joint venture partners for each project, as well as other external resources available in the market, it was crucial for us to establish our own groundwork and capabilities as operator. For this reason, I believe the merger was an essential step for us to expand and transition from an exploration company into a world-class E&P company capable of spearheading exploration, development and production operations.

Ten years after the merger, the Ichthys LNG Project commenced production in 2018. The current business environment surrounding our industry is certainly not easy, but I look forward to seeing INPEX continue to grow and prosper.



10 years from the merger

Masatoshi Sugioka, Senior Corporate Advisor

Looking back over the 10 years since the merger, my heart is filled with emotion as I recall the constant challenges we faced on a daily basis. There was a genuine excitement emanating throughout the company as we all, in our individual capacities, pursued our common goal of growing into a globally competitive operator leveraging the combined strengths and capabilities from the integrated company.



This past decade has been an opportunity for INPEX to devote itself to learning from the world and to give rein to grow further. As a result, we have scored numerous operational achievements both large and small, from the world class Ichthys LNG Project to

the mature oil fields in Japan. These achievements, regardless of size and scope, today have come to embody INPEX and all that it represents.

I am truly grateful for all the hard work put in by our directors and employees until now, and would like to extend to them my sincere gratitude.

INPEX has built a solid framework as a global E&P company during the last 10 years, but there remains a lot more to be done. The exploration, development and production of oil and gas is by nature a global endeavor, and for us to advocate our rightful position as a global player in the industry, we must face the challenges involved in applying the mechanisms we have nurtured on a global scale, not limited to technical fields but in all disciplines. These are common challenges that were also faced by our E&P industry peers in their own times.

Let us take this opportunity to celebrate the successful commencement of production at the Ichthys LNG Project, which lays the groundwork for the future growth of our company while coinciding with our 10th anniversary. Furthermore, let us consider Ichthys as a springboard for our further growth and success as a global company.

Preface

The current INPEX was created on October 1, 2008. It has worked hard to drive key projects seamlessly both in Japan and abroad, and to achieve the important goals set during the business integration, while maximizing the synergies of a smooth integration of the former INPEX and Teikoku Oil.

The greatest of those goals, and the shared dream was to establish itself as a competitive E&P company, capable of self-sustained growth on the world stage. To achieve that goal, we determined to develop our capabilities, experience and human resources through materializing the Ichthys and Abadi projects as the operator.

In this respect, the Ichthys Project is of particular note throughout the first ten years of the current INPEX. Making the final investment decision (FID) after overcoming many obstacles, production finally started. The journey was exciting but also a full of difficulties.

With the LNG plant site unavoidably changed to Darwin, 900 kilometers away from the production facility, work had proceeded at a steady pace to create development plans, sign engineering, procurement and construction (EPC) contracts, and obtain environmental approvals and licenses. At the same time, other work focused on to solidify the company's financial position through a capital expansion of ¥500 billion, raising project financing of ¥2 trillion, and finalizing long-term sales contracts for 8.4 million tons of LNG, after which the long-anticipated FID was made in January 2012.

Another important goal was to create a stable gas supply chain by connecting LNG from the company's Ichthys and other projects to its own gas supply infrastructure in Japan. In August 2008, just prior to full integration, construction of the Naoetsu LNG Terminal was decided, with construction of the Toyama Gas pipeline beginning in April 2012. By connecting the highly cost-competitive Minami-Nagaoka Gas Field to one of Japan's greatest high-pressure pipeline networks stretching 1,400 kilometers, they created an important piece of supply infrastructure for domestic gas and overseas LNG that enabled growth and new development of the company's domestic gas supply business.

In light of the progress made toward achieving these goals, INPEX was expected to deliver clear long-term corporate strategy to investors and other stakeholders. As a response, INPEX announced Medium- to Long-term Vision in May 2012.

This included the basic goals of responsible management as a global company, enhanced HSE in operations, continuing enhancements to governance, creation of a vibrant organization,

development of global HR, and building of robust financial structures. It included efforts to bring all areas of business to levels appropriate for a global company.

It also included a business strategy that clarified three business pillars for INPEX through the 2020s, and detailed a growth strategy and priority initiatives during development of the Ichthys Field. Going forward, INPEX management would progress in line with this Medium- to Long-term Vision.

With this in mind, the company actively focused on upstream businesses, including preparations for development of the Abadi Field, extension and expansion of the Abu Dhabi concession, development of the Kashagan Field, expansion of exploration operator activities, and acquisition of new assets.

In Japan, the company developed the Naoetsu LNG Terminal and Toyama Gas pipeline as part of efforts to expand its domestic gas supply business. With a focus on Ichthys, it also secured its own fleet of ships, including ownership of its first LNG tanker and chartering of other vessels. Operation has now begun and the company's gas supply chain is complete, with a view to further development going forward.

In what may be a new dawn, INPEX has launched into initiatives toward renewable energies, starting with solar power generation and geothermal power generation.

With oil prices reaching historical lows from the end of 2014, INPEX was under pressure to respond urgently and severely, with actions including reducing costs, reviewing investment programs, and reviewing its portfolio in order to strengthen its business structure and improve business efficiencies. In fact, the company was experiencing the greatest changes to the business environment in its entire history. Incidentally, it was at this time that production from the Attaka, Mahakam and other concessions, which had underpinned growth for the company for 40 years, started to decline. Therefore, fiscal 2014 and onward represented difficult times for business performance.

Looking back over the past ten years, INPEX has faced numerous major challenges over what feels like the most difficult of journeys. During this period, INPEX has remained focused on becoming a global operator and has made great strides in responding to the many different experiences it faced, including developing HSE-related systems under the "safety first" motto, overall planning and process management, procuring and contracting materials and insurances, securing and managing human resources and finances, and the legal system.

At the same time, the company went through a decade of

upheaval, experiencing firsthand how much the business environment could change over a short period of time and how important an agile and flexible response is to things like changing energy supply/demand structures with the arrival of shale oil and other energies, the climate change problem, the growth in renewable energies, tighter corporate governance and the flow of ESG investments.

The long-awaited Ichthys production came online last year. But INPEX has experienced big developments on the business front over the past ten years. Upstream business production volume increased from about 400,000 to about 500,000 barrels per day, with the Ichthys Field growing to a point where it could achieve 700,000 barrels per day at plateau production. With confirmed reserves mainly in the Ichthys and Abu Dhabi assets growing from 1.6 billion BOE to 3.6 billion BOE (crude oil equivalents), the company's business infrastructure has been enhanced enormously. Together, the start of full production at Kashagan, the expansion of the Abu Dhabi concession, and the start of production at Ichthys have enhanced the company's portfolio. And in Japan, long-term production systems have been strengthened at the Minami-Nagaoka Gas field.

INPEX has expanded its domestic gas supply infrastructure to the two billion cubic meter level, with plans to further expand to 2.5 billion cubic meters in the near future. At the same time, it is developing renewable energies as a business through geothermal power generation at Sarulla, and progress toward geothermal and wind power generation.

Next for INPEX is large-scale development of the Abadi Gas Field. Utilizing the accomplishments of the past 10 years to enable its next stage of growth in line with a new growth vision, and leveraging those difficult experiences in future opportunities, INPEX will push through these changing times as it continues to advance as a global company.

The following pages detail the growth and experience trajectory of INPEX over these past ten years.

For the sake of convenience, all timeline references to actions of the company's predecessors will be referred to as being taken by INPEX.

2008

- Oct Three companies merged to establish INPEX CORPORATION
- Nov Acquired interest in the Block BM-C-31, Campos Basin, offshore Brazil
- Nov Acquired the Semai II Production Sharing Contract in the Seram Sea, offshore West Papua, Indonesia
- Dec Acquired 40% participating interest in the Block 18, Oriente Basin, onshore Ecuador

2009

- Jan Initiated FEED for Ichthys LNG Project LNG liquefaction plant
- Mar Acquired interests in the discovered but undeveloped area located close to the Van Gogh Oil Field offshore Western Australia
- Apr Opened Darwin Office in Australia
- Apr Completed Japan-GTL Demonstration Plant
- Apr Invested in ELIY Power Co., Ltd., which is planning mass production of high-capacity lithium-ion batteries
- Apr Initiated offshore FEED for Ichthys LNG Project production facilities

- Jun Commenced crude oil production from the Frade Field, Campos Basin, offshore Brazil
- Jul Lifted first cargo from Tangguh LNG Project in Indonesia
- Aug Commenced construction of Naoetsu LNG Terminal
- Oct Completed Shin Oumi Line (68 kilometers between Tomioka, Joetsu City and Toumi, Itoigawa City)
- Oct Ceased production at Griffin oil fields located offshore Western Australia
- Nov Transferred partial interest in the Abadi field, Masela Block to PT EMP Energi Indonesia (EMPI)
- Dec Commenced crude oil production from the North Belut Gas Field in the South Natuna Sea Block B in Indonesia



FPSO vessel at Frade Field



Train 1 and Train 2 at Tangguh LNG Terminal



Unloading berth at Tangguh LNG Terminal



Naoki Kuroda, then INPEX President, speaking at a party announcing completion of the Shin Oumi Line

Frade Field offshore Campos, Brazil commences oil production

In June 2009, the Frade Field offshore of Campos, Brazil started producing oil. This was the first time a Japanese company had participated in a Brazilian petroleum upstream project that progressed to production. Discovered in 1986, the Frade Field is situated offshore in 1,050 to 1,300 meters of water, about 370 kilometers northeast of Rio de Janeiro.

With its Petroleum Law Revision of 1997, Brazil opened to foreign companies its upstream oil concessions that had previously been exclusive domain of the country's national oil company Petrobras. In line with the INPEX strategy of gaining a foothold in Brazil through participation in upstream projects, the company took part in an international bidding process conducted by Petrobras in July 1999. At that time, the Frade Field was in the exploration and evaluation stage, and was successful in acquiring the Frade Field concession interest. INPEX is participating in this project through Frade Japão Petróleo Limitada (FJPL), which holds 18.3% interest. FJPL is a Brazilian subsidiary of INPEX Offshore North Campos, Ltd.,

whose shareholders are INPEX, Sojitz Corporation and Japan Oil, Gas and Metals National Corporation (JOGMEC). With Chevron as operator (participating interest of 51.7%), FJPL (18.3%) is partnering with Petrobras (30%) in development and production from this project.

This field was developed on the concept of tying back the subsea wells to a floating production, storage and offloading (FPSO) vessel. The final investment decision (FID) for the Frade Field was obtained in June 2006, with production starting in June 2009. Due to small oil seeps, the project partners voluntarily suspended production temporarily in March 2012, but safely resumed oil production in April 2013.

Tangguh LNG Project commences LNG shipment

In July 2009, the Tangguh LNG Project lifted the first cargo from the LNG production and offloading facility in the Bintuni Bay, West Papua Province, Indonesia. The project moved to full-scale operations in the short period of four years and four months from the final investment decision (FID) in March 2005. It was a tremendous result considering the scale

of the project as well as geographical challenges of project development in such a remote location.

The Tangguh LNG Project is composed of three Blocks: Berau, Wiriagar and Muturi, located between Berau Bay and Bintuni Bay in Bintuni, in the Indonesian province of West Papua. As a result of exploration carried out since the mid-1990s, giant gas fields straddling these three Blocks were identified. In 1997, President Suharto named this large LNG project "Tangguh" as the third major LNG project following Arun and Bontang. INPEX acquired a 16.30% participating interest in this project in October 2001 through MI Berau, a company jointly established with Mitsubishi Corporation (INPEX net 7.17%). INPEX later acquired a further stake, increasing its net interest to 7.79%. Joint venture partners in this project are the operator BP (40.2%), CNOOC (13.9%), Nippon Oil Exploration (Berau) (12.2%), KG Berau Petroleum (8.6%), LNG Japan Corporation (7.3%), and KG Wiriagar Petroleum (1.4%).

The Tangguh LNG Project obtained approval from the Indonesian government in January 2005 for the development

plan with total annual LNG production capacity of 7.6 million tons through trains 1 & 2. FID was made in March 2005 and went on to ship the first LNG cargo in 2009. In July 2016, the project made FID for the development of a third train to develop the huge amount of recoverable reserves and increase the value of the project. Development work is currently progressing toward the planned start of production in 2020. After the startup of train 3 for production, the annual LNG production capacity will increase to 11.4 million tons and it will be one of the world's largest LNG projects.

INPEX discontinues oil production at Griffin oil fields offshore Western Australia

In October 2009, the Griffin oil fields in the WA-10-L production license region offshore Western Australia, with INPEX involvement through its subsidiary INPEX Alpha, ceased production. This was the first project in Australia that INPEX, as a Japanese company, became involved from exploration through oil field discovery, development and production. It was also a major project that gave INPEX an opportunity for



GRIFFIN VENTURE, the FPSO vessel used for offshore processing and storage of oil from the Griffin oil fields

full participation in oil and gas exploration and development in Australia.

The Griffin oil fields consisted of three fields, the Griffin, the Chinook and the Scindian. They were located about 62 kilometers off the coast of Western Australia in the Carnarvon Basin and in a water depth of about 130 meters. Discovered in 1989 and 1990, the fields started production in January 1994. After processing and storage on an FPSO vessel, the oil was off-loaded to tankers, and gas was pumped through a 70-kilometer subsea pipeline for sale within Australia. With a 20% participating interest in the project, INPEX Alpha worked on production with the operator BHP Billiton (45%) and ExxonMobil (35%).

The fields were producing about 80,000 barrels of oil per day at peak. However, through natural depletion the volume dropped to less than 4,000 barrels per day until 2009 when production finally ceased. The fields produced a total of 178 million barrels of oil equivalent.

- Jan Received regasified LNG from Shizuoka Gas Co., Ltd.
- Jan JODCO exhibited at the 3rd World Future Energy Summit 2010 (Abu Dhabi) with the main theme of renewable energy
- Feb Commenced CO₂-EOR joint study with JOGMEC in Abu Dhabi
- Feb Commenced crude oil production from the Van Gogh Oil Field, offshore Western Australia
- Feb Acquired interests in Block BM-ES-23 Espirito Santo Basin, offshore Brazil
- Feb Formulated the Corporate HSE Mid-Term Plan (Phase 1)
- Mar Obtained final approval for development plans for Chirag Oil Project of ACG Block, Caspian Sea, Azerbaijan
- Apr Obtained approval of development on the Kitan Oil Field Joint Petroleum Development Area, Timor Sea (JPDA06-105)
- May Signed Joint Venture Agreement for development in the Orinoco Oil Belt, Venezuela
- Jun Toshiaki Kitamura became the President & CEO
- Jul Decommissioned Offshore Iwaki Platform

- Jul Decided extension of Shin Tokyo Line (fourth phase) (between Takase, Tomioka City and Kamiyuzuka, Fujioka City)
- Jul Resolved to issue new shares and conduct a secondary offering of shares in order to fund Ichthys LNG Project development expenditures
- Aug Commenced demonstration tests with JGC and BASF of new technology to remove CO₂ from natural gas
- Aug Acquired participating interest in the Block 117, onshore Peru
- Aug Acquired interests in Nganzi Block, onshore D.R. Congo
- Aug Commenced crude oil production from the Ravensworth Field, offshore Western Australia
- Sep Sold Offshore Northwest Java and Offshore Southeast Sumatra interests to Pertamina
- Sep Acquired 15% participating interest in the Sebuku Block in Indonesia
- Oct Withdrew from the Azadegan development project in Iran
- Nov Released Invitation to Tender for the Central Processing Facility for Ichthys LNG Project



NINGALOO VISION, the FPSO vessel processing oil from the Van Gogh Oil Field and Coniston Oil Field



From left: Then Chairman Naoki Kuroda, President Toshiaki Kitamura and Vice Chairman Masatoshi Sugioka launching the new organizational structure in June 2010

INPEX commences oil production at multiple oil fields offshore Western Australia

In February 2010, INPEX started producing oil through its subsidiary, INPEX Alpha, at the Van Gogh Oil Field located in production license region WA-35-L offshore Western Australia. In August 2010, production also started from the Ravensworth Oil Field in the WA-43-L region. This was soon after production in the Griffin oil fields ceased in 2009, which was one of INPEX's core business activities in Australia.

Discovered in 2003, the Van Gogh Oil Field is located about 50 kilometers offshore Western Australia at a water depth of 400 meters. In 2007, development the field was decided with the concept of tying back the subsea wells to an FPSO vessel. INPEX Alpha has a 47.499% participating interest in this project, with the remaining 52.501% held by Apache Corporation (currently Santos) as the operator. In May 2015, the Coniston Oil Field located in the Coniston Unit, straddling the WA-35-L region where the Van Gogh Oil Field is located and the neighboring WA-55-L region, started production through the FPSO used at the Van Gogh Oil Field.

The Ravensworth Oil Field, also discovered in 2003, is located 45 kilometers offshore Western Australia but in a shallower depth of 210 meters. The decision to move to development was made in 2007. INPEX Alpha has a 28.500% participating interest in this project, with the operator BHP Billiton holding 39.999% and the remaining 31.501% held by Apache Corporation (currently Santos). The oil produced from the Ravensworth Oil Field is processed and offloaded at the FPSO operated in the neighboring WA-42-L production license area.

INPEX withdraws from Azadegan development project

The Azadegan Oil Field, a giant onshore oil field located about 80 kilometers west of Ahwaz, the capital of Iran's Khuzestan Province, was discovered in 1999. In 2000, the concession of Saudi Arabia held by Japan through Arabian Oil Company, Ltd. was expired. In reaction to this, the Japanese government was looking for a replacement concession in the Middle East to secure the country's energy security. In November 2000, on the occasion of Iranian President Khatami's visit to Japan, the

Nov Transferred partial interest (10%) in the Masela Block
 Nov Withdrew from the Block 18 without migration to service contract, onshore Ecuador
 Dec Released Invitation to Tender for Ichthys LNG Project onshore LNG facilities
 Dec Obtained approval for Abadi Gas field FLNG development plans



JODCO exhibiting at 3rd World Future Energy Summit 2010 in Abu Dhabi



Decommissioning work of platform at the Offshore Iwaki Gas Field

two governments signed a basic agreement giving Japan priority negotiation rights for the Azadegan development. At the time, INPEX had succeeded in acquiring a large concession in the Caspian Sea to add to its key assets in Indonesia and Australia. It set out to transform into a company capable of expanding globally and rank among the international oil companies of Europe and the US some day in the future. Therefore, it had decided that becoming an operator of one of the major oil field development businesses in the Middle East was an essential strategy for that goal. For this reason, it entered the contest as a private sector company and began serious negotiations with NIOC toward acquiring a concession. As a result of tough negotiations, in February 2004, INPEX and Naftiran Intertrade Co., Ltd (NICO), a subsidiary of NIOC, finally managed to sign a service agreement. It was called a “buyback” agreement regarding the evaluation and development of the Azadegan Oil Field with participating interests of 75% and 25% respectively. The contract for Azadegan Oil Field development adopts a two-stage concept. The full production level for stage 1 was expected to reach 150,000 barrels per day after 4 years and 4

months from the date of the contract, and the full production level for stage 2 was expected to reach 260,000 barrels per day after 8 years from the date of the contract.

Subsequently, in accordance with the basic development plan, oil reservoir evaluation work, basic design work on the facility, and development preparations were conducted. However, the project economics had turned for the worse since 2004 because the international situation surrounding Iran deteriorated and dramatic increases in steel market prices caused considerable increases in development costs. As a result, in October 2006, INPEX assigned 65% of its participating interest to NICO and transferred operatorship. Furthermore, the international situation continuously deteriorated, and sanctions against Iran by the US got tougher in particular. Therefore, investment to Iran became practically impossible. As a result, in October 2010, INPEX made an overall decision to withdraw from the project in light of discussions with relevant parties including the Japanese government.

As explained above, this project was a large project that was part of a planned strategy to advance further as a global

enterprise, with comprehensive support from the Japanese government, so having to withdraw halfway through was a regrettable result. Nevertheless, this project provided INPEX with first-hand experience of the changes in the external environment, such as oil prices, materials and equipment markets and international affairs, which are unavoidable when conducting upstream businesses. Since then, the useful experience and knowledge gained by INPEX through this episode has helped with other project management and risk management situations.

INPEX decommissions offshore Iwaki platform

In May 2010, INPEX started decommissioning the platform at its Offshore Iwaki Gas Field, located about 40 kilometers offshore of Naraha Town, in Fukushima Prefecture, Japan, at a water depth of 154 meters.

The Iwaki Gas Field was the first offshore gas field on the Pacific Ocean side in Japan. It was discovered in 1973 through joint exploration drilling by INPEX and Esso Exploration. The field produced gas and condensate for 23 years between the start of production in 1984 and 2007. For development of the gas field, it was taken into account that this area has severe weather and nautical conditions, and frequent earthquakes. Therefore, the facilities were designed and manufactured to withstand a 100-year weather event such as a typhoon with waves up to 20 meters and wind speeds up to 62 meters per second, and a 200-year earthquake event on the level of the Great Kanto Earthquake. Construction of the platform started in 1981. At a height of 247 meters from the ocean floor and with a total weight of 33,500 tons, the giant offshore facilities were completed in 1984. This was thanks to the superiority of Japan's industrial technologies. Drilling of the production well took about one year from its start in February 1984, which enabled gas production to start in July 1984. All gas and condensate produced in the gas field was transported to the Naraha Plant through a 40-kilometer long undersea pipeline for supply as a clean power generation fuel to the neighboring Hirono Thermal Power Station operated by Tokyo Electric Power Co., Inc. At the initial stage recoverable gas was estimated at 3.5 billion cubic meters. However, the reservoir turned out to be better than expected, delivering a total of 5.6 billion cubic meters of gas over its lifetime. After gas production ended in July 2007,

INPEX plugged and abandoned all production wells, and then started preparing for conductor pipe decommissioning, and platform decommissioning work that included washing clean the pipeline.

During platform decommissioning, a Sapura 3000 heavy lifting vessel was brought from Malaysia. One of only a few in the world, the floating crane has a lifting capacity of about 2,700 tons and comes equipped with hull thrusters to enable dynamic positioning. Work entailed (1) lifting and decommissioning the topside facilities, (2) truncation of the jacket legs 92 meters under the water surface, (3) lifting and decommissioning the two meter diameter main piles from the eight jacket legs, (4) pumping air into the upper jacket to create a buoyancy tank for lifting it and moving it for temporary placement on the ocean floor, and (5) pulling down the upper jacket to be used as a reef for fish. It was one of the largest steel platform decommissions globally. Therefore, the work required a range of technical challenges to be overcome and a high level of cooperation between the company and various contractors in Japan and overseas. In July 2010, the work was completed successfully ahead of schedule, and without any accident.

INPEX formulates Corporate HSE Medium-term Plan

INPEX Holdings, Inc. was established in April 2006 ahead of full integration. At the time, it determined that activities in line with an international standard HSE Management System (HSEMS) were essential for driving greater globalization of the company's E&P activities. So in June of that year, INPEX defined a new Health, Safety and Environmental (HSE) Policy for the whole Group. In 2007, it established the Corporate HSE Committee to discuss rules and requirements for building the HSEMS. It then formulated HSEMS rules covering all health, safety and environment initiatives to properly implement the commitment of the HSE Policy. Since then, INPEX has systematically focused on building its HSEMS while launching various initiatives for ongoing improvements to environmental and occupational safety and health aspects of operator projects.

Through this process, in February 2010, INPEX formulated its Phase 1 Corporate HSE Medium-term Plan (FY2010–2012) that aims to broaden HSE awareness and improve the level of HSE activities. The five objectives set in the plan

were (1) Enhance cooperation with HSE staff at Operational Organizations, (2) Improve capabilities of HSE staff through education and training, (3) Establish and achieve medium-term numerical targets, (4) Acquire HSE capabilities equal to the average level among International Oil Companies (IOCs), and (5) Contribute toward preventing global warming through greenhouse gas emission reductions and energy-saving measures. As a result, it succeeded in dramatically raising the level of HSE activities. They included application of the IFC performance standards and IFC guidelines to voluntary corporate standards, establishing the INPEX 7 Safety Rules, and holding HSE Meetings for HSE managers in Japan and overseas. And promotion of the system of HSE awards, development of systems for responding to large-scale oil spill, and development of earthquake response manuals in anticipation of a Tokyo inland earthquake were also included.

The Phase 2 Corporate HSE Medium-term Plan (FY2013–2015) established seven objectives to raise the company's level of HSE activities to a level equal to the IOCs 1st tier group. As a result, it succeeded in further raising its ability to execute HSE activities. Through this, voluntary standardization of Safety Cases and establishment of related management requirements through the creation of a new team specializing in Process Safety were achieved. In addition, dramatic improvement of LTIF and TRIR results, revision of emergency response procedures and a corporate crisis response manual through the adoption of an Incident Command System, and adoption of an HSE risk activity reporting system were also provided. In 2016, INPEX formulated a new Phase 3 Corporate HSE Medium-term Plan (FY2016-2020) that followed on from Phase 2. The eight objectives were established to rapidly yet steadily achieve HSE competencies on a level equal to the IOCs 1st tier group. Its eight objectives were (1) Reform the INPEX HSEMS in accordance with the newly released IOGP guidelines, (2) Enhance the HSE assurance and governance system by conducting risk-based audits and HSE reviews, (3) Enhance technical support using HSE resources, (4) Develop HSE activities reflecting worksite feedback, (5) Commit to major accident prevention by promoting Process Safety management, (6) Continue monitoring and evaluating LTIF and TRIR, (7) Improve emergency and crisis response capabilities, and (8) Drive forward management plans for reducing GHG



INPEX 7 Safety Rules

emissions. During FY2016, the company successfully shared HSE lessons on construction work by enhancing HSE technical support in Japan and overseas and holding HSE Forums. Such efforts contributed to achieving LTIF of 0.11 and TRIR of 0.97 which were the top 25% level of IOGP member companies; however, considering that both benchmarks started to show an increase in FY2017, enhanced efforts have been undertaken to ensure further improvements. In April 2017, INPEX revised its HSE Policy in line with this latest plan. Also, it once again declared that it would work to develop an HSE culture in which HSE is regarded as an indispensable factor in all areas of decision making, and that will be pursued on a daily basis. The company is now also actively involved in efforts to improve HSE performance across the whole Group, revise its HSEMS Manual, and expand the scope of HSE management to its domestic subsidiaries and others.

- Feb Acquired participating interest in the Walker Ridge 95/96/139/140 Blocks located in the Gulf of Mexico in the US
- Feb Confirmed gas and condensate in the Dai Nguyet structure in Blocks 05-1b & 05-1c, offshore southern offshore Vietnam
- Apr The Environment Safety Unit was renamed to the HSE UNIT
- May Opened Rio de Janeiro Office in Brazil
- May Decided investment of the Toyama Line (between Itoigawa City and Toyama City)
- Jun Final investment decision made on the Ruby gas field in the Sebuku Block in Indonesia
- Jun Agreed on joint geothermal energy development survey with Idemitsu Kosan Co., Ltd. in Hokkaido and Akita Prefecture
- Jun Decided purchasers for entire 8.4 million tons per annum of LNG from the Ichthys LNG Project



Recovery support activities for the Great East Japan Earthquake at Rikuzentakata City (September 2011)

INPEX joins Great East Japan Earthquake relief and recovery efforts

On March 11, 2011, a huge magnitude 9.0 earthquake occurred in the Pacific Ocean offshore of the Tohoku region in Japan, and with a powerful tsunami immediately afterward, 15,896 people died, and 2,537 people are still missing for as of June 10, 2018, according to the National Police Agency, resulting in massive damage and a large number of people lost their livelihood.

INPEX luckily escaped any human loss or serious property damage, but Fukushima Prefecture, with which INPEX had a long and deep relationship through production operations at its Offshore Iwaki Gas Field, severely damaged by the earthquake, tsunami and the effects of nuclear disaster after the earthquake. INPEX's business sites at Nagaoka City and Kashiwazaki City had previously experienced the Niigata Chuetsu Earthquake (2004) and Niigata Chuetsu Offshore Earthquake (2007), and the company was strongly aware of the necessity of prompt relief and support, so the following relief and recovery efforts were immediately implemented.

- Donation of 200 million yen, plus a further 4.8 million yen

- Jun Established the Health, Safety and Environmental Policy
- Jul Split the Technical Division Technology Development & Support Unit into Sub-surface Evaluation Unit and Field Development Unit
- Jul Obtained approval for the Ichthys LNG Project Environmental Impact Statement
- Jul Undertook legal restructuring and transferred Company assets related to the Ichthys LNG Project
- Oct Commenced crude oil production from the Kitan Oil Field, Joint Petroleum Development Area, Timor Sea (JPDA06-105)
- Nov Oil sheen occurred in the vicinity of the Frade field Campos Basin, offshore Brazil
- Nov Acquired 100% participating interest in the Babar Selaru Block, south offshore Indonesia



Provisional fumarolic testing of geothermal survey wells in the Oyasu area of Yuzawa City, Akita Prefecture (November 2017)

provided by INPEX Group executives and employees, to the affected areas through the Japan Red Cross

- Provision of essential household items, including drinking water, emergency food items, blankets and other relief goods to affected areas (Soma City, Fukushima Prefecture)
- Provision of petroleum products, refined and manufactured from domestic oil at an INPEX Group refinery to affected areas (Iwaki City and Soma City, Fukushima Prefecture) due to severe fuel shortages
- Provision of physical support such as restoration work of town gas supplies

In July 2011, INPEX set up a paid volunteer leave system to support volunteer activities in affected areas conducted by employees, with related transport and accommodation, as well as equipment, paid for by INPEX. In the same month, 31 employees participated in recovery work in the city of Rikuzentakata, Iwate Prefecture. Since then, and up until December 2016, 82 restoration and recovery activities have been conducted by INPEX employees, with participation by more than 700 people.

- Nov Held the first Environmental Meeting (on Nov 28 and 29)
- Nov Agreed in principle to acquire participating interest in the shale gas projects in the Horn River, Cordova and Liard basins, British Columbia State, Canada
- Dec Transferred partial participating interest in the Masela Block, Abadi Gas Field to a subsidiary of Shell
- Dec Agreement made with Osaka Gas Co., Ltd. for partial transfer of Ichthys LNG Project equity interest
- Dec Final investment decision made on the Coniston Unit located offshore Western Australia
- Dec Sold interests in the West Bakr block, Egypt
- Dec Joined United Nations Global Compact Initiative



Oil production started at the Kitan Oil Field

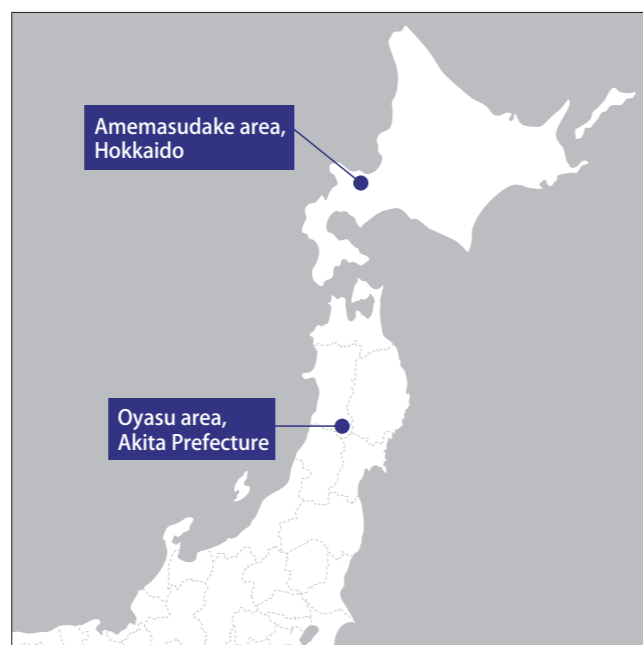


International symposium held as part of INPEX's endowed chair on Energy Security and the Environment at the University of Tokyo's Graduate School of Public Policy (November 2011)

INPEX launches joint study in preparation for first commercial geothermal power generation project

In June 2011, INPEX and Idemitsu Kosan Co., Ltd. agreed to conduct the joint study, namely a geothermal power generation feasibility study, in Amemasudake area (Akaigawa Village and Sapporo City) of Hokkaido and the Oyasu area (Yuzawa City) of Akita Prefecture. This was a major step towards realizing the basic INPEX strategy of Evolvement into a company that offers diversified forms of energy, established at the time of the business integration in 2008, INPEX had made its first inroads into the renewable energy business. INPEX adjudicated that the discovery of subsurface geothermal resources would allow the application of the technologies and knowledge, acquired over many years identifying and developing underground oil and gas resources, so it expected to realize strong synergies in this new endeavor.

New Energy and Industrial Technology Development Organization (NEDO) had already surveyed the Amemasudake and Oyasu areas to promote geothermal energy development, and had identified them as having high potential for



Sites of joint surveys on geothermal power generation

geothermal resources. Our initial surveying started in 2011, with surface study including geological survey, gravity survey and electro-magnetic survey. Then in July 2013, with the additional participation of Mitsui Oil Exploration Co., Ltd., the second stage began with drilling of geothermal exploratory wells to survey such things as geological structure, underground temperature and permeability of the reservoir. After that, the companies investigated commercialization, including flow test of exploratory wells at both sites.

From 2013, INPEX also started the joint study at the Bandaisan area and Azuma-Adatara area of Fukushima Prefecture as a member of the Fukushima Geothermal Project Team, a group of 11 Japanese companies, with a view to geothermal energy development.

Ichthys LNG Project finalizes sales agreements covering all LNG to be produced

In June 2011, the Ichthys Project Joint Venture reached agreements to enter into long-term sales contracts for liquefied natural gas (LNG) from the Ichthys LNG Project, which was required for development of Ichthys by INPEX as operator. The long-term sales contracts, running for 15 years from 2017, will supply 5 Buyer Consortium consisting of Tokyo Electric Power Co., Inc. (1.05 million tons per annum (mtpa), now JERA Co., Inc.), Tokyo Gas Co., Ltd. (1.05 mtpa), The Kansai Electric Power Co., Inc. (0.80 mtpa), Osaka Gas Co., Ltd. (0.80 mtpa), and Kyushu Electric Power Co., Inc. (0.30 mtpa), 2 Buyer Consortium consisting of Chubu Electric Power Co., Inc. (0.49 mtpa, now JERA Co., Inc.) and Toho Gas Co., Ltd. (0.28 mtpa), CPC Corporation, Taiwan (1.75 mtpa), Total and INPEX (0.90 mtpa each). Then from December 2011 to January 2012, the Ichthys Project Joint Venture signed legally binding Sales and Purchase Agreements with these 10 companies. The signing of these contracts meant the Project secured the sales of the total volume of the annual LNG production of 8.4 million tons.

This 8.4 mtpa of LNG is equivalent to over 10% of Japan's annual LNG import volume. Approximately 70% of this volume will be shipped to Japanese buyers, which means the Ichthys Project contributes to a stable energy supply to Japan. Securing buyers for the entire LNG production was originally expected to be difficult when INPEX started marketing in

2005. INPEX overcame such difficulty and achieved its target through combined efforts of people across the company.

Securing long-term buyers of entire LNG production from the Ichthys LNG Project was a big step forward in obtaining the FID.

- Jan Agreed with Toho Gas Co., Ltd. and Tokyo Gas Co., Ltd. for partial transfer of Ichthys LNG Project equity interest
- Jan Confirmed the final investment decision on Ichthys LNG Project
- Jan Acquired participating interest in the deepwater Blocks S and R, located offshore Sabah, Malaysia
- Mar Acquired Ichthys LNG Project production licenses
- Mar Agreed to acquire a 17.5% participating interest in the Prelude FLNG Project, offshore Australia
- Mar Established Japanese GTL (Gas to Liquid) technology in commercial scale
- Mar Suspended production after another seep occurred in the Frade field, Campos Basin, offshore Brazil

- Apr Established the GHG working group under the HSE committee
- Apr Adopted IFC Performance Standards and EHS Guidelines as Corporate voluntary standards
- Apr Started construction of Toyama Line (between Itoigawa City and Toyama City)
- May Formulated the Medium-to Long-term Vision of INPEX
- May Agreed partial transfer with Chubu Electric Power Co., Inc. (currently JERA Co., Inc.) for Ichthys LNG Project equity interest
- May Launched construction of the Ichthys LNG plant
- May Acquired 40% participating interest in Block 10 in Iraq
- Jun Established the New Ventures Division

- Jun Concluded an agreement for reciprocal backup supply of natural gas in emergencies with Tokyo Gas Co., Ltd. and Shizuoka Gas Co., Ltd.
- Jun Acquired 50% participating interest in the exploration block AC/P36, offshore Australia
- Jul Teiseki Propane Co., Ltd. and Tokyo Gas Energy CO., Ltd. were merged
- Jul Agreed partial transfer with TOTAL group companies for Ichthys LNG Project equity interest
- Aug Acquired a 40% participating interest in shale gas projects in the Horn River, Cordova, and Liard basins in British Columbia, Canada
- Aug Opened Calgary Office in Canada
- Aug Acquired a 7.2% participating interest in the Lucius project in the Gulf of Mexico in the US
- Aug Acquired a 9.99% indirect interest in Block 14, offshore Angola

- Aug Decided to construct the large-scale photovoltaic power generation system INPEX Mega Solar Joetsu in Joetsu City, Niigata Prefecture
- Aug Acquired next generation certification logo "Kurumin"
- Oct Established the INPEX Advisory Committee
- Oct Awarded offshore Exploration Blocks in the 27th Seaward Licensing Round in UK
- Nov Acquired 26% participating interest in the exploration block KG-DWN-2004/6 in the Bay of Bengal, India
- Nov Concluded a Service Contract for Exploration Block 10 in Iraq
- Dec Terminated the refining business at the Kubiki Refinery of Teiseki Topping Plant Co., Ltd.
- Dec Completed the Ichthys LNG Project financing arrangements
- Dec Added INPEX 7 Safety Rules to corporate voluntary standards
- Dec Completed fourth phase construction work for the Shin Tokyo Line extension



Ceremony marking the final investment decision (FID) for the Ichthys LNG Project



Prelude FLNG vessel departing for offshore production site



Production facilities at the Offshore Angola Block 14



Members of the INPEX Advisory Committee: (front row from left) Masayuki Yamauchi, Tsutomu Toichi, Kaori Kuroda and Kent Eyring Calder

Ichthys LNG Project announces financial investment decision (FID)

In January 2012, the final investment decision was obtained for the Ichthys LNG Project. With INPEX participating through one of its Australian subsidiaries, this was the first time for a Japanese company to lead an LNG development operatorship of this scale. The project would entail liquefaction of natural gas from the Ichthys Gas-condensate Field at an onshore gas liquefaction plant built at Darwin, producing and shipping 8.4 million tons of LNG annually, and 1.6 million tons of LPG. It would also produce and ship about 100,000 barrels of condensate per day (at its peak) from a floating production, storage and offloading (FPSO) facility and Darwin.

INPEX acquired this concession solely in 1998, after which it conducted test drilling as the operator and then discovered the Ichthys Gas-condensate Field in 2000. From that point, it spent over ten years on a range of work, starting from the basic front-end engineering and design (FEED) work for development, until reaching the most important milestone, the FID. The Ichthys LNG Projects is forecast to have a long

40-year production life, which puts it at the center of INPEX's medium- to long-term growth strategy. For Japan as well, the project is making an important contribution to energy stability.

The real engineering, procurement and construction (EPC) work—detailed design, materials procurement and construction—ahead of the start of production started after obtaining the FID. In May 2012, a groundbreaking ceremony was held for the onshore gas liquefaction plant on the outskirts of Darwin, after which full-scale construction work started for the plant. The many guests at the ceremony included dignitaries from the Australian Commonwealth Government, including Prime Minister Julia Gillard, Resources, Energy and Tourism Minister Martin Ferguson, and Northern Territory Chief Minister Paul Henderson; the Senior Vice Minister of Economy, Trade and Industry and the Japanese Ambassador to Australia from the Japanese Government; and many other dignitaries of companies related to the project.

INPEX acquires stake in Prelude FLNG Project

In March 2012, through its subsidiary INPEX Oil & Gas

Australia, INPEX agreed to acquire a 17.5% participating interest in the Prelude FLNG Project being developed by Royal Dutch Shell's subsidiary, Shell Development Australia (SDA), in the WA-44-L region offshore Western Australia. This was one of the world's first FLNG (floating liquefied natural gas) projects using a floating facility for gas liquefaction. In July 2011, INPEX selected Royal Dutch Shell as a strategic partner and hoped to acquire experience and knowledge about FLNG development for use in future LNG projects.

The Prelude FLNG Project consists of two gas fields located in Western Australia's WA-371-P region, acquired by Royal Dutch Shell in 2006, with the Prelude gas field discovered in 2007 and the Concerto gas field in 2009. FID was made in May 2011 with plans to develop and produce 3.6 million tons of LNG and 400,000 tons of LPG annually at peak, and 36,000 barrels of condensate per day at peak.

Participating interests in this project were divided between the operator SDA (67.5%), INPEX (17.5%), KOGAS (10%) and OPIC (5%).

In June 2017, the FLNG vessel—the most important

facility in the project—left South Korea where it was built and arrived at the site offshore Western Australia, and the Prelude gas field started production in December 2018 after a series of commissioning work.

INPEX acquires stakes in deepwater exploration blocks offshore Sabah, Malaysia

In January 2012, INPEX simultaneously acquired a 75% participating interest in deepwater Block S in Sabah, Malaysia, and a 37.5% participating interest in deepwater Block R, southwest of Block S, from Malaysia's national oil company, Petronas. Both blocks held promise for oil and gas discovery because they were located in the vicinity of large oil fields such as the Kikeh and the Gumusut fields. As INPEX's first operator project in Malaysia, INPEX Offshore North West Sabah worked closely with partner Petronas Carigali (PCSB), a subsidiary of Petronas, in the S Block region. Meanwhile, INPEX Offshore South West Sabah conducted exploration activities in Block R with the operator JX Nippon Oil & Gas Exploration (Deepwater Sabah) and PCSB.

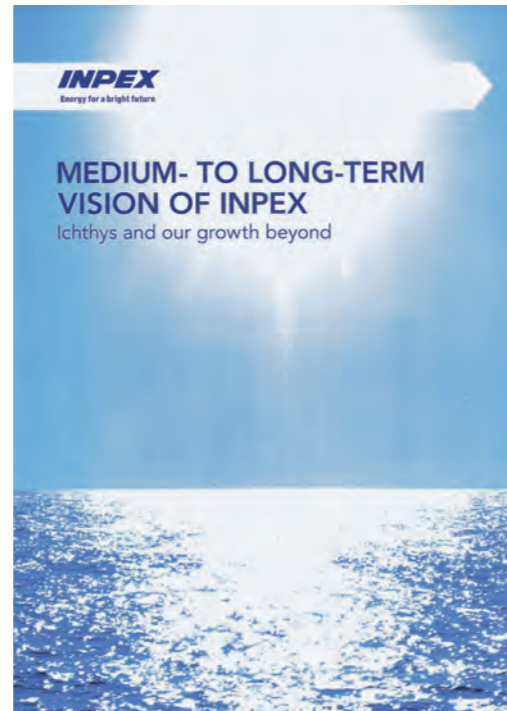
The companies conducted a three-dimensional seismic survey and other geological and geophysical studies on both blocks before drilling wildcat wells. They eventually withdrew from the S Block in 2016 after being unable to find oil or gas. They discovered several oil layers at the Bestari-1 exploration well, drilled in Block R in 2015, but withdrew from that also because the appraisal wells were unable to confirm if there were commercial quantities available in the reserves.

INPEX establishes MEDIUM- TO LONG-TERM VISION

In May 2012, INPEX established its MEDIUM- TO LONG-TERM VISION OF INPEX -Ichthys and our growth beyond. With the FID obtained for the Ichthys LNG Project in January of the same year, INPEX established the VISION to set targets for achieving sustainable growth over the medium-to long-term, and for clarifying key initiatives for the next five years leading up to the Ichthys startup.

The energy situation was changing rapidly and becoming more complex, so there was an acute awareness of a shift toward gas and renewable energies amid increasing demand for energy, partnerships and acquisitions within the energy development industry expanding dynamically, and the need to respond to the arrival of unconventional resources and issues surrounding safe operations and the global environment. To achieve continuous growth in this environment while focusing on the start of production at Ichthys, INPEX established concrete targets to achieve three growth targets in the 2020s. It also clarified concrete measures concerning priority initiatives for the following five years, and the necessary management policies, required for each target. By achieving these targets, INPEX would become a leading and internationally competitive oil and gas E&P company, while growing into an integrated energy company with natural gas at its core.

The three targets INPEX set itself were (1) Continuous



MEDIUM- TO LONG-TERM VISION OF INPEX -Ichthys and our growth beyond

enhancement of our E&P activities (1 million barrels per day by the early 2020s), (2) Strengthening our gas supply chain (domestic gas supplies of 2.5 billion cubic meters annually by the early 2020s and 3 billion cubic meters in the long term), and (3) Reinforcement of our renewable energy initiatives (research, development and commercialization targeting growth for the next generation). The three management policies INPEX wanted to develop were (1) Securing / developing human resources and building an efficient organizational structure, (2) Investment for growth and return for shareholders, and (3) Responsible management as a global company.

- Jan Launched construction of the central processing facility (CPF) of the Ichthys LNG Project in Geoje Island, Korea
- Feb Established the INPEX HR Vision
- Mar Awarded interests in the West Sebuku Block, South Makassar, offshore Indonesia
- Apr Formulated the Corporate HSE Mid-Term Plan (Phase 2)
- Apr Merged Teiseki Topping Plant Co., Ltd., and Teiseki Transport System Co., Ltd., and named the merged company INPEX Logistics (Japan) Co., Ltd.
- Apr Acquired 25% participating interest in the exploration block Area 2 & 5, offshore Mozambique
- Apr Obtained authorization for the restart of production activities at the Frade Field in Campos Basin, offshore Brazil
- Apr Start of operation of INPEX Mega Solar Joetsu
- May Acquired 30% participating interest in exploration block Area 15, Uruguay

- May Concluded a Cooperation Agreement for Magadan 2 and 3 blocks in the Sea of Okhotsk, Russia
- Jun Established Gas Supply & Infrastructure Division (Coordination & Administration Unit, Strategy & Planning Unit, Naoetsu LNG Terminal, Pipeline Operation & Maintenance Unit, and Toyama Pipeline Construction Office)
- Jun Decided to construct of new LNG vessels for Ichthys LNG Project
- Jun Succeeded in appraising the Dai Nguyet gas and condensate discovery in Blocks 05-1b and 05-1c offshore southern Vietnam
- Jun Acquired 100% interest in the exploration Block WA-494-P, offshore Western Australia
- Jun Started construction of Ichthys LNG Project FPSO facility in Okpo, Korea
- Jun Agreed to transfer part of the Ichthys LNG Project equity interest to CPC Corporation, Taiwan
- Jul Completed the construction of the pipeline connecting Naoetsu LNG Terminal with the existing pipeline network



TANGGUH FOJA, the first LNG tanker docked at the Naoetsu LNG Terminal



INPEX Mega Solar Joetsu

INPEX completes construction of Naoetsu LNG Terminal

In December 2013, INPEX held a completion ceremony for the Naoetsu LNG Terminal. This was the company's first LNG receiving facility built in Joetsu City, Niigata Prefecture. With the opening of this terminal, INPEX improved its domestic gas supply capacity and stabilized its supply system by mixing LNG produced overseas and gas produced in Japan from the Minami-Nagaoka Gas Field in Niigata Prefecture. This also further expanded its infrastructure to achieve its target of reinforcing the gas supply chain, one of the growth targets in INPEX's Medium- to Long-term Vision.

Japan's demand for gas was central to a transition away from petroleum-based fuels, and there were expectations that this transition would remain strong into the future. The FID for the Naoetsu LNG Terminal was made in August 2008 and actual construction commenced in August 2009. With construction proceeding smoothly, the first LNG tanker, the TANGGUH FOJA, docked in August 2013. After that, commissioning of the key facilities proceeded in turn and the terminal was opened on December 1, 2013, ahead of schedule. The

terminal includes two above-ground LNG tanks with storage capacity of 180,000 kiloliters, a berth which enables the large 210,000 cubic meter loading class Q-flex LNG tanker to dock, vaporizers and calorific value adjustment facilities. The terminal can supply enough gas to satisfy the annual gas needs of about five million households.

In 2016, cryogenic LPG facility was also completed in response to moves to adjust calorific values to 45 mega joules per cubic meter, and its operation is ongoing.

INPEX commences Mega Solar Joetsu photovoltaic power generation in Joetsu, Niigata

In April 2013, INPEX held a completion ceremony for INPEX Mega Solar Joetsu, the company's first photovoltaic power generation facility. It was also INPEX's first commercialization project related to its Medium- to Long-term Vision growth target of Reinforcement of our renewable energy initiatives.

INPEX used part (46,710 square meters) of the premises owned by its subsidiary INPEX Logistics (Japan) Co., Ltd. (INPEX Logistics) in Joetsu City, Niigata Prefecture. INPEX started installing the solar panels in October 2012, with a

- Jul Started drilling exploratory wells for geothermal energy development by geothermal power generation joint venture established with Idemitsu Kosan Co., Ltd.
- Jul Agreed to transfer part of participating interest in Block 31, offshore Suriname to Tullow Suriname B.V.
- Aug First LNG carrier arrived at Naoetsu LNG Terminal
- Sep Commenced crude oil production from the Kashagan field in the Caspian Sea, Kazakhstan
- Sep Fukushima Geothermal Project Team comprised of ten companies including INPEX commenced a joint survey for geothermal energy development at Bandaisan in Fukushima Prefecture
- Sep Participated in exploration projects in Irkutsk, Russia

- Oct Acquired additional exploration license in the 27th Seaward Licensing Round in UK
- Oct Commenced production from the Ruby gas field in the Sebuku PSC in Indonesia
- Nov Established the wholly owned subsidiary INPEX Energy Trading Singapore Pte Ltd.
- Dec Completed the Naoetsu LNG Terminal
- Dec Acquired 29.1667% participating interest on blocks in the Kanumas Area in the northeastern part of offshore Greenland, Denmark

- Jan Extended the concession agreement for the Upper Zakum Oil Field, offshore Abu Dhabi
- Jan Commenced additional oil production from ACG oil fields in the Caspian Sea, Azerbaijan (Chirag Oil Project)
- Mar Decided to construct a second INPEX Group large-scale photovoltaic power generation system in Joetsu City, Niigata Prefecture
- Mar Selected as the Nadeshiko Brand 2013 by the Tokyo Stock Exchange as an outstanding enterprise in terms of encouraging the empowerment of women in the workplace
- Apr Commenced production at the South Belut Gas Field in the South Natuna Sea Block B in Indonesia

- Apr Established the INPEX Values
- May Acquired 40% participating interest in Block WA-502-P offshore Western Australia
- May Signed Heads of Agreement on LNG sales with Tokyo Electric Power Company, Inc., and Shizuoka Gas Company, Ltd., for the Prelude FLNG Project in Australia
- May Concluded a contract with JOGMEC concerning the Commissioned Work Support Work Related to Studies on the Basic Policy and Plan for Medium- and Long-Term Offshore Methane Hydrate Production Tests
- Jun Opened Oslo office in Norway



OCEANIC BREEZE naming ceremony (October 2017)



Oil production started in the offshore production facilities at the Ruby Gas Field, Indonesia



Production facilities at the Upper Zakum Oil Field



Production platform for the Chirag Oil Project in the ACG oil fields concession in the Caspian Sea

maximum of approximately 2,000kW of electric generating capacity, and went on to start operation in April 2013.

Then in July 2015, second new photovoltaic power generation facility owned by INPEX Logistics commenced the commercial operations. With this, the total expected annual power generation capacity of the INPEX Mega Solar Joetsu project came to about 5.33 million kWh per year, which is equivalent to the annual power consumption of some 1,600 households.

When constructing the facility, a number of creative ideas were used to improve the power generating efficiency, including solar panels designed for snow bound region, and the foundations for the panels being increased in height to prevent accumulation of snow on the panels during winter.

Construction begins on LNG tankers to service Ichthys LNG Project

In June 2013, INPEX made a decision to build and charter its first LNG ship to transport 0.9 million tons of Ichthys LNG per annum to the INPEX Naoetsu LNG Terminal.

Built by Mitsubishi Heavy Industries, Ltd., the specification is 288 meters length of perpendicular, 49 meters breadth with a tank capacity of 155,300 cubic meters. The ship features continuous cover over Moss spherical tanks integrated with

the hull called "Sayaendo type." The ultra-steam turbine plant achieves reduced transportation costs through a significant improvement in fuel efficiency. She is co-owned by INPEX SHIPPING and Kawasaki Kisen Kaisha Ltd. ("K" Line) for a time charter by INPEX SHIPPING. In October 2017 at the naming ceremony, she was named "OCEANIC BREEZE" by Toshiaki Kitamura, then president and CEO of INPEX, and she was delivered in April 2018.

In May 2013, IT Marine Transport Pte. Ltd. (ITMT), a joint venture with TOTAL, was established to transport 1.75 million tons of Ichthys LNG per annum, to be delivered to CPC Corporation, Taiwan, through time charter agreement with "K" Line.

Built by Kawasaki Heavy Industries, Ltd., this world's largest Moss-type LNG ship's specification is about 300 meters length of perpendicular, 52 meters breadth, with tank capacity of 182,000 cubic meters. The ship features a TFDE (Tri-Fuel Diesel Electric propulsion system, utilizing a diesel engine fueled by natural gas, marine diesel oil, or heavy fuel oil). This system achieves reduced transportation costs through high fuel efficiency. In September 2017 at the naming ceremony, she was named "PACIFIC BREEZE" by Jeng-Zen Fang, then vice president of CPC, and she was delivered in March 2018.

INPEX awarded extension on Upper Zakum Oil Field concession offshore Abu Dhabi

In January 2014, the Abu Dhabi government granted INPEX an extension of over 15 years to the Abu Dhabi Upper Zakum Oil Field concession where it was participating in development and production through its subsidiary Japan Oil Development Co., Ltd. (JODCO). The decision was made to extend the concession until December 2041, and the project's fiscal terms and conditions were revised.

JODCO started development of the Upper Zakum Oil Field with ADNOC in 1978, and production started in 1982. ExxonMobil joined the partnership in March 2006 through a partial transfer of ADNOC's interest, and the field's development and production continued. This field had become a key oil field in Abu Dhabi, and the parties were working at the time to increase production capacity to 750,000 barrels per day.

In November 2017, the parties agreed on a plan to further lift production capacity in the oil field to 1 million barrels per day by 2024. At this point the concession agreement was extended yet again by ten years, to December 2051.

The Upper Zakum Oil Field is the upper part of the Zakum Oil Field, which is one of the largest oil fields in the world. Because this is the most recent of Abu Dhabi's large oil

fields to start production, it has lots of room for expanding production capacity in the future. Therefore, securing the long-term concession was a significant achievement for INPEX.

INPEX joins Japanese government-sanctioned methane hydrate survey

In May 2014, INPEX, together with Japan Petroleum Exploration Co., Ltd. (JAPEX) and Japan Drilling Co., Ltd. (JDC), undertook a commission for Support Work Related to Studies on the Basic Policy and Plan for the Medium and Long-Term Offshore Production Test of Methane Hydrate. This was a program being implemented by JOGMEC to promote development of methane hydrate in Japan. INPEX committed to use the technologies, experience and know-how, developed through its engagement for oil and natural gas exploration and development activities for the research and development of methane hydrate resources in Japan.

Substantial quantity of methane hydrate has been expected in the offshore areas around Japan to become a new domestic energy source to contribute to a stable national energy supply for Japan by establishing robust production technology for its commercialization. In 2013, the first offshore production test was carried out to produce gas from a sand-layer methane

- Jun Acquired 40% participating interest in Block WA-504-P offshore Western Australia
- Jun Commenced Ichthys LNG Project gas export pipeline installation work
- Jul Unloaded first modules for construction of Ichthys LNG Project onshore gas liquefaction plant
- Jul Acquired additional interest in the Lucius Deepwater US Gulf of Mexico
- Aug Agreed partial transfer of equity interest in the Ichthys LNG Project with the Kansai Electric Power Co., Inc.
- Aug Confirmed gas and condensate in the Sao Vang structure of Blocks 05-1b and 05-1c offshore southern Vietnam
- Aug Discovered gas and condensate in Block WA-274-P, offshore Western Australia

- Sep Agreed to partial transfer of equity interest in the Deepwater Block S located offshore State of Sabah, Malaysia
- Sep Started upgrading facilities at Koshijihara Plant, Minami-Nagaoka gas field
- Oct Participated in Japan Methane Hydrate Operating Co., Ltd.
- Oct Discovered oil reservoirs in the block BM-ES-23 in Espirito Santo Basin, offshore Brazil
- Oct Commenced oil production from the Umm Lulu Oil Field offshore Abu Dhabi, UAE
- Oct Established sections responsible for process safety management and security and crisis management in the USE UNIT

- Jan Discovered additional oil reservoirs in the BM-ES-23 in the Espirito Santo Basin, offshore Brazil
- Jan Established the Diversity & Inclusion Group in the Human Resources Unit, General Administration Division
- Jan Commenced crude oil production from the Lucius Oil Field in the US Gulf of Mexico
- Jan Agreed to partial transfer of participating interest in Deepwater Block R offshore Sabah State, Malaysia to Santos
- Jan Commenced oil production from the Nasr Oil Field offshore Abu Dhabi, UAE
- Feb Commenced drilling production wells for Ichthys LNG Project
- Feb Agreed to sell all participating interest in Block SL20183 in Louisiana State, USA

- Feb Acquired 100% interest in the EPNT14-1 onshore exploration acreage in Northern Territory, Australia
- Feb Acquired 40% participating interest in Blocks WA-513-P and WA-514-P, offshore Western Australia
- Apr Acquired 5% participating interest in the ADCO onshore concession in Abu Dhabi, UAE
- May Commenced crude oil production from the Coniston Oil Field offshore Western Australia
- Jun Participated in the world's largest Sarulla Geothermal Independent Power Producer Project in Indonesia
- Jun Discovered new oil reservoir in Minami-Kuwayama Oil Field in Niigata Prefecture



Start of construction of gas trunk pipeline for Ichthys LNG Project



Drill stem tests at exploration concession in offshore southern Vietnam blocks



Production facilities at the Lucius Oil Field



Fujairah Terminal used to ship production (Murban oil) from ADCO Onshore Concession

hydrate typed formation under the seabed. This was the first successful test in the world and it led the plan of the medium- to long-term offshore production test in the government's Plan for the Development of Marine Energy and Mineral Resources announced in the end of 2013.

In October 2014, a new company Japan Methane Hydrate Operating Co., Ltd. (JMH) was established, and INPEX made a capital participation. JMH, which received capital participation by 11 companies engaged in oil and gas development and in engineering, joined medium- to long-term offshore production test for sand-layer type methane hydrate led by the government. JMH has the ability to operate efficiently and smoothly by its "all-Japan" organization but with the knowledge acquired through its activities being shared across the private sector.

INPEX discovers new gas and condensate reservoirs offshore southern Vietnam

In August 2014, the new accumulation of gas and condensate enough to consider commercialization was discovered in Exploration Blocks 05-1b and 05-1c participating through Teikoku

Oil (Con Son) Co., Ltd. on the southern coast of Vietnam.

The exploration blocks are located at 300 kilometers south-east from Ho Chi Minh City in Vietnam. Teikoku Oil (Con Son) Co., Ltd., Idemitsu Oil and Gas Co., Ltd. (as an Operator) and Nippon Oil Exploration Limited had concluded a production sharing contract with Vietnamese National Oil (Petro Vietnam) in 2004, acquired an investment license from the Vietnamese government and has proceeded with the exploration works.

In addition to the gas and condensate discovery by exploration wells drilled in 2011 and 2013, Joint Venture made a big step forward towards commercialization through the new gas and condensate discovery in a different structure.

Subsequently, after the detailed evaluation of reserves for these discoveries, Joint Venture made a declaration of commercial discovery in August 2016 and the development plan has been commenced.

Lucius Oil Field in US Gulf of Mexico commences oil production

In January 2015, oil production started at the Lucius Project located in US Gulf of Mexico. This project was INPEX's first ultra deepwater production project. The Lucius Oil Field is located approximately 378 kilometers offshore of Louisiana in about 2,160 meters of deepwater and is distributed in the Keathley Canyon 874, 875, 918 and 919 blocks.

INPEX acquired a 7.2% interest in this field, and entered this project, in August 2012 through its US subsidiary Teikoku Oil (North America) Co., Ltd. Anadarko Petroleum Corporation is the operator, and INPEX, with a participating interest currently of 7.75%, is participating in the development and production from this project as a partner with ExxonMobil, Petrobras and Eni.

Produced crude oil and natural gas from the Lucius project are processed at production facilities installed offshore (SPAR platform) with the capacity to produce about 80,000 barrels of oil per day and about 450 million cubic feet of gas per day. The processed oil and gas are sent to the onshore facilities

in Louisiana through the submarine pipelines and are sold and shipped.

Commercial production from this field was achieved in an extremely short period of time, in about five years from its discovery in December 2009. This project enabled INPEX to acquire ultra deepwater operational know-how such as the fast decision making and appropriate risk management by operator, and allowed INPEX to accumulate related technical knowledge.

INPEX awarded ADCO Onshore Concession in Abu Dhabi

In April 2015, INPEX acquired a 5% participating interest, through its subsidiary JODCO Onshore Ltd. (JOL), in the Abu Dhabi ADCO Onshore Concession. The concession is one of the world's largest groups of oil fields producing about 1.6 million barrels of oil per day. INPEX's acquisition is based on a 40-year agreement, starting in January 2015, with the Emirates government and ADNOC. With the concession holding sufficient expected reserves to enable 40 years of production, participation in this large project will contribute to continuing

- Jul Concluded a Heads of Agreement with Chubu Electric Power Co., Inc., for a joint power supply business
- Jul Concluded a contract with JOGMEC concerning the Commissioned Work Small-scale Demonstration of Ceramic Membrane-based Produced Water Treatment Technology
- Jul Commissioned by the Agency of Natural Resources and Energy of the Ministry of Economy, Trade and Industry of Japan to drill an offshore exploratory well in a location offshore of Shimane and Yamaguchi prefectures
- Jul Started power generation at the second construction of the INPEX photovoltaic power generation system Mega Solar Joetsu
- Sep Submitted the revised plan for development of Abadi LNG Project
- Sep Announced an updated production schedule and raised the expected production capacity of the Ichthys LNG Project

- Oct Opened Astana Office in Kazakhstan
- Oct Conducted a short-term flow test in Amemasudake Area, Hokkaido by geothermal power generation joint venture established with Idemitsu Kosan Co., Ltd.
- Nov Commenced crude oil production from Block 14 of Lianzi Field offshore Angola
- Nov Completed construction for 890 kilometers offshore pipeline for the Ichthys LNG Project
- Nov Established Corporate Governance Guidelines
- Dec Further discovery of new oil accumulations in the BM-ES-23 block in the Espirito Santo Basin, offshore Brazil

- Jan Agreed with nine city gas companies in the Tokyo metropolitan area on the supply of wholesale electricity
- Jan Concluded a Natural Gas Sales and Purchase Agreement with Nihonkai Gas Co., Ltd.
- Jan Agreed to sell all participating interest in Block WA-155-P (Part 1) offshore Western Australia to Carnarvon Petroleum Ltd.
- Mar Received authorization to establish the Geological Carbon Dioxide Storage Technology Research Association
- Apr Received notification from the Indonesian government demanding a review of the Abadi LNG Project development plan
- Apr Formulated the Corporate HSE Mid-Term Plan (Phase 3)
- Jun Commenced drilling operations on an exploratory well offshore from Shimane and Yamaguchi prefectures (Completed on Oct 26)
- Jun The Fukushima Geothermal Project Team comprised of INPEX and ten other companies commenced drilling survey (Phase 3) in Bandai District, Fukushima Prefecture for Geothermal Energy Development

- Jul Made final investment decision to expand the Tangguh LNG facility in Berau Block, Indonesia
- Jul Commenced partial operation of the Toyama Line
- Sep Agreed business partnership with three city gas companies (Seibu Gas Co., Ltd., Matsumoto Gas Co., Ltd., Suwa Gas Co., Ltd.) for wholesale electricity supply
- Oct Commenced dispatch of crude oil from Kashagan Oil Field in North Caspian Sea, Kazakhstan
- Oct Completed construction of the Toyama Line
- Dec Acquired interests in Exploratory License for Block 3 (Perdido Fold Belt) of the northern Gulf of Mexico, in Mexico
- Dec Entered the production phase at Zapadno-Yaraktinsky Block Oil Field in Irkutsk, Russia
- Dec Signed a Heads of Agreement with Rosneft Oil Company in relation to cooperation on joint exploration, development and production of hydrocarbon at a license block in the offshore zone of Russia



New oil reservoir discovered at Minami-Kuwayama No. 3 well



Production well drilling started for Ichthys LNG Project



Production facilities at the Kashagan Oil Field



Announcing completion of the Toyama Line

expansion of INPEX upstream businesses.

The ADCO concession consists of 11 oil fields in production and four that remain undeveloped. With the generic name of Murban oil, production from the concession is a high quality light crude with a low sulfur content and high gasoline yield. It is the crude of choice for many buyers in Japan and the rest of Asia. A portion of production from the concession is transported through an onshore pipeline to the port of Fujairah on the Indian Ocean for shipping without having to traverse the Straits of Hormuz.

INPEX discovers new oil reservoir at Minami-Kuwayama Oil Field, Japan

To further develop and enhance the productivity of the Minami-Kuwayama Oil Field in Niigata Prefecture, INPEX spudded the Minami-Kuwayama-3 well in April 2015, resulting in the discovery of a new, 24 meter-thick oil column at a depth of about 3,900 meters. The Minami-Kuwayama Oil Field's reservoirs are mainly located at a depth of 3,000–3,500 meters.

The Minami-Kuwayama Oil Field extends across a vast area within Niigata Prefecture, from Ozeki in Akiha-ku, Niigata City to the northern part of Gosen City.

The oil field is also located in the vicinity of some other oil and gas fields along the Agano River such as the Niitsu Oil Field, Minami-Aga Oil Field and Matsuzaki Gas Field.

The Minami-Kuwayama Oil Field was discovered in 2003 through the Minami-Kuwayama TT-1 exploratory well, which was drilled to explore the depths beneath the area southwest of and adjacent to the Kuwayama Gas Field. Approximately 160,000 kiloliters (about 1 million barrels) of oil were produced at the Minami-Kuwayama Oil Field between the start of production tests in 2004 and 2015, mainly using a jet pump extraction system using CT (Coiled Tubing). Meanwhile, countermeasures were taken to prevent the accumulation of asphaltene within the production wells. INPEX holds a 90% participating interest in the oil field, while TOHO EARTH-TECH, Inc. holds the remaining 10%.

Kashagan Oil Field in Kazakh sector of North Caspian Sea commences full-scale production

In October 2016, INPEX commenced shipment of crude oil from the Kashagan Oil Field, a giant oil field located in the Kazakh sector of the North Caspian Sea. INPEX North Caspian Sea, Ltd., a subsidiary of INPEX, currently holds a 7.56% equity interest in the Kashagan project.

The Kashagan Oil Field is located about 75 kilometers offshore and southeast of Atyrau, the capital of the Atyrau Oblast region of the Republic of Kazakhstan. The oil field lies some 4,200 meters beneath a shallow sea where the water is 3–5 meters deep, and extends over a surface area of approximately 75 kilometers by 45 kilometers with estimated reserves of about 35 billion barrels of oil in place, making it one of only a handful of giant oil fields around the world. In September 1998, INPEX acquired an interest in the Offshore North Caspian Sea Contract Area, joining the consortium members in the discovery of hydrocarbons from the first exploration well in July 2000. INPEX and its partners subsequently drilled appraisal wells confirming oil deposits at each one, leading to the declaration

of commerciality in 2002.

However, after development work on the oil field began in 2004, INPEX and its partners encountered a series of challenges. Conventional rigs could not be deployed due to the extremely shallow depths of the sea, while the oil reservoirs were both highly pressurized and contained high levels of hydrogen sulfide, and working conditions were harsh especially during the frozen winters. Compounding to these challenges was the shift in the project's operational structure whereby the equal shares held by several major oil companies including ExxonMobil and Shell made consensus building difficult. The current operator of the Kashagan Project is North Caspian Operating Company (NCOC), a consortium of seven partners including INPEX and Kaz MunayGas (KMG), Kazakhstan's national oil company.

INPEX and its partners ultimately overcame the challenges and oil production started in 2013. That same year, however, gas leaks in the pipeline forced the project to be suspended and the pipeline was re-laid over a period of about three years. Thereafter, following a series of stringent inspections, production re-started in September 2016.



Toyama Line construction



Basic test drilling work offshore of Shimane and Yamaguchi Prefectures

The Kashagan Project has adopted a phased development plan, in which the production target for the initial phase has been set at 370,000 barrels of oil per day. INPEX and its partners are currently engaged in production and development activities to meet this target.

INPEX completes Toyama Line (natural gas trunk pipeline extension)

In October 2016, INPEX held a completion ceremony for the Toyama Line, a natural gas trunk pipeline linking Itoigawa City in Niigata Prefecture to Toyama City in Toyama Prefecture. With this new line, the INPEX natural gas pipeline network in Japan is now about 1,500 kilometers long.

INPEX started discussions on this pipeline around the year 2000. However, with the 2008 decision to build the Naoetsu LNG Terminal, Nihonkai Gas Co., Ltd. expressed desire to have natural gas supplied via the pipeline. INPEX took the opportunity and started full-scale surveys and investigations in 2009. With results pointing to the feasibility of the line, the final investment decision was made in May 2011 and a groundbreaking ceremony was held in April 2012. During construction, INPEX engaged with local communities, and earned their understanding and cooperation, while ensuring operational safety at all times. Construction work of the 103 kilometer pipeline was then completed in June 2016.

From July 2016, INPEX commenced partial operations of the Toyama Line to the Toyama plant of Nissan Chemical Industries, Ltd. Then later in October 2016, INPEX commenced supply of natural gas to the Iwase plant of Nihonkai Gas.

INPEX drills Shimane-Yamaguchi Oki exploratory well commissioned by Japanese government

An exploratory well offshore Shimane and Yamaguchi prefectures commissioned by the Agency of Natural Resources and Energy of the Ministry of Economy, Trade and Industry (METI) of Japan was drilled in 2016 at a location approximately 130 kilometers northwest of Shimane Prefecture and 140 kilometers north of Yamaguchi Prefecture where the water depth is approximately 210 meters. The drilling operations, which were ultimately impacted by adverse weather conditions, began in June 2016 and were completed without incident in October 2016. The well was drilled to a depth of 2,900 meters below the seabed resulting in the discovery of a thin gas reservoir in a shallow zone as well as some gas indications in deeper zones. In addition, strong gas indications were confirmed, suggesting the presence of a high pressure gas column in the deepest zone. The location of the well was selected based on intelligence gathered from a three-dimensional geophysical survey that INPEX conducted in 2013 as well as the results of a government-sanctioned national geophysical survey conducted by the seismic survey vessel SHIGEN in 2011.

The project was part of the Heisei 26–28 Domestic Offshore Drilling Program in Japan formulated by the national government in order to investigate the potential for new oil and gas sources in Japan. This was the first government-commissioned drilling program that INPEX undertook after its consolidation.

It is highly significant that the project was successful in confirming the presence of natural gas in the area, where exploratory drilling had not taken place since the 1980s, and that it was implemented with the understanding and cooperation of the local communities and other stakeholders in both Yamaguchi and Shimane prefectures.

- Jan Launched the low pressure production system at Koshijihara Plant, Minami-Nagaoka gas field
- Jan Agreed in principle with ADNOC to extend the duration of joint development of the Satah and Umm Al Dalkh oil fields offshore Abu Dhabi, UAE
- Feb Discovered an oil reservoir at Block 10 in Iraq
- Mar Concluded an agreement in principle with Astomo Energy Corporation on the sale of LPG from Ichthys LNG Project
- Mar Completed construction of the Demonstration Plant for Produced Water Treatment at Yabase Oil Field
- Mar Commenced commercial operation of the first unit of the Sarulla Geothermal Independent Power Producer Project in Indonesia

- Mar Sold all shares in INPEX NATUNA Ltd., to PT Medco Daya Sentosa
- Apr Established the Domestic Energy Supply & Marketing Division through the reorganization of the Oil & Gas Business Division 2 and Gas Supply & Infrastructure Division
- Apr Ichthys LNG Project's central processing facility (CPF) sailed away from the construction site in Geoje, Korea
- May Established the INPEX Group Human Rights Policy
- Jun Sold the participating interest in Block PDL3 in Papua New Guinea to the national oil and gas company of Papua New Guinea
- Jun FLNG facility for Prelude FLNG Project sailed away from the construction site in Geoje, Korea



Drilling wildcat wells at Exploration Block 10 in Iraq

INPEX discovers oil reservoir at Exploration Block 10 in Iraq

INPEX launched its first project in the Republic of Iraq in 2012 with the acquisition of a 40% participating interest in Exploration Block 10 located 150 kilometers west of the city of Basra in southern Iraq, through its subsidiary INPEX South Iraq, Ltd. Block 10 covers an area of about 5,600 square kilometers. In February 2017, INPEX succeeded in discovering deposits of quality oil through an exploration well drilled at the block. Crude oil production tests that were subsequently conducted confirmed the discovery of a highly productive oil reservoir with a production volume capacity of more than 8,000 barrels per day. These results suggest a high probability of discovering a large oil field depending on the evaluation results of additional exploration activities.

Block 10 is operated by Lukoil Overseas Iraq Exploration B.V., a subsidiary of Russia's LUKOIL with a 60% participating interest. INPEX and LUKOIL were successfully awarded rights to explore Block 10 in 2012 through a licensing round organized by the Iraqi government, and signed a 30-year service



Low-pressure extraction equipment begins operation at Koshijihara Plant, Minami-Nagaoka Gas Field

contract including a 5-year exploration period and a requirement to conduct seismic surveys and drill an exploration well. Following the discovery of quality oil deposits through the first exploration well, a second exploration well was drilled and also produced positive production test results. INPEX and LUKOIL will conduct further exploration work to study commercial development opportunities.

INPEX commences compressor plant operations at Koshijihara Plant, Minami-Nagaoka Gas Field, Japan

In April 2015, INPEX began installing a compressor at the its Koshijihara Plant to increase supply capacity and recoverable reserves at the Minami-Nagaoka Gas Field, one of Japan's largest gas fields. Following the completion of this installation work in December 2016, the infrastructure was put into operation in January 2017 and now runs all year round.

INPEX began production operations at the Minami-Nagaoka Gas Field in 1984, and the gas field has since become a cornerstone of the company's domestic natural gas business. The new infrastructure is expected to increase recoverable gas and

- Jul Strengthened LNG marketing and legal functions
- Jul Ichthys LNG Project's Floating Production Storage and Offloading (FPSO) Facility sailed away from the construction site in Okpo, Korea
- Jul Chubu Electric Power Co., Inc., and Diamond Power Corporation (DPC) decided to supply wholesale electricity to Ueda Gas Co., Ltd., Nagano Toshi Gas Co., Ltd., and Honjo Gas Co., Ltd.
- Aug Established the Gas Business Development Unit in the Global Energy Marketing Division
- Sep LNG ship for delivering Ichthys LNG to CPC Corporation, Taiwan was named "PACIFIC BREEZE"
- Sep Extended the duration of the production sharing agreement for ACG oil fields in the Caspian Sea, Azerbaijan by 25 years

- Sep Acquired the participating interest in exploration license PL767 located in the western Barents Sea, Norway
- Oct Transferred the New Business Planning Unit of the Corporate Strategy & Planning Division into a standalone organization and renamed it the Renewable Energy & Power Business Unit
- Oct Commenced commercial operation of the second unit of the Sarulla Geothermal Independent Power Producer Project in Indonesia
- Oct LNG ship for delivering Ichthys LNG to the INPEX Naoetsu LNG Terminal was named "OCEANIC BREEZE"
- Nov Acquired 100% interest in the Exploration Block WA-532-P offshore Western Australia

- Nov Conducted short-term flow tests in the Oyasu region, Akita Prefecture by Geothermal power generation joint venture established with Idemitsu Kosan Co., Ltd.
- Nov Agreed to increase production capacity from the Upper Zakum Field offshore Abu Dhabi to 1 million barrels per day by 2024; The concession of the oil field was extended until the end of 2051
- Dec Agreed to extend the duration of the concession for the Offshore D.R. Congo Block for a period of 25 years
- Dec Surrendered offshore Mahakam Block and the Attaka Block in Indonesia



Production facilities at the ACG oil field concession in the Caspian Sea



Fumarolic testing for the Sarulla Geothermal Power Generation Project



Operation started at Sarulla Geothermal Power Generation Plant (2017)

condensate reserves of gas and condensate by about 20%, and to extend the oil field's production life by about 20 years.

As of March 31, 2018, cumulative production from the Minami-Nagaoka Gas Field reached 24 billion cubic meters of natural gas and, 3.6 million kiloliters of condensate and oil, while the average daily production volume for fiscal year 2017 was 3.78 million cubic meters of natural gas and, 540 kiloliters of condensate and oil.

Production sharing agreement for ACG oil fields in Caspian Sea, Azerbaijan, extended by 25 years

Since 2003, INPEX has been engaged through its subsidiary INPEX Southwest Caspian Sea, Ltd. in the development and production of crude oil in the Azeri-Chirag-Deepwater Gunashli (ACG) oil fields in the Azerbaijan sector of the Caspian Sea, where oil production began in 1997. In September 2017, INPEX and its partners entered into an agreement with the State Oil Company of the Azerbaijan Republic (SOCAR) to extend the duration of the production sharing agreement by 25 years until December 31, 2049.

The ACG oil fields are located in the southwestern Caspian Sea about 100 kilometers east of Baku, the capital of the Republic of Azerbaijan, and cover an area of about 432 square kilometers. The oil fields consist of the Azeri Oil Field, Chirag Oil Field and Deepwater Gunashli Oil Field. During the first half of 2017, the oil fields produced an average of 585,000 barrels of oil per day. With BP as operator, six platform rigs have been constructed in the ACG contract area and production wells and injection wells extend from these platform rigs. After the produced oil is processed at a floating facility, it undergoes final processing at an onshore facility. International shipping has become much more efficient thanks to the completion of the Baku-Tbilisi-Ceyhan (BTC) Pipeline in 2006. The pipeline links Baku, the capital of Azerbaijan, with Ceyhan in the Republic of Turkey. INPEX has a 2.5% participating interest in the BTC Pipeline, and also has capacity rights to use the line.

As part of the production sharing agreement extension, all shareholders in the ACG oil fields, with the exception of SOCAR, transferred an equal proportion of their participating interests to SOCAR. As a result, INPEX's participating interest

in the ACG oil fields decreased from 10.96% to 9.31%. Despite this, INPEX expects the production volume across the entire contract area to increase by more than two billion barrels over the 25-year extension period, in addition to economic advantages brought on by revised financial terms and conditions.

Sarulla Geothermal Independent Power Producer Project commences commercial operations

In 2015, through its subsidiary INPEX Geothermal Sarulla, Ltd., INPEX joined the Sarulla Geothermal Project under Independent Power Producer (IPP) scheme in the Sarulla Concession in North Sumatra Province, Sumatra Island, Indonesia. This is world's largest project of its kind. In addition to being INPEX's first renewable energy project outside Japan. The Sarulla initiative is also in line with the company's Medium- to Long-Term Vision. As a large scale geothermal development, it will provide electricity to Indonesia, a country where INPEX has been conducting oil and gas exploration for many years. This project is expected to contribute to the economic development of Indonesia.

In this project, INPEX joined Sarulla Operations Ltd., a special purpose company established by ITOCHU Corporation, Kyushu Electric Power Co., Inc., PT Medco Power Indonesia, and Ormat Technologies, to construct geothermal power generation plants with total output of approximately 330 MW. All electrical power generated will be sold to Perusahaan Listrik Negara, Indonesia's government-owned electricity company, for a period of 30 years.

The construction on the power plant started in 2014. The first unit commenced commercial operation in March 2017, and the second unit in October 2017. Both units produce approximately 110 MW of electricity. In May 2018, the third unit also commenced commercial operation. The total electricity output is now approximately 330 MW, achieving the planned output, providing enough electrical capacity to power 2.1 million households in Indonesia.

- Jan Acquired interests in Exploration License PL950 in Western Barents Sea, Norway
- Jan Acquired interests in Exploration License for Block 22 (Salina Basin) of the southern Gulf of Mexico, Mexico
- Feb Acquired the participating interest in the Lower Zakum concession offshore Abu Dhabi and extended the concession of the Satah and Umm Al Dalkh oil fields for a period of 25 years
- Mar Acquired a 100% participating interest in Exploration Block WA-533-P offshore Western Australia
- Mar Commenced Pre-FEED work for the Abadi onshore LNG Project

- Apr Appointed as Asset Leader for the Lower Zakum Oil Field offshore Abu Dhabi, UAE
- May Commenced commercial operation of third unit of Sarulla Geothermal Independent Power Producer Project in Indonesia
- May Formulated the Vision 2040 and Medium-term Business Plan 2018–2022
- May Completed all commissioning of Ichthys LNG Project required for the start of production
- Jun Takayuki Ueda became the President & CEO
- Jun Established Abu Dhabi Project Division and Renewable Energy & Power Business Division

- Jul Commenced production in Ichthys LNG Project
- Oct Commenced condensate shipment from Ichthys LNG Project
- Oct Commenced LNG shipment from Ichthys LNG Project (for Naoetsu)
- Oct First LNG carrier from Ichthys LNG Project arrived at Naoetsu LNG Terminal
- Nov Commenced LNG shipment from Ichthys LNG Project
- Nov Held commemoration ceremony for the start of operations and arrival of LNG from Ichthys LNG Project, in Darwin and Naoetsu
- Dec Started production from the production well of the Prelude FLNG Project in Australia



Drillship for the Abadi 2nd Drilling Campaign in 2002



Appointed as Asset Leader for Lower Zakum Oil Field Japan-UAE Business Forum (Photo: JETRO)



From left: Chairman Toshiaki Kitamura and President Takayuki Ueda launching the new organizational structure in June 2018



First condensate shipment from Ichthys LNG Project at Ichthys Venture

INPEX acquires exploration licenses in Mexico and Norway

In Norway, INPEX had conducted a series of evaluations on exploration potential in offshore areas and made approaches for participation in promising concessions through its subsidiary, INPEX Norge AS, established in 2014. As a result, it acquired a 40% participating interest in September 2017 in the exploration license PL767, operated by Lundin Norway, being located in the southwestern part of the Barents Sea offshore of Norway. In August 2017, INPEX made a joint bid with Lundin Norway on an open area in the western part of the Barents Sea, and consequently acquired a new license PL950 in January 2018 with a participating interest of 30%. PL950 was the second exploration project for INPEX Norge in Norway.

In Mexico, INPEX, through its subsidiary INPEX E&P Mexico, S.A. de C.V., teamed up with subsidiaries of US company Chevron, Energia de Mexico, S de R.L. de C.V. and Mexico's state-owned petroleum company Pemex Exploración y Producción S.A. de C.V. to make a joint bid in round 2.4 of Mexico's bidding process for a deepwater exploration concession. INPEX E&P Mexico, S.A. de C.V. acquired the

Exploration Block 22 AP-CS-G03 with a 35% participating interest together with Chevron (operator with 37.5%) and Pemex (27.5%) in January 2018. The block is located in the Salina Basin in deep water in the southern Gulf of Mexico, and it was the second block in Mexico for INPEX, after the acquisition of a 33.3333% interest in Block 3 in the Perdido area in the northern Gulf of Mexico in 2016, together with subsidiaries of Chevron (operator with 33.3334%) and Pemex (33.3333%).

This string of exploration block acquisitions helped expanding INPEX's exploration portfolio in its prioritized exploration areas.

Abadi LNG Project enters Pre-FEED

The Abadi LNG Project is operated by the INPEX subsidiary INPEX Masela, Ltd. which was established for the development and production of the Abadi Gas Field, which was discovered in 2000.

The Abadi Gas Field is located 150 kilometers off the coast of the Tanimbar Islands, east Indonesia. INPEX Masela, Ltd. formulated a development plan in 2010 using a floating LNG

(FLNG) concept, with equipment for treatment, liquefaction, storage, and offloading of natural gas to achieve annual LNG production of 2.5 million tons. It obtained approval from the Indonesian government and started front-end engineering and design (FEED) work. Because significant increase of gas reserves was confirmed through appraisal wells drilling, it submitted a revised development plan to the government in 2015 with increased annual LNG production capacity of 7.5 million tons.

However, in April 2016, the Indonesian government requested that INPEX should reconsider development as an onshore LNG scheme. After a series of constructive discussions with its partner Shell and the government, it was decided to develop the Abadi Gas Field as an onshore LNG project with annual LNG production capacity of 9.5 million tons. From March to October of 2018, Pre-FEED (conceptual design) work was conducted ahead of the FEED work.

INPEX appointed asset leader of Lower Zakum Oil Field offshore Abu Dhabi

In April 2018, INPEX was appointed by ADNOC as the

Asset Leader for the Lower Zakum Oil Field where it had a 10% participating interest through its subsidiary JODCO Lower Zakum Limited. In addition to INPEX's announcement in a press release dated April 30, the appointment was also announced at the Japan-UAE Business Forum held on the same day in the presence of Japan's Prime Minister Shinzo Abe who was visiting Abu Dhabi.

Asset Leader is a new system adopted for new ADCO interests. One foreign partner per asset group is appointed to the role and advises ADNOC on development and production of the assets. The role also entails working closely with the operator of the Lower Zakum Oil Field to achieve production targets, review optimal EOR technologies, reduce costs, transfer technologies and conduct other work.

INPEX was appointed to this role in recognition of its involvement in oil development and production projects in Abu Dhabi, and its efforts to resolve a range of technical challenges. It was the first time that a company other than one of the oil majors was appointed as Asset Leader for a giant offshore field in Abu Dhabi.

With 45 years' experience working in Abu Dhabi, INPEX has been involved in a broad range of technology areas, including regional geology, IOR/EOR (secondary and tertiary recovery), asphaltene issue, geomechanics and rock physics, drilling and well completion, oil reservoir characterization and modeling, production and facilities, development planning and multi-disciplinary integrated studies. This knowledge and these technologies are INPEX's strengths. Through fulfilment of its responsibilities as an Asset Leader, it endeavors to further improve its technical capabilities.

INPEX is also the only international oil company with interests in both the Lower and Upper Zakum Oil Fields, so it plans to leverage this position to maximize synergies in the development of both fields.

INPEX expects to gain greater coordinating and negotiating capabilities by coordinating development plans for these giant oil fields with ADNOC and the major oil companies as Asset Leader of the Lower Zakum Oil Field, involved in offshore Abu Dhabi oil development with a complex array of stakeholders. Specifically, this means putting together Lower Zakum Oil Field partners (an Indian consortium, China's CNPC, Italy's ENI and France's Total) and working with the Upper Zakum Oil Field partner (ExxonMobil) to discuss the synergies between the two oil fields.

Ichthys LNG Project celebrates operational commencement

The Ichthys LNG Project, which INPEX is undertaking as operator, commenced production of gas from the wellhead in July 2018 following the completion of final safety verifications. Shipments of offshore condensate (ultra-light crude oil) from the floating production, storage, and offloading facility (the Ichthys Venturer) started in early October 2018. In addition, the long-awaited first shipment of LNG from the onshore LNG liquefaction plant in Darwin began in late October 2018. This first shipment of LNG was delivered to the Naoetsu LNG Terminal operated by INPEX in Niigata Prefecture in Japan at the end of October, organically linking the company's LNG development business overseas to its gas distribution network in Japan. Shipments of LPG from the onshore gas liquefaction plant in Darwin started in mid-November.

To celebrate the Ichthys LNG Project's smooth startup

of operations, the Ichthys LNG Production Commencement Ceremony was held at the Darwin Convention Center on November 16.

The ceremony was attended by about 400 individuals including Prime Minister Shinzo Abe of Japan, Prime Minister Scott Morrison of Australia, Minister of Economy, Trade and Industry Hiroshige Seko of Japan, Minister for Resources and Northern Australia Matthew Canavan, Chief Minister of the Northern Territory Michael Gunner and other government officials from both countries as well as the buyers of the LNG and LPG produced from the project, financial institutions involved in project financing, project partners, members of local communities, other project stakeholders and INPEX directors and employees. At the ceremony, the participants celebrated the commencement of operations of the Ichthys LNG Project positioned as a symbol of the cordial relations between Japan and Australia.

Prior to the ceremony, Minister of Economy, Trade and Industry Hiroshige Seko of Japan, Minister for Trade, Tourism and Investment Simon Birmingham, Minister for Resources and Northern Australia Matthew Canavan of Australia, and Minister for Primary Industry and Resources Kenneth Vowles of the Northern Territory participated in a plaque unveiling ceremony officially marking the startup of operations of the Ichthys LNG Project's onshore gas liquefaction plant. The plaque was unveiled by Ministers Seko and Birmingham to the applause of the many INPEX workers and others in attendance. The plaque is inscribed with the names of all the Japanese and Australian ministers in attendance and will watch over operations at the plant site for the next 40 years and beyond.

Meanwhile, another ceremony was held on November 29 in Joetsu City, Niigata Prefecture, where LNG from the first Ichthys LNG tanker was received at the Naoetsu LNG Terminal, to celebrate the offtake of LNG from the Ichthys LNG Project.

The event was attended by project stakeholders including Ryo Minami, Director-General, Natural Resources and Fuel Department, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry (METI), His Excellency the Honourable Richard Court, Ambassador of Australia to Japan, Noboru Ohno, Director-General of Regional Development of Joetsu City, Niigata Prefectural Government Office, and Hideyuki Murayama, Mayor of Joetsu City. Also present were natural gas customers based in Japan.

The event included the screening of a video featuring the history of the Project beginning with INPEX's acquisition of the offshore exploration permit and ending with the arrival and unloading of the Project's first LNG cargo at the Naoetsu LNG Terminal. The event served as a demonstration to Project



Full-page advertisement in the *Nikkei* Newspaper (November 16, 2018)



Ceremony held to commemorate receipt of LNG from the Ichthys LNG Project

stakeholders of INPEX's significant step toward the development of a global gas value chain business.

Following the commencement of LNG shipments in October 2018, LNG production at the Ichthys LNG Project will gradually increase and will reach a plateau production volume of approximately 8.9 million tons per year, which is equivalent to more than 10% of Japan's annual LNG imports. (Initial plans at FID consisted of producing 8.4 million tons per year, but following a review in September 2015, the production output target was increased by approximately 6%). The Ichthys LNG Project will also produce approximately 1.65 million tons of LPG per year as well as 100,000 barrels of condensate per day at peak.



Ichthys LNG Project Production Commencement Commemorative Ceremony
From left: INPEX Chairman Toshiaki Kitamura, Chief Minister of the Northern Territory Michael Gunner, Prime Minister Scott Morrison of Australia, and Prime Minister Shinzo Abe of Japan



Ichthys LNG Project Production Commencement Commemorative Ceremony
Hiroshige Seko, Minister of Economy, Trade and Industry in Japan (third from left) takes the lead in breaking open the ceremonial sake barrel

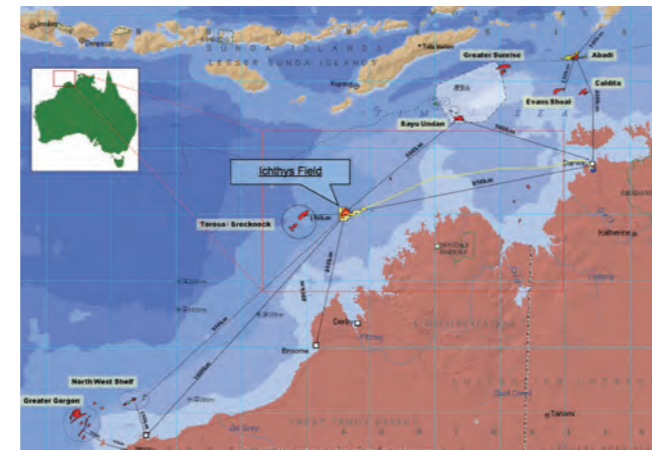
INPEX, bringing forth the bounty of Ichthys

From the northwest continental shelf of Australia, at the turn of a new century, gradually expanding ripples were being created. An ancient fish more than 10 meters long was brought to the peaceful surface of the sea. Slowly, over the 18 years since this gas and condensate field was discovered, the bounty of those ripples has now reached Asia and Japan. The story of “Ichthys,” of this magnificent ancient fish, started from a single challenge.

Discovery of the Ichthys Gas-condensate Field

The Ichthys story started 12 years after the arrival of the former INPEX in Australia in 1986. During that period, the former INPEX managed to discover several oil fields and begin production on the northwest continental shelf of Australia, which includes the Timor Sea, through joint projects with BHP Petroleum (currently BHP Billiton) and other operators.

Through these various projects, the former INPEX had independently evaluated the area of offshore Western Australia as having further potential for exploration. Then, in 1998, the



Location of the Ichthys Field



Contract area 2018 (left) compared to the original acquisition in 1998 (right)



Mixed Japanese/Australian team at Perth Office, Level 17, Central Park Tower (January 1999)

Australian authorities opened up the 5,000 square kilometers WA-285-P Block, which was an area they had kept closed for many years.

Acquiring this block would give a boost to the company’s business expansion in Australia, as well as an excellent opportunity to consolidate its presence in the country. At that time, the company was expanding its businesses in other regions as well, and had to strive to overcome staff shortage and spread exploration risk. Based on its own evaluations, the company attempted to enlist the major oil companies in joint bidding proposals but failed to reach agreement. After deciding to make an independent bid, the former INPEX was awarded the block in August 1998. With both expectations and uncertainties, this was the company’s first challenge to take on an exploration operatorship outside of Indonesia.

To overcome the staff shortage, the company sourced local staff in Perth by using the local network it had built up over more than 10 years of joint projects. While preparing to open up its regional office, the company applied to the government and other relevant authorities for licenses and approvals. As a result, two-dimensional seismic surveys were successfully conducted in the block the same year. Through analysis of the newly acquired seismic prospecting data, three potential prospects were confirmed as candidates for obligatory test drilling work as independent structures in the northwestern part of the block. While starting the drilling preparation works in 1999, the company vigorously pursued the option of farming out* some of the work to major oil companies as an attempt to spread risk. Unfortunately, no company followed the option this second time either.

From March 2000, exploration activities continued by drilling three exploration wells in the prospects. Praying for the successful discovery of a large-scale oil and gas field, the company named the wells “Dinichthys,” “Titanichthys,” and “Gorgonichthys” after the scientific names of giant fossilized fishes.



Sedco 703 drilling rig in operation at “Dinichthys-1,” the first exploration well drilled during the first round of drilling



Drill stem test at first exploration well

Production tests were conducted on the first well, “Dinichthys-1,” with a successful production of large volumes of gas and condensate. Then, the following two test wells recorded even greater volumes of production, so the wells lived up to their names.

* To reduce capital burden, owners of exploration and development rights may retain part of a concession for themselves and transfer the remaining portion to others.

The prospects were originally expected to be independent of each other. However, after analyzing the geological features of the exploration wells, geophysical logging and drill stem test (DST) data, the former INPEX decided that the three structures could very likely be part of a single giant structure. After the success of the exploration wells, three-dimensional seismic surveys were conducted in 2001 to ascertain the size of the giant structure. At the same time, various geological evaluations were carried out, including the analysis of core samples from the three exploration wells, and an integrated interpretation was

conducted. As a result, the company came to the conclusion that there probably were commercial quantities of gas and condensate lying in that giant structure. Then, in 2002, the structure was named “Ichthys” the suffix in the names of all three test wells, which on its own means “fish” in Greek language.

A second drilling round commenced in June 2003, with three exploration wells being drilled. As expected, all three wells were successful, which confirmed the continuous nature of the reservoir. This clarified the presence of a giant underground gas and condensate field that could be commercially developed. The former INPEX then applied to the Australian government for permission to investigate commercialization of the giant gas and condensate field and other regions. Authorization was received in May 2004.

Wanting to develop on its own

In 2000, the year of the Ichthys’ successful exploration drill, the former INPEX was conducting exploration projects as an operator and discovered the giant Abadi Gas Field in the Masela concession in Indonesia, and confirmed the extent of the gas and condensate reservoir. The company was faced with a difficult internal management decision—how to develop the two giant gas and condensate fields of Ichthys and Abadi that were discovered at the same time. After through consideration, the company realized the importance of the concept of liquefying the production gas for sale as LNG. However, this concept involved the construction of production wells, offshore facilities, pipelines, and gas liquefaction plants, and this required an enormous investment. Despite listing on the First Section of the Tokyo Stock Exchange in November 2004, the former INPEX only had consolidated sales of 218.8 billion yen and a workforce of 269 employees, which fell short of the human resources and capital required.

On the other hand, other companies which had heard of the large-scale gas and condensate field discovery did approaches to obtain a partial interest in Ichthys and even the role of development operator. However, the former INPEX did not choose that road and, being already involved in oil and gas development business, it naturally had a strong desire to develop and produce on its own this giant field that it had so painstakingly found by itself. Additionally, the successful development and production of Ichthys field would give the company a solid track record as an international operator, which would in turn increase the possibility of obtaining new development concessions. Up to that point, the former INPEX had participated only as non-operator in many exploration and development

projects, but it had learned and acquired knowledge from other major and large independent oil companies. In other words, the former INPEX chose the road that offered the most growth as a development and production operator.

But the road to development was not easy

Before producing LNG, an LNG plant for processing and liquefying the gas had to be constructed. From estimated reserves at Ichthys, the company forecast expected production of millions of tons per year. This meant that a large facility would be needed, as well as a large construction site.

In 2005, the local Perth Office started to consider in detail the options of development concepts and conceptual designs, including construction site candidates for the LNG plant, in continuation to the work already started in 2002. Because the construction of an LNG plant has an enormous financial and environmental impact on the surrounding area, the agreement of local governments and residents was essential. Australia in particular has considerable respect for environmental sustainability and for the rights of indigenous Australians. Careful investigation from many perspectives was needed, in addition to studying the technical and economic effects of developing the potential site candidates. As such, narrowing down the number of site candidates was not easy.

At the same time, the gas division of the former INPEX started marketing activities in Japan to secure buyers for its LNG. To successfully raise a large amount of funds and investment return, the company had to secure long-term LNG buyers in advance. This was necessary to fulfil the conditions for the final investment decision (FID). With this in mind, the marketing unit started reaching out to potential buyers such as Japanese electricity and city gas companies. However, due to the oversupplied market, Japanese buyers were taking a cautious approach to procuring LNG by signing a new contract. Therefore, meetings with buyers did not go as smoothly as planned.

Gaining support and beginning the journey

The former INPEX was determined to develop the field on its own, and had made progress with difficulty through trial and error. But then some powerful partners arrived. With the establishment of INPEX Holdings, Inc. in April 2006, the company acquired the support of Teikoku Oil, which had operation experience both in Japan and overseas.

Additionally, the successful execution of the project also required the participation of major oil companies with financial strength, abundant experience in LNG technologies, and involvement in many global LNG projects. As a result of the selection process, joined the Ichthys LNG Project in August 2006 with a participating interest of 24%. The former INPEX had already been involved with Total through various projects, including the Offshore Mahakam Project in Indonesia. With Total’s participation, this project was able to make a giant leap forward.

Concurrent with these changes, the Department of Industry, Tourism and Resources of Australia stated that they expected the development of Ichthys to contribute to the economic development of Australia for many years. The project was granted Major Project Facilitation status, which provided support for fast-tracking the necessary licenses and approvals from the federal government, state government, and related local authorities.

The former INPEX head office also established an internal Ichthys Project Division to connect the overseas site and head office departments. It served to advance and manage the project, and to provide business support, which completed a companywide structure to promote the development.

There were also important moves in the site selection activities for the LNG plant. With the Perth Office pushed in all directions, the Northern Territory government hoped to attract the LNG plant to Darwin as one of the potential construction site candidates in November 2007. Darwin had the drawback of being located about 900 kilometers from Ichthys field, which meant increased costs associated with the pipeline, but it had environmental, and infrastructure advantages over other sites. After giving the matter detailed consideration, the former INPEX decided that constructing the LNG plant in Darwin was the best among a number of possible options. After coordinating with all parties, the company signed a Project Development Agreement (PDA) with the Northern Territory government in July 2008. The agreement was for long-term land use and other matters, and then in September 2008, it made the formal decision to construct the LNG plant in Darwin.

Then, in October 2008, after merging into the current INPEX Corporation, INPEX laid out the organizational structure for the Ichthys LNG Project. In January 2009, front end engineering design (FEED) work started and project development got into full swing.

FEED work includes series of thorough investigations

Between 2007 and 2008, an additional two wells were drilled at Ichthys and INPEX gained a deeper understanding of the breadth and other characteristics of the gas reservoir. In 2010, three-dimensional seismic surveys of the area were conducted, and the latest available technique were used to understand the finer details of the Ichthys field structure and to form the base of Ichthys field development planning thereafter.

INPEX applied this data to the FEED work it had commenced in 2009 to investigate a range of development methods and optimal production volumes. It then used the results to determine actual specifications for the production wells, the subsea production facilities, the offshore production, processing and offloading facilities, the subsea pipeline, and the LNG plant. At the same time, it started the process toward selecting an engineering, procurement, and construction (EPC) contractor who would do the actual construction work of the facilities.

While the FEED work was progressing, INPEX thoroughly investigated other previous projects in addition to conducting the basic design work and risk analysis. The investigation included several case studies on schedule delays and cost overruns that actually occurred with large-scale LNG projects in the past. In light of that, company specifications were carefully produced for their use in the tendering processes to select an EPC contractor for each package. From the end of 2010, cost, quality (technical capability) and procurement evaluations were conducted to select EPC contractors. This was done in cooperation with head office specialist resources, for coordination/negotiation with the EPC contractors. As a result, EPC contractors that were highly reliable in Japan and overseas were selected. INPEX then worked carefully with the contractors to look at the FEED results and prepare for the FID.



Additional well drilled to confirm the finer details of the Ichthys Field structure



Briefing for local residents in Darwin

Approvals acquired for FID

In addition to technical and economic verification of the development plan, there were three critical matters for the final investment decision (FID): 1. acquiring licenses and approvals from government, 2. raising funds, and 3. securing buyers.

The basic requirement for acquiring environmental approvals was that construction of the large LNG plant did not negatively impact the natural environment or local communities. Environmental examination began with the delivery of the results of an environmental impact study to the government in April 2010. INPEX took the local situation into consideration and the examination included an eight-week public review process. This was twice the legally-mandated period and, in addition, a briefing was held in Darwin to gain the understanding of locals, as well as to conduct an extensive gathering of opinions from local residents. Thanks to the careful way the process was handled locally, the Northern Territory environment minister granted approval in May 2011, with the federal government environment minister following suit in June 2011. INPEX then continued the process of getting the agreement of local residents. From a survey conducted, more than 80% of residents who knew about the Ichthys LNG Project were in favor of the project.

Licenses for laying the gas export pipeline from the Ichthys Field to Darwin were received from each administrative jurisdiction in May 2011. In April 2011, together with the submission of the concession development plans, INPEX also applied to the Australian federal government and Western Australian government for production licenses in the Ichthys Field, and then received the production license offer in November of that year.

Capital increase and project financing

Raising a large amount of funds was another big challenge when developing Ichthys project. INPEX had to strengthen its own financial position to obtain the massive bank loans it

needed to carry out this upstream development project involving a considerable number of uncertainties. In August 2010, the company increased its capital by about 520 billion yen through a public offering.

Despite being one of the largest capital increase in the Tokyo stock exchange market at that time, and some existing shareholders being critical in a dilution of share price, the management team visited and explained to investors in Japan and overseas to convince them that the development of Ichthys would contribute to increase profits in the future and greatly enhance share price value, and, as a result, INPEX managed to raise funds mostly as planned.

Improving its consolidated capital account from about 1.4 trillion yen as of March 31 2010 to about 2 trillion yen as of March 31 2011, INPEX was able to secure the equity capital for developing Ichthys project and achieve a stronger financial position necessary for obtaining the massive bank loans.

Next, the company focused its efforts on obtaining non-recourse financing* through a large international syndicate. INPEX had experience acquiring corporate loans from Japanese banks, such as Japan Bank for International Cooperation (JBIC) or Japan's three megabanks, with JOGMEC and INPEX's guarantees. However, because of the immense size of Ichthys investment, a level of financing was required that Japanese banks alone could not cover. Therefore, INPEX needed a scheme whereby it would borrow jointly with Total inviting overseas banks as well.

* Non-recourse financing: A loan where the repayment is made out of project cash flow only with security over the project assets, so that lenders are not entitled to recourse to sponsors (parent companies).

Luckily there were no country risk concerns with Australia, and shareholders (partners), INPEX, Total and the various utility companies buying the LNG had all excellent creditworthiness. The forecasted earnings from LNG were solid, and the price of oil at the time was high. For all these reasons, INPEX sought a financing method based on future cash flow from Ichthys LNG Project being used for repayments. Preparations started in 2009 and included many meetings with Total, financial advisors, and lawyers. The initial talks were with JBIC, the biggest potential lender which required relatively stringent conditions. The project was also presented to Nippon Export and Investment Insurance (NEXI), JOGMEC, overseas export credit agencies, and Japanese and Australian banks capable of providing large loans. After preparing a full set of documents on the project, serious negotiations with the financial institutions began in April 2011.

Unlike corporate financing, with shareholders guaranteeing

the debt, in project financing the lending institution carries the repayment risk once the completion guarantee is released. For this reason, INPEX was hit with a barrage of questions from financial institutions around the world who wanted to analyze the project risk. The Finance Unit set about answering the questions with the cooperation of external advisors in a range of fields, in addition to internal engineers and field experts. In May 2012, INPEX launched a syndication putting together major terms and conditions, and received finance amounts and interest offers from banks. Terms and conditions were further negotiated while completing a massive amount of work on documentation of agreements. Finally, in December 2012, finance-related agreements were signed for the unprecedented total amount of 20 billion US dollars, from eight Japanese and overseas export credit agencies and 24 commercial banks.

Despite an adverse situation, INPEX secures buyers through ongoing serious dialogue

Gas Business Unit was going through difficulties to secure LNG buyers, which was another requirement for the FID. Due to the global financial crisis of 2008, the LNG demand forecasts were revised downward and, therefore, domestic buyer requirements became even stricter than ever before. With the difficulty of finding enough domestic buyers for the entire production, INPEX started communications with buyers overseas in mid-2010. Despite the regular visits and close communication with domestic and overseas buyers, it was tough to reach the stage of negotiating detailed terms and conditions.

In the beginning of 2011, INPEX finally received a concrete counteroffer from one buyer, which triggered progress in discussions with other buyers and drew closer to agreements. On such occasion, in March 2011, the Great East Japan Earthquake struck Japan. Due to this unprecedented event, the negotiations were almost stalling again, but INPEX marketing unit continued sincere dialogue with buyers. Finally, at the end of June 2011, INPEX succeeded in reaching basic agreements with 10 buyers. By the time of FID in January 2012, the company had already signed long-term LNG sales and purchase agreement for the full production.

Arranging the largest ever construction insurance

With the help of its Logistics & Insurance Unit, INPEX negotiated the details of construction insurance, needed after obtaining the FID, with the EPC contractors. Because EPC

contractors take responsibility for any loss or damage to the facility and equipment during construction, they sought a broader range of indemnities in the construction insurance arranged by INPEX. The insurance capacity required for the Ichthys LNG Project was on a scale never seen before in the insurance industry. To see whether the construction insurance conditions agreed with the EPC contractors could really be arranged, INPEX reached an agreeable compromise with the contractors under advice from insurance consultancies. It took a long year or so after obtaining the FID. But at the end of 2012, INPEX succeeded in arranging construction insurance terms that the EPC contractors agreed with through the participation of more than 50 insurance companies from the insurance markets of London, Tokyo, Singapore, Australia, and the Middle East.

FID obtained with everyone's cooperation

The final investment decision drew near over the period from the end of 2011 to January 2012. Busy with final confirmations and checks of FID prerequisites, relevant departments in INPEX's Tokyo and Perth offices were also extremely busy preparing for a quick start to work after obtaining the FID. INPEX adjusted the pace of progress in various areas, including making EPC preparations, completing financing, arranging sales contracts, arranging insurance, and assigning interests to LNG buyers. These, and the timing of the FID, were both extremely critical, so departments in charge frequently gathered for detailed meetings and coordination.

Licenses and approvals were obtained or secured, and while project financing was not yet obtained, financial institutions had expressed their willingness to lend. Long-term 15-year LNG purchase agreements were entered into with buyers, and basic design documents were completed after FEED and subsequent EPC preparations were completed. Terms and conditions of EPC contracts for LNG plant construction, offshore production facilities, gas export pipeline, and other facilities were also negotiated with major domestic and foreign companies. Agreements were signed, at which point preparations for starting the EPC work were complete. With prospects also looking good for the supply base, personnel transport, and insurance arrangements, the timing was ripe.

In January 2012, INPEX obtained the FID for the Ichthys LNG Project, the long-awaited first time for a Japanese company to lead an LNG development operatorship of this scale. The decision was also the result of company-wide efforts that seemed to leave no employee without some involvement in the project. At last, development work on this massive project

started making concrete moves toward its planned annual production of 8.4 million tons of LNG and about 1.6 million tons of LPG, and 100,000 barrels of condensate per day at its peak.

Then President & CEO Toshiaki Kitamura emphasized that the FID was only a checkpoint in the development process: “From the perspective of the overall project, the final investment decision for Ichthys was just a single milestone, even though the process required unwavering resolve while staking the future of the company. From the planning stage, we had progressed to a new starting line where we had to actually begin, and complete, construction of some of the largest production facilities and equipment in the world.” Mr. Kitamura then spoke of the importance of the development work: “The period prior to production was an important time that really put us to the test as an operator.”



LNG plant groundbreaking ceremony
 Left: INPEX Chairman Naoki Kuroda
 Center left: Australian Prime Minister Julia Gillard
 Center right: Northern Territory Chief Minister Paul Henderson
 Right: TOTAL E&P Australia Managing Director Mike Sangster

Tourism minister from the federal government, and the Northern Territory chief minister. Many government dignitaries also attended from Japan, showing the high expectations that each country had for the project. The first stage of construction for the LNG plant was large-scale civil works, followed by preparations for large-scale construction. For this, lodgings had to be constructed on the outskirts of Darwin for a 3,500-strong workforce. The LNG plant was constructed using a modular construction technique, so construction of the various LNG modules started at four yards in Thailand, China, and the Philippines. From August 2012, dredging work was also conducted at Darwin Port for a period of about two years. Despite original concerns that underwater blasting would be needed to remove hard rocks—and this greatly impacts the marine environment—a state-of-the-art cutter suction dredger was successfully employed to remove the material.



FPSO groundbreaking ceremony



Final investment decision (FID) ceremony

Design and construction work begins around the world

With the FID obtained, INPEX signed a series of EPC contracts for onshore and offshore facilities and started detailed design and construction work for each facility at more than 10 sites throughout Europe, America, and Asia (the development concept and an outline of structures manufactured around the world are shown on pages 46–47). With the giant production facilities comprising everything from production wells to liquefaction facilities, works began on the various work packages for drilling, subsea production systems (SPS), umbilical, riser and flowline (URF), the central processing facility (CFP), the floating production, storage and offloading (FPSO) facility, the gas export pipeline and the onshore LNG plant.

In May 2012, INPEX held a groundbreaking ceremony for the Darwin LNG plant. Guests at the ceremony included Prime Minister Julia Gillard and the Resources, Energy and



Subsea wellhead assembly installation operations

In January 2013, a CPF construction keel-laying ceremony was held at Samsung’s shipyard in Korea. As a core facility, the CPF is one of the world’s largest offshore facilities for separating gas and liquids such as condensate out of production from the gas and condensate fields. In June 2013, a keel-laying ceremony was also held for the FPSO, another core facility where liquids from the CPF are further separated to produce condensate for storage and offloading to tankers. It took place at the shipyard of Daewoo Shipbuilding & Marine Engineering Co., Ltd. (DSME), also in Korea, and construction work got into full swing.

With building and construction work proceeding well, the halfway mark was reached in Darwin LNG plant construction in June 2014 and then from July the modules manufactured in the various yards were brought in and installation started. Meanwhile offshore, two drilling rigs were brought in in February 2015 and drilling of 18 Phase 1 production wells started into the gas and condensate reservoir between 4,000 and 4,500 meters beneath the seabed. Then work to lay the gas export pipeline, which measures about 890 kilometers in total length, kicked off in June 2014, and was completed in November 2015.

In September 2016, the final three of 230 modules manufactured in the yards was brought into Darwin and installed. At the same time, work was continuing on construction of other facilities, including LNG, LPG and condensate tanks, the high thermal-efficiency combined-cycle power generation facility, product shipping berths, and office buildings. In March 2018, after carefully completing commissioning, preparations for the first LNG plant train to start production were finalized. Prior to completion though, in September 2015, INPEX revealed that LNG production capacity was expected to increase from the initial plan of 8.4 million tons per year to 8.9 million tons.

The construction of CPF and FPSO was completed in February 2017, and the facilities were named Ichthys Explorer



CPF and FPSO onsite



Panoramic view of onshore LNG plant

and Ichthys Venturer, respectively. Ichthys Explorer departed Korea in April 2017 bound for Australia, and arrived at Ichthys field in May. Ichthys Venturer then arrived in August, and both facilities were installed in their offshore locations.

After that, commissioning work picked up pace ahead of the start of production. Although troubled by issues including bad weather from cyclones and the always-complicated commissioning work, the FPSO was ready for production in March 2018, followed by the CPF in May. Incidentally, during 2015, INPEX had more than 2,200 employees engaged in EPC work for Ichthys project at locations all round the world.

First ship sets sail on a new era for INPEX

With all facilities ready by July 2018, the production wells were at last able to be opened to start producing gas. All upstream facilities were carefully started up in order, starting from the CPF, using produced gas. LNG production was then started at the LNG plant, and the first condensate cargo was shipped from the FPSO on October 1.

Finally, on October 22, the first ship bound for Japan, the LNG tanker PACIFIC BREEZE, was loaded with LNG, and departed from Darwin. Twenty years after acquisition of the exploration concession in 1998, 18 years after discovery of the gas and condensate field, and six-and-a-half years after the final investment decision, the long-awaited first LNG cargo had shipped.

After about one week at sea, the LNG tanker appeared out of a rainbow-spanned sea on the morning of October 31 and, under the watchful eyes of the Naoetsu LNG Terminal operators, pulled alongside the pier and unloaded its cargo of Ichthys LNG to onsite tanks. After regasification, the LNG was transported by pipeline to domestic consumers.

Chairman Toshiaki Kitamura attended the November 16 ceremony in Darwin to commemorate the commencement of operations for the Ichthys LNG Project, where he thanked everyone for their support, including representatives of the governments of Japan and Australia, members of the local communities, Ichthys LNG buyers, financial institutions, joint venture partners and contractors. He explained that mutual bonds and trust were the main driving force behind the Ichthys LNG Project to date, and that he would take all possible measures to achieve a quick ramp-up to peak production and safe operations. He also expressed his wish to contribute over the coming 40 years to a stable energy supply to Japan, and to the economic and social development of the Northern Territory and the rest of Australia.

During the EPC work, INPEX experienced a range of difficulties, from staff shortages stalling progress to sudden withdrawals of subcontractors, poor workmanship discovered during construction and commissioning, difficult negotiations

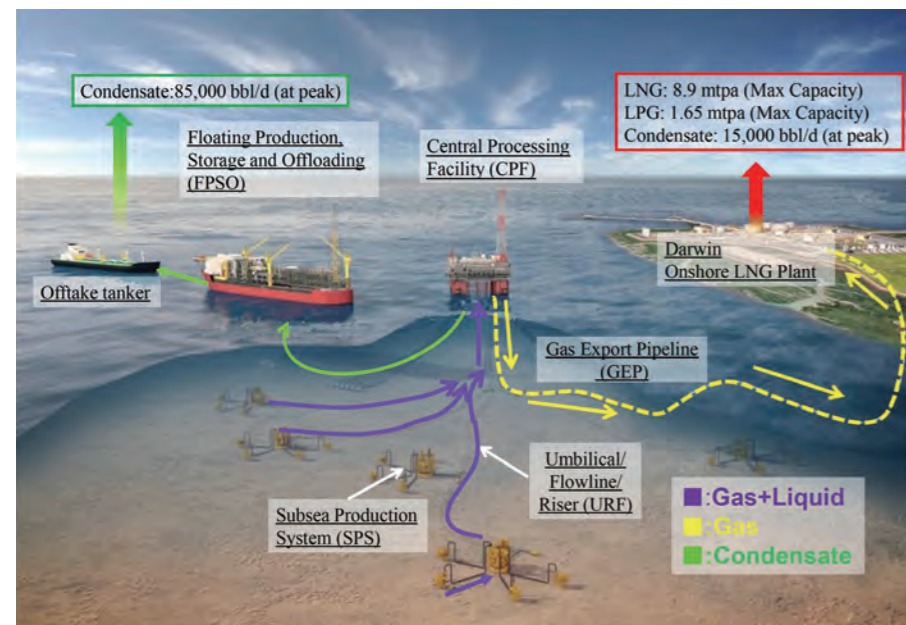
with contractors about contract interpretations, and division of responsibilities, and ongoing coordination with joint venture partners. With reflection back on that time, it is possible that any one of those issues could have affected the success or failure of the project. All stakeholders, institutions, and organizations joined forces to apply extraordinary effort and exertion to overcome these difficulties, until they finally managed to secure the start of production.

Epilogue

With a burning passion to bring forth the bounty of Ichthys by itself, INPEX took on a great challenge at the start of the 21st century. Now INPEX has reached this milestone, an important challenge to achieve 40 long years of stable operation lies ahead. It is only by meeting this challenge that INPEX will be considered a fully-fledged development and production operator. The path will be long, but it will also be an opportunity to demonstrate the true value of the company.

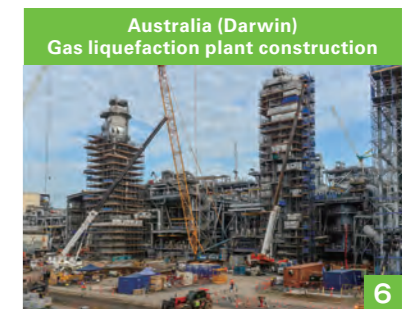
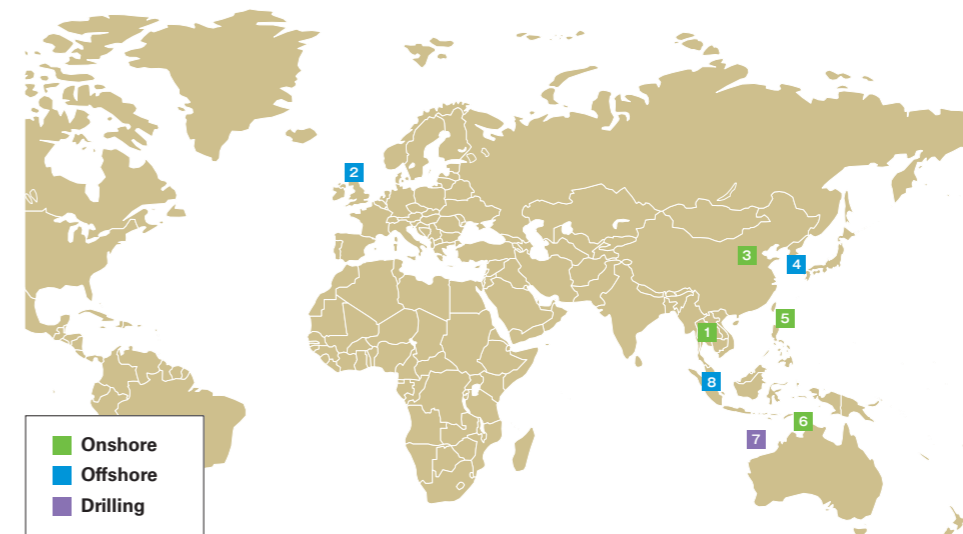
On the other hand, the bounty of Ichthys is not just evident in high asset values, but also in the development of an ability to support the company into the future. From before Ichthys FID and through the EPC work, young employees from every department at INPEX, from administration to engineering, have been thrust to the frontline of active operations. They have gained experience alongside veteran employees at the local Office and at worksites. Working valiantly on the frontline of Ichthys and tackling difficulties as they arose has been an ideal opportunity for young employees. They acquired

a broad range of necessary knowledge and experience, expertise, and communication skills as true oil men and women. In this way, capable young INPEX employees will be able to fly off to new ventures after Ichthys to pass on their experience and knowledge to others. The capabilities developed through Ichthys will certainly become the driving force for unlocking the future for INPEX.



Project Development Concept

Major construction and instruction works around the world



Bonds of trust with Abu Dhabi lead to a bright future

The Emirate of Abu Dhabi, in the United Arab Emirates, is home to some of the largest oil fields in the world. In May 2004, INPEX made Japan Oil Development Co., Ltd. (JODCO) into a wholly owned subsidiary, inheriting the oil development and production business that JODCO had been conducting in Abu Dhabi for more than 30 years since 1973. JODCO reached 2 billion barrels of cumulative crude oil lifting in April 2004, one month prior to joining the INPEX Group, having contributed significantly over many years to Japan's energy security as a Japanese oil developer. Following its acquisition of JODCO, INPEX continued to work with its partners on oil fields under development located in the vicinity of ones already in production, and succeeded in commencing oil production at the Umm Lulu and Nasr oil fields between 2014 and 2015.

Through JODCO, INPEX has since been further expanding its footprint in Abu Dhabi by acquiring new concessions and extending existing ones as part of its mission to contribute to meeting the energy needs of Japan over the long-term. The Abu Dhabi authorities have adopted a strategy of selecting genuine partners in the upstream domain committed to participating in diverse projects that will contribute to enhanced economic and social development in the UAE. In light of this, INPEX has worked hard to further strengthen its multi-faceted relationships with ADNOC and other key stakeholders in Abu Dhabi to secure and maintain its oil concessions.

Technical strengths a decisive factor in the extension of the Upper Zakum concession

In 1978, INPEX began developing the Upper Zakum Oil Field in partnership with Abu Dhabi National Oil Company (ADNOC), and started production in 1982. The oil field's

production capacity continued to increase thereafter, reaching the 550,000 barrels per day threshold, and the Upper Zakum Oil Field became one of Abu Dhabi's principal oil fields.

In March 2006, ExxonMobil acquired a 28% stake in the Upper Zakum concession from ADNOC and proceeded to conduct a redevelopment study. ExxonMobil then made a proposal to increase the oil field's production capacity to 750,000 barrels per day through extended reach drilling from artificial islands. INPEX leveraged its experience working in the Upper Zakum Oil Field to contribute to the discussions on the ExxonMobil-led development proposal.

During this process, INPEX also pursued a further extension of the concession period and a revision of the fiscal terms that would ensure adequate returns on the enormous additional investment required. INPEX considered these items to be prerequisites for the production capacity enhancement project to go forward, and negotiated its proposal alongside ExxonMobil with Zakum Development Company (ZADCO), the operating company of the oil field.

With a positive response from ADNOC, an agreement was reached in January 2014 that included an improvement to the fiscal terms and an extension of the concession period by more than 15 years, from March 2026 to December 2041.

During the negotiations, INPEX had to carefully steer the challenging discussions to maintain the good relations it had built up with ADNOC and Abu Dhabi, while also considering



Abu Dhabi oil fields (INPEX participation)

its relations with ExxonMobil, which was prepared to pull out of the project altogether if necessary.

Today, INPEX continues to work with ADNOC and ExxonMobil on the plan to increase the Upper Zakum Oil Field's production capacity to 750,000 barrels per day using an innovative artificial island-based development combined with extended-reach drilling technology. The three companies also reached an agreement in November 2017 to further increase the oil field's production capacity to 1 million barrels per day by 2024, resulting in a further 10-year extension of the concession until December 2051.

Participating interest in ADCO Onshore Concession acquired through successful bid

With the 1939 onshore concession expiring in January 2014, the Abu Dhabi government decided to grant a combined 40% interest in a new, 40-year concession through an international bidding process. At the time of INPEX's acquisition of a 5% participating interest in April 2015, the ADCO Onshore Concession, as it was known then, produced about 1.6 million barrels of oil per day and was one of the world's largest deposits of oil, consisting of 11 onshore oil fields in production and four that remained undeveloped.

The Abu Dhabi onshore concession originally began in January 1939 after the Ruler of Abu Dhabi granted Petroleum Development (Trucial Coast) Ltd. a 75-year concession agreement to explore and develop petroleum in Abu Dhabi. Full-scale exploration activities began after the end of the Second World War. Thereafter, following the discovery of a number of



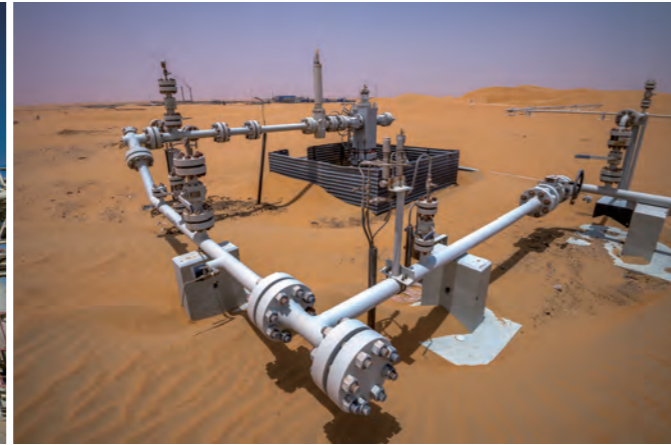
Ceremony affirming the agreement to increase the Upper Zakum Oil Field's production capacity to 1 million barrels per day by 2024 (Photo: ADNOC) INPEX President & CEO Toshiaki Kitamura (right) with ADNOC CEO Dr. Sultan Ahmed Al Jaber (center) and ExxonMobil CEO Darren W. Woods (left) (November 2017)



Upper Zakum Oil Field



Abu Dhabi Onshore Concession production facilities



A wellhead in the Abu Dhabi Onshore Concession

oil fields including Bab, Bu Hasa, Asab, Shah and Sahil, development work led to the production and exportation of Murban crude.

Petroleum Development (Trucial Coast) later changed its name to Abu Dhabi Petroleum Company (ADPC). As natural resources nationalism grew around the world in the years that followed, ADNOC acquired a 25% interest in the concession in 1973, which was then raised to 60% in 1974. ADPC was restructured in 1978 to become Abu Dhabi Company for Onshore Oil Operations Ltd. (ADCO), thereby bringing the concession's operatorship under the control of an Abu Dhabi company, much like the Emirate's offshore concessions. Thus, the Abu Dhabi onshore concession became known as the ADCO Onshore Concession.

At this point, Murban oil accounted for about half of Abu Dhabi's total oil production, and Japan was one of the world's largest importers of the grade.

When the ADCO Onshore Concession opened to international bidding, INPEX decided to participate in the bidding through JODCO. INPEX submitted its pre-qualification documents in mid-2012 and was pre-qualified in early 2013, at which point the bidding process began. INPEX presented its bidding documents at the end of 2013, after which there were briefings and due diligence conducted by ADNOC.

While the former concession expired in January 2014, a decision on granting stakes in a new concession was still pending at the time. In January 2015, JODCO was notified that ADNOC had entered an agreement with Total SA for a 10% interest in the concession, and that INPEX could also take an interest if it accepted the same terms and conditions. Accepting these terms and conditions was a major decision. In April 2015, INPEX concluded a 40-year agreement for a 5% interest effective January 2015, where JODCO Onshore Limited (JOL) was established as the interest holder.

Thereafter, South Korea's GS was granted a 3% interest in the concession in May 2015, followed by a 10% interest being awarded to BP in December 2016. Finally, in February 2017, China's CNPC and CEFC (currently China ZhenHua Oil) were granted interests of 8% and 4%, respectively, bringing the total participating interest assigned to international players to 40%.

Today, ADNOC Onshore serves as the operator of what is known as the Abu Dhabi onshore concession, where INPEX has begun development work alongside ADNOC and others to raise oil production to 1.8 million barrels per day. Oil produced from the concession is shipped from the port of Jebel Dhanna on the western coast of Abu Dhabi as well as from the Emirate of Fujairah on the Indian Ocean, where the oil is first transported through the Abu Dhabi/Fujairah crude oil pipeline, which became operational in 2012. The oil exported from the Fujairah terminal effectively bypasses the Strait of Hormuz, a maritime transit route considered to be prone to geopolitical risk.



ADNOC and JODCO peer review of Zakum integration study

Abu Dhabi offshore oil field concessions acquired and extended amid tough competition

The ADMA Block, an offshore oil field concession dating from 1953 until 2018, was located off the coast of Abu Dhabi and comprised seven oil fields including Upper Zakum, which is one of the world's largest, as well as Umm Shaif, Lower Zakum, Umm Lulu, Nasr, Satah and Umm Al-Dalkh.

The Upper Zakum Oil Field concession agreement was first extended in 2014 and again in 2017. However, the concession agreements for the remaining oil fields were due to expire in March 2018, prompting major international oil companies and many other key players in the industry to vie for new stakes in these oil fields.

During this time, INPEX worked to reach an agreement in principle with ADNOC in January 2017 to extend the concession agreements for the Satah and Umm Al-Dalkh oil fields. Discussions included the terms on which the duration of the joint development of the oil fields would be extended by approximately 25 years until December 2042, and INPEX's participating interest in the Umm Al-Dalkh Oil Field would be increased from 12% to 40%.

Meanwhile, INPEX also joined the bidding process for the other oil fields in the ADMA Block. ADNOC and the Abu Dhabi authorities had divided the ADMA Block oil fields into three groups for the new bid. These three groups consisted of the Umm Lulu and Satah al-Razboot (SARB, an oil field solely developed by ADNOC) oil fields, the Lower Zakum Oil Field, and the Umm Shaif and Nasr oil fields. Ownership of a participating interest in Abu Dhabi's offshore oil fields was considered attractive due to the relatively low cost of production, the large volume of reserves and Abu Dhabi's political stability. The bid therefore attracted the interest of numerous parties from around the world, with as many as fourteen companies



Signing the new concession agreement for the Lower Zakum Oil Field (February 2018) (Photo: ADNOC)

and organizations considered to be vying for stakes in the oil field concessions. INPEX had set its sights on pursuing a concession agreement for the Lower Zakum Oil Field, the largest among the offshore oil fields. Under the ADMA Block concession framework, INPEX was the only international oil company with participating interests in both the Upper Zakum and Lower Zakum oil fields, and it therefore leveraged this advantage by implementing a study on the synergies of an integrated development of the two oil fields, and submitted a technical proposal based on this study to ADNOC.

Despite the most intense competition for a stake in the Lower Zakum Oil Field, in February 2018 INPEX succeeded in being awarded a 10% participating interest in the Lower Zakum Oil Field to be held through JODCO Lower Zakum Limited over a 40-year period extending until March 2058. An extension of the Satah and Umm Al-Dalkh concession was also formally signed to substantiate the agreement in principle reached earlier. The concession agreement for these fields now runs until March 2043.

JODCO's operational and technical contributions to Abu Dhabi's oil development and production industry over more than four decades are believed to be a key contributing factor in INPEX's acquisition and extension of these concessions, as are the Japanese government's proactive efforts to engage in resource diplomacy with Abu Dhabi and the UAE.

Over the last decades, INPEX has built a sound reputation for excellence in Abu Dhabi, as evidenced by its appointment by ADNOC as the asset leader for the Lower Zakum Oil Field in April 2018, marking the first instance for a company other than an Oil Major to be appointed asset leader for a giant offshore field in Abu Dhabi. INPEX is committed to meeting the expectations of all its stakeholders and will continue to proactively engage in the oil development and production business in Abu Dhabi over the long-term.



Students undertaking the Kumon method of learning mathematics (from 1998)

Social contribution activities help build trusting relationships

INPEX has long worked on building cordial, long-term relationships with Abu Dhabi, and conducts various activities designed to contribute to social development in Abu Dhabi. These activities, which have been carried out in earnest since the latter half of the 1990s, are focused on education, the environment and cultural exchange.

Education and the development of human resources are considered to be key priorities for the authorities of Abu Dhabi. INPEX has proactively supported the training of Emirati students by organizing seminars in Japan for geology majors at the United Arab Emirates University from as early as 1993, subsequently also including students from the Petroleum Institute—currently part of the Khalifa University of Science, Technology and Research—from 2007. Meanwhile, in 1998, INPEX played an active role in introducing the Kumon method of learning mathematics to Abu Dhabi's primary school education authorities, later expanding this initiative to support the introduction of Kumon at ADNOC-sponsored schools in 2018, in view of INPEX's enhanced presence in Abu Dhabi's oil and gas development and production sector. Since 2006, INPEX has also been instrumental in a project to accept Emirati children at the Japanese School in Abu Dhabi. In the spring of 2018, the Japanese School produced its first Emirati junior high school graduates who had entered the school's kindergarten program in 2006, and two of these graduates have entered a high school in Japan. In terms of contributions to cultural exchange, INPEX has for many years assisted in the showcasing of traditional Japanese falconry in Abu Dhabi, while also helping introduce and promote traditional Japanese values and practices such as the tea ceremony and judo. Also, as part of a concerted effort to revive the local pearl farming industry, which earlier in history had supported the economy of Abu Dhabi, INPEX has played a role in helping local pearling operations adopt Japanese pearl culture technologies.

Behind INPEX's social contribution activities in Abu Dhabi is a desire to help improve the Emirate's social challenges and promote a mutual understanding to further enhance the strategic partnership between Japan and Abu Dhabi. These activities have also enabled INPEX to strengthen its relationships with government institutions as well as academic and research organizations, creating new channels that would not have been possible by focusing solely on the company's core business of oil and gas development and production. In such ways, INPEX has successfully reinforced its ties to the local community reflecting its deep-rooted commitment.



Supporting a project to accept UAE children at the Japanese School in Abu Dhabi (from 2006)

Feature

3

Aiming for greater heights with a more robust gas supply chain



INPEX's business in Japan started with the operation of gas fields and transportation of gas through long-distance pipelines, and has since expanded to midstream and downstream-business. Along with business expansion, securing a stable gas supply also became important, so operations greatly evolved to cover all processes in the gas supply chain, including overseas gas field production and operation, liquefaction, shipping and unloading from LNG carriers, and finally regasification of the LNG. Each phase in the gas supply chain is creating value to the business, and the aim is to develop this model further to complement the business as a whole.

Preparing for the strong demand of natural gas construction of an LNG receiving terminal

In January 2010, INPEX carried out a plan to source gas from LNG which began to be received from the Shizuoka Gas company via the Shizuoka pipeline. This LNG sourced from the Pacific Ocean side of the country, combined with the domestic gas operations on the Sea of Japan side, meant INPEX could secure gas from two different sources, and this improved its ability to utilize the full pipeline network and create a stable supply of gas. Meanwhile, the demand for natural gas as an environmentally-friendly energy source was expected increase significantly due to global warming. However, there was a limit



Panoramic view of Naoetsu Harbor (March 2017)
Photo: Port Development Division, Bureau of Transportation Policy, Niigata Prefectural Government

to how much demand that could meet when relying on Japanese gas field deposits and LNG from Shizuoka Gas alone. INPEX frantically searched for the supply of LNG from other companies in order to ensure a third and fourth source of gas but things did not go as hoped. After various studies, in 2005 the conclusion was reached that an LNG receiving terminal should be constructed for the supply of LNG from overseas. This construction project was the start of a long journey involving a huge amount of capital investment.

Construction of the cherished Naoetsu LNG Terminal

(1) Acquisition of the Naoetsu Site

As the potential locations for LNG terminals are limited to seaside areas, investigations targeted existing harbors near the Sea of Japan between Niigata and Toyama. Naoetsu was considered to be the optimal location in relation to the INPEX pipeline network, plus the area is being developed as the leading energy harbor near the Sea of Japan. However, the completion of a landfill project in Naoetsu led by the prefectural government was still a long way off and it was not possible to find suitable land in the harbor area that was not being used. Then, there was a major turning point. After hearing INPEX's intention to construct an LNG receiving terminal, the government of Niigata prefecture and Joetsu city realized the importance of the business and how the construction would stimulate the region. A decision was made to conduct a study to bring forward the land reclamation in the Naoetsu harbor. After many discussions, INPEX made an official request to Niigata prefecture and Joetsu city in September 2007 to cooperate with the construction of the Naoetsu LNG receiving terminal and an agreement was formalized. This memorandum stated the prefecture would change the harbor plans and land would be reclaimed for the terminal construction at the Arahama wharf in Naoetsu harbor. It also stated that INPEX would acquire that site and in cooperation with Joetsu city would endeavor to realize the construction plans for the LNG receiving terminal. The cooperation from Niigata prefecture along with the understanding of many stakeholders including Joetsu city and the Hokuriku Region Development Bureau propelled this project forward.

(2) Acquiring the know-how for optimal facility construction

In August 2008, the LNG Receiving Terminal Construction Division was established and the construction plan was made official. The plan included a berth for massive LNG carriers, two 180,000 kiloliters above-ground tanks, regasification equipment and heat adjustment facilities on a 25 hectare site. However, as INPEX did not have the expertise and experience to construct LNG facilities, it started by visiting LNG terminals at major electricity and gas companies to acquire knowledge. INPEX considered outsourcing the construction work, but as the terminal is near the Sea of Japan and as they had their own ideas for the plan, they decided to construct the terminal themselves to avoid potential issues from suspending the operation. Meanwhile, Tokyo Gas Engineering (now Tokyo Gas Engineering Solutions Corporation) was appointed as technical adviser to carry out the project smoothly. The groundbreaking ceremony was held in July 2009 and construction began the following month. Construction progressed well and the facility took shape when two dome-shaped LNG tank roofs were lifted in September 2011. Meanwhile, due to various external factors during construction, flexible measures had to be taken on site to revise the facilities and plans. Thorough safety management was needed with 1,200 employees per day at peak construction. In July 2013, the extensions of the Naoetsu and Shin Nagaoka pipelines were completed and connected to the LNG Terminal. In August 2013, the first LNG carrier docked into the harbor and in December of the same year, four years and four months after the commencement of work, Naoetsu LNG Terminal was complete, without any major accidents or difficulties and one month ahead of schedule. It started operation following the completion ceremony.



(From right) Joetsu City Mayor Masayuki Kiura, Niigata Prefecture Governor Hirohiko Izumida and Teikoku Oil President Masatoshi Sugioka shaking hands after signing a written memorandum ahead of construction of the LNG receiving terminal (September 2007)



LNG carrier arriving at the completed Naoetsu LNG Terminal

Completion of a major gas supply chain

During the construction of the LNG receiving terminal emphasis was put on creating a terminal that never stops. The only INPEX LNG receiving terminal is in Naoetsu, no others exist, so if the terminal stops operation so too will the supply of natural gas. Among the policies to avoid potential suspension of operations was the inclusion of duplicate piping, preparation of spare equipment such as pumps, and various schemes to combat the changing climate and marine conditions near the Sea of Japan. As for the control system, in addition to having a DCS (decentralized control system) that allows control of the terminal remotely with the touch of a button, leveraging from their operational experience INPEX added a system that controls the operations on site. As a security measure, access to the DCS is limited to the personnel who have sufficient knowledge to use the system. Employees gain valuable experience through

the daily use of the system, including techniques for the safe and smooth berthing, unloading and departure of LNG carriers. As of 2018, more than four years after the start of operation, everyone at Naoetsu LNG Terminal is brimming with confidence after acquiring lots of experience in this regard.

At Naoetsu LNG Terminal, approximately 900,000 tons of LNG per year will be received from Ichthys. This LNG, combined with domestically produced natural gas and the LNG from Shizuoka Gas Company, will ensure sound gas sources that will support the business in the future. INPEX has finished business integration and has drawn close to the day when the central idea behind business development—to supply Japan with the natural gas it developed overseas—becomes a reality. In October 2018, the first LNG tanker loaded with LNG from Ichthys arrived into Naoetsu Harbor to the keen interest of local colleagues. With this, the development of a robust gas supply chain was finally completed.



First receipt of LNG at the Naoetsu LNG Terminal LNG unloading operation (left); closely watched by the central control room (right)



Five mountain tunnels drilled despite being hampered by hard bedrock and flooding (total length of approximately 12.6 kilometers)



Laying pipeline underground with the Tateyama mountains in the background (Asahi, Toyama Prefecture)

Cultivating new demand: Construction of the Toyama Pipeline

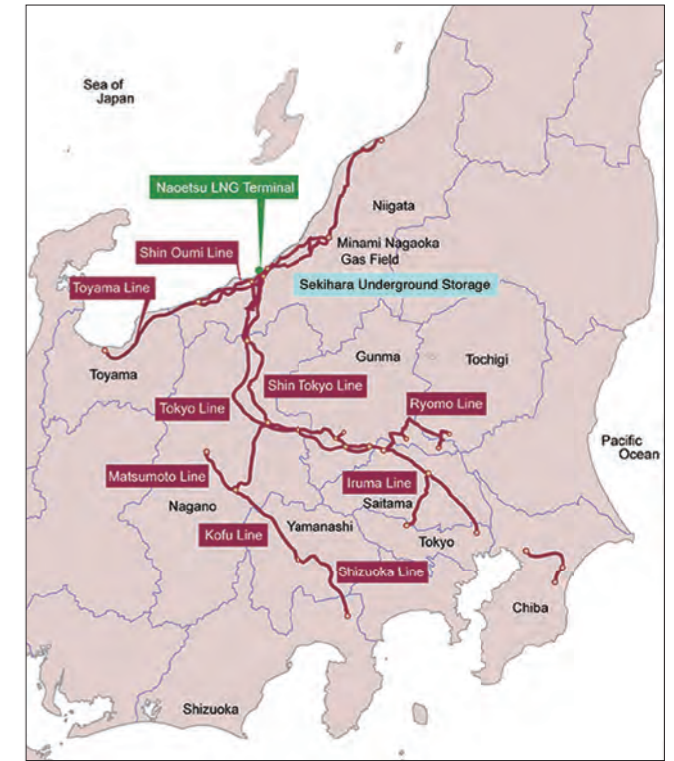
By building its own LNG receiving terminal, INPEX secured a new source of gas leading to a stable supply to meet the strong demand. However, this also proved to be the start of a new challenge. In order to cultivate demand for natural gas, it is essential to be competitive and increase the number of customers beyond the current level. A strategy to extend the pipeline network to new regions was developed to achieve cost competitiveness. This strategy continued after the integration of the businesses, where “expanding the scale of the natural gas business in Japan” became a business target, which includes an LNG supply chain that incorporates overseas gas assets. This strategy was carried out and the Toyama pipeline was born. Nihonkai Gas Co, which developed an urban gas supply business in Toyama prefecture, informed INPEX about the need for the supply of natural gas through a pipeline. In 2008, the decision to construct the Naoetsu LNG Terminal was made official, then the completion of the Shin-Oumi pipeline came into view in 2009 and an opportunity to construct a pipeline toward Hokuriku appeared. INPEX began a full-scale evaluation in the autumn of 2010. Despite the challenges of construction in mountainous areas and uncertainty about economic viability, more detailed studies were conducted and a decision was made to construct the Toyama pipeline in May 2011. The pipeline extends approximately 103 kilometers from the end of the Shin-Oumi pipeline in Itoigawa, Niigata prefecture, through to Toyama city, Toyama prefecture, and construction began in 2012. There was little familiarity with gas pipelines in this region, plus there was a heightened awareness of safety in Japan due to the nuclear power issues brought by the Great East Japan Earthquake that occurred the year before,

so considerable time was devoted to gaining the understanding of local residents about the safety of the pipeline. Construction work for this project was even more difficult than previous projects in terms of topography and geology. The pipe was laid along the coast which brought construction difficulties as there were many points where it crossed rivers both large and small, plus the line was obstructed by steep terrain with hard bedrock and debris, and there were many cases of flooding. Furthermore, the project required advanced techniques including the construction of mountain tunnels and the use of shielding and jacking method on traffic-prone urban roads as well as rivers. At its peak, there were 1,000 workers at more than 100 on-site locations.

As a result of difficulties in construction and certain unavoidable route changes, the construction period was extended by 18 months. Construction was eventually completed in June 2016, and after partial initiation the opening ceremony was held in October of the same year and natural gas was supplied to Nihonkai Gas. With the completion of the Toyama pipeline, the huge INPEX pipeline network reached a total length of more than 1,500 kilometers.

New business opportunities due to gas deregulation

With the start of operation of the entire Toyama pipeline, the sales volume of natural gas as of March 2018 reached approximately 2.11 billion cubic meters in combination with an increased supply to gas thermal power stations. The annual sales volume exceeded two billion cubic meters. In the 2012 Medium- to Long-term Vision, INPEX announced a strengthened gas supply chain as a growth target with the long-term aim of a domestic gas supply volume of three billion cubic meters per year. The aim of achieving 2.5 billion cubic meters by the mid-2020s was also stated, and INPEX has already drawn close to this amount. In April 2017, the revised Gas Business Act was enacted, which entirely deregulated participation in the gas retail market. As a result, following the deregulation of electricity retail the previous year, it was predicted that lowering the barriers to competition between energy businesses would lead to greater competition through participation of other industries and measures for diversified services. However, INPEX will take flexible measures to meet the various needs of wholesale city gas businesses that are proactively developing business. This has led to a business opportunity to increase the volume of gas sales, expand into new regions and develop new services. The Domestic Energy Supply & Marketing Division was therefore established in April 2017. The objectives of this division include enabling the Company to be flexible and respond to the changing business environment, to build stronger partnerships through enhanced cooperation, and to make new plans and proposals for urban gas suppliers and related companies. The gas supply chain that plays a role in the further growth of INPEX is not only about the stable supply of gas in Japan but also the start of a new challenge toward the full scale deregulation of the gas retail market.



Natural gas pipeline network (as at August 2018)

1. Interview with Takayuki Ueda, President & CEO



achieve exceptional performance in our Ichthys LNG Project and other large-scale operatorships while making steady progress in our projects.

Within a period of stagnating oil prices from the latter half of 2014, we had the backup of our domestic gas business, which is hardly impacted at all by oil prices, our Abu Dhabi projects and other businesses, so from the asset portfolio perspective as well, the merger had a great impact.

Going forward, this merger will bring benefits to Abadi, Abu Dhabi and other large-scale projects, which I am certain will enable our company to grow even more.

Vision 2040, the future of INPEX

Q Vision 2040, which you announced in May 2018, details this, but with great changes expected to occur across INPEX and the energy sector out to 2040, what sort of company do you want INPEX to become?

Both INPEX and the international energy market are experiencing great change right now. Over the medium to long term, the global middle-class population will grow and economic growth in emerging countries in the Asia region and elsewhere will continue, so demand for primary energy will continue to increase. As those emerging countries transition away from coal as a fuel source, demand for oil is expected to remain strong into the future. However, even greater growth in demand is expected for natural gas, which results in fewer CO₂ emissions than other fossil fuels, and renewable energies, which have a minimal impact on the environment.

Adopted in 2015, the Paris Agreement set a target of limiting the increase in the average global temperature to less than two degrees Celsius above pre-industrial levels as a long-term, globally shared goal. The agreement also requires proactive measures by the entire international community toward elimination of greenhouse gases and the establishment of a low-carbon society. As a result, the roles that natural gas and renewable energies play will become considerably more important. Stable energy supplies and an improved self-development rate remain challenges for Japan. While the Japanese government set a target

of 40% or higher for self-development rate by fiscal 2030, the actual rate as of 2017 was less than 30%, which was below the target level, so the need for INPEX initiatives will continue.

Partly due to an awareness of this business situation, we established “VISION 2040, Delivering tomorrow’s energy solutions” in May 2018.

In Vision 2040, we established three business targets: (1) Sustainable growth of oil and natural gas E&P activities, (2) Development of global gas value chain, and (3) Reinforcement of renewable energy initiatives.

As the first of our business targets, in our core business area of oil and natural gas E&P activities, we aim to achieve a net production volume of one million barrels of oil equivalent per day over the long term while continuously expanding reserves, and to significantly increase net income and cash flow from operations while improving capital efficiency, to become a top 10 international oil company (IOC) in terms of production volume, reserves, profitability, technical capabilities and other criteria.

As the second of our targets, in development and supply of natural gas, we aim to further expand our gas supply chain, which has been developed so far mainly in Japan, and build a global gas supply chain. We also aim to maximize the value of our natural gas projects, including Ichthys and Abadi, as we become a major player in the development and supply of gas in Asia, Oceania.

And as the third target, in the area of renewable energies, we aim to continue driving our geothermal power business, with its strong synergies with our E&P activities, and to enter and expand our participation in wind power generation. While also maintaining a focus on the contribution of these renewable energies to our bottom line, we aim to bring them to 10% of our portfolio in the long term.

In all of our activities related to these targets, we will reduce our carbon footprint and, through an asset portfolio that allows us to respond flexibly to the changing business environment out to 2040, we aim to continuously increase our corporate value.

Aiming to become a top 10 IOC through qualitative growth (technical and management capabilities, etc.) and a market perspective

Q Vision 2040 details your aim to become a top 10 international oil company, but what points do all members of staff need to focus on for INPEX to become one of those top 10?

As we just discussed, one business target that we established in Vision 2040 is to become a top 10 IOC.

However, the international energy market that we are a part of is approaching a major turning point. While increasing production of shale oil and shale gas in North America is dramatically changing the structure of the international energy market, the LNG market is also undergoing deregulation. With deregulation of the electricity and gas markets in Japan, existing energy providers are expanding into each other’s territories and new providers are entering the markets, while the composition of the global energy industry is also changing dramatically.

As deregulation is taking many forms in the domestic and international electricity, gas and LNG markets, having a market perspective is more important than ever for us if we are to succeed in becoming a top 10 IOC. In the past, we thought of the oil and natural gas we produced as commodities for sale. From a market perspective though, we will supply markets with what they need at the appropriate prices and times they want. This will enable us to operate as a business with high market value.

The next thing we need to become a top 10 IOC is growth in total capabilities, including qualitative growth areas such as technical capabilities, financial strength, profitability and management in addition to quantitative growth in production volume and reserves. And to achieve growth in our total capabilities, it is important to always be willing to take on challenges.

Finally, perhaps we are not as recognized in society as we might wish. To improve awareness of INPEX in the global community, we have to improve our ability to actively communicate our message both internally and externally in order to become a more visible company.

Connecting Ichthys operator experience and know-how to Abadi and beyond

Q INPEX started gas production operations as part of its operatorship of the Ichthys LNG Project. What are your future plans for the knowledge and human resources you built up through that project?

The Ichthys LNG Project is not just the first large-scale LNG project that INPEX has worked on as operator, but it is the first one for any Japanese company. In addition to the upstream exploration process that led to discovery of the Ichthys Gas-condensate Field, we worked on operation processes including construction and commissioning of large offshore structures and an onshore plant. The valuable technical experience and know-how we acquired through these processes will be great strengths for our future growth. In addition to this technical experience, we also acquired the wealth of experience, and the people with that experience, needed for working on large-scale projects as the operator. That experience included contract negotiation strategies acquired when entering LNG sales contracts with buyers and EPC contracts with engineering companies to construct the plant, and the know-how for procuring materials, obtaining finance, and developing global human resources. The knowledge and people we acquired as operator of the Ichthys LNG Project can be put to use immediately in development of our Abadi LNG Project. Not only are annual LNG production volumes at Ichthys and Abadi similar, producing about 8.9 million tons and 9.5 million tons respectively, but the development concepts are also practically the same, from developing offshore gas fields to constructing and installing offshore facilities, laying subsea gas pipelines, and constructing onshore LNG plants. Therefore, the experience and know-how we built up at Ichthys will be very useful at Abadi. A number of our divisions are already transferring this experience and know-how from Ichthys to Abadi, which includes personnel transfers as well.

As we work toward becoming a top 10 IOC, we will leverage this experience and these people not only in the Abadi LNG Project, but in the various projects we participate in as both operator and non-operator.

Developing renewable energy businesses with a focus on geothermal and wind power generation

Q In light of a diversification of demand for energy over the medium- to long-term, Vision 2040 has a business target of enhancing its renewable energy initiatives. Specifically, what renewable energies, under what organizational structures, are you thinking of when talking about developing the business?

INPEX regards efforts by the international community to achieve the long-term targets of the Paris Agreement as a period of transition toward a low-carbon society, and as such we consider our response to climate change to be an important business challenge. As a responsible member of the oil and natural gas industry therefore, we are taking steps to meet this important challenge.

To communicate INPEX's renewable energy initiatives both internally and externally, including active "reinforcement of our renewable energy initiatives" and efforts to enhance our renewable energy business and power business in fiscal 2017, we established the new independent Renewable Energy & Power Business Unit from what was the New Business Planning Unit previously attached to the Corporate Strategy & Planning Division. Then in May 2018, we changed the status of this unit to create the Renewable Energy & Power Business Division. Our basic policy now is to make renewable energies a core business for INPEX built around this new division. As detailed in Vision 2040, we will also do our best to increase renewable energies to 10% of our project portfolio.

We can expect synergies with the geothermal power generation business because of the many technical commonalities between our core E&P business and drilling wells to uncover underground resources, so we are continuing to implement initiatives in this area. Overseas, we began commercial production in 2017 out of our Sarulla Geothermal IPP Project in the Sarulla Concession on Sumatra Island, Indonesia. Domestically as well, we are in the process of conducting geothermal resource surveys with a view to commercializing geothermal power generation in Hokkaido and Akita prefectures. We have already drilled structure test wells in the Amemasu-dake region

of Hokkaido and the Oyasu region of Akita, and have confirmed production of both steam and hot water through provisional fumarolic testing. After the US and Indonesia, Japan has the world's third largest amount of geothermal resources, so geothermal power generation holds considerable promise from the perspective of a clean, home-grown, baseload power supply. Going forward, we plan to extend our existing geothermal business and pursue new projects in Japan and overseas with a view to becoming a domestic geothermal development operator in the future.

We are actively working on our wind power generation business as well. In 2015, the annual volume of electricity generated from renewable energies exceeded that which was generated from fossil fuels and nuclear power throughout the world. The wind power generation business is also becoming the lowest cost choice for many regions adopting new power sources over recent years, largely due to the increased size and efficiency of wind generators. Despite the Japanese wind power generation market facing many challenges, including site restrictions, wind power generation is being promoted through fixed price purchasing schemes with conditions that are competitive by international standards. We plan to start with a focus on new development of onshore wind power, together with partners who have development know-how in the area of wind power generation, to build up our own level of technical knowledge and development know-how. Then, using our entry into the domestic onshore wind power generation business as a stepping stone, we will actively consider entry into the offshore wind power generation business in the future through participation in existing domestic and overseas wind farms and mergers and acquisitions of operating companies.

Apart from geothermal and wind power, we also plan to conduct development into carbon dioxide capture and storage technologies to capture CO₂ emissions from the atmosphere and store them in geological formations in order to reduce the CO₂ emissions causing global warming. In this way, and through enhancement of initiatives in areas such as storage batteries and new technology research and development, we hope to build our competitive edge in the renewable energy sector as well.



Enabling personal growth and active participation

Q The Medium-term Business Plan you announced at the same time as Vision 2040 touches on various initiatives, including work style reform, creating workplaces that offer job satisfaction, and developing global human resources. From perspectives like these, what message do you have for INPEX's employees within Japan and around the world?

Full employee participation is essential to achieve our targets in Vision 2040. I want to increase energy levels across the whole company by creating workplace environments where every employee can be creative and fully demonstrate their individual abilities in line with the INPEX Values, and where the company can continue to grow together with society. Looking ahead to 2040 in the midst of a continually changing business environment, in addition to sustainable growth in our oil and natural gas E&P activities, INPEX will need new knowledge more than ever as it takes on challenges in the renewable energy sector of Japan including commercialization of geothermal power generation and entry into the wind power generation business, and new challenges overseas including entry into midstream and downstream businesses in the supply of natural gas. I also want to provide our employees with the necessary support and work environments that enable them to take on the challenges of these new sectors.

In any case, we will always recognize the hard work of all our employees as the most important factor in the growth of INPEX. I want our company to be a place that considers diversity and work-life balance, where everyone can demonstrate their autonomy and participate with a strong sense of mission, and where they can grow and prosper together with us.

2. Vision 2040 and the Medium-term Business Plan 2018–2022

● Vision 2040



In 2012, INPEX formulated its “INPEX Medium- to Long-term Vision—Ichthys and the Next 10 Years” with concrete initiatives for the five years till start of production on the Ichthys LNG Project, and with a focus on growth thereafter. Despite dramatic changes in the business environment after that, including drops in the price of oil and the shale revolution in North America, the company has continued to steadily implement initiatives to achieve this medium- to long-term vision.

INPEX achieved the significant milestone of starting production at Ichthys in 2018, but looking at the entire energy sector again, energy companies are expected to meet global energy demand, which will continue to grow. On the other hand, the long-term business environment is undergoing major changes, with greater emphasis on addressing climate change and transitioning to a low-carbon society. In light of this changing business environment, INPEX decided in May 2018 to present its long-term vision for the period until 2040 in the form of “Vision 2040, Delivering tomorrow’s energy solutions.” The sub-heading “Delivering tomorrow’s energy solutions” encompasses INPEX’s desire to deliver a stable supply of energy as required while actively addressing climate change.

INPEX’s mission as stated in Vision 2040 is “contributing to the creation of a brighter future for society through our efforts to develop, produce and deliver energy in a sustainable

way,” while its goal is to “become a leading energy company serving an essential role in global society by meeting the energy needs of Japan and countries around the world.”

The business targets it set for itself to achieve this vision ahead of 2040 were (1) to become a top 10 international oil company through sustainable growth of oil and natural gas E&P activities, (2) to become a key player in natural gas development and supply in Asia & Oceania through development of global gas value chain business, and (3) to make renewable energy 10% of its project portfolio through reinforcement of renewable energy initiatives. While oil and gas will continue to be at the core of INPEX’s business operations, these targets reflect the growing importance of renewable energy initiatives and the diverse expectations placed on the company over the long-term.

In its core business area of oil and natural gas E&P activities, INPEX aims to achieve volume (net production volume of one million barrels of oil equivalent per day over the long term while maintaining and expanding reserves) and value (significantly increasing net income and cash flow from operations while improving capital efficiency) to become a top 10 international oil company in terms of total capability, including production volume, reserves, profitability, and technical capabilities.

INPEX is also developing a global gas value chain business to capitalize on the growing LNG market. Specifically, INPEX will increase its supply of natural gas within Japan to over three billion cubic meters annually; develop gas demand in growth markets across Asia and beyond by participating in gas infrastructure projects including IPP (independent power producer), FSRU (floating storage and regasification unit) and LNG bunkering initiatives; and strengthen its global trading functions to maximize the value of its upstream assets, respond flexibly to market shifts and provide value across the entire supply chain. Through these initiatives, INPEX aims to become a key player in the development and supply of natural gas in Asia & Oceania.

To proactively address climate change and meet long-term

demand for renewable energy, INPEX will also accelerate the development of new renewable energy projects. It will expand its participation in wind power generation and other areas with considerable potential in addition to its geothermal power business, which draws on synergies with its oil and natural gas E&P activities. The company will consider leading projects as operator and, while maintaining a focus on profitability, it aims for renewable energy to account for 10% of its project portfolio in the long term.

Going forward, INPEX also plans to help achieve the SDGs (Sustainable Development Goals) by strengthening its ESG (environment, society and governance) initiatives through CSR management.



Vision 2040, Delivering tomorrow’s energy solutions: Overview

● “Medium-term Business Plan 2018–2022”



Along with Vision 2040, INPEX established its “Medium-term Business Plan 2018–2022—Growth & Value Creation” as a set of concrete goals and initiatives from 2018 to 2022 to achieve that vision. In addition to volume growth, “Growth & Value Creation” encompasses the pursuit of value creation through improved profitability and efficiency and, as a result, an increase in the company’s corporate value.

Basic policy on cash allocation

INPEX will prioritize allocation of its approximate ¥2.5 trillion cash flow from operations before exploration expenditure in the order of (1) debt reduction, (2) enhanced shareholder returns, and (3) investment for growth (about ¥1.7 trillion). It also aims to achieve the following financial targets and business targets.

INPEX’s business targets in the area of shareholder returns, during this medium-term business plan, are to maintain stable dividends and enhance shareholder returns in stages in line with growth of company performance.

Business targets

(1) Oil and Natural Gas Upstream

INPEX aims to gradually deliver key project milestones, including starting production and shipping LNG from the Ichthys LNG Project, and quickly achieving and maintaining stable production. Its quantitative targets are 700,000 barrels of oil equivalent per day net production volume by fiscal 2022, maintaining 100% or higher 3-year average reserve replacement ratio (RRR) during the plan period, and reducing production costs to US\$5 per barrel.

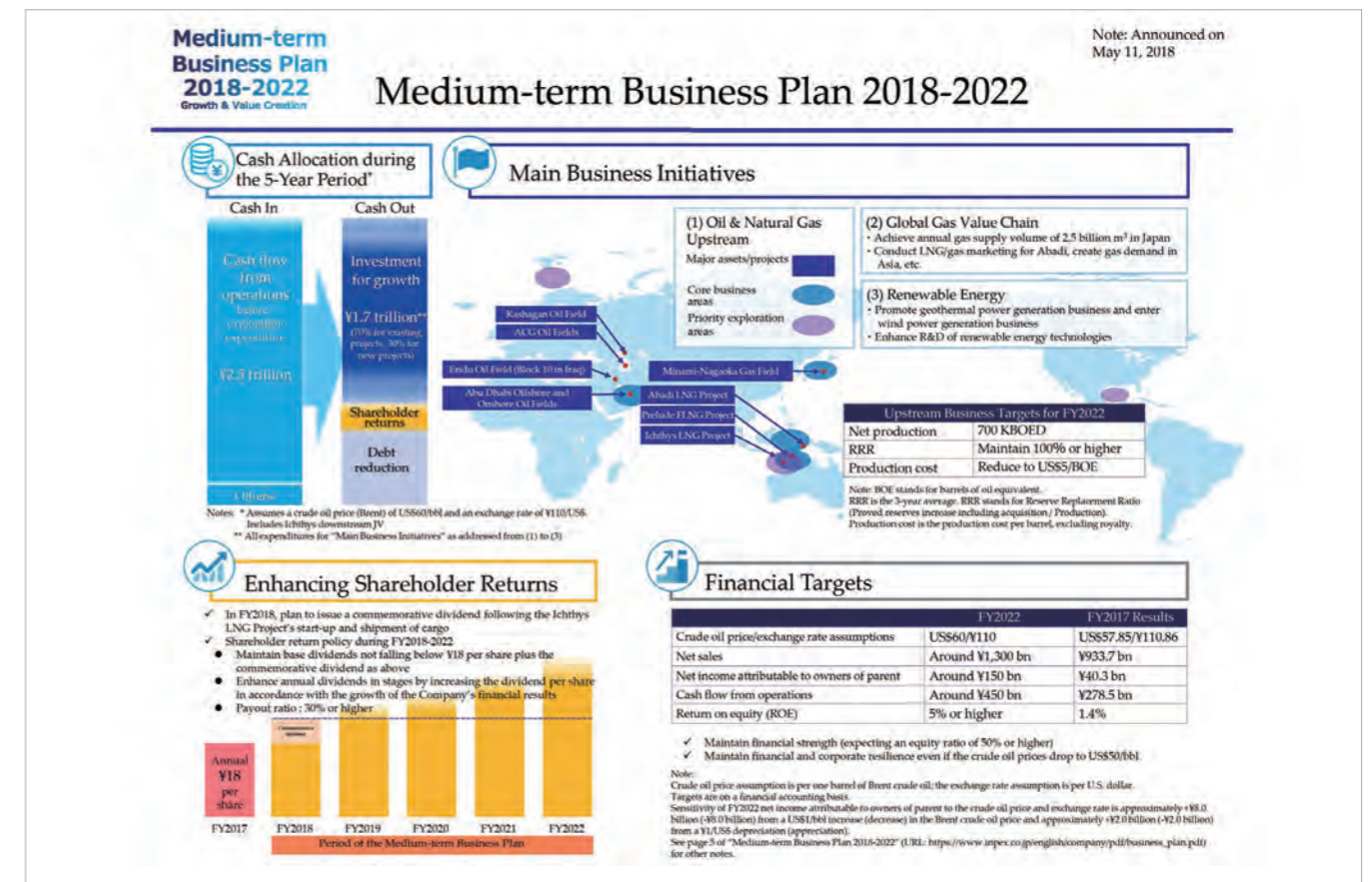
(2) Global Gas Value Chain

In Japan, INPEX aims to achieve annual natural gas supply volume of 2.5 billion cubic meters. Overseas, it aims to independently create natural gas demand in Asia and other growing markets, where increased natural gas demand is expected in the future, through participation in midstream and downstream natural gas businesses.

(3) Renewable Energy

INPEX will promote the geothermal power generation business in both Japan and overseas, while proactively entering the wind power generation business in Japan. It will also work on research and development of renewable energy technologies.

Vision 2040 and the Medium-term Business Plan 2018–2022 clarify future directions for INPEX. Going forward, the entire INPEX Group must strive together to help bring them to fruition.



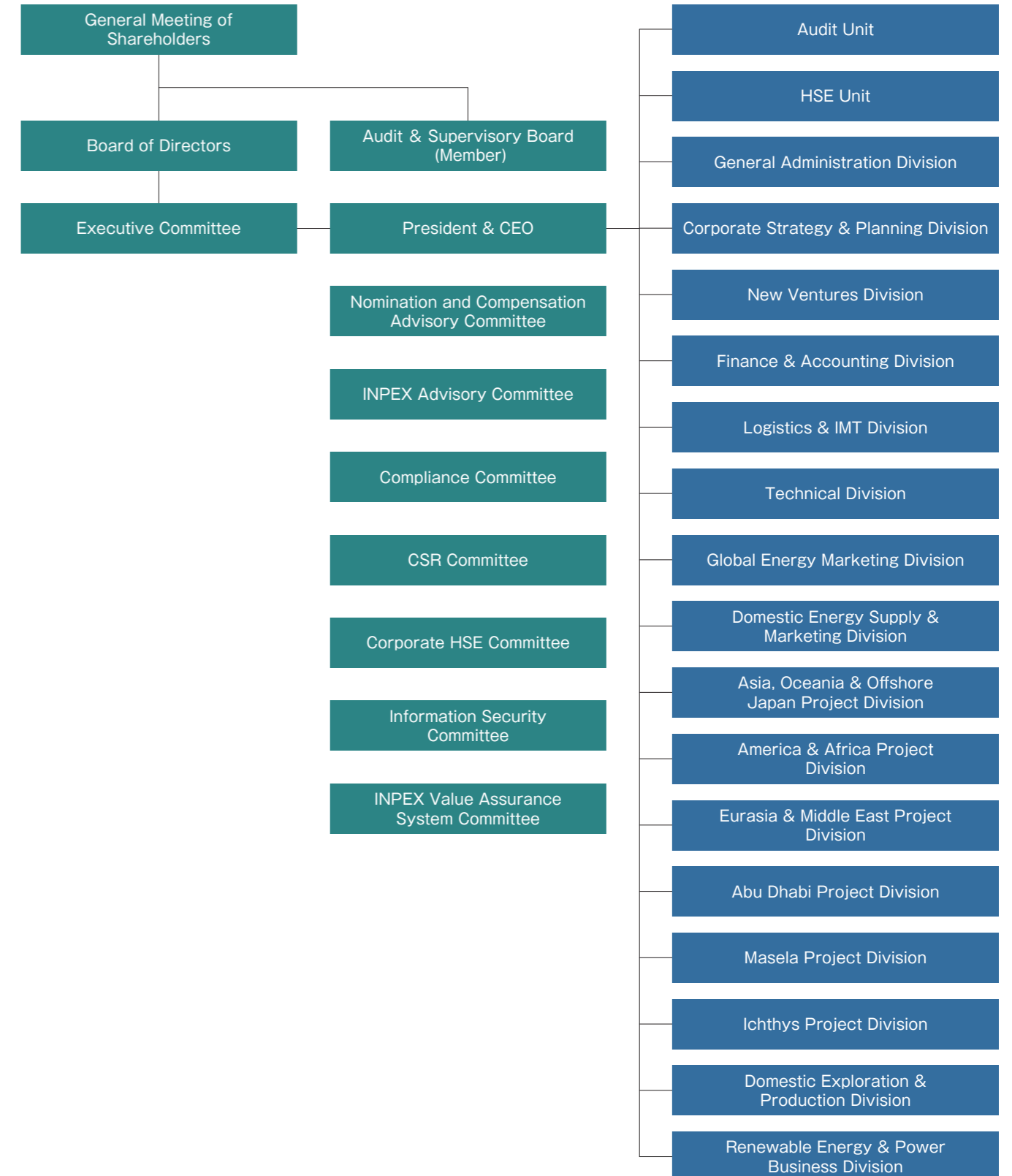
Medium-term Business Plan 2018–2022—Growth & Value Creation: Overview

1. Overview, access & management

Company Name	INPEX CORPORATION
Company Headquarters	Akasaka Biz Tower 5-3-1 Akasaka, Minato-ku, Tokyo 107-6332, Japan Phone: +81-3-5572-0200
Established	April 3, 2006
Fiscal Yearend	March
Capital	¥290,809,835,000
Number of Employees (Consolidated)	3,189(As of March 31, 2018)
Main Business	Research, exploration, development, production and sales of oil, natural gas and other mineral resources, other related businesses and investment and lending to the companies engaged in these activities, etc.

2. Organizational chart

(As of June 26, 2018)



3. Mission and CSR Principles and INPEX Values

Mission and CSR Principles

The INPEX Group has formulated a Mission, CSR Principles, Business Principles, and Code of Conduct. Our Mission reflects our objective of playing an active role in social development. Our CSR Principles directs our CSR initiatives and reaffirms our commitment to promoting them. Our Business Principles describes how every officer and employee as individuals of the Group should perform ethically on a daily basis. Additionally, our Code of Conduct puts our Business Principles into practice.

◆ Mission

We are committed to contributing to the creation of a brighter future for society through our efforts to develop, produce and deliver energy in a sustainable way.

◆ CSR Principles

The INPEX Group conducts business efficiently and proactively with a long-term perspective. Guided by the leadership of top management, we are committed to fulfilling our corporate social responsibilities by taking into consideration our stakeholders' interests. Our key principles include:

1. Deliver energy in a stable and efficient manner.
2. As a company responsible for energy supply, strictly maintain safety in operation and control in all areas of our business activities.
3. Comply with laws, rules and regulations and adhere to ethical business conduct in accordance with the social norms including human rights at our international or operating locations.
4. Communicate timely and openly with shareholders, employees, customers, business partners and other stakeholders while protecting and properly managing information.
5. Value the individuality of employees, secure a safe, healthy and worker-friendly environment, and provide opportunities for career development.
6. Recognize our responsibility to help preserve the environment and proactively contribute to sustainable development.
7. Contribute to the economic development of host countries and communities, by taking cultural diversity into consideration.

INPEX Values

INPEX Values serve as a common foundation to unite our global workforce as one team in our vision to become a top class exploration and production company. Our values represent our shared understanding of the behaviors we strive to demonstrate in the way we work.



◆ Safety

Anzen dai ichi - 'Safety Number One' - is the way we think, act and promote safety at INPEX that forms the core of a strong HSE culture.

◆ Integrity

We are ethical, honest and trustworthy in our business relationships and professional in our conduct at all times.

◆ Diversity

We proactively embrace our individual differences which is central to who we are at INPEX and what makes a unique and welcoming workplace environment.

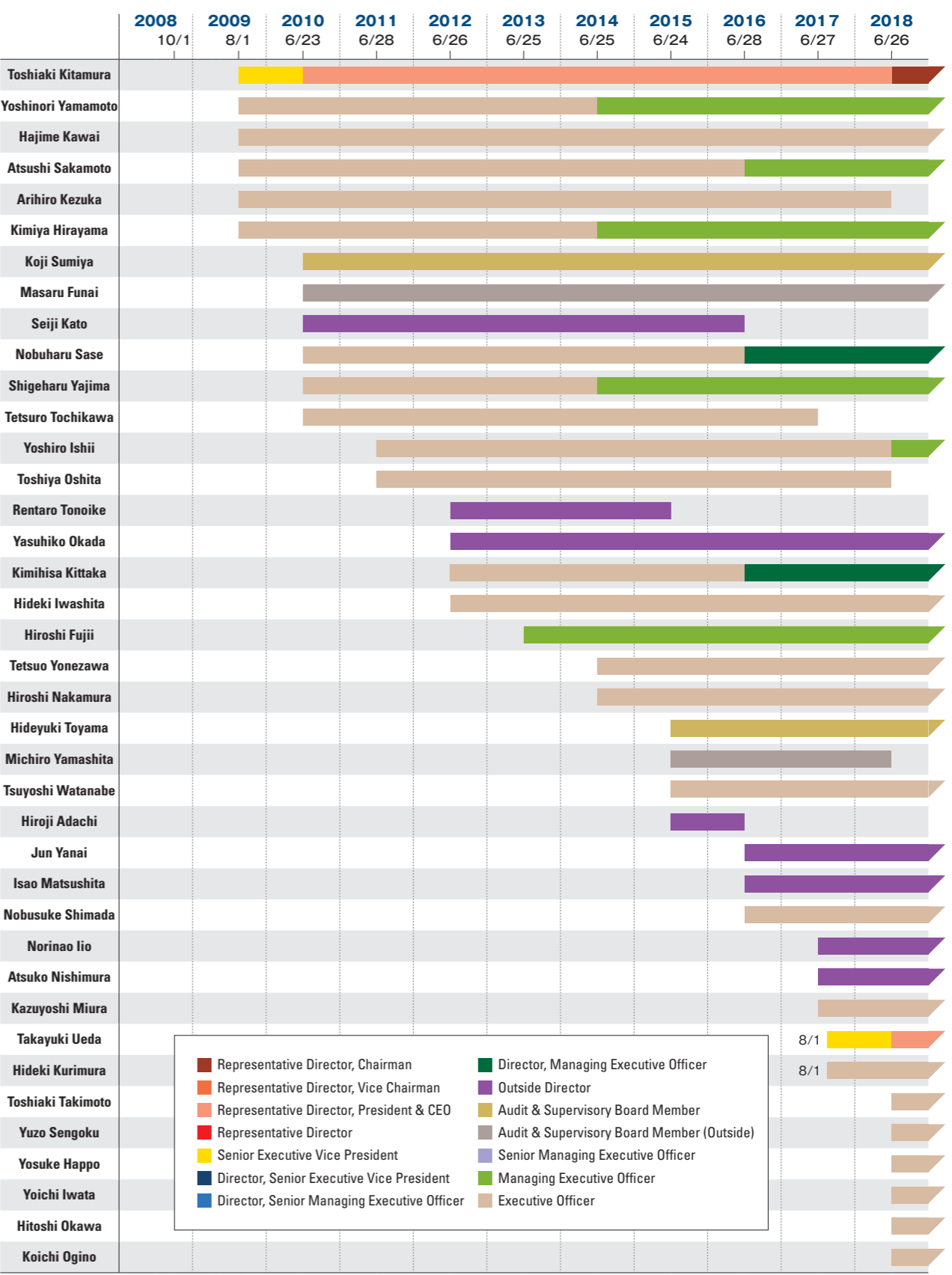
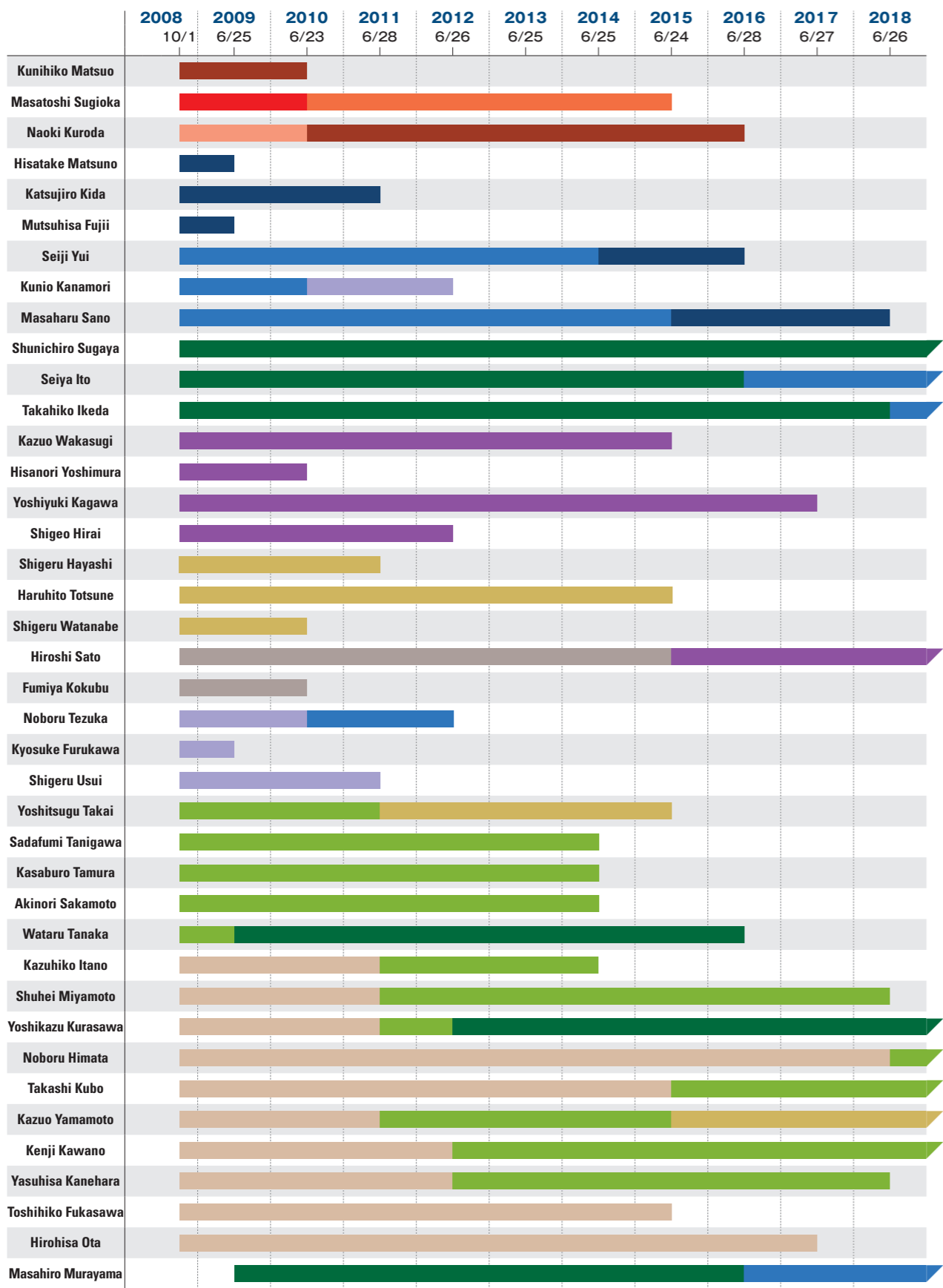
◆ Ingenuity

We embrace initiative and innovative problem-solving at every level of INPEX and celebrate our successes at every opportunity.

◆ Collaboration

We rely on unity and team spirit to build strong professional working relationships within INPEX as well as within the communities in which we operate.

4. List of senior management's terms



5. Segment overview

Eurasia			Fiscal year ended March 31, 2018		
Number of countries	5	Number of projects total	8	Net sales (¥ million)	88,597
Projects in production	4	Under development	0	Operating income (¥ million)	21,396
Preparation for development	0	Under exploration	3	Proved reserves (million BOE)	271
Other	1			Net production (million BOE)	45

Japan		Fiscal year ended March 31, 2018	
● Minami-Nagaoka Gas Field		Net sales (¥ million)	120,060
● Naoetsu LNG Terminal		Operating income (¥ million)	25,256
● Natural gas pipeline network (Approx. 1,500 km), etc.		Proved reserves (million BOE)	166
		Net production (million BOE)	31

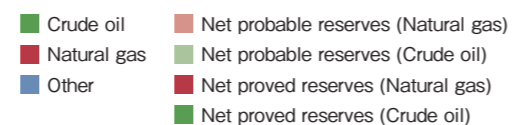
Middle East & Africa			Fiscal year ended March 31, 2018		
Number of countries	5	Number of projects total	9	Net sales (¥ million)	565,244
Projects in production	7	Under development	0	Operating income (¥ million)	305,056
Preparation for development	0	Under exploration	2	Proved reserves (million BOE)	2,293
				Net production (million BOE)	257

Asia & Oceania			Fiscal year ended March 31, 2018		
Number of countries	5	Number of projects total	40	Net sales (¥ million)	148,837
Projects in production	11	Under development	2	Operating income (¥ million)	28,405
Preparation for development	1	Under exploration	26	Proved reserves (million BOE)	1,119
				Net production (million BOE)	91

Americas			Fiscal year ended March 31, 2018		
Number of countries	6	Number of projects total	15	Net sales (¥ million)	10,964
Projects in production	9	Under development	0	Operating loss (¥ million)	10,656
Preparation for development	1	Under exploration	5	Proved reserves (million BOE)	9
				Net production (million BOE)	25



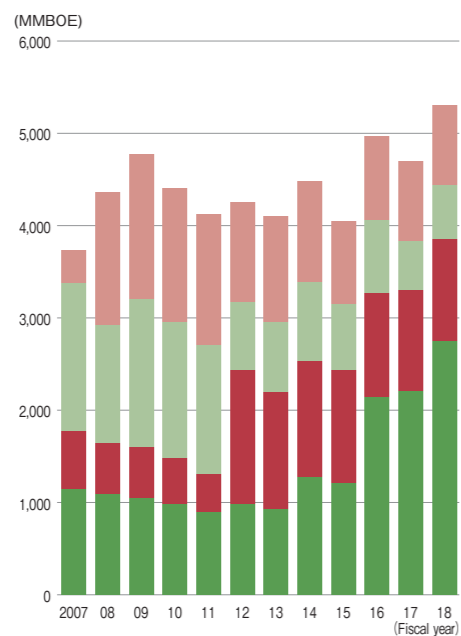
6. Trend of business results



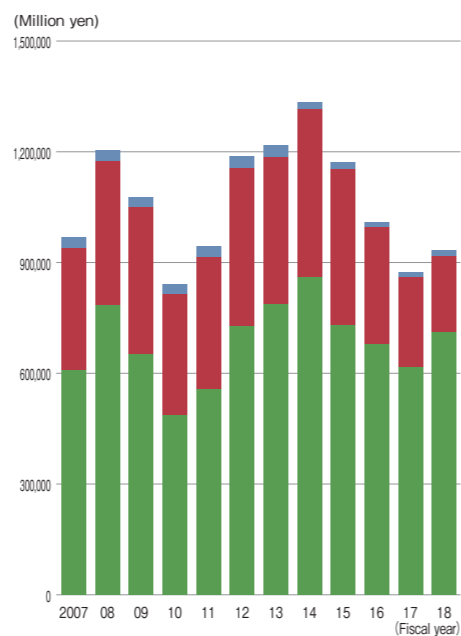
Net production volumes



Reserves



Net sales



(1) Trend of net production volumes

(Thousand BOE/day)												
Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Crude oil	242.50	241.50	223.20	218.30	239.60	251.20	245.90	244.90	242.70	339.20	348.30	329.10
Natural gas	175.19	181.50	181.68	187.10	183.74	174.98	161.89	163.89	165.36	174.64	173.01	120.82
Total	417.69	423.00	404.88	405.40	423.34	426.18	407.79	408.79	408.06	513.84	521.31	449.92

(2) Trend of reserves

(MMBOE)													
Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Proved reserves	Crude oil	1,139	1,088	1,048	980	899	981	929	1,278	1,213	2,143	2,747	
	Natural gas	631	557	550	495	409	1,451	1,259	1,254	1,221	1,094	1,110	
	Total	1,770	1,645	1,598	1,475	1,308	2,432	2,188	2,532	2,434	3,264	3,304	3,857
Net probable reserves	Crude oil	1,610	1,274	1,603	1,476	1,393	734	769	854	715	796	521	583
	Natural gas	349	1,447	1,573	1,453	1,425	1,089	1,138	1,091	895	909	868	860
	Total	1,959	2,721	3,176	2,929	2,818	1,823	1,907	1,945	1,610	1,705	1,389	1,443

(3) Trend of net sales by product

(Million yen)												
Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Crude oil	607,400	783,465	650,352	486,920	557,910	726,222	788,135	858,753	730,422	679,241	617,194	710,277
Natural gas	332,937	391,090	398,266	326,412	356,247	429,065	397,766	455,414	421,859	316,761	242,575	208,102
Other	29,375	28,409	27,545	27,094	28,921	31,443	30,631	20,457	18,944	13,561	14,653	15,322
Total	969,712	1,202,965	1,076,164	840,427	943,080	1,186,731	1,216,533	1,334,625	1,171,226	1,009,564	874,423	933,701

Editor's note:

With INPEX celebrating the 10th anniversary since forming a new company on October 2018, we decided in 2016 to publish a short history of the company as part of the anniversary celebrations.

Despite concerns that 10 years may be too short for such a publication, we moved forward with the belief that it's the right time to record our thoughts on the merger and integration of the businesses, and the 10th Anniversary Publication Editing Committee was established to put it together.

Senior Corporate Advisors Naoki Kuroda and Masatoshi Sugioka, who led the companies prior to the merger, have contributed their thoughts about the time of the merger and their hopes for the company on our 10th anniversary. Corporate Advisor Seiji Yui and Counselors Wataru Tanaka and Katsujiro Kida played a role as advisors to the editing committee to ensure the accuracy of this publication.

On behalf of the editing committee I hope this short history provides an interesting look back over the past 10 years of INPEX, and that it helps in particular the younger members of staff who joined after the merger understand the circumstances of the time. I hope it also conveys some of the excitement of the world of oil development and encourages our younger generations to take a stronger step forward in our industry.

Finally, I would like to offer my sincere thanks to all members of the editing committee and others within the company who cooperated throughout this process, providing photographs and documents, responding to interview requests and proofreading the manuscript.

Thank you also to the people of Dai Nippon Printing for their tremendous cooperation.

Nobuharu Sase, Chairman
10th Anniversary Publication Editing Committee

10th Anniversary Publication Editing Committee

Chairman:	Nobuharu Sase	Staff:	Koichiro Kobayashi
Vice Chairmen:	Masaharu Sano		Takao Umeno
	Takahiko Ikeda		Masanori Itozawa
	Kimihisa Kittaka		Keisuke Yano
Committee Members:	Tsuyoshi Watanabe		Yuko Mori
	Akio Kawamura		Masami Mitani
	Naoki Takaishi		Norihiko Kobayashi
	Munehiro Hosono		Akira Kato
	Kuniharu Tsukada		Tomomi Kikawada
Advisors:	Wataru Tanaka		
	Seiji Yui		
	Katsujiro Kida		

INPEX CORPORATION: The First 10 Years

Merger, Challenges and the Future

Published April 2019

Published by: INPEX CORPORATION
Akasaka Biz Tower 5-3-1 Akasaka,
Minato-ku, Tokyo 107-6332, Japan

Production Assistance: Dai Nippon Printing Co., Ltd.

Printing and Binding: Dai Nippon Printing Co., Ltd.
1-1-1 Ichigaya-Kagacho, Shinjuku-ku, Tokyo 162-8001, Japan
