Mining Regulation in the Northern Territory

October 2015

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Director Mining Compliance
Mining Activity

- Bauxite/Alumina
- Zircon
- Uranium
- Ilmenite
- Diamonds
- Manganese
- Iron Ore
- Gold
- Lead/Zinc/Silver
- Garnet
- Vermiculite
Exploration changes 2004 to 2014
## Mineral Production
(Metallic Minerals: 2013-2014)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Unit of Quantity</th>
<th>Quantity Produced</th>
<th>Quantity Sold</th>
<th>$ Amount for Quantity Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallic Minerals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumina 7</td>
<td>Tonnes</td>
<td>1,573,976</td>
<td>1,582,004</td>
<td>$444,770,325</td>
</tr>
<tr>
<td>Alumina Hydrate 7</td>
<td>Tonnes</td>
<td>282,787</td>
<td>204,732</td>
<td>$60,851,337</td>
</tr>
<tr>
<td>Bauxite 8</td>
<td>Tonnes</td>
<td>0</td>
<td>2,741,499</td>
<td>$125,587,932</td>
</tr>
<tr>
<td>Gold 9</td>
<td>Grams</td>
<td>581</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Gold Dore 10</td>
<td>Grams</td>
<td>14,655,708</td>
<td>14,656,952</td>
<td>$652,099,162</td>
</tr>
<tr>
<td>Iron Ore</td>
<td>Tonnes</td>
<td>2,725,872</td>
<td>2,447,908</td>
<td>$219,006,454</td>
</tr>
<tr>
<td>Manganese</td>
<td>Tonnes</td>
<td>5,553,445</td>
<td>5,722,530</td>
<td>$1,214,071,521</td>
</tr>
<tr>
<td>Mineral Sands</td>
<td>Tonnes</td>
<td>3,400</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Zinc Concentrate</td>
<td>Tonnes</td>
<td>109,121</td>
<td>79,934</td>
<td>$65,623,000</td>
</tr>
<tr>
<td>Zinc Lead Concentrate</td>
<td>Tonnes</td>
<td>329,101</td>
<td>299,899</td>
<td>$273,887,000</td>
</tr>
<tr>
<td>Metallic Minerals Value</td>
<td>n/a</td>
<td></td>
<td></td>
<td>$3,055,896,731</td>
</tr>
</tbody>
</table>

**Energy Minerals**

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Unit of Quantity</th>
<th>Quantity</th>
<th>$ Amount for Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uranium Oxide</td>
<td>Tonnes</td>
<td>1,112</td>
<td>3,193</td>
</tr>
</tbody>
</table>
## Mineral Production

*(Non-Metallic Minerals: 2013-2014)*

<table>
<thead>
<tr>
<th>Mineral Type</th>
<th>Units</th>
<th>2013</th>
<th>2014</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushed Rock</td>
<td>Tonnes</td>
<td>3,805,942</td>
<td>3,771,877</td>
<td>$95,169,810</td>
</tr>
<tr>
<td>Dimension Stone</td>
<td>Tonnes</td>
<td>0</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Gravel</td>
<td>Tonnes</td>
<td>657,683</td>
<td>523,817</td>
<td>$6,285,053</td>
</tr>
<tr>
<td>Limestone</td>
<td>Tonnes</td>
<td>0</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Mineral Specimen</td>
<td>Tonnes</td>
<td>71.00</td>
<td>0.40</td>
<td>$50,184</td>
</tr>
<tr>
<td>Quicklime</td>
<td>Tonnes</td>
<td>31,209</td>
<td>29,967</td>
<td>$10,308,648</td>
</tr>
<tr>
<td>Sand</td>
<td>Tonnes</td>
<td>753,663</td>
<td>690,760</td>
<td>$16,193,313</td>
</tr>
<tr>
<td>Soil</td>
<td>Tonnes</td>
<td>876,287</td>
<td>868,548</td>
<td>$13,951,870</td>
</tr>
<tr>
<td>Vermiculite</td>
<td>Tonnes</td>
<td>0</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Non-Metallic Minerals Value</td>
<td>n/a</td>
<td></td>
<td></td>
<td>$141,958,878</td>
</tr>
</tbody>
</table>
Mineral Titles Act

Mining Management Act
Mineral Titles Act

- Provides a framework for granting and regulating mineral titles that authorise exploration for, and extraction and processing of minerals and extractive minerals

- Facilitates commercialisation of activities under titles by authorising creation and transfer of interests

- Authorises other activities relating to minerals or extractive minerals to be conducted without mineral titles

- Provides authority for bulk sampling
Mineral Titles

- 1100 Exploration Licences issued
- ~3000 Titles of all types issued
- ~1400 Applications of all types pending
Mining Management Act

- To ensure the development of the Territory’s mineral resources in accordance with environmental standards consistent with best practice in the mining industry
- To protect the environment
- To assist the mining industry to introduce programs of continuous improvement to achieve best practice environmental management
- To minimise the liability of the territory by requiring the payment of 100% security to provide for the rehabilitation of mining sites or to rectify environmental harm caused by mining activities
- To require the payment of a remediation levy
• Five mining teams:
  – 1 x Uranium,
  – 1 x Central Australia,
  – 3 x Darwin

• 19 Mining Officers
• 400+ Authorised sites
• Sites including significant mining operations are distributed between teams
• ~20 operations per officer
• District scheme equalises work load
Authorisations  (30 Sept 2015)

TOTAL  =  402

...comprising

- Exploration  =  194
- Extractive  =  118 (includes 6 pending)
- Quarry  =  20
- Mine-open+u/g  =  29
- Prospector  =  13
- Processing only  =  3
- Rehabilitation only  =  25
Administration of mining activities

Mineral Titles Act
- Granting of title (EL, Extractive, Mineral Lease)

Mining Management Act
- Assessment of MMP
- Approval of MMP
- Remediation Security bond:
  - 100%; paid up front
  - cash or bank guarantee
- Issue of Authorisation
- Payment of levy
- Annual renewal requirement
Inspection of mining activities

- Inspections completed on a routine basis:
  - High risk sites
  - Investigations of unauthorised activities
  - Assessment of MMP, Amendments, etc.)
Investigations

Following an incident the CE of DME may, under s.30 of the MMA, instruct a Mining Officer to investigate and report...

Recent matters investigated include:

- 2011 – Alcan Gove Investigation regarding the loss of 62,000L of unleaded petrol
- 2012 – McArthur River Mine investigation regarding the loss of 27,000L of diesel fuel
- 2013 - ERA Ranger Mine leach tank
- 2015- Unauthorised mining (2 convictions)
  - Ranger fire; unauthorised water release; processing leaks
- DME assisted AAPA in the matter of Bootu Creek mine
Remediation Security

- Introduced in 2006; includes exploration activities and extractives as well as mines
- Must be 100% of estimated costs
  - Calculation tool provided by DME
  - Total includes 15% contingency
- Cash or unconditional bank guarantee
- Integral part of the MMP – revised annually
- 2005  DME held ~$38.2 M
- 2015  DME holds ~$967,559,529.90
- Charge 1% pa of security as Remediation Levy
Small scale mining

• Generally small scale is extractive activity
• Few small metalliferous mines, mostly gold and some gem stones
• Same laws apply
• DME accept limited resources of operators means less comprehensive documentation
• Still risk-based inspection programmes
• Type of activity and location are the major risk factors
Future of Mining Regulation

- Introducing “smarter” operating methods
- Continuing to develop and provide high level technical advice—including closure guidelines
- Improving authorisations by including standard conditions
- Make greater use of 3-4 year MMP timeframes with targeted operations and introducing Environmental Mining Reports
- Communicating clear and transparent timescales for assessment of mining activities and maintaining a one-stop-shop
- Looking for ways to improve legislative requirements - ALRA and NTA and working with Land Councils to better outcomes
- Move onus of security from operator to title owner
- Develop remediation guidelines
- Expand activities of the Legacy Mines Unit
SUMMARY

• Mining is a significant contributor to the NT economy
• Plenty of activity over the whole NT – and growing
• Assessment & Regulation effective in meeting the objects of the Acts
• Security bonding and levy system is the best in Australia
• DME always looking for ways to improve
• Seeking balanced outcomes – triple bottom line