The Export of Australia's Raw Materials to our trading partner China,
And Marine Surveying / Assessing in Australia

Presentation for Lloyd’s Agency Marine Workshop, Shanghai
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Introduction

1. China as Australia’s Export Market

2. Top Four

3. Latest Developments

4. Major Ports – Iron Ore and Coal

5. Marine Surveying / Assessing in Australia – Challenges & Procedures

6. Summary, Conclusion and Questions
OUR EXPORT MARKET
- CHINA
## Australia’s Top 10 Exports to China 2001 vs 2011

<table>
<thead>
<tr>
<th></th>
<th>2001 $M</th>
<th>2001 % SHARE</th>
<th>2011 $M</th>
<th>2011 % SHARE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Iron Ore &amp; Concentrates</strong></td>
<td>1,369</td>
<td>15.5</td>
<td>43,960</td>
<td>57.0</td>
</tr>
<tr>
<td><strong>Wool</strong></td>
<td>1,280</td>
<td>14.5</td>
<td></td>
<td>5.9</td>
</tr>
<tr>
<td><strong>Aluminium ores (incl. Alumina)</strong></td>
<td>891</td>
<td>10.1</td>
<td></td>
<td>5.3</td>
</tr>
<tr>
<td><strong>Education-related travel services</strong></td>
<td>597</td>
<td>6.7</td>
<td></td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Barley</strong></td>
<td>370</td>
<td>4.2</td>
<td></td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Copper ores &amp; concentrates</strong></td>
<td>306</td>
<td>3.5</td>
<td></td>
<td>1.9</td>
</tr>
<tr>
<td><strong>Crude Petroleum</strong></td>
<td>300</td>
<td>3.4</td>
<td></td>
<td>1.9</td>
</tr>
<tr>
<td><strong>Personal travel (excl. education)</strong></td>
<td>244</td>
<td>2.8</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Hides &amp; Skins</strong></td>
<td>180</td>
<td>2.0</td>
<td></td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Aluminium</strong></td>
<td>171</td>
<td>1.9</td>
<td></td>
<td>1.4</td>
</tr>
</tbody>
</table>
GENERAL FACTS

• Strong growth in Australian exports to China due to rapid urbanisation and industrialisation

• The strong growth resulted in increased demand for raw materials from around the world including China

• Australia’s resource and energy commodity exports rose from $3.9 billion in 2001 (44.5% of total exports to China) to $62.4 billion in 2011 (80.9% of total exports to China)
Our exports of Minerals to China increased by average of 36.8% per annum over the 10 year period.

Minerals exports dominated by iron ore – China was Australia’s largest market for iron ore exports from 2004 onwards.

China our largest market for copper ores, nickel ores, aluminium ores, manganese ores, mineral sands and non-ferrous waste & scrap.

Uranium is a new export with the first shipments starting in 2008.

The main fuel export in 2011 to China was coal.

Crude petroleum and natural gas our second & third largest fuel export.
The Top Four – Raw Materials
IRON ORE
Exploration & Discovery

• Iron Knob Mine in Middleback Ranges of South Australia widely recognised as first commercial iron ore mine – mining commenced in 1880.

• From 1899 until 2000 BHP Ltd operated mines in the Middleback Ranges, in 2000 Onesteel Ltd became operator

• The Australian Government placed an embargo on exports from 1938 until 1960 to conserve available known resources

• When the embargo lifted - led to a boom in iron ore exploration in Western Australia. Koolanooka deposit in Yilgarn discovered in 1961 and Mt Tom Price in 1962. Many discoveries followed including Robe River, Paraburdoo, Hope Downs, Marandoo to name a few.
• More recently due to large increases in exploration expenditure many new deposits discovered

• Early explorers noted the presence of iron ore in the Hamersley Ranges and geologists referred to the Pilbara as “… essentially an iron country”

• Since the 1960’s the Hamersley iron province has become one of the great iron provinces of the world. This area will continue to supply the bulk of Australian iron ore exports for the foreseeable future
IRON ORE (cont).

- Growth in Iron Ore expected to remain positive until at least 2025
- Major iron ore projects in WA (worth $5 billion and over)

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>OWNER / JOINT VENTURERS</th>
<th>VALUE ($B)</th>
<th>PRODUCTION (Mtpa)</th>
<th>STATUS</th>
<th>START-UP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilbara 283 Mtpa Expansion</td>
<td>Rio Tinto</td>
<td>10.2</td>
<td>53</td>
<td>Construction</td>
<td>December 2013</td>
</tr>
<tr>
<td>Roy Hill Iron Ore Mine</td>
<td>Hancock Prospecting, Posco &amp; KJTC</td>
<td>9.5</td>
<td>55</td>
<td>Construction</td>
<td>December 2014</td>
</tr>
<tr>
<td>Chichester 2 &amp; Solomon Hub</td>
<td>FMG</td>
<td>8.3</td>
<td>60</td>
<td>Construction</td>
<td>December 2012</td>
</tr>
<tr>
<td>Cape Preston Mine &amp; Processing</td>
<td>CITIC Pacific &amp; Sino Iron</td>
<td>6.3</td>
<td>24</td>
<td>Construction</td>
<td>November 2012</td>
</tr>
<tr>
<td>West Pilbara Iron Ore Mine Rail &amp; Port (Stage 1)</td>
<td>Australian Premium Iron Ore JV (Aquila &amp; AMCI)</td>
<td>7.4</td>
<td>30</td>
<td>Under Consideration</td>
<td>March 2014</td>
</tr>
<tr>
<td>Pilbara 353 Mtpa Expansion</td>
<td>Rio Tinto</td>
<td>6.1</td>
<td>70</td>
<td>Under Consideration</td>
<td>June 2015</td>
</tr>
</tbody>
</table>
COAL

General Facts

- Australia’s coal largely comprise two forms of bituminous coal – thermal and metallurgical
- Thermal coal (softer form of bituminous coal) mainly used for electricity generation
- Metallurgical coal (harder form of bituminous coal) mainly used in manufacture of steel
COAL
General Facts

• Australia ranked as world’s second largest exporter of thermal coal – world trade estimated at 837.0 million tonnes – Australia accounting for 16.8% of that trade

• World’s largest exporter of metallurgical coal – world trade estimated at 270 million tonnes – Australia accounting for 49.3% of that trade
COAL TRADE WITH CHINA

- The third largest buyer of Australian thermal coal – 12.7%

![Chart 5: Thermal coal exports by destination, 2011](chart.png)

  Based on ABS trade data on the DFAT STARS database.

- China the big mover over the last 4 years of the period rising from 1.5% of thermal coal exports in 2007 to 12.7% in 2011

- The fifth largest buyer of Australian metallurgical coal – 8.1%
FUELS

• Our exports of fuels to China increased by average of 31.9% per annum over 10 years - $520 million to $8.0 billion

• In 2001 our main fuel exports were Crude Petroleum ($300 million) and Liquefied Propane & Butane ($123 million). The composition has changed considerably over the 10 years to 2011.

• Crude petroleum now ranked second, valued at $2.9 billion in 2011

• Natural gas third largest fuel export – first shipments started in 2006.

• Natural gas exports worth around $500 million in 2011.
WOOL

• Total wool produced in Australia (2011) – 368,330 tonnes. The majority is produced in New South Wales and Victoria.

• 2010-11 value of Australian wool exports was $3.047 billion.
• Major markets for wool by value are China ($2.235 billion), India ($209 million) and Italy ($178 million)

• Lower sheep numbers, drought and high meat prices constrained production. Improved seasonal conditions likely to increase production as wool cut per sheep increases and flock numbers rise.
LATEST DEVELOPMENTS

- Following recent meetings in China between our Prime Minister and Chinese Government Officials - for the first time direct trading between the Australian Dollar and Yuan began on 22 April 2013 in China’s onshore foreign exchange market
- Third currency directly exchangeable after the US dollar and Yen.
- China Foreign Exchange Trade System has appointed 12 banks as market makers – 7 major Chinese banks, 2 Australian banks and 3 other foreign banks
- Free Trade Agreement talks to continue in May 2013 – to include agricultural tariffs and quotas, manufactured goods, services, temporary entry of people and foreign investment
Major Ports & Loading Facilities
PORT FACILITIES
IRON ORE

- Our main port for export of Iron Ore is located in Port Hedland.

- Within the inner harbour there are 4 berths which are owned and operated by the Port Hedland Port Authority, 8 owned and operated by BHP Billiton Iron Ore and 3 owned and operated by a subsidiary Fortescue Metals Group (FMG).

- This is Australia’s largest port by annual throughput – the first to exceed the 100 million tonne (Mt) ceiling in 2004-05.
PORT FACILITIES
IRON ORE

- In 2010-11 it finished marginally below the 200Mt milestone making it the largest bulk minerals export port in the world.

- Trains carrying ore from the mines to the port consist of up to 3 locomotives and in excess of 250 wagons.

- Trains are longer than 2kms with loads in excess of 25,000 metric tonne.
PORT FACILITIES

COAL

- Our largest export port for Coal is located in Newcastle
- Port Waratah Coal Services (PWCS) progressively developing its Kooragang Island terminal since the 1990’s and now has capacity of 133 Mtpa.
- Newcastle Coal Infrastructure Group (NCIG) opened its $1 billion coal terminal on Kooragang Island in May 2010 and is increasing its export capacity to 33 Mtpa. The Stage 2 expansion has commenced costing $900 million which will increase capacity to 66 Mtpa.
- 114.1 million tonnes of coal exported from Port of Newcastle in 2011
PORT FACILITIES
COAL (cont.)

- Port of Gladstone has two coal loading facilities – RG Tanna Coal Terminal and Barney Point
- The nearest mine is Moura (189km) from the Port and the furthest is Oaky Creek (394km)
- RG Tanna Coal Terminal has three unloading stations to allow 3 trains to unload simultaneously at 6,000tph
- The average train length is 1.7km
- The average train size (60 wagons) on Moura line has an average payload of 4,200 tonnes per train
PORT FACILITIES
COAL (cont.)

- Two coal terminals in Port of Mackay – Dalrymple Bay Coal Terminal (DBCT) and Hay Point Coal Terminal (HPCT).
- DBCT is leased from the State Government and HPCT is owned by BHP Billiton Mitsubishi Alliance.
- These two terminal service mines in the Bowen Basin in Central Queensland. Mines linked to the port terminals by integrated rail-port network.
- Both terminals have purpose-built, rail inloading facilities, onshore stockpiles and offshore wharves.
- The offshore wharves serviced by conveyor systems, supported on jetties which run out to sea and allow loading in deep water.
- Plans for expansion for Port of Hay Point progressing which involves two new coal terminals – Dudgeon Point Coal Terminals Project. Expected construction cost $10 - $12 billion and is expected to include new stockyards, up to 6 new ship berths, a new rail connection and expansion of the existing Tug Harbour.
Marine Surveying in Australia
## Challenges of Marine Surveying in Australia

### Distance in Kilometres Between Our Major Cities

<table>
<thead>
<tr>
<th>Location</th>
<th>Adelaide</th>
<th>Alice Springs</th>
<th>Brisbane</th>
<th>Cairns</th>
<th>Canberra</th>
<th>Darwin</th>
<th>Melbourne</th>
<th>Perth</th>
<th>Sydney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adelaide</td>
<td></td>
<td>1533</td>
<td>2044</td>
<td>3143</td>
<td>1204</td>
<td>3042</td>
<td>728</td>
<td>2725</td>
<td>1427</td>
</tr>
<tr>
<td>Alice Springs</td>
<td>1533</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brisbane</td>
<td>2044</td>
<td>2100</td>
<td></td>
<td>1718</td>
<td>1268</td>
<td>3415</td>
<td>1669</td>
<td>4384</td>
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<tr>
<td>Cairns</td>
<td>3143</td>
<td></td>
<td>2500</td>
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<td>2680</td>
<td>1489</td>
<td>2270</td>
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<tr>
<td>Canberra</td>
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<td>2680</td>
<td>1268</td>
<td>2922</td>
<td>3100</td>
<td>3917</td>
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<td>3042</td>
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<td>Melbourne</td>
<td>728</td>
<td>2270</td>
<td>1669</td>
<td>3387</td>
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<td>3430</td>
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<td>3911</td>
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<td>3430</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sydney</td>
<td>1427</td>
<td>2850</td>
<td>1010</td>
<td>2730</td>
<td>288</td>
<td>3991</td>
<td>963</td>
<td>4110</td>
<td></td>
</tr>
</tbody>
</table>
Difficulties with access to areas of Australia during the wet season in the north of Australia

Many road closures due to flooding

Ports and rail access can be limited during cyclone activity

During summer access can be restricted in the south of Australia due to bushfire activity

We can have flooding and heavy rain in one part of the country with fires in another during the same season – Many Recent Natural Disasters
ACCESSING REMOTE LOCATIONS – in Australia

- May have to use multiple methods of transport to access locations e.g. fly from a capital city to a country area, then drive to survey site

- Most remote mine sites use fly-in, fly-out workers on charter flights. We sometimes can arrange to access the charter flights otherwise we use commercial airlines and drive to site

- Not always able to attend survey on same or next day of receipt of instructions due to location and ease of access
ACCESSING REMOTE LOCATIONS – in Australia

- An example of travel time from Perth to Hope Downs mine site – it’s situated 1050km north-northeast of Perth. To access the site we would fly from Perth to Newman – flight time approximately 2hrs. Drive 78kms to Hope Downs with the last 18.6kms on unsealed road. Flights are usually heavily booked and it can take a few days to get an available seat.
Our Procedures  
Receipt of Application for Survey - Chinese Policies

1. The Claimant / Consignee on receipt of damaged cargo / consignment will contact our office to request survey – either by telephone or email

2. We will request the following documentation be provided urgently to confirm if we should attend to survey – Insurance Certificate, Bill of Lading, Commercial Invoice

3. A follow up email sent to the Claimant / Consignee requesting all documentation and the need for original documents.

4. An email sent to the Insurer advising we have been contacted for survey and provide preliminary details and documents

5. We will attend survey, obtain all documents and prepare our reporting for submission. We may submit a 1st Report with details known to date pending receipt of further documents/information/final quantum of claim

6. On receipt of all information/documents/final quantum we will submit final report
Summary

1. China is a major Partner to Australia, with a strong relationship
2. This relationship has Increased over the past 10 years – due to the increasing demand by China for our raw materials
3. Iron ore and Concentrates are easily the Major Export to China
4. Australia has been required to upgrade and develop Ports and related infrastructure – many projects completed and to be completed
5. Closer Governmental Ties
6. Large Distances and Varied Climatic Conditions in Australia, and low population densities in rural areas

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Conclusion and Questions

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