Floating Production, Storage and Offloading (FPSO)
The FPSO receives condensate from the CPF and handles storage (capacity of 1.2 MMbbl) and shipments (85 Mbbld, peak rate). Some of the natural gas is re-pressurized and sent back to the CPF.

Central Processing Facility (CPF)
Processes the product received via the flexible risers from the production wells, separating it into gas and condensate.

Flexible Risers
Flexible risers are used to transfer well flow from the SPS to the CPF.

Gas Liquefaction Plant
The gas liquefaction plant will extract condensate and LPG from the natural gas pumped via the pipeline. Using two trains, the liquefaction plant will then cool the remaining natural gas to -162°C to form LNG. It will handle shipments of approximately 8.4 million tons per year of LNG, 1.6 million tons per year of LPG and 15 Mbbld (peak rate) of condensate.

Production Wells
50 gas wells.

Subsea Production System (SPS)
A Subsea Production System (SPS) enables commingling of individual well flows, prior to distribution to the Central Processing Facility (CPF) via production flowlines and production risers. The CPF separates the gas and the liquids, including a large portion of the condensate. The condensate is exported to a floating production, storage and offloading (FPSO) facility, from which it is transferred to tankers for delivery to market. The gas is transported back to the CPF through a gas export pipeline to the onshore LNG plant.

The Ichthys LNG Project is one of two large-scale LNG projects operated by INPEX. As an operator, we are engaging in development, production and sales activities in the Ichthys gas-condensate field, which is located about 200 km offshore Western Australia.

Having made the FID in January of this year, we have transitioned to the development phase encompassing detailed design work, procurement and facility construction, with the production start targeted by the end of 2016.
The Ichthys LNG Project, which will produce the equivalent of approximately 10% of Japan’s annual LNG import volume, is finally entering the development phase.

Environmental Impact Survey and Contribution to Regional Communities
Multiple environmental impact surveys were conducted concerning the Ichthys Project, including the offshore production facility, the gas export pipeline, and the onshore LNG plant. The survey results were submitted for public review, and after taking into consideration the opinions of a variety of stakeholders, we applied for and received the environmental approvals necessary to go forward with the project.

The Ichthys LNG Project was upgraded to ‘proved’ reserves in the Asia-Oceania region.

The Ichthys LNG Project has been recognized by the Australian government as a project undertaken with a Japanese company as the operator. Operating from our bases in Perth and Darwin in Australia, with the cooperation of our partners, including TOTAL of France, our LNG customers, the Australian authorities and the EPC contractors, as well as everyone in the local communities, we shall move forward with safe, efficient development toward our goal of commencing production by the end of 2016.

Key Features of the Ichthys LNG Project

Development Cost (CAPEX) and Economics

- Capex: AUD $24 billion
- Stable and revenue fees paid for a long period of production startup
- Sufficient assurance (90%)

Substantial Reserves and Production

- 40-year project (life of LNG production)
- Total production of 8.4 million tons per year for approximately 20 years
- Good coordination and relationships with joint venture partners

Essential Infrastructure

- LNG production facilities
- Good relations with local communities
-已有50年以上的开发计划

Project Overview

The Ichthys LNG Project is a large-scale Project operated by INPEX in Australia in an open bid conducted in August 1998 and subsequently made known to the Australian authorities and the environmental approvals necessary to go forward with the project.

In proceeding with the Ichthys LNG Project, INPEX places great importance on communication with local communities and building a relationship of mutual understanding with the people of the surrounding project area.

We are doing our utmost to considered a trusted corporate citizen.

Our efforts include providing training opportunities for young people, including local youth, as well as supporting the creation of the Larrakia Trade Training Centre, which opened in Darwin in April 2011. We then proceeded in April 2012 to provide the funds that will underpin Charles Darwin University’s North Australian Centre for Oil and Gas, which will help grow a sustainable workforce to further develop the oil and gas industry.

At the inception of Ichthys, we are committed to providing social, economic, and cultural support for the sustainable development of the region and for the creation of the workforce necessary to it.

The Ichthys LNG Project

In Australia, Ichthys is gaining the world’s attention as the first major LNG project undertaken with a Japanese company as the operator.

Operating from our bases in Perth and Darwin in Australia, with the cooperation of our partners, including TOTAL of France, our LNG customers, the Australian authorities and the EPC contractors, as well as everyone in the local communities, we shall move forward with safe, efficient development toward our goal of commencing production by the end of 2016.

The Ichthys LNG Project

The Ichthys LNG Project is a large-scale Project operated by INPEX in Australia in an open bid conducted in August 1998 and subsequently made known to the Australian authorities and the environmental approvals necessary to go forward with the project.

In proceeding with the Ichthys LNG Project, INPEX places great importance on communication with local communities and building a relationship of mutual understanding with the people of the surrounding project area.

We are doing our utmost to considered a trusted corporate citizen.

Our efforts include providing training opportunities for young people, including local youth, as well as supporting the creation of the Larrakia Trade Training Centre, which opened in Darwin in April 2011. We then proceeded in April 2012 to provide the funds that will underpin Charles Darwin University’s North Australian Centre for Oil and Gas, which will help grow a sustainable workforce to further develop the oil and gas industry.

At the inception of Ichthys, we are committed to providing social, economic, and cultural support for the sustainable development of the region and for the creation of the workforce necessary to it.

The Ichthys LNG Project

In Australia, Ichthys is gaining the world’s attention as the first major LNG project undertaken with a Japanese company as the operator.

Operating from our bases in Perth and Darwin in Australia, with the cooperation of our partners, including TOTAL of France, our LNG customers, the Australian authorities and the EPC contractors, as well as everyone in the local communities, we shall move forward with safe, efficient development toward our goal of commencing production by the end of 2016.

The Ichthys LNG Project

The Ichthys LNG Project is a large-scale Project operated by INPEX in Australia in an open bid conducted in August 1998 and subsequently made known to the Australian authorities and the environmental approvals necessary to go forward with the project.

In proceeding with the Ichthys LNG Project, INPEX places great importance on communication with local communities and building a relationship of mutual understanding with the people of the surrounding project area.

We are doing our utmost to considered a trusted corporate citizen.

Our efforts include providing training opportunities for young people, including local youth, as well as supporting the creation of the Larrakia Trade Training Centre, which opened in Darwin in April 2011. We then proceeded in April 2012 to provide the funds that will underpin Charles Darwin University’s North Australian Centre for Oil and Gas, which will help grow a sustainable workforce to further develop the oil and gas industry.

At the inception of Ichthys, we are committed to providing social, economic, and cultural support for the sustainable development of the region and for the creation of the workforce necessary to it.

The Ichthys LNG Project

In Australia, Ichthys is gaining the world’s attention as the first major LNG project undertaken with a Japanese company as the operator.

Operating from our bases in Perth and Darwin in Australia, with the cooperation of our partners, including TOTAL of France, our LNG customers, the Australian authorities and the EPC contractors, as well as everyone in the local communities, we shall move forward with safe, efficient development toward our goal of commencing production by the end of 2016.
Taking the Challenge of Operatorship Because We Believe in the Potential of Ichthys

The Ichthys LNG Project, for which the FID was made in January 2012, is entering the development phase and moving ever closer to the start of production. Commercial production is expected to continue for 40 years at Ichthys, which means about 60 years for this major project when counted from 1998, the year INPEX acquired the block. The entire process, from exploration through production, makes for a grand story.

**Development Story**

Taking up the challenge of operatorship with the Ichthys discovery

This block was offered in an open bid in March 1997 by the government, and we began further studies after acquiring geophysical survey data in addition to the study results already in hand. After the geologists accumulated more data and determined those blocks with potential, INPEX’s top management made the decision to take up the challenge of an operator project in Australia in the hope of attaining future growth. This led to a successful bid for an exploration permit for WA-285-P in August 1998 as an operator.

There were initially some voices of doubt about the potential of this block, therefore no oil and gas companies including oil majors or local companies participated as joint venture partners. Nonetheless, INPEX pressed on alone with exploration, and in 2000, gas condensate was discovered in the first exploratory well. Further assessments made it clear that spread out under that block was an enormous quantity of gas condensate, so the block was given the name “Ichthys gas-condensate field.” Afterward, assessments of Ichthys continued steadily, and it turned out the geologists feeling about the block was correct.

**Project History**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>Participated in an open bid, permitted acquisition</td>
</tr>
<tr>
<td>2000-01</td>
<td>First drilling campaign</td>
</tr>
<tr>
<td>2003-04</td>
<td>Second drilling campaign</td>
</tr>
<tr>
<td>2007-08</td>
<td>Appraisal of recoverable reserves</td>
</tr>
<tr>
<td>2009-11</td>
<td>Preparation for development</td>
</tr>
<tr>
<td>2012-onward</td>
<td>Government approvals</td>
</tr>
</tbody>
</table>

Darwin selected as the LNG plant site

Initially, a location in the Maret Islands, which are small, uninhabited islands with no airfield near Ichthys off the Kimberly coast, was considered as the prime candidate for the LNG plant site in our gas-condensate field development plan. However, the idea of building the LNG plant in the Maret Islands was dropped when authorities decided on a policy of concentrating a number of LNG plant construction projects planned for Western Australia to a single location.

Darwin, the main city in Northern Australia, was also a candidate, and because that city had for some time welcomed the construction of an onshore LNG plant we finally selected Darwin as the plant site.

Although we looked into the possibility of a fixed platform for an offshore processing facility, we selected a semi-subsurface processing facility after conducting a comprehensive analysis taking into consideration factors such as technical advantages, operational stability, scheduling and cost.

The building of good relations with the authorities, as well as with local communities, is indispensable to successful project progress. The decision to build the plant in Darwin received the full support of the government. We have worked with the government in contributing to the local community by funding the construction of the Larrakia Trade Training Centre for providing vocational training opportunities to young people, including indigenous people.

Also, we have completed the FEED work, which was started in 2009, for the onshore and offshore production facilities including one of the world’s largest offshore production facilities, as well as an approximately 880 km pipeline and an onshore LNG plant with 8.4 million tons of LNG per year. In tandem with the FEED work, we also went about obtaining government approvals, concluding long-term LNG sales and purchase agreements with customers such as utility companies, calculating capital expenditures and examining profitability. After making all the necessary preparations to move forward with the project, we made the FID on January 13, 2012, marking a major project milestone and making the transition to the development phase.

We will continue making steady progress toward our goal of commencing production by the end of 2016.

**Project moves into development phase**

The building of good relations with the authorities, as well as with local communities, is indispensable to successful project progress. The decision to build the plant in Darwin received the full support of the government. We have worked with the government in contributing to the local community by funding the construction of the Larrakia Trade Training Centre for providing vocational training opportunities to young people, including indigenous people.

Also, we have completed the FEED work, which was started in 2009, for the onshore and offshore production facilities including one of the world’s largest offshore production facilities, as well as an approximately 880 km pipeline and an onshore LNG plant with 8.4 million tons of LNG per year. In tandem with the FEED work, we also went about obtaining government approvals, concluding long-term LNG sales and purchase agreements with customers such as utility companies, calculating capital expenditures and examining profitability. After making all the necessary preparations to move forward with the project, we made the FID on January 13, 2012, marking a major project milestone and making the transition to the development phase.

We will continue making steady progress toward our goal of commencing production by the end of 2016.

**Internal Rationale**

- **Operational Efficiency**
  - Improved resource allocation
  - Enhanced safety standards
  - Optimal production output

**External Rationale**

- **Market Expansion**
  - Increased customer base
  - Diversified sales distribution
  - Enhanced brand reputation

**Key Milestones**

- **2009-2011**
  - FEED activities
  - Offshore production facilities
  - Pipeline construction

- **2012-2013**
  - LNG plant construction
  - Start-up operations

**Strategic Objectives**

- **Maximize Efficiency**
  - Implementing advanced technologies
  - Training program for employees

- **Enhance Sustainability**
  - Renewable energy initiatives
  - Community development projects

**Challenges**

- **Regulatory Compliance**
  - Adhering to environmental regulations
  - Meeting safety standards

- **Financial Forecasting**
  - Project cost management
  - Revenue projections

**Conclusion**

The Ichthys LNG Project has successfully navigated the challenges of operatorship and is now poised for development. With a strong foundation in exploration and a comprehensive approach to construction, the project is well on its way to meeting its goals and contributing to the economic growth of Australia. The lessons learned from the project will be invaluable in future endeavors, ensuring continued success in the energy sector.
Large-Scale LNG Projects Following Ichthys

Our LNG projects, employing the world’s first floating LNG technology, are driven by our strategic partnership with Shell.

<table>
<thead>
<tr>
<th>Country</th>
<th>Abadi</th>
<th>Prelude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production volume (expected)</td>
<td>LNG: 2.5 million tons/year Condensate: Approximately 8.4 Mmbld</td>
<td>LNG: 3.8 million tons/year LPG: Approximately 400 thousand tons/year Condensate: Approximately 36 Mmbld (at peak)</td>
</tr>
<tr>
<td>Interest owned</td>
<td>Stage-I: INPEX 60%, Shell 30%, PT Energi Mega Persada 10%</td>
<td>INPEX 17.5%, Shell 72.5%, KOGAS 10%</td>
</tr>
<tr>
<td>Operator</td>
<td>INPEX</td>
<td>Shell</td>
</tr>
<tr>
<td>Development method</td>
<td>FLNG</td>
<td>FLNG</td>
</tr>
<tr>
<td>Project status</td>
<td>Preparation for development</td>
<td>Under development</td>
</tr>
</tbody>
</table>

Abadi LNG Project

The Abadi gas field is located in the Aru-fura Sea in Indonesian territorial waters and is a large gas field with an area of more than 1,000 km². INPEX has been the operator of the Abadi LNG Project since the exploration stage and is currently conducting FEED preparations. The Indonesian Government granted approval in December 2010 to the plan of development for Stage-I (POD-1) for an FLNG with a capacity of 2.5 million tons per year of LNG. In December 2011, INPEX invited Shell onboard as our strategic partner in the project, in exchange for which we transferred to Shell 30% of the participating interest in Abadi. We are gaining technical support and bringing in FLNG experts from Shell, and currently our goal is to commence FEED in the latter half of 2012.

What is "floating LNG"?

A floating LNG is created by installing an LNG plant on a large vessel. This new method allows for natural gas to be processed into liquid at that plant and then directly offloaded to an LNG carrier. A number of oil and gas companies, including oil majors and engineering companies, are looking into the commercial use of such FLNGs or are preparing to construct them. A floating LNG eliminates the need for some conventional facilities, such as pipelines, and therefore requires less initial investment and minimizes the environmental impact.

Prelude FLNG Project

In June 2012, INPEX participated in the Prelude FLNG Project being operated by Shell, then acquired a 17.5% participating interest. Prelude is under development in offshore Western Australia. The Prelude FLNG Project will produce 3.6 million tons per year of LNG, along with 400 thousand tons per year (at peak) of LPG (liquefied petroleum gas) and approximately 36 Mmbld of condensate (at peak). Shell made the FID on the project in May 2011, and development works are ongoing. Our participation in the Prelude is significant in terms of expanding our global relationship with Shell, enhancing our LNG portfolio and improving FLNG know-how and experience, which we can put to use at the Abadi LNG Project.