Manganese

- World-class, low-cost GEMCO manganese mine at Groote Eylandt produces more than 15% of global production, and has been in operation since 1965.
- Mineralisation at Groote Eylandt comprises flat-lying oolitic and pisolitic sedimentary manganese within the Cretaceous Walker River Formation of the Carpentaria Basin.
- The Cretaceous palaeo-shoreline is a target for further sedimentary manganese deposits.
- The Bootu Creek manganese deposit is a hydrothermally modified sedimentary deposit hosted in Palaeoproterozoic rocks of the Tomkinson Province.

### Operating mines

<table>
<thead>
<tr>
<th>Region</th>
<th>Mine</th>
<th>Annual production</th>
<th>Resource</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpentaria Basin</td>
<td>Gemco</td>
<td>5.78 Mt Mn concentrate (2019–20)</td>
<td>148 Mt @ 41.76 % Mn</td>
<td>South 32 Ltd</td>
</tr>
<tr>
<td>Tomkinson Province</td>
<td>Bootu Creek</td>
<td>0.73 Mt Mn concentrate (2020)</td>
<td>10.03 Mt @ 16.51 % Mn (2019)</td>
<td>OM Holdings Ltd</td>
</tr>
</tbody>
</table>

### Under feasibility

<table>
<thead>
<tr>
<th>Region</th>
<th>Project</th>
<th>Resource</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpentaria Basin</td>
<td>Winchelsea</td>
<td>No published JORC resource</td>
<td>Winchelsea Mining Pty Ltd</td>
</tr>
</tbody>
</table>

Wedge-shaped claystone lens along northern wall of Quarry F1, Groote Eylandt.

Simplified geology of Groote Eylandt.
Manganese in Australia’s Northern Territory

Total production
135.4 million tonnes of manganese ore and concentrate

2019/20 production
6.3 million tonnes

Remaining JORC resources
167 million tonnes of manganese ore

Value of production in 2019/20
$1.61 billion

Production ranking in Australia
1st