Western Australia – Outlook and Opportunities

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About Western Australia

- 2.5 million square kilometres, one third of the continent
- 2.35 million population, 10.4% of the nation
- Resource abundance: minerals, energy, agriculture
- Relaxed lifestyle and quality infrastructure, education and health
- Gateway to Asia and 60% of the world’s population
Value of WA’s mineral & petroleum industry increased 39% from previous year to a record high of A$101.2 billion in 2010-11.

Oct 2011: 64% of Australia’s resource projects committed or under construction were in WA.

Sep 2011: A$81 billion of oil & gas projects under construction or committed; A$93 billion under consideration.

Sep 2011: A$58 billion of minerals projects under construction or committed; A$76 billion under consideration.

Western Australia ranked #17 in the Fraser Institute Survey.
World Leader in Minerals and Energy Market Share 2010

SELECTED WA COMMODITIES RELATIVE TO WORLD PRODUCTION ENDING 2010 BY QUANTITY

Source: DMP, ABARE and USGS

SELECTED WA COMMODITIES RELATIVE TO NATIONAL PRODUCTION ENDING 2010 BY QUANTITY

Source: DMP, ABARE and USGS
Australia’s Natural Gas Resources

Dominated by Western Australia

- Total: 178.62 Trillion cubic feet (5059.5 Billion cubic metres)
- North and North West: 160.4 Trillion cubic feet (4542.5 Billion cubic metres)
# Big Projects: LNG

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>STATUS</th>
<th>VALUE A$</th>
<th>CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gorgon</td>
<td>Developing</td>
<td>$43 billion</td>
<td>15mtpa</td>
</tr>
<tr>
<td>Pluto Train 1</td>
<td>Developing</td>
<td>$13 billion</td>
<td>4.3mtpa</td>
</tr>
<tr>
<td>Wheatstone</td>
<td>Under construction</td>
<td>$23 billion</td>
<td>8.6mtpa</td>
</tr>
<tr>
<td>Prelude FLNG</td>
<td>Developing (FID: May 2011)</td>
<td>$7 billion</td>
<td>3.6mtpa</td>
</tr>
<tr>
<td>Pluto Expansion (Trains 2 &amp; 3)</td>
<td>Under Consideration (FID: 2012)</td>
<td>$10 billion per train</td>
<td>8.6mtpa</td>
</tr>
<tr>
<td>Browse LNG</td>
<td>Under consideration (FID: 2012)</td>
<td>$30 billion</td>
<td>Up to 12mtpa</td>
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</tbody>
</table>
Gorgon Upstream Overview - initial development

Jansz Field
- 2 Drill Centres
- 10 Production Wells
- 1350m Water Depth
- ~130km from Barrow Island

Gorgon Field
- 3 Drill Centres
- 8 Production Wells
- 220m Water Depth
- ~65km from Barrow Island

Source: CHEVRON
Greater Western Flank – Indicative Scope Diagram

Greater Western Flank 2
Full Gas Development

[Diagram showing the Greater Western Flank 2 full gas development, including various platforms and pipelines.]
Wheatstone Downstream Scope

Includes:

- LNG & domgas plants
- Condensate & LNG storage facilities
- Materials Offloading Facility (MOF)
- Export jetty
- Roads, buildings and infrastructure
- Domgas pipeline

Source: CHEVRON
Wheatstone Upstream Scope

Includes:

- Wells
- Sub-sea installations
- Tie-backs to platform
- Platform construction & installation
- Trunkline to shore

Note: Images are concepts only
Prelude Development

- Gas / Condensate field in East Browse Basin in NW Australia discovered in Jan’07
- Water depth 240m, Cat 5 cyclone area
- 100% Shell Ownership
- UR
  - ~3 tcf gas (Prelude + Concerto)
  - 90 – 130 MMbbls Condensate
- 9 mol % CO2; ~25 ppm H2S
- FLNG selected as Host Facility
  - 3.6 mtpa LNG production (~ 700 mmscfd)
- Subsea System
  - 7 subsea gas producer wells in single DC
  - 2 x 6-slot Prod Manifolds + 1 x RBM
  - 4 x 12” CRA Flowlines (~3 kms ea)
  - 4 x 12” Flexible Risers
  - 1 x Steel Tube Umbilical
Prelude Subsea System

Subsea System Hardware - FMC
- Wellheads
- Subsea Xmas Trees
- Production Manifolds
- Riser Base Manifold
- Production Controls & Distribution
- ROV / Running Tools

Flexible Risers
- 4 x 12” dia Flexible Risers
- Buoyancy Modules

Subsea Umbilical
- Steel Tube Umbilical
- Steel Flying Leads
- Buoyancy Modules

Flowlines
- 12” X65 CRA Linepipe, ~13kms
- Insulation coating – 5 Layer PP Foam

Source: Shell Development (Australia) Proprietary Limited
Browse Upstream – Indicative Scope Diagram
Fletcher/Finucane oil development

Targeting first oil by 2H 2013

- Successful Finucane South exploration well in May 2011
- Currently in FEED on Fletcher Finucane tie-back to Mutineer-Exeter
ProjectConnect


- Provides project developers and their engineers with their own unique categorised electronic library of suppliers
- Innovative and easy to use tool to communicate supply opportunities to industry.
- Environmentally friendly as it alleviates the need for suppliers to provided printed marketing material to project buyers.
ProjectConnect: Western Australian Opportunities

(as of Wednesday, 1 February 2012 – 2044 supply opportunities listed)

- Gorgon Project
- Ashburton North Strategic Industrial Area
- Oakajee Port & Rail Project
- Collie Urea Project
- Browse LNG Development
- CITIC Pacific Mining Sino Iron Project
- Macedon Project
- North Rankin Redevelopment
- Shell Prelude FLNG Project
- Wheatstone LNG Project
- Worsley Alumina Efficiency and Growth Project
Where to from here?…..

Follow up to obtain information on opportunities in Western Australia by:

- Joining in various conferences & exhibitions –
  - Subsea Australasia Conference, Perth
    22-24 February 2012 (www.aogexpo.com.au)
  - APPEA 2012 Conference & exhibition, Adelaide
    13-16 April 2012 (www.appea.com.au)

- Visiting Perth independently -
  - Follow up with our Office
Further information

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Thank you