

28<sup>th</sup> August 2017

## POSEIDON & NORTHERN STAR ENTER INTO AN MOU ON BLACK SWAN

### *Highlights*

- **Poseidon & Northern Star enter into an MOU to explore processing gold ore at Black Swan Operations**
- **Strong progress towards establishing Black Swan as a central processing hub**
- **Black Swan processing plant enables a low capital cost entry to become a significant gold producer**
- **Engineering progressing for processing gold ores at Black Swan Operations**
- **On-going discussions with third parties for toll treating gold ores**
- **Poseidon is seeking to process over 2 million tonnes per annum**
- **Retain the flexibility to process Silver Swan high grade nickel ore**

Poseidon Nickel Limited (ASX:POS, Poseidon or the Company) is pleased to announce it has entered into a non-binding Memorandum of Understanding (MOU) with Northern Star Resources Limited (Northern Star) to explore the option of processing free milling gold ores at Black Swan.

Poseidon Chairman, Mr Chris Indermaur stated, "Entering into an MOU to process gold ores from Northern Star advances the Company's stated strategy of establishing Black Swan Operations, with all of its existing plant and infrastructure, as a free milling and refractory gold central processing facility and represents a positive step towards establishing the Black Swan Operations as a low capital cost entry into the gold market."

Poseidon plans to use existing plant and infrastructure at Black Swan to become a major gold producer in the highly prospective Goldfields region of Western Australia. Importantly the Company retains the flexibility of processing high grade Silver Swan nickel ore at Black Swan via a parallel and independent circuit.

Under the terms of the MOU the Parties have agreed to work together to evaluate all commercial options for processing Northern Star ore. Poseidon Chairman, Mr Chris Indermaur commented "We are very pleased to have this opportunity to work with Northern Star in increasing its ore processing options, following Northern Star's recently announced organic growth plans for its Kalgoorlie operations."

An aerial view of the Black Swan Operations is shown below in Figure 1. The facility was expanded by LionOre at a capital cost of over \$70 million. The Black Swan tenements, mines, plant and equipment remain in good standing.



**Figure 1: Aerial View of Black Swan Operations**

The Black Swan Operations (shown below in Figure 2) is a 2.2 million tonne per annum (Mtpa) processing facility that includes a conventional SAG mill, 5 ball mills, 2 flotation circuits, multiple thickeners, 3 ceramic filters and a large concentrate storage shed. With the addition of a carbon in leach (CIL) circuit the process plant is capable of processing nickel, oxide and refractory gold ores. The process is controlled remotely via a central control centre.

Infrastructure at Black Swan include, existing tailings disposal cells, a borefield and water treatment plant, large mine workshop and maintenance facilities, administration buildings, functional laboratory and metallurgical laboratory, plant stores and workshop areas, medical centre and emergency response control centre. The site is connected to the South West Interconnected System (SWIS) electricity supply.

In 2014 Poseidon completed an engineering study (refer to POS:ASX announcement 13 August 2014) for the restart of the Black Swan Operations. The refurbishment capital was estimated to be approximately A\$12.8M (GR Engineering) and the capital cost to install a CIL circuit is estimated at A\$8M for a 1.5Mtpa operation (Como Engineering).

Black Swan Operations is likely to be able to process over 2Mtpa of gold ore. To ensure the existing plant capacity is fully utilised negotiations are progressing with local gold explorers and miners to secure the supply of gold ore that will increase plant throughput and further reduce operating costs.

Poseidon intends to progress a detailed feasibility study (DFS) with a suitably experienced engineering subcontractor to begin the integrated design at Black Swan. The DFS will underpin the future funding of the Project. Regulatory approvals will also be progressed in parallel to allow early engagement with key stakeholders.



**Figure 2: Black Swan Grinding Circuit (10MW of installed power)**

**CORPORATE DIRECTORY**

**Director / Senior Management**

Chris Indermaur	Non-Executive Chairman
David Singleton	Non-Executive Director
Geoff Brayshaw	Non-Executive Director
Robert Dennis	Non-Executive Director
Gareth Jones	Company Secretary
Eryn Kestel	Joint Company Secretary

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**Home Exchange**

The Company's shares are listed on the Australian Securities Exchange and the home exchange is Perth ASX code: POS