Development Challenges & Solutions in our Oil & Gas Sector | 23 Years on…

ANU - UPNG | 2015 PNG Update
Friday, 19th June 2015
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Agenda

Item 1 Who is Oil Search?
Item 2 The Growth Story….one we should be proud of
Item 3 Challenges
Item 4 The Future…continuing that growth trajectory
Item 1 Who is Oil Search?
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» Established in Papua New Guinea (PNG) in 1929
» Market capitalisation ~A$11bn (~US$8.56bn)
» > 95% of OSH’s assets in PNG
» Operates all PNG’s currently producing oil fields
» 29% interest in 6.9Mtpa PNG LNG Project, operated by ExxonMobil. First LNG cargoes shipped in May 2014. Project has transformed OSH into regionally significant oil and gas producer
» Comprehensive exploration and appraisal programme to underpin LNG expansion in PNG
» Exploration interests in Middle East/North Africa
» Listed on ASX (Share Code: OSH) and POMSOX, plus US ADR programme (Share Code: OISHY)
PNG licence interests
Agenda

Item 1 Who is Oil Search?
Item 2 PNG’s Growth Story
Item 3 Challenges
Item 4 The Future…continuing that growth trajectory
PNG’s Expected Annual Growth Rate Highest in the Region

Aug 25, 2014. *The Economist*. Asia’s fastest-growing economy in 2015 will be a country that most investors will not have considered closely before. Papua New Guinea tops the regional rankings with a GDP growth rate of 14.8%, owing to a huge increase in its energy exports as a giant new ExxonMobil-led liquid natural gas (LNG) project comes on stream.

Jan 5, 2015. *The Economist*. Papua New Guinea is predicted to be the zippiest economy of all, expanding by almost 15%, nearly twice as fast as any other country.
GDP Annual Rate of Growth | How do we compare with our nearest neighbour?

Source: http://www.tradingeconomics.com/
PNG LNG Project

PNG LNG Project Gas Fields

Hides development drilling complete

LNG shipped to Asian buyers

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First PNG LNG shipment arrived in Japan in early June 2014

Unloading of first PNG LNG cargo at TEPCO Futtsu-2 Terminal

Source: ExxonMobil
Methane Spirit, 100th LNG cargo departed PNG on 12 June 2015 bound for TEPCO, Japan
PNG LNG Project – performing ahead of expectations, has delivered strong platform for future growth

» PNG LNG Project – a major success story:
  – Delivered ahead of expectations and within revised US$19bn budget
  – Operational and financial completion achieved in February 2015
  – To date, Project has exported >7 million tonnes of LNG and shipped ~100 LNG cargoes

» Both trains now consistently operating at or above nameplate capacity of 6.9 MTPA

» Focus on production optimisation/debottlenecking

» Project has delivered major infrastructure, Government and landowner support, Tier 1 LNG customers, financier confidence
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Size and speed of oil price fall was unexpected

Industry capital cost deflation now taking place

Brent Oil Price Forecasts to 2020

Source: FACTS Global Energy, Wood Mackenzie, Various Brokers, OSH analysis
Our Response

» OSH is in strong position to manage lower oil price environment, with profitable production

» Proposed LNG growth projects remain attractive based on current long-term oil price assumptions

» Industry capital cost deflation now taking place

» Presents opportunity to recalibrate cost structure

» Overall, strategic direction remains unchanged

» Plan for the worst, hope for the best’

» 2015 capex and opex reduced, actively engaging with contractors to reduce costs further, by targeted 15 – 25%

» Business Optimisation Programme initiated. Strategic, measured and reasoned approach to improve work efficiencies and build value, without compromising safety and long-term sustainability

» Looking to high-grade PNG portfolio to further support strategic initiatives

» Focus is to maintain top quartile returns to shareholders, underpinned by delivery of at least two new LNG trains in PNG

2015 Spending Cuts

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNG Oil and Gas production costs</td>
<td>~20%</td>
</tr>
<tr>
<td>Exploration and evaluation spend</td>
<td>~25%</td>
</tr>
<tr>
<td>Production capital</td>
<td>~20%</td>
</tr>
<tr>
<td>Corporate capital</td>
<td>~40%</td>
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</table>
Domestic Public Policy Challenges

» The ability of our Government to convert the resource boom into development outcomes for their Districts and Provinces

» Our sector has had to respond to survive – is it the same issue for the public sector?

» Growth vs austerity in bringing debt under control

» Transformation agenda for regulator to keep pace with industry evolution, driven by regulatory philosophy (self-regulation vs prescriptive vs somewhere in between)

» Balanced fiscal regime – the wisdom of our forebears in putting in place a balanced regime will ensure the sustainability of our industry in PNG – the RRT ensures we share more of the upside in a high oil price environment

» Gas Development Strategy for our country which addresses 3rd party access/strategic infrastructure

» Identifying our competitive advantage =>which informs the industrialization strategy =>the role of DMO (if any) in promoting that strategy =>broaden industrial base and reduce overreliance on non-renewable sector. There are a few missing pieces in that jigsaw
Domestic Public Policy Challenges

- National Content / indigenous enterprise / landowner business
- NOC/State Nominee strategy (revenue pass through vs assuming exploration risk)
- Gestation period for gas projects and the need to address vacuum between PRL expiry and PDLA to promote security of tenure
- PNG LNG Benefits Management using PPP to assure delivery to address legacy of unfulfilled commitments
- National Energy Policy and unbundling our electricity value chain
- Addressing factors of production (access to and mobilising land bank, skilled and affordable labour, encouraging State owned, indigenous and foreign enterprise and access to affordable capital)
- Sovereign Wealth Fund
- Resource nationalism
PNG LNG Non Tax Benefits | Shared Responsibility with Government for delivery is an imperative

<table>
<thead>
<tr>
<th>Benefits Stream</th>
<th>Quantum</th>
<th>Beneficiary</th>
<th>Type</th>
<th>Governance Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royalty</td>
<td>2% of wellhead value</td>
<td>Landowners</td>
<td>Statutory</td>
<td>40% cash to landowners, 30% each to CIT &amp; FGT</td>
</tr>
<tr>
<td>Development Levy</td>
<td>2% of wellhead value</td>
<td>5 Impacted Provincial Governments ie. sub national level</td>
<td>Statutory</td>
<td>Mobilising funds against defined goals and assist implementation</td>
</tr>
<tr>
<td>Business Development Grant</td>
<td>K120m</td>
<td>Landowners</td>
<td>Contractual</td>
<td>Distributed in 2010 – too late</td>
</tr>
<tr>
<td>Infrastructure Development Grant</td>
<td>K1.2bn released @ K120m pa from 2010</td>
<td>5 Impacted Provinces</td>
<td>Contractual</td>
<td>Lost 2010 – 2013 Infrastructure delivery partnership with Gov’t forward plan</td>
</tr>
<tr>
<td>High Impact Infrastructure Projects (next slide)</td>
<td>Project list – unrealistic designated cost</td>
<td>5 Impacted Provinces</td>
<td>Contractual</td>
<td>Infrastructure delivery partnership with Gov’t</td>
</tr>
<tr>
<td>Landowner equity</td>
<td></td>
<td>Landowners</td>
<td>Statutory &amp; extra equity is contractual</td>
<td>Managed by a corporate trustee per royalty</td>
</tr>
</tbody>
</table>

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PNG LNG Non Tax Benefits | Shared Responsibility to deliver High Impact Infrastructure Projects needed

<table>
<thead>
<tr>
<th>Project</th>
<th>Designated</th>
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<tbody>
<tr>
<td>Kikori-Kutubu-Tari-Koroba-Kopiago North Coast Road</td>
<td>K100m</td>
</tr>
<tr>
<td>(Tax Credit Scheme*)</td>
<td></td>
</tr>
<tr>
<td>Komo to Tari road sealing</td>
<td>K 90m</td>
</tr>
<tr>
<td>Hela City Development (first phase)</td>
<td>K100m</td>
</tr>
<tr>
<td>International airport at Tari (first phase)</td>
<td>K 90m</td>
</tr>
<tr>
<td>Komo Township</td>
<td>K 15m</td>
</tr>
<tr>
<td>Magarima Township</td>
<td>K 15m</td>
</tr>
<tr>
<td>Kutubu Township</td>
<td>K 15m</td>
</tr>
<tr>
<td>Koroba Township (including hospital)</td>
<td>K 20m</td>
</tr>
<tr>
<td>Nogoli Growth Centre</td>
<td>K 15m</td>
</tr>
</tbody>
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*The Tax Credit Scheme is a legislated infrastructure delivery model that permits the mobilization of 0.75% - 2% of a Developer’s taxable income to fund project delivery by the Developer
Shared Responsibility with Government to deliver public and social infrastructure priorities

### National Priorities

<table>
<thead>
<tr>
<th>A. Planning Framework</th>
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<tbody>
<tr>
<td>Vision 2050 (2010-50)</td>
</tr>
<tr>
<td>20 Year PNG DSIP (2011-2030)</td>
</tr>
<tr>
<td>5 year MTDP (2011-15)</td>
</tr>
<tr>
<td>Annual Budget Priorities</td>
</tr>
<tr>
<td>Sector plans and provincial plans</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. External Influences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>(now called Sustainable Development Objective)</td>
</tr>
<tr>
<td>Aid Agency programmes</td>
</tr>
<tr>
<td>Australia, Japan, Multi-laterals</td>
</tr>
</tbody>
</table>

| C. UBSA/LBSA Commitments |

| D. NEC Decision(s) |

### Oil Search Prioritisation

1. Criticality Analysis:
2. Capability/Capacity Analysis
   - Organisational Capability current and future
3. Funding Constraints
4. Policy/Law: evolution
   - eg tax credit/NITCS?
5. Operating models: best fit

### Project List

- **Level A**
  - Large Projects
- **Level B**
  - Small Projects
- Initial List
- Short List

**Examples**
- Hospital
- Power Solution
- Road
- HIIPs projects
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Global LNG demand forecast to nearly double over next decade

Source: ExxonMobil, The Outlook for Energy, Dec 2014

Global Gas Demand by Region and Supply Type

Source: ExxonMobil, The Outlook for Energy, Dec 2014
LNG Market well supplied until post 2020

Global LNG Contracted Supply and Demand balance

Source: Wood Mackenzie
Many global LNG projects proposed but how many work in new pricing paradigm?

Source: Wood Mackenzie, Q1 2015
LNG from PNG has competitive advantages

- Conventional LNG projects with no new technology utilised in development
- Substantial reserves base with high heating value, suitable for Asian reticulation network
- High liquids, enhancing economics
- Onshore location with existing infrastructure base from oil and LNG developments
- Located close to growing Asian LNG markets
- Stable fiscal regime with strong Government support
- Aligned Joint Ventures. Highly respected Operators able to deliver and operate major projects, augmented by OSH’s 86 years of in-country experience
- Provide attractive returns and robust to product price movements
Key focus for OSH is commercialising PNG’s undeveloped gas

- PNG LNG Project has delivered strong platform for growth
- PNG can deliver at least two more LNG trains underpinned by existing undeveloped resources in NW Highlands and Gulf areas and third train with modest drilling success
- PNG LNG expansion and Elk/Antelope development are economically attractive
- Multiple exploration opportunities remain, to potentially provide backfill gas or additional trains
- Delivery of near-term additional trains is common objective for industry, communities and Government
- OSH well positioned to play key role to ensure optimum development outcome for all stakeholders
NW Hub: LNG expansion and power MoU signed

ExxonMobil PNG Limited (as operator of PNG LNG and PRL 3) and PNG Government signed MoU in Jan 2015

Sets roadmap for development of P’nyang to provide long-term gas resources to support domestic power and potential PNG LNG Project expansion

Power sale agreement with PNG Power, to supply 25MW of power for local use, signed in April 2015

P’nyang 2C contingent resource could increase materially

Planning for an appraisal well underway

<table>
<thead>
<tr>
<th>PRL 3</th>
<th>WI %</th>
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<tbody>
<tr>
<td>ExxonMobil affiliates (operator Esso PNG P’nyang Ltd)</td>
<td>49.0</td>
</tr>
<tr>
<td>Oil Search</td>
<td>38.5</td>
</tr>
<tr>
<td>JX Nippon</td>
<td>12.5</td>
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</table>
Gulf Hub: PRL 15 (Elk/Antelope) appraisal

» Potential second world-scale LNG development in PNG

» Comprehensive appraisal programme underway, with initial results encouraging

– *Antelope 4*: Located ~1 km south of Antelope 2. Well presently suspended and plans underway to sidetrack well using Rig 103 (subject to final JV approvals)

– *Antelope 5*: Located ~1.8 km west of Antelope 2. Initial test completed in April. Additional testing, with pressure monitoring in Antelope 1, underway

– *Antelope 6*: Located in eastern part of field. Well site preparation underway

» Aim to complete resource evaluation, select broad development concept and move into pre-FEED in 2015:

– Preliminary discussions on project financing, marketing and environmental and social mapping activities underway
The Future | only $\frac{1}{2}$ of PNG’s full resource potential has been discovered

» Internal and external assessments indicate only half of PNG’s full resource potential has been discovered

» Significant remaining gas potential in Highlands and Gulf areas

<table>
<thead>
<tr>
<th>PNG Resource Base</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Exploration Yet-to-Find (full potential)</td>
<td>Producing Fields</td>
<td>Discovered Undeveloped Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>2.2</td>
<td>2.5</td>
<td></td>
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YTF = USGS P50 & IHS Estimates

Cumulative Discovered P50 Recoverable Volume (mmboe)

- Hides is largest field found to date
- Future field sizes likely smaller but still material

Field Size Distribution

〜10 bnboe

Based on OSH estimates

OSH estimates
** Cumulative numbers based on arithmetic sum of P50 resource

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PNG gas exploration activities

» Focus of 2015 PNG exploration and evaluation programme is to mature material gas prospects to support PNG LNG expansion or additional trains for 2016/17 drilling

» Key gas exploration activities in 2015/16:
  - Antelope South exploration well*
  - Exercised option to farm-in to 70% interest in PPL 339 in May 2015 (OSH-operated). Drilling in 2016
  - Extensive seismic and field work in NW Highlands exploration licences
  - Well to be drilled in PPL 269* (Talisman-operated)
  - Major PNG basin-wide review underway, focused on acquiring strategic material licence interests, to support long-term programme
Contributing to long-term sustainability in PNG – some essentials

» Landowners and community expectations will not change with oil price halving

» Requirement of efficient benefits distribution

» Partnership between State and Private Sector has never been more important

» Focus areas:
  – Provision of competitively priced, reliable power
    • Port Moresby
    • Highlands and Ramu Grids
      – Platform for industry development
      – Small scale LNG for resource projects and remote communities
  – Partnerships on infrastructure development
  – Partnerships on health programmes
  – Capacity development
Thank You