Rehabilitation of the Pardoo mine

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Outline

• Site description
• Closure planning process
• Closure works
• Closure performance
• Lessons learned
Site Description

- 75 km east of Port Hedland
- 11 open pits, six WRDs and mining infrastructure
- Mining commenced 2008 and finished 2013
Closure planning process

- Stakeholder engagement
- Closure risk assessment
- Knowledge gaps / studies
- Detailed MCP
Closure planning process

- Stakeholder engagement
- Knowledge gaps / studies
- Detailed MCP
- Closure risk assessment
Poor revegetation
Erosion
Closure planning process

Closure risk assessment

Knowledge gaps / studies

Detailed MCP

Stakeholder engagement
Key knowledge gaps - vegetation

- Amount of growth medium
- Plant growth properties of waste rock
- Required surface treatments
- Seed requirements
Key knowledge gaps - erosion
Key knowledge gaps - erosion
Closure planning process

- Stakeholder engagement
- Closure risk assessment
- Knowledge gaps / studies
- Detailed MCP
Detailed Mine Closure Plan

• Results of all closure investigations and stakeholder engagement
• Detailed landform designs
• Robust framework for measuring closure performance
Closure planning process

- Stakeholder engagement
  - Closure risk assessment
  - Knowledge gaps / studies
  - Detailed MCP
Stakeholder engagement

• Schedule of meetings to discuss:
  – Closure planning process
  – Outcomes of closure investigations
  – Closure objectives and criteria
Closure works
Closure works - WRD

Reprofiling → Armouring → Topsoil → Contour ripping → Seed and fertiliser
Closure performance
Rainfall

[Graph showing rainfall and long-term average for each month from Jan-14 to Nov-18]

Rainfall (mm) and Long term average (mm)
Vegetation

Vegetation closure criteria
- Closure works were completed as per DMCP
- Revegetation was used as a benchmark
- Cover species richness, plant cover, weeds and the production of seed
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Erosion assessment

Erosion closure criteria:

• Structures are constructed and performing as designed
• Erosion levels stabilise over time
Bobby erosion features
Bobby erosion features
Bobby
South Limb
South Limb
Lessons learned....
Lessons

- Documentation
- Contractor selection and management
- Regular inspections
- Stakeholder engagement
- Adaptable closure criteria
End

• Thanks to Atlas Iron Limited – Brendan Bow
• Questions?