

10th July 2017

POSEIDON & APHRODITE MOVE CLOSER TO GOLD PRODUCTION

Highlights

- **Poseidon & Aphrodite enter into an MOU to process Aphrodite's gold ore at Black Swan Processing Operations**
- **Aphrodite to farm in their gold tenements and Poseidon the Black Swan processing plant and infrastructure, into a 50:50 Special Purpose Vehicle (SPV)**
- **Poseidon moves to establish Black Swan as a central processing hub for gold**
- **Existing Black Swan processing plant enables a low cost option to becoming a major gold producer**
- **Aphrodite Gold recently announced the results of prefeasibility study (PFS)**
- **Aphrodite gold resource estimation 13.1 million tonnes @ 2.99 g/t gold for 1.26 million contained ounces**
- **Engineering for processing gold at Black Swan to be progressed to DFS**
- **On-going discussions with third parties for gold concentrate offtake**
- **Poseidon retains the rights and ability to process nickel ore at Black Swan**

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 Aphrodite Gold Limited (Aphrodite) to process gold ores at Black Swan. Poseidon Chairman, Mr Chris Indermaur stated, "Poseidon and Aphrodite have been in discussions for over 6 months and the MOU is an excellent result for both Companies. Poseidon would farm in the Black Swan Operations and Aphrodite would farm in their gold tenements to a special purpose vehicle (SPV or NewCo) in a 50:50 joint ownership structure."

"Entering into an MOU with Aphrodite unlocks existing capital at Black Swan Operations in what continues to be a very difficult nickel market. Poseidon plans to use existing plant and infrastructure at Black Swan to facilitate a transition to becoming a major gold producer in the highly prospective Goldfields region. Black Swan offers a low capital cost entry into the gold market and could exploit the concentrator's unique ability to process both oxide and refractory gold ores. Furthermore at 2Mtpa rates and 3 g/t the SPV can produce over 150,000oz per year in gold concentrate an outstanding outcome for both parties."

The Chairman closed his remarks by stating, "It is however important to stress that when the nickel market does improve nickel production at Black Swan can restart via a parallel and independent circuit. Poseidon would retain all nickel ore at Black Swan and Silver Swan."

An aerial view of the Black Swan Operations is shown below in Figure 1. The facility was expanded in 2005 by LionOre at a capital cost of over \$70 million. Black Swan has been on care and maintenance since 2009 following the global downturn. The Black Swan tenements, mines, plant and equipment remain in good standing.

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.



Figure 1: Aerial View of Black Swan Operations



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

Aphrodite's gold tenements are located approximately 65 kilometres trucking distance from the Black Swan process plant run of mine (ROM) stockpiled ore. Discussions with the relevant key stake holders will be progressed to ensure appropriate approvals are secured well in advance of first ore deliveries to support mining at Aphrodite and processing at Black Swan. Figure 3 below highlights the location of Aphrodite's gold tenements relative to the Black Swan Operations.

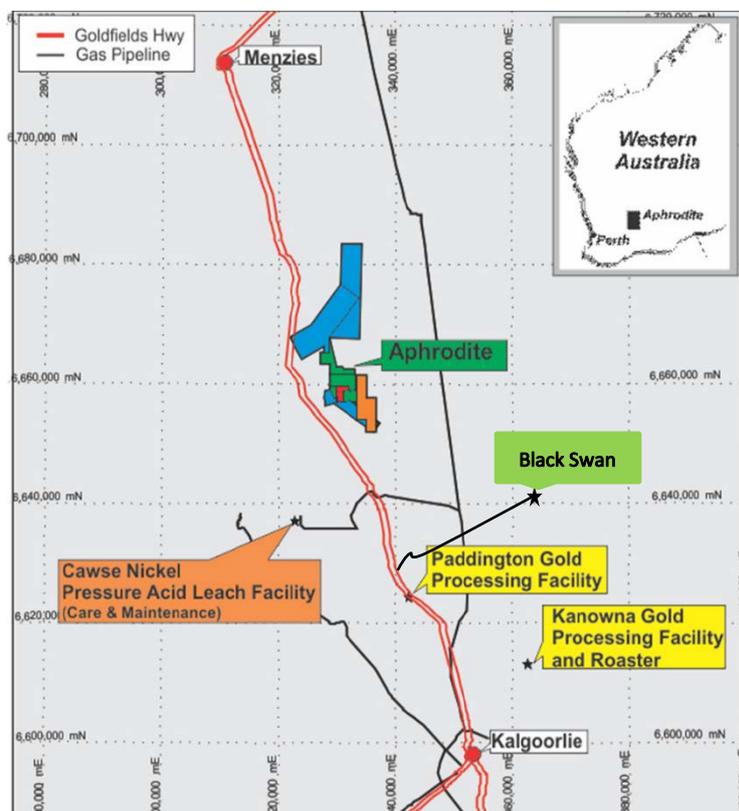


Figure 3: Aphrodite Gold Tenements Relative to Black Swan

Aphrodite recently released the results from the prefeasibility study (PFS) for the development of the open pit mine and installation of a gold processing facility to be constructed on their tenements (refer to AQQ: ASX announcement 27 June 2017). The plant and equipment included a concentrator, followed by a CIL circuit. The gold concentrate produced is subject to a pressure oxygen (POX) leach whereby the sulphides are oxidised and the slurry is then neutralised prior to a conventional CIL circuit to recover the gold. Typically more than 90% of the gold is recovered. The PFS capital and operating cost to process Aphrodite gold via a conventional gravity, CIL circuit including all infrastructure was \$81 million and \$38/t respectively.

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). If Black Swan is only operated at 1.5Mtpa the SAG mill will be modified to operate in closed circuit and the ball mill will be bypassed.

The Black Swan open pit ore rock hardness was 30kWhr/t however Aphrodite's ore is typically less than 20kWhr/t therefore the Black Swan facility is likely to be able to process over 2Mtpa of gold ore. Consequently, work is progressing with local gold explorers and miners to source supply of gold ore to increase the plant throughput and further reduce operating costs.

Gold concentrate produced at Black Swan would be sold initially to third party refiners via an offtake agreement however the Parties are planning to progress the installation of a POX circuit at a later stage funded from cash flows. This will establish a central and unique refractory gold processing facility within the Goldfields. As the discovery of oxide orebodies slows in and around the Goldfields area the importance of refractory orebodies will grow as a significant source of known gold resources remaining. Therefore establishing a refractory gold processing facility is an important strategic decision. Poseidon has over 10 years of operating “in-house” POX expertise for the processing of concentrates and would be pleased to join with Aphrodite to construct the first POX plant in the Kalgoorlie region.

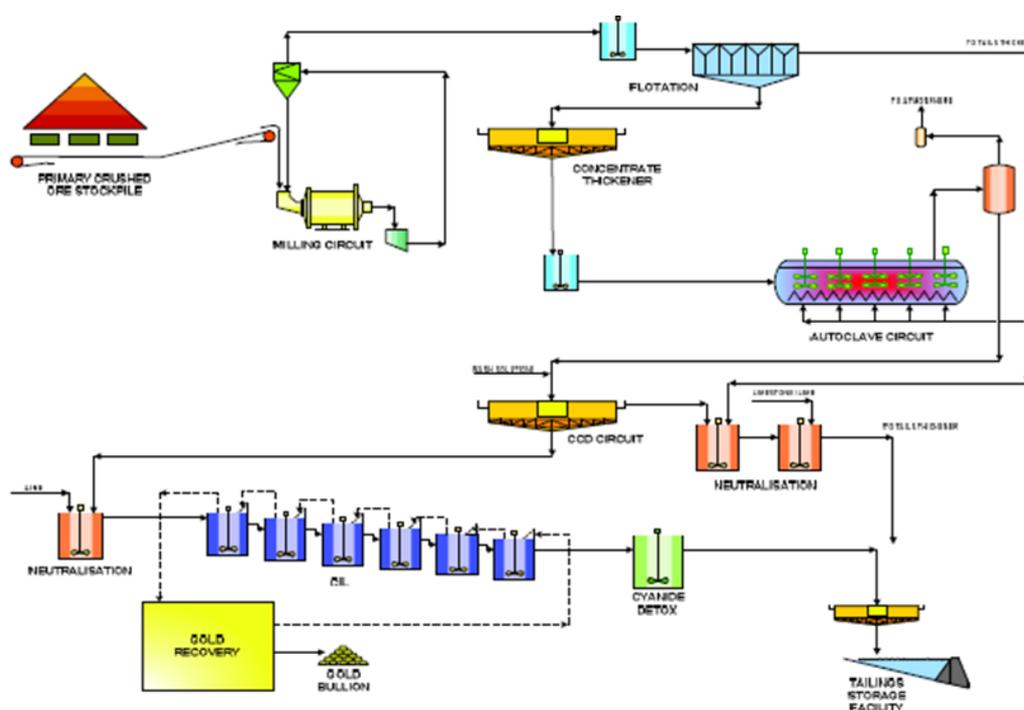


Figure 4: Simplified POX Flowsheet

The Parties intend 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 stake holders. Further gold exploration will also be progressed both on Aphrodite’s tenements and some “hot spots” for gold on the Black Swan tenements will also be reviewed.

Entering into an MOU to process gold ores from Aphrodite’s gold tenements is consistent with the Company’s strategy of establishing Black Swan, with all of its existing plant and infrastructure, as the first refractory gold POX facility within the Goldfields region.

The Project can be developed in 2 stages in order to secure cash flow early by refurbishing the existing Black Swan Operations to treat Aphrodite’s gold ores. To that end discussions are progressing with offtake parties for the gold concentrate. Gold production could start within 12 months of financing.

8th July 2017

MEMORANDUM OF UNDERSTANDING

This memorandum of understanding (“**MOU**”) is entered into on 8th July 2017 between:

Poseidon Nickel Limited (ASX: POS), (“**Poseidon**”);

and

Aphrodite Gold Limited (ASX: AQQ), (“**Aphrodite**”).

Poseidon and Aphrodite are collectively referred to herein as the “**Parties**”.

RECITALS:

- A. Poseidon owns directly or via subsidiaries the Black Swan Operations located in the Goldfields, Western Australia. The facility includes the Silver Swan mine, Black Swan open pit nickel mine and a 2.2Mtpa concentrator with 7 mills and 2 operational circuits. Infrastructure includes tailings facility with spare capacity of approximately 2.4 years at 1.2Mtpa rates, borefield to supply water to the processing facility, water treatment facility, workshops, stores, warehouse and offices.
- B. Aphrodite holds directly or via subsidiaries the Aphrodite Gold Project (Aphrodite) approximately 65 kilometres north-west of the Black Swan Operations that include the tenements. Aphrodite have progressively explored their tenements for gold and recently completed their prefeasibility study (PFS). Aphrodite is seeking to develop Aphrodite and start mining.
- C. The Parties intend to evaluate the joint development of Aphrodite’s PFS gold resource and Poseidon’s Black Swan Processing Operations for the mining and processing of gold ore mined at Aphrodite and processed at Black Swan Operations providing a cost effective expeditious development path to market (“**Proposed Transaction**”).
- D. Poseidon and Aphrodite have been in discussions to explore the synergies available between the Party’s assets and have expressed an interest in establishing a jointly owned 50:50 Special Purpose Vehicle (SPV) (“**NewCo**”) to support an early entry into gold mining and processing.
- E. Both Parties acknowledge that they have developed and own intellectual property (IP).
- F. The Parties wish to enter into this non-binding MOU to record their current intent for the terms of the Proposed Transaction.

1. Purpose of MOU

The purpose of this MOU is to provide a framework for co-operation so that the Parties can establish the key principles to be incorporated into a formal agreement (the “**Final Agreement**”) to enable the Proposed Transaction.

2. Creation of NewCo

The Parties agree to work in good faith to establish the terms under which an SPV or NewCo will be established which Poseidon and Aphrodite will share equally. The parties agree that the purpose of NewCo is to share equally the definitive feasibility study (DFS) costs, capital development costs, operating costs and after-tax net profits earned in respect of mining and processing gold.;

- i. Both Parties will contribute their share of the funds required by NewCo.
- ii. NewCo to raise capital to fund the development of the Aphrodite open pit and underground mining operation, refurbishment of the Black Swan process plant , install the carbon in leach (CIL) circuit, carbon stripping and carbon regeneration facilities, electro-winning cells (EW), gold room, Pressure Oxidation autoclave including supporting infrastructure (timing to be agreed), associated infrastructure costs and related activities, working capital, pre-production activities, commissioning and start-up costs to commercial production.
- iii. Subsequent operating expenses are expected to be funded from Newco cash flow but in the event of a shortfall may require cash calls on the Parties;
- iv. If either Poseidon or Aphrodite default on a cash call the defaulting party equity in NewCo will be diluted under a mechanism to be agreed.
- v. Excess plant capacity will be offered to third party gold miners in the region by NewCo.
- vi. Poseidon will retain the nickel rights on the tenements including but not limited to Silver Swan underground operation, Black Swan open pit mine, high grade Silver Swan tailings and Stockpiled ore.
- vii. Poseidon will also retain the right to process nickel ore mined via the high grade Silver Swan circuit without jeopardising in any way the gold production and the capital or operating cost of the upgraded for gold processing Black Swan Process Plant. Any processing of nickel ore through the Silver Swan circuit will be on a commercial basis to be negotiated in the Final Agreement.
- viii. Care and maintenance costs of the Silver Swan mine will be Poseidon's expense.
- ix. Poseidon and Aphrodite will appoint an equal number of directors to the board of Newco with dead lock provisions to be set out in the Final Agreement.
- x. Poseidon and Aphrodite will be responsible for their own legal expenses.
- xi. It is recognised that the potential of the proposed arrangement may create interest in the stock of both parties and that during

detailed due diligence information may enter the market. The parties therefore agree to this document being posted in full as part of the ASX announcement in the interests of transparency.

- xii. The Parties intend to reflect this MOU in a Final Agreement within sixty (60) days.

(b) Documentation and unenforceability. Notwithstanding the preparation of such a Final Agreement, the Parties acknowledge that the terms set forth within this MOU will underpin the Final Agreement. This MOU however does not create obligation or rights on either party and will not be used in a court of law by the parties for any reason.

3. Indicative Timetable

Subject to any confidentiality restrictions, Aphrodite is to provide Poseidon and Poseidon is to Provide Aphrodite a copy of any available data as soon as possible after execution of this MOU for each Party to undertake a review of the data with the intent of completing due diligence and preliminary review/feasibility of the Proposed Transaction.

Provision of the following items as a minimum but not limited to the information tabled below will be exchanged within fourteen (14) business days upon execution of the MOU:

- i. Poseidon are to provide documentation relating to the existing regulatory approvals (DER, DMP and DoW relating to existing activities);
- ii. Gold resource estimates (no reserve estimate exits);
- iii. Provision of metallurgical testwork;
- iv. Mine design, LOM planning, geotechnical and hydrogeological studies available including forecast capital and operating costs (Aphrodite Gold PFS);
- v. Engineering for Black Swan plant refurbishment, CIL circuit, carbon stripping & regeneration facilities, EW & gold room design, pressure oxygen circuit (POX), including forecast capital and operating costs;
- vi. Where available mass and energy balances, design criteria, PFDs and P&IDs;
- vii. Infrastructure review including tailings, water and power;
- viii. Any other information requested by the parties that is relevant to the proposed transaction.

The Parties agree that the information to be provided by the outlined in Clause 4 shall be used to jointly prepare a business plan. The joint business plan and supporting documentation shall be subject to independent third party expert reviews as part of the due diligence

process and must be completed within sixty (60) days of the execution of this MOU.

The Parties agree that they will use reasonable endeavours to meet the Indicative Timetable in clause 4 to effect the Proposed Transaction but parties acknowledge that the Indicative Timetable is indicative only and is subject to change.

4. General

a. Public Announcements.

The Parties shall consult with each other before issuing any news release or making any public announcement with respect to this MOU or the transactions described herein and, except as required by any applicable law or regulatory requirement, neither party shall issue any news release or make any such public announcement without the written consent of the other, which consent shall not be unreasonably withheld or delayed.

b. Termination.

Any Party may terminate this MOU.

c. Entire Understanding.

This MOU is the entire agreement and understanding between the parties on everything connected with the subject matter of this MOU and supersedes any prior agreement or understanding on anything connected with that subject matter, other than the Confidential Agreement, which continues to apply.

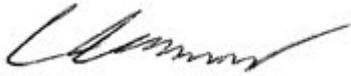
d. Costs and Outlays.

Subject to the terms of this MOU each Party must pay its own costs and outlays connected with the negotiation, preparation and execution of this MOU. Each Party must bear equally all duty and other government imposts payable in connection with this MOU and all other documents and matters referred to in this MOU when due. The parties shall mutually agree on the appointment of legal counsel for the preparation of the Final Agreement (the costs to be shared equally).

e. Laws.

This MOU shall be governed and construed in accordance with the law of Western Australia and the Parties hereby submit themselves to the non-exclusive jurisdiction of the courts of the State in relation to all matters concerning the operation and interpretation of this MOU.

Agreed by
POSEIDON NICKEL LIMITED
in accordance with Section 127(1)
of the Corporations Act 2001 (Cth)
by authority of the Director/s



Director - Chairman

Chris Indermaur

Name (please print)

Agreed by
APHRODITE GOLD LIMITED
in accordance with Section 127(1)
of the Corporations Act 2001 (Cth)
by authority of the Director/s



Director – Managing Director and CEO

Peter Buttigieg

Name (please print)

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

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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