



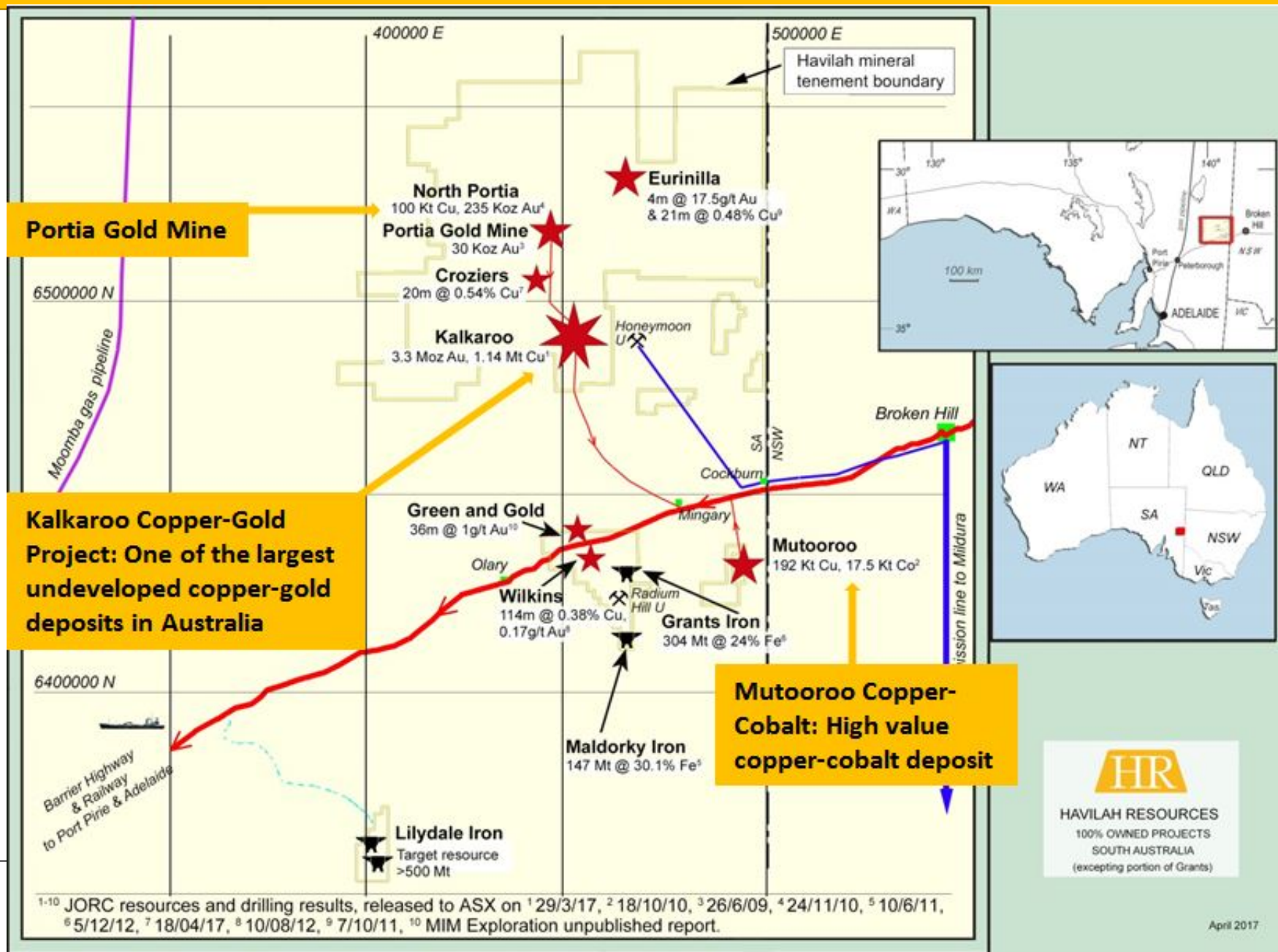
Havilah Resources

A New Mining Force in South Australia

Transforming the Northeast of SA

.....by developing known large mineral resources

Copper-gold, cobalt-sulphur and iron ore



What Does The Northeast of SA Offer?

- A mineral rich extension of the Broken Hill mineral province with large discoveries of copper, gold, cobalt and iron ore resources by Havilah Resources and other explorers.
- 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.
- **Simple equation** : Cash from mining developments →
revitalised service infrastructure →
jobs+revenue+flow on industries.

Mining - Driver For An Integrated Resources Industry

Sustainable for > 15 years from Havilah's JORC mineral resources in NE South Australia

Iron Ore

Maldorky 3 mtpa
Grants 10 mtpa

Rail Transport to Wallaroo via Snowtown Spur

Export Iron Ore

Grain export

Port Havilah WALLAROO

Copper-Gold

Kalkaroo 40,000 tpa Cu
Nth Portia 8,000 tpa Cu

Native Copper

Copper Concentrate

Gold 140,000 oz pa

Molybdenum

Olympic Dam

Barge Transhipment

Sulphuric Acid

Mutooroo 500,000 tpa

Sulphuric Acid

Co-Gen Electricity 15 Mw

266,000 tpa CO₂ replacement

Copper 7,500 tpa

Cobalt 750tpa

Gold

Iron ore 500,000 tpa

Imported Rock Phosphate

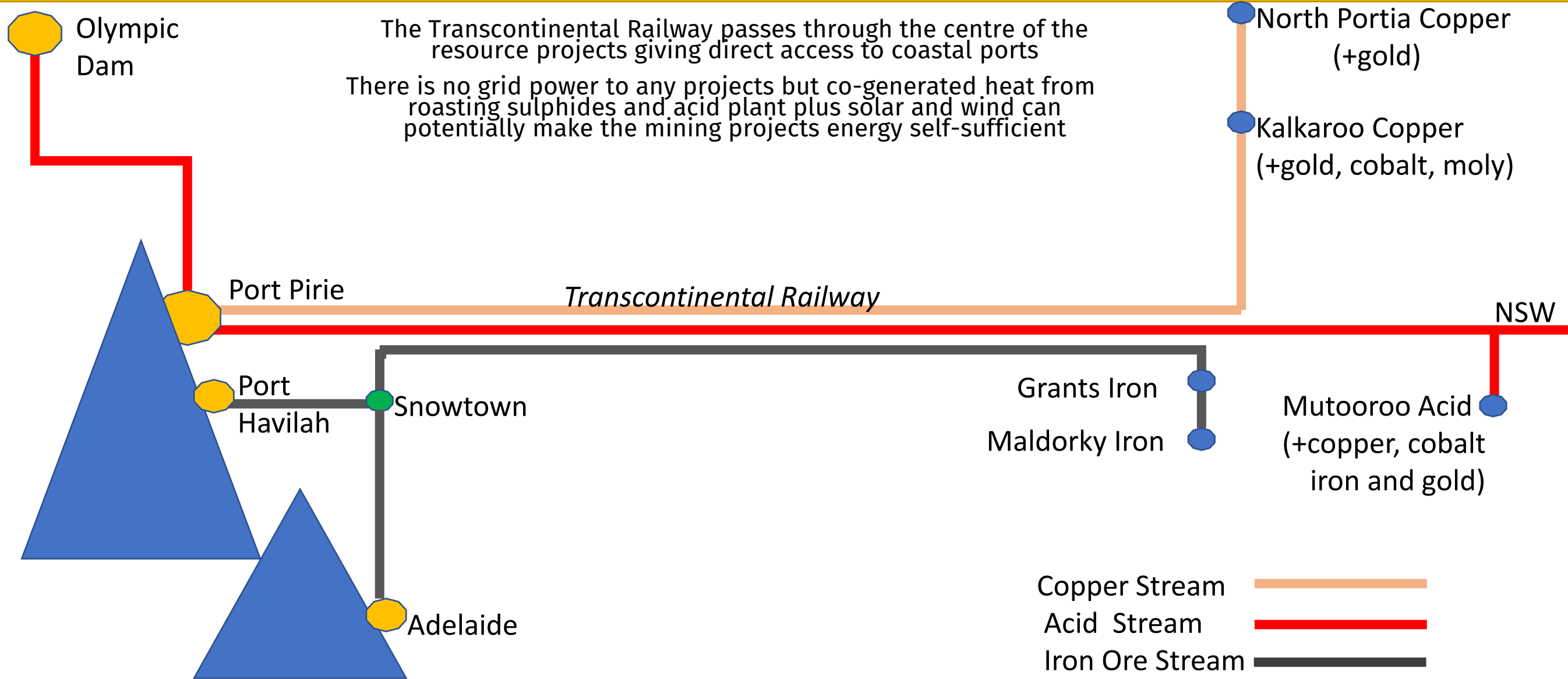
Superphosphate



Havilah Resources

Estimated production for each commodity is shown

Logistics Overview



Supporting Annual Revenue Chart

Project	Tonnes Mined Annually (mt)	Tonnes/ozs Annual Prodn.	Grade	Unit value (US\$) (current prices)	Annual Prodn Value (A\$m)*	Est. Project Capex (A\$m)	Est. Mine Life (Years)
Maldorky							
Iron Ore	8	3,000,000	63%	\$85	\$340	70	15
Grants							
Iron ore	31	10,000,000	63%	\$85	\$1,130	400	>50
Kalkaroo							
Copper	11	40,000	0.55%	\$6,670	\$356	450	15-20
Gold	11	105,000	0.40 g/t	\$1,330 /oz	\$186		15-20
Cobalt	11	1,666	150 ppm	\$80,000	\$177		15-20
Molybdenum	11	1,000	350 ppm	\$16,000	\$21		15-20
North Portia							
Copper	1	8,000	0.89%	\$6,670	\$71	30	10
Gold	1	35,000	0.64 g/t	\$1,330/oz	\$62	(incl overburden)	10
Molybdenum	1	600	600 ppm	\$16,000	\$13		10
Mutooroo							
Sulphur (as acid)	0.5	535,168	35% S	\$140	\$75	300	15-20
Copper	0.5	7,500	1.50%	\$6,670	\$67	(roaster+acid)	15-20
Cobalt	0.5	750	0.14%	\$80,000	\$80	30	15-20
Gold	0.5	3,215	0.2 g/t	\$1,330/oz	\$6	(copper float)	15-20
Iron ore	0.5	400,000	63%	\$85	\$45		15-20
Electricity	15Mw	15mW			No power bill !		15-20
TOTAL					\$2,629m	\$1,280m	



* exchange rate AUD:USD 0.75
*Assumes all Havilah projects are in full production at optimum rates based on current JORC resources
 Capex numbers are based on existing scoping or PFS studies and are subject to change*

Summary of Havilah Metal Sources

- **Copper and Gold** 48,000 tpa copper and 140,000 oz pa gold
from **Portia Gold Mine** – in production and paying royalties
and **Kalkaroo Project** – Mining Lease Proposal at final stages of approval, PFS completed
and **North Portia Project** – on granted ML 6534, currently updating PEPR and PFS
- **Sulphuric Acid and Cobalt** 535,000 tpa sulphuric acid and 1450 tpa cobalt
from **Mutooroo Project** – Mining Lease Proposal in preparation , PFS in progress
and **Kalkaroo Project** - pyrite concentrate
- **Iron ore beneficiated to 63%** 1 mtpa growing to 13 mtpa
from **Maldorky Project** - 145Mt iron ore – Mining Lease Proposal at final stages
and **Grants Project** - 305Mt, with very large resource upside potential in a large iron ore basin
- Havilah has sufficient JORC mineral resources to drive these operations for 15 years without any further discoveries at the indicated production rates.

Why This Is A Good Idea

UNLOCKS A VAST NEW IRON ORE PROVINCE

- Underpins new rail and import /export facility at Port Havilah (south of Wallaroo).
- Facilitates exports and imports from a rich agricultural area.
- Catalyst for a whole new industrial base on Northern Yorke Peninsula and northeastern SA.

SULPHURIC ACID IMPORT REPLACEMENT

- Fills part of large demand in SA (at OD) with local product.
- Could lead to a fertilizer production industry also facilitated by a new port.

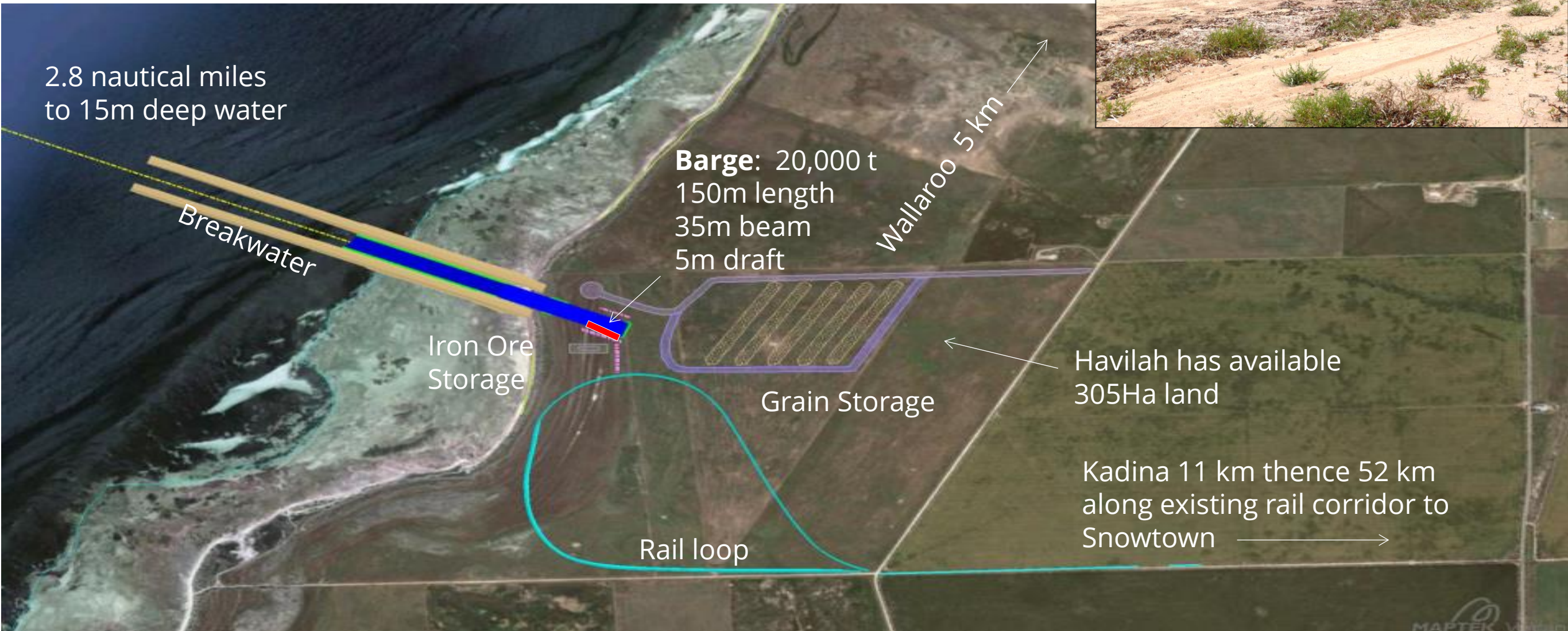
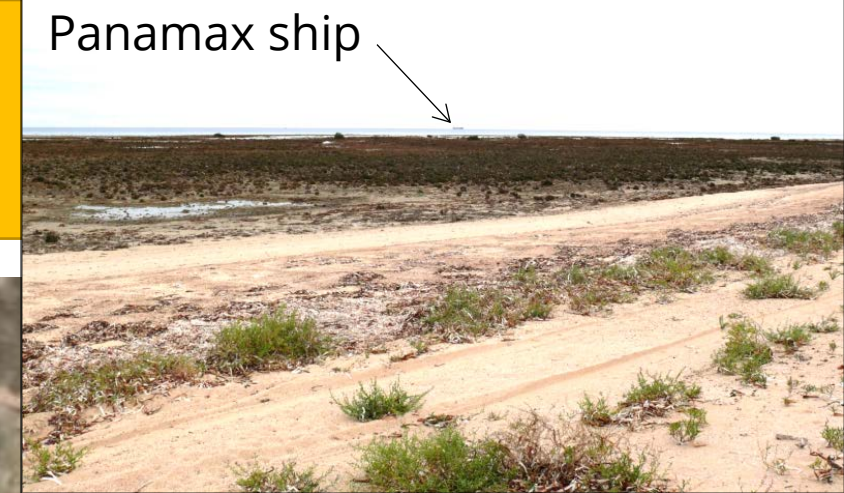
NEW COBALT PRODUCTION AND RENEWABLE POWER SOURCE

- Driven by the roaster / acid plant complex and co-generated heat.
- Derived from large by-product iron sulphide resources that would otherwise be wasted.

COPPER PRODUCTION INDUSTRY

- Could support expansion of Port Pirie smelter or contribute concentrate to a new smelter.
- Possibility that high grade copper ores (native copper / chalcocite) could value add to other operations eg OD scrap Cu replacement

Port Havilah Concept





Havilah Resources

A New Mining Force in South Australia



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