

Havilah Resources

A New Mining Force in South Australia



Submission: South Australian Energy Transformation

Interconnector Route Can Be Better Located

- The proposed interconnector route passes areas that already have power.
- It does nothing to provide power to the northeast of the state that will aid in development of its rich mineral resources.
- It is close to the existing interconnector and will be subject to the same natural hazards (weather, bushfires).
- Does not assist current and future renewable energy sources such as wind and solar in the Olary- Broken Hill district (eg Silverton wind farm) to access markets.

Map of indicative interconnector route



Maximise Future Development Opportunities in SA

Build the new interconnector along a route where there is no existing power and where it will have maximum benefit to new mining operations and associated industries - parallel to the Barrier Highway (eg a modified version of **OPTION C.5**).

Potential benefit to new SA mining operations:

Havilah Resources Limited

- Maldorky iron ore project
- Grants iron ore project
- Kalkaroo copper-cobalt-gold project
- Mutooroo copper-cobalt project

Consolidated Mining and Civil Pty Ltd

- Portia and North Portia copper-gold mine

Magnetite Mines Limited

- The Mawson Iron Project
- Razorback Iron Project

Copper Chem Limited

- White Dam gold mine

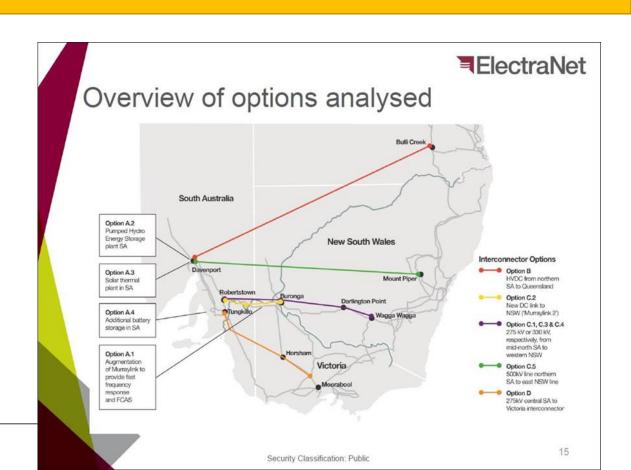
Boss Resources Limited

- Honeymoon uranium mine

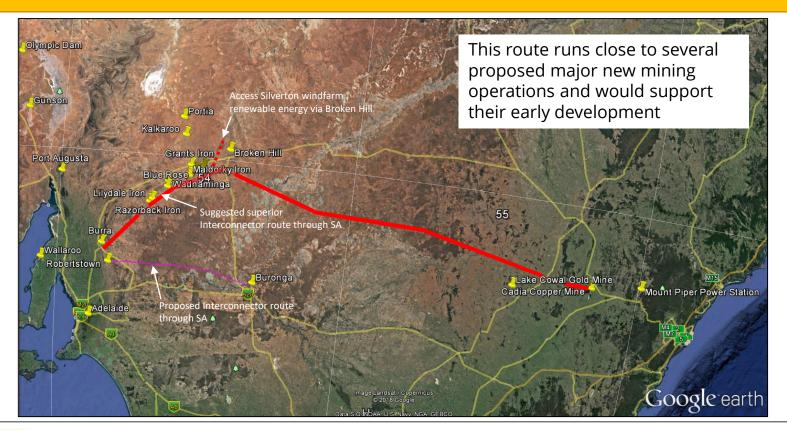
Minotaur Resources Limited

- Mutooroo iron ore project.

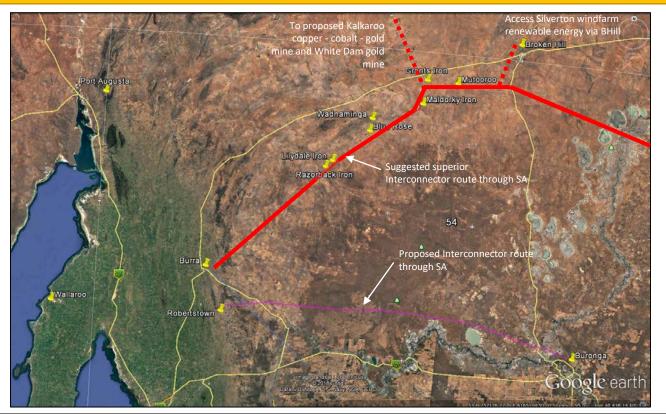




Modified C.5 Interconnector Option to Burra



Detail of Modified C.5 Option in SA

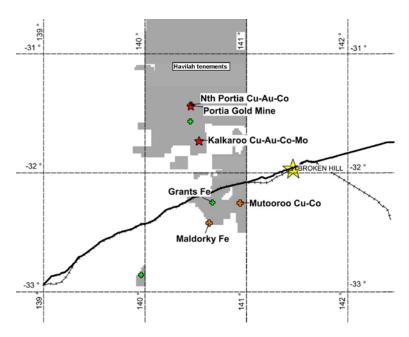


This route runs close to several proposed major new mining operations and would support their early development

What The Northeast Offers – Havilah Example

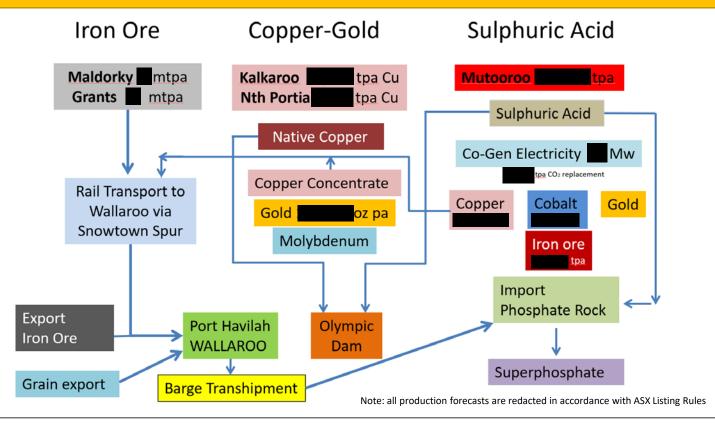
- A mineral rich extension of the Broken Hill mineral province as proven by the discovery of large copper, gold, cobalt and iron ore resources by Havilah (see table below).
- Havilah's published mineral resources can support iron ore and copper mining operations for at least 15 years and further discoveries are likely to extend this for many years to come.
- Potential mineral royalties of > \$100 million annually to the State assuming all of Havilah's projects are in full production or \$0.7-\$1.6 billion over a 15 year mine life as in following table.

Commodity	Havilah JORC Mineral Resource	5% Royalty Low (\$M)	5% Royalty High (\$M)*
Copper	1.4 million tonnes	11	25
Iron Ore	450 million tonnes	27	55
Gold	3.4 million ounces	7	17
Cobalt	32,200 tonnes	6	12
ANNUAL TOTAL		51	109

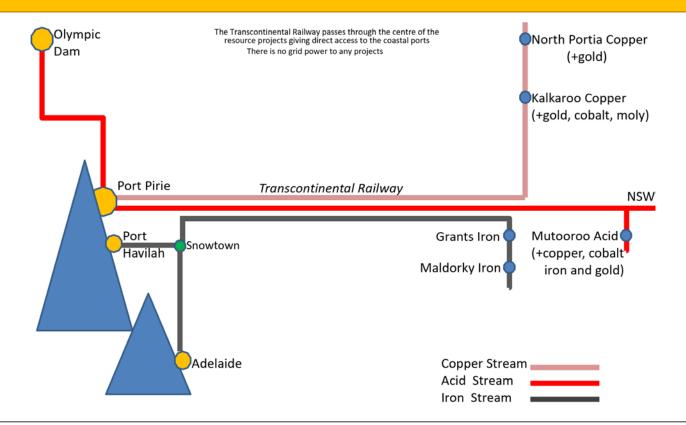


^{*} Assumes all of Havilah projects as shown on the map above are in full production and applying metal prices current as at 30 June 2018.

Mining Drives An Integrated Resources Industry



Logistics Overview



Key Points Summary

- Interconnector should be routed through an area where it will maximise the economic impact for SA.
- The incremental cost increase by a slightly longer route should not be a hinderance to driving long term strategic infrastructure development. Any additional cost outlay would be quickly recouped in mining royalties and additional power usage.
- The northeast of SA is a very mineral rich area and could be transformed into a second mining power house for the State (after the Gawler Craton) by proposed mining developments. Havilah's mineral resources alone have the potential to generate >\$100 million annually (or \$0.5 billion in five years) in royalties for the State when fully developed. Other mineral developments will add to this.
- Presently the northeast is an impoverished backwater with few employment opportunities and this
 can be transformed by grid power that will allow a competitive and sustainable mining and
 processing industry to develop. This will improve the quality of life for people who live and work in
 this area and will also supply them with grid power that everyone else takes for granted.
- Mining activity will justify new infrastructure (eg ports, roads, rail upgrades) and flow on businesses eg iron ore pelletising, sulphuric acid production, fertilizer production, renewable energy developments that will benefit the entire State.



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