

## POSEIDON ENTERS AGREEMENT WITH ENCORE MINERALS TO DEVELOP WINDARRA TAILINGS PROJECT

### Agreement entered with Encore Minerals to develop the Windarra Gold and Nickel Tailings using Draslovka's Glycine Leaching Technology

- Encore Minerals intends to use proprietary Glycine Leaching Technology (GlyCat™ + GlyLeach™) to process the Windarra gold and nickel tailings and potentially the Lancefield gold tailings
- Under the Agreement Encore Minerals is responsible for the funding, development, operation, closure and rehabilitation of the Windarra tailings project, subject to various conditions precedent and milestones being met
- Consideration to Poseidon includes:
  - A\$250,000 non-refundable cash payment upon execution of the Agreement
  - Further payments totalling \$1 million cash, payable upon commencement of the development period and the production period
  - 3% Net Smelter Return royalty, once the Project is in production
- Encore Minerals to pay \$1.6 million to Poseidon to partially cover the \$3.5 million environmental bond held by Poseidon for the Windarra project

**Poseidon Nickel (ASX: POS, the Company)** is pleased to announce it has entered into an Agreement with Encore Minerals Pty Ltd (**Encore Minerals**) to develop the gold and nickel tailings at the Windarra Tailings Project (**Project**) using Draslovka a.s.'s (**Draslovka**) proprietary Glycine Leaching Technology (**GLT**) and other patented technology.

CEO, Brendan Shalders, commented, "Once unconditional, this Agreement will provide the basis for a mutually beneficial relationship for the Company and Encore Minerals to develop and monetise the Windarra Tailings Project using Draslovka's proprietary and revolutionary GLT and other technology, which has been developed to extract minerals such as gold, copper, cobalt and nickel by using amino acids such as glycine to leach tailings and ores. We are pleased to see that Draslovka have applied and expanded the use of Glycine Leaching Technology successfully at a number of operations worldwide.

The Agreement outlines the proposed staged framework agreement with Encore Minerals for the processing of the Windarra Tailings, with a final agreement to be entered into upon the completion of their test work. Pursuant to the Agreement, Poseidon will receive a total of \$1.25 million in cash, an NSR royalty of 3% on production and \$1.6 million towards the existing rehabilitation bond. The funding, development, operation, closure and rehabilitation of the project will be the responsibility of Encore Minerals. The Agreement is conditional on Encore Minerals being satisfied during the initial due diligence period, FIRB and other regulatory and third party approvals (if required).

This framework agreement is a great outcome for Poseidon and we look forward to working with Encore Minerals and Draslovka to progress this Project to production."

## Windarra Tailings Project

The Company released a definitive feasibility study (**DFS**) for the Windarra Tailings Project during July 2021, refer to ASX announcement “*Windarra Gold Tailings DFS Highlights Robust Project*”, dated 23 July 2021.

The DFS detailed a standalone gold tailings reprocessing plant at Windarra to process gold tailings from Windarra and Lancefield. Poseidon acquired an option for the right to treat tailings from Lancefield in August 2020 (refer to ASX announcement “*Poseidon to Acquire Right to Treat Lancefield Gold tailings*”, dated 17 August 2020).

**The base case DFS economic outcomes were a net operating cashflow of \$30.6M, a Net Present Value (NPV<sub>8</sub>) of \$21.7M and an IRR of 50.6%, assuming a gold price of A\$2,500/oz. Since the release of the DFS the gold price has increased to circa A\$3,500/oz.** In addition, there is also potential for Draslovka’s patented technologies to process the nickel tailings at Windarra, which could add further value to the Project.

The Agreement provides for Encore Minerals to update the DFS to include both gold and nickel tailings at Windarra, and depending on project economics, may include the Lancefield gold tailings.

## Draslovka’s Glycine Leaching Technology

As reported in Poseidon’s 31 December 2023 Quarterly Report, refer ASX announcement “*Quarterly Report 31 December 2023*” dated 30 January 2024, the Company completed metallurgical testwork to assess the potential of Draslovka’s GlyCat Technology.

The testwork confirmed a potential improvement in the gold recoveries from the Lancefield gold tailings samples and the potential to also extract nickel from the Windarra nickel tailings. Further details were presented in the 31 December 2024 Quarterly Report noting additional testwork would be required to assess if these recent metallurgical breakthroughs would deliver improved economics for the Project. Encore Minerals will commence bulk sample testing of the patented technology immediately.

## About Encore Minerals

Encore Minerals is a Perth based company that provides resource development strategies and includes innovative technologies and plant design with a multi-disciplined understanding of success factors in resources projects. Encore Minerals is a wholly owned subsidiary of Mining and Process Solutions Pty Ltd, a Perth based company that owns several patented processing technologies including the GLT, which Poseidon understands is an environmentally friendly hydrometallurgical process that leaches base and precious metal oxide, mixed oxide and sulphide ores. In 2022, Draslovka acquired Mining and Process Solutions Pty Ltd and their patented technologies, and both companies are now part of the Draslovka group. Originally founded in 1906, Draslovka has become a global chemicals business with agricultural, mining and speciality chemicals divisions. For more information, refer to their website at [www.draslovka.com](http://www.draslovka.com)

***Further details on the Agreement terms are set out in Appendix 1.***

***This announcement was authorised for lodgement by the Board of Poseidon Nickel Limited.***



**Brendan Shalders**

**CEO**

**31 July 2024**

***For further information contact Brendan Shalders: + 61 (0)8 6167 6600***

## 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 over 420,000 tonnes of nickel and 180,000 ounces of gold<sup>1</sup>.*

*Poseidon's strategy is focused on targeted exploration and business development to grow reserves and resources for the eventual restart of its established processing operations in Western Australia with the aim of being a profitable and sustainable producer.*

*Poseidon owns the Black Swan, Windarra Nickel and Lake Johnston Projects. The mines and infrastructure across all projects, including concentrators at Black Swan and Lake Johnston, present near term development options for Poseidon and peer companies that have mineral resources without established processing infrastructure.*

*In addition to processing capabilities, the Company has significant nickel exploration opportunities demonstrated by the discovery of the Golden Swan Resource at Black Swan, Maggie Hays West prospect at Lake Johnston and more recently the NW05 and NW04 targets at Windarra. Assessment of other commodities across Poseidon's project portfolio has noted strong lithium prospectivity at Lake Johnston and gold anomalies at all three projects.*

*The Company completed a Bankable Feasibility Study on Black Swan in November 2022 which is planned to be the first project to restart, subject to appropriate project financing structures being achieved, the outlook for the nickel price improving and all necessary approvals being obtained.*

*A Definitive Feasibility Study on retreating the gold tailings at Windarra and Lancefield was completed in mid-2022. In December 2023 Mt Morgans entered into a trial processing agreement with Poseidon on the Lancefield gold tailings and accessing the water in the South Windarra pit.*

<sup>1</sup> Refer to the Company website, [www.poseidon-nickel.com.au](http://www.poseidon-nickel.com.au), for Resource and Reserves tables

### **COMPETENT PERSON STATEMENTS:**

*The information in this report which relates to Mineral Resources is based upon details compiled by Ian Glacken (FAusIMM - CP, FAIG, CEng), who is a Fellow of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Glacken has sufficient experience which is relevant to the style of mineralisation and the deposit under consideration, and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mr Glacken is taking responsibility for the quality of the resource estimation data, the collection and processing of the 2020 resource estimation data and the resource estimation and classification. Mr Glacken is a full-time employee of Optiro Pty Ltd and has more than five years' experience in the estimation of tailings resources. Mr Glacken visited the Windarra site and the Lancefield site in December 2020.*

*The information in this report which relates to metallurgical testwork, process Opex and process plant Capex is based on information compiled and/or reviewed by Mr Rob Gobert, who is a Fellow of the Australasian Institute of Mining and Metallurgy ("FAusIMM"). Mr Gobert has sufficient experience which is relevant to the metallurgy and processing method under consideration, to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mr Gobert is a full-time employee of Como Engineers.*

*The information in this report which relates to mining methods and Ore Reserve is based on information compiled and/or reviewed by Mr Peter Wade FAusIMM(CP), BEng. (Mining), who is a Fellow of the Australasian Institute of Mining and Metallurgy ("FAusIMM"). Mr Wade has sufficient experience which is relevant to the mining methods and modifying factors under consideration, to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mr Wade is a full-time employee of Black Mountain Metals Pty Ltd. Mr Wade consents to the inclusion in this report of the matters based on his information in the form and context, which it appears.*

*The information in this report that references previously reported results is extracted from the Company's previous ASX market announcements released on the date noted in the body of the text where that reference appears. The previous market announcements are available to view on the Company's website ([www.poseidon-nickel.com.au](http://www.poseidon-nickel.com.au)) or on the ASX website ([www.asx.com.au](http://www.asx.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 market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.*

## FORWARD LOOKING STATEMENTS

*Some of the statements contained in this report are forward looking statements. Forward looking statements include, but are not limited to, statements concerning estimates of tonnages, expected costs, statements relating to the continued advancement of Poseidon's project and other statements that are not historical facts. When used in this report, and on other published information of Poseidon, the words such as 'aim', 'could', 'estimate', 'expect', 'intend', 'may', 'potential', 'should' and similar expressions are forward looking statements.*

*Although Poseidon believes that the expectations reflected in the forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that the actual results will be consistent with these forward-looking statements. Various factors could cause actual results to differ from these forward-looking statements including the potential that the Project may experience technical, geological, metallurgical and mechanical problems, changes in gold and nickel price and other risks not anticipated by Poseidon. Poseidon considers that this summary of the study is presented in a fair and balanced way and believes that it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any mining of mineralised material, modifying factors, production targets and operating cost estimates. This announcement has been compiled by Poseidon from the information provided by the various contributors to the announcement*

## Appendix 1

### Summary of key terms of the Windarra Tailings Project Agreement

<b>Parties</b>	Poseidon Nickel Limited (ACN 060 525 206) ( <b>Poseidon</b> ); and Encore Minerals Pty Ltd (ACN 624 869 414) ( <b>Encore Minerals</b> ).
<b>Initial Payment</b>	Encore Minerals to make an upfront non-refundable payment of \$250,000 to Poseidon within 14 days of execution of the Agreement.
<b>Conditions Precedent</b>	<ul style="list-style-type: none"> <li>• Completion of satisfactory Due Diligence</li> <li>• Obtaining any necessary Regulatory Approvals</li> <li>• Obtaining any necessary Third party approvals</li> <li>• Obtaining FIRB approval (if required)</li> </ul>
<b>Project Milestones (Periods)</b>	<ul style="list-style-type: none"> <li>• Upon satisfaction or waiver of the Conditions Precedent, an initial Testing Period of 12 months will commence.</li> <li>• Upon completion of the initial Testing Period, Encore Minerals may opt to extend the testing period for a further 12 months.</li> <li>• Upon completion of the Testing Period, a Development Period of 24 months may follow (reduced to 12 months if the testing period has been extended for 12 months) to develop and construct the Project.</li> <li>• A Production Period may commence upon the completion of the Development Period where Encore Minerals will treat the tailings and acquire 100% of the mineral rights in the tailings product once treated.</li> </ul>
<b>Subsequent Payments</b>	<ul style="list-style-type: none"> <li>• Encore Minerals to make a subsequent non-refundable payment of A\$100,000 upon option to extend the Testing Period.</li> <li>• Encore Minerals to make a non-refundable payment of A\$500,000 (reduced to A\$400,000 if Encore Minerals opts to extend the Testing Period) upon commencement of the Development Period.</li> <li>• Encore Minerals to make a non-refundable payment of A\$500,000 upon the commencement of the Production Period.</li> <li>• Poseidon to receive a 3% royalty (NSR), payable quarterly during the Production Period.</li> </ul>
<b>Rehabilitation Bond</b>	Encore Minerals to pay \$1.6 million rehabilitation bond to Poseidon prior to commencement of the Production Period.
<b>Other Information</b>	<p>The Agreement specifies that Encore Minerals will be solely responsible for meeting any rehabilitation or other environmental liabilities arising from the Project.</p> <p>Encore Minerals' parent company, Mining and Process Solutions Pty Ltd, guarantees the performance of Encore Minerals' obligations under the Agreement.</p> <p>Full Form Agreement to be agreed by the parties within 60 days of a positive Final Investment Decision otherwise Agreement terminates.</p>
<b>Poseidon's Water Access Agreement with Mt Morgans</b>	The Agreement acknowledges, and is not intended to impact on, Mt Morgans' rights under the existing agreement between Poseidon and Mt Morgans (as described in ASX announcement <i>Gold Tailings Trial and Windarra Water Access Agreement</i> dated 21 December 2023).

## Appendix 2

### Gold Projects Ore Resource Statement

#### Windarra Gold Tailings Project North and South Dams Mineral Resource – JORC 2012 Tabulation

INDICATED							
	Tonnes (t)	AU (g/t)	Au (oz)	Ag (g/t)	As (ppm)	CU (ppm)	Ni (ppm)
North Dam	3,902,000	0.78	98,000	1.9	1,805	365	975
South Dam	850,000	0.50	14,000	0.6	645	355	2,533
<b>Total</b>	<b>4,752,000</b>	<b>0.73</b>	<b>112,000</b>	<b>1.7</b>	<b>1,600</b>	<b>363</b>	<b>1,250</b>

#### Windarra Gold Tailings Project Central Dam Mineral Resource – JORC 2012 Tabulation

INDICATED						
	Tonnes (t)	AU (g/t)	Au (oz)	As (ppm)	CU (ppm)	Ni (%)
Central	6,198,000	0.37	74,000	435.0	270	0.3

#### Lancefield Gold Tailings Mineral Resource – JORC 2012 Tabulation

INDICATED AND INFERRED							
	Tonnes (t)	AU (g/t)	Au (oz)	Ag (g/t)	As (ppm)	Cu (ppm)	Ni (ppm)
Indicated	1,210,084	1.27	49,278	3.61	2,789	314	70
Inferred	337,964	1.20	13,063	3.48	2,951	269	57
<b>Total</b>	<b>1,548,048</b>	<b>1.23</b>	<b>62,341</b>	<b>3.58</b>	<b>2,824</b>	<b>304</b>	<b>67</b>

**Windarra Gold Tailings North and South Dams Resource:** no cut-off grade has been used to report the resource, as potential mining method dictates removal of the entire dams. a dry bulk in situ density of 1.6 t/m<sup>3</sup> has been used to derive tonnages. resource numbers in the above table may not sum exactly due to rounding.

**Windarra Gold Tailings central Dam Resource:** No cut-off grade has been used to report the resource, as the potential mining method dictates removal of the entire dam down to a specified elevation. The mineralisation has been reported above a flat elevation of 446 mRL; there are tailings below this level but these have been shown by drilling to contain no gold, and it is anticipated that the proposed mining method will not treat material below this elevation. A dry bulk in situ density of 1.6 t/m<sup>3</sup> has been used to derive tonnages. Resource totals may not sum exactly due to rounding.

**Windarra Gold Tailings Resource as at 22 June 2020** (see ASX announcement "Gold Tailings Resource at Windarra updated to JORC 2012 Indicated" 22 Jun 2020).

**Lancefield Gold Tailings Resources as at 23 July 2021** (see ASX Announcement "Windarra Gold Tailings DFS Highlights Robust Project" 23 July 2021) .