

SCOPING STUDY COMPLETED ON CAPEX AND OPEX FOR BLACK SWAN PROCESSING OPTIONS

27 July 2021

HIGHLIGHTS

- Black Swan ore processing circuits can be refurbished for relative low capital cost
- The 150ktpa high-grade circuit is estimated to cost \$13.4 million or \$15.9 million to refurbish depending on the crushing option
- The 1.1Mtpa lower grade circuit could be refurbished for \$22.1 million
- Both plants would take about six months to refurbish

Poseidon Nickel (ASX: POS, “the Company”) is pleased to report the outcomes from the Scoping Study on the estimated capital cost for the refurbishment and operation of two processing plant configurations at Black Swan undertaken by GR Engineering Services Limited (“GRES”) (ASX Code GNG), namely:

- the 150,000 tonne per annum (tpa) Silver Swan circuit for treating high-grade sulphide ore; and
- the 1.1 million tpa Black Swan circuit for treating lower grade open pit disseminated ore and potentially ore from Windarra.

Managing Director and CEO, Peter Harold, commented: “*The results from the Scoping Study demonstrate that both processing plants can be refurbished at a relatively low cost and in a relatively short period of time, i.e., approximately six months.*”

This creates wonderful optionality for our shareholders as it allows us to consider producing concentrate from our high-grade resources like Silver Swan and potentially Golden Swan, assuming the current resource drilling results in a maiden resource which can be converted to a reserve. The benefit of producing our own concentrate compared to selling ore would be the ability to obtain higher payability for the contained nickel and improve overall project economics. In addition, with a strong nickel price environment and positive outlook, it’s definitely time to review mining and processing of the lower grade Black Swan disseminated ore and potentially combining that feed with Windarra ore from Mt Windarra and/or Cerberus. These are certainly very exciting times for our shareholders.”

DETAILS

Background

GRES has provided Poseidon with capital and operating cost estimates for the refurbishment and operation of the separate 150ktpa and 1.1Mtpa ore treatment circuits at Black Swan to a +/- 20% level of accuracy, collectively referred to as the Scoping Study. GRES was chosen to undertake the Scoping Study due to their detailed knowledge of both circuits and their experience in the construction and refurbishment of these type of

plants. JR Engineering, the precursor to GRES constructed the 150ktpa plant in 1997. Lycopodium constructed the 2Mtpa plant in 2006. GRES completed a refurbishment cost estimate on the 2Mtpa plant in 2014.

It is proposed that the existing 2Mtpa plant would be derated to 1.1Mtpa utilising the SAG Mill grinding capacity only initially but could be derated later to bring into service the Ball Mill grinding capacity, subject to the quantity of ore reserves defined going forward and the prevailing nickel price.



Figure 1 – Black Swan 2Mtpa processing plant with the 150ktpa circuit located between the mills and float circuit

Capital cost estimates

GRES has undertaken the Scoping Study based on three possible plant configurations as follows:

- 150ktpa plant (the original Silver Swan high-grade circuit) with contract crushing;
- 150ktpa plant with the secondary and tertiary crusher refurbished; and
- 1.1Mtpa plant (the original 2Mtpa Black Swan plant for treating low grade disseminated open pit ore) derated to process 1.1Mtpa of lower grade ore.

Based on these possible plant configurations GRES have estimated the refurbishments costs that are summarised in Table 1. These estimates are to a +/-20% accuracy level. GRES have advised that each plant configuration refurbishment would take approximately six months to complete.

Table 1 – Capital cost estimates for the various processing circuits

Circuit configuration	150ktpa Silver Swan circuit with contract crushing	150ktpa Silver Swan circuit with secondary & tertiary crushing	1.1Mtpa Black Swan circuit (derated from 2Mtpa)
Capital cost estimate	\$13.4 million	\$15.9 million	\$22.1 million

In determining the capital cost estimates GRES noted the following items:

- no allowance was made for refurbishment of structural concrete
- no provision was made for conveyor covers
- sand blasting and priming only
- process and raw water ponds not included in the scope
- allowance was made for cleaning of disk filters
- scats from 1.0Mtpa SAG Mill case to be rehandled by front end loader
- assumption made that CV203 dust scrubber will not be recommissioned
- tailings thickener common for both 150ktpa and 1.1Mtpa circuits
- 150ktpa plant restart will require some shared facilities with 1.1Mtpa plant i.e., reagents, water reticulation, air reticulation, tailings

Operating cost estimates

GRES has determined the following operating costs for the various plant configurations.

Table 2 – Operating cost estimates for the various processing circuits

Circuit configuration	150ktpa circuit with contract crushing	150ktpa circuit with secondary & tertiary crushing	1.1Mtpa circuit
Operating cost estimate	\$91.60/tonne	\$79.09/tonne	\$29.39/tonne

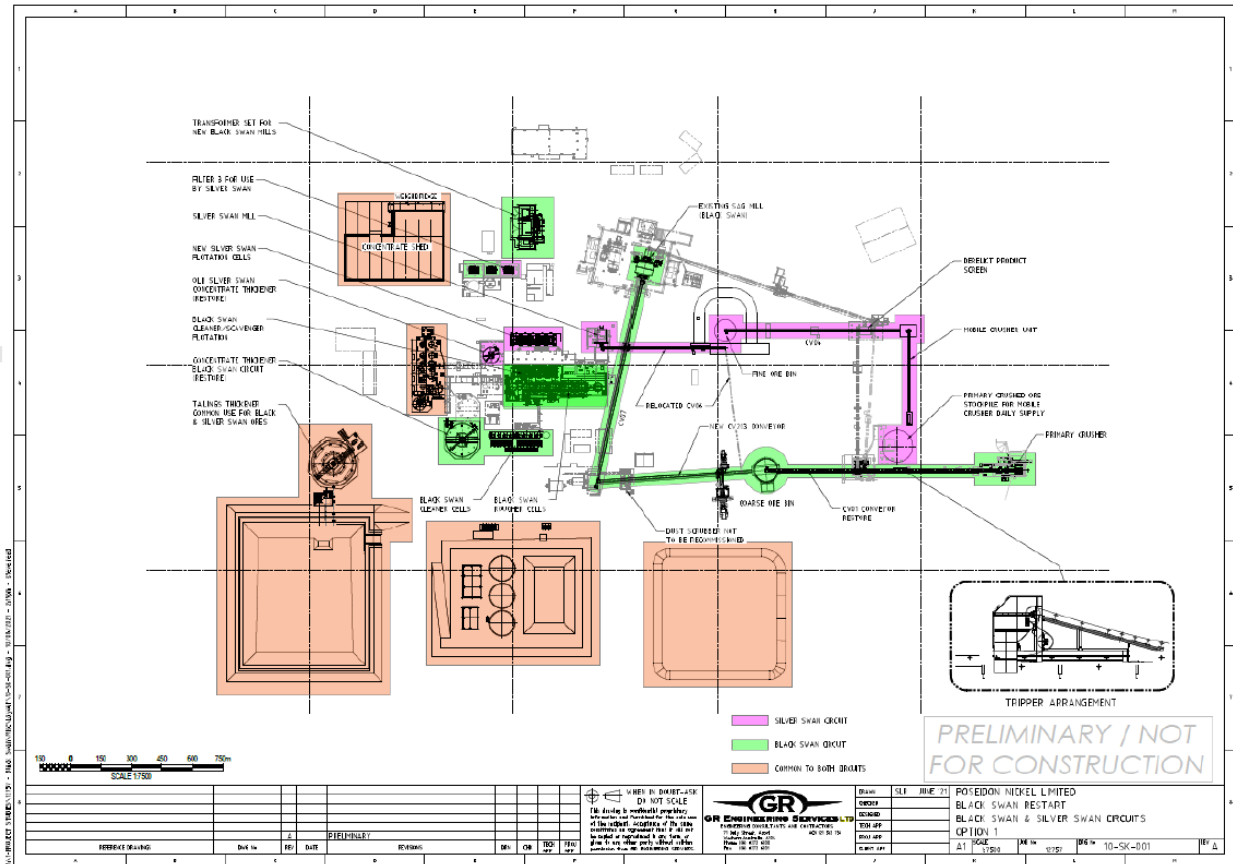


Figure 2 – Black Swan circuit in green, Silver Swan circuit in purple and common areas in orange

Discussion

Given the relative low capital number for the refurbishment for both circuits and the strong nickel price and buoyant price outlook, the Company will maintain its focus on the high-grade ore production options available including Silver Swan and potentially Golden Swan, subject to defining a Resource and a Reserve. The Company will continue to study the sale of ore to third parties, however given the low capital cost of the refurbishments and high payabilities for high quality (i.e., high nickel grade, high iron/low MgO ratio) nickel concentrates, processing at Black Swan looks to be the most attractive option for the Company for high-grade ore.

In addition, with the positive outlook for nickel prices the Company will revisit the economics of mining and processing lower grade ores from the Black Swan disseminated orebody (via the open pit) and study the economics of mining and trucking underground ore from Windarra to be processed at Black Swan through the 1.1Mtpa circuit.

NEXT STEPS

High Grade Ore - The Company needs to increase its high-grade ore inventory and plans to do this by:

- delivering a maiden Resource from Golden Swan and converting that to a Reserve; and
- increasing the Silver Swan Reserve by infill drilling the existing Resource.

Assuming the Company can deliver the above outcomes then restarting the 150ktpa concentrator would be a very attractive option based on the GRES Scoping Study results and assuming acceptable mining costs, metallurgical recoveries, concentrate payabilities, future A\$ nickel price and attractive overall project economics.

Lower Grade Ore - The Company will also commence studies on mining the Black Swan disseminated orebody via the open pit and mining and trucking Windarra ore to Black Swan for processing. The Company will release the results of these studies once they are completed.



Peter Harold
Managing Director & CEO
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For further information contact Peter Harold: + 61 (0)8 6167 6600

The announcement was authorised for lodgement by the board of Poseidon Nickel Limited.

FORWARD LOOKING STATEMENTS:

This release contains certain forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "except", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production and expected costs. Indications of, and guidance on future earnings, cash flows, costs, financial position and performance are also forward looking statements.

Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change, without notice, as are statements about market and industry trends, which are based on interpretation of current market conditions. Forward looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance.

Forward looking statements may be affected by a range of variables that could cause actual results or trends to differ materially. These variations, if materially adverse, may affect the timing and development of the processing options at Black Swan.