ASX Announcement
7 August 2023

Apollo Hill Preliminary Economic Assessment

Saturn Metals Limited (ASX: STN) (Saturn or the Company) is pleased to announce the results of a Preliminary Economic Assessment (PEA) or Scoping Study for the Company's 100% owned Apollo Hill Gold Project (the Project) located in the Northern Goldfields region of Western Australia, with key outcomes highlighting the potential of the Project to support a viable standalone gold mining and processing operation.

Cautionary Statement

The Preliminary Economic Assessment (the PEA) or Scoping Study referred to in this ASX announcement has been undertaken to evaluate the potential development of the Apollo Hill Gold Project located in the Northern Goldfields region of Western Australia. Saturn Metals Limited owns 100 % of the Project. The PEA is a preliminary technical and economic study of the potential viability of the Apollo Hill Gold Project. It is based on lower-level technical and preliminary economic assessments that are not yet sufficient to support the estimation of ore reserves. Further evaluation work and appropriate studies are required before Saturn will be in a position to estimate any ore reserves or to provide any assurance of an economic development case.

Approximately 57% of the Life-of-Mine production is in the Measured and Indicated Mineral Resource categories and 43% is in the Inferred Mineral Resource category. The Company has concluded it has reasonable grounds for disclosing a Production Target, given that the PEA assumes that in the first 3 years of operation, 89% of the production is from the measured and indicated resource categories. There is a low level of geological confidence associated with Inferred Mineral Resources, and there is no certainty that further exploration work will result in the determination of Measured or Indicated Mineral Resources or that the production target itself will be realised. However, the Company has now undertaken three geographically and geologically representative grade control programmes across the main mineral resource domains which have seen Inferred Mineral Resources convert to Indicated and Measured Resources with strong reconciliation characteristics (See ASX Announcements dated 27 June 2023, 27 March 2023 and 30 March 2021). On this evidence, the Company believes that there is a reasonable basis for the forward-looking production target based on partially Inferred Mineral Resources in the later years of this PEA.

The Mineral Resource underpinning the production target in the PEA has been prepared by a competent person in accordance with the requirements of the JORC Code (2012). For full details on the Mineral Resource Estimate, please refer to the ASX announcement dated 28 June 2023 and titled "Apollo Hill Gold Resource Upgraded to 1.84Moz". Saturn confirms that it is not aware of any new information or data that materially affects the information included in that previous announcement and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not been changed.

The Company believes that it has a reasonable basis for providing these forward-looking statements and the forecast financial information based on material assumptions outlined elsewhere in this announcement. One of the key assumptions is that funding for the Project will be available when required. While the Company considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the PEA will be achieved.

To achieve the range of outcomes indicated in the PEA, funding of approximately $345 M is estimated to be required comprising of approximately $304 M in pre-production capital expenditure and $41 M in funding for early-stage operations. There is no certainty that the Company will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Saturn's shares.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the PEA.

Plate 1 – Apollo Hill

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Financial Highlights:

Gold Price	A$/oz	2,665
Project EBITDA (earnings before interest, taxes, depreciation & amortisation)	A$M	1,044
Free Cash Flow (undiscounted and pre-tax)	A$M	694
Pre-Production Capital	A$M	304
Net Present Value ($NPV_{7\%}$) (unleveraged and pre-tax)	A$M	390
Internal Rate of Return (IRR) (unleveraged, pre-tax, and calculated on an annual basis)	%	30
Average Annual Production	oz	122,441
Average Annual Pre-Tax Cash flow (excludes capital construction)	A$M	90
Payback	Years	2.8

Saturn's assessment and the results of our PEA present a positive initial evaluation of the Project.

In June, the Company announced an upgraded Mineral Resource Estimate (MRE) (JORC 2012) for Apollo Hill of 105 Mt grading 0.54 g/t Au for 1.84 Moz[1] under a bulk tonnage heap leach processing scenario. The PEA is based on the June MRE with current and well researched mining, economic, engineering and metallurgical factors applied.

An outline of the PEA highlights is presented below with additional details provided in the PEA Summary attached to this announcement as Appendix 1.

PEA Highlights:

- The PEA is based on the development of a large-scale open pit mine and establishment of a 10.0 Mtpa heap leach processing facility at the wholly owned Apollo Hill Gold Project, located near Leonora in the Northern Goldfields of Western Australia.
- **Generating over 1 billion dollars in EBITDA** over the Life-of-Mine, with a strong free cash flow averaging over A$ 90 million per annum, the Apollo Hill Gold Project is able to provide a rapid payback on capital investment with payback occurring within the first 2.8 years of production; with a healthy 30% Internal Rate of Return over the Life-of-Mine.
- LOM undiscounted, pre-tax, free cash flow of A$ 694M over 10-year term (A$2,665/oz sale price), increases to A$ 1,028M at a spot of ~A$2,950/oz.
- The PEA has outlined a technically and financially robust project, within an economic environment which has not yet returned to equilibrium after recent global health and current conflict events.
- The PEA is based on a planned mining inventory of 93.9 Mt grading 0.54 g/t Au containing 1,636,000 ounces of gold. The Project has an initial 10.5 year life of mine based on a portion the current Mineral Resource.
- Initial strip ratio over the first two years is 1.1:1, with an average strip ratio of 1.5:1 over the life of the Project (Figure 2).

[1] Complete details of the Mineral Resource (105 Mt @ 0.54 g/t Au for 1,839,000 oz Au) and the associated Competent Persons Statement were published in the ASX Announcement dated 28 June 2023 titled "Apollo Hill Gold Resource Upgraded to 1.84Moz". Saturn reports that it is not aware of any new information or data that materially affects the information included in that Mineral Resource announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and there have been no adverse material changes.

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- Average grade over the initial two years is 0.57 g/t Au, 6 % above the average grade of 0.54 g/t Au over the total life of the Project.
- The PEA is supported by 57 % of the mining inventory being based upon the Measured and Indicated categories of the Mineral Resource, which funds the mine through the 2.8 year payback period (Figure 3). With a negligible oxide regolith profile, the metallurgically superior fresh rock material is accessed within the first year of production.
- Utilising a conventional mineral processing system incorporating advanced in High Pressure Grinding Rolls (HPGR) crushing technologies, the Apollo Hill Gold Project is able to achieve test work average gold recoveries of 79.3% at 100 days of leaching. Saturn has selected a conservative average recovery of 75% for use within the PEA to represent scaled up "on-heap" performance.
- Capital and operating cost estimates have been costed and calibrated in line with the recent commissioning of a new heap leach project in Western Australia[2].
- Estimated pre-production capital requirement of $304 M (Table 2) comprising:
    - $236 M for 10.0 Mtpa processing facility and heap leach pad infrastructure.
    - $67 M for mining pre-production, other site infrastructure and accommodation.

In response to the positive outcome of PEA, the Company intends progress to higher level feasibility studies and scale-up test work programs.

Saturn Managing Director, Ian Bamborough, commenting on the Preliminary Economic Assessment outcomes said:

"A thorough and persistent technical approach to our work has provided Saturn with solid economic foundation from which to build the future of the Apollo Hill Asset.

By applying industry leading advancements in crushing technology to a conventional heap leaching scenario, on a metallurgically clean and bulk tonnage ore body, we are setting an exciting direction for Apollo Hill.

Apollo Hill now has demonstrated potential to become a profitable, long-life mine with robust margins and strong economic returns. The PEA has paved the way for Saturn to accelerate project development activities.

Apollo Hill is well positioned to further capitalise on positive gold investment themes."

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[2] Binduli North, Norton Gold Fields Pty Ltd.

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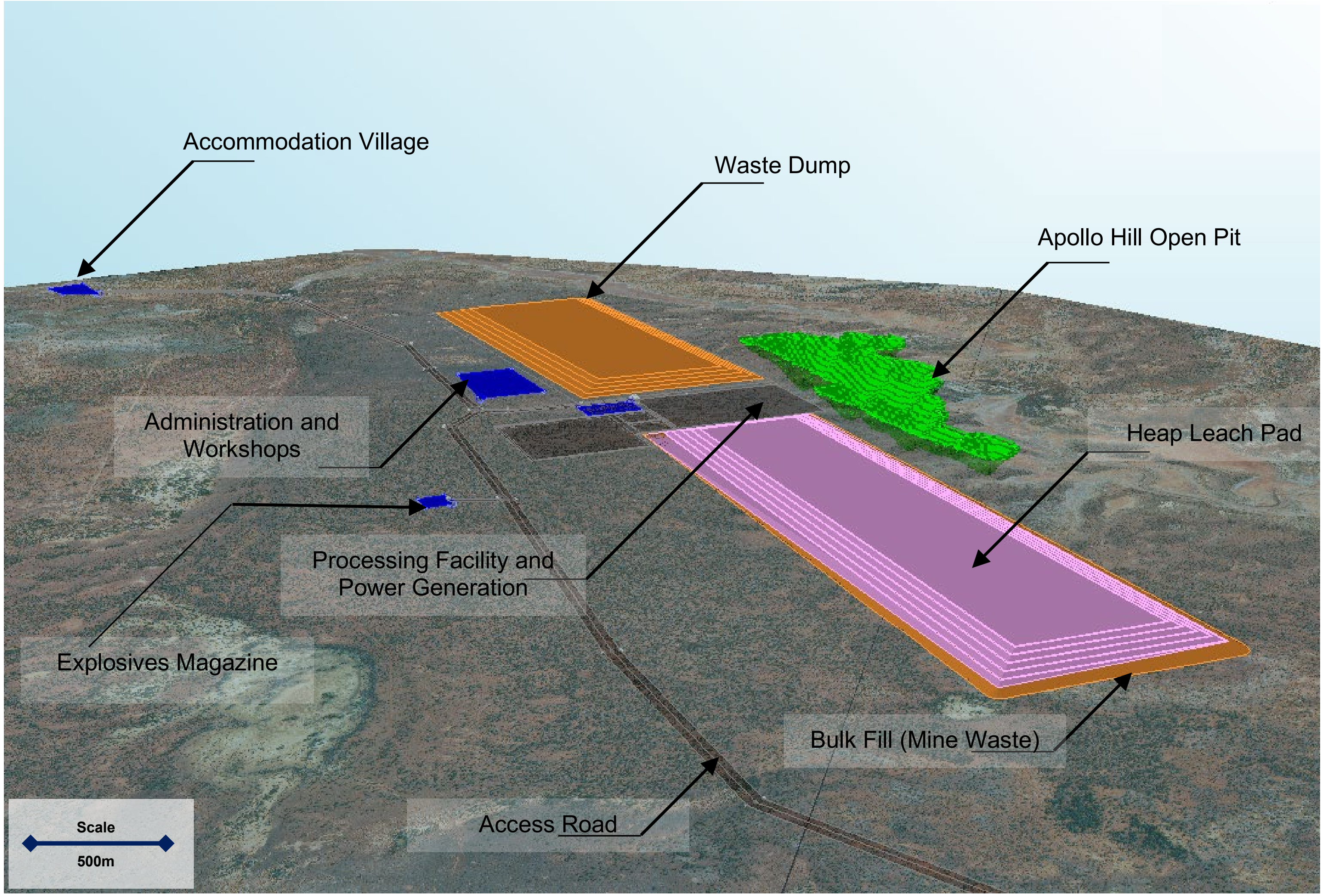

Figure 1 – Apollo Hill Gold Project

Preliminary Economic Assessment Results:

Saturn Metals Limited has undertaken a Preliminary Economic Assessment into the viability of developing the 1.84 Moz Apollo Hill gold deposit[1]. The PEA is based on undertaking large scale bulk open pit mining coupled with conventional heap leach processing to produce gold doré on site. The PEA indicates that the project can deliver robust financial outcomes.

Table 1 – Apollo Hill PEA Results

Apollo Hill Gold Project Total Mineral Resource			
Measured	5 Mt	0.55 g/t	82 koz
Indicated	54 Mt	0.53 g/t	912 koz
Inferred	47 Mt	0.56 g/t	845 koz
Total Resource	105 Mt	0.54 g/t	1,839 koz
Capital Costs			
10.0 Mtpa Process Facility (e.g. crushers)		A$M	$ 134
Plant Infrastructure (e.g. ponds)		A$M	$ 80
Heap Leach Pad		A$M	$ 6
Other Infrastructure (e.g. buildings/roads)		A$M	$ 42
Open Pit - early-stage establishment & material movements		A$M	$ 18
Owners Costs		A$M	$ 7
Contingency		A$M	$ 16
Total Pre-Production Capital Costs		A$M	$ 304
Capital Cost / LOM Gold Production		A$/oz	$ 260
$NPV_{7\%}$ (unleveraged and pre-tax) / Capital		ratio	1.3
Heap Leach Pad (Sustaining Capital)		A$M	$ 15
Process Plant Major Maintenance		A$M	$ 10
Closure		A$M	$ 21
Production Summary			
PEA Mining Inventory	93.9 Mt	0.54 g/t	1,636 koz
Life-of-Mine (LOM)		Years	10
LOM Strip Ratio		Waste : Ore	1.5:1
LOM Gold Production		oz	1,226,826
LOM Average Annual Gold Production		oz	122,441
Processing Rate		Mtpa	10
LOM Average Gold Recovery		%	75
LOM Operating Costs			
Mining		A$/t processed	$ 11.20
Processing (average LOM)		A$/t processed	$ 9.46
Administration		A$/t processed	$ 1.87
C1 Costs		A$/oz	$ 1,725
AISC		A$/oz	$ 1,852
Project Economics			
LOM Revenue		A$M	$ 3,269
LOM Pre-Tax Net Cashflow		A$M	$ 694
$NPV_{7\%}$ (unleveraged and pre-tax)		A$M	$ 390
IRR (unleveraged, pre-tax, and calculated on an annual basis)		%	30
Payback (unleveraged and pre-tax)		Years	2.8

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Executive Summary:

Location and Ownership

The Apollo Hill deposit is situated within Apollo Hill Gold Project, located 50 kilometres south of Leonora in the Northern Goldfields of Western Australia.

The Project consists of 18 contiguous Mining Leases and Exploration Licenses totalling approximately 1,000 square kilometres in area.

All project tenure is 100% owned by Saturn.

Geology

The Apollo Hill deposit comprises two trends: the main Apollo Hill deposit in the northwest of the project area, and the smaller Ra-Tefnut trend in the south. Gold mineralisation is associated with quartz veins and alteration along a steeply north-east dipping contact between felsic rocks to the west, and mafic dominated rocks to the east.

The combined mineralised zones extend over a strike length of approximately 2.5 kilometres and have been intersected by drilling to approximately 350 metres vertical depth. The depth of complete oxidation averages around 4 metres, with depth to fresh rock averaging around 20 metres.

Mineral Resources

The current Apollo Hill Mineral Resource was published by the Company on 28 June 2023 and totals 105 million tonnes grading 0.54 g/t gold for 1,839,000[1] contained ounces comprising:

Measured	4.7 Mt at 0.55 g/t for 82 koz
Indicated	54 Mt at 0.53 g/t for 912 koz
Inferred	47 Mt at 0.56 g/t for 845 koz
Total	105 Mt at 0.54 g/t for 1,839 koz

The Mineral Resource estimate was prepared by AMC Consultants Pty Ltd using restricted ordinary kriging (ROK) with a large selective mining unit size of 10mE x 25mN x 5mRL chosen to reflect a bulk mining strategy. The resource model was constrained within an open pit shell and reported above a 0.20 g/t lower cut-off grade.

Mining

The PEA assumes mining will be carried out via a single large open pit approximately 2,300 metres in length and up to 750 metres wide, with a maximum depth of 285 metres below surface (Figure 2).

Contractors will be engaged to carry out mining under technical direction of the Company.

Conventional drill and blast, truck and shovel mining is to be employed. The nature and geometry of the deposit supports adoption of a bulk mining strategy, enabling low unit costs to be achieved. The PEA assumed mining will be carried out on 10-metre-high benches using 750 tonne hydraulic face shovels to load 230 tonne payload off-highway trucks.

At full scale production,10 million tonnes of ore per annum is planned to be mined, with life of mine production totalling 93.9 million tonnes grading 0.54 g/t for 1.64 million ounces of contained gold. Life of mine waste movement totals 140.7 million tonnes, equating to an average waste to ore ratio of 1.5:1.

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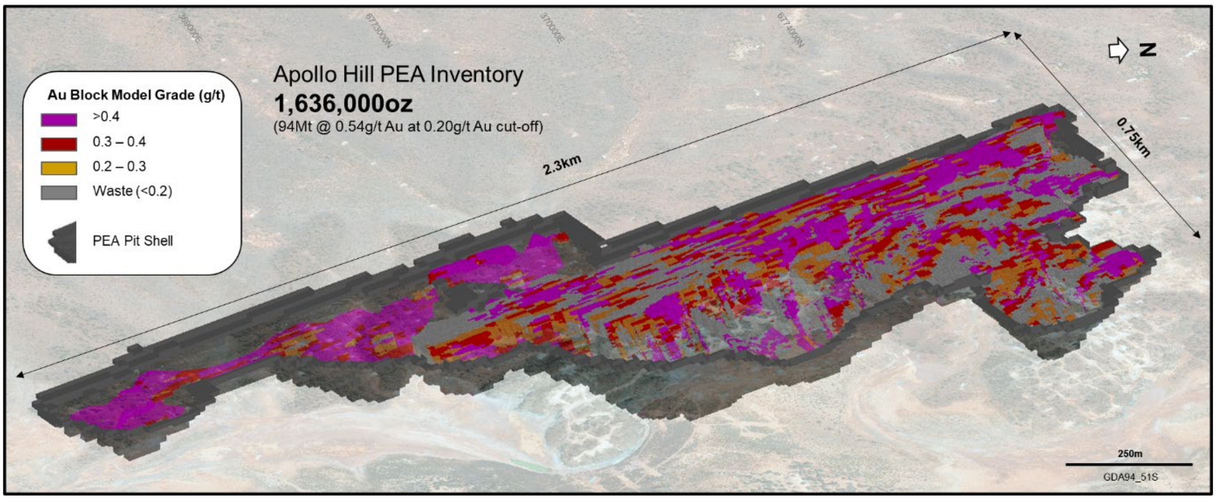

Figure 2 – Apollo Hill Gold Project.

Mining has been scheduled in seven stages to maintain stable production rates and consistent total annual material movement. However, due to the presence of near surface higher grade mineralisation, in the first two years the gold grade is forecast to be higher than average at 0.57 g/t and the strip ratio will be lower at 1.1:1, contributing to the project's short capital payback period of 2.8 years.

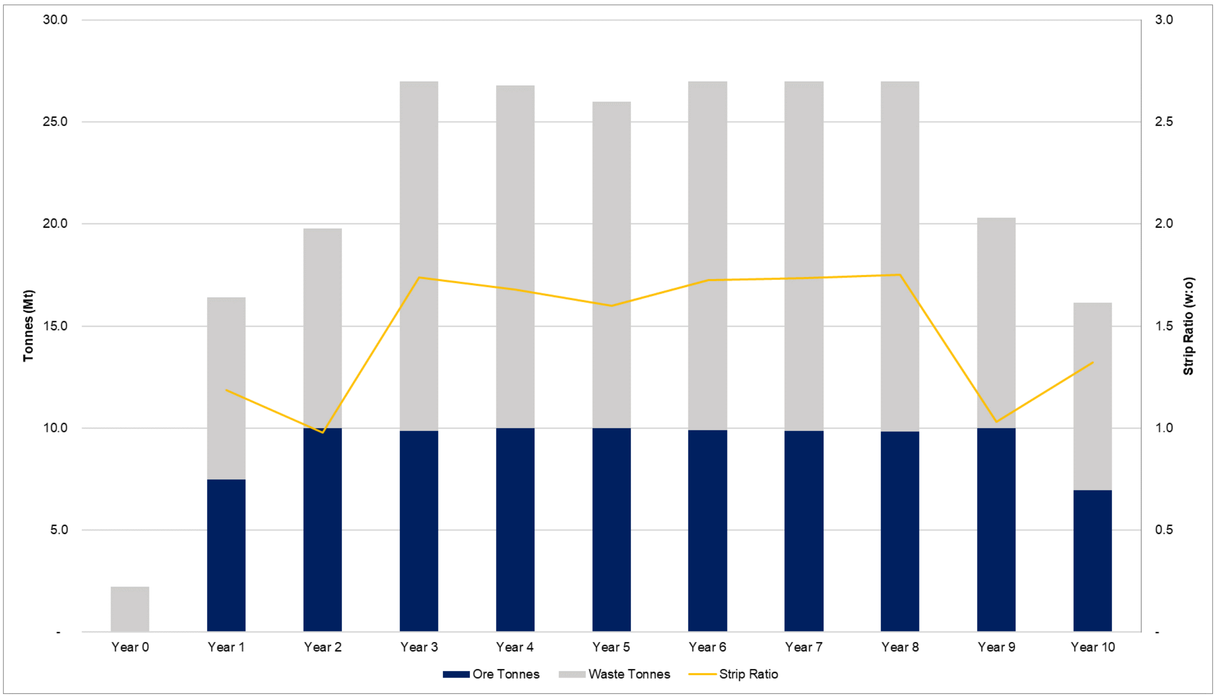

Figure 3 – Open Pit Annualised Mine Tonnes with Strip Ratio.

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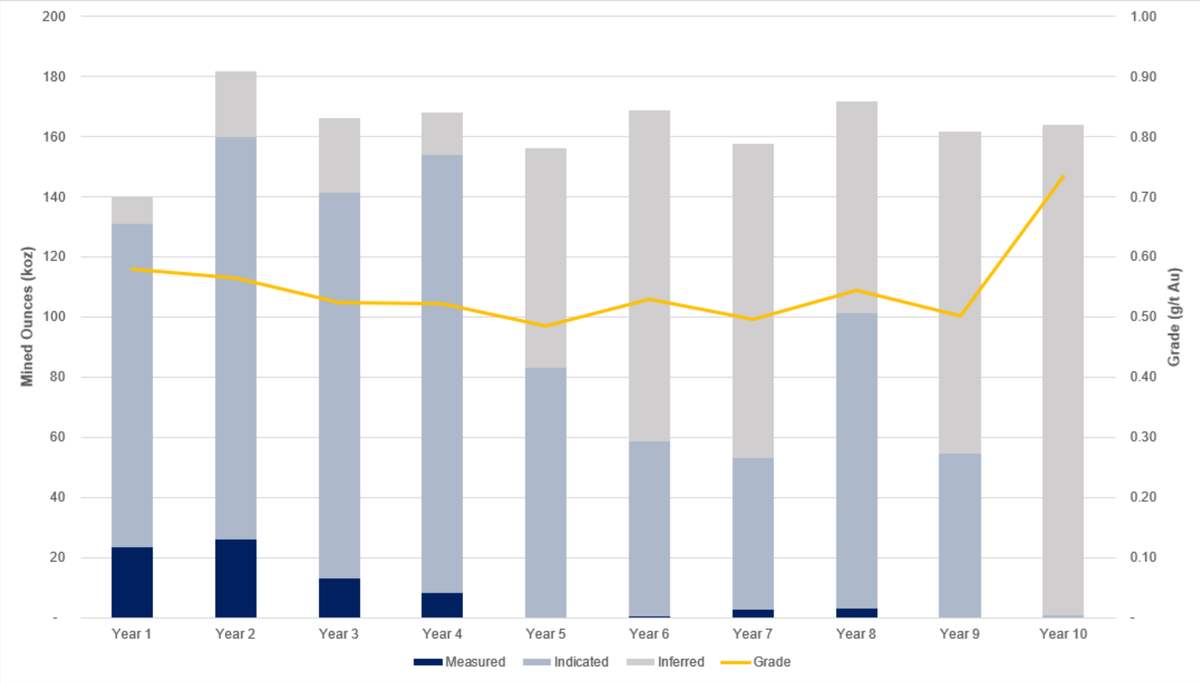

Figure 4 – Open Pit Mined Ounces by Mineral Resource Category.

Processing

Conventional cyanide heap leaching of crushed and agglomerated mineralised material was selected as the preferred processing route for Apollo Hill due to the low capital and operating costs associated with this method.

Several phases of metallurgical test-work have been carried out to confirm the amenability of Apollo Hill mineralisation to heap leaching and to provide processing parameters for financial assessment of the Project under this scenario. This test-work included multiple intermittent bottle roll and column leach tests carried out on the various material types found within the deposit at a range of head grades and feed sizes produced via various crushing methods. Agglomeration, percolation and comminution characterisation testing was also carried out.

Overall, the test-work showed that cyanide leaching readily and rapidly achieved high gold recoveries from Apollo Hill mineralisation with low levels of reagent consumption. Recovery was generally insensitive to feed grade across the range of grades expected to be presented during operations.

Based on the test work results, a crushed product size of 100% passing 8mm (P_{100}), delivered using high pressure grinding rolls (HPGR), was adopted for the PEA.

Seven column leach tests on material crushed to 8mm (P_{100}) using HPGR have been undertaken by Saturn generating an average gold recovery of 79.3% at 100 days, which was materially higher than recoveries obtained by conventional crushing to the same size. For the PEA analysis, an overall recovery of 75% at a conservative 200 days was adopted to cater for recovery at operational scale.

The processing circuit modelled and costed in the PEA consists of a gyratory primary crusher capable of direct tip feeding, followed by twin secondary cone crushers in closed circuit and a single HPGR in closed circuit.

Processing is scheduled at a rate of 10 Mtpa of ore to match the mining rate. Crushed material will be agglomerated using cement binder, then conveyed to automated stackers to deposit the agglomerated product in 8-metre-high lifts on a High-Density Polyethylene (HDPE) and clay lined leach pad, which is comprised of 38 cells. Over the life of mine a total of 4 lifts are stacked on each cell of the leach pad.

Cyanide solution is reticulated over the stacks with drippers and the resulting pregnant liquor solution (PLS) drains from the base of the stacks to collect in HDPE lined ponds. PLS is pumped from the ponds through banks of carbon absorption columns. Once loaded, carbon is transferred to a pressure Zadra elution circuit where gold is stripped from the loaded carbon ahead of electrowinning and smelting of gold doré.

Infrastructure

Access

Road access to the Project will be via the Goldfields Highway and Kookynie to Mt Remarkable Road.

Leonora has an established sealed commercial airfield, which will be utilised in lieu of establishing a dedicated airfield for the Project.

Power

Site power generation is assumed to be from a power station utilising trucked gas, owned and operated by a power supply contractor. The system will include some diesel power for back-up use in event of emergency. The estimated installed power requirement is 12 MW.

Water

Bore fields will be required to provide water for processing operations in the order of 4.0 GL per annum, whilst water generated from mining is estimated to be sufficient to meet the mine water requirements (dust suppression and drill water). Initial stage hydrogeological studies have indicated sufficient water in the area to meet the operational demands.

A small reverse osmosis plant will be required to supply potable water for drinking water and ablutions across site. The capacity of the regional aquifers will need to be confirmed by future hydrogeological studies.

Site Buildings

An assay laboratory will be placed in proximity to the processing facility. This facility will serve the plant's assay, environmental, metallurgical requirements and open pit grade control needs.

A workshop will be established to service the mine fleet mobile equipment. It will be designed and built to accommodate the 230-tonne haul trucks and have a pre-engineered structure with concrete foundations and floor slab.

Offices and ablution buildings for administration, processing and mining of prefabricated, demountable construction and placed in proximity to the respective areas.

Accommodation Village

A permanent site village will be a prefabricated modular-type construction of typical design for the region and conditions. There will be sufficient fully furnished rooms to accommodate 200 persons onsite, with each room including ensuite facilities. The complex will service both the construction and operation phases of the project, with additional short-term capacity available in Leonora.

Workforce

Employees

Saturn will directly employ persons in management, administration and technical positions. It is also intended that Saturn will engage directly all persons involved in the operation of the processing facility. A total of 58 persons have been allowed for onsite at any one time in these roles.

Contractors

Contractors will be utilised to operate the mine and other auxiliary functions such as camp administration and general site services. It is estimated that 118 persons will be onsite in these roles at any time.

Rosters

Two industry typical rosters have been adopted in the PEA, 8 days on, 6 days off and 14 days on, 7 days off.

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Environmental Assessment

A series of environmental studies have commenced to inform the Projects environmental impact and mitigative strategies. The studies are ongoing and include ore, soil and waste material characteristics, as well as flora and fauna studies. Investigations of increasing intensity will occur as higher-level evaluation of the Project continues.

Cultural Heritage

Saturn Metals has a well-established relationship with the traditional ownership group at Apollo Hill. This constructive relationship has been a key aspect of the exploration and drilling program to date and will be enhanced and managed to be compliant with new legislative requirements to provide support to the Project as it develops.

Statutory Approvals

Although heap leach processing for the recovery of gold is very commonly used in most mining jurisdictions it is less frequently used in Western Australia. To mitigate risk pf potential schedule delays associated with this; permitting and ESG management will be a critical aspect of the project planning and will be comprehensively addressed during the PFS stage of the Project. Required licensing for the Project will include, but is not limited to; Mining Proposal, Native Vegetation Clearing Permit, Groundwater Abstraction Licence and Work Approval.

Financial Analysis

Capital Cost

The cost estimates are based on a preliminary mine schedule and are derived from several sources including quotes and budgetary pricing from suppliers and estimates based on recent actual pricing from similar mines in Western Australia. They include all pre-production site, process plant, and heap leach pad costs as well as sustaining capital post-production start-up. The pre-production plant establishment capital expenditure of $230.1 M is based on a 2022 Scoping Study report by CPC Engineering, a 2023 Orway Mineral Consultants Preliminary Crushing Circuit Evaluation and a brief independent peer review.

Table 2 – LOM Capital Cost Estimate

Pre-Production Capital	Total (A$M)
Site Infrastructure	$ 42.1
Owners Costs	$ 7.1
Processing Facilities	$ 230.1
Heap Leach Pad	$ 6.5
Open Pit Early-stage material movements for pad and infrastructure establishment	$ 17.9
Total Pre-Production Capital	**$ 303.6**
Sustaining Capital – LOM	
Heap Leach Pad inc. Pipe, Trenches & Conveyors	$ 14.8
Process Plant Major Maintenance	$ 10.5
Closure	$ 20.8
Total Sustaining Capital – LOM	**$ 46.1**

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Operating costs

Operating Costs are derived from a number of sources including quotations and budgetary pricing provided by suppliers. Estimates are based on similar WA mining operations, and pricing built up from plant suppliers, and where necessary, scaled by accepted methods. Open pit mining costs are derived from estimated costs per tonnes rates for load and haul, drill and blast and overheads as well as an assumed cost per tonne for grade control drilling and related costs. The average overall mining cost over LOM is $4.50 / t mined.

The processing costs are based on estimates informed by the CPC Engineering study, Orway Mineral Consultants study and information provided by Macromet and Kappes Cassiday metallurgical consultants. Processing costs are derived from estimated costs per tonne for crushing and screening, stacking, treatment and processing overheads. The average overall processing cost over LOM is $9.46 / t of the production target processed.

General and Administrative (G&A) costs include personnel costs for site management, administration, safety, training and environmental functions, and allocations for flights and accommodation. This cost excludes mining and processing related administrative costs which have already been built into the respective cost areas. G&A costs are set at $1.87 / processed tonne.

Table 3 – Operating Cost Estimate

Operating Costs	A$M	A$/t Processed	A$/oz Payable
Mining	$ 1,052	$ 11.20	$ 857
Processing	$ 888	$ 9.46	$ 724
Site G&A	$ 176	$ 1.87	$ 143
C1 Cash Cost	**$ 2,116**	**$ 22.54**	**$ 1,725**
Royalty	$ 109	$ 1.16	$ 89
Sustaining Capital	$ 46	$ 0.49	$ 38
All-in Sustaining Cost (AISC)	**$ 2,272**	**$ 24.19**	**$ 1,852**

Royalties

The Project economics as presented in this PEA have incorporated allowance for a 4.50 % net smelter return royalty on all ounces produced. This figure is considered to provide adequate provision for State Royalties, two Private Party Royalties and for any future Heritage Agreement Compensation.

Peak funding requirement / cashflow

Cashflow modelling identifies that the peak funding requirement for the Project is estimated to total $345 M, comprising the pre-production capital expenditure of $304 M, and funding for operations until first gold doré of $41 M. Operational cashflow is scheduled to be positive from the end of Year 1, with a 2.8 year capital payback period from the start of first production in year one (Figure 5).

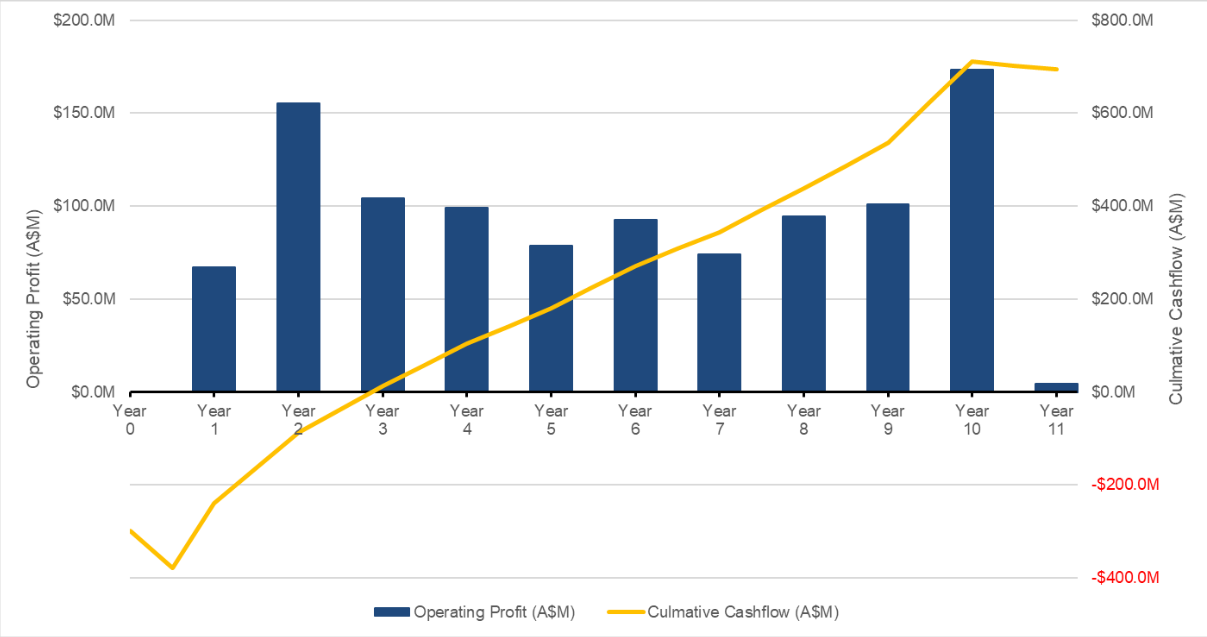

Figure 5 – Apollo Hill operating profit and cumulative cashflow.

Sensitivity studies

The Project's key financial metrics are most sensitive to changes in the gold price and metallurgical recovery, while it is more resilient to changes in capital costs. Table 4 below details the sensitivities of the Project to metallurgical recoveries, whilst Figure 6 details the impact of gold price, operating costs and capital costs in relation to Net present value (at 7% discount rate).

Table 4 – Gold Price Sensitivity Analysis (Gold price (A$ 2944/oz) 1 August 2023)

Gold Price (A$/oz)		2400	2500	2600	2665 Base Case	2700	2800	2900	2944[3] 1st Aug '23	3000
$NPV_{7\%}$	A$M	170	253	336	390	419	502	586	622	669
IRR	%	18	23	27	30	31	35	39	41	43
Payback	years	4.4	3.6	3.1	2.8	2.8	2.5	2.3	2.2	2.1
Annual EBITDA	A$M	73	85	97	104	109	121	133	138	144
LOM EBITDA	A$M	727	847	966	1,044	1,086	1,205	1,325	1,378	1,445
LOM Free Cash	A$M	377	497	616	694	736	856	975	1,028	1,095

The Study selected base case gold price, A$ 2,665/oz demonstrates the robustness of the Apollo Hill Project. At the recent spot gold prices (Table 4), the Project demonstrates outstanding financial outcomes including a free cash flow of more than A$ 1,000M, and a $NPV_{7\%}$ of over A$ 620M.

[3] Gold price (A$ 2944/oz) 1 August 2023

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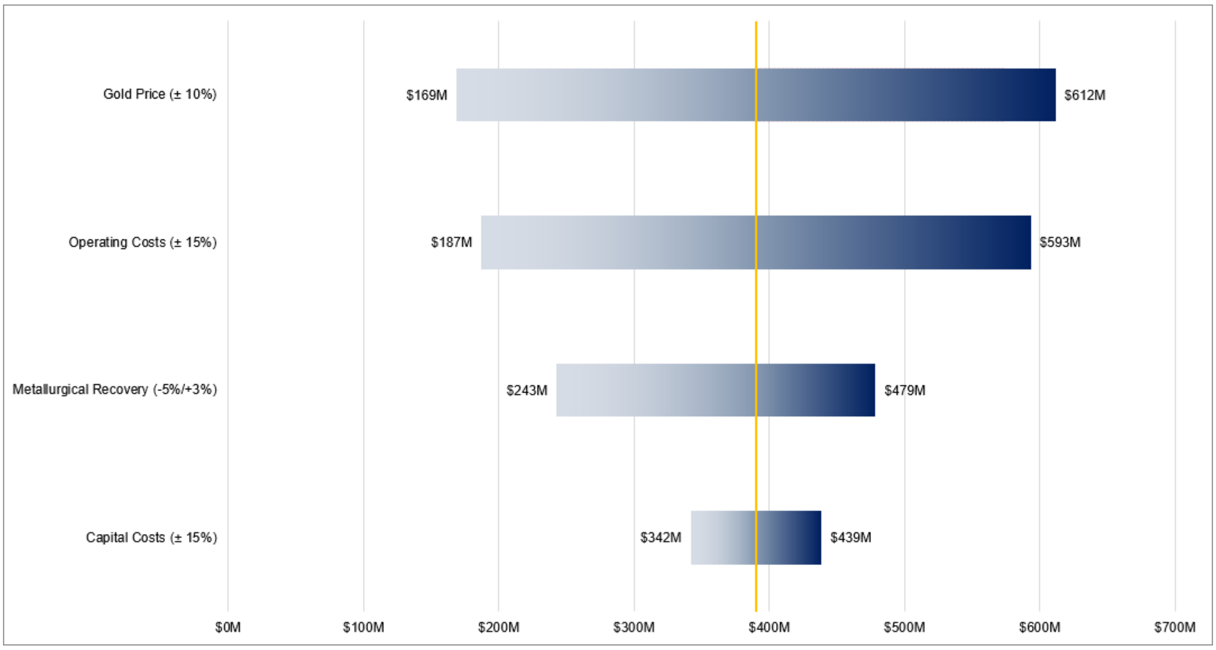

Figure 6 – $NPV_{7\%}$ Sensitivity analysis

Forward Work Program

The Company intends to progress to higher level feasibility studies and scale up test work activities, along with on-going regional exploration to sustain Saturn's strong exploration performance across its 1,000 km^2 of regional tenements.

Saturn uses 'Stage Gate' management principles to manage and monitor progress along our development path.

This announcement has been approved for release by the Saturn Metals Limited Board of Directors.

IAN BAMBOROUGH
Managing Director

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Forward Looking Statements:

This announcement may contain certain “forward-looking statements” which may not have been based solely on historical facts, but rather may be based on the Company’s current expectations about future events and results. Where the Company expresses or implies an expectation of belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. The detailed reasons for that conclusion are outlined throughout this announcement and all material assumptions are disclosed.

However, forward-looking statements are subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements.

Such risks include, but are not limited to resource risk, metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as governmental regulation and judicial outcomes.

For a more detailed discussion of such risks and other factors, see the Company’s Annual Reports, as well as the Company’s other filings. Readers should not place undue reliance on forward-looking information. The Company does not undertake any obligation to release publicly any revisions to any “forward looking statement” to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

Scoping Study Summary:

The information in this Preliminary Economic Assessment release is based on information compiled by Mr Stuart Ellison, a Competent Person who is an Associate of the Australasian Institute of Mining and Metallurgy. Mr Ellison is a full-time employee of the company. Mr Ellison is eligible to participate in short and long-term incentive plans in the Company. Mr Ellison has sufficient experience in the study, development and operation of gold projects and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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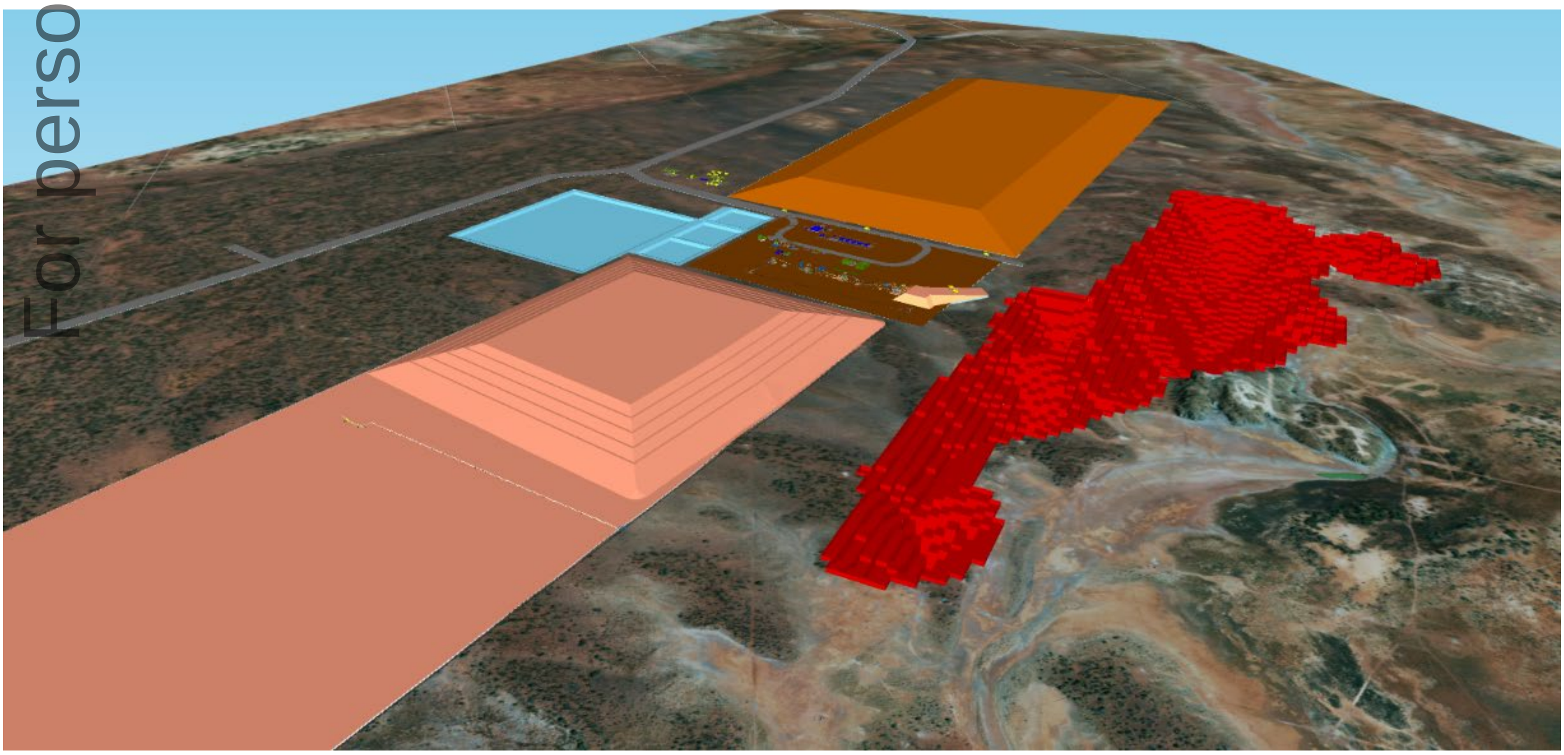
Appendix 1

Apollo Hill

Preliminary Economic Assessment (PEA) Summary

7 August 2023



Saturn Metals Limited

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1 Introduction

1.1 Project Controlling Entity

Saturn Metals Limited (ASX:STN) (Saturn or the Company) is a listed public company limited by shares and incorporated in Australia with Australian Company Number (617 614 598). Saturn was incorporated on 2 June 2017 for the purposes of gold exploration and development and on 11 October 2017 Saturn acquired the tenements forming the Apollo Hill Project in Western Australia, pursuant to a Sale Agreement between the Company, Apollo Hill Pty Ltd and Peel Mining Limited dated on or around 7 July 2017. Saturn wholly owns the Project and all Tenements.

1.2 Project Location

The 1,000 km^2 Apollo Hill tenement package is situated approximately 50 km to the southeast of Leonora, approximately 250 km north of Kalgoorlie in the Goldfields of Western Australia (Figure 1). Road access to the Project from Kalgoorlie is around 300 km along the Goldfields Highway and the Kookynie to Mt Remarkable roads (also illustrated on Figure 1). Leonora has an established and operating airfield with a flight time from Perth of around one hour for most aircraft.

At the heart of Saturn's tenement package is the Apollo Hill Gold Mineral Resource, recently upgraded to 105 Mt at 0.54 g/t Au for 1,839,000 oz[1].

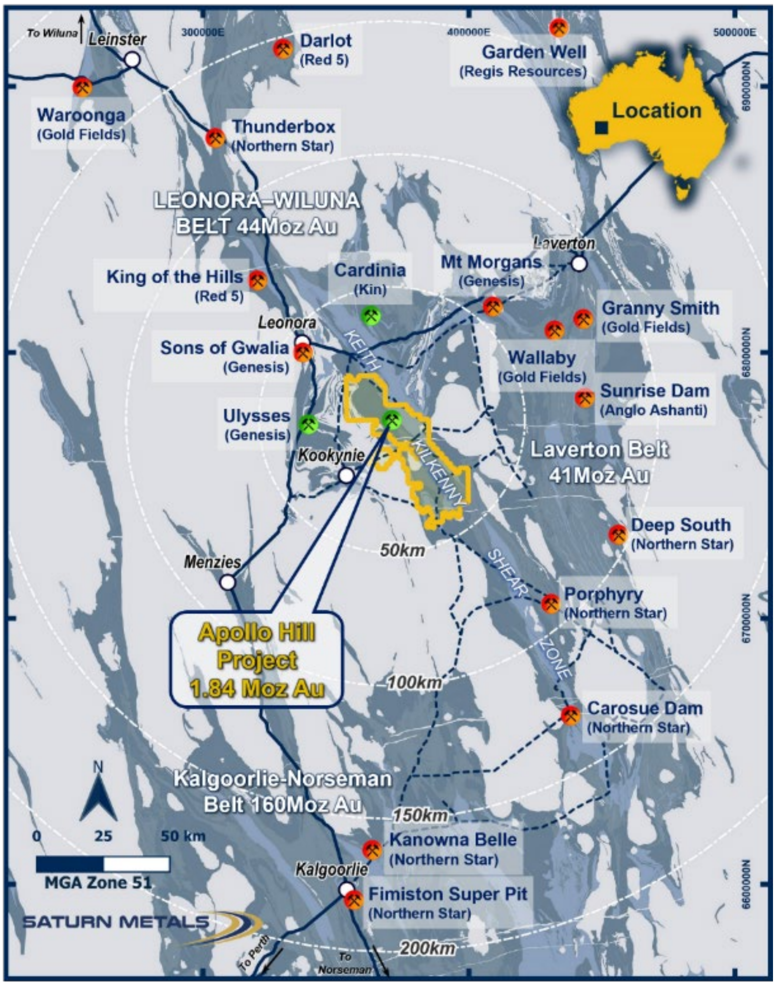

Figure 1 – Apollo Hill Gold Project location plan.

[1] Complete details of the Mineral Resource (105 Mt @ 0.54 g/t Au for 1,839,000 oz Au) and the associated Competent Persons Statement were published in the ASX Announcement dated 28 June 2023 titled "Apollo Hill Gold Resource Upgraded to 1.84Moz". Saturn reports that it is not aware of any new information or data that materially affects the information included in that Mineral Resource announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and there have been no adverse material changes.

1.3 PEA Team

The PEA was compiled between November 2022 and July 2023. The PEA was compiled by the Company with technical input from a range of independent experts (Table 1).

Table 1 – Apollo Hill PEA Team

Area	Completed by
Geology	
Resource Model	AMC Consultants
Drillhole Database Management	Geobase
Structural Review	In-house
Mining Technical	
Geotechnical Engineering	MineGeotech
Surface Hydrology	Carrick Consulting
Hydrogeology	Pennington Scott & Pentium Water
Open Pit Optimisations	Orelogy
Open Pit Schedules	Orelogy
Metallurgy and Processing	
Metallurgical Test work	Various – Bureau Veritas, SGS and ALS
Metallurgical Test work Management	MacroMet & Kappes Cassidy
Process Plant – Design	CPC Engineering
Heap Leach – Design	Knight Piesold & Kappes Cassidy
Cost Modelling	
Processing – 5Mt scaled to 10Mt – Capital and Operating	CPC Engineering
Crushing Circuit – 10Mt – Capital and Maintenance	Orway Mineral Consultants
Processing - Operating	CPC Engineering & MacroMet
Site Infrastructure	Knight Piesold
Open Pit	Orelogy
Site Administration	Inhouse
Charter Flights	Skippers Aviation
Heritage and Environment	
Permitting and Compliance Status	Significant Environmental
Flora	EcoScape
Fauna	Bennelongia
Heritage	De Gand & Waru
Native Title Consultants	Nyalpa Pirniku
Waste Rock Characterisation	Mine Waste Management

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2 Geology

2.1 Regional Geology

The Apollo Hill project is located in the Archaean aged Norseman-Wiluna Belt, Eastern Goldfields Province of the Yilgarn Craton. It is the youngest litho-structural block of the greenstone-granite terrain (2,700Ma) in the Yilgarn and is highly mineralised. It contains the Norseman, Kambalda, Kalgoorlie, Leonora, Wiluna, Laverton and Yandal mining centres that have produced over 60 million ounces of gold. The Norseman-Wiluna Greenstone Belt is a NNW trending graben structure characterized by Komatiitic ultramafic, Tholeiitic mafic, banded iron formation, clastic sedimentary rocks and calc-alkaline felsic rocks. This greenstone sequence is intruded by granite-granodiorite bodies and felsic dykes. Local occurrences of felsic volcanics are confined to discrete volcanic centres, which are surrounded by subaqueous tuffs, epiclastics and cherts.

The structural architecture of the Norseman-Wiluna Belt is dominated by the Keith-Kilkenny Tectonic Zone, a major NNW striking strike slip tectonic zone traced over hundreds of kilometres. This structural zone is interpreted to be a mantle tapping feature which acted as a major conduit for hydrothermal fluids during mineralisation events. Reactivation of secondary and tertiary structures generated off the Keith-Kilkenny Tectonic Zone produce brittle to ductile dilatational zones that commonly contain ore deposits. The Apollo Hill deposit occurs in one of these mineralised structures, the Apollo Hill Shear Zone, which runs parallel and adjacent to the Keith-Kilkenny tectonic zone. Saturn's geological interpretation of the greenstone belt within its tenement package is presented in Figure 2.

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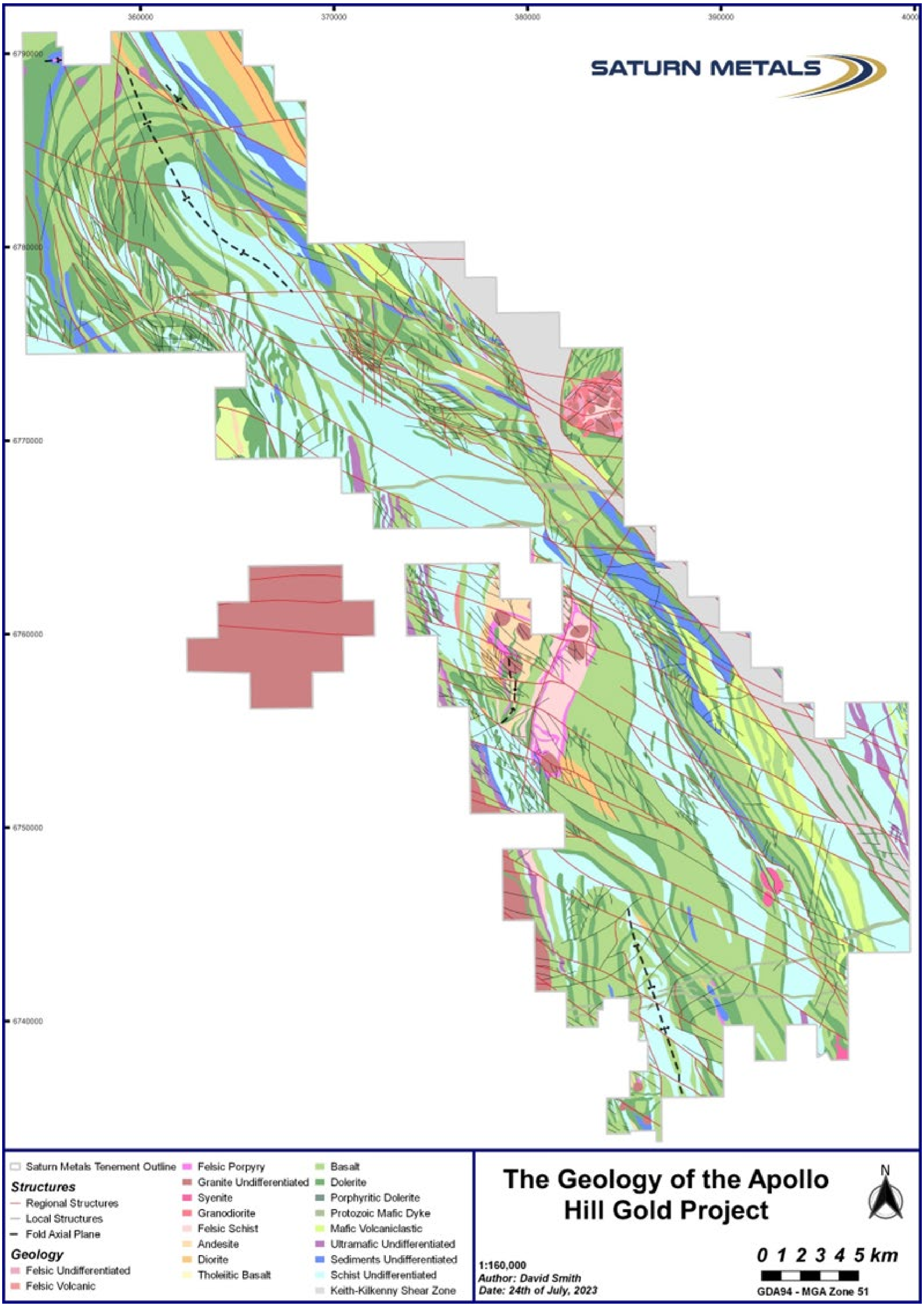

Figure 2 – Saturn Metals Apollo Hill regional geological interpretation.

2.2 Deposit Geology

The geology of the deposit is comprised of fine to medium grained basalts, medium-grained dolerites, mafic schists, and interflow sediments. The greenstone sequence can be subdivided into three major local settings: The 'Main Lode', 'Footwall Lode' and the 'Hanging Wall Lode'. These lodes can be viewed by their relationship and their proximity to the Apollo Hill Shear Zone (Figure 3).

The Apollo Hill Shear Zone is parallel and adjacent to the NW trending Keith-Kilkenny tectonic zone and is interpreted as a fault splay trending northwest, dipping 45° to 60° northeast (Figure 3). From aeromagnetic and drill data, the Apollo Hill Shear Zone is interpreted to be approximately 1km wide consisting of an anatomising network of individual shears containing rafts of relatively undeformed rock. It can be traced under alluvium cover by its low magnetic characteristics for up to 24km. Interpretation of high-resolution aeromagnetic images detail shears and faults throughout the tenements which display similar magnetic characteristics to the Apollo Hill Shear Zone. Conjugate WNW and younger northerly trending cross cutting dilatational zones are also apparent from the magnetics both at Apollo Hill and throughout the tenement package. The role and importance of these structures as fluid pathways away from Apollo Hill is still being tested as Saturn set out further testing for potential satellite deposits.

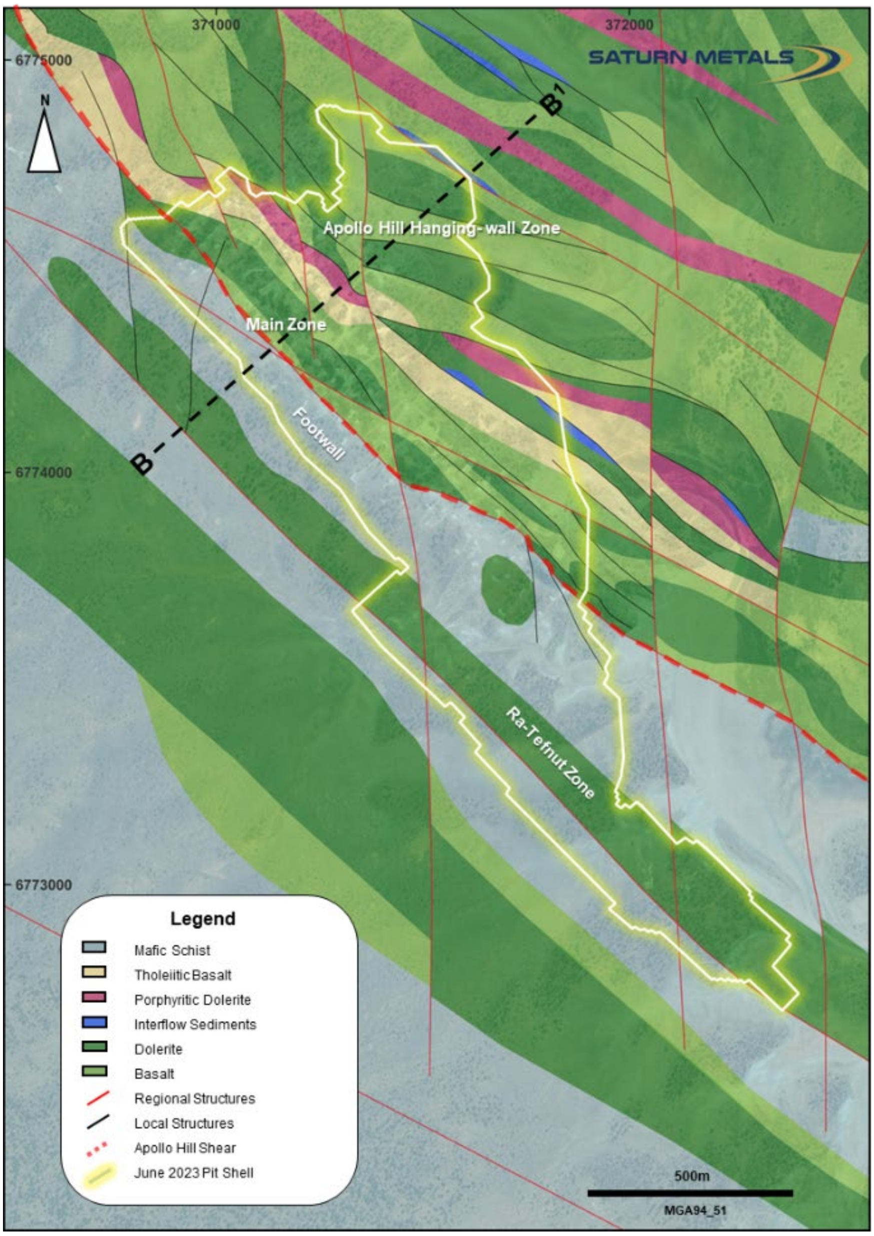

Figure 3 – Apollo Hill geology map on topographic image background (also see cross section B-B1 in Figure 4).

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The Main Lode comprises the bulk of the stronger grades in the deposit and is where the first discovery was made by Fimiston in 1986. This area has been the focus of previous explorers. The main lode is comprised of fine to medium grained Dolerites and Basalts. Intermittent schist units do appear in areas of more ductile deformation along NW-SE, E-W and N-S structures that dissect the Apollo Hill Shear Zone and have induced a large amount of strain on the main lode units. Like all of Apollo Hill the gold is primarily associated with vein assemblages. The mineralised fluids tend to follow structural trends that are visible from aeromagnetic and gravitational data into brittle openings where the fluids reside. The gold grains are sometimes seen in the edge of the vein selvedge and veins are commonly associated with alteration halos of ± silica/pyrite. Areas of more ductile deformation also seem to host these gold rich veins with localised boudinaged and shear hosted tension veins also boasting a large depress of mineralised fluids. The main lode doesn't appear to discriminate between its host or structural setting and gold is disseminated throughout the entire system.

The Hanging Wall Zone (Figure 3, Figure 4 and Figure 5) resides on the Eastern flank of the Main Lode. It is primarily a sequence of dolerites and basalts juxtaposed and thrusted on top of the Main Lode's basalts and dolerites to a sub-vertical angle in places. These thrust faults create the landscapes rolling topographic highs. The Hanging Wall Zone also contains thin interflow sediments, mainly in the form of cherts and rarely thin shale bands. The mafic units in the hanging wall can be subject to a degree of alteration that is apparent throughout the deposit, mainly being susceptible to potassic and propylitic alteration. The gold mineralisation in the hanging wall appears to be more associated with brittle deformation in the hard mafic units whereby mineralisation fluids reside in fractured spaces. Areas of more intense silica (± pyrite) alteration, in the form of vein halos, seem to be the clearest indicator for the presence of gold mineralisation within the Hanging Wall Zone.

The Footwall Zone (Figure 4 and Figure 5) is situated on the Western flank of the Apollo Hill Shear zone. It is an apparent geomorphological feature with a sharp decline in topography. The more ductile units have created a plateau due to their proneness to weathering in comparison to the brittle mafics in the hanging wall. The footwall zone is interpreted as an amalgamation of different rock types. Due to the situation within the shear zone the rock types have near but been completely altered with an array of replacement minerals mainly in the form of ± silica/sericite/chlorite/pyrite dominating the units. Some hardier areas that haven't been deformed still display a mafic composition and therefore the footwall unit has been defined as a 'Mafic Schist' for development purposes. This unit is likely the result of volcanics, volcaniclastics and interflow sediments all being subject to intense degrees of deformation, movement and flooding of secondary fluids.

Within the footwall zone a localised continuous dolerite intrusion contains the 'Ra', and 'Tefnut' zones (Figure 3, Figure 4 and Figure 5) which have been named differently due to their spatial location upon prospect discovery. The dolerite is a medium-coarse grained mafic intrusive that often demonstrates ± silica/chlorite/K-feldspar/pyrite alteration. Gold is thought to deport in quartz veins on the dolerite unit margins where it is in contact with the surrounding 'Footwall Schist'.

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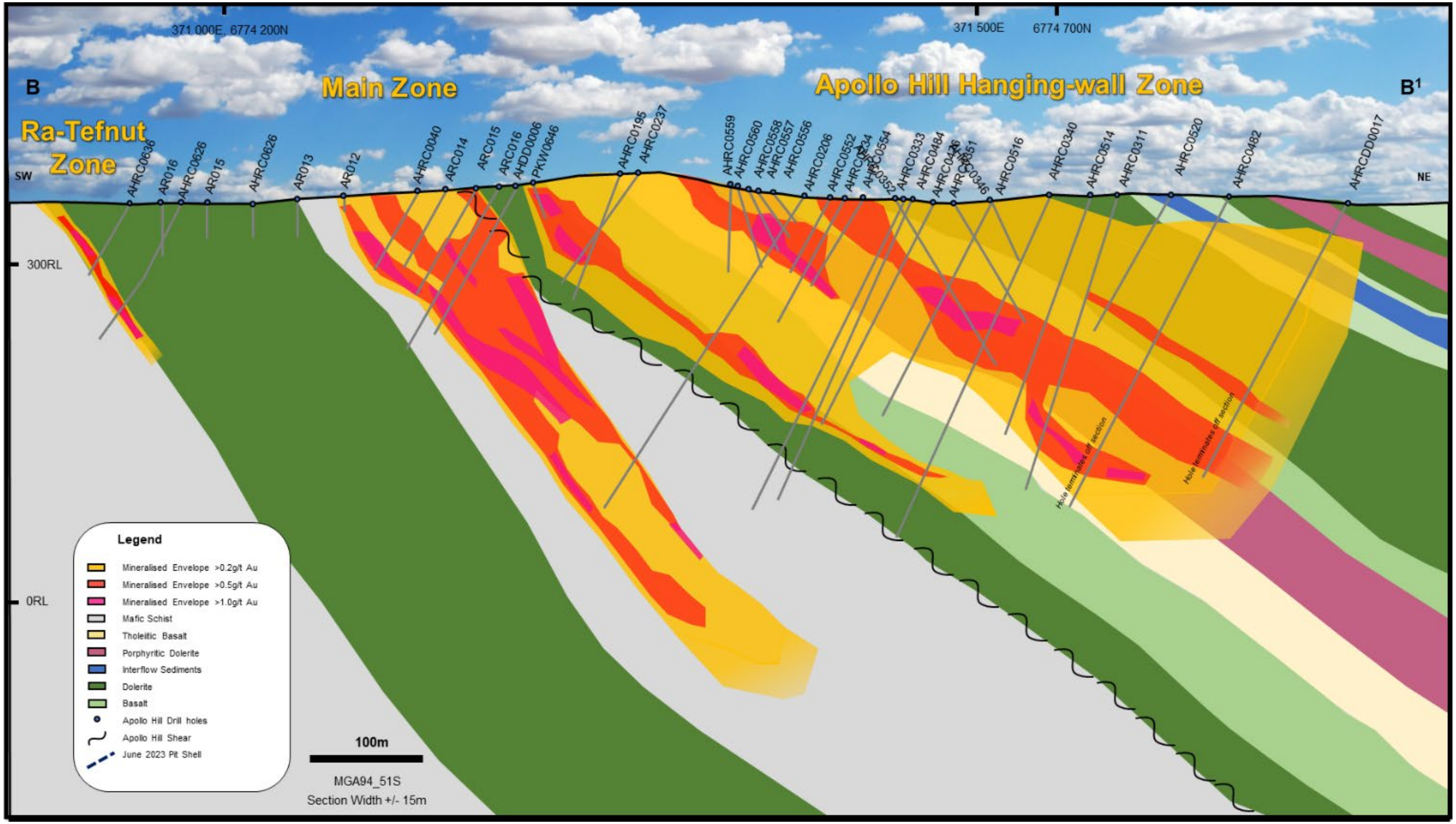

Figure 4 – Apollo Hill Shear Zone and gold mineralisation in southwest-northeast cross section (± 15m) B-B1 location illustrated in plan view Figure 3.

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Recent and Tertiary aged eluvium and alluvium onlap onto bedrock. This cover sequence varies in thickness from zero metres; outcropping at Apollo Hill; to around 20m thick around at the southern end of the deposit. The average depth of cover over the deposit is approximately 2m. The usual weathered Archean profile is not well developed across most of the deposit or the tenement package as a whole with the upper and lower saprolite eroded in many areas. Young alluvial and aeolian sediments have been deposited on the mottled to lower saprolite in many locations, with the profile stripped to sap-rock over large areas. Residual laterite profiles are rare.

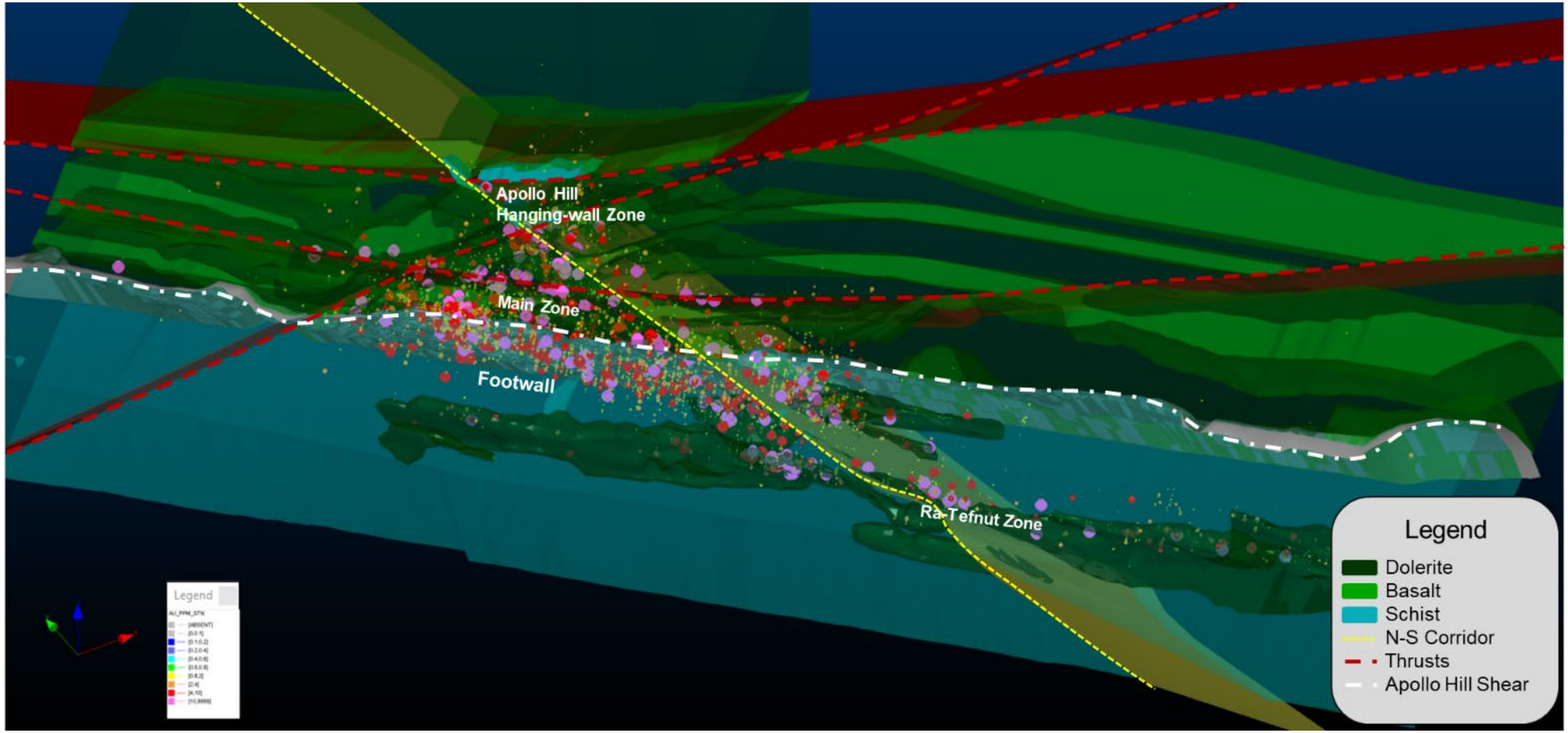

Figure 5 – Overview of Apollo Hill in 3D Oblique Plan View looking Northeast. Drilling grade points (Au > 0.2 g/t), colour coded by grade, can be seen demonstrating the distribution of gold in each zone.

2.3 Resource Estimation

The latest Apollo Hill Mineral Resource estimation was completed and reported by AMC consultants Pty Ltd in accordance with the JORC Code on 28 June 2023 as a total of 105 Mt at 0.54 g/t Au for 1,839,000 oz[1] (Table 2).

The Mineral Resource estimate used a total of 1,260 DD and RC drillholes for a total of 172,033 m drilled. Most of the drillhole data has been generated by Saturn between 2018 and 2023 (1,248 drill holes for a total of 140,689 m).

The mafic and schist rock-type contact, dolerite units and base of alluvium were manually interpreted and modelled in conjunction with Saturn to produce a set of wireframes used to set rock-type flags in the models.

Mineralisation envelopes were constructed on south-west to north-east sections parallel to drilling fences, using a nominal 0.2 g/t Au mineralisation boundary on the raw grade data to define the edges of the mineralised zones. Strings were snapped to drillholes and used for developing wireframes of the mineralisation for the Apollo Hill, Southern Apollo Hill Corridor (including gold mineralisation in Ra Dolerite) and Apollo Hill Hanging-wall mineralised zones. Further refinement of internal dilution within the mineralisation envelopes used conditional indicator kriging (CIK) on 5 mE x 12.5 mN x 5 mRL blocks to probabilistically define coherent zones of mineralisation and internal dilution.

Wireframe interpretations for secondary weathering related oxidation and top of fresh rock were incorporated into the model.

Raw sample/assay files were flagged/coded for the interpreted mineralisation zones, oxidation profile and internal domains and then composited to a regular 2 m downhole composite length as a means of achieving a uniform sample support.

Bulk density was generated from a set of 562 Archimedean determinations using billets of core. Densities have been assigned based on oxidation state. At Apollo Hill, assigned densities range from 2.1 t/m^3 (alluvial/soil) to 2.9 t/m^3 (fresh mafic rocks).

Grade estimation has been completed using Restricted Ordinary Kriging (ROK) for all mineralised zones (Main Apollo Hill mineralised zone including the Footwall - zone, the Apollo Hill Hanging-wall mineralised zone, and the smaller Ra and Tefnut mineralised zones). The flagged composites were used for estimation of panels within a rotated parent block size which emulates a selective mining unit (SMU) scale mining block with a dimension of 10 mE x 25 mN x 5 mRL (Figure 6 and Figure 7).

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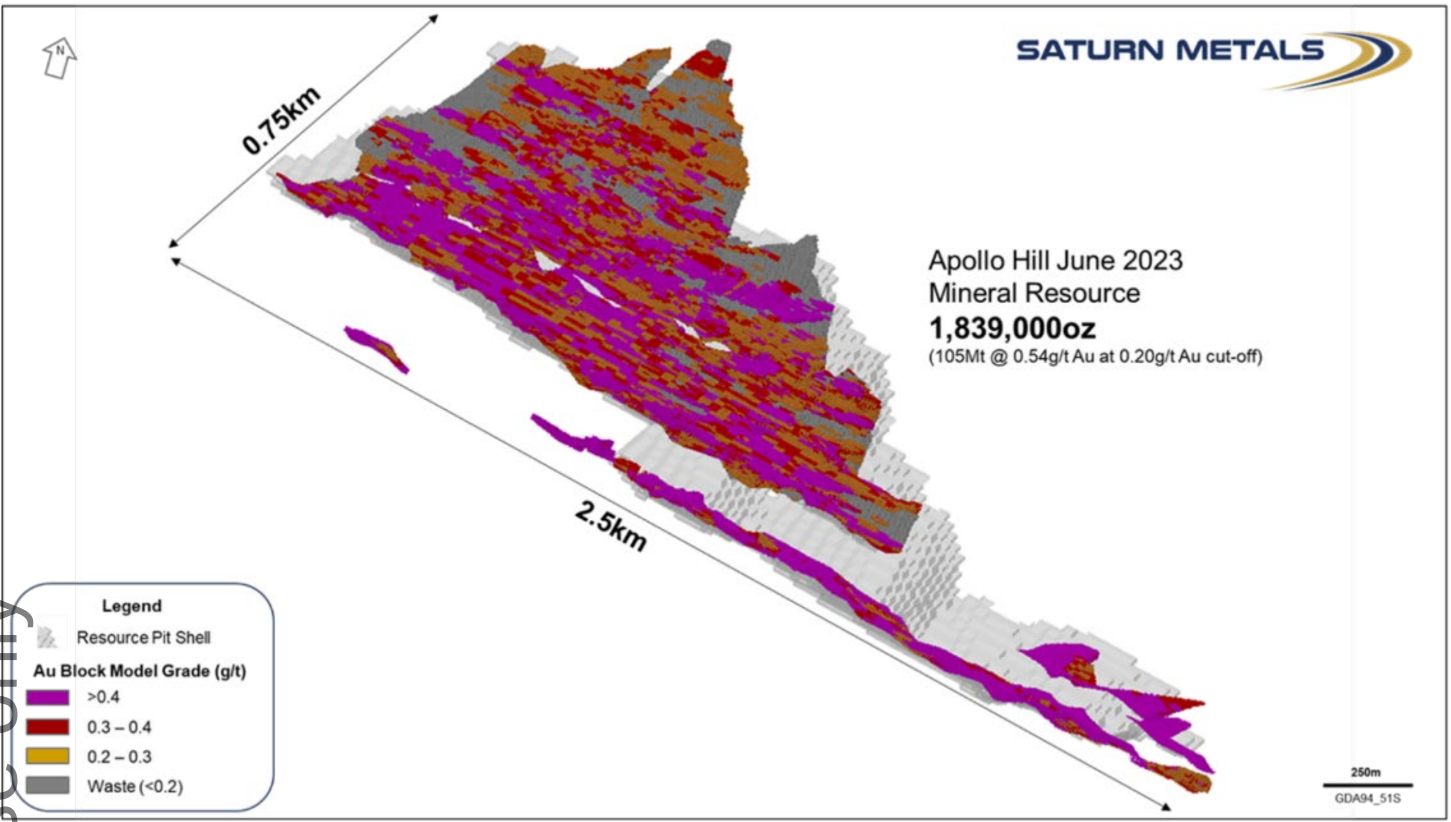

Figure 6 – Oblique view 3D Representation of the June 2023 Apollo Hill Mineral Resource model and selected nominal constraining pit for reporting, shown with topography – Mineral Resource reported within/above the pit shell only.

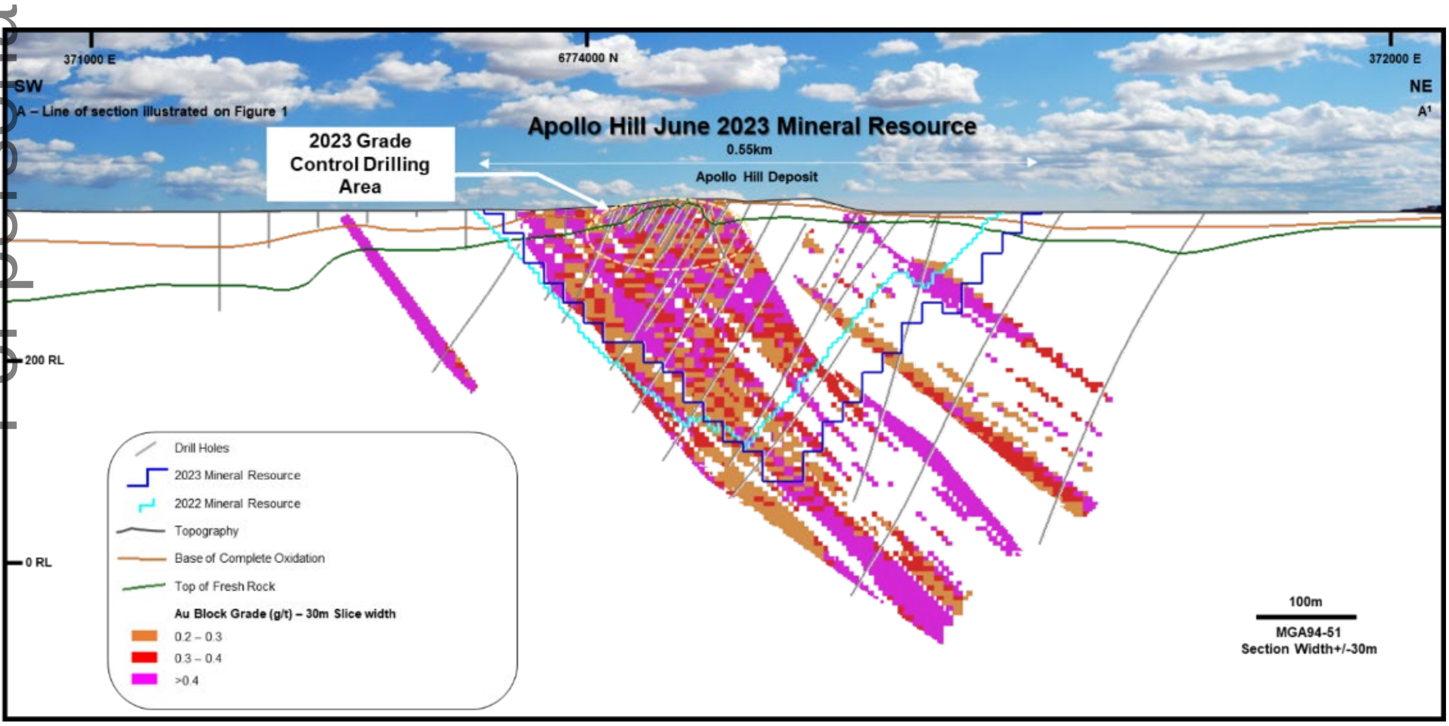

Figure 7 – Oblique block model cross-section (South West – North East, A-A1 on Figure 6 3D diagram) ± 30 m showing gold grade and block locations.

A combination of Measured, Indicated and Inferred Mineral Resources has been defined (Figure 8), considering a range of parameters including the robustness of the input data, the confidence in the geological interpretation (the predictability of both structures and grades within the mineralised zones), distance from data, and amount of data available for block estimates within the mineralised zones.

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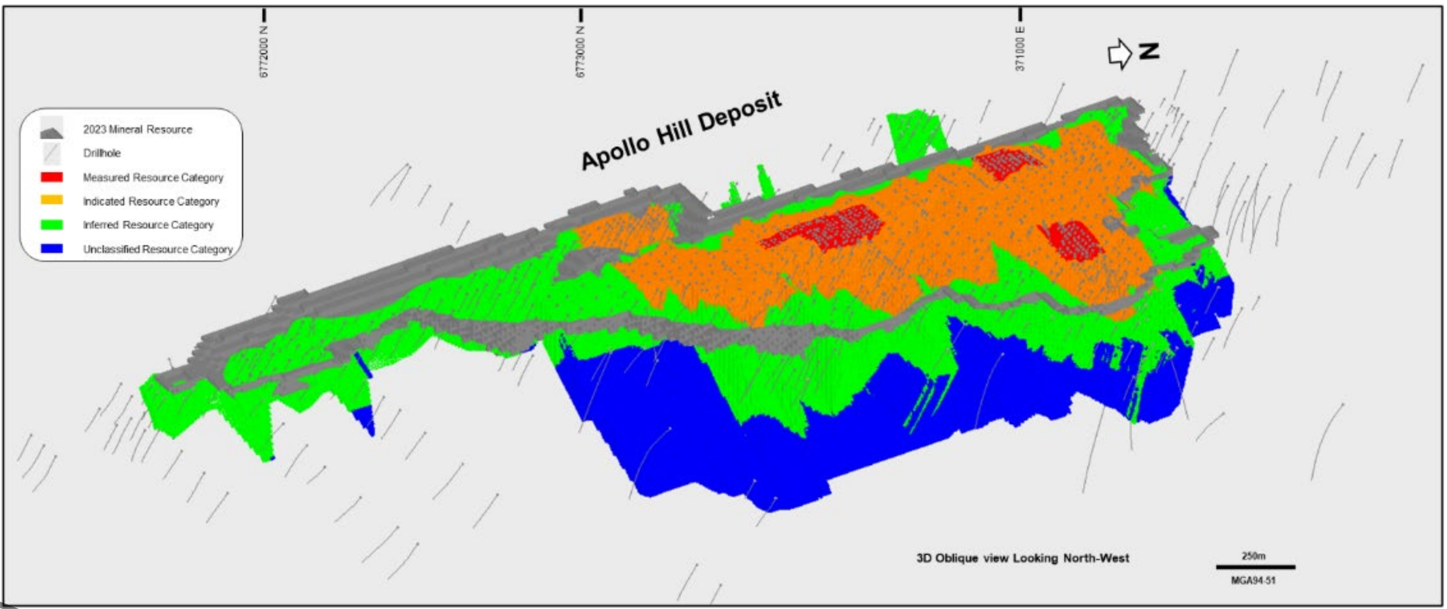

Figure 8 – Measured, Indicated and Inferred Mineral Resource Classifications relative to the nominal constraining open pit shell and drilling density. Material outside of the nominal pit shell is not reported.

In 2023, Saturn completed further infill and extensional RC and DD drilling on the deposit. Preliminary Whittle pit optimisations using approximated regional mining and processing costs for a heap leach processing scenario were run on the resource model using a gold price of A$2,850/oz to generate an economic pit shell and cut-off grade. A pit shell representing a revenue factor of 1 (RF1.0) was selected as a nominal constraint within which to report the Apollo Hill Mineral Resource, thereby satisfying the JORC Code requirement for a Mineral Resource to have reasonable prospects for eventual economic extraction (RPEEE).

The Mineral Resource was reported using a 0.20 g/t Au cut-off grade in line with preliminary economic analyses and other similar projects globally. The Apollo Hill Mineral Resource estimate was developed with a view to open pit mining on 10 m benches.

Table 2 – Summary Table – Apollo Hill Mineral Resource June 2022

Lower Cut-off Grade Au g/t	Oxidation state	Measured			Indicated			Inferred			MII Total		
		Tonnes (Mtonnes)	Au (g/t)	Au Metal (KOzs)	Tonnes (Mtonnes)	Au (g/t)	Au Metal (KOzs)	Tonnes (Mtonnes)	Au (g/t)	Au Metal (KOzs)	Tonnes (Mtonnes)	Au (g/t)	Au Metal (KOzs)
0.2	oxide	0.1	0.63	2.8	1.1	0.46	17	0.8	0.55	14	2.1	0.51	33
	transitional	2.1	0.57	39	8.9	0.51	145	3.1	0.56	56	14	0.53	239
	fresh	2.4	0.52	40	44	0.53	751	43	0.56	775	89	0.55	1,567
	total	**4.7**	**0.55**	**82**	**54**	**0.53**	**912**	**47**	**0.56**	**845**	**105**	**0.54**	**1,839**

The model is reported above the 2023 nominal RF1.0 pit optimization shell for RPEEE and 0.20 g/t Au lower cut-off grade for all material types. There is no depletion by mining within the model area. Estimation is by restricted OK (ROK) for all mineralised zones. The model currently assumes a 10 mE x 25 mN x 5 mRL selective mining unit (SMU) for open pit mining. Selectivity may vary with changed mining and processing scenarios. The final models are SMU models and incorporate internal dilution to the scale of the SMU. The models do not account for mining related edge dilution and ore loss. Classification is according to JORC Code Mineral Resource categories. Measured is assigned only to areas having RC grade control drilling. Densities are assigned according to key lithological units and weathering oxidation states with values ranging from 2.1 to 2.9 t/m^3. Totals may vary due to rounded figures.

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3 Metallurgy and Processing

3.1 Metallurgical Testing

3.1.1 Testing History

A series of test work programmes have been completed on the Apollo Hill deposit since 2010. These tests focused on CIL processing, gravity recovery and heap leach recovery. In general, Apollo Hill samples have produced excellent cyanidation performance, with for example, a 2016 programme achieving gold extractions ranging from 92% to 97% over a P_{80} size of 300 µm to 90 µm.

Test work has indicated high variability in reported multiple assay and calculated head gold grades suggesting "spotty" gold, or in other words, a nuggety orebody. This characteristic is reflected in the relatively high gravity gold recoveries achieved in the programmes, where gravity gold recoveries of between 40% and 90% were reported at various crush and grind sizes. Additionally, test work has consistently shown the ore material to have low cyanidation species potential, no pregnant solution robbing characteristics, very low silver (Ag) grades, and low concentrations of both copper and arsenic (around 100 ppm maximum).

Rod and Ball Bond Mill work indexes in this previous test work approximated to 22.4 kWh/t and 14.1 kWh/t respectively showing ore was generally amenable to milling in line with other Archean Greenstone deposits.

3.1.2 Recent Testing and Programmes – Increasing Focus on Heap Leach

Since 2021, MacroMet and Kappes Cassiday have been engaged to manage test work including five separate test work programmes undertaken to encompass all major ore types and over a wide range of target gold grades. From these studies the outcomes could generally described as:

- Relatively high gravity gold recovery with an average of 47.8% reported at 2.0 mm P_{100}.
- Strong correlation of cyanidation recovery to crush/grind size illustrating the importance of liberation.
- Amenability to column leaching with very good recoveries (up to 85%) obtained at P_{100} sizes at 8 mm and relatively low cement addition (agglomeration) requirements (less than 3 kg/t) and with efficient percolation results >10,000 l/hr/m^2.
- Significant column leach gold recovery improvements obtained via High Pressure Grinding Roll (HPGR) crushing technology when compared with conventional (stage) crushed samples indicating benefits related to 'microcracking' and better particle size distribution from HPGR.
- Low lime and cyanide consumption (applicable for the tested site water).
- Importantly, recovery was generally insensitive to feed grade across the deposits grade range. Strong recovery at the deposit's lower grade range confirms that gold recovery is viable from material which would normally be considered marginal if not for the deposits amenability to low unit cost heap leach processing (the alternative being a higher unit cost Mill and CIL scenario).

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Sample Selection

Representative samples were selected and composited from geological drill holes and dedicated metallurgical diamond drill holes based on a variety of rock types, geographies, depth profiles, material types and mineralogical characteristics for the scoping level test work programmes. The majority of recent test work has been completed on Apollo Hill fresh mineralisation which comprises approximately 84% of the PEA mining schedule.

Results

Recovery and Crushing Type

Since 2021 Saturn has undertaken a total of 56 Intermittent Bottle Roll Tests (IBRT's) and 16 column leach tests. Sample preparation methods for the IBRTs and column leach tests have been by both conventional (stage) crushing and HPGR techniques to assess the suitability of both for any eventual circuit. A comparison of mineral recovery by crushing technique has illustrated significant benefits to HPGR crushing with this method outperforming stage crushing on split composites. For this reason HPGR has been selected as the preferred crushing route in this PEA. In addition, it has also been found that HPGR generally produces a finer particle size distribution (PSD) for a given top-size (P_{100}) allowing better liberation of Apollo Hill's gold grains from gangue material. 'Micro-fractures' under HPGR conditions are also understood to improve cyanidation penetration and performance. HPGR test work results also illustrated an advantage in more rapid leach kinetics. Study work has shown that HPGR crushing is cost neutral as compared to conventional crushing, whilst delivering an improved recovery performance.

Recovery By Rock Type

Figure 9 illustrates strong gold recovery across the deposits dominant rock types at various P_{80} HPGR crush sizes. These rock types include fresh basalt/dolerite (BD), fresh mafic schist (MS) and Ra-Tefnut Zone (fresh dolerite and mafic schist) – (RT). As previously noted, fresh rock types make up 84% of the deposits mining and processing schedule, and for this reason, this is where test work has focussed to date.

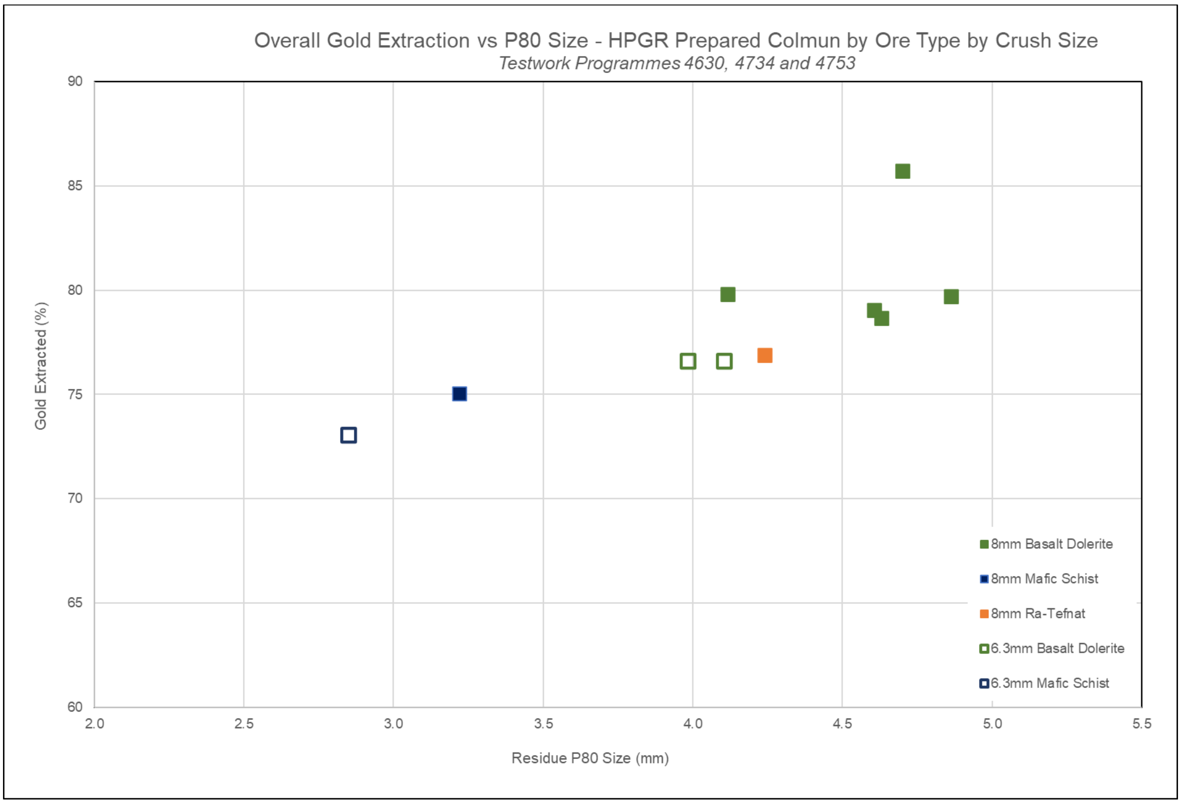

Figure 9 – Average makeup of overall gold extraction by Apollo Hill's main fresh rock types at various P_{80} HPGR crush sizes.

Average gold recoveries by rock type and P_{80} HPGR grind size are summarised in Table 3. Given the limited variation in recovery by rock type, an overall average recovery has been used as a base from which to consider recovery in this PEA.

Table 3 – Material Grind Size to Recovery

Ore Type	Head Grade (g/t)	P_{80} Size (mm)	Average Recovery (%)
Basalt and Dolerite	0.82	4.43	79.5
Mafic Schist	0.40	3.03	74.1
Ra-Tefnut (Oxide and Transitional)	0.46	4.24	76.9
Average All Tests	0.70	4.16	78.1

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Overall Recovery Percentage and Crush Size

A total of ten column leach tests with HPGR prepared material have been completed at HPGR P_{100} crush sizes of 8.0 mm and 6.3 mm with an average recovery of 78.1% (Table 3).

A total of seven column leach tests with HPGR prepared material have been completed at the PEA optimally selected HPGR P_{100} 8.0 mm crush size with an average overall recovery of 79.3%.

As noted above, results from recent test work indicated that finer crushing to P_{100} 6.3 mm did not appear to improve gold recovery. This may be because the particle size distributions under the 8.0 mm P_{100} and 6.3 mm P_{100} HPGR closed-circuit crush procedures were very similar as exhibited by P_{80} sizes of 4.6 mm and 4.1 mm, respectively. The coarser 8.0 mm P_{100} size crush size is considered as the most cost-effective solution at this stage of project development given current test work results (slightly better recovery and leaching kinetics than P_{100} 6.3mm, lower re-agent consumption, less cement addition for agglomeration, theoretically less energy use in crushing/grinding work and lower capital requirements).

However, in order to provide more statistics around any potential crush size-recovery relationship additional data points will be sought. Thus, along with general evidence that increased crushing generally leads to increased liberation of gold grains, a trade-off study, including supporting test work, is underway to assess gold recovery, capital cost and operating cost at 4 mm P_{100} crush sizes.

Grade and Recovery

Figure 10 illustrates that gold recovery is generally insensitive to grade. For example, a strong recovery of 79% was obtained in one column composite (LBD#2 HPGR 8 mm P100) at the deposit's lower grade range (0.33 g/t Au) confirming that gold recovery is viable from material which would normally be considered marginal if not for Apollo Hill's amenability to low unit cost heap leach processing (the alternative being a higher unit cost Milling and Carbon- In-Leach (CIL) scenario). This validates Saturn's use of lower cut off grades which has helped to bulk up the Mineral Resource. Larger continuous mineralised zones in turn lead to improved economics through greater resource utilisation, yielding low waste to ore stripping ratios and subsequent application of low-cost bulk mining scenarios through big selective mining units to capture and efficiently process Apollo Hill's gold distribution.

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Leach Kinetics

Figure 10 shows the leach curves for recent (since 2021) column tests at P_{100} 8.0 mm crush sizes. Strong column leach gold extraction kinetics are illustrated across the deposits grade range with approximately 75% of the ultimate extraction achieved within only 30 days of the entire test work duration period of around approximately 100 days. Despite this 100-day recovery period the modelled leach pad performance used for this PEA is based on a conservative 200 day "on-pad" recovery period to account for any scale-up variations.

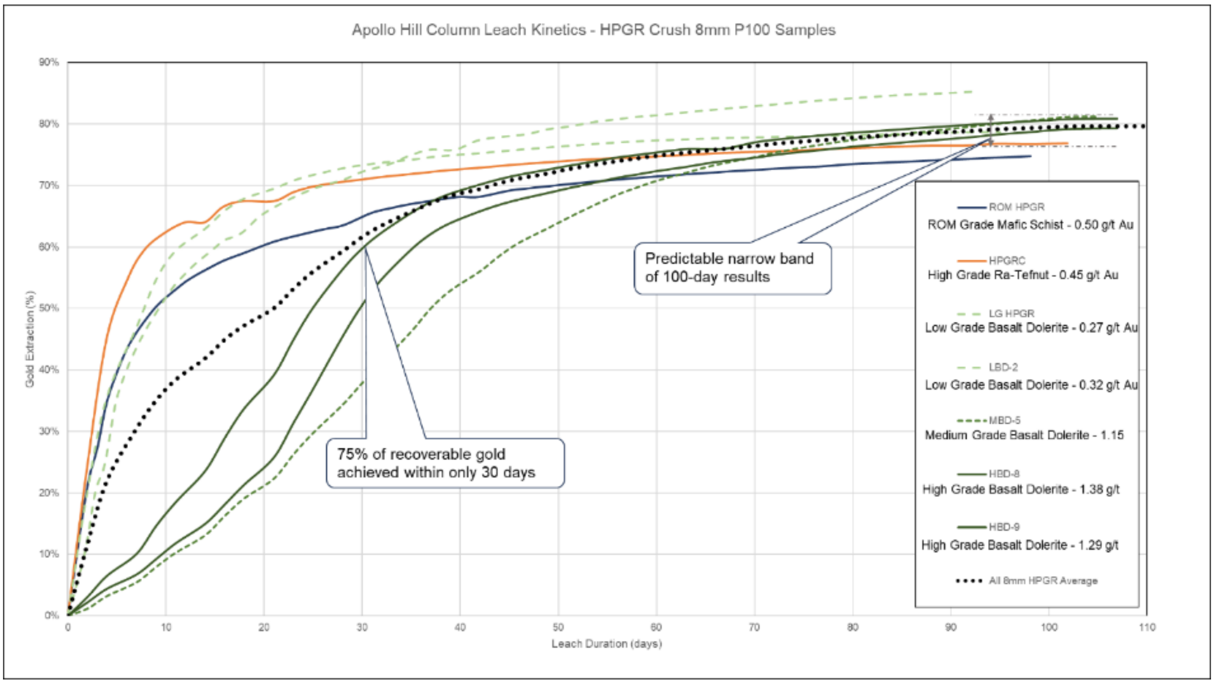

Figure 10 – Recent column leach recovery test curves 8mm HPGR – strong leach kinetics – a predictable narrow band of 100-day recovery results; recovery also illustrated to be insensitive to grade.

Comminution – Crushing Work Indexes

Detailed comminution test work on the composite column samples across Apollo Hill's major fresh rock types gave an average impact crush work index of 12.9 kWh/t (moderate), a Bond abrasion work index of 0.117 (moderate), and a standard SMC Mih derived parameter (a measure of HPGR crushing work index to predict overall specific energy requirements) of 17.5 kWh/t. These figures highlight that there are no issues with the crushability of the Apollo Hill ore types.

Further Work

Work to date on the deposit's oxide and transitional ore types (representing only 2% and 14% of the Mineral Resource respectively) has been by Bulk leach extractable gold (BLEG - 2021 programme). This programme showed that transitional material (14% of the PEA mine schedule) recoveries were marginally less than fresh recoveries, whilst oxide material (only 2% of the PEA mine schedule) recovered less effectively than fresh material. While these small volumes do not raise areas of concern, further studies are planned to investigate the detailed performance of these ore types under column leach and scale up conditions.

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3.2 Process Plant Strategy and Process Design Basis

The processing route and scale selected for evaluation in this PEA is based on the suitability of the Apollo Hill deposit to large scale low-cost extraction and heap leach methods as discussed in the preceding sections. In this instance, a 10 Mtpa operation has been evaluated as it provides the best balance between the operating cost and capital cost advantages that come with scale and is suited to the size of the resource providing for attractive and not unrealistic financial metrics. Any further optionality relating to scale, or any other related processing metric, would be the subject of a Pre-Feasibility level study (PFS).

The process design basis is summarised in the table below:

Table 4: Process Design Criteria

Parameters	Unit	Design
Plant Capacity	Mtpa	10.0
Crushing Plant Utilisation	%	70
Crushing Rate	t/h	1,635
ROM Feed Top Size, F_{100}	mm	1,000
ROM Feed F_{80}	mm	619
ROM Feed F_{50}	mm	299
ROM Feed F_{10}	mm	23
Crushing Product Top Size, P_{100}	mm	8
Moisture Content	% Water	< 2%
Ore Specific Gravity	t/m^3	2.91

3.2.1 Process Flow Sheet

A 10 Mtpa two stage crush plus HPGR to P_{100} 8.00 mm, agglomeration, stacking, heap leaching and elution circuit is configured to produce gold doré. Figure 11, Figure 12, Figure 13 and Figure 14 show a series of flowcharts, site layouts and 3D visuals of the circuit for reference when reading this section of the report. The processing infrastructure and circuit has been based around studies and reports provided by CPC Engineering (CPC) and Orway Mineral Consultants (OMC).

Heap leaching is a commonly used method for extracting gold from low-grade ore deposits. The process involves creating a large heap of crushed ore on a lined pad. A solution containing a leaching agent, typically a weak cyanide solution, is applied to the top of the ore heap through a series of drip irrigation pipes or sprinklers. The solution percolates down through the heap, dissolving the gold from the ore as it goes.

To maximize the contact between the solution and the gold-bearing ore particles, the heap is usually designed with a specific size and shape to promote efficient solution flow. This is achieved through crushing and agglomeration, whereby the crushed material is combined with cement to agglomerate the finer particles. The ore particles are stacked in a way that allows for adequate pore space, ensuring that the solution can flow through the heap uniformly and reach all the gold particles.

The gold-laden solution, also known as the pregnant solution, collects at the base of the heap and is directed via collection ponds to a processing plant for gold recovery. Once the gold is recovered, the barren solution, which no longer contains significant gold content, is recycled back into the heap to continue the leaching process.

The chosen 8.0 mm HPGR crush option provided an optimal mix of lower capital requirements, lower operating costs and the best overall gold recoveries, leach kinetics and re-agent consumption achieved in test work (see results in Section 3.1).

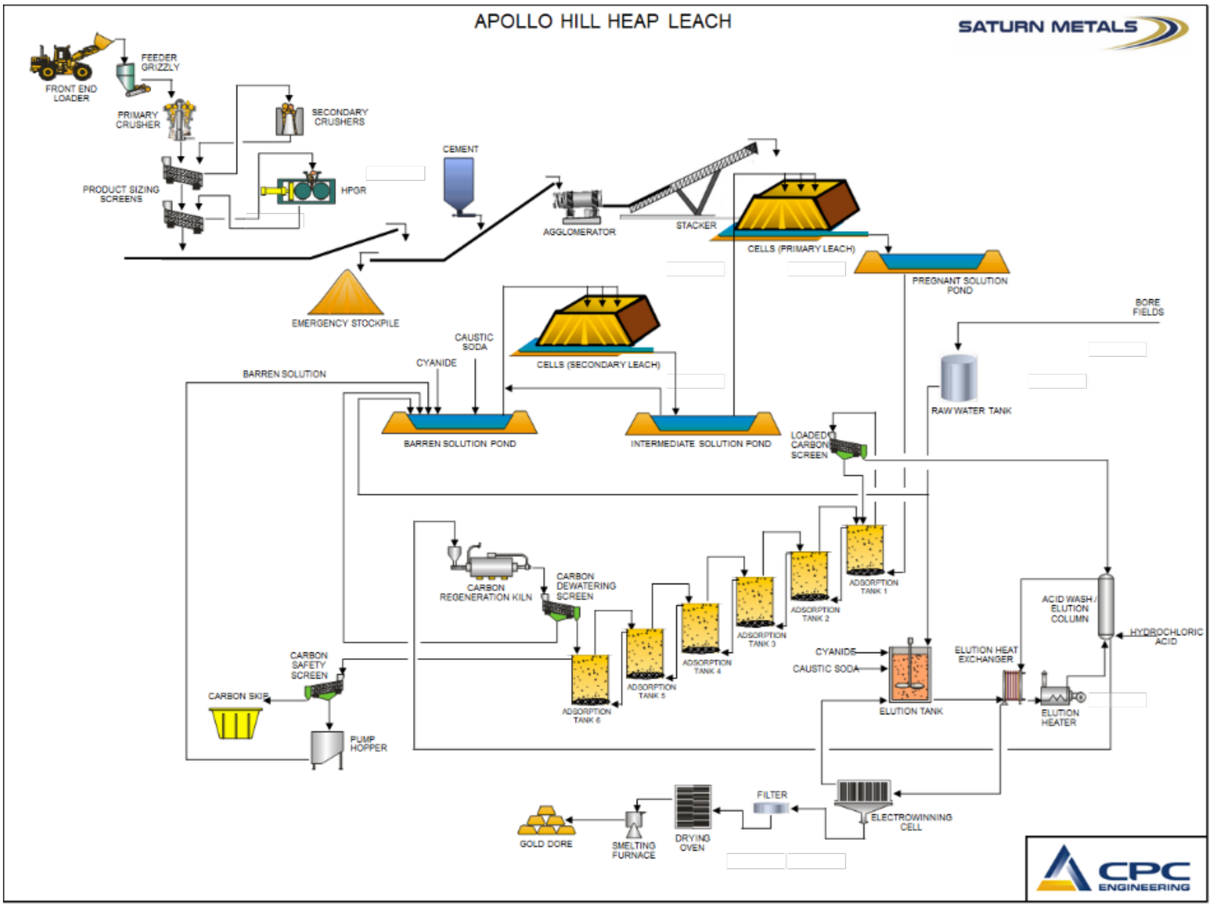

Figure 11 – Process diagrammatic flow schematic.

Crushing and Screening

Run of mine ore will be fed directly over a grizzly to a bin above a primary crusher to provide for product sizing suitable for subsequent crushing stages. For the purposes of this study a Metso:Outotec MK-III 54-75 gyratory crusher with 600 kW drive, or similar meeting 10 Mpta throughput requirements has been selected. The primary crusher product is discharged over screens with screened product being fed to secondary crushing. For the purposes of this study twin secondary crushers such as Metso:Outotec HP900 or similar, are selected to produce a screened product meeting the feed specifications for the HPGR stage. Product classification is assumed to be provided by double deck banana screens (Figure 11 and Figure 12).

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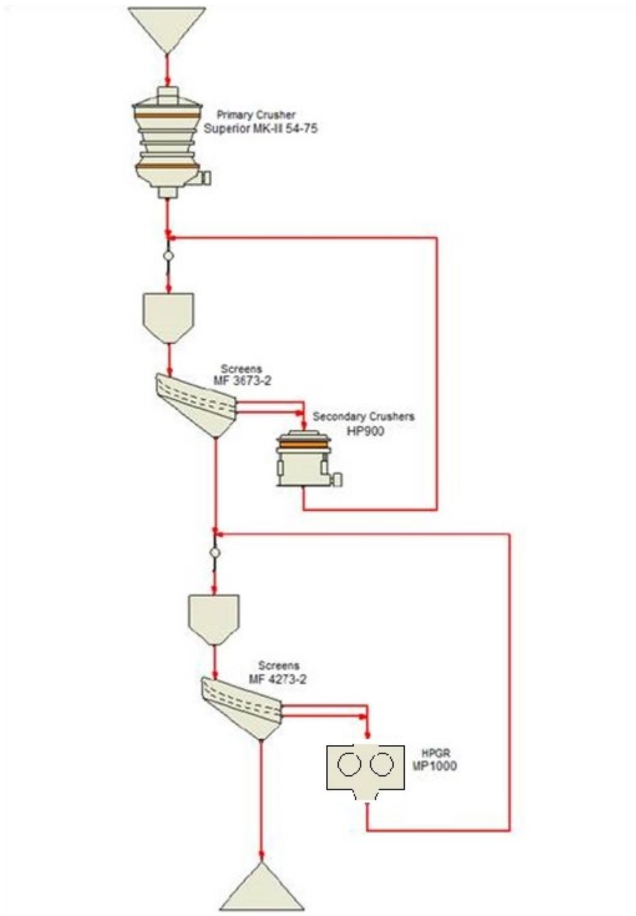

Figure 12 – Detailed crushing flow sheet.

Modelling of the HPGR circuit utilising OMC propriety software has indicated that in order to achieve 8.0 mm product size, a Metso:Outotec HRC 2600 with 2 x 3.1 MW drive or equivalent is required. This unit will have a 2.6 m roll diameter and 1.75 m roll width, operating at 17.8 rpm roll speed and 3.5 N/mm^2 specific pressing force. The unit will operate in closed circuit with 4 x MF 3673-2 double deck banana screens, using 16.0 mm top deck aperture and 8.0 mm, the bottom deck (Figure 12).

All screening is to be undertaken dry.

Agglomeration

After crushing, material moves via conveyor to a rolling agglomerator drum within an agglomeration plant (Figure 14). In the agglomerator, cement binder and water are added at an expected rate in the order of 2 kg/t to 3 kg/t and 5 % respectively; to form material suitable for transfer to the pad for stacking. Agglomeration allows for efficient and effective percolation of the heap leach fluids and strong heap formation and stability.

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Pad Stacking

Trippers, grasshoppers and automated stacking conveyors will be utilised to transport and place material onto the leach pads to enhance homogeneous material build on the pad. This stacking procedure is a more efficient alternative to trucking and moving material with mobile equipment. amore importantly it avoids equipment on the leach pad to avoid compaction which could limit leaching solution flow. It is assumed that stacking will provide for 8 m lifts per leach cycle and four lifts on the entire pad are expected over the life of mine.

Heap Leach Pad

The heap leach pad is constructed in 38 cells (Figure 13). The base of the pad is constructed of a clay zone over the foundation material with a 1.5 mm High-Density Polyurethane (HDPE) liner installed on the clay. A 300 mm deep drainage zone of gravel will sit on the HDPE liner and the drainage pipework will consist of perforated pipe within the drainage layer discharging to reticulation pipework that coneys the leach solutions to a collection box at each cell. Exact geometry and dimensions will be determined on the basis of further geotechnical study and hydraulic modelling.

Feed and drainage lines are located in a corridor on the opposite side of the stacking conveyor (Figure 14) to allow irrigation of the heap to commence as soon as the stacker retracts after ore placement.

Irrigation

Cyanide solution is made up at the plant side and is fed, with recycled barren solution (solution that the gold has been recovered from) to the top of the heap leach lift that is to be irrigated for leaching, as seen in Figure 11. Pipe work and drippers are laid on the top of the pad cells to apply cyanide solution usually at between 350 parts per million (ppm) and 500 ppm. Pipe work and drippers are considered a consumable item; with only the main lines being relocated to future pad cells.

Ponds

Storage ponds for barren (BLS), intermediate (ILS) and pregnant (PLS) liquor (the various terms referring to gold saturation in the liquor at the various stages of processing) as well as storage tanks for reagents are required (Figure 13).

BLS and ILS are irrigated to the heap leach cells. Return liquor is diverted to the ILS and PLS according to grade by the use of the collection box and manual valves for each heap leach pad cell.

Any excess solution is diverted to the open (lined) pipe corridor, as well as any spillage is directed to the storm pond (Figure 13).

Pumps are provided to allow makeup water to be sourced from either the storm pond or the raw water pond.

Solution Management

Drawing from the International Cyanide Management Code (ICMC), Saturn will implement various measures to address the transportation, storage and use of cyanide solution at Apollo Hill. These measures will include;

- Establish purpose-built cyanide unloading and storage facilities consistent with sound engineering practices, coupled with appropriate spill protection and containment measures.
- Process water conditioning and the use of drippers in lieu of sprays; minimising evaporation; to ensure cyanide usage is minimised within the processing system.
- HDPE and clay lined solution storage ponds and heap pads to mitigate the potential for seepage into ground water systems.

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- Establishment of overflow ponds and the use of enclosed drainage pipework; instead of open-air drainage systems; to provide spill protection in the event of large surface water inflows.

- Wildlife and ground water monitoring and reporting programs to proactively prevent any potential for impacts to the broader environment.

Gold Recovery Circuit – 'Wet Plant'

PLS solution is pumped to the Carbon in Column (CIC) trains or tanks to collect and concentrate the gold from the gold bearing solution. Each CIC train is a series of six up flow carbon contactors that will enable adsorption of gold onto carbon. Once gold is removed, the solution is returned to the BLS circuit. A vibrating screen is used to recover fine carbon.

Loaded carbon is forwarded by eductors and screened prior to loading to the acid wash column.

A Pressure Zadra circuit is used to elute gold from the acid wash and electrowin gold prior to smelting and production of gold bullion.

A kiln is used to regenerate the carbon's activity prior to return to the CIC circuit.

Plant Layout

The overall site plan layout in Figure 13 shows the relative locations of the run of mine pad (ROM), crushing, agglomeration, heap leach cells, ponds and wet plant areas. Figure 14 is a 3D illustration of the Apollo Hill PEA processing plant equipment and infrastructure.

The crushing plant is to be laid out to minimise elevation requirements and therefore conveyor lengths.

Several locations for the heap leach pad location were assessed with a view to taking advantage of site topography. The benefit of establishing the pad in close proximity to the Pit provides the advantages of reducing the cost of ore from the pit edge and of being able to use open pit waste materials to build the heap leach pad with a gradient of 1 in 100 up.

The wet plant layout is typical with reagents easily accessible for unloading requirements.

The illustrated locations are all nominal, and no optimisation has been undertaken as at this stage of study the layout has minimal impact on capital and operational expenditure. It is envisaged that the locations and layouts of the heap leach pads will be modified during subsequent studies and following the evaluation of more advanced mining schedules and related information once available.

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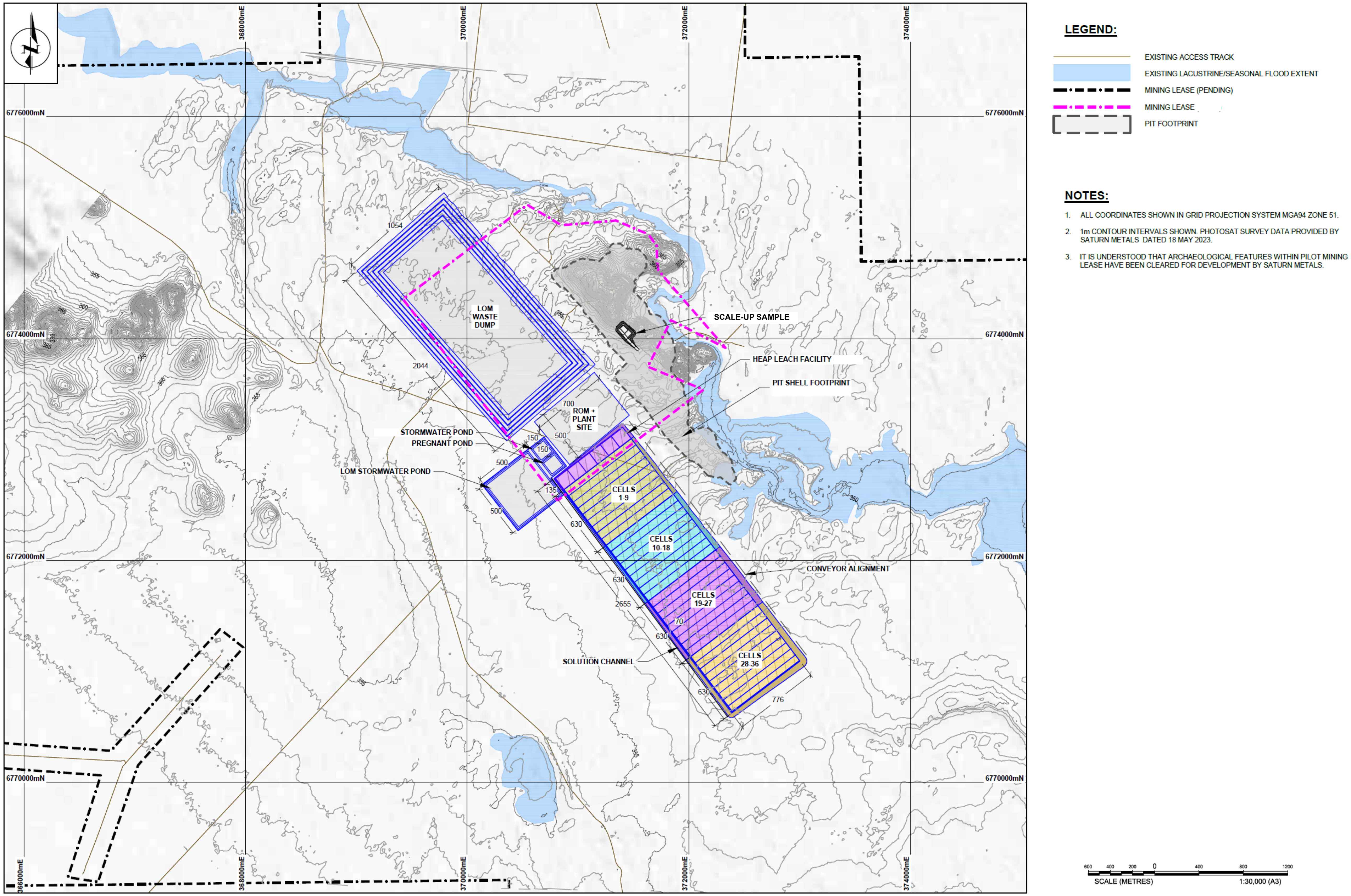

Figure 13 – Conceptual general arrangement – site layout.

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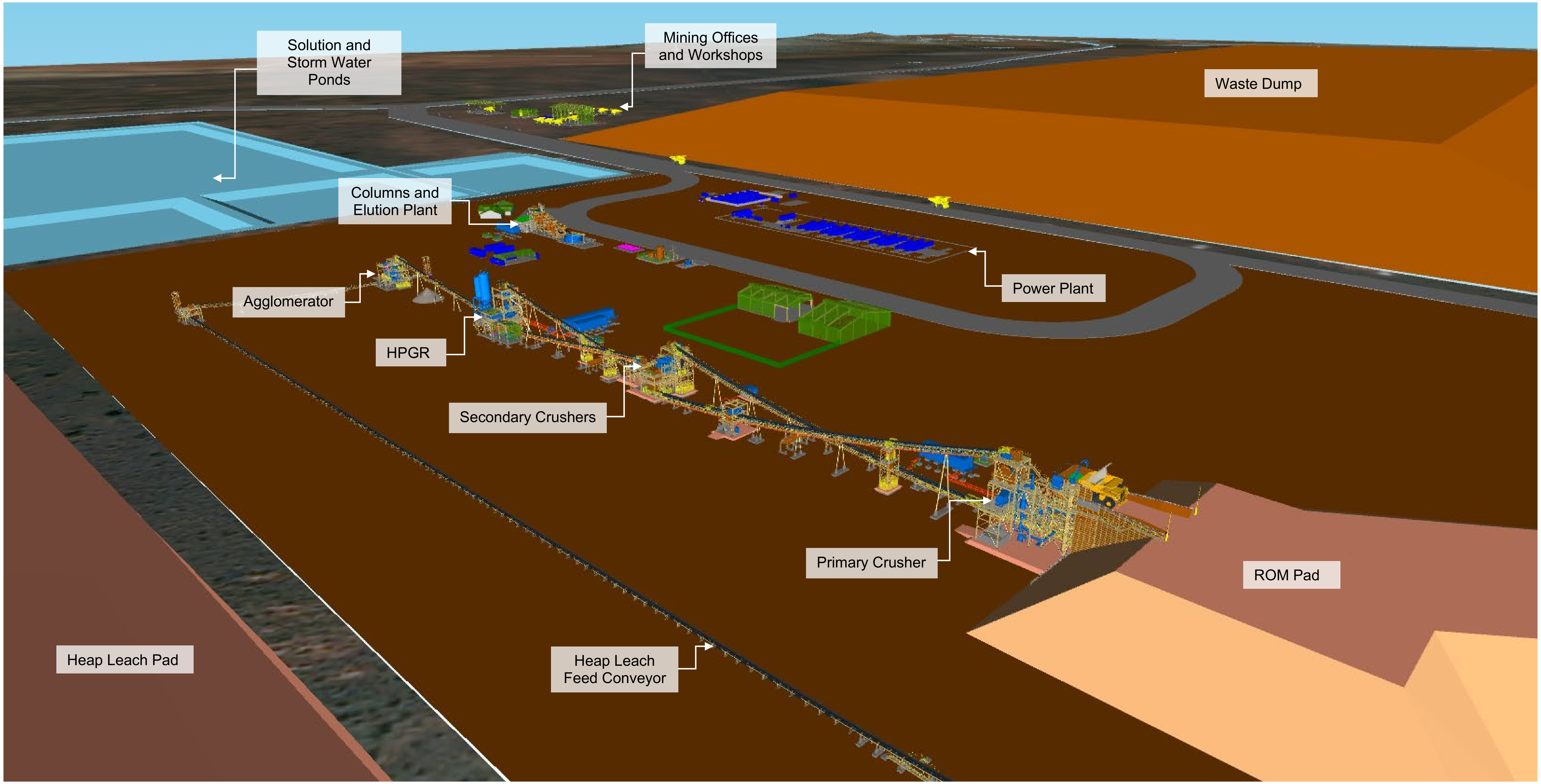

Figure 14 – Conceptual general arrangement – 3D site layout and processing plant.

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4 Mining

4.1 Process

Orelogy Mine Consulting (Orelogy) was engaged by Saturn to undertake mining engineering studies in relation to the Apollo Hill deposit. The scope of works included the collation of input parameters, open pit optimisation studies and pit production scheduling.

The resource models utilised in the mining engineering studies were provided by AMC Consulting. They were a coarser block size (bigger selective mining unit) derivative of the Mineral Resource published by Saturn in June 2023 as their official Mineral Resource. This Mineral Resource is discussed in Section 2 of this Report.

Final input parameters for the mine engineering studies; consisting of processing, operating, fixed, administration, and mining costs and mineral recovery were arrived at in consultation with Saturn and its various Consultants (detailed in other sections of this report).

4.2 Whittle Pit Optimisation

The open pit optimisations were developed using 'WHITTLE'® software, which uses the Lerchs-Grossman algorithm to determine a range of optimal pit shells at varying metal prices. The programme generates economic pit shells based on input parameters consisting of operating costs (mining & processing costs, royalties, selling costs), metallurgical recoveries, geological and geotechnical (slope) considerations. The optimal pit shells derived from the open pit optimisation were then used to develop open pit mine plans and schedules for the deposit. A selective mining unit (SMU) of 20 mE x 25 mN x 10 mRL blocks was used for the purpose of the WHITTLE optimisation. These larger SMU's effectively applied a 5 % dilution as represented to each ore block within the original Mineral Resource.

Geotechnical Input

The design criteria for the Apollo Hill pit wall designs are shown in Table 5. These parameters were derived mainly from geotechnical logging of a scoping level diamond drill programme (five holes for 957 m) and an associated downhole televiewer programme of ten older holes. The programme targeted differing wall geographies and geologies of both the PEA and Mineral Resource pit shells.

Table 5 – Apollo Hill Pit Wall Geotechnical Design Criteria

Domain	Bench Heights (m)	Batter Angle (degrees)	Berm Width (m)	IRA (degrees)
Oxides	10	50	6	35
Transitional	10	65	7	41
Fresh – West Wall	20	50	8	55
Fresh – East Wall	20	85	6	70
Fresh – North Wall	20	90	6	85
Fresh – South Wall	20	80	6	60

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Mining Cost Input

Mining load and haul, and drill and blast costs were provided by Orelogy and based on typical and current contract mining scenarios in Western Australia. Orelogy's scope of work for the purposes of design and pricing covered the following aspects:

- Supply and mobilisation of mining equipment and personnel;
- Establishment of mining facilities;
- Preliminary works of clearing, grubbing, topsoil removal and haul road construction;
- Drilling and blasting including supply of explosives and presplitting;
- Loading and hauling of ore to the ROM pad stockpiles;
- Loading and hauling of waste materials to a single waste rock emplacement;
- Waste rock emplacement profiling and topsoiling; and
- Miscellaneous dayworks activities.

The mining cost developed by Orelogy and further described in the Project Economics Section (Section 10) is A$ 4.50/ tonne of ore. This figure has been generated using a 'first principles' approach.

The proposed mining fleet consist of large-scale excavators, such as a Komatsu PC7000 with a 70-tonne capacity bucket; and 230 tonnes payload off highway haul trucks, such as Caterpillar 793. Larger equipment such as the Komatsu PC7000 excavator pictured in Plate 1 helps the Project to benefit from economies of scale and lower unit costs through the PEA's bulk mining strategy. It is also noted that production rates and operating cost could be supported by smaller fleets if required.

Plate 1 – Komatsu PC7000 – scale of equipment proposed in Apollo Hill PEA study (Courtesy of SMS Mining Equipment).

4.3 Optimised PEA Open Pit

Mining is planned via a single large open pit approximately 2,300 metres in length and up to 750 metres wide, with a maximum depth of 285 metres below surface. Life of mine production totals 93.9 Mt at 0.54 g/t Au for 1,636,000 oz of contained gold. Life of mine waste movement totals 140.7 Mt, equating to an average waste to ore ratio of 1.5 to 1. Figure 15 illustrates this open pit mining scenario and the ore and waste blocks contained within the PEA WHITTLE generated pit shell.

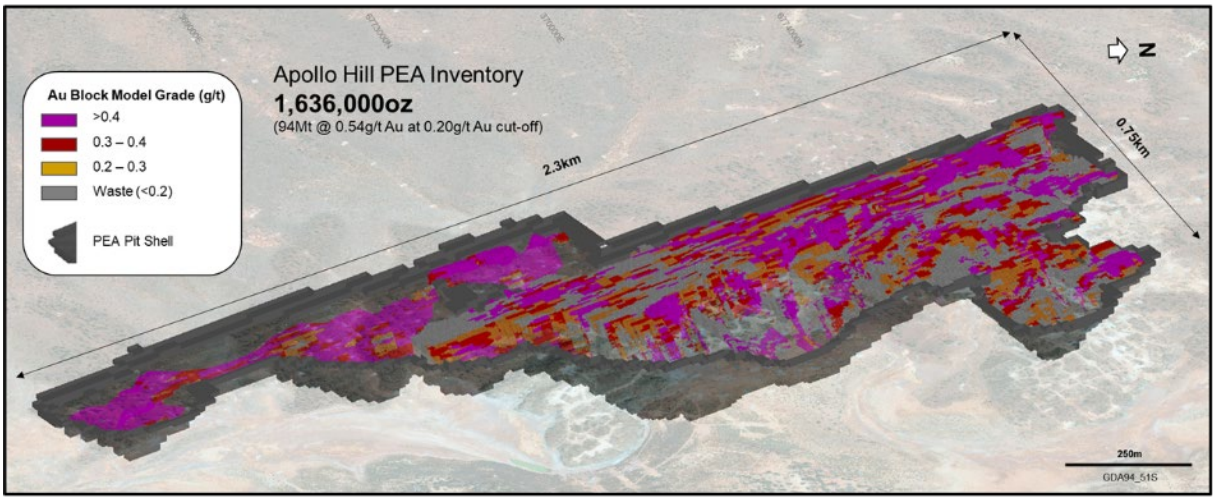

Figure 15 – PEA pit shell and ore and waste blocks by grade.

4.4 Mining Schedule

Mine schedules using the final optimised pit shell were developed at a 10 Mtpa processing rate.

Maximum mining rates have been based upon the scheduling parameters of 30 Mtpa and 110 vertical meters advance per annum. Production from the Apollo Hill deposit has been constrained within seven stages; with a maximum of four stages being mined at any one time.

The Apollo Hill pit has a low strip ratio and no pre-strip (both points illustrated in cross section in Figure 16).

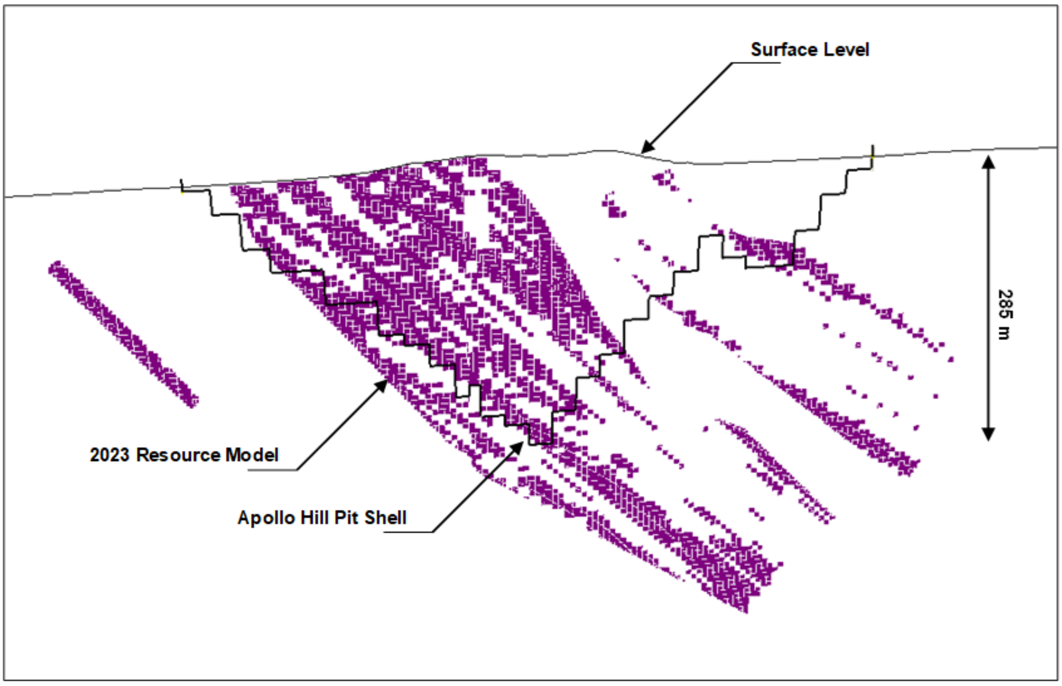

Figure 16 – Section showing PEA pit outline with 2023 Resource Model (constrained to blocks greater than 0.2 g/t); the diagram illustrates large ore mining widths, a low strip ratio and ore material outcropping at surface.

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Table 6 and Figure 17 illustrate the ore and waste schedules for the PEA life of mine.

Table 6 – Apollo Hill Annualised Mine Schedule

	Total	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Ore Tonnes (Mt)	**93.9**	-	7.5	10.0	9.9	10.0	10.0	9.9	9.9	9.8	10.0	6.9
Ore Grade (g/t)	**0.54**	-	0.58	0.57	0.52	0.52	0.49	0.53	0.50	0.54	0.50	0.73
Waste Tonnes (Mt)	**140.7**	2.2	8.9	9.8	17.1	16.8	16.0	17.1	17.1	17.2	10.3	9.2
Total Mined Tonnes (Mt)	**234.6**	-	16.4	19.8	27.0	26.8	26.0	27.0	27.0	27.0	20.3	16.1
Strip Ratio	**1.5**	-	1.2	1.0	1.7	1.7	1.6	1.7	1.7	1.8	1.0	1.3

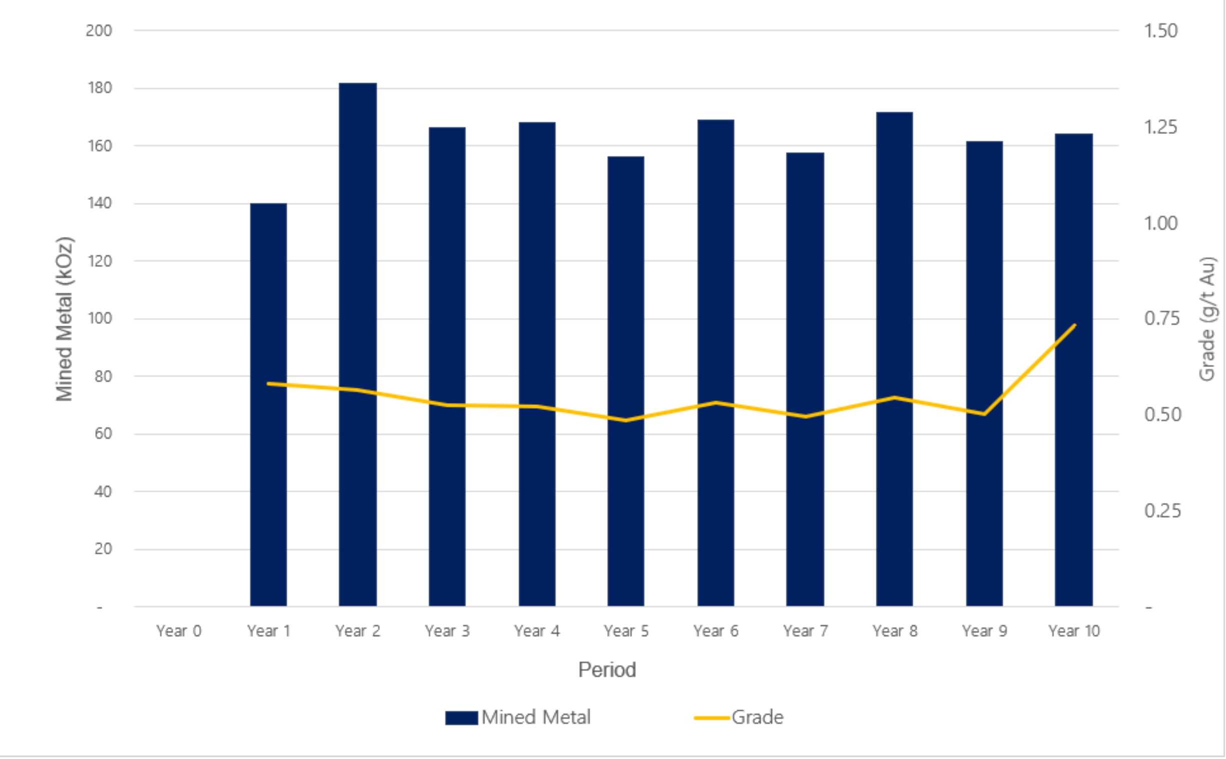

Figure 17 – Open pit annualised ounce production and grade.

Continuing refinement and optimisation of the mining schedule will be undertaken as part of all future study phases, with the aim to further minimise early-stage works through the realisation of earlier gold production.

Figure 18 illustrates the spatial pit schedule with seven phases or sub pits planned. These phases have been planned with respect to maximising front end grade and lowering front end strip ratios - to optimise payback; whilst also providing a waste schedule which feeds heap leach pad construction and lining materials effectively offsetting build capital. Further work will be undertaken in proceeding study phases to confirm appropriate materials properties; geotechnical and handling characteristics; to ensure material meet the required design characteristics for foundation and lining applications.

For example, as well as material from the Pit Stage 1 and Pit Stage 2 Pit sequences, approximately 2.2 Mt of waste is planned to be mined from within the Pit Stage 7 during the construction phase (Year 0). This material being utilised as bulk heap leach pad build fill as well as providing clays from the relatively shallow geological cover sequence of the Ra Zone for additional pad lining (see Figure 23, later in this document).

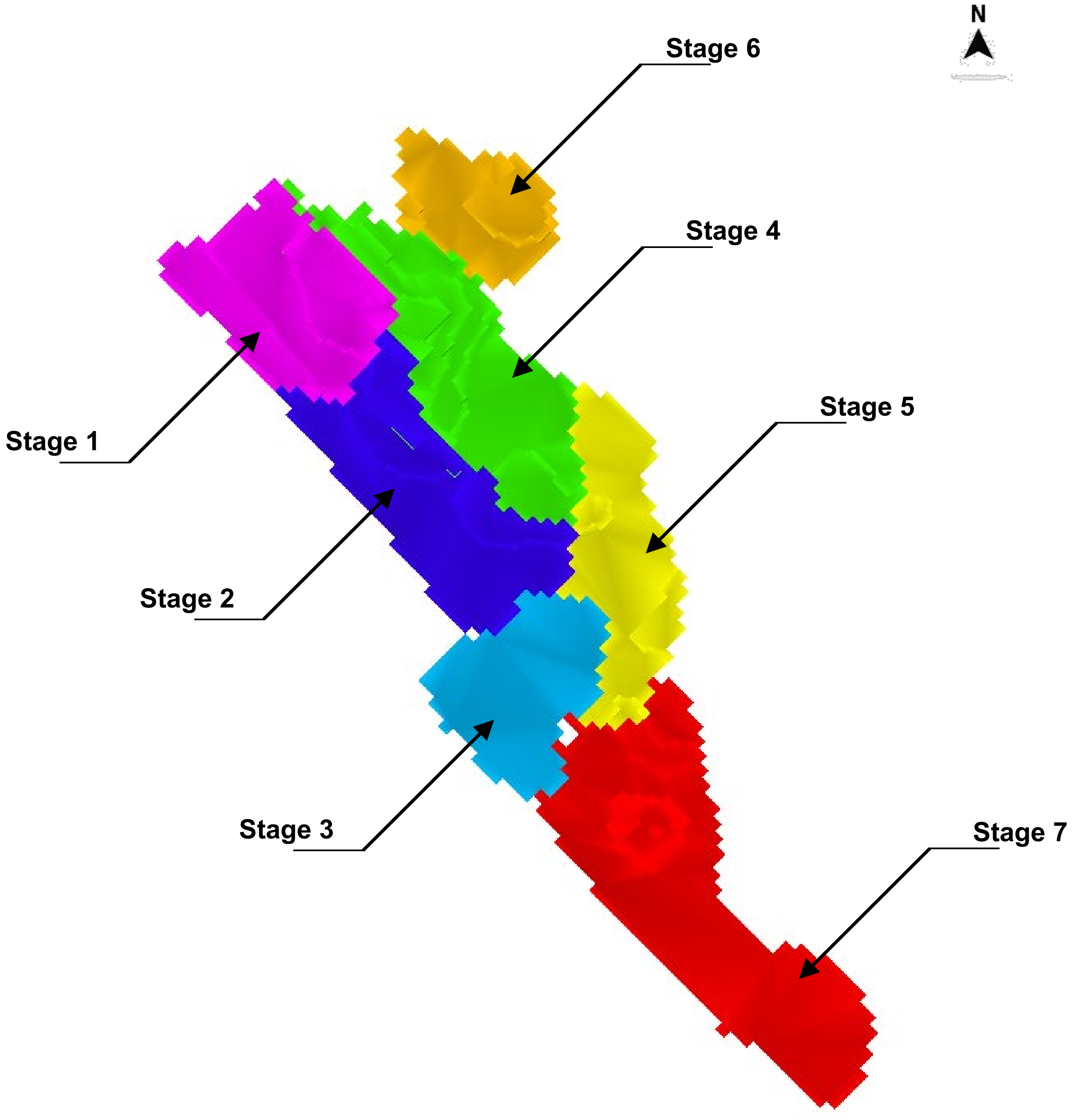

Figure 18 – Apollo Hill – PEA study pit stage sequencing.

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5 Environmental

Environmental studies have commenced across the Project. Whilst studies for the full-scale Apollo Hill mining project require surveys over a longer timeline (to capture seasonal variation); a series of parallel baseline studies over a more condensed project area (at pilot scale) and time period (one season) are being undertaken to inform this PEA. Whilst not yet fully complete the results of these studies indicate:

Flora & Fauna; Field studies have commenced, with ongoing studies planned in the broader area.

Short Range Endemics (e.g. Spiders and Scorpions); Field studies have commenced, with ongoing detailed studies planned across the larger mining lease.

Sub Terranean Fauna; No red flag species have been identified in studies and trapping to date; studies are ongoing to quantify the extent of any significant species.

Soil Characterisation Studies; Completed for site soil stockpile management purposes (for later rehabilitation projects) showing a relatively uniform and unremarkable soil profile across the project's infrastructure footprint.

Plate 2 – Project soil sample location – proposed waste rock dump location, looking North.

Mine Waste Management; Waste Rock and Residual Leach Pad Rock

A total of 32 rock samples (ore and waste) were selected from drillhole samples for the PEA to represent the various fresh and weathered rock types which are scheduled to end up on either the Projects waste dump or heap leach pad.

The Acid Base Accounting (ABA) analysis data on these sample showed that only one sample was potentially acid forming (PAF); although, this sample had an elevated acid neutralising capacity (ANC), hence the risk of acid drainage to the surrounding countryside is considered low.

Five metallurgical trial residues (i.e., analogues of ore that has been heap leached) were selected from five column leach tests. All five samples tested were classified as non-acid forming (NAF).

Rock samples across the deposit were selected for sulphur analysis; where higher assay figures are a predictor of PAF rocks. The results of these assays are illustrated in Figure 19, where very few samples have more than minimal (>1%) suplhur content. This again indicates low risk for PAF material within the deposit.

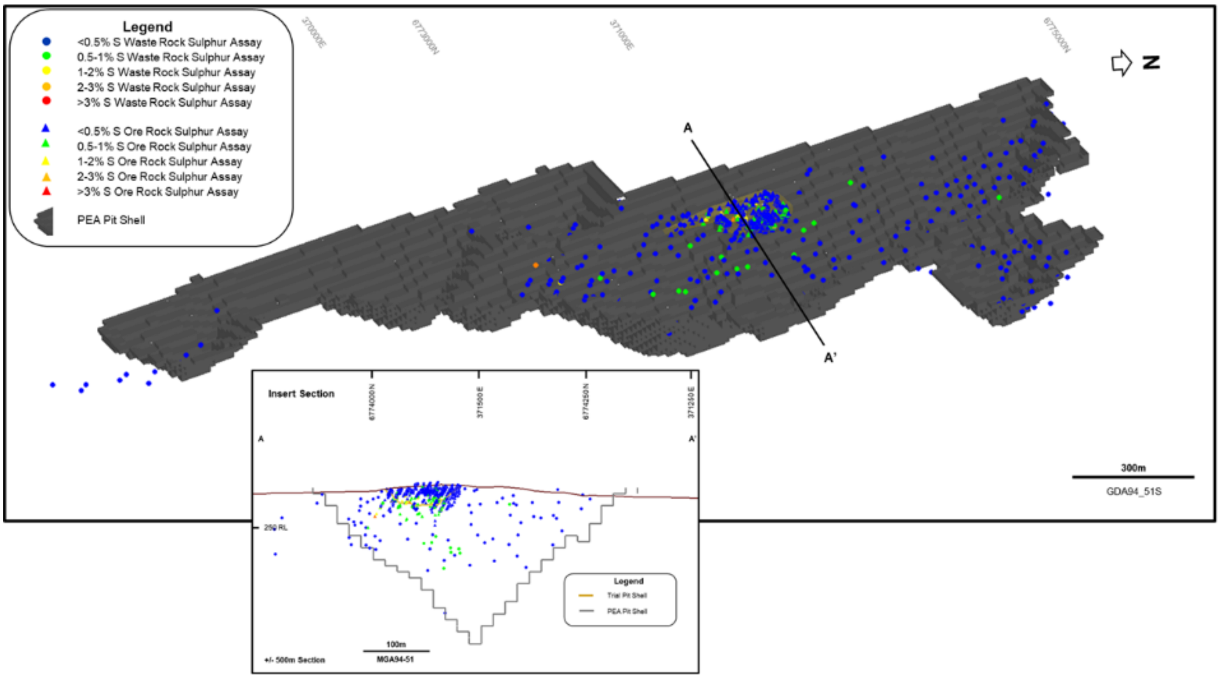

Figure 19 – Open pit sulphur assay locations.

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Hydrology

The region is flat with local drainage channels reporting into Lake Raeside to the east of the Apollo Hill Gold Deposit (Figure 20).

For the proposed mine, the hydrology of the Lake Raeside region must be assessed to understand potential water flows and therefore the scale of any necessary mitigation infrastructure (diversion bunds, flood protection bunding etc.). Works undertaken by Carrick Consulting have identified the prevalent drainage channels around the Apollo Hill project area (Figure 20).

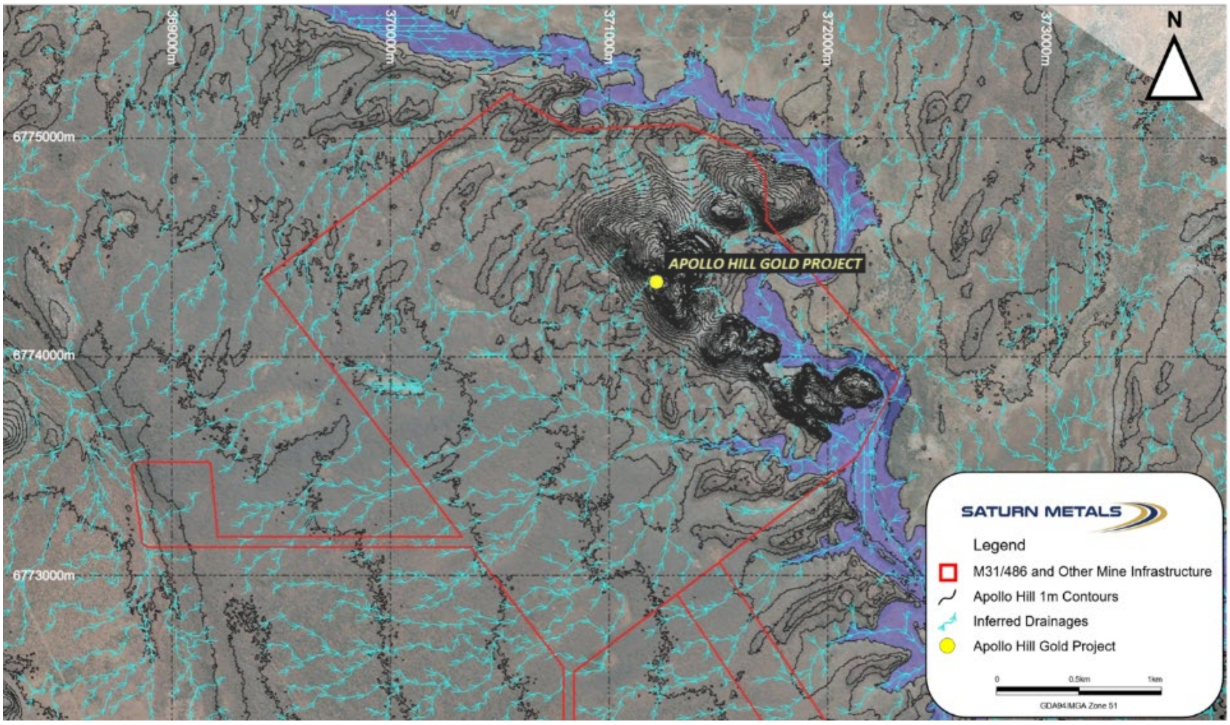

Figure 20 – Inferred drainage channels.

A detailed assessment of site hydrology for the purposes of managing site water and the environment will be completed as a part of any PFS scope of work. Important areas of study are:

- Protection of Mine from ephemeral flows;
- Protection of the Environment from Mine water flows;
- Optimum location of road corridor and site infrastructure to avoid the impact of any ephemeral flows following heavy rainfall; and
- Capture of any site run-off to avoid unintended effects beyond the project footprint.

Saturn adherence to the International Cyanide Management Code and the basis of our intended management systems are discussed in Section 3.2.1.

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6 Social

Apollo Hill is located within the Nyalpa Pirniku Native Title Claim. Negotiations in relation to Heritage Agreements required for mining have commenced with the group after several ethnographic surveys, a successful Western Australian Aboriginal Heritage Act 1972 Section 18 (Section 18) approval for exploration purposes over the Lake Raeside heritage site (with the Claimants support), and a detailed site archaeological survey around planned mining infrastructure.

The Apollo Hill mining leases and surrounding exploration leases are located on the Glenorn Pastoral Lease and Station. Land access agreements are in place which have successfully facilitated exploration and development whilst also anticipating mining.

Plate 3 – Archaeological survey and site consultation at the Apollo Hill Gold Project beside Lake Raeside with Native Title Claimants of the Nyalpa Pirniku.

Saturn has, and will continue to, communicate and liaise with various stakeholders including traditional owners, knowledge holders, regulatory bodies and lease holders.

Saturn will seek to undertake initiatives to assist in the development of traditional owner businesses, supply lines and local employment initiatives, as we seek to continually develop our relationship with the community. The Company aims to become an industry leader in social responsibility having successfully worked with the traditional owners over our exploration journey to date, and who remain highly supportive of the development of the Project.

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7 Hydrogeology

7.1 Water Supply – Processing

Processing of ore material under a heap leach processing scenario will require a supply of water with total dissolved solids (TDS) below 100,000 mg/L; ideally without the need for any desalination. Based on high level assessment the Project anticipates an annual water requirement in the order of 4.0 GL per annum, which Saturn is confident of being able to source from its land package. Further work will be done to refine this estimate and complete a detailed water balance study to ensure that water supply does not constitute a risk to the project and to ensure that any seasonal discharge requirements are addressed in project permitting.

Saturn maintains a 970 km^2 portfolio of water exploration miscellaneous licenses over the Project to target a mixture of fresh, brackish and saline to hyper saline higher volume channels for its future bore fields. An 842 line-km airborne electromagnetic (AEM) survey has been commissioned for early August 2023 to help map higher volume and fresher water channels for water boring activities. To date, one production bore has been sunk and tested in the main Apollo Hill trunk channel (Figure 21). This bore produced a promising result, delivering sustainable abstraction rate of 15 litres a second at only 52,000 mg/L TDS with no noted draw down over a standard pumping test two-day period. Figure 21 shows Saturn's water exploration and infrastructure miscellaneous licenses relative to our mining leases and the targeted location of fresh, brackish and saline to hypersaline channels and gradients.

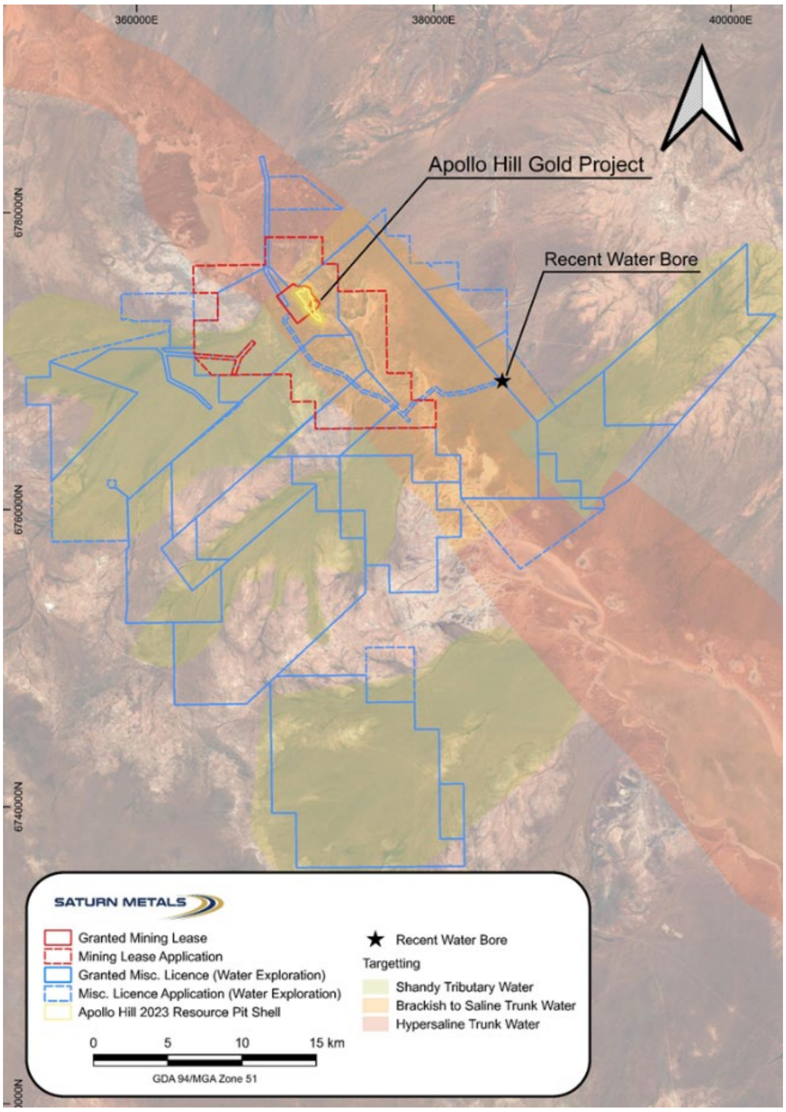

Figure 21 – Saturn Metals water exploration targets, water exploration miscellaneous license and other miscellaneous licenses at Apollo Hill.

7.2 Ground Water Management – Mining

Saturn have retrofitted 22 exploration holes with PVC casing to create a wide array of monitoring bores around the Project. Monitoring and testing of these bores have shown natural groundwater level in the region at approximately 30 m below surface.

Initial hydrological studies have indicated groundwater inflow rates of approximately 22 L\sec during early mining stages, which whilst typical, will require in pit pumping. This water will be used in dust suppression, and some processing activities with excess water in certain circumstances discharged under permit.

Further studies and water balance modelling will be a part of the scope of work for following phases of project evaluation and engineering.

8 Tenure and Permitting

8.1 Tenements – Land Holdings

The Company's Apollo Hill tenement holdings are illustrated in Figure 22. A complete list of the Company's tenement holdings is published in the Company's quarterly reports to the ASX.

In Western Australia, Saturn currently holds 1,000 km^2 of contiguous tenements over 18 mining and exploration licences in addition to 31 miscellaneous licenses covering 970 km^2 (miscellaneous licenses also discussed in Section 7.1 of this report).

The Project has two granted mining leases M31/486 and M39/296 which cover a portion of the proposed project (Figure 22) (encompassing at least the entire Mineral Resource and PEA pit shells) with an additional mining lease, M31/496, pending approval which covers the entirety of the Project (Figure 22).

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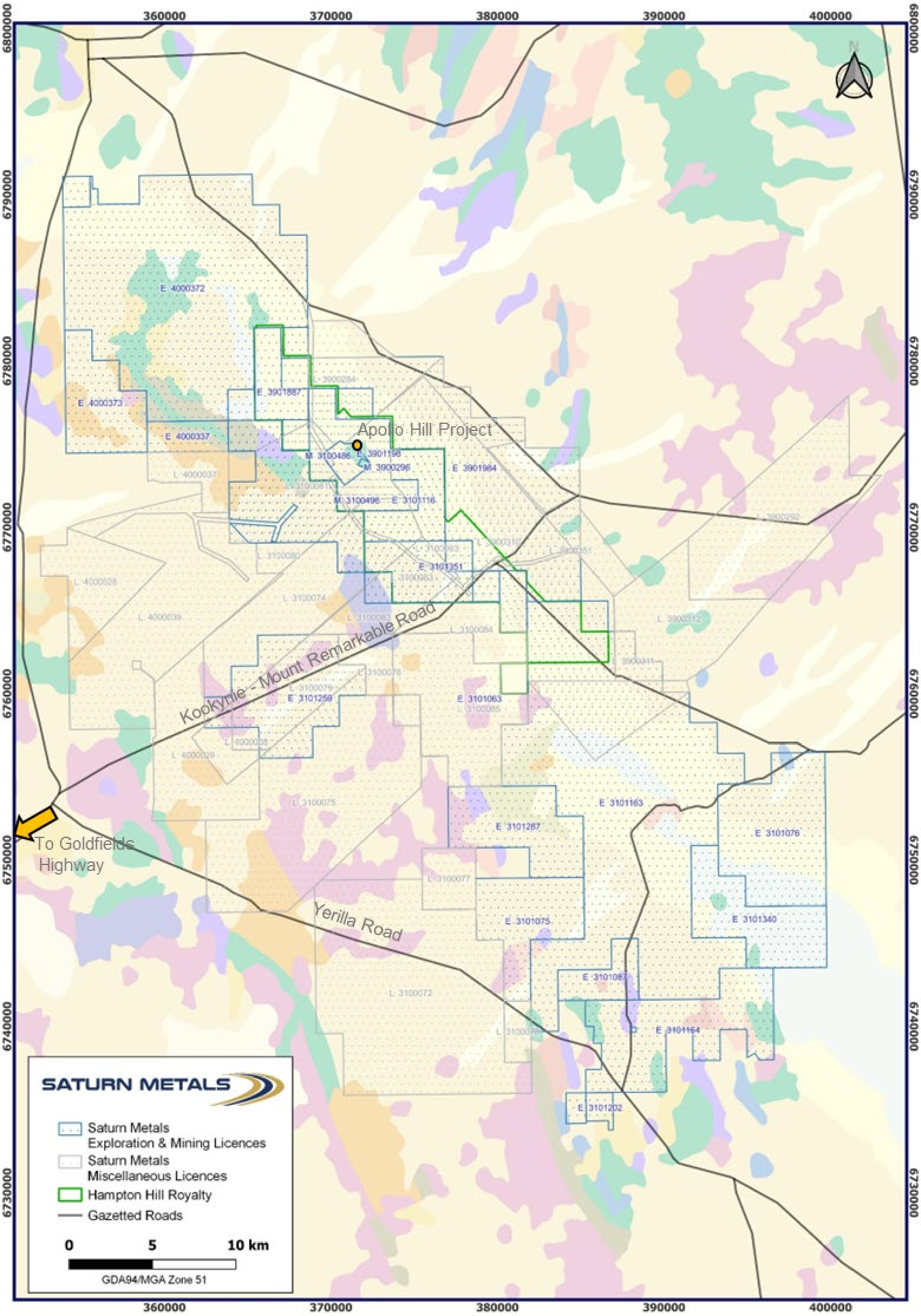

Figure 22 – Saturn Metals Limited WA (Apollo Hill) tenement map and land holdings – 27 July 2023 (base map GSWA 1:250k regolith map sheet).

8.2 Permitting

No permitting for the proposed mining operation in the PEA has yet been submitted. Permitting will commence and progress as appropriate during any following Pre-Feasibility and Definitive Feasibility stages, and in a timely manner for commencement of the Project as it proceeds and passes the Company's internal 'Stage Gate' project governance procedures.

Permitting required includes but is not limited to:

- Mining Proposal;
- Native Vegetation Clearing Permit;
- Groundwater Abstraction Licence;
- Work Approval;
- Water Discharge Permits;
- Mine Closure Plan, and;
- Environmental Approvals.

Whilst time and spatially confined baseline environmental and hydrology studies have provided a reasonable level of information for this PEA (refer to works described in Section 5), larger scale longer lead time baseline environmental studies, required to support a full-scale mining proposal are planned to commence in late 2023 as part of our ongoing feasibility studies. These studies will ultimately inform the above permitting activities.

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9 Infrastructure

The Project infrastructure is designed to support the operation of an open pit mine and heap leach processing plant, operating on a 24 hour per day, seven day per week basis. The overall site layout is illustrated in a 3D image in Figure 23 which shows the location of the pits, processing plant, waste management facilities, heap leach facilities and supporting infrastructure.

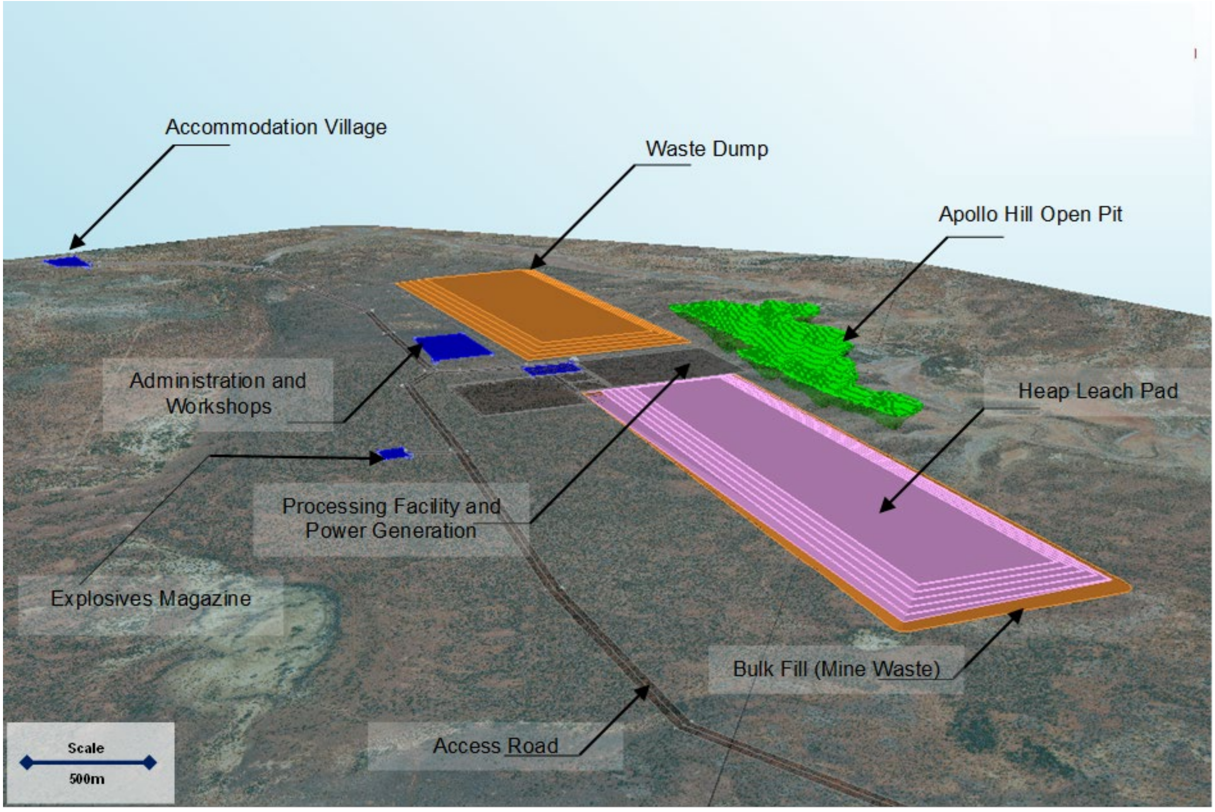

Figure 23 – Apollo Hill planned infrastructure overview, looking North.

9.1 Access and Internal Roads

The company has outlined a 10 km long road corridor and associated miscellaneous license which heads south from the Apollo Hill Project to an intersection with the Kookynie to Mt Remarkable Road (Figure 22).

An additional 1 km of internal site haulage roads have been allowed for within the capital cost to those shown in Figure 23.

9.2 Airstrip

Air travel to site will be via the Leonora Airstrip (approximately 50 km to the Northwest on existing roads, Figure 1), in lieu of establishing a dedicated airstrip at Apollo Hill. Although this will increase travel time over the life of the operation, this has not provided a strong enough case for the establishment of a dedicated airstrip at this early stage of development.

9.3 Site Buildings

Administrative and other site office buildings will be prefabricated, demountable construction and placed floating concrete foundations. Approximate site locations are illustrated on Figure 23.

An assay laboratory will be placed in proximity to the processing facility. This facility will serve the plant's assay, environmental, metallurgical requirements and open pit grade control needs.

9.4 Accommodation Village

There will be sufficient fully furnished rooms to accommodate 200 persons onsite, with each room including ensuite facilities. The complex will service both the construction and operation phases of the Project. A conceptual location is illustrated on the 3D site plan in Figure 23. Overflow accommodation can draw upon established accommodation in Leonora.

9.5 Fuel Storage

There will be three 55,000 L diesel storage tanks and dispensing station for the mine haul fleet located on the truck shop pad. The facility will be complete with the requisite spill storage capacity and will meet the fuel storage requirements of the Australian Standards (AS1940). Fuel storage on site will accommodate emergency supplies.

9.6 Power Supply

Site power generation is assumed to be from an onsite power station utilising gas converted diesel generators and trucked gas (from Kalgoorlie) into gas storage bullets, owned and operated by a power supply contractor. The system will include some diesel power in event of emergency. A price was obtained from an energy provider for this arrangement which included no start-up cost and comprised of fixed monthly cost made up of a capital charge and a fixed operational charge plus a variable rate based on actual power consumption. A capital cost has been allowed for to account for owners related charges to establishment.

The estimated power requirement for the 10 Mtpa 8.0 mm HPGR process option is 12 MW. Allowances for other site services is considered negligible.

9.7 Water Supply and Storage Distribution

Bore fields will be required to provide water for processing operations (as detailed in Section 7.1 of this document 'Water Supply – Processing').

Site water infrastructure will include a turkey's nest and water tanks for distribution of the supply across site.

Once the mining operations are established it is expected that dewatering from the pit will be sufficient to meet mine water requirements (dust suppression and drill water). Initial stage hydrogeological studies have indicated sufficient water in the area to meet the operational demands (as detailed in Section 7.2 of this document "Groundwater Management – Mining)).

A small reverse osmosis plant will be required to supply potable water for drinking water and ablutions across the site and camp. Exploration drilling in the vicinity indicates that there is potentially a supply of ground water suitable for this purpose. The capacity of this aquifer will need to be confirmed by ongoing hydrogeological studies.

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10 Project Economics – Costs

All dollar currency values quoted are Australian dollars/currency (A$)

10.1 Accuracy of Estimate

For preliminary studies the cost accuracy is typically ±35 %, taking into account that the physical inputs of grade and tonnage are also subject to a range of error. Indicative quotations and industry information have been sourced from relevant contractors and consultants for key capital items within this estimate.

10.2 Basis of Estimate

The cost estimates are based on a preliminary mine schedule and are derived from several sources including quotes and budgetary pricing from suppliers and estimates based on recent actual pricing from similar mines with Western Australia. They include all pre-production site, process plant, and heap leach pad as well as sustaining capital post-production start-up. The plant establishment (Processing Facilities) capital expenditure of $251.4 M is based on a 2022 Scoping Study report by CPC Engineering, a 2023 Orway Mineral Consultants Preliminary Crushing Circuit Evaluation and a brief peer review by a third-party engineering firm.

10.3 Capital Cost Estimate

The estimated processing facility capital costs are summarised in Table 7.

Table 7 – Processing Capital Cost Requirements

Processing Facility Costs	Total (A$M)
Crushing (Primary, Secondary and Tertiary)	$ 39.2
Screening	$ 3.5
Agglomeration	$ 8.8
Conveying and Stacking	$ 17.4
Heap Leach pad	$ 19.3
Ponds	$ 1.3
Adsorption	$ 2.2
Elution and Electrowinning	$ 6.3
Gold Room	$ 1.1
Reagents	$ 0.1
Additives	$ 2.3
Plant Services	$ 1.6
Electrical	$ 6.5
Piping	$ 10.8
Earthworks - Civil (ex. Heap Leach pad)	$ 21.7
Concrete - Civil	$ 16.5
Total Construction Direct Costs	$ 158.7
Construction In-directs	$ 47.6
EPCM Consultant	$ 28.9
Contingency	$ 16.2
Total Construction Costs	$ 251.4
Owners Costs	
Client Costs	$ 3.6
First Fills	$ 0.4
Critical Spares	$ 2.0
Consumables and Reagents	$ 1.1
Total Owners Costs	$ 7.1
Plant & Owners Costs	
Plant Costs	$ 251.4
Owners Costs	$ 7.1
Total	$ 258.4

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Processing facility capital costs relate to those infrastructure items described within Section 3.2.1.

The Processing capital cost of A$ 251.4 M is split between pre-production; A$ 236.6 M; and future sustaining capital works surrounding the expansion of the Heap Leach pad and associated trenches, conveyors and pipe works; A$ 14.8M (detailed in Table 7).

Pre-production capital costs (A$ 6.5M) to establish the Heap Leach pad (Cells 1 to 9 as per Figure 13) have been accounted within Year 0 to enable processing to commence in Year 1, with costs related to establishing the remaining 29 cells spread over the subsequent four years (Years 1 to 4). At the completion of Year 4, all 38 cells and associated infrastructure including trenches, conveyors and pipework, will have been established.

Owners related costs of A$ 7.1M consist of Saturn employee costs, first fills, critical spares and other consumables and reagents. An allowance for additional Owners related costs has been built into the early-stage Open Pit mining capital rates.

Construction in-directs equate to 30% of the Processing facilities direct costs; A$ 47.5M. This figure has been benchmarked against industry norms and recent trends following a peer review of the Processing facilities capital costs undertaken by an independent engineering firm.

Engineering, Procurement, Construction and Management (EPCM) related costs of A$ 28.9M; have been estimated at 14% of the Processing facilities direct and in-direct costs via the CPC's study. There is a further provision of a 10% contingency value based on the total direct costs (Table 7); A$ 16M.

A total of A$ 10.5M has been allocated for Processing facility major component maintenance as part of sustaining capital. This is an allowance for replacement HPGR rollers and other high impact items within the crushing circuit (Table 9).

Site Infrastructure capital costs of A$ 42.1M (detailed in Table 8 - Site Infrastructure Capital Costs), provide for costs associated with workshops, roads, fuel, buildings, accommodation village, water supply, and other miscellaneous capital items.

Table 8 - Site Infrastructure Capital Costs

Site Infrastructure Costs	Total (A$M)
Access Roads	$ 10.0
Water bore fields	$ 4.6
Power	$ 1.5
Fuel Storage	$ 0.8
Buildings and Workshops	$ 5.5
Accommodation Village	$ 14.6
General and Miscellaneous	$ 5.2
Total Site Infrastructure Capital	**$ 42.1**

Open Pit related capital expenditure of A$ 17.9M provides for the 2.2 Mt of waste planned to be mined from within the Pit Stage 7 during the construction phase as described in Section 4.4. This consist of A$ 9.4M for material movement and A$ 8.5M mine site establishment and contractor mobilisation expenses.

Closure costs have been based upon a cost per tonne of total material movement. Allowance has been made for rock armouring, placement of topsoil, reshaping and preparing landforms and construction of erosion and sediment control measures within the A$ 20.8M value (Table 9).

Table 9 - LOM Capital Costs

Pre-Production Capital	Total (A$M)
Site Infrastructure	$ 42.1
Owner Costs	$ 7.1
Processing Facilities	$ 230.1
Heap Leach Pad	$ 6.5
Open Pit Early-stage material movements for pad and infrastructure establishment	$ 17.9
Total Pre-Production Capital	**$ 303.6**
Sustaining Capital – LOM	
Heap Leach Pad inc. Pipe, Trenches & Conveyors	$ 14.8
Process Plant Major Maintenance	$ 10.5
Closure	$ 20.8
Total Sustaining Capital – LOM	**$ 46.1**

10.4 Operational Cost Estimate

Operating costs are derived from a number of sources including quotations and budgetary pricing from suppliers. Estimates are based on similar West Australian mining operations. Equipment costs and pricing have been built into our models from plant suppliers, and in some instances scaled by usual and accepted methods.

Table 10 – Operating Cost Summary

Operating Costs	A$M	$/t Processed	$/oz Payable
Mining	$ 1,052	$ 11.20	$ 857
Processing	$ 888	$ 9.46	$ 724
Site G&A	$ 176	$ 1.87	$ 143
Cash Cost (C1)	**$ 2,116**	**$ 22.54**	**$ 1,725**
Royalty	$ 109	$ 1.16	$ 89
Sustaining Capital	$ 46	$ 0.49	$ 38
All-in Sustaining Cost (AISC)	**$ 2,272**	**$ 24.19**	**$ 1,852**

10.4.1 Mining Costs

Open Pit mining costs are derived from estimated costs per tonne rates for contract load and haul, drill and blast and technical services, as well as an assumed cost per tonne for grade control drilling and related costs.

The open pit mining costs are based on estimates prepared by Orelogy sourced over the previous 12 months. Costs are based on mining operations similar in scale and layout to Apollo Hill. The estimated capital costs include pre-production waste mining (See Section 10.3, Table 6 'Early-stage material movements'.

The ore mining cost provided by Orelogy is A$ 4.50/t of ore, inclusive of load and haul, drill and blast, technical services and grade control.

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Table 11 – Open Pit LOM Total Cost Summary

	Rate	Unit	Cost (A$M)
Load and Haul	$ 2.90	/t total mined (avg.)	$ 677
Drill and Blast	$ 0.59	/t total mined (avg.)	$ 138
Overheads	$ 0.81	/t total mined (avg.)	$ 189
Grade Control (blast hole)	$ 0.20	/t ore mined (avg.)	$ 19
Total	**$ 4.50**		**$ 1,040**

10.4.2 Processing Costs

Processing costs are derived from estimated costs per tonne rates for crushing, heap leach and gold extraction, which are inclusive of power, reagents, and maintenance as well as an assumed cost per tonne for labour and related costs.

The Processing mining costs are based on estimates prepared by CPC, revised with data provided by OMC and MacroMet.

Table 12 – Processing Mining Costs

	Rate (A$)	Unit	Cost (A$M)
Labour	$ 1.58	/t processed (avg.)	$ 148
Power	$ 2.77	/t processed (avg.)	$ 260
Reagent	$ 2.83	/t processed (avg.)	$ 266
Maintenance	$ 1.72	/t processed (avg.)	$ 162
Vehicles	$ 0.02	/t processed (avg.)	$ 2
Assay/General	$ 0.54	/t processed (avg.)	$ 51
Total	**$ 9.46**		**$ 888**

10.4.3 Work Force

Saturn's overall operations strategy is to exploit the deposit by using large scale mining methods to feed a purpose-built processing facility.

The peak onsite operating workforce required by the Project is 176 people. Of the 176 people required on an ongoing basis to operate the Project, Saturn full time staff employees account for 58. Contractors will be utilised for grade control drilling, drill and blast, haulage and catering services. Accommodation will be provided for 200 people at the Apollo Hill village with overflow either accommodated by short term "hoteling" of the village rooms or by the short-term hiring of rooms in Leonora.

Despite the proximal location of Leonora, the region is not considered of sufficient size to provide a workforce for the operation and most of personnel will be sourced from Perth and operate on a fly-in, fly-out (FIFO) basis.

The costs associated with these workforces have been included within the unit rates of the mining and processing areas.

Two industry typical rosters have been utilised in the PEA, 8 days on, 6 days off and 14 days on, 7 days off.

10.4.4 Royalty

The Project economics as presented in this PEA assessment have been tested against a 4.50 % overall net smelter return equivalent on all ounces produced. This total comprises allowances for a State Royalty, two Private Party Royalties (The Hampton Hill Royalty (refer to area of influence on Figure 22) and the Birimian Royalty on M39/296 (also illustrated on Figure 22)) and for any future Native Title Compensation.

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11 Project Economics – Financial Analysis and Outcomes

11.1 Financial Result

At a conservative gold price of A$2,665 / oz, which is lower that the gold spot price over the past six months, the Project is forecast to generate an unleveraged and pre-tax IRR of 30%, a strong undiscounted and pre-tax Free Cash Flow of A$694 M, and an unleveraged and pre-tax $NPV_{7\%}$ of approximately A$390 M. The financial summary is presented below:

Table 13 – Financial Results Summary

Financials		
Key Financial Assumptions		
Gold Price	$/oz	2,665
Discount Rate	%	7.00
Project Valuation		
Project EBITDA	A$M	1,044
Project Free Cash Flow (undiscounted and pre-tax)	A$M	694
Project $NPV_{7\%}$ (unleveraged and pre-tax)	A$M	390
Project IRR (unleveraged, pre-tax, and calculated on an annual basis)	%	30
Payback Period (unleveraged and pre-tax)	years	2.8
Capital Intensity	A$/oz	233
NPV (unleveraged and pre-tax)/Pre-production Capital	ratio	1.3

Notes:
1. Payback period is calculated from the start of the first year of gold production.
2. Capital Intensity is calculated by dividing pre-production capital by payable metal.

11.2 Production Target

Total payable (recovered) metal over the life of the Project is forecasted to be approximately 1.23 Moz. The annual mining schedule breakdown of the measured, indicated and inferred resource inventory ounces and grade is illustrated in Figure 24.

Of the Mineral Resources scheduled for extraction in the first 3 years of the PEA production target, approximately 89% is classified as Measured and Indicated, only 11% is classified as Inferred. This demonstrates the ability for the project to payback upfront development capital under the assumptions in this PEA from higher confidence measured and indicated categories. Figure 8 in Section 2.3 of this report 'Mineral Resource' illustrates the physical location of these higher confidence categories at surface in the early mining phases of the project.

Over the life of the mine evaluation period, approximately 57% of the production target is classified as Measured and Indicated category and 43% as Inferred category.

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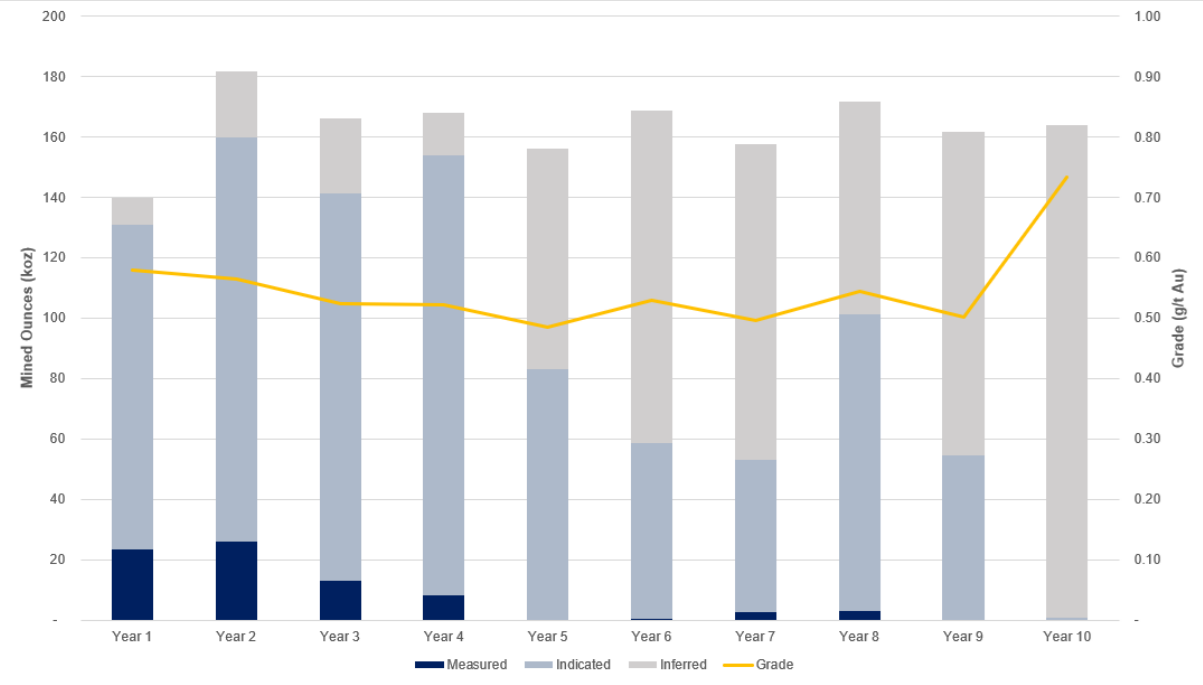

Figure 24 – Annual payable metal by resource category.

11.3 Sensitivity Analysis

The Project's key financial metrics are most sensitive to changes in the gold price (Table 14). In addition, the Project is sensitive to changes in operating cost and metallurgical recovery.

The Study selected base case gold price, A$ 2,665/oz demonstrates the robustness of the Apollo Hill Project. At the recent spot gold prices (Table 15), the Project demonstrates outstanding financial outcomes including a free cash flow of more than A$ 1,000M, and a $NPV_{7\%}$ of over A$ 620M. (Table 15, Figure 24 and Figure 25).

The Project is more resilient to changes in the capital costs (Figure 25 and Figure 26).

Table 14 – Scenario Analysis – Gold Price (A$ 2,665/oz – Base Case)

Gold Price (A$/oz)		2400	2500	2600	2665	2700	2800	2900	2944[2]	3000
$NPV_{7\%}$	A$M	170	253	336	390	419	502	586	622	669
IRR	%	18	23	27	30	31	35	39	41	43
Payback	years	4.4	3.6	3.1	2.8	2.8	2.5	2.3	2.2	2.1
Annual EBITDA	A$M	73	85	97	104	109	121	133	138	144
LOM EBITDA	A$M	727	847	966	1,044	1,086	1,205	1,325	1,378	1,445
LOM Free Cash	A$M	377	497	616	694	736	856	975	1,028	1,095

Table 15 – Scenario Analysis – Metallurgical Recovery (75.0% – Base Case)

Recovery (%)		72.0%	73.0%	74.0%	75.0%	76.0%	77.0%	78.0%	79.0%
$NPV_{7\%}$	$M	302	331	361	390	420	449	479	508
IRR	%	25	27	28	30	31	33	34	36
Payback	years	3.3	3.1	3.0	2.8	2.8	2.7	2.6	2.5
Annual EBITDA	$M	92	96	100	104	109	113	117	121
LOM EBITDA	$M	917	959	1,002	1,044	1,086	1,129	1,171	1,214
LOM Free Cash	$M	567	609	652	694	736	779	821	864

[2] Gold price (A$/oz) 1 August 2023

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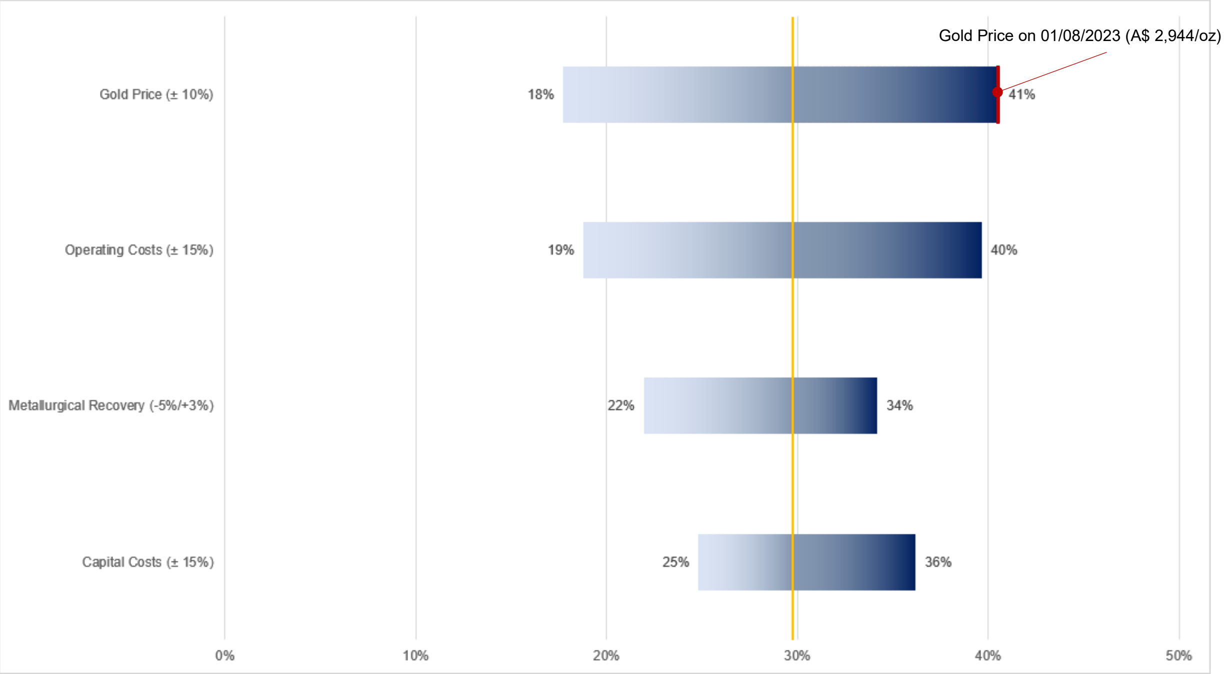

Figure 25 – Apollo Hill IRR sensitivity.

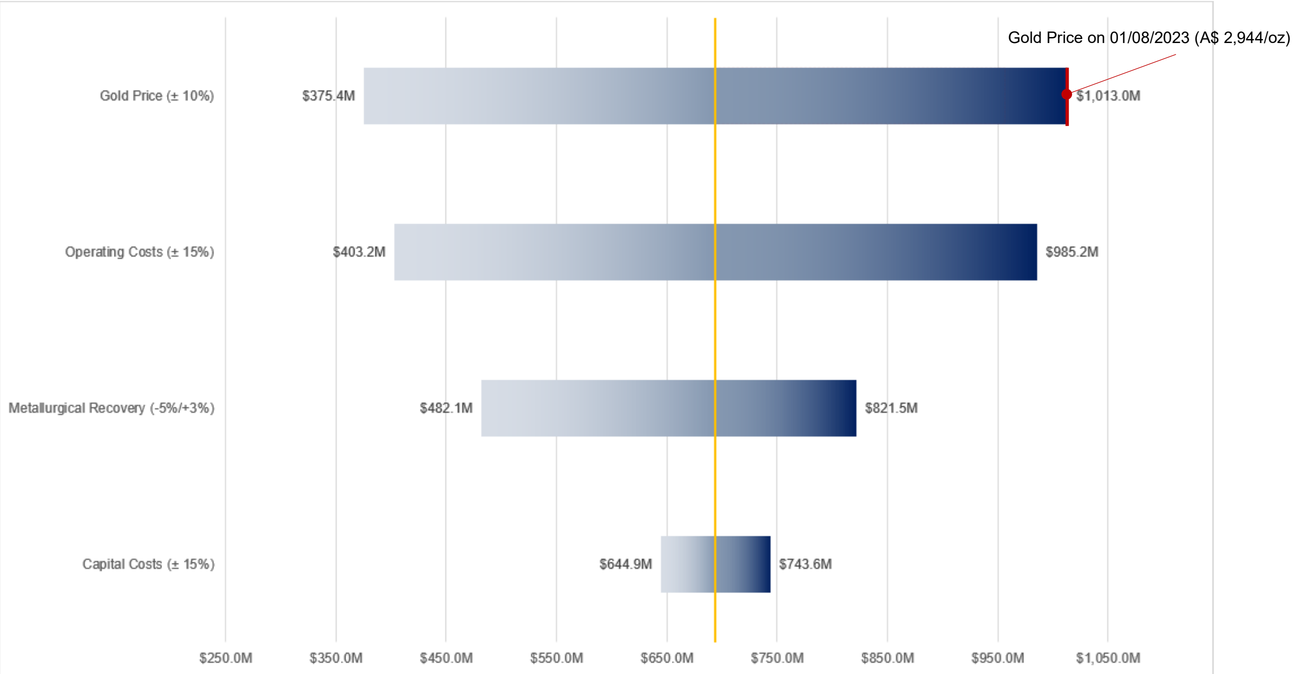

Figure 26 – Apollo Hill free cash flow sensitivity.

11.4 Growth Potential

The following factors have not been captured in the PEA and could offer medium and long-term upside to the financial outcomes:

- **Potential for growth in the Mineral Resource through improving economics**

  Figure 27 illustrates an example of multiple promising exploration drill intersections beneath both the current Mineral Resource pit shell and the PEA pit shell. Under any improving economic circumstances, these intersections show the potential to add additional Mineral Resource or PEA scenario ounces.

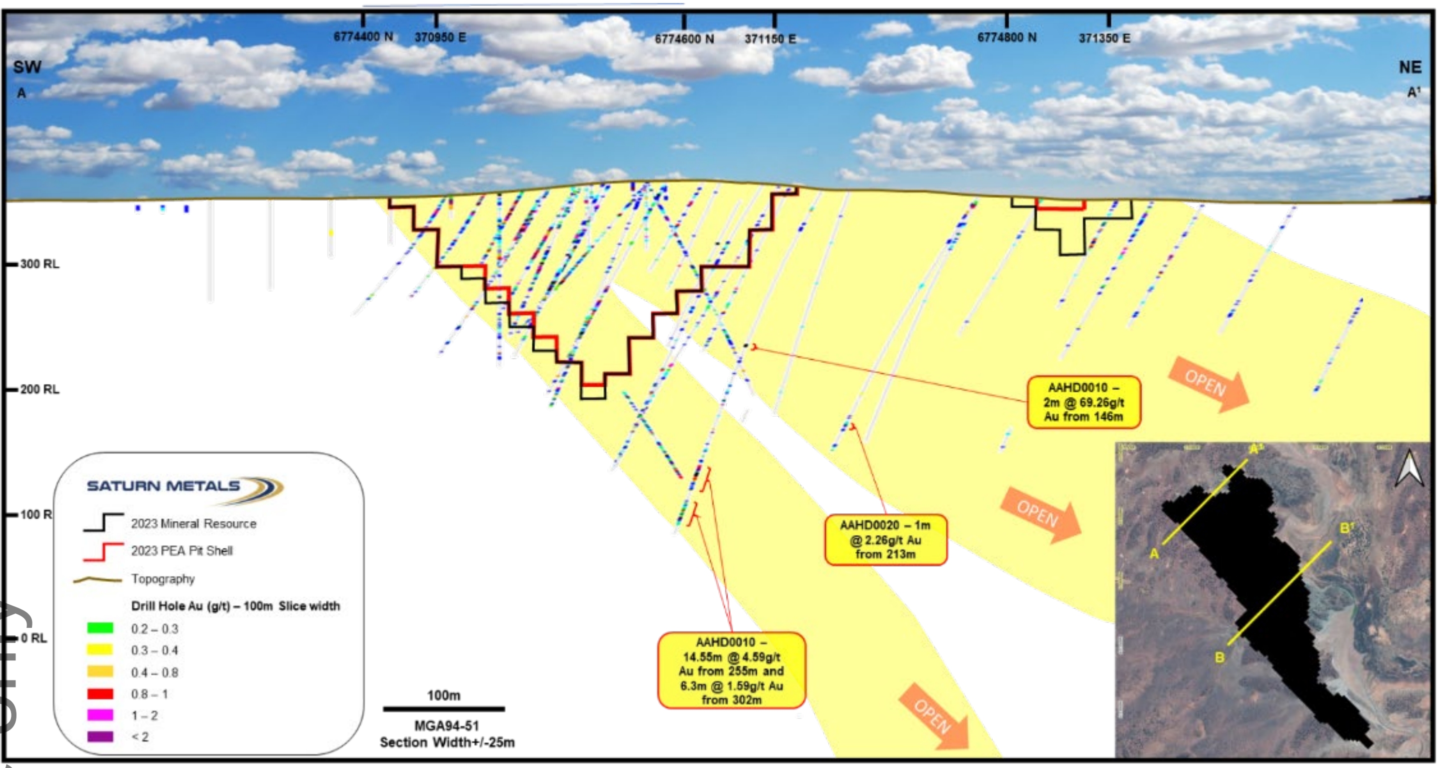

Figure 27 – Apollo Hill Deposit drilled at depth.

- **Potential for growth in the Mineral Resource through further drilling**

Figure 28 illustrates an example of an area beneath the Mineral Resource Pit shell where drilling remains open. Further exploration drilling is arguably warranted, and could, if successful, also add additional ounces to Apollo Hill's Mineral Inventory, and under positive economic conditions, to the Mineral Resource base or any future mining scenario.

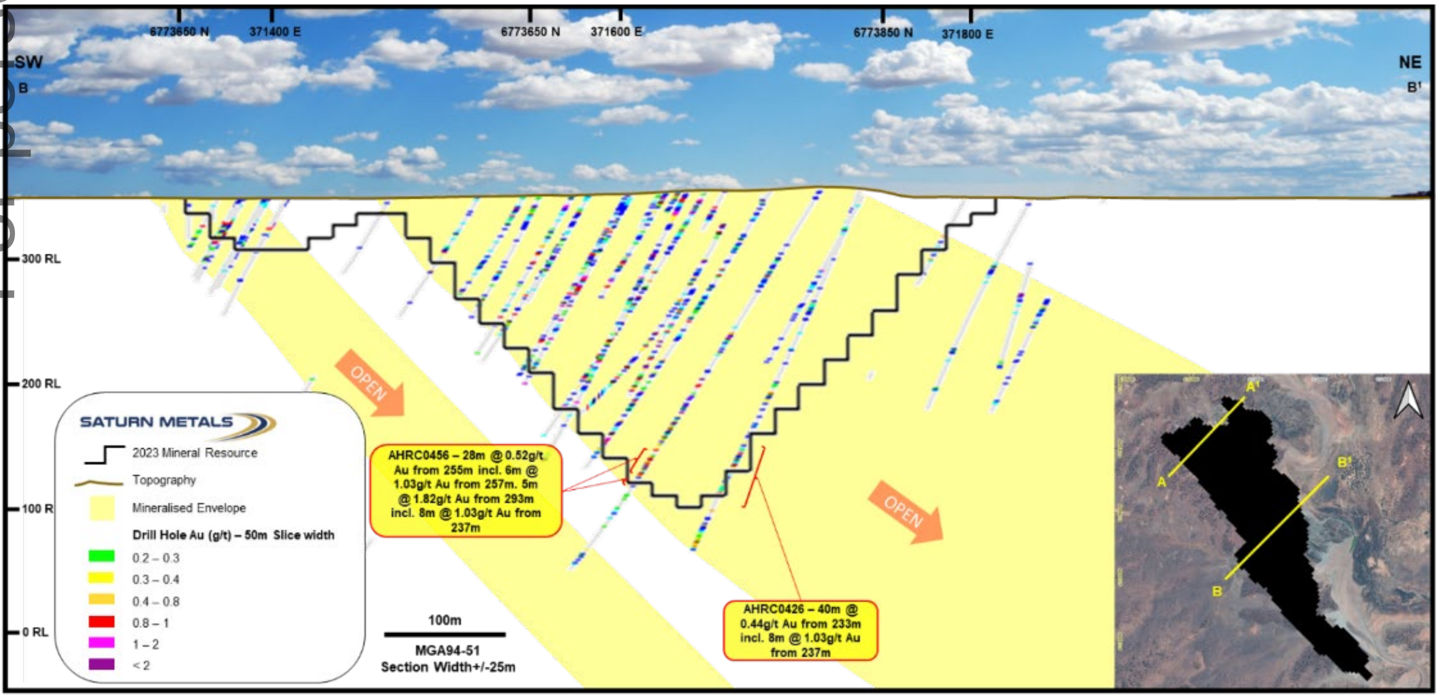

Figure 28 – Apollo Hill Deposit open at depth.

Mineralisation also remains open along strike with a number of positive lead drill intersections highlighting areas for additional follow up drilling (Figure 29).

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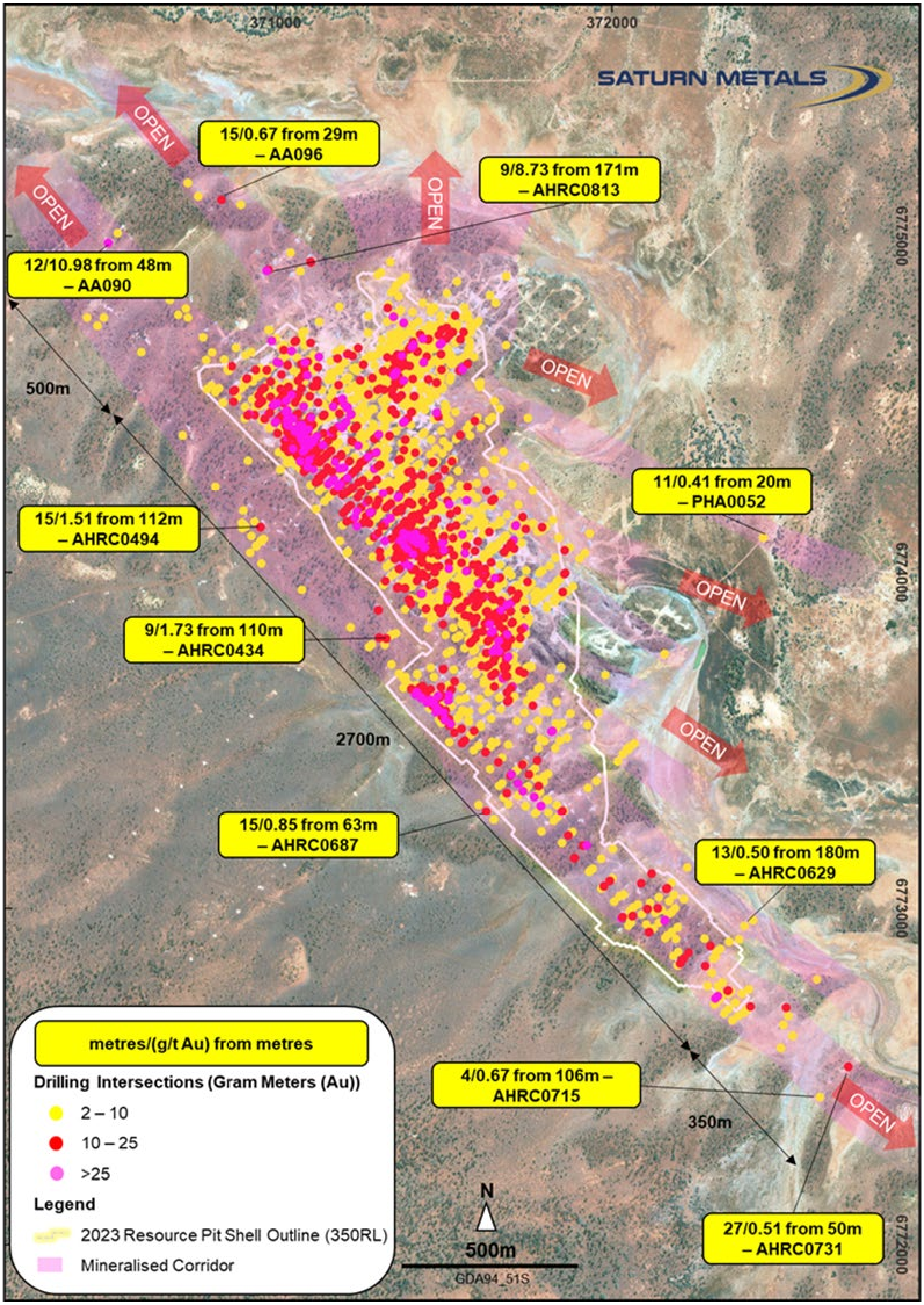

Figure 29 – Strike extension potential at Apollo Hill.

- **Regional Exploration – Potential for Satellite Discoveries**

  Saturn owns more than 1,000 km^2 of contiguous prospective greenstone terrain around the Apollo Hill Project. To date, drilling exploration has provided evidence of a large 60km long and a 20km wide gold system where fifteen prospects have been identified (Figure 30). Exploration continues across this terrain.

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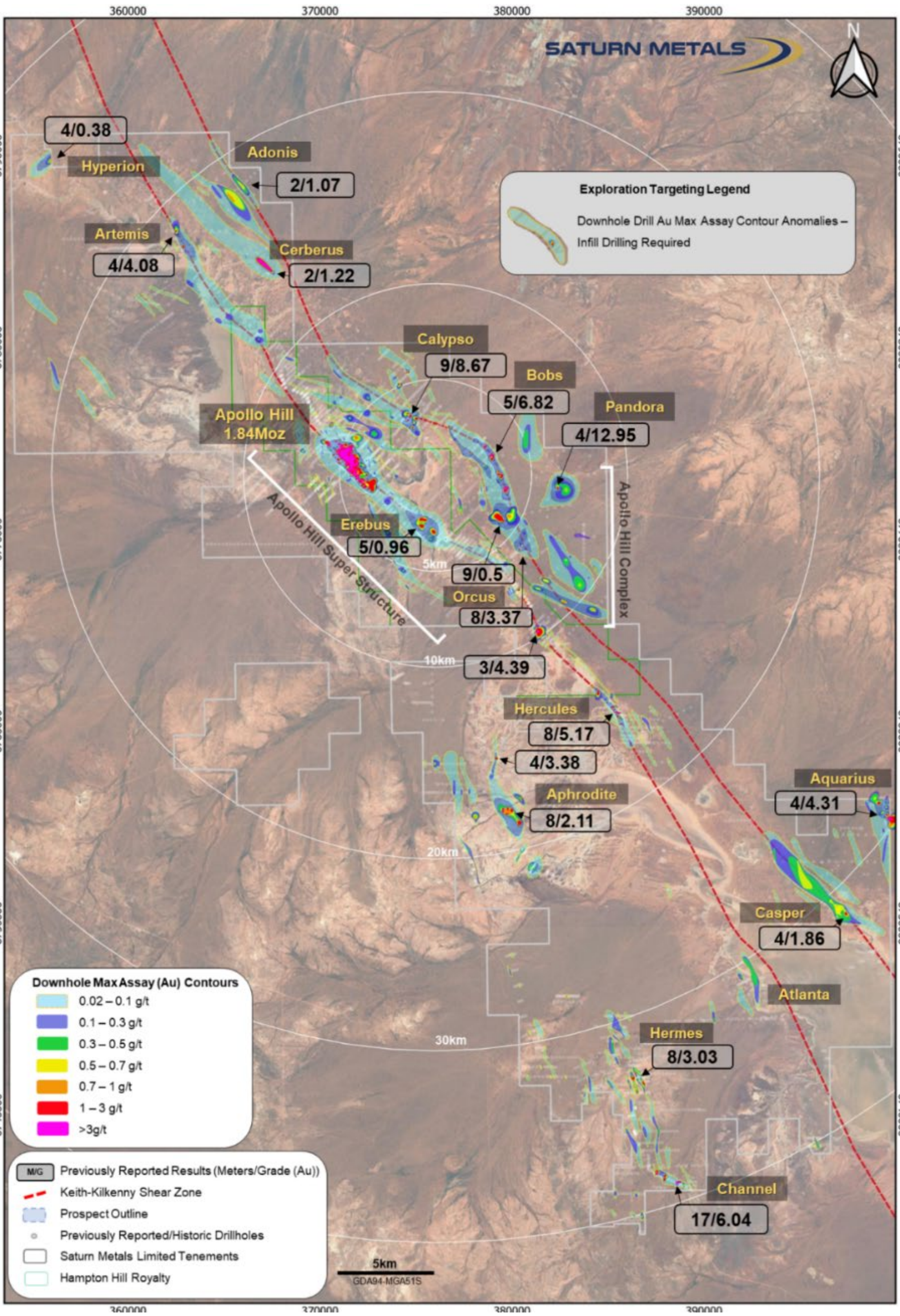

Figure 30 – Apollo Hill regional exploration – prospects, intercepts and targeting.

- **Treatment of marginal material during periods of low plant utilisation**

  A potential opportunity exists to treat marginal cutoff grade material that otherwise would be lost to the waste dump, assuming there is capacity in the processing facility. There is approximately 5.7 Mt grading at 0.16 g/t of material available in the current Resource and PEA production target.

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12 Funding

To achieve the range of outcomes indicated in the PEA, funding of approximately A$345 M is estimated to be required comprising of approximately A$304 M in pre-production capital expenditure and A$41 M in early-stage operations. There is no certainty that the Company will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Saturn's shares.

The Board has a reasonable level of confidence that the Project will be able to secure funding in due course, having particular regard to:

1. The Company is debt free and is in a sound financial position, with approximately A$3.5m cash on hand (30 June 2022).
2. The Company's shares are listed on the ASX which is a premier market for growth companies and provides strong access to capital from institutional and retail investors in Australia.
3. Saturn has approximately 50% institutional and high net worth shareholder support on its share register.
4. Saturn has an experienced and high-quality Board and management team comprising highly respected resource executives with extensive technical, commercial, and capital markets experience. The directors have completed numerous capital raisings for a number of exploration and development companies.
5. Recently completed funding arrangements for similar or larger scale development projects with similar levels of required capital;
6. The range of potential funding options available;
7. The favourable key metrics generated by the Apollo Hill Project;
8. The potential to consider lower capital or phased production scenarios from higher confidence measured and indicated resource categories which sit at or near surface in earlier phase pit sequences;
9. Saturn plans to continue exploring its extensive land holdings. There is potential for additional discovery which could positively impact Company valuation and hence our ability to raise capital; and
10. Investor interest to date.

13 Next Steps

The Saturn Board approves this PEA, and subject to ongoing funding, the commencement of next stage feasibility studies and scale up test work activities, along with an exploration campaign to sustain Saturn's strong exploration performance across its 1,000 km^2 of regional tenements.

Saturn uses 'Stage Gate' management principles to manage and monitor progress along our development path.