

EXCELLENT NICKEL EXTRACTION ACHIEVED ON BLACK SWAN CONCENTRATES

3 FEBRUARY 2022

KEY POINTS

- Preliminary leach testwork by Pure Battery Technologies Limited (“PBT”) demonstrates that Black Swan concentrates could be suitable feed material for the proposed pCAM hub project in Kalgoorlie
- The leaching testwork achieved >90% extraction of nickel and >95% extraction of cobalt
- Leach testing will continue on other concentrate blends from Black Swan

Poseidon Nickel (ASX: POS, “the Company”) is pleased to advise that excellent preliminary test results have been achieved on Black Swan concentrates utilising pressure oxidation.

Managing Director and CEO, Peter Harold, commented: *“We are currently advancing the bankable feasibility study for Black Swan, which includes evaluating a number of offtake options to deliver long term value for the project. These options include traditional nickel smelters, existing leaching plants and proposed plants (ie. PBT’s Kalgoorlie pCAM hub).”*

We are delighted that PBT’s preliminary leach testwork has returned excellent extraction results for a range of concentrate specifications that could be produced from various feed scenarios (open pit and underground) through the Black Swan concentrator. If PBT are successful in the financing and construction of the proposed pCAM plant this could unlock the additional value for Poseidon from our large mineral resource base. We look forward to continuing to work with PBT as studies progress.”

DETAILS

Pressure oxidation testwork

PBT has achieved excellent results from its preliminary leach testwork on samples of nickel sulphide concentrates that could be produced from the Company’s Black Swan Project. The Pressure Oxidation Leach tests were carried out on three different concentrate blends provided by the Company. The tests achieved >90% extraction of nickel and >95% extraction of cobalt.

PBT’s Chief Technology Officer Dr William Hawker said:

“These successful results demonstrate that the Black Swan concentrate could be suitable feed material for PBT’s pCAM hub project.”

“Our next steps are to widen the design feed envelope by testing further blends that align with Poseidon’s Black Swan production plans, along with some other nickel sulphide concentrates, and demonstrate the production of Mixed Hydroxide Precipitate (MHP) from these nickel concentrates, for subsequent conversion from MHP to precursor Cathode Active Material (pCAM), through our proprietary PBT processing technologies”.

PBT's Managing Director and CEO Mr Zikarsky also noted the positive developments with PBT's Australian project were being mirrored in their European operations.

"We are charging ahead in Europe too with recent campaigns at our plant in Germany producing commercial quantities of multiple, on-spec, NMC pCAM products from primary Mixed Hydroxide Precipitate and recycled lithium-ion battery Black Mass materials.

"We are extremely pleased that third party testing in Germany has verified earlier electrochemical testing results. These results show our demonstration plant products meet and beat the battery performance of other commercially available pCAM products," he said.

PBT's and the proposed Kalgoorlie pCAM Hub

PBT is an Australian based company with an international nickel and cobalt refining operation in Germany (owned via a subsidiary company) that is advancing its plan to establish a refinery in Western Australia to produce precursor pCAM battery metal products. Initial studies will focus on initial production of up to 50,000tpa of pCAM.

PBT and Poseidon has signed a Memorandum of Understanding (MoU) to investigate a Battery Metals Refinery in WA (refer to the Company's ASX Announcement on the 13 October 2021) whereby Poseidon and PBT will evaluate the establishment of a regional pCAM refining hub. Under the MoU PBT will provide its in-house technology and expertise, and Poseidon will provide typical specifications and anticipated production volumes of nickel concentrate from Poseidon's projects as potential base feed for the proposed refinery, should Poseidon decide to develop its projects and supply concentrate to the proposed refinery.

The ultimate objective is for the parties to execute a Definitive Agreement that will detail how the parties can work together to fund and develop a regional supply chain from mine to concentrate, to an intermediate mixed nickel cobalt hydroxide product that will be further refined in PBT's refinery using PBT's patented technology to produce products suitable for the battery manufacturing markets. The MoU notes that obligations of the parties under the MoU are not binding or enforceable unless and until a Definitive Agreement has been entered into. The MoU has been drafted to not hinder any other transactions or processes for either PBT or Poseidon to bring their respective products to market, either currently underway or future opportunities.

Progress with indicative terms for the Black Swan Bankable Feasibility Study

The Company has recently provided a number of interested parties including smelter companies, traders and battery manufacturers with a potential Black Swan concentrate specification and some guidance around possible production volumes. We have already received indicative terms from most parties contacted which we are using for preliminary financial cashflow analysis. We will maintain dialogue with all interested parties as we progress with the Bankable Feasibility Study and seek more definitive terms once we have completed the metallurgical test work program and have a more accurate production schedule.



Peter Harold
Managing Director and CEO

3 February 2022

For further information contact Peter Harold: + 61 (0)8 6167 6600.

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

About Poseidon Nickel Limited

Poseidon Nickel Limited (ASX Code: POS) is a nickel sulphide exploration and development company with three projects located within a radius of 300km from Kalgoorlie in the Goldfields region of Western Australia and a resource base of around 400,000 tonnes of nickel and 180,000 ounces of gold.

Poseidon's strategy is focused on the exploration and eventual resumption of its established nickel operations in Western Australia where project risk capital and operating costs are low. A critical element of this strategy has been to acquire projects and operations with high levels of geological prospectivity likely to lead to potential substantial extension of the operation's life through the application of modern exploration techniques.

Poseidon owns the Windarra, Black Swan and the Lake Johnston Nickel Projects. In addition to the mines and infrastructure including concentrators at Black Swan and Lake Johnston, these projects have significant exploration opportunities demonstrated by the discovery of the Abi Rose deposit at Lake Johnston and the Golden Swan high grade mineralisation at Black Swan. The Company has recently completed a Definitive Feasibility Study on retreating the gold tailings at Windarra and Lancefield given the strength of the A\$ gold price.

COMPETENT PERSON STATEMENTS:

The information contained within this announcement is extracted from the reports titled:

- "Poseidon Announces Black Swan Mineral Resource" released 4 August 2014
- "Silver Swan Resource Upgrade" released 5 August 2019
- "50% Increase in Indicated Resources at Lake Johnston" released 17 March 2015
- "Poseidon Announces Revised Mt Windarra Resource" released 7 November 2011
- "Resource Increase of 25% at Windarra Nickel Project" released 1 December 2011
- "Silver Swan Resource Upgrade" released 5 August 2019
- "Silver Swan Tailings – Maiden Resource Estimate" released 15 September 2021
- "Golden Swan Maiden Resource" released 27 October 2021

which are available to view on www.poseidon-nickel.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and, in the case of Minerals Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not materially modified from the original market announcement."

The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

FORWARD LOOKING STATEMENTS

This release contains certain forward looking statements in relation to future matters that may involve risks or uncertainties and may involve significant items of subjective judgement and assumption of future events that may or may not eventuate. 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. .

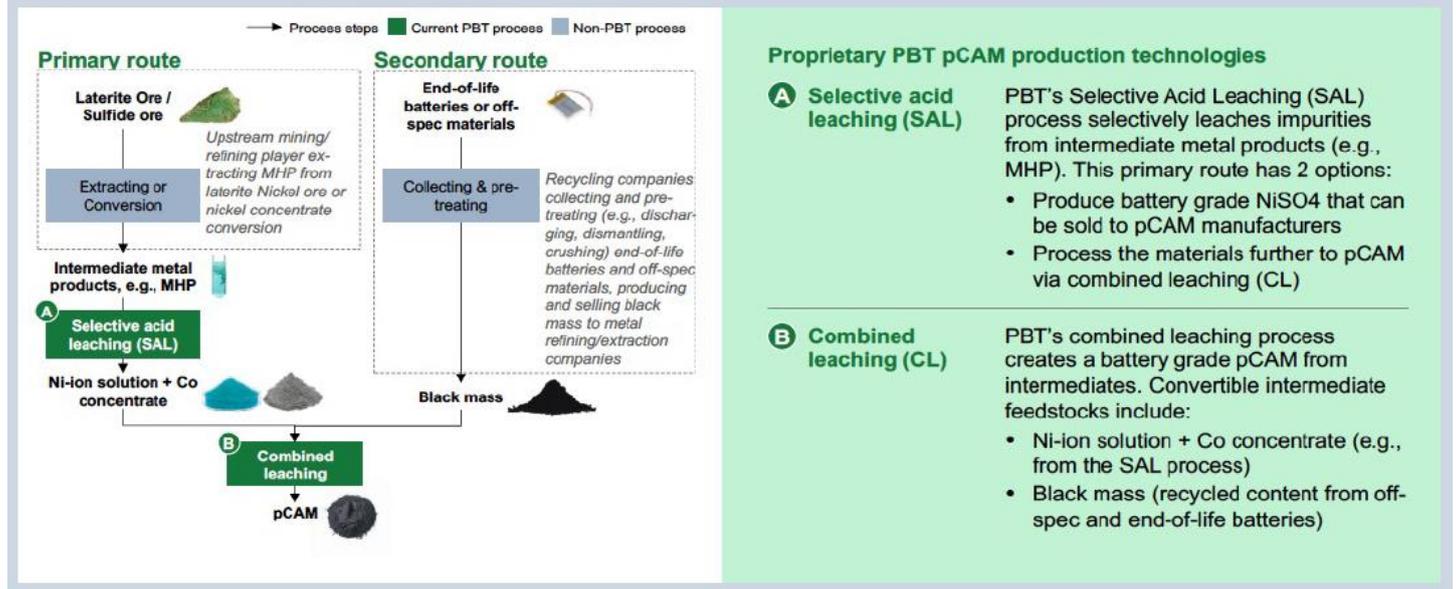
Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change, without notice, as are statements about market and industry trends, which are based on interpretation of current market conditions. Forward looking 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 or the feasibility and potential development of the Black Swan Project and/or the proposed pCAM hub project in Kalgoorlie.

About Pure Battery Technologies (PBT)

Pure Battery Technologies Pty Ltd (PBT) was established in 2017 and is headquartered in Queensland. PBT commercialised and patented the Selective Acid Leaching (SAL) process. The SAL process was developed by the University of Queensland and has been commercially proven to produce high-quality, more affordable nickel and cobalt battery materials with a lower environmental footprint. PBT currently utilises Mixed Hydroxide Precipitate (MHP) to produce nickel and cobalt materials for Lithium-Ion Batteries (LIB).

PBT's technology can be used for both primary and secondary production



PBT's technology can also be used to recycle existing LIB materials creating a closed-loop lifecycle for these critical battery minerals. In September 2020, PBT acquired an existing refinery in Hagen, Germany, providing a base to demonstrate the commercial viability of PBT's technology. PBT is a publicly unlisted company. Further information on PBT can be found at www.purebatterytech.com

MINERAL RESOURCE STATEMENT

Table 1: Nickel Projects Mineral Resource Statement

Nickel Sulphide Resources	JORC Compliance	Cut Off Grade	MINERAL RESOURCE CATEGORY												
			INDICATED			INFERRED			TOTAL						
			Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co% Grade	Co Metal (t)	Cu% Grade	Cu Metal (t)
BLACK SWAN PROJECT															
Black Swan	2012	0.40%	9,600	0.68	65,000	21,100	0.54	114,000	30,700	0.58	179,000	0.01	4,200	NA	-
Silver Swan	2012	4.50%	108	9.4	10,130	61	9.7	5,900	169	9.5	16,030	0.19	316	0.4	679
Golden Swan	2012	1.00%	111.6	4.7	5,200	48.4	2.2	1050	160	3.9	6250	0.08	123	0.3	480
LAKE JOHNSTON PROJECT															
Maggie Hays	2012	0.80%	2,600	1.60	41,900	900	1.17	10,100	3,500	1.49	52,000	0.05	1,800	0.10	3,400
WINDARRA PROJECT															
Mt Windarra	2012	0.90%	922	1.56	14,000	3,436	1.66	57,500	4,358	1.64	71,500	0.03	1,200	0.13	5,700
South Windarra	2004	0.80%	772	0.98	8,000	-	-	-	772	0.98	8,000	NA	-	NA	-
Cerberus	2004	0.75%	2,773	1.25	35,000	1,778	1.91	34,000	4,551	1.51	69,000	NA	-	0.08	3,600
TOTAL															
Total Ni, Co, Cu Resources	2004 & 2012	-	16,887	1.04	179,230	27,275	0.81	222,550	44,209	0.91	401,480	0.02	7,639	0.03	13,859

Zone	Table 2B. Silver Swan Tailings Resource - December 2021										
	Measured										
	Tonnes	Ni%	Ni t	Cu%	Co ppm	Fe%	MgO%	As%	S%	Density	
1	280,600	0.75	2118	0.02	283	16.7	8.81	0.04	7.56	2.84	
2	394,365	1.04	4082	0.06	967	26.1	4.71	0.17	13.56	3.09	
Total	674,964	0.92	6200	0.04	683	22.2	6.42	0.11	11.06	2.98	

Note: totals may not sum exactly due to rounding. NA = information Not Available from reported resource model. The Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves.

Black Swan Resource as at 22 July 2014 (see ASX announcement "Poseidon Announces Black Swan Mineral Resource" released 4th August 2014)

Silver Swan Resource as at 5 August 2019 (see ASX announcement "Silver Swan Resource Upgrade" released 5th August 2019)

Golden Swan Resource as at 12 November 2021 (see ASX announcement "Golden Swan Maiden Resource – Additional Information released 12th November 2021)

Maggie Hays Resource as at 17 March 2015 (see ASC announcement "50% Increase in Indicated Resources at Lake Johnston" released 17th March 2015)

Mt Windarra Resource as at 7 November 2014 (see ASX announcement "Poseidon Announces Revised Mt Windarra Resource" released 7th November 2014)

South Windarra and Cerberus Resource as at 30 April 2013 (see ASX announcement "Resource Increase of 25% at Windarra Nickel Project" released 1st December 2011)

Silver Swan Tailings Resource as at 15 September 2021 (ASX Announcement "Silver Swan Tailings – Maiden Resource Estimate" 15 September 2021)

The Company is not aware of any new information or data that materially affects the information in the relevant market announcements. All material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.