

15 June 2023

Black Swan Resource Update Underpins Restart and Growth Options

NEED TO KNOW

- 8,000 tonnes more nickel, 14% increase in grade
- 48% increase in Measured and Indicated Resource
- Increased understanding of resource underpins Black Swan restart and 2.2mtpa growth option

Resource drilling defines a bigger resource with a higher grade: A 112-hole, 10,845-metre drill program was recently undertaken to increase the confidence in the Black Swan Mineral Resource Estimate (MRE) through infilling the area 125 metres below the existing Black Swan open pit. The program defined 8,000 more contained nickel (Ni) tonnes and uplifted the grade by 14%.

Quality and confidence of resource uplifted significantly; helps progress restart and work towards expansion: The key objectives of the program were to better delineate the metallurgically important serpentinite and talc-carbonate hosted resources to lift most of these resources into the Measured and Indicated categories (M&I). The drilling was very successful on this front, increasing the M&I by 48%. Increased confidence in the Ni grade distribution and the metallurgical characterisation provides improved certainty of concentrate specifications and allows POS to more efficiently plan the restart of the 1.1mtpa Black Swan plant and work towards the expansion to 2.2mtpa.

FID late June/early July: With resource drilling completed, the final piece of the puzzle for Final Investment Decision (FID) is the debt funding and offtake package. POS has selected 2 preferred parties for provision of both funding and offtake, with the final decision to be made in late June/early July, followed by FID.

Investment Thesis

Black Swan restart – a robust project: The Black Swan restart presents near-term value for POS, with initial processing of 1.1mtpa of Ni ore to produce 30kt of Ni in smelter-grade concentrate. The Bankable Feasibility Study (BFS) outlines a robust project with relatively low up-front capex and planned first production in CY24.

Black Swan expansion to 2.2mtpa adds value; additional projects provide options: The Black Swan project has a large ore resource that is amenable to processing a lower-quality concentrate for sale into the battery production space. This would allow production to double and, potentially, mine life to increase. POS owns 100% of 2 other Ni projects in WA, providing further Ni production potential.

Nickel – a key commodity for the new world: The use of high-quality Ni in EV batteries represents a long-term driver for demand. Battery manufacturers are adopting battery chemistries with higher Ni content. The Ni market is likely to encounter significant supply deficits over the medium to long term, forcing prices to rise and incentivising new production capacity.

Valuation

Our valuation is A\$0.16, fully diluted (down slightly from A\$0.17 previously). This valuation, substantially above the current share price of A\$0.04, is driven by our expectation of the successful restart of Black Swan and subsequent expansion to 2.2mtpa. We also include a risked valuation for the restart of Lake Johnston.

Risks

Key risks include delays to FID, Ni price volatility and increasing capital costs.

Report prepared by MST Access, a registered business name of MST Financial services ABN 617 475 180 AFSL 500 557

MST Access has been engaged and paid by the company covered in this report for ongoing research coverage. Please refer to full disclaimers and disclosures.

Equities Research Australia

Metals and Mining

Michael Bentley, Senior Analyst
michael.bentley@mstaccess.com.au



Poseidon Nickel (POS) owns 100% of the Black Swan, Windarra and Lake Johnston nickel (Ni) assets located in Western Australia's Goldfields Ni province. The Black Swan project is the focus for POS, with the high-grade Golden Swan and Silver Swan adding high-grade Ni tonnes to the Black Swan open pit. A BFS has been completed on the 1.1mtpa Black Swan Restart Project, with FID slated for late June/early July 2023 and first production for CY24.

<https://poseidon-nickel.com.au/>

Valuation	A\$0.16 (previous A\$0.17)
Current price	A\$0.04
Market cap	A\$129m
Cash on hand	A\$10m (31 March 2023)

Upcoming Catalysts and Newsflow

Period

Late June/early July	Black Swan: funding and offtake completion; FID
June 2023	Lake Johnston: 6,600m drilling assay results
Mid FY2024	2.2MTPA Pre-Feasibility Study

Share Price (A\$)



Source: FactSet, MST Access.

FINANCIAL SUMMARY POSEIDON NICKEL LTD. Year End 30 June

POSEIDON NICKEL LIMITED						POS.AX						
MARKET DATA												
Share Price	A\$/sh					0.040						
52 week low/high	A\$/sh					0.067 - 0.033						
Valuation	A\$/sh					0.16						
Market Cap (A\$m)	A\$m					136						
Net Cash / (Debt) (A\$m)	A\$m					10						
Enterprise Value (A\$m)	A\$m					126						
Shares on Issue	m					3,404						
Options/Performance shares	m					10						
Other Equity	m					1,030						
Potential Diluted Shares on Issue	m					4,445						
INVESTMENT FUNDAMENTALS												
		Jun-21	Jun-22	Jun-23e	Jun-24e	Jun-25e						
Reported NPAT	A\$m	(11)	(12)	(15)	(8)	14						
Underlying NPAT	A\$m	(11)	(12)	(15)	(8)	14						
EPS Reported (undiluted)	¢ps	(0.4¢)	(0.4¢)	(0.5¢)	(0.2¢)	0.3¢						
EPS Underlying (undiluted)	¢ps	(0.4¢)	(0.4¢)	(0.5¢)	(0.2¢)	0.3¢						
Underlying EPS Growth	%	-17.6%	-3.6%	22.5%	-59.5%	-259.8%						
P/E Reported (undiluted)	x	n/m	n/m	n/m	n/m	13.1						
P/E Underlying (undiluted)	x	n/m	n/m	n/m	n/m	13.1						
Operating Cash Flow / Share	A\$	(0.00)	(0.00)	(0.00)	(0.00)	0.01						
Price / Operating Cash Flow	x	n/m	n/m	n/m	n/m	6.4						
Free Cash Flow / Share	A\$	(0.01)	(0.01)	(0.00)	(0.02)	0.01						
Price / Free Cash Flow	x	n/m	n/m	n/m	n/m	7.9						
Book Value / Share	A\$	0.02	0.02	0.02	0.03	0.03						
Price / Book	x	1.87	1.62	1.68	1.51	1.25						
NTA / Share	A\$	0.02	0.02	0.02	0.03	0.03						
Price / NTA	x	1.87	1.62	1.68	1.51	1.25						
Year End Shares	m	2,809	3,064	3,404	4,445	4,445						
Market Cap (spot)	A\$m	112	123	136	178	178						
Net Cash / (Debt)	A\$m	8	11	8	(57)	(34)						
Enterprise Value	A\$m	104	111	128	235	212						
EV / EBITDA	x	n/m	n/m	n/m	n/m	3.7x						
Net Debt / Enterprise Value		(0.1)	(0.1)	(0.1)	0.5	0.3						
PRODUCTION AND PRICING												
		Jun-21	Jun-22	Jun-23e	Jun-24e	Jun-25e						
Nickel in con Production	kt	-	-	-	-	3						
Nickel Price (US\$/lb)	US\$/lb	-	-	-	-	12.4						
AUDUSD	:	-	-	0.65	0.65	0.65						
12-Month Relative Performance vs S&P/ASX Metals & Mining												
Profit & Loss (A\$m)												
		Jun-21	Jun-22	Jun-23e	Jun-24e	Jun-25e						
Sales		-	-	-	-	89						
Expenses		(10)	(11)	(15)	(8)	(55)						
EBITDA		(10)	(11)	(15)	(8)	34						
D&A		(0)	(0)	(0)	(0)	(9)						
EBIT		(10)	(12)	(16)	(8)	25						
Interest		(1)	0	0	1	(6)						
Tax		-	-	-	-	(6)						
Underlying NPAT		(11)	(12)	(15)	(8)	14						
Reported Profit		(11)	(12)	(15)	(8)	14						
Cash		8	11	8	5	27						
Receivables		1	1	1	1	7						
PP&E		25	25	34	135	132						
Exploration		87	100	100	100	100						
Other		4	4	4	4	4						
Creditors		3	2	2	2	7						
Debt		-	-	-	62	62						
Other		1	1	1	1	1						
Liabilities		65	65	65	127	132						
Net Assets		60	76	81	118	142						
Cashflow (A\$m)												
		Jun-21	Jun-22	Jun-23e	Jun-24e	Jun-25e						
Interest		-	-	-	-	(6)						
Tax		(0)	0	0	1	(6)						
Net Cash From Operations		(10)	(11)	(6)	(4)	28						
Capex		(0)	(0)	(0)	(99)	-						
Exploration		(12)	(12)	(9)	(3)	(5)						
Investments		-	-	-	-	-						
Free Cash Flow		(22)	(24)	(15)	(106)	23						
Equity		9	27	12	41	-						
Borrowings		(25)	-	-	62	-						
Dividend		-	-	-	-	-						
Net Increase / (Decrease) in Cash		(37)	3	(3)	(3)	23						
Mineral Resource Category												
Nickel Sulphide Resources	MEASURED		INDICATED			INFERRED			TOTAL			
	Tonnes (kt)	Ni% Grade	Ni Metal (t)	Tonnes (kt)	Ni% Grade	Ni Metal (t)	Tonnes (kt)	Ni% Grade	Ni Metal (t)	Tonnes (kt)	Ni% Grade	Ni Metal (t)
Black Swan Project												
Black Swan	800	0.78	7,000	15,100	0.73	111,000	10,400	0.69	71,000	26,300	0.72	189,000
Silver Swan	-	-	-	138	9.00	12,450	8	6.00	490	146	9.50	12,940
Golden Swan	-	-	-	112	4.70	5,200	48	2.20	1,050	160	3.90	6,250
Silver Swan Tailings	-	-	-	675	0.92	6,200	-	-	-	675	0.92	6,200
Lake Johnston Project												
Maggie Hayes	-	-	-	2,600	1.60	41,900	900	1.17	10,100	3,500	1.49	52,000
Windarra												
Mt Windarra	-	-	-	922	1.56	14,000	3,436	1.86	57,500	4,358	1.64	71,500
South Windarra	-	-	-	772	0.98	8,000	-	-	-	772	0.98	8,000
Cerebus	-	-	-	2,773	1.25	35,000	1,778	1.91	34,000	4,551	1.51	69,000
Total												
Total	800	0.78	7,000	22,417	1.11	233,750	16,570	0.84	174,140	40,462	0.94	414,890

Source: POS; MST Estimates

Report prepared by MST Access, a registered business name of MST Financial services ABN 617 475 180 AFSL 500 557
MST Access has been engaged and paid by the company covered in this report for ongoing research coverage. Please refer to full disclaimers and disclosures.

Black Swan: Resource Update Positive; FID Targeted for Late June/Early July

In November 2022, POS completed a BFS for a restart of its Black Swan mine and processing plant. The BFS outlined a robust project with a company-calculated NPV of A\$248m and free cash flow of A\$333m over a ~4-year life (based on November 2022 spot pricing), utilising 1.1mtpa of the plant's 2.2mtpa capacity. This compares very favourably to POS's current market cap of \$129m.

In order to achieve FID for the project, POS has set 3 key deliverables:

- **Deliverable 1 – complete a resource update**
- **Deliverable 2 – assess customer offtake options and securing agreements**
- **Deliverable 3 – finalise debt financing.**

Deliverable 1: Complete a resource update – status: completed; increase in tonnes, grade and confidence

POS has completed a 112-hole, 10,845-metre drilling program, from the bottom of the open pit, into the Black Swan Disseminated (BSD) resource. The principal aims of the drilling program were to:

- upgrade some of the large tonnages of Inferred Resources that are available within the proposed open-pit shell to the Indicated Resources category. The higher confidence levels could lead to an increase in mining inventories and reportable open-pit ore reserves
- enhance the delineation of the metallurgically important serpentinite and talc-carbonate hosted ore types to quantify variations in their respective characteristics, to optimise the mining schedules and ore-blending strategies
- optimise the mining schedule for the commencement of operations
- provide additional material for ongoing metallurgical testwork for the Phase 2 Expansion Project study.

Any increase in the Ore Reserve of the Black Swan open pit would result in a longer mine life, which would subsequently improve the NPV and the debt financing parameters for the project.

Increase in tonnes and grade

The drilling program infill drilled the area 125 metres below the existing Black Swan open pit. Overall, the program defined 8,000 more tonnes of contained Ni (a 4.4% increase) while uplifting the average grade of the resource by 14%. Details of the new and previous resources are shown in Figure 1.

Figure 1: Comparison: new resource vs. 2022 resource (189kt contained Ni vs. 181kt; 0.72% Ni grade vs. 0.63%)

Category	2023			2022		
	Tonnes (Mt)	Ni% Grade	Ni Metal (t)	Tonnes (Mt)	Ni% Grade	Ni Metal (t)
Black Swan Project						
Measured	0.8	0.78	7,000	0.8	0.76	6,000
Indicated	15.1	0.73	111,000	9.9	0.75	74,000
Inferred	10.4	0.69	71,000	18.2	0.55	101,000
TOTAL	26.3	0.72	189,000	28.9	0.63	181,000

Source: POS.

Increase in confidence – drilling defines significant increase in Measured and Indicated Resource

Upgrading some of the large tonnages of Inferred Resources that are available within the proposed open-pit shell to the Measured and Indicated Resources category could lead to an increase in mining inventories and reportable open-pit ore reserves. Delineating the metallurgically important serpentinite and talc-carbonate hosted resources to the Measured and Indicated categories has increased the confidence in the Ni grade distribution, and the metallurgical characterisation provides improved certainty of concentrate specifications.

POS can now more accurately plan the restart of the 1.1mtpa Black Swan plant... POS now has the capacity to quantify variations in serpentinite and talc-carbonate respective characteristics, such as talc and non-sulphide nickel levels as well as sulphur/nickel ratios, to optimise the mining schedules and ore blending strategies for the commencement of operations.

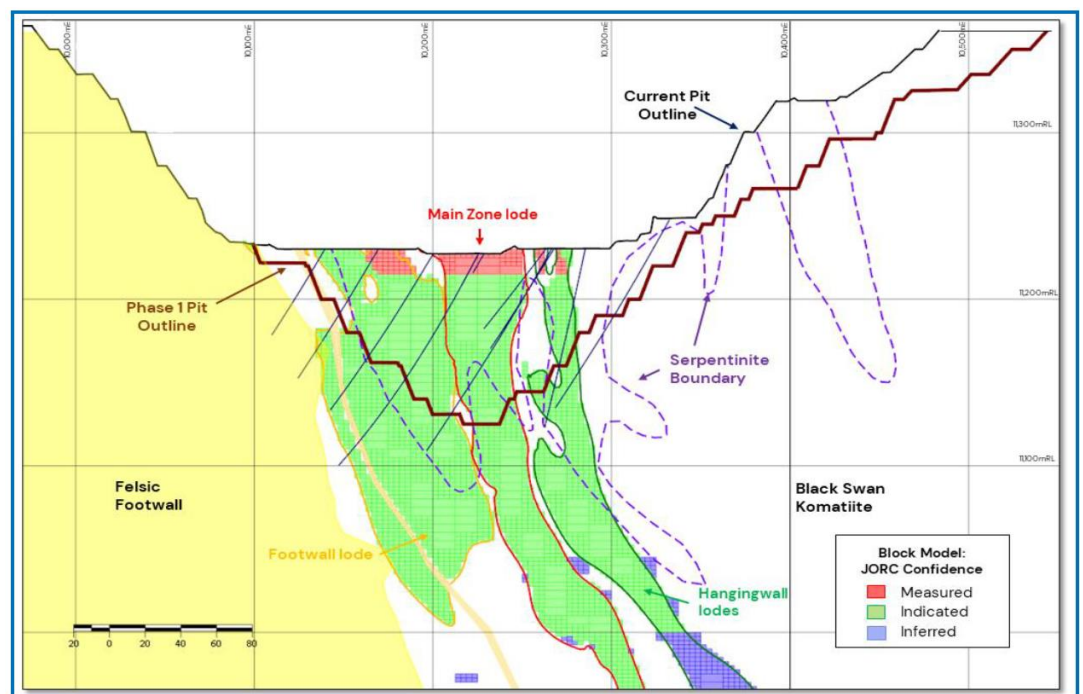
...and provide more information for 2.2mtpa expansion case. Confirming the distribution of the ore types (and quantifying the talc content) is important to identify mining blocks that will be suitable to produce a smelter-grade concentrate. The talc-carbonate ore is typically high in talc (MgO) content (and low in iron-sulphide content) and does not produce a favourable concentrate feed for conventional smelters.

With a better understanding of the BSD ore, the 2.2mtpa Expansion Project would present an opportunity to process a larger portion of the significant Ni endowment within the BSD resource and significantly increase the annual Ni output, increasing the utilisation of the large Black Swan resource.

The drilling campaign has enabled POS to:

- have more information to progress the studies into the 2.2mtpa Expansion Project and provide more information on the distribution of the ore types
- build a mine plan and schedule for the expansion case
- provide additional material for ongoing metallurgical testwork for the Expansion Project Pre-feasibility study.

Figure 2: New resource mineral categories



Source: POS.

Deliverables 2 and 3: Assess offtake options, secure agreements; finalise debt financing – status: 2 parties left

Key to reaching FID is securing customer offtake agreements and debt funding.

The concentrate produced for the initial 1.1mtpa project will produce a high-quality concentrate, ideal for potential customers to process through conventional Ni smelters to produce Ni for use in the stainless steel production process and EV batteries. Black Swan's concentrate could also be blended with lower-quality concentrates to improve the overall quality of the smelter feed.

The demand for the Black Swan concentrate has been high, attracting a number of potential customers from across the globe, with the company receiving attractive Ni payabilities and other terms.

In the process of determining the best offtake terms, POS concluded that potential offtakers were also providing the best debt terms. POS has now narrowed down the potential providers of both offtake and debt to two parties. Final selection and terms will be completed around end-June/early July, ahead of FID.

Refresher: Black Swan, Phase 1 BFS – 1.1mtpa; Plant Restart

The Phase 1 BFS is based on the plan to mine ore from the BSD open pit (serpentinite ore only) and Silver Swan and Golden Swan high-grade underground mines, supplemented with Silver Swan Tailings and existing surface stockpiles (disseminated serpentinite material). The company will then process these feed sources through the refurbished existing concentrator and associated infrastructure at an annualised rate of 1.1mtpa. Processing of the current mining inventory of 5mt therefore leads to a 4-year project life.

The BFS assumes that only a portion of the Mineral Resource is processed at Black Swan and paves the way for a Phase 2 BFS, based on full plant capacity of 2.2mtpa.

Phase 1 BFS: key project attributes

- High-grade high-quality concentrate grading 15% Ni
- Processing a total of 5mt of feed (1.1mtpa)
- Total concentrate production of ~200kt, 30kt of contained Ni
- Ore reserves of 3.5mt @1% Ni for ~35kt of Ni (total resource 31.5mt @ 0.68% Ni for 214.2kt Ni)
- Pre-production capex A\$50m, total LOM capex A\$99m
- C1 operating costs of US\$4.52/lb (before smelter deductions)

Key work streams in process – progress on pre-works

Outside of the three key deliverables needed for FID to be made, POS is making solid strong progress in a number of other areas for the Black Swan restart to go ahead.

The status of pre-works at Black Swan is as follows:

- **open-pit dewatering:** completed
- **underground:** remaining rehabilitation works will be scheduled to coincide with the mine ramp-up
- **processing plant:** contract finalisation with selected engineering company for plant refurbishment
- **major contracts:** discussions will commence as required
- **approvals:** work continues on obtaining outstanding approvals required for the restart
- **personnel onboarding:** planning is well underway for the onboarding of the technical team
- **accommodation:** this is recognised as one of the key execution risks. The company is looking at various options in order to achieve sufficient rooms in Kalgoorlie for the full complement of personnel required for the operating phase. There is a temporary accommodation camp at site which will be utilised for the plant refurbishment.

Refresher: Black Swan, Phase 2 Expansion Project – 2.2mtpa; Potentially Better Economics

Background – maximising the Black Swan open-pit ore

The updated Black Swan Mineral Resource in July 2022 significantly improved the confidence in the Ni grade and distribution of the serpentinite and talc-carbonated hosted disseminated mineralisation immediately below the Black Swan open pit. The new resource just announced has increased this confidence further and allowed further work to be progressed in looking at the Phase 2, 2.2mtpa Expansion Project.

Potential for 2.2mtpa Black Swan mill

The BFS for 1.1mtpa has the Black Swan Mill operating at 50% of its rated capacity of 2.2mtpa in order to produce a smelter-grade concentrate, requiring low-talc ore.

With a better understanding of the BSD ore, and in order to fully understand the economics of the downstream production of a mixed hydroxide precipitate, POS has included studies on producing a rougher concentrate which could be delivered to a POX plant or sold to other Ni plants in WA that utilise autoclave leaching technology.

This option would present an opportunity to process a larger portion of the significant Ni endowment within the BSD resource and significantly increase the annual Ni output, increasing the utility of the large Black Swan resource. Additional capex would be minimal (MST estimate: A\$20m).

Rougher concentrate product would be targeted at the high-growth battery sector. The pre-feasibility study for this option will be completed mid FY24.

Financials: POS Funded to FID

Funding sources

Private placement: On 1 December 2022, POS placed \$6m (before costs) through a private placement of ordinary shares with the issue of 171.5m fully paid ordinary shares at an issue price of 3.5 cents per share, an 18.2% discount to the 5-day volume weighted average share price (VWAP) of \$0.043 and a 14.6% discount to the last closing price before the trading halt of \$0.041.

Share purchase plan: POS also conducted a non-underwritten share purchase plan (SPP) in December 2022, which was heavily oversubscribed. The POS board exercised its discretion under the terms of the SPP and increased the amount to accept A\$6m, up from the originally planned A\$3m.

Cash position and uses of funds

At 31 March 2023, POS had A\$10m in cash, sufficient to take it through to FID for the Black Swan project.

The funds are being used to:

- bring the Black Swan 1.1mtpa restart to FID;
- complete the Black Swan 2.2mtpa Expansion Project pre-feasibility Study during 1HFY24 to potentially support the expansion of operations at Black Swan beyond the 1.1mtpa Phase 1 concentrate project;
- review the exploration potential of Windarra;
- conduct further drilling at Lake Johnston; and
- meet general working capital needs.

Valuation: A\$0.16/Share (Previous \$0.17)

Valuation methodology: SOTP with risked NPV

Our valuation has decreased marginally to A\$0.16 per share (from A\$0.17). The main driver of the small change is that we also increased the equity portion of the funding for Black Swan 1.1mtpa to 40% (from 25%).

We use a sum-of-the-parts (SOTP) methodology, valuing the assets on a risked NPV basis (see Figure 3).

We have risked the 1.1mtpa at 100% as we consider that the project is at an advanced stage with strong funding and offtake interest. We risk the Phase 2 expansion to 2.2mtpa at 60% as it is at a less advanced stage and there are a number of milestones to be achieved for the project to advance. We consider Lake Johnston as an attractive option but it is less advanced and requires further drilling; as such, we risk this project at 50%.

Figure 3: Valuation summary

VALUATION	Current Valuation			Previous Valuation	Valuation Methodology
	A\$m	Risk Weighting	EQUITY VALUE A\$/SHARE FULLY DILUTED		
Equity Valuation of Black Swan 1.1	\$207.5	100%	\$0.05	\$0.07	Risked NPV
Equity Valuation of Black Swan 2.2	\$503.9	60%	\$0.07	\$0.07	Risked NPV
Equity Valuation of Lake Johnston	\$318.3	50%	\$0.04	\$0.02	Risked NPV
Windarra Gold and Nickel	\$51.5	50%	\$0.01	\$0.01	Risked NPV
EQUITY VALUE PROJECTS	\$1,081.4		\$0.17	\$0.17	
Add: Cash	\$10.0		\$0.00	\$0.01	Balance 31/03/2023
EQUITY VALUE PRE SG&A	\$1,091.4		\$0.17	\$0.18	
SG&A	-\$30.0		-\$0.01	-\$0.01	NPV of Corporate Costs
EQUITY VALUE	\$1,061.4		\$0.16	\$0.17	

Source: MST estimates.

Black Swan constitutes bulk of valuation – our key assumptions

Production: Our valuation is based on POS adopting the Black Swan 1.1mtpa concentrator model as per the BFS for 2 full production years, utilising the Black Swan BFS modelling. From year 3 onwards, we assume POS switches to the 2.2mtpa model, producing a rougher concentrate and accessing the entire Black Swan Disseminated (BSD) ore body.

Tax losses: We have assumed all tax losses are utilised.

Black Swan 1.1mtpa smelter-grade concentrate: Our valuation of the 1.1mtpa option follows the assumptions in the BFS. As the BFS is an up-to-date document, we believe that the capex and opex assumptions take into consideration WA's current tight labour markets and the global supply chain issues.

Our key assumptions for the 1.1mtpa option are:

- first production in FY25, ramping up to full production in FY26 and FY27
- WACC of 10%
- Ni price \$11.50/lb escalated at 3%pa
- total capex of \$99m (see Figure 4)
- operating cash costs of US\$4.60/lb escalated at 3%pa.
- full utilisation of the high-grade Silver Swan and Golden Swan deposits
- AUD/USD exchange rate of 0.65
- Ni price at spot for 1.1mtpa project
- payability on contained Ni of 80%
- recovery rates as per the BFS
- project funded 60/40 debt to equity (A\$99m funding).

Black Swan 2.2mtpa rougher concentrate: Our valuation of the 2.2mtpa option assumes that FY28 is the first full year of running a 2.2mtpa mill and mining the entire BSD open pit. We assume ~75% of the BSD resourced is mined, taking into consideration that part of the resource is not open pitable and that there is mining dilution. We assume a 9-year mine life for this project. Feed from Windarra is assumed to add an additional year of mine life to the project.

Other key assumptions:

- WACC of 10%
- additional capex (above 1.1mtpa project) of \$20m
- operating costs of US\$3.60/lb
- AUD/USD exchange rate of 0.65
- Ni price \$11.50/lb escalated at 3% p.a
- payability on contained Ni of 70%
- recovery rates of 70%
- project funded by cashflow and/or debt
- risk weighted at 60% to reflect pre-BFS assumptions and execution risk.

Our assumptions for the 2.2mtpa Black Swan rougher concentrate project are preliminary and will be refined upon the release of the PFS in 1HFY24.

We consider that the 2.2mtpa option has strong potential, because it would mean:

- producing a larger amount of concentrate sooner, thus bringing forward higher cashflows
- reducing reliance on high-grade ore
- a longer mine life
- lower unit operating costs
- minimal additional capex for the rougher concentrate option
- broader market options and possible better payment terms
- with the inclusion of a POX plant, producing a significantly higher-value product (we estimate a POX plant would cost around A\$100m).

Figure 4: Capex estimates: Black Swan restart, Phase 1 (A\$m)

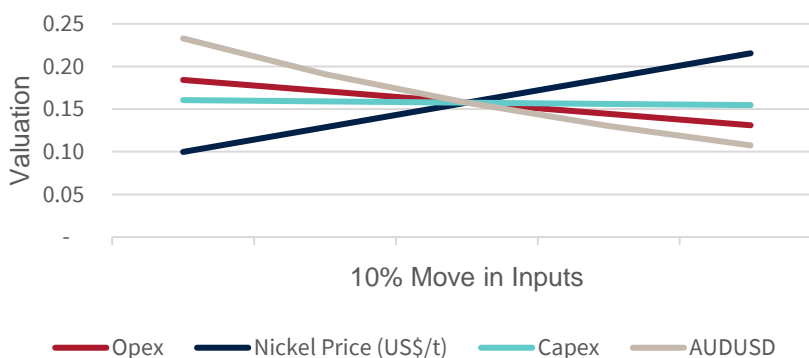
Black Swan Phase 1 Capital Costs	
Concentrator restart capital costs	37.8
Open pit mine establishment and pre-strip	1.8
Underground mine establishment and development	19.8
Other capital items	7.0
Open pit mine development	26.8
Open pit & underground contractor demobilisation	0.5
Sustaining capital – Processing plant	0.8
Sustaining capital – Underground mining	1.5
Sustaining capital – Tailings facility uplift	2.9
Total capital expenditure	99

Source: MST estimates.

Sensitivity analysis – Ni price and AUD/USD the key factors

As would be expected, the key drivers of the valuation are Ni prices and the AUD/USD exchange rate. The project is relatively sensitive to operating cost changes but not capital cost changes (see Figure 5).

Figure 5: Sensitivity analysis: variation from base case



Source: MST estimates.

Positive catalysts for the share price

Key drivers of share price upside

Offtake agreements for Ni production and funding: Funding is key to achieving FID, and any agreements to purchase Ni from POS would be a positive indication of the Ni market's acceptance of the product.

FID for Black Swan mill refurbishment: The FID for the Black Swan mill refurbishment will mark a major step towards first production and will be a positive catalyst.

2.2mtpa PFS: We have estimated a 2.2mtpa option in our valuation and consider that confirmation of this option has the potential to be a key catalyst for the share price.

Exploration and further resource definition: Further exploration success and reserve and resource definition at Black Swan are key to share price appreciation.

First production from Black Swan mill: The first production from the Black Swan mill refurbishment will mark the start of cash flow generation for POS.

Exploration success at Lake Johnston/Windarra Ni: The Lake Johnston and Windarra projects both have exploration potential. Exploration success at either project would accelerate the potential and add to the valuation.

Ni price increases: POS is directly leveraged to higher Ni prices. A sustainable increase in the Ni price would accelerate the potential start of Black Swan in particular, even without exploration success.

Other potential share price catalysts

Potential processing of third-party ores at Black Swan/Lake Johnston: Black Swan and Lake Johnston have processing facilities. Any agreements to process third-party ore could generate cash at high margins.

Risks to the share price and valuation

Key risks to the share price

Delays to or not achieving FID for Black Swan mill refurbishment: The FID for the Black Swan mill refurbishment will mark a major milestone. Any delay or non-achievement of FID would be a negative catalyst for the stock.

Delay to first production from Black Swan mill: The first production from the Black Swan mill refurbishment will mark the start of cash flow generation for POS. Any delay to first production would be a negative for the stock.

Extended period of low Ni prices: Ni prices are the key driver of POS's valuation. Extended periods of low Ni prices could delay projects, even with exploration success.

Disappointing exploration at Windarra Ni/Lake Johnston: As longer-term drivers of value, any disappointing exploration results at Lake Johnston/Windarra could lead to a decrease in the share price/valuation.

Other potential risks to the share price and valuation

Further capital cost increases for projects: Capital cost increases lead to direct valuation decreases. Capital costs at the POS projects are relatively low, and therefore have a smaller effect on valuation, but increases could nonetheless be negative to stock sentiment.

Further operating cost increases: Any increase in operating costs would have a direct negative effect on valuation.

Appreciating AUD vs USD: An increasing AUD against the USD would lead to a decreased AUD Ni price, reducing cashflow and valuation.

Appendix 1 – Other Key Projects for POS

Lake Johnston: Low-capex restart, just like Black Swan – 6,600m of program is complete, with assays expected in late June 2023

A quick history of Lake Johnston

The Lake Johnston plant started operating in 1998, treating ore from the Emily Ann underground Ni mine. 1.5m tonnes of ore were mined and processed, at an average grade of 3.8% Ni, delivering 57,000 tonnes of contained Ni between 1998 and 2007. There have been a number of expansions since, the most recent being a major expansion to 1.5mtpa throughput capacity in 2006. The Maggie Hays deposit was brought online in 2007 with a resource of 12.3m tonnes at 1.5% Ni for 182,000 contained Ni and mined and processed between 2008 and 2013. The plant was placed on care and maintenance in 2013. In 2017, certain pieces of infrastructure were removed from the Maggie Hays mine and the workings were allowed to flood.

The current Lake Johnston resource for the Maggie Hays is 3.5Mt @ 1.5% Ni for 52kt Ni.

Pathway to a Lake Johnston restart

What would be required? In order to restart Lake Johnston, the mine would need to be dewatered and the mill refurbished. In 2020, mining consultants Entech costed the dewatering and rehabilitation of the submerged underground workings and reinstallation of required underground infrastructure at \$26.4m. The expected duration of these works was 22 months.

What would it cost and how long would it take? POS engaged GR Engineering (GRES), the same organisation that provided the mill refurbishment estimate for Black Swan, to estimate the refurbishment cost of the Lake Johnston mill in late 2021. GRES estimated that the processing plant and associated infrastructure could be refurbished for an estimated cost of \$31m and that this would take approximately seven months to complete. The operating cost for the process plant was estimated at the same time at approximately A\$36 per tonne of ore based on a throughput rate of 0.9mtpa. The project also has a 200-person village, tailings dam and airstrip.

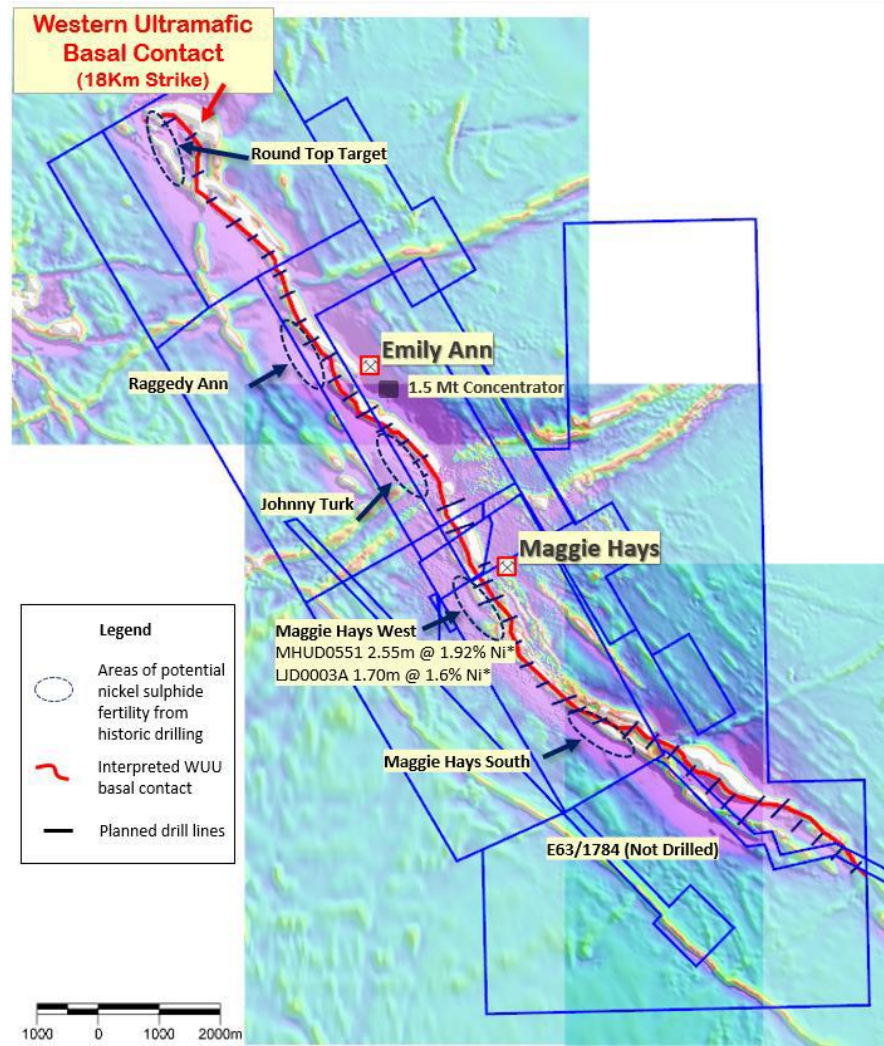
Next steps: large drilling campaign to increase resource

POS plans to conduct an exploration program aimed at increasing the Lake Johnston resource, starting with a 15,000m RC program that commenced in April 2023 focused on the highly prospective Western Ultramafic Unit. The first 6,600m of the program is complete, with assays expected in late June 2023. The addition of Lake Johnston to POS's production profile would contribute to its corporate strategy of producing >15,000t of Ni in concentrate per annum.

The drilling program is aimed at testing the base of the Western Ultramafic Unit against the underlying Banded Iron Formation (BIF) Unit, at regular intervals over its 14km strike. The Western Ultramafic Unit is sparsely drilled with a lack of effective drilling that intersects the all-important basal contact position.

The Western Ultramafic Unit is interpreted to represent the extruded portion of the intrusive body hosting the Maggie Hays and Emily Ann deposits that has breached the BIF Unit. As the extrusive lavas flow over the basal contact, melting and assimilating of the sulphidic BIF Unit occurs, which is conducive to the formation of nickel sulphides.

Figure 6: The Lake Johnston Project – drilling focused on Western Ultramafic



Source: POS.

Windarra: Another option in the nickel portfolio

The Windarra Nickel project sits some 250 km north of Black Swan in WA's Mt Margaret Goldfields, about 25 km west of Laverton. The project, in a well-established mining precinct, is well serviced by regional infrastructure with a skilled labour and contracting workforce available. Since 2008, POS has completed over 550 drill holes for ~70km of drilling on the project to bring the historical mine resources into JORC-compliant status. The drilling program also discovered a new resource at Cerberus.

The Windarra deposit consists of three broad geologically based mineralised areas: Mt Windarra, South Windarra and Cerberus. A more recent exploration focus lies between Cerberus and Mt Windarra at Crazy Diamond.

Windarra underground mine remnants contain resources of 148,500t of contained Ni at an average grade of around 1.5%. There are no processing facilities at Windarra. With the Black Swan mill in operation, the option to process ore from the Windarra deposit opens up, with ore trucked to Black Swan.

Appendix 2: The Nickel Market – Batteries Turbo-Charging Growth

Over the medium to long term, Ni demand will be incrementally driven by the battery market off the back of EV demand. Recent shifts in legislation that favour EVs will likely result in a surge in demand for Ni units to be used in battery production.

Global nickel demand growth: the future is batteries

While stainless steel will continue to be the primary use for Ni, the major engine of demand growth over the next two decades will be batteries. In 2021, batteries accounted for only 7% of the total market. Market consensus is that battery use will grow to 35-40% of Ni consumption by 2040. That will push Ni demand to double in size to 6 million tonnes per year.

The use of high-quality Ni in EV batteries represents a long-term driver for demand and upside to the Ni price. Battery manufacturers are now adopting battery chemistries with higher Ni content. The Ni market is likely to encounter significant supply deficits over the medium to long term and we expect prices to rise, incentivising new production capacity.

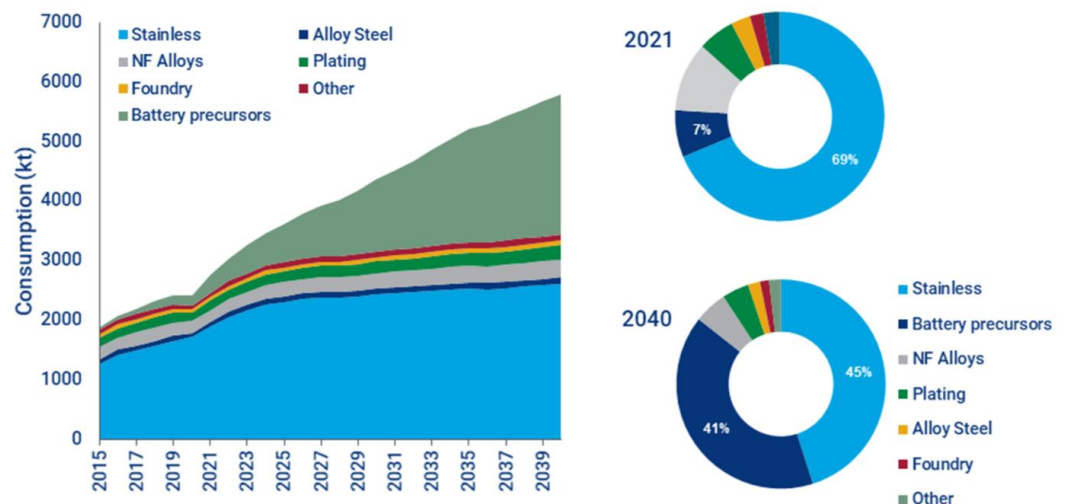
The UK's plan to outlaw the sale of wholly petrol and diesel cars from 2030 is an indication of where the global motor vehicle industry is heading and the forces which will drive Ni demand. Greater net zero commitments from governments and automakers are increasing the importance of energy storage to enable wider use of renewables, which will also be an important factor in driving demand.

Significant additional Ni will be required over the next decades. However, the vast majority of new capacity development over the past decade has been in Indonesia, and has had significant environmental side effects. Recent pledges by Indonesia to reverse deforestation and cease coal-fired power station development will hamper Indonesia's potential continued contribution to Ni supply growth.

There is a growing focus on using locally-produced raw materials in Europe and the US. However, the lack of new project development for Ni mining outside Asia means battery manufacturers will need to turn to recycling to plug the gap.

BHP has made statements on Ni which support this view, with its Chief Commercial Officer stating in late 2021: 'Demand for nickel in batteries is estimated to grow by over 500 per cent over the next decade, in large part to support the world's rising demand for electric vehicles.' 85% of BHP's Ni is now sold to global battery material suppliers.

Figure 7: Use of Ni in batteries to increase significantly over the next few decades



Source: Wood Mackenzie.

Recent performance of Ni prices – rarely below US\$9/lb

Early 2022 saw some extraordinary price action when the LME suspended Ni trading for several days following a massive rally sparked by fear of supply disruptions after Russia's invasion of Ukraine, with a short squeeze by one of the biggest Chinese steel manufacturers, Tsingshan Holding Group, also fuelling Ni's massive price rally.

A global economic slowdown caused by central banks' aggressive monetary tightening and the effects of COVID-19 lockdowns on China's economy saw prices decline in mid-2022 but recover once China relaxed its COVID-related quarantine measures.

Continued concern recently about ongoing tightening monetary policy has seen prices for Ni and other base metals decline into 2023.

The price of Ni has rarely dropped below US\$9/lb over the past 2 years.

Figure 8: 2-year nickel price – volatile, but rarely below US\$9/lb (US\$20k/t)



Source: Factset.

Methodology & Disclosures

MST Access is a registered business name of MST Financial Services Pty Ltd (ACN 617 475 180 "MST Financial") which is a limited liability company incorporated in Australia on 10 April 2017 and holds an Australian Financial Services Licence (Number: 500 557). This research is issued in Australia through MST Access which is the research division of MST Financial. The research and any access to it, is intended only for "wholesale clients" within the meaning of the Corporations Act 2001 of Australia. Any advice given by MST Access is general advice only and does not take into account your personal circumstances, needs or objectives. You should, before acting on this advice, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs. If our advice relates to the acquisition, or possible acquisition, of a financial product you should read any relevant Product Disclosure Statement or like instrument.

This report has been commissioned by Poseidon Nickel Ltd. and prepared and issued by Michael Bentley of MST Access in consideration of a fee payable by Poseidon Nickel Ltd. MST Access receives fees from the company referred to in this document, for research services and other financial services or advice we may provide to that company.

MST Financial also provides equity capital markets ("ECM") and corporate advisory services through its capital markets division, MST Capital Markets ("MST Capital"). MST Capital provides these services to a range of companies including clients of the MST Access service. As such, MST Capital may in future provide ECM and/or corporate advisory services to the company that is the subject of this research report and, accordingly, may receive fees from the company for providing such services. However, MST Financial has measures in place to ensure the independence of its research division is maintained, including information barriers between its Capital Markets and Research teams. In addition, neither MST Access, nor any of its research analysts, receive any financial benefit that is based on the revenues generated by MST Capital Markets or any other division of MST Financial.

The analyst has received assistance from the company in preparing this document. The company has provided the analyst with communication with senior management and information on the company and industry. As part of due diligence, the analyst has independently and critically reviewed the assistance and information provided by the company to form the opinions expressed in the report. Diligent care has been taken by the analyst to maintain an honest and fair objectivity in writing this report and making the recommendation. Where MST Access has been commissioned to prepare content and receives fees for its preparation, please note that NO part of the fee, compensation or employee remuneration paid will either directly or indirectly impact the content provided.

Accuracy of content: All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently certified. Opinions contained in this report represent those of MST Access at the time of publication. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results and estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

Exclusion of liability: To the fullest extent allowed by law, MST Access shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out of or in connection with the access to, use of or reliance on any information contained in this report. No guarantees or warranties regarding accuracy, completeness or fitness for purpose are provided by MST Access, and under no circumstances will any of MST Financials' officers, representatives, associates or agents be liable for any loss or damage, whether direct, incidental or consequential, caused by reliance on or use of the content.

General Advice Warning

MST Access Research may not be construed as personal advice or recommendation. MST encourages investors to seek independent financial advice regarding the suitability of investments for their individual circumstances and recommends that investments be independently evaluated. Investments involve risks and the value of any investment or income may go down as well as up. Investors may not get back the full amount invested. Past performance is not indicative of future performance. Estimates of future performance are based on assumptions that may not be realised. If provided, and unless otherwise stated, the closing price provided is that of the primary exchange for the issuer's securities or investments. The information contained within MST Access Research is published solely for information purposes and is not a solicitation or offer to buy or sell any financial instrument or participate in any trading or investment strategy. Analysis contained within MST Access Research publications is based upon publicly available information and may include numerous assumptions. Investors should be aware that different assumptions can and do result in materially different results.

MST Access Research is distributed only as may be permitted by law. It is not intended for distribution or use by any person or entity located in a jurisdiction where distribution, publication, availability or use would be prohibited. MST makes no claim that MST Access Research content may be lawfully viewed or accessed outside of Australia. Access to MST Access Research content may not be legal for certain persons and in certain jurisdictions. If you access this service or content from outside of Australia, you are responsible for compliance with the laws of your jurisdiction and/or the jurisdiction of the third party receiving such content. MST Access Research is provided to our clients through our proprietary research portal and distributed electronically by MST to its MST Access clients. Some MST Access Research products may also be made available to its clients via third party vendors or distributed through alternative electronic means as a convenience. Such alternative distribution methods are at MST's discretion.

Access & Use

Any access to or use of MST Access Research is subject to the [Terms and Conditions](#) of MST Access Research. By accessing or using MST Access Research you hereby agree to be bound by our Terms and Conditions and hereby consent to MST collecting and using your personal data (including cookies) in accordance with our [Privacy Policy](#), including for the purpose of a) setting your preferences and b) collecting readership data so we may deliver an improved and personalised service to you. If you do not agree to our Terms and Conditions and/or if you do not wish to consent to MST's use of your personal data, please do not access this service.

Copyright of the information contained within MST Access Research (including trademarks and service marks) are the property of their respective owners. MST Access Research, video interviews and other materials, or any portion thereof, may not be reprinted, reproduced, sold or redistributed without the prior written consent of MST.