Twists and Turns of Ichthys Project
–The Road to FID and Beyond–

INPEX as the First Japanese Operator of a World Class LNG Project getting over TECOP Challenges

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Vice President, Ichthys Project Division

INPEX CORPORATION

16th April 2013
No company, on its own can achieve such an undertaking without the buy-in, committed and willing support of its key stakeholders.
Our Business

27 countries, 76 projects

Production over 400 kboed
Ichthys Field is located in Browse Basin 200km off North Western coast of Australia.
As a newcomer operator, we have faced and overcome a number of challenges to progress the mega-project.
Dawn of Ichthys Project – the first challenge –

PARTNERSHIP
no other company interested

FUNDING
government funding application rejected

But we were confident

We decided to solely advance the exploration drilling
Exploration History – great discovery –

1998  Acreage Obtained (WA-285-P)
2000-01  1st Drilling Campaign
2000  Discovery of Gas and Condensate
2001  Named “ICHTHYS FIELD”
2003-04  2nd Drilling Campaign
         Confirmed Extension of Reserves
2007  Commenced Safety First Initiative
2007-08  Further Drilling

安全第一  Safety First
A number of locations in the Kimberley were examined for potential LNG plant site.
However…

We faced increasing difficulties in securing land tenure over the Maret Islands in a bankable and timely manner.
Alternative Option

The **Northern Territory** Government proposed...

- Potential site for LNG Plant near Darwin
- Use of Existing Infrastructure
- Strong Government Support
Although Darwin was an attractive option, feasibility of the lengthy pipeline was a cause of headache...
We did our best to **mitigate technical concerns** and to establish **mutual trust** with the local society on a step by step basis.

- intensive **Technical Studies**
- dialogues with **Local Communities**
- agreement with **Traditional Owners**
- supports from **Local Government**
Land Tenure

Project Development Agreement, signed in July 2008 with Northern Territory Government, became a breakthrough as it assures bankable Land Tenure for Onshore LNG Plant Site

NO NATIVE TITLE

LAND FOR FUTURE EXPANSION

BIPARTISAN SUPPORT
Decision Made!

In September 2008, we reached a conclusion to select DARWIN for the LNG Plant Site

Technically, Economically and Environmentally feasible! Certainty is the key decision factor!
Ichthys Concept – designed for 40-year project life –

- **Condensate**: 85 kbbl/d (peak)
- **LNG**: 8.4 mtpa, **LPG**: 1.6 mtpa
- **Condensate**: 15 kbbl/d (peak)

- FPSO
- CPF
- LNG Plant
- Darwin
- Gas Export Pipeline
- Subsea Production System (SPS)

:Ichthys Field

:Gas & Liquid :: Gas :: Liquid
Strongest team of **International Professionals** was organized under a family bond to achieve FID and Further Goals
We worked together with capable contractors on a world-wide basis to **overcome a number of technical challenges**

**OFFSHORE**
with: AMEC, JP Kenny and Aker Solutions
at: London/Perth

**ONSHORE**
with: JGC, KBR and Chiyoda
at: Yokohama
Contracting Strategy - make haste slowly -

We needed more time...

- Freeze Basis of Design
- Maximise Lump Sum Portion
- Interface Management
- Maximise At-Shore Commissioning
- Maximise Modularisation
- Full Risk Management

FID Target postponed by 1 year in order to finalise satisfactory EPC Contracts to secure confidence in the Execution Phase
Throughout the approval processes, we have raised **a spirit of mutual understanding** and cooperation with the Governments.

<table>
<thead>
<tr>
<th>License Type</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIPELINE LICENSES</td>
<td>obtained in May 2011</td>
</tr>
<tr>
<td>ENVIRONMENT APPROVALS</td>
<td>approved in May/June 2011</td>
</tr>
<tr>
<td>PRODUCTION LICENSES</td>
<td>offered in November 2011 accepted in March 2012</td>
</tr>
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</table>
Mutual trust with LNG Buyers and Project Finance Lenders have led us to achieve the **World-Class deals**

<table>
<thead>
<tr>
<th>LNG buyers (8.4 million tons/year)</th>
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<tbody>
<tr>
<td>A Tokyo Electric Power 1.05</td>
</tr>
<tr>
<td>B Tokyo Gas 1.05</td>
</tr>
<tr>
<td>C Kansai Electric Power 0.80</td>
</tr>
<tr>
<td>D Osaka Gas 0.80</td>
</tr>
<tr>
<td>E Chubu Electric Power 0.49</td>
</tr>
<tr>
<td>F Kyushu Electric Power 0.30</td>
</tr>
<tr>
<td>G Toho Gas 0.28</td>
</tr>
<tr>
<td>H INPEX 0.90</td>
</tr>
<tr>
<td>I TOTAL (France) 0.90</td>
</tr>
<tr>
<td>J CPC (Taiwan) 1.75</td>
</tr>
</tbody>
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8.4MT USD20B

- Export Credit Agencies
- World Leading Banks
- Project Sponsors
Finally, Final Investment Decision (FID)

In January 2012, after all these twists and turns, finally, we have reached the Development Phase getting over TECOP challenges!

However, it is only the beginning of the Real Challenges...
The Development Phase is being progressed by the world class Contractors

<table>
<thead>
<tr>
<th>PACKAGES</th>
<th>CONTRACTORS</th>
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</thead>
<tbody>
<tr>
<td>Drilling</td>
<td>ENSCO</td>
</tr>
<tr>
<td>SPS (Subsea Production System)</td>
<td>GE Oil &amp; Gas</td>
</tr>
<tr>
<td>URF (Umbilicals, Risers, Flowlines)</td>
<td>McDermott</td>
</tr>
<tr>
<td>CPF (Central Processing Facility)</td>
<td>Samsung (SHI)</td>
</tr>
<tr>
<td>FPSO (Floating Production Storage and Offloading Facility)</td>
<td>Daewoo (DSME)</td>
</tr>
<tr>
<td>GEP (Gas Export Pipeline)</td>
<td>Saipem/ Mitsui, Sumitomo, MetalOne</td>
</tr>
<tr>
<td>Onshore LNG Plant</td>
<td>JGC-KBR-Chiyoda JV (JKC)</td>
</tr>
<tr>
<td>Dredging</td>
<td>Van Oord</td>
</tr>
</tbody>
</table>
Work Progress - Onshore

FID ▼

| 2012 | 2013 | 2016 |

2012

2013

2016
Work Progress - Offshore

FID ▼

<table>
<thead>
<tr>
<th>2012</th>
<th>2013</th>
<th>2016</th>
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PN.7108 STEEL CUTTING
INPEX SHIPYARD
24-5 JANUARY 2013

INPEX

Kangaroo
Project Schedule


- Offshore FEED
- Offshore EPC Preparation
- Offshore EPC
- Onshore FEED
- Onshore EPC Preparation
- Onshore EPC
- Drilling
- Production Start Up
- FID
- Now
Circle of Mutual Trust

Vector of all stakeholders is now in one direction to move forward, targeting to achieve “First Production” by the end of 2016 and ensuring **Security of LNG Supply!**
We formed the platform for a circle of mutual trust with first class Joint Venture Partners, TOTAL in particular!
We **highly value** relationships with the local communities and the traditional owners in Australia.

North Australian Center for Oil and Gas in Charles Darwin University

Larrakia Trade Training Center Graduates already working for Ichthys Project!
Lastly but not the Least...

I would like to complete my presentation with the message that a project is a living creature, and it can grow depending upon how well the people involved would nurture it.
Thank you
ご清聴ありがとうございました。