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Trident Preliminary Economic Assessment, Technical Report

Catalyst Metals Ltd.

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1.1 Executive Summary

RPM Advisory Services Pty Ltd ("RPM") was retained by Catalyst Metals Limited ("Catalyst", "CYL" or the "Client") to prepare an Preliminary Economic Assessment ("PEA" or the "Report") on the Trident Gold Project ("Trident" or the "Project") located in the Plutonic – Marymia Gold Belt of Western Australia. The Client is the owner and operator of the adjacent Plutonic gold mine (the "Mine"), which is the proposed plant facility to process the Trident ore. The Mine and Project form part of a larger project, which, for this Report, is termed the "Combined Project," which consists of the Plutonic and Marymia tenement packages. For the purposes of this Report, the Marymia tenement package is referred to as the "Marymia Project".

Trident is currently owned by Vango Mining Limited (the 'Company"), which is a wholly-owned subsidiary of Catalyst. This Technical Report conforms to the NI 43-101 Standards of Disclosure for Mineral Projects. RPM notes that the Trident PEA covers multiple tenements within the Combined Project, and any reference to the Project, refers to any tenement, previous working or facility which the proposed PEA impacts.

This Report includes a review of the mining, processing and environmental studies undertaken to support the reporting of the PEA included in this Report. The PEA demonstrates that the Project has the potential to mine an estimated 230koz of gold over a four and a half year mine life at an average grade of 6.7g/t Au through development of an underground mine. At an assumed gold price of AUD 2,700/ Oz, Trident has a Net Present Value ("NPV") of approximately AUD 246 million ("M") (5% Discount Rate), an IRR of 132% and has a payback of approximately 1 year. A longer-term exploration strategy is being developed with a focus on extending the Trident mine life, with the deposit open along strike and at depth.

RPM's technical team ("the Team") consisted of geologists, a mining engineer, a process engineer and an environmental specialist. In March 2023, Jeremy Clark (Principal Geologist), and in 2019 Dr Spero Carras, undertook site visits to the Project to familiarise themselves with site conditions and had open discussions with the Company and Client personnel on technical aspects relating to the Project as a part of this Report. RPM understands that while no additional mining has been undertaken, additional drilling was completed since the Mineral Resources estimates were completed in 2020. This drilling is discussed in Section 10.

In addition to the work undertaken by RPM to generate an estimate of Mineral Resources, this Report includes information provided by the Company and verified where applicable, either directly from the site and other offices or from reports by other organisations whose work is the property of the Company or the Client. The data relied upon for the Mineral Resource estimates completed, as reported by RPM and contained in this Report, has been compiled primarily by the Company and validated where possible by the Qualified Person. The Report specifically excludes all aspects of legal issues, marketing, commercial and financing matters, insurance, land titles and usage agreements, and any other agreements/contracts that the Company may have entered into except to the extent required pursuant to NI 43-101.

In RPM's opinion, the information provided by the Client was reasonable and nothing was discovered during the review of the data and the preparation of the Report that indicated there was any material error or miss-representation in respect of that information. RPM does not, however, warrant the completeness or accuracy of the information provided to it and which has been used in the preparation of this Report.

RPM has independently assessed the Relevant Asset by reviewing historical technical reports, drill hole databases, original sampling data, sampling methodology, development potential, proposed mining methods and metallurgical test work resulting in a Mineral Resource estimate and the resultant PEA. All opinions, findings and conclusions expressed in this report are those of the Qualified Persons named herein.

To achieve the outcomes in the PEA, funding in the order of AUD 69 M is required, which will include all pre-production costs, of which the pre-production capital is AUD 36 M. There is no certainty that CYL will be able to source funding when required. It is possible that such financing may be dilutive or otherwise affect the company's share price.

CYL has indicated that a definitive feasibility study ("DFS") has commenced, with completion expected in the second half of CY2023. It is the intent that the DFS will address areas identified in the PEA that require additional detail to support financing and final investment decisions.

All costs presented in this report are based in Australian Dollar (AUD) denominations.

1.1.1 Conclusions

The PEA demonstrates that the Project has potential for eventual economic extraction using underground mining techniques and employing conventional mineral processing methods to recover gold via the existing Mine processing facilities.

Gold mineralisation occurs in a large number of deposits and prospects throughout the Plutonic – Marymia Gold Belt, with the main deposit, Plutonic Gold Mine, located at the southern end of the belt. Mineralisation regularly occurs as shallow dipping, layered parallel lodes, although steep lodes and minor quartz-vein-hosted deposits also occur. Regionally within the greenstone belt, mineralised host rocks vary from amphibolites to ultramafics and banded iron formation (BIF). Lateritic and supergene enrichment are common throughout the Belt and have been mined locally. Biotite, arsenopyrite, and lesser pyrite/pyrrhotite are common minerals generally accepted to be associated with gold mineralisation. The mineralized domains show variation in thickness and geometry, however, the drill density has allowed the delineation of coherent bodies of mineralisation.

Several generations of exploration have been completed over the Combined Project which has been undertaken by previous owners. Work completed includes geochemical sampling, geophysical surveys, reverse circulation, and diamond drilling. These works have been completed in various amounts across the tenements, resulting in the delineation of Mineral Resources and various identification of mineralisation, which are considered to have exploration upside.

The sampling and assaying methodology and procedures were satisfactory for the majority of drilling campaigns. QA/QC protocols were adequate and a detailed review of the data did not show any consistent bias or reasons to doubt the assay data.

The Project exhibits a moderate to a high degree of structural complexity. The block models are defined by drilling on predominately 20 m by 20 m drill spacings with extension out to 80 m by 80 m drill spacing. Therefore there is potential for the tonnage and overall geometry variations between modelled and actual mineralization.

The Trident Mineral Resource was classified as Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. The deposit shows reasonable continuity of the main mineralised lodes along strike and down dip with relative consistency evident in the thickness of the structures, along with the continuity of structure between sections. While there is good geological continuity along strike and down dip, there is evidence, and it is interpreted, that local variation of grade and thickness will occur between the current drill spacing arising from the type structures, resulting in discontinuous pods of mineralisation. These Mineral Resources used to underpin the production target were prepared by Mr Spero Carras who is a Qualified Person.

The preliminary production target is based on the Mineral Resource for the Trident Project comprising underground resources at a cut-off grade of 3.0g/t Au of 945kt at 9.4g/t Au in the Indicated category and 645kt at 6.0g/t Au in the Inferred category.

Mining is proposed to be undertaken via conventional underground mechanised mining methods incorporating appropriate modifying factors for dilution and recovery for both development and stoping activities. No NI 43-101 Mineral Reserves estimates has been classified or reported. As part of the mining cost estimate, Entech Pty Ltd ("Entech", the Companies third party mining consultant) used recent actuals from CYL's Plutonic operation. The rates are assembled as fully variable schedule of rates, which were applied to mining physicals.

Trident ore is proposed to be transported and processed at the Plutonic processing facility. Trident is assumed to be an incremental ore source to a base load being processed at Plutonic. The Plutonic plant is an established operation, historical operating costs are generally well understood and documented.

Testwork, commissioned by Como Engineers and conducted by ALS Metallurgy, Report A19022, showed that the Trident fresh ore is suitable for treatment via a typical crush, grind and leach process, with final gold recoveries being ~90%. Hardness testing of the Trident underground ore showed that the Bond Ball Mill work index of the Trident fresh ore was 13.3kWh/t. This is considered medium and is consistent with an ultramafic orebody.

The geochemical characterisation of waste rock from Trident has indicated that potential seepage or runoff from waste rock is expected to be neutral to alkaline, non-saline and contain very low concentrations of environmentally significant metals and metalloids. There is no considered potential for acid generation from waste rock. It is not considered to present any significant environmental risks to the relatively fresh to brackish aquifers in the project area.

Environmental studies have been completed and include flora and fauna surveys and did not record any threatened or priority ecological communities. Groundwater assessments have also been undertaken and will be subject to additional work in the DFS.

The Trident Development will utilise existing support infrastructure at the Plutonic Gold Mine, a well-established mine with associated services and infrastructure. The mine can be accessed by aircraft or road, operates as a fly-in/fly-out operation, and maintains a camp on-site for the employees and contractors.

Diesel gensets will provide electricity at Trident and have been considered as part of the underground mining cost model. A route between Trident and Plutonic exists, and it is anticipated that these access roads will serve as a suitable haulage and service road between the Plutonic mill and the Trident deposit and associated infrastructure.

1.1.2 Recommendations

RPM highlights that global resource estimates, particularly with Indicated and especially Inferred levels of confidence, are suitable only for medium to long-term mine planning and economic analysis and should not be the basis for detailed short-term production planning. In production environments, the mine geology teams use these types of estimates to guide grade control drilling and sampling to confirm the location and grade of the mineralisation prior to production. This process is industry standard practice and aims to minimise the inherent risk of mining and geology.

Asbestiform material is present at Trident West and is likely to be found throughout the entire ultramafic unit. Additional analysis work will be required as part of the definitive feasibility study that CYL have commenced to better understand the distribution of the material and any specific downstream implications.

1.2 Exploration Drilling

Based on the outcomes of the resource estimate RPM recommends additional drilling be undertaken. There is good potential to expand the resource base and, importantly, increase confidence in the known resource areas which is required to make informed investment decisions. Based on its review RPM recommends that future drilling should aim to define the following:

- Infill drilling of high-grade areas within potentially mineable areas of the resource. Infill drilling should target the material within the underground optimisation envelopes (at the completion of the initial mining study), along with the down plunge of key zones in areas of assumed economic viability.
- Resource drilling in extensional areas adjacent to, and down plunge of, the high-grade areas within the resource. This presents exploration upside in the medium to short term and should be a high priority for drilling due to the potential impact on project economics.
- Target mineralisation along strike to increase the resource base. This is considered regional exploration and should focus on the known deposits outside of the current resource base. This is particularly the case for areas considered conceptual or where drilling has been undertaken post the 2020 estimates, such as high-priority target Skyhawk.

RPM notes that the above recommendations are general with drill plans and budgets no available at the time of writing. As such, no expected cost is able to be presented.

1.3 Mining, Processing and ESG

Based on the outcome of the mining aspects of the PEA, it is recommended that CYL should proceed to the next level of study, this would include increased studies in key areas of metallurgical testwork including ore and waste characterisation, ventilation, geotechnical assessment, backfill studies along with a fibrous study and further environmental and community studies to ensure ongoing permitting is not delayed.

The recommended studies are detailed in Section 26 and have an estimated budget of AUD 2.5 M including the geological drilling.

1.4 Technical Summary

1.4.1 Property Description, Location and Land Tenure

The Property is located approximately 1,000km northeast of Perth in the Northern Goldfields of Western Australia. Located 216 km northeast of the regional town of Meekatharra and 160km south of Newman, the Marymia Project consists of 45 granted Mining Tenements and 11 exploration and land use permits covering an area of 400 sq.km. The Project is located to the northeast and adjacent to the Plutonic mining operation which was recently acquired by Catalyst through its wholy owned subsidiary Billabong Gold Pty Ltd.

In addition to the Marymia Project, Vango currently has seven tenements covering 340 sq.km known as the Ned's Creek Joint Venture Project, which are under a joint venture with Lodestar Minerals Ltd. Ned's Creek is located 25km to the south of Marymia with Vango currently earning into 51% with the spend of AUD 4.5M.

1.4.2 Existing Infrastructure

Due to the status of the Project, limited infrastructure is on-site. This infrastructure includes an exploration camp consisting of mess facilities, and satellite communications and can accommodate up to 30 people, along with numerous good standard haul roads. These hauls roads connect the majority of the resource and known deposit areas and were constructed as part of the previous mining operation in the 1990s and 2000s.

1.4.3 History

The Marymia Project has a long history dating back to the 1970s, however, the history of the Project is closely linked to the adjacent Plutonic mine tenement. As such, it is suitable to discuss both the ownership and development history of these two areas in conjunction. In the 1970s, International Nickel Company ("Inco") undertook nickel exploration however, failed to identify an economic nickel deposit. This was followed in 1986 when numerous companies were granted exploration rights in the region and commenced exploration. Of note during this period, in 1989, Pioneer Minerals Exploration who changed their name to Plutonic Resources Limited following the discovery of the Plutons deposit (not within the tenements).

The Plutonic Gold Mine (not within the Project) opened, with open-pit production from the Main Pit, in 1990. This was followed in 1992 with mining commencing in the Project K1 and K2 open pits. The Triple P open-pit production started in 1993 with treatment at the Marymia Plant which has since been removed and rehabilitated.

Plutonic Underground mining started in 1995 and in 1998, Homestake Mining Company acquired Plutonic Resources. Along with this acquisition, Homestake Gold of Australia Limited bought all of the Marymia property and assets from Resolute which covered the Project.

Open pit mining commenced at Triple P, B Zone, in August 2002, and was completed in August 2003. Barrick (formally Homestake) divested the Project's tenement holding in August 2010 which was purchased by Dampier Gold including the K2 deposit and the Trident Deposit, in 2010. In November 2013 formed a Joint Venture/Farm

In Agreement with Ord River Resources (ORD) with the project lastly acquired by Vango Mining Ltd (the current owners) which remained from the previous JV partners of Dampier ORD in 2014.

More than 50 gold deposits were ultimately delineated in the Plutonic, Marymia and Freshwater (southern margin) areas of the belt during this period. Open pit mining operations in the project were completed in mid-2005 and the exploration focus shifted towards near-mine definition drilling in support of the Plutonic underground operations with limited exploration undertaken until Dampier took ownership.

The estimated total gold production at the Marymia area is 0.685 Moz as noted by previous internal report. RPM has been unable to verify these results, however, visual inspection of the mined pits appears reasonable.

1.4.4 Sample Preparation, Analyses and Security

The review of the drilling and sampling procedures indicates that international standard practices were being utilised with no material issues being noted by RPM during all generations of drilling. The QA/QC samples all showed suitable levels of precision and accuracy to ensure confidence in the sample preparation methods employed by the Company and primary laboratory.

The selective original data review and site visit observations carried out by RPM did not identify any material issues with the data entry or digital data. In addition, RPM considers that the onsite data management system meets industry standards which minimizes potential ‘human’ data-entry errors and no systematic fundamental data entry errors or data transfer errors; accordingly, RPM considers the integrity of the digital database to be sound.

RPM considers that there are sufficient geological logging and bulk density determinations to enable estimation of the geological and grade continuity of the deposit to accuracy suitable for the classification applied.RPM considers the sample security measures undertaken to be industry standard and regards the sample security and the custody chain to be adequate.

1.4.5 Geology and Mineralisation

Marymia area covers the northeast-southwest trending Plutonic (Marymia) Greenstone Belt, occurring in the central portion of the Marymia Inlier. The Belt is interpreted as a regional-scale fold-thrust belt. Rocks of the Marymia Inlier consist mainly of granite and gneiss with enclaves of meta-greenstone (including mafic and ultramafic igneous rocks, BIF and sedimentary rock precursors) metamorphosed at upper amphibolite to granulite facies. The meta-greenstones may represent high-grade metamorphic equivalents of the Plutonic Greenstone Belt to the north-east. Rocks of the Peak Hill Schist area include quartz-sericite schist, quartz-muscovite schist and quartz-muscovite-biotite-chlorite schist, which have been variously deformed and contain a range of mylonitic textures and discrete mylonitic units.

The area hosts 39 known gold deposits mined throughout the history of mining across the Marymia Dome. Gold mineralisation occurs in a large number of deposits and prospects in the Belt, with the main deposit at the Plutonic Gold Mine on the southern end (outside the tenement holdings). Mineralisation regularly occurs as shallow dipping, layered parallel lodes, although steep lodes and minor quartz-vein-hosted deposits also occur. Regionally within the greenstone belt, mineralised host rocks vary from amphibolites to ultramafics and banded iron formation (BIF). Lateritic and supergene enrichment are common throughout the Belt and have been mined locally such as at the Skyhawk deposit. Biotite, arsenopyrite, and lesser pyrite/pyrrhotite are common minerals generally accepted to be associated with gold mineralisation

1.4.6 Exploration Status

Several generations of exploration have been completed over the Project which has been undertaken by previous owners. Work completed includes geochemical sampling, geophysical surveys, reverse circulation, and diamond drilling. These works have been completed in various amounts across the tenements, resulting in the delineation of Mineral Resources as reported in this report, and various identification of mineralisation which are considered to have exploration upside.

Systematic exploration commenced in the 1990s which included geochemical sampling across both the Project area and the adjacent Plutonic mine area. programme led to the identification of numerous gold anomalies which resulted in Project-wide geophysical IP and magnetic surveys being completed.

Drilling on the property has been under via a number of methods and generations dating back to the 1980s. While numerous reverse air blast (RAB), and aircore (AC) programs have been undertaken, the Mineral Resources reported in the Report are based on the Diamond Drilling (DD) and Reverse Circulation (RC) methods only, as such, only these drilling methods are discussed in Section 11 and 12.

Given the exploration history, the Project is considered to be a resource definition stage of exploration with drilling planned to target resource extensions and resource quantity increases.

1.4.7 Mineral Resources

RPM has independently estimated the Mineral Resources contained within the Project, based on the data collected by the Client as at 22 February 2023. The Mineral Resource estimate and underlying data complies with the guidelines provided in the CIM Definition Standards under NI 43-101 RPM, therefore, considers it is suitable for public reporting. The Mineral Resources were completed by or under the supervision of Dr. Spero Carras. The Mineral Resources are reported at Au g/t cut-off grade based on selected mining methods.

RPM considers the Mineral Resource estimate meets the general guidelines for CIM Definition Standards for reporting Mineral Resources at the Indicated and Inferred confidence levels as reported in Table 1-1. The Mineral Resources have been reported at mineralised grades of 0.5g/t Au for open-cut resources and 3 g/t Au for the underground resources. Further details on reporting can be found in **Section 14.12.**

RPM is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

1.4.8 Mineral Reserves

No Mineral Reserves have been estimated for the Project.

Table 1-1 Marymia Project Mineral Resource Estimate as at 22nd February 2023

Area	Deposit	COG	Indicated			Inferred		
		Au g/t	Quantity (Kt)	Au (g/t)	Ounces (k)	Quantity (Kt)	Au (g/t)	Ounces (k)
Open-cut	Trident West	0.5	253	1.1	9			
	Marwest & Mars	0.5	688	2	45			
	Mareast	0.5	486	1.9	30			
	EastMareast	0.5	237	1.1	8			
	Wedgetail	0.5	185	1.7	10			
	PHB-1 (K3)	0.5	604	2	39	238	1.4	11
	K1	0.5	743	1.8	42	837	1.7	47
	Triple-P & Triple-P Sth	0.5	633	2.1	42	486	1.4	21
	Albatross & Flamingo	0.5				853	1.4	38
	Cinnamon	0.5	1,472	1.8	86	536	1.9	32
	Total OP		**5,300**	**1.8**	**311**	**2,950**	**1.6**	**150**
UG	Trident	3	945	9.4	285	645	6	125
	K2	3	197	10.6	67	177	7	40
	Triple-P & Zone-B	3				170	4.3	24
	Total UG		**1,142**	**9.6**	**352**	**992**	**5.9**	**189**
Total Mineral Resource			**6,442**	**3.2**	**663**	**3,942**	**2.7**	**339**

Note:

1. *The Statement of Estimates of Mineral Resources has been compiled under the supervision of Dr. Spero Carras, who is a sub-consultant of RPM and Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralization and type of deposit and to the activity that they have undertaken to qualify as a Qualified Person as defined in the CIM Standards of Disclosure.*
2. *All Mineral Resources figures reported in the table above represent estimates based on drilling completed up to 30th Nov 2018. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.*
3. *Mineral Resources are reported on a dry in-situ basis.*
4. *Mineral Resources are interpreted using 0.5g/t Au for open-cut and 3g/t Au for underground resources and reported as per Section 14.*
5. *The open pit resources are reported within the May 2020 optimised conceptual pit shells which had used a A$2,500/oz gold price and 2020 costs. In 2023, the reasonable prospects for economic viability of the 2020 conceptual pits were examined using a A$2,800/oz gold price and increasing the May 2020 costs by 32%. The 2023 study confirmed that the conceptual 2020 pits remained similar using the A$2,800/oz gold price and the 2023 costs and as such the open pit resources remain unchanged from the reported Mineral Resource Estimate of 2020.*
6. *In Trident underground resources were reviewed using a A$2,800/oz gold price and increasing the April 2019 costs by 40%. The previously applied cut-off grade of 3.0 g/t Au remained valid and as such the Trident underground resources are retained as first reported in April 2019 which used a 3.0 g/t Au cut-off grade, and was modelled at a gold price of A$2,000/oz. Further drilling would be required to increase the Trident underground resource. Other underground resources are reported above a 3.0 g/t Au cut-off (with minor 2.5 g/t Au cut-off material included for continuity purposes) and include fresh material only.*
7. *The Mineral Resources referred to above, have not been subject to detailed economic analysis and therefore, have not been demonstrated to have actual economic viability*

1.4.9 Mining Methods

The PEA is based on low-level technical and preliminary economic evaluations with a considered accuracy of +/- 50% which is insufficient to support estimation of Mineral Reserves. There is no assurance of an economic development case at this stage, or certainty that the conclusions of the PEA will be realised.

Development of Trident proposes to use an owner-operator mining team, and the mining cost basis is from Catalyst's nearby operating Plutonic Mine, which utilises similar mining methodologies. This PEA assumes that Trident ore will be processed at the Plutonic processing facility and be an incremental ore source to the base load being processed at Plutonic. This assumption is the basis for this study's processing and general and administrative costs. RPM notes that Plutonic Mine has Mineral Reserves declared, which supports the ongoing operation of the Mine.

The selection of Mining method was undertaken by Entech, whereby suitable mining methods for mining the Trident orebody were based on a combination of key geological and geotechnical factors, combined with findings from previous studies.

The medium to high-grade nature of the orebody means that maximising orebody extraction is of key importance. Given the anticipated geotechnical conditions, a backfill method is necessary to achieve higher orebody extraction.

An engineered cemented fill is recommended due to the varying orebody widths, anticipated wall exposures, flat dipping areas of the orebody being unsuitable to other backfill types, and the ability to achieve greater extraction and lower dilution.

The Trident underground is proposed to be accessed via the existing Marwest pit. A recent geotechnical inspection of the pit has been conducted, identifying minor clean-up works and ground support requirements, along with a potential portal location has been identified. A cost allowance has been made for the clean-up of the Marwest pit. Geotechnical drilling has been planned to assess the final portal and decline position.

An integrated life of mine design was prepared using Deswik mine planning software. Based on the current Resources, the mine is planned to produce at a peak rate of circa 360,000 t per annum, resulting in a mine life of ~5 years, with peak production reached in year 3.

The underground mining work was summarised into individual activities that provided sufficient detail for PEA-level mine scheduling and reporting. An annualised summary of the key mining physicals and schedule is detailed in **Table 1-2**.

Table 1-2 Key Physicals per Annum

Physical	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Capital Lateral Development	m	4,577	1,852	1,452	603	639	30
Operating Lateral Development	m	7,750	550	1,668	2,664	2,390	479
Total Lateral Development	**m**	**12,327**	**2,402**	**3,120**	**3,267**	**3,029**	**509**
Capital Vertical Development	m	206	0	139	36	31	0
Operating Vertical Development	m	198	0	143	39	16	0
Total Vertical Development	**m**	**403**	**0**	**281**	**75**	**47**	**0**
Production Drilling	m	233,794	0	29,240	69,456	78,417	56,681
Waste Tonnes	t	560,855	180,705	173,117	73,977	108,993	24,063
Backfill Tonnes	t	422,232	11,563	65,358	130,068	140,873	74,370
Development Ore Tonnes	t	347,413	15,393	73,282	133,965	106,462	18,311
Development Ore Grade	Au (g/t)	6.4	3.0	5.6	6.9	6.0	11.3
Development Ore Metal	Au (Oz)	71,815	1,500	13,276	29,928	20,442	6,669
Stope Ore Tonnes	t	725,930	0	84,804	207,357	253,734	180,036
Stope Ore Grade	Au (g/t)	6.8	0	5.8	6.0	7.0	7.8
Stope Ore Metal	Au (Oz)	157,707	0	15,704	39,865	56,837	45,300
Total Ore Tonnes	t	1,073,343	15,393	158,086	341,323	360,196	198,346
Total Ore Grade	Au (g/t)	6.7	3.0	5.7	6.4	6.7	8.1
Total Ore Metal	Au (Oz)	229,521	1,500	28,980	69,793	77,279	51,969
Indicated Ore Metal	Au (Oz)	209,587	0	23,278	66,988	69,028	50,294
Inferred Ore Metal	Au (Oz)	19,934	1,500	5,703	2,804	8,252	1,675
Haulage	tkm	2,460,458	247,282	466,232	637,030	749,489	360,423

1.4.10 Recovery Methods

Preliminary metallurgical testwork has been performed on the Trident orebody, as well as nearby orebodies, such as the Triple P, K1 and K2 by several mining companies over the past 30 years. These ores have successfully been treated at the Marymia (decommissioned) and Plutonic (operational) plants historically as outlined in **Section 6**.

Testwork, commissioned by Como Engineers and conducted by ALS Metallurgy, Report A19022, showed that the Trident fresh ore is suitable for treatment via a typical crush, grind and leach process, with final gold recoveries being ~90%, as shown in the **Table 1-3**.

Table 1-3 Summary of cyanidation testwork – Trident Underground

PLUTONIC DOME COMPOSITE: DIRECT CYANIDATION TESTWORK										
Composite ID	Test No. (JR)	Grind Size P_{80} (µm)	% Au Extraction @ hours				Au Grade (g/t)		Consumption (kg/t)	
			2	8	24	48	Calc'd Head	Leach Residue	NaCN	Lime
PD Composite	3853	106	82.88	85.98	89.31	89.93	8.89	0.90	0.82	0.20
	3854	75	82.96	85.04	88.21	89.85	8.43	0.86	0.95	0.18

Based on the limited metallurgical testwork to date on the Trident fresh ore, the metallurgical recovery assumption is expected to be 89%, being the average recovery of the two tests after 24 hours of cyanidation, with the consideration that additional testwork is required to better understand the gold leaching within different areas of the defined orebody.

Given the level of accuracy of the PEA, the testwork completed, and specifically the assumed recovery in the LOM plan and OPEX is considered suitable, however, further work is required for ore type characterisation and recoveries.

The Trident underground ore will be processed via the Plutonic, PP1 processing plant. The Plutonic processing plant is an established processing plant consisting of a three (3) stage crushing circuit, followed by a primary SAG mill, then two (2) secondary ball mills, for a nominal throughput of 210tph, or ~1.7Mtpa annualised with a target P80 of 75µm.

The cyanidation circuit consists of two (2) leach tanks and six (6) CIL carbon adsorption tanks, each having a volume of 1,020m3, giving a nominal residence time of ~24 hours at 210tph. Cyanidation tailings are thickened prior to discharge to the tailing storage facility. Major reagents added are typical of a gold processing plant: lime, cyanide, oxygen and lead nitrate.

1.4.11 Project Infrastructure

Given the project's development status, no onsite infrastructure is located within the Marymia tenement package other than an exploration camp and haulage roads as noted in Section 4. However, RPM notes that the Project was in operation from 1993 to 2006. All infrastructure associated with this operation has been removed except for the haulage roads. The Project is adjacent to the operating Plutonic Mine, which will support ongoing operations.

The Trident development will utilise existing support infrastructure at the Plutonic Gold Mine, a well-established mine with associated services and infrastructure. The Mine can be accessed by aircraft or road, operates as a fly-in/fly-out operation, and maintains a camp on-site for the employees and contractors. The camp has a capacity for 500+ persons and includes wet and dry mess facilities, a recreational oval, a gymnasium, and an entertainment room.

Diesel gensets will provide electricity at Trident and has been considered as part of the underground mining cost model. A haulage route that is well maintained exists between Trident and Plutonic and it is anticipated that these roads will serve as a suitable haulage and service road between the Plutonic mill and the Trident Project and associated infrastructure. Detailed assessment of these access roads will be required in the next phase of the study to assess their suitability for heavy haulage.

1.4.12 Market Studies and Contracts

No marketing studies have been undertaken given the early stage of the Project and gold being a freely tradeable commodity. However, RPM notes that a Gold Price of AUD 2,700 has been assumed for the PEA (as detailed in Section 16 and 22), which is below the current spot and long term consensus gold price for August 2023.

1.4.13 Environmental Studies, Permitting and Social or Community Impact

The environmental and heritage values of the Project area have been assessed historically when the Marymia Project was in operation between 1993 and 2006. More recently, additional baseline studies were completed to inform environmental impact assessment and support regulatory applications for a planned recommencement of mining operations at Trident. A summary of the environmental setting of the Project is provided in Section 20.

RPM notes that Catalyst proposes a LOM plan that takes the operations beyond their existing approvals. This is likely to include:

- Development of the Trident underground.
- Associated mine dewatering, waste rock stockpiling and support infrastructure.
- Offsite processing.

RPM is aware that Catalyst is progressing with environmental approval applications to enable the recommencement of mining at Trident, including:

- A Mining Proposal for Small Scale Operations and associated Mine Closure Plan to enable the development of an exploration drive from Marwest open pit to the Trident deposit that has been submitted (17 July 2023) and is currently under assessment by the regulators.
- A Mining Proposal and Mine Closure Plan for development of the Trident underground and associated infrastructure that is in progress to be submitted Quarter 3 CY2023.
- A Works approval for prescribed premises activities (largely mine dewatering and discharge) associated with Trident underground and Mareast Pit was submitted on 28 July 2023 and is currently under assessment. A submission for an environmental licence must be submitted upon the completion of the dewatering infrastructure.
- A Native Vegetation Clearing Permit (NVCP) is required where clearing exceeds 10 ha per tenement per financial year.
- A Groundwater abstraction licence application for Trident was submitted on 31 May 2023 and is currently under assessment and will require amendment for mining operations.

Based on the target schedule for mining operations at Trident for Q4 CY 2024, RPM considers that all required environmental approvals will likely be obtained based on current regulatory timeframes.

An update to the closure cost estimate is required to include proposed mining and infrastructure disturbances from the development of the Project. RPM highlights that the required closure cost of the Project are likely immaterial to the NPV presented in Section 22. Furthermore, given that the Plutonic Mine is assumed to be operating well past the closure of Trident, based on the PEA, the Company will continue the Project on a care and maintenance process before the full closure of the Plutonic Mine.

1.4.14 Capital and Operating Costs

Based on current industry standards and similar scale mines, a total of AUD 69 M is required for Capital costs, including pre-production capex of AUD 36 M.

Operating costs were based on the nearby Plutonic Mine which includes a total mining cost of AUD 129.36 /t ore over the mine life, a AUD 5.8 /t ore for haulage from the Project to the Plutonic ROM pad, AUD 20.5 /t ore for processing and AUD 5.58 /t ore for G&A costs. No royalties occur over the Project other than the State 2.5% for all gold sales.

1.4.15 Economic Analysis

As part of RPM's process to justify the economic viability of the reported mineable quantities of the PEA, a revenue cash flow analysis was completed for the LOM schedule incorporating Inferred Mineral Resources as ore feed. The analyses were based on the following:

- All variable unit costs for the mine life, including mining, ore processing and handling, transportation costs, overheads and royalty costs, as shown above;
- The forecast production schedules as shown in **Section 16.9**;

- CAPEX costs, as outlined in above. No allowance has been made for any potential salvage value of fixed plant or infrastructure at closure or closure costs. Also, capital previously expended (sunk cost) is not included in the assessment of economic returns;
- Applied the forecast prices as agreed with the Company AUD 2,700 per troy ounce. RPM is not a price forecast expert and has relied on third-party and expert opinions; however, considers them reasonable;
- A discount rate of 5%, which was selected based on the limited capital required and well-established community relations; and
- State levies and royalties of 2.5%.

It is assumed that the existing infrastructure at Plutonic, including camp facilities, airstrip and tailings facility will support the Trident development. In addition, existing access roads between Trident and Plutonic are considered suitable for the proposed haulage route with only minor upgrades. The key assumptions are outlined in **Table 1-4**.

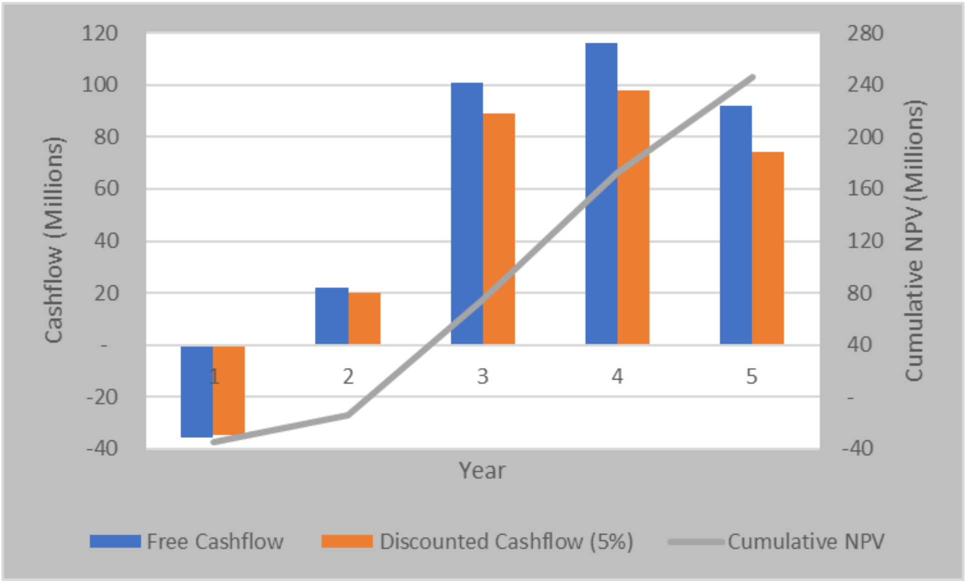
Table 1-4 Key assumptions

Operation Parameters	Units	Total	Year				
			1	2	3	4	5
Total Development	*m*	***12,327***	2,402	3,120	3,267	3,029	509
Waste Tonnes	*t*	***560,855***	180,705	173,117	73,977	108,993	24,063
Total Ore Tonnes	*t*	***1,073,343***	15,393	158,086	341,323	360,196	198,346
Total Ore Grade	*g/t Au*	***6.7***	3	5.7	6.4	6.7	8.1
Total Ore Metal	*oz*	***229,521***	1,500	28,980	69,793	77,279	51,969
Indicated Ore Tonnes	t	***929,599***	0	115,655	324,655	300,951	188,338
Inferred Ore Tonnes	t	***143,744***	15,393	42,431	16,667	59,245	10,009
Indicated Ore Metal	*oz*	***209,587***	-	23,278	66,988	69,028	50,294
Inferred Ore Metal	*oz*	***19,934***	1,500	5,703	2,804	8,252	1,675
Recoveries	*%*		89%	89%	89%	89%	89%
Gold Produced	*oz*	***204,274***	1,335	25,792	62,116	68,779	46,252

The PEA indicates Trident has the potential, given its medium to high grade resource, to generate robust cashflows over the life of mine with a pre-tax cashflow Net Present Value (NPV) of AUD 246 M, and IRR of 132% and results in an annual average C1 cash cost of 817/oz and an AISC is A$1,046/oz. The pre-production capital investment of $36m includes mine infrastructure and development, with the project benefitting from the existing processing and site support infrastructure located at Plutonic.

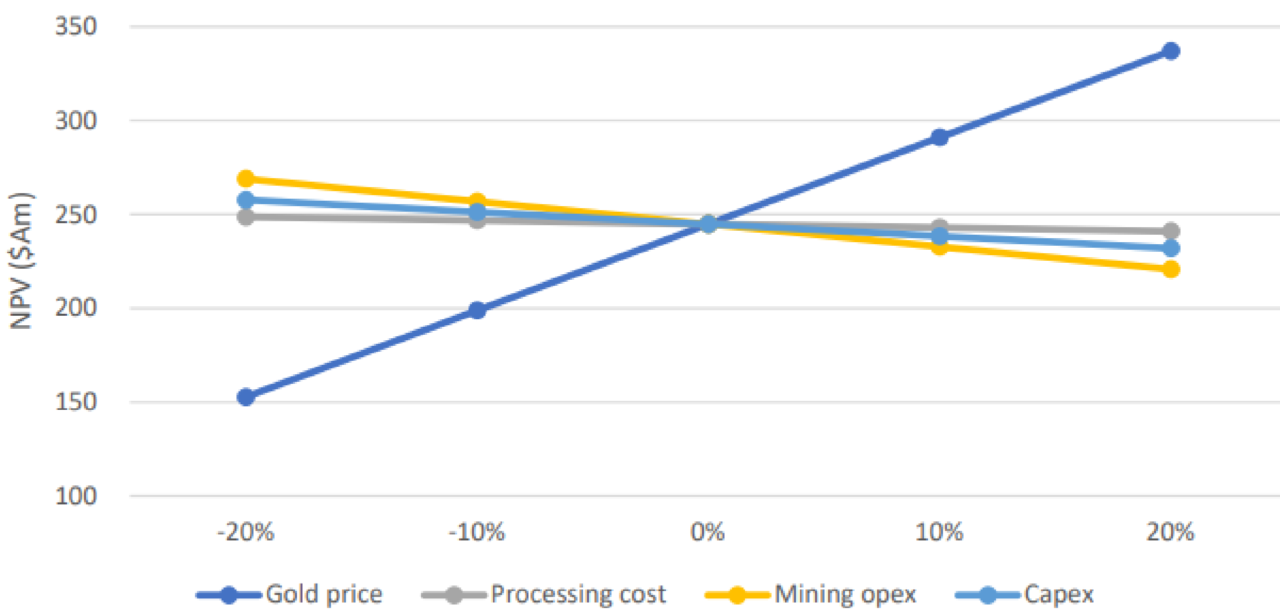
The estimated annual cashflows are shown in **Figure 1-1**.

Figure 1-1 LOM Discounted Cashflow Summary



Sensitivity analysis was conducted by varying commodity price, processing costs, mining operating costs, and capital costs to assess their impact on the project's NPV. A range of ±20% was applied to each of these key inputs with the project NPV being most sensitive to gold price. The resulting NPV's from the sensitivity analysis are shown in **Figure 1-2**.

Figure 1-2 Sensitivity Analysis



2. INTRODUCTION

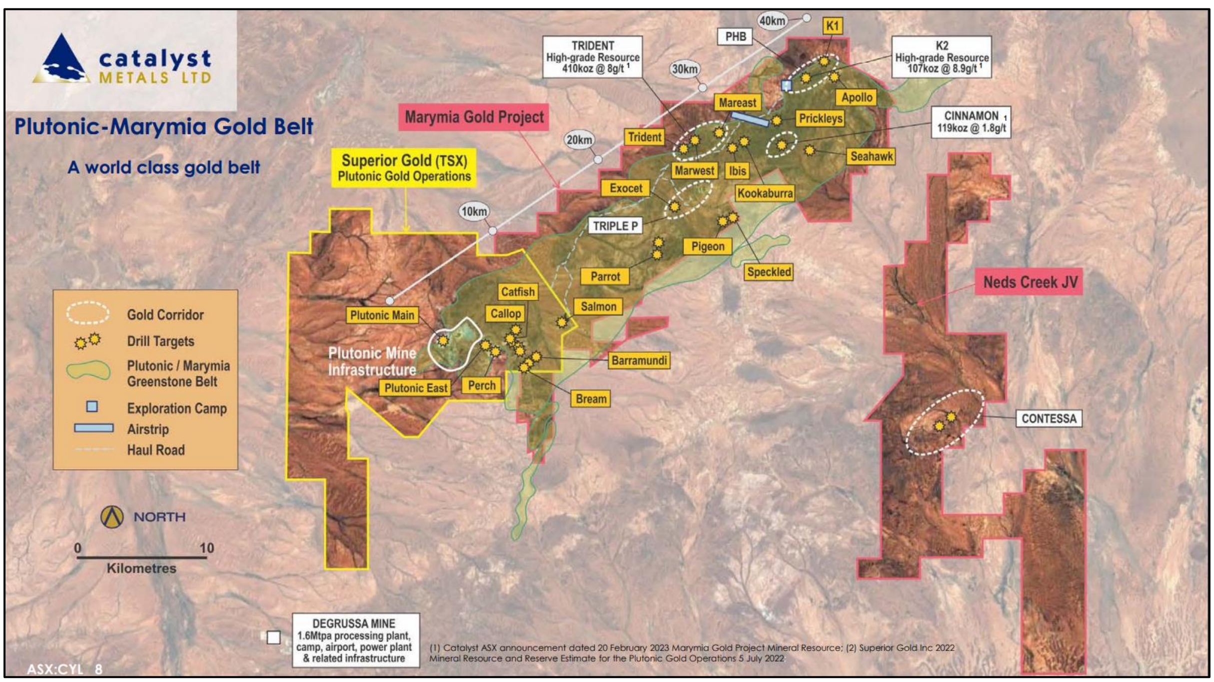
Catalyst Metals Limited is an Australian-based gold mining and development company listed on the Australian Securities Exchange (ASX code: CYL) and has recently completed the acquisition of Superior Gold Inc (TSXV: SGI) which was the owner of the Plutonic Gold Mine. CYL holds significant landholdings in three mineral belts with large gold endowments – Henty (Tasmania), Plutonic - Marymia (WA) and Four Eagles (Victoria). RPM Advisory Services Pty Ltd (RPM) was retained by Catalyst Metals Limited (the "Client" or "CLY") to report a Preliminary Economic Assessment ("PEA" or the "Report") on the Trident Gold Project ("Trident" or the "Project") which forms part of Plutonic-Marymia Gold Belt located in Western Australia. The Client is the owner and operator of the adjacent Plutonic gold mine (the "Mine"), the proposed plant facility to process the Trident ore. The Mine and Project form part of a larger project which, for the proposes of this Report, are termed the "Combined Project"**,** as shown in **Figure 2-1**

Trident is owned by Vango Mining Limited (the 'Company"), a wholly-owned subsidiary of CYL**.** The PEA is based on mining the Trident deposit via conventional underground open stoping mechanised mining methods using an owner-operator mining team. The mining and processing costs are based on actual mining costs achieved at CYL's nearby Plutonic Mine.

This PEA assumes that Trident ore will be processed at the Mine's processing facility. It is assumed that Trident will be an incremental ore source to a base load being already processed by CYL at Plutonic. This assumption is the basis for this study's processing and general and administrative costs.

The PEA has been prepared in accordance with the disclosure and reporting requirements outlined in NI 43-101 Standards of Disclosure for Mineral Projects.

Figure 2-1 Plutonic – Marymia Gold Belt



2.1 Sources of Information

Site visits were carried out by Qualified Persons, Mr Jeremy Clark on the 14th March 2023, and Dr Spero Carras in 2019. The site visit focused on reviewing the drilling location's results and procedures and assessing the historical mining activity.

The documentation reviewed and other sources of information, are listed at the end of this report in Section 27 References.

2.2 List of Abbreviations

Units of measurement used in this report conform to the metric system. All currency in this report is Australian dollars (AUD) unless otherwise noted.

Abbreviation	Unit or Term
A	Ampere
ARD	acid rock drainage
Ag	silver
Au	gold
AUD	Australian dollar
AuEq.	gold equivalent
CAPEX	Capital expenses
CFM	cubic feet per minute
CM	Carrizal Mining
CoG	cutoff grade
COO	Chief Operating Officer
CST	cleaner scavenger tailings
Cu	copper
dmt	dry metric tonnes
dst	dry short tons
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management System
EP	Equator Principles
EPC	Engineering, Procurement, Construction
EPCM	Engineering, Procurement, Construction Management
ESAP	Environmental and Social Action Plan
F&A	Finance and Administration
Feet	feet, ′ or `
FoS	factor of safety
FS	Feasibility Study
G & A	General and Administrative
g	grams
hp	horsepower
k	Thousand
klbs	thousands of pounds
km	kilometer
km^2	square kilometers
koz	thousands of troy ounces
kt	kilo tonnes
kV	kilovolt
kW	kilowatt
kWhr	kilowatt hour
l	liter

l/s	liters per second
LAN	Local Area Network (computer communications system)
lb	pound
lbs	pounds
LOM	Life of Mine
m	meter(s)
m^3	cubic meter
masl	meters above sea level
MDE	maximum design earthquake
M+I	Measured and Indicated (with respect to Resources)
Mm^3	million cubic meters
MSHA	US Department of Labor – Mine Safety and Health Administration
Mt	million tonnes
MW	megawatt
MWhr	megawatt-hour
Mw	movement magnitude (of rock, by seismic activity)
NPV	net present value
OBE	Operational basis earthquake
OPEX	Operational expenses
oz. t	Troy ounces
opt	Troy ounces per short ton
P^{80}	80-percent-passing size
PAG	Potentially acid generating
PC	Principal Contractor
Pb	lead
PE or PEng	Professional Engineer
PFS	Prefeasibility Study
PG or PGeo	Professional Geologist
PGA	peak ground acceleration
PMF	probable maximum flood
ppm	parts per million
QA/QC	quality-assurance/quality-control
Rec	recovery
RMR	Rock Mass Rating
ROI	return on investment (percentage, after tax)
RPM	RPMGlobal
S	sulfur
SAG	semi-autogenous grinding
SEIA	Social and Environmental Impact Assessment
SLOS	Sub-Level Open Stoping
SSM	Santacruz Silver Mining
tpd	metric tons per day
US$	US dollars
WAN	Wide Area Network (computer communication system)
WRF	Waste Rock Facility
Wi	Work index (grinding characteristic of rock)

Zn	zinc

2.3 Participants

A site visit was carried out on the 14th March 2023, by RPM consultant Mr Jeremy Clark while Dr Spero Carras undertook a site visit in 2019. Project participants included:

- Jeremy Clark (Principal Geologist)
- Dr Spero Carras (Executive Consultant)
- Shane McLeay (Principal Mining Consultant)
- Ross Moger (Senior Mining Consultant)
- Mr Dirk Richards (Executive Processing Engineer)
- Erin Lee (Senior Environmental Advisor)
- Grant Morris (Executive Mining Consultant)
- Ms Siobhan Pelliccia (Manager – ESG)
- Mr Philippe Baudry (Executive General Manager – Advisory)

2.4 Responsibility and Context of this Report

The contents of this report have been created using data and information provided by or on behalf of the Client or the Company at the date stated on the cover page. This report cannot be relied upon in any way if the information provided to RPM changes. RPM is under no obligation to update the information contained in the report at any time.

The Company has indemnified and held harmless RPM and its subcontractors, consultants, agents, officers, directors, and employees from and against any and all claims, liabilities, damages, losses, and expenses (including lawyers' fees and other costs of litigation, arbitration or mediation) arising out of or in any way related to:

- RPM's reliance on any information provided by the Company; or
- RPM's services or Materials; or
- Any use of or reliance on these services; and in all cases, save and except in cases of wilful misconduct (including fraud) or gross negligence on the part of RPM and regardless of any breach of contract or strict liability by RPM.

The findings and opinions presented herein are not warranted in any manner, expressed or implied. The ability of the operator, or any other related business unit, to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond the control of RPM and cannot be fully anticipated by RPM. These factors included site-specific mining and geological conditions, the capabilities of management and employees, availability of funding to properly operate and capitalise the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, etc. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining operation.

2.5 Capability and Independence

RPM provides advisory services to the mining, environmental and finance sectors. Within its core expertise it provides independent technical reviews, resource evaluation, mining engineering, environmental and mine valuation services to the resources and financial services industries.

All opinions, findings and conclusions expressed in this Technical Report are those of RPM and its specialist advisors as outlined in ***Section 2.4*.**

Drafts of this Report were provided to the Client, but only for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in this Technical Report.

RPM has been paid, and has agreed to be paid, professional fees based on a fixed fee estimate for its preparation of this Report.

This Technical Report was prepared on behalf of RPM by the signatories to this Technical Report whose experiences are set out in **Section 28** of this Technical Report. The specialists who contributed to the findings within this Report have each consented to the matters based on their information in the form and context in which it appears.

3. RELIANCE ON OTHER EXPERTS

This report has been prepared by RPM for Catalyst. The information, conclusions, opinions, and estimates contained herein are based on:

- The information available to RPM at the time of preparation of this report, in particular the Mineral Resource estimate statements (Section 14) by Dr Spero Carras, who was a co-contributor to the report,
- The information available to RPM at the time of preparation of this report, in particular, Sections 16, 18, 21 and 22 by Entech Pty Ltd, who was a co-contributor to the Report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information are supplied by Catalyst and other third-party sources which is largely limited to the history of the project.

Taxes, royalties and other government levies or interests, applicable to any future or income from the project are not considered applicable to the report.

RPM has not researched property title or mineral rights for the Project and expresses no opinion as to the ownership status of the property.

4. PROPERTY DESCRIPTION AND LOCATION

The Property is located approximately 1,000km northeast of Perth in the Northern Goldfields of Western Australia. Located 216 km northeast of the regional town of Meekatharra and 160km south of Newman (**Figure 4-1**) the Marymia Project consists of 45 granted Mining Tenements and 11 exploration and land use permits covering an area of 400 sq.km. The Project was mined in the late 1990s and early 2000s by Resolute (Barrick). This mining was part of the Plutonic mining operation which is located directly adjacent to the tenements to the southwest, owned by Catalyst. The Project is located approximately at the following coordinates in the central area of the tenement package:

- Easting: 119.636326o, and
- Northing: 25.224840º.

In addition to the Marymia Project, Vango currently has seven tenements covering 340 sq.km known as the Ned's Creek Joint Venture Project, which is under a joint venture with Lodestar Minerals Ltd. Ned's Creek is located 25km to the south of Marymia with Vango currently earning into 51% with the spend of AUD 4.5M.

The location of the Project is shown below in **Figure 4-1** and **Figure 4-2**.

4.1 Land Tenure

Minerals tenure for the Marymia Project as granted under the *Mining Act 1978* (WA) and recorded in the Department of Mines, Industry Regulation and Safety (DMIRS)0F[1] database as of 15/03/2023 is summarised in **Table 4-1** and shown in **Figure 4-1**. **Table 4-1** identifies four lease types at the Project, these include:

- Mining Leases – The lessee of a Mining Lease may work and mine the land, take and remove minerals, and do all of the things necessary to effectually carry out mining operations in, on, or under the land, subject to conditions of title.
- Exploration Leases – The lessee of an Exploration Lease has the right to enter and explore the land over which it is granted as well as extract or disturb up to 1,000 tonnes of material.
- Miscellaneous Licences – For purposes such as roads, pipelines, power lines, a bore/bore field, and a number of other special purposes outlined in Section 42B of the Mining Regulation 1981.

RPM is not aware of any environmental liabilities on the property. Vango has all the required permits to conduct the proposed work on the property. RPM is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property. RPM recommends that potential investors complete their own legal due diligence on this matter.

As shown in **Table 4-1** all the Marymia tenements are held 100% held by the Company, while the Ned's Creek project is under a joint venture agreement where Vango is earning and currently holds 30% interest with Vango currently earning into 51% with the spend of AUD 4.5M. As outlined in Section 20, the Marymia licences are subject to ongoing rehabilitation works of historical mine sites. In addition, the total rent for Marymia is AUD 0.81 M with expenditure required of AUD 3.6M inclusive of rehabilitation costs.

The Trident PEA covers only a portion of the Marymia Project, on licence M52/217, which is highlighted in **Table 4-1**

[1] Department of Mines, Industry Regulation, and Safety: the state mining regulator.

Table 4-1 Tenement Information

Project	Type	Tenement ID	Grant_Date	Expiry	Area	Status	Ownership
	Exploration Licence	E 52/2071 (Live)	4/09/2008	4/09/2024	15.00000 BL.	Granted	100%
	Exploration Licence	E 52/2072 (Live)	4/09/2008	4/09/2024	10.00000 BL.	Granted	100%
	Mining Lease	M 52/183(Live)	29/11/1989	4/12/2031	902.70000 HA.	Granted	100%
	Mining Lease	M 52/217(Live)	18/03/1991	20/03/2033	913.05000 HA.	Granted	100%
	Mining Lease	M 52/218(Live)	18/03/1991	20/03/2033	988.75000 HA.	Granted	100%
	Mining Lease	M 52/219(Live)	18/03/1991	20/03/2033	799.35000 HA.	Granted	100%
	Mining Lease	M 52/220(Live)	18/03/1991	20/03/2033	772.05000 HA.	Granted	100%
	Mining Lease	M 52/226(Live)	18/03/1991	20/03/2033	843.85000 HA.	Granted	100%
	Mining Lease	M 52/227(Live)	18/03/1991	20/03/2033	901.80000 HA.	Granted	100%
	Mining Lease	M 52/228(Live)	18/03/1991	20/03/2033	943.20000 HA.	Granted	100%
	Mining Lease	M 52/229(Live)	18/03/1991	20/03/2033	896.75000 HA.	Granted	100%
	Mining Lease	M 52/230(Live)	18/03/1991	20/03/2033	743.75000 HA.	Granted	100%
	Mining Lease	M 52/231(Live)	18/03/1991	20/03/2033	814.80000 HA.	Granted	100%
	Mining Lease	M 52/232(Live)	18/03/1991	20/03/2033	967.15000 HA.	Granted	100%
	Mining Lease	M 52/233(Live)	31/01/1991	4/02/2033	606.10000 HA.	Granted	100%
	Mining Lease	M 52/234(Live)	31/01/1991	4/02/2033	761.10000 HA.	Granted	100%
	Mining Lease	M 52/235(Live)	31/01/1991	4/02/2033	928.65000 HA.	Granted	100%
	Mining Lease	M 52/246(Live)	26/07/1991	9/08/2033	941.35000 HA.	Granted	100%
	Mining Lease	M 52/247(Live)	26/07/1991	9/08/2033	784.35000 HA.	Granted	100%
	Mining Lease	M 52/257(Live)	24/10/1991	4/11/2033	947.90000 HA.	Granted	100%
Marymia	Mining Lease	M 52/258(Live)	24/10/1991	4/11/2033	990.95000 HA.	Granted	100%
	Mining Lease	M 52/259(Live)	24/10/1991	4/11/2033	770.85000 HA.	Granted	100%
	Mining Lease	M 52/269(Live)	4/11/1991	7/11/2033	863.25000 HA.	Granted	100%
	Mining Lease	M 52/270(Live)	15/11/1991	27/11/2033	737.00000 HA.	Granted	100%
	Mining Lease	M 52/278(Live)	19/12/1991	13/01/2034	271.95000 HA.	Granted	100%
	Mining Lease	M 52/279(Live)	19/12/1991	13/01/2034	459.25000 HA.	Granted	100%
	Mining Lease	M 52/291(Live)	18/03/1992	20/03/2034	538.20000 HA.	Granted	100%
	Mining Lease	M 52/292(Live)	18/03/1992	20/03/2034	588.25000 HA.	Granted	100%
	Mining Lease	M 52/293(Live)	18/03/1992	20/03/2034	372.05000 HA.	Granted	100%
	Mining Lease	M 52/299(Live)	10/03/1992	17/03/2034	415.80000 HA.	Granted	100%
	Mining Lease	M 52/303(Live)	9/08/1992	12/08/2034	732.35000 HA.	Granted	100%
	Mining Lease	M 52/304(Live)	9/08/1992	12/08/2034	913.20000 HA.	Granted	100%
	Mining Lease	M 52/305(Live)	14/05/1992	21/05/2034	46.61000 HA.	Granted	100%
	Mining Lease	M 52/306(Live)	14/05/1992	21/05/2034	488.95000 HA.	Granted	100%
	Mining Lease	M 52/320(Live)	26/08/1992	3/09/2034	637.60000 HA.	Granted	100%
	Mining Lease	M 52/321(Live)	26/08/1992	3/09/2034	618.10000 HA.	Granted	100%
	Mining Lease	M 52/323(Live)	26/08/1992	3/09/2034	669.90000 HA.	Granted	100%
	Mining Lease	M 52/366(Live)	12/05/1993	14/05/2035	156.20000 HA.	Granted	100%
	Mining Lease	M 52/367(Live)	8/06/1993	10/06/2035	513.05000 HA.	Granted	100%
	Mining Lease	M 52/369(Live)	8/06/1993	10/06/2035	345.70000 HA.	Granted	100%
	Mining Lease	M 52/370(Live)	8/06/1993	10/06/2035	321.05000 HA.	Granted	100%

Project	Type	Tenement ID	Grant_Date	Expiry	Area	Status	Ownership
	Mining Lease	M 52/396(Live)	15/06/1993	15/06/2035	540.75000 HA.	Granted	100%
	Mining Lease	M 52/478(Live)	17/05/1994	23/05/2036	42.09000 HA.	Granted	100%
	Mining Lease	M 52/572(Live)	4/06/1996	14/06/2038	103.95000 HA.	Granted	100%
	Mining Lease	M 52/593(Live)	24/09/1996	27/09/2038	87.74000 HA.	Granted	100%
	Mining Lease	M 52/654(Live)	23/12/1997	30/12/2039	9.59750 HA.	Granted	100%
	Mining Lease	M 52/748	31/12/2015	31/12/2036	2.99900 HA.	Granted	100%
	Prospecting Licence	P 52/1587 (Live)	13/12/2019	13/12/2023	14.96100 HA.	Granted	100%
	Prospecting Licence	P 52/1588 (Live)	13/12/2019	13/12/2023	22.97309 HA.	Granted	100%
	Prospecting Licence	P 52/1609 (Live)	18/05/2022	18/05/2026	31.64554 HA.	Granted	100%
		L 52/188	28/09/2018	28/09/2039	95.84	Granted	100%
		L 52/154			372.26300 HA.	pending	100%
Ned's Creek	Mining Lease	M 52/779(Live)	27/09/2013	27/09/2034	794.45000 HA.	Granted	JV
	Mining Lease	M 52/780(Live)	27/09/2013	27/09/2034	886.60000 HA.	Granted	JV
	Mining Lease	M 52/781	31/12/2015	31/12/2036	940.95000 HA	Granted	JV
	Mining Lease	M 52/782	31/12/2015	31/12/2036	958.70000 HA	Granted	JV

LEGEND

- Town
- Road
- River
- Political Boundaries

N

0 30 60 kilometer

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

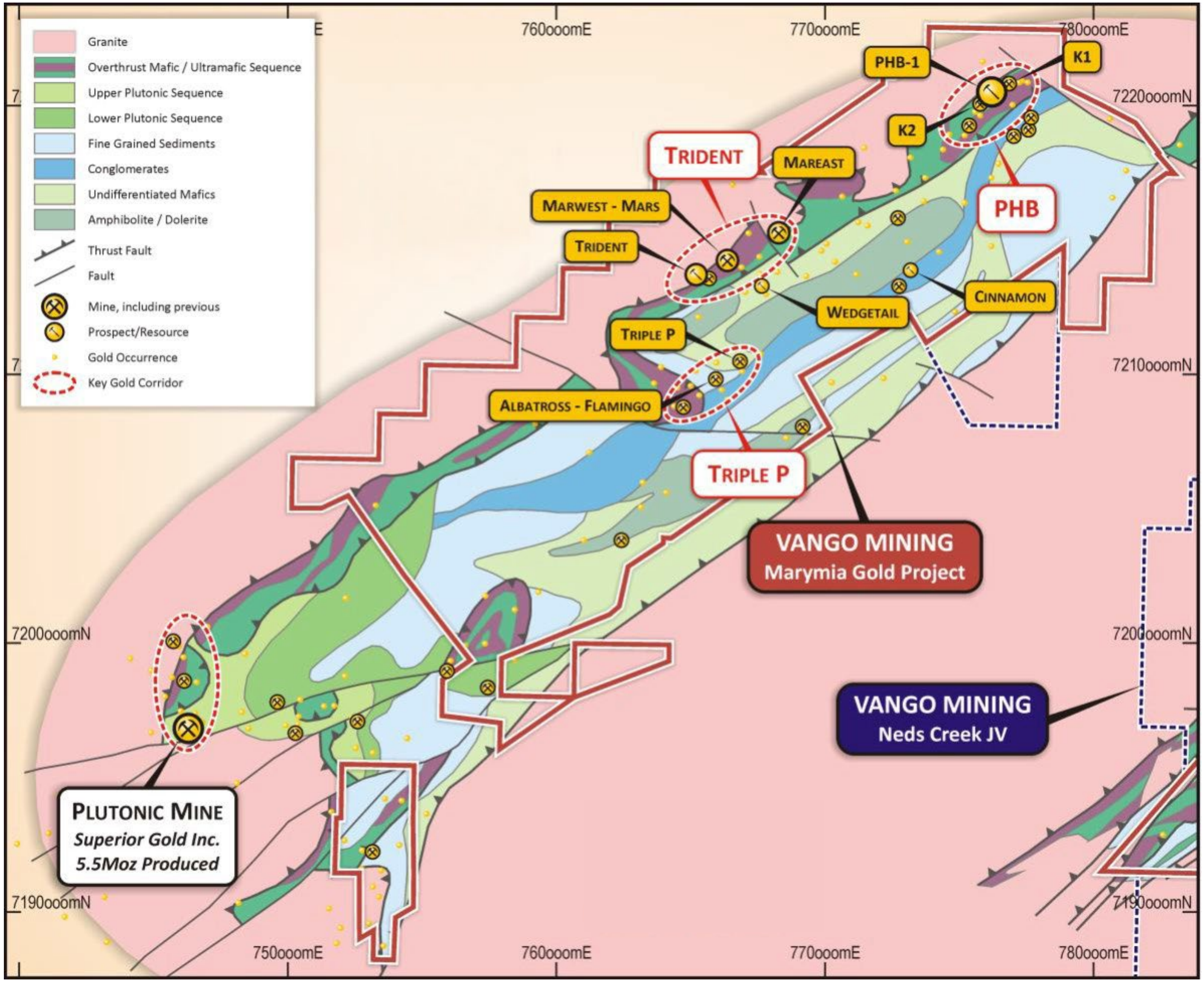
catalyst METALS LTD

PROJECT

NAME	TRIDENT GOLD PROJECT
DRAWING	General Location Plan

FIGURE NO.	PROJECT NO.	DATE
4-1	ADV-AU-00572	August 2023

RPMGLOBAL



LEGEND	CLIENT	PROJECT
N 0 2.5 5 kilometer DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE	catalyst METALS LTD	NAME: TRIDENT GOLD PROJECT DRAWING: Detailed Location Plan and Regional Geology FIGURE NO.: 4-2 PROJECT NO.: ADV-AU-00572 DATE: August 2023

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5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

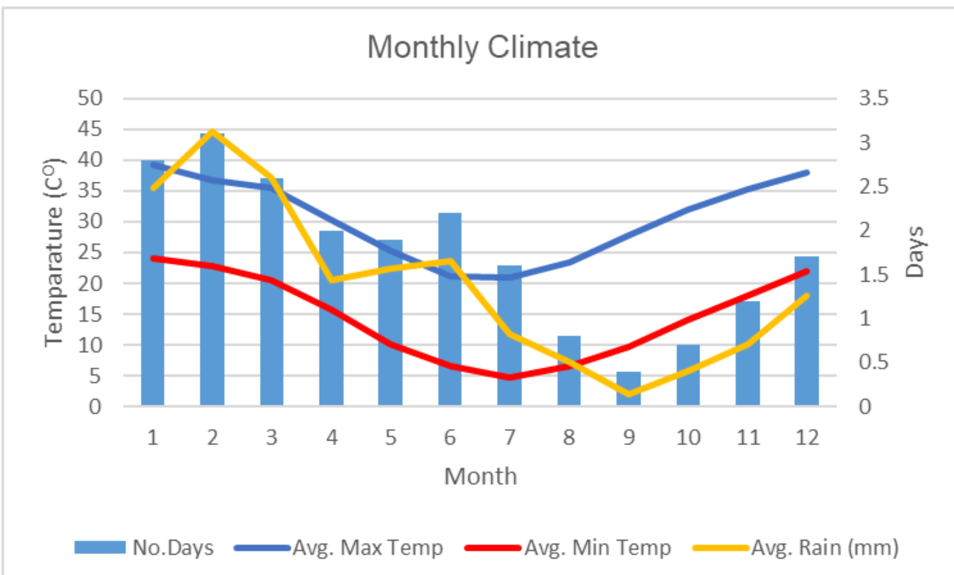
5.1 Accessibility

The Project is accessible from Perth via the Great Northern Highway via sealed roads from Meekathara and Newman, followed by unsealed for approximately 50km. Access between the tenements and known deposits is via high-quality unsealed historical haul roads and station tracks. An airstrip is located within the Marymia Project suitable for light aircraft while the adjacent Plutonic mine allows larger aircraft, as well as the nearby Degrussa Copper mine operated by Sandfire Resources which is a tarred airstrip.

5.2 Climate

The Project is located in a semi-arid environment and is characteristic of a Mediterranean climate with mild winters and hot, dry summers. The Project area experiences light rainfall with an average rainfall of approximately 240 mm per annum, however, this varies throughout the year with the main rain season occurring between December and June as shown in **Figure 5-1**. Average daily maximum temperatures range from approximately 21˚C in June to 40˚C in January.

Figure 5-1 Monthly Regional Climate



Note: Source http://www.bom.gov.au/climate/averages/tables/cw_007080.shtml

5.3 Seismicity

The Project is located within a region of Western Australia judged to be at low risk from future seismic events taking place during the life of the proposed mining. The estimated peak ground acceleration in 50 years with a 10% chance of being exceeded is low at ~0.06g

5.4 Infrastructure

Due to the status of the Project, limited infrastructure is on-site. This infrastructure includes an exploration camp consisting of mess facilities, and satellite communications and can accommodate up to 30 people as shown in **Figure 5-2.** In addition numerous haulroads are located onsite which are well maintained and allow excellent access across the site between historical pits.

Figure 5-2 Exploration Camp Facilities

5.5 Physiography

The Project area is characterised by gentle to moderate topographic relief cut by minor, ephemeral, northwest-draining tributaries to the nearby Gascoyne River. With an average elevation throughout the project of around 600 metres ("m") above sea level, the vegetation cover is dominated by mulga woodlands and spinifex grasslands (**Figure 5-3**).

Figure 5-3 Skyhawk Pit with Geography of the Project

6. HISTORY

6.1 Prior OWNERSHIP

Given the history of the Project being combined with the adjacent Plutonic Mine tenements, its suitable to discuss both the ownership and development history of these two areas in conjunction. A summary of the ownership and production history is as follows:

- In the 1970s, International Nickel Company ("Inco") undertook nickel exploration over the Archaean Plutonic Marymia Greenstone Belt (the "Belt") and abandoned the area in 1976 after failing to identify an economic nickel deposit.
- In 1986, Redross Consultants Pty Ltd ("Redross") was granted an Exploration Licence over the southern portion of the Plutonic mining lease (outside of the Marymia Project area). Titan Resources NL ("Titan") commenced exploration in the area surrounding Marymia Hill (portions of the Project area).
- In 1987 Redross optioned the Plutonic Exploration Lease to Great Central Mines Limited ("GCM"). Resolute Resources Ltd ("Resolute") and Titan entered into a joint venture over the Marymia Hill leases. Battle Mountain Australia ("BMA") commenced exploration in the Plutonic Bore area (outside of the Marymia Project area). Stockdale Prospecting Ltd conducted a regional sampling program in the vicinity of Marymia Dome.
- In 1989, GCM sold the Plutonic Gold Mine lease to Pioneer Minerals Exploration who changed their name to Plutonic Resources Limited.
- In 1992, mining started in the Project K1 and K2 open pits.
- Marymia Triple P open-pit production started in 1993 with treatment at the Marymia Plant (since removed and rehabilitated).
- In 1998, Homestake Mining Company acquired Plutonic Resources, and Homestake Gold of Australia Limited (Homestake") bought all of the Marymia property and assets from Resolute. Homestake owned and operated the adjacent Plutonic Gold Mine as a result of the Plutonic Resources acquisition.
- Homestake Mining (USA) merged with Barrick Gold Corp. ("Barrick") in 2002 resulting the Barrick taking ownership of the PLutoninc Mine and the Marymia tenements.
- Open pit mining on the tenements commenced at Triple P, B Zone, in August 2002, and was completed in August 2003.
- Barrick divested the Project's tenement holding (Marymia) in August 2010 which was purchased by Dampier Gold including the K2 deposit and the Trident Deposit, in 2010 and in November 2013 formed a Joint Venture/Farm In Agreement with Ord River Resources (ORD).
- The Project was acquired by Vango Mining Ltd (the current owners) which remained from the previous JV partners of Dampier ORD in 2014.

6.2 Development History

The Plutonic region was first developed for pastoral purposes in the early 1880s with stations being pegged out around Murchison and Gascoyne between 1870 and 1884. It was not until the 1920s that the Baumgarten and Plutonic areas were explored for minerals. Prospectors later found this area of interest when gold was found at Peak Hill in 1892, approximately 100 km southwest of Plutonic Mine resulting in many Europeans travelling to the region and establishing small towns and communication routes. The Peak Hill goldfields lasted from 1892 until 1908.

The lack of outcrop, complex geology and remote location inhibited further exploration activities until the late 1960s when the greenstone successions were first recognised. Between 1969 and 1976, the Plutonic Well Belt was explored for nickel mineralisation under the joint venture, but these studies failed to locate any economic nickel deposits. In the mid-1980s, several exploration companies acquired tenure over various portions of the

Plutonic Well Belt (this includes both the Plutonic Mine, which is outside the tenement holdings, and the Marymia Project).

Inco conducted nickel exploration in the "Crows Nest Well" Project between 1969 and 1976 using soil geochemistry, geophysics, costeaning, rotary air blast ("RAB"), and RC drilling. Inco identified and recorded the greenstone rocks within the Belt in 1976. No economic nickel was found.

Battle Mountain Australia ("BMA") carried out exploration between 1987 and 1993. Commencing in the southern portion of the belt, geological mapping, geochemical sampling and subsequent reverse circulation ("RC") drill testing of an arsenic and gold soil geochemical anomaly led to the discovery of the Plutonic deposit (not within the Project) in 1987. This was rapidly followed by the discovery of the K1 and K2 deposits along the Keillor Shear in the Marymia area (northern part of the belt) in 1988 and 1990, respectively. In 1992 ,discovery of the Triple P deposit resulted from regional mapping, bulk leach extractable gold soil sampling, and RAB drilling.

BMA followed up with RAB drilling in 1992, aswell asair core ("AC"), RC, and diamond drilling programs were conducted to define the deposits and further defined A, B, and C zones. This drilling also resulted in the Marwest and Mareast deposits being delineated as well as Pelican, Albatross and Flamingo deposits being discovered in the southern portion of the Project.

These exploration successes triggered extensive, albeit generally shallow, greenfield exploration throughout the remainder of the Plutonic Well Belt. The emphasis during the period 1987 to 1995 was directed towards defining and converting defined near-surface mineralisation to 'resource' and reserve status. Based on closer-spaced delineation drilling, this change in strategy resulted in only modest increases to the overall gold endowment of the belt, but greater confidence in the defined resource and reserve position.

In 2000, the Homestake Exploration group carried out induced polarisation and moving loop electro-magnetic geophysical surveys on the Plutonic trend (the Project and Plutonic mine). A total of ten deep RC holes for 2,515 m were drilled to test the geophysical anomalies defined and the down-dip extension of mineralisation. Two holes intersected semi-massive sulphide mineralisation at depth at what is now the adjacent Plutonic Mine.

Exploration efforts focused on the Triple P open pit in 2002, but all open pit mining ceased at Plutonic in 2005. Plutonic Resources Ltd then focused on underground targets for the expansion of Mineral Resources in the Plutonic Underground (not include in the Project).

More than 50 gold deposits were ultimately delineated in the Plutonic, Marymia and Freshwater (southern margin) areas of the belt during this period. Mining of the Plutonic Main Pit and Marymia K1-K2 open pits commenced in 1990 and 1992, respectively. At Marymia, processing of ore from the K1-K2, Marwest and other open pits at a separate facility continued until early 1998 when operations were placed on care and maintenance due to a significant decline in the gold price. Total gold production at Marymia between 1992 and 1998 is estimated at 3.2 Mt grading 3.5 g/t Au for 360,000 oz of contained gold derived from more than.

Following a period of ownership consolidation, open pit mining recommenced in the Marymia tenements in 2000 with ore sourced from cutbacks on seven existing open pits and the development of 12 new pits (across both the Plutonic and Project areas). Open pit mining operations in the project were completed in mid-2005 and the exploration focus shifted towards near-mine definition drilling in support of the Plutonic underground operations with limited exploration undertaken until Dampier took ownership.

Estimated total gold production at the Marymia and Freshwater areas is 0.685 Moz and 0.42 Moz as noted by the previous internal report. RPM has been unable to verify these results, however, visual inspection of the mined pits appears reasonable.

6.3 Historical Resource Estimates

Historical estimates on the Project have been undertaken by Barrick in 2009 as shown in **Table 6-1**. These Mineral Resources are reported by Barrick in accordance with NI 43-101, however, have not been reviewed by

RPM. This estimate is considered to be historical in nature and should not be relied upon. A qualified person has not completed sufficient work to classify the historical estimate as a current Mineral Resource or Mineral Reserve, and the Company is not treating the historical estimates as current Mineral Resources or Mineral Reserves, given an update to the Mineral Resources has occurred and is reported in the report. No cut off grade was provided.

Table 6-1 Mineral Resources as at 31 December 2009

Deposit	Area	Indicated		Inferred	
		Quantity (t)	Grade (Au g/t)	Quantity (t)	Grade (Au g/t)
K2	OP	88,000	2.8	9,000	2.1
	UG	104,000	5.1	32,000	4.9
Sub-total		**192,000**	**4.1**	**41,000**	**4.3**
Trident	OP	-	-	-	-
	UG	754,000	6.1	53,000	5.1
Sub-total		**754,000**	**6.1**	**53,000**	**5.1**
Albatross - Flamingo	OP	194,000	1.8	103,000	2.8
Sub-total		**194,000**	**1.8**	**103,000**	**2.8**
Triple P	OP	283,000	2.8	11,000	3.6
Sub-total		**283,000**	**2.8**	**11,000**	**3.6**
Total		**1,734,000**	**4.3**	**235,000**	**3.6**

Source: Barrick, 2009
Mineral Resources are exclusive of Ore Reserves
OP = open pit, UG = underground
Open pit resources are reported within an optimized pit shell at A$845/oz Au
Due to rounding, tonnages and grades may not equate to the exact contained ounces
100% equity basis

In addition to the historical K2 underground gold resource of 30,900 ounces, there is a Probable Reserve of 35,200 ounces reported by Barrick in 2009, as shown in **Table 6-2**.

Table 6-2 Historical Probable Reserves 2009

Deposit	Classification	Tonnes	Grade (g/t Au)	Contained metal (oz)
K2	Proved	-	-	-
	Probable	222,000	4.9	35,200
Total		**222,000**	**4.9**	**35,200**

These estimates are considered to be historical in nature and should not be relied upon. A qualified person has not completed sufficient work to classify the historical estimate as a current Mineral Resource or Mineral Reserve and Vango is not treating the historical estimates as current Mineral Resources or Mineral Reserves, given an update to the Mineral Resources has occurred and is reported in the report.

6.4 Past Production

A total of 685koz have been produced within the project predominately via numerous open-cuts which focused on the near-surface oxide material. RPM notes some minor underground workings have been completed at Trident while numerous levels were developed and mined at K2.

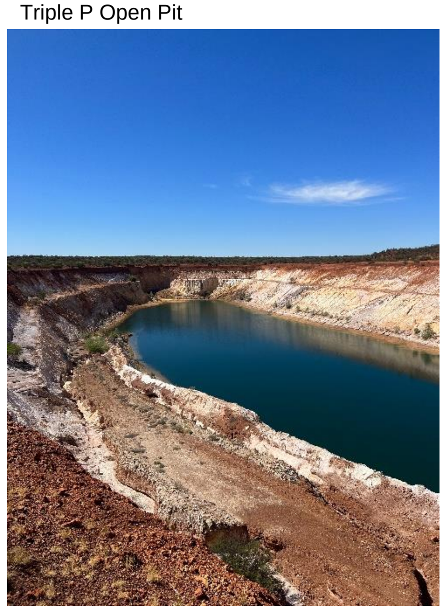
Figure 6-1 Historical Mining Operations

K2 Open Pit

PHB1 Open Pit

Mars Open Pit

Triple P Open Pit



7. GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

Marymia area covers the northeast-southwest trending Plutonic (Marymia) Greenstone Belt, occurring in the central portion of the Marymia Inlier. The Belt is interpreted as a regional-scale fold-thrust belt. The generalised stratigraphic column of the Plutonic Greenstone Belt consists of a mafic-ultramafic-BIF dominated sequence at the base, passing into mafic-dominated and finally clastic sediments at the top.

Rocks of the Marymia Inlier consist mainly of granite and gneiss with enclaves of meta-greenstone (including mafic and ultramafic igneous rocks, BIF and sedimentary rock precursors) metamorphosed at upper amphibolite to granulite facies. The meta-greenstones may represent high-grade metamorphic equivalents of the Plutonic Greenstone Belt to the north-east. Rocks of the Peak Hill Schist area include quartz-sericite schist, quartz-muscovite schist and quartz-muscovite-biotite-chlorite schist, which have been variously deformed and contain a range of mylonitic textures and discrete mylonitic units.

Soils typically comprise thin colluvium/alluvium over laterite (ferricrete) caprock. Based on the geotechnical investigation, sub-surface conditions of the site comprise clayey sand / sandy clay, clayey gravel, sandy clayey gravel and gravelly clayey sand extending to the maximum investigated depth of 1.1 m. Open mulga woodlands occur on shallow earthy loams over hardpan on the plains, with mulga scrub and Eremophila shrublands on the shallow stony loams of the ranges. The Carnegie Salient to the east is characterised by extensive salt lake features supporting succulent steppes

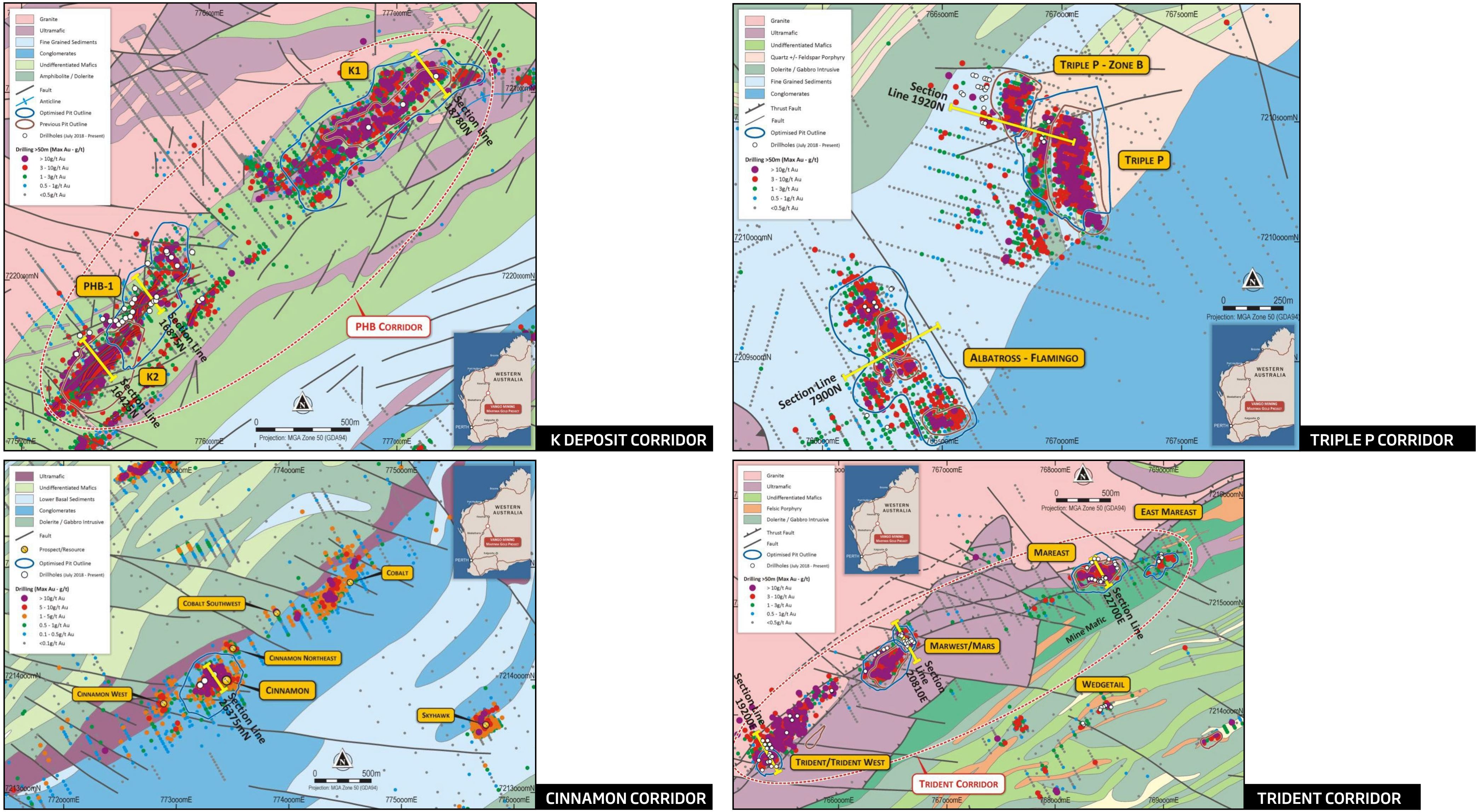
The Marymia Inlier is an Archaean basement remnant within the Proterozoic Capricorn Orogen comprising two mineralised greenstone belts (Plutonic Well and Baumgarten), with surrounding granite and gneissic complexes. The Capricorn Orogen is situated between the Pilbara and Yilgarn Cratons and is possibly the result of an oblique collision of the two Archaean cratons in the early Proterozoic.

The Belt extends over an 80 km strike length and is up to 10 km in width. The Belt is sub-divided into two volcano-sedimentary sequences, consisting of mafic and ultramafic units which are overlain by predominately felsic volcaniclastic and sedimentary rocks. These units have been subject to greenschist and amphibolite facies metamorphism, deformed by polyphase folding, shearing and faulting, and intruded by felsic porphyry and granitoid bodies. This has resulted in a strong northeast trending fabric parallel to multiple low-angle thrust faults. These thrust faults occur throughout the Belt and are intimately associated with the known gold mineralisation.

The Belt has been shaped by three major structural events — D1, north-directed, low-angle thrusting emplacing mafic and ultramafic units above sediments, followed by granite sheet intrusion and subsequent granite thrusting along the western portion of the Belt during D2. This was followed by D3 high-angle thrusting towards the southeast, open folding of earlier structures and reactivation of D2-thrusts. Gold mineralisation is thought to be associated with the earliest structural event (D1) within regional-scale thrust duplexes controlled by deep-seated east-west trending lineaments.

The area hosts 39 known gold deposits mined throughout the history of mining across the Marymia Dome.

Gold mineralisation occurs in a large number of deposits and prospects in the Belt, with the main deposit at the Plutonic Gold Mine on the southern end. Mineralisation regularly occurs as shallow dipping, layered parallel lodes, although steep lodes and minor quartz-vein-hosted deposits also occur. Regionally within the greenstone belt, mineralised host rocks vary from amphibolites to ultramafics and banded iron formation (BIF). Lateritic and supergene enrichment are common throughout the Belt and have been mined locally. Biotite, arsenopyrite, and lesser pyrite/pyrrhotite are common minerals generally accepted to be associated with gold mineralisation.



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Local Geology Maps

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7.2 Property Geology

The Property Geology can be separated into various gold-bearing corridors which contain different geology. Four known corridors are defined which include the Trident, Triple P, PHB and Cinnamon areas (**Figure 7-1**). These separate corridors are discussed below

7.2.1 Trident Corridor

The Trident corridor extends from the Trident West deposit through Trident in the south, Marwest/Mars and continues to the Mareast and East Mareast deposits in the north (**Figure 7-1**).

Trident

The Trident gold deposit is a structurally controlled, orogenic, mesothermal (amphibolite metamorphic facies) gold deposit hosted by ultramafic rocks that are part of strike extensions to the Plutonic Gold Mine stratigraphy (**Figure 4-2** and **Figure 7-1**). The gold deposit is specifically hosted by, shallow to moderate dipping, ultramafic tremolite – phlogopite (mica) schist, immediately overlying serpentinised ultramafic units, derived from higher MgO ultramafic volcanics.

High-grade gold zones are best developed within the shallow dipping ultramafic tremolite – phlogopite schist where it is bent into a concave flexure, in the hangingwall of steep, north-westerly dipping fault structures (see (**Figure 7-2**). Vertical “dragging” movement against these steeply dipping faults appear to have played a role in dilating the cleavage of the ultramafic schist, resulting in mineralisation and alteration between the dilated cleavage planes. The steeply dipping faults also host gold mineralisation.

Gold mineralisation is associated with potassic, phlogopite mica, and alteration has a low proportion of quartz and sulphides, including minor pyrrhotite, pentlandite, chalcopyrite and, directly associated with gold, bismuthinite and rare bismuth tellurides. Rarely observed gold grains (in microscopy) are predominantly fine (<50 micron) but free and/or attached to, and rarely occluded within sulphide grains.

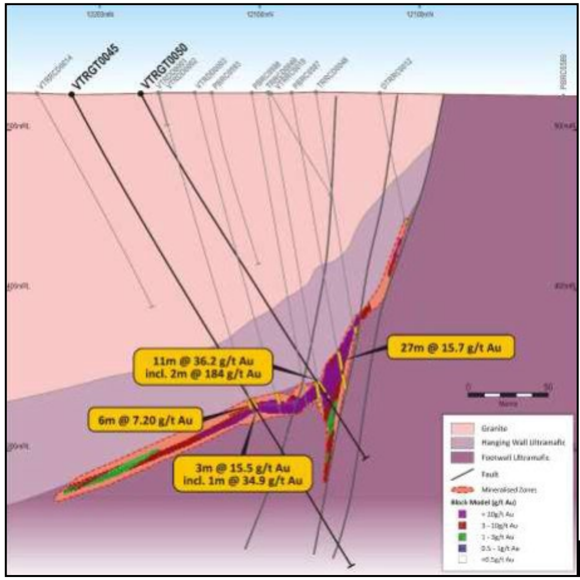
Trident West

Trident West is the up-plunge surface representation of the Trident underground deposit. Like Trident, mineralisation is hosted by, shallow to moderate dipping, ultramafic tremolite – phlogopite (mica) schist, immediately overlying serpentinised ultramafic units, and with a hangingwall of thrusted granite-gneiss that has been eroded away at Trident West.

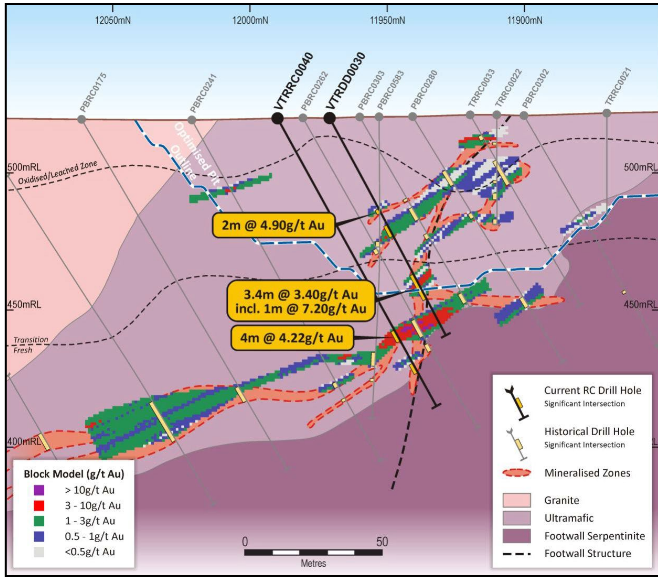
High-grade gold zones are best developed within the shallow dipping ultramafic tremolite – phlogopite schist where it is bent into a concave flexure, in the hangingwall of steep, north-westerly dipping, fault structures. Gold mineralisation in fresh rock (Trident) is associated with potassic, phlogopite mica, alteration and has a low proportion of quartz and sulphides, including minor pyrrhotite, pentlandite, chalcopyrite and, directly associated with gold, bismuthinite and rare bismuth tellurides. Rarely observed gold grains (in microscopy) are predominantly fine (<50 micron) but free and/or attached to, and rarely occluded within sulphide grains. The Trident West Mineral Resource estimate is predominantly oxide and transition mineralisation and is demarcated from the Trident underground resource by the optimised open-pit boundary (see **Figure 7-2**).

Marwest and Mars

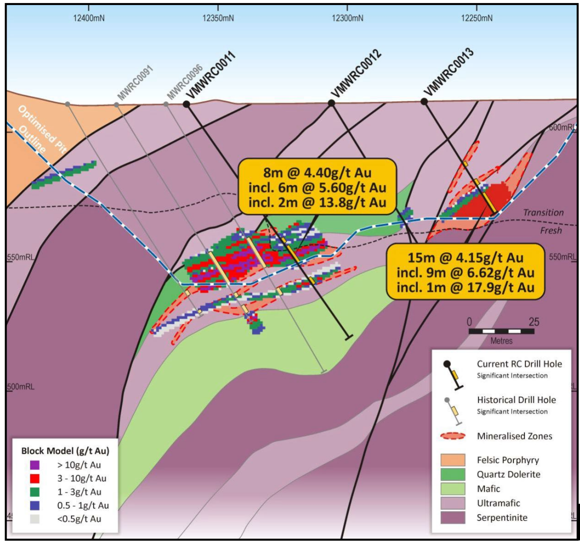
The Marwest and Mars deposits are located 1km along strike to the northeast of Trident within the same geological corridor. Mineralisation is hosted by the same ultramafic tremolite-phlogopite schist that is complexly folded and faulted, generally underlain by the serpentinised ultramafic units, and with a hangingwall of thrusted granite-gneiss. The Marwest deposit has been previously mined to approximately 80m vertical depth by Resolute Mining as part of their Marymia Project which closed in 2001. Mars is an unmined extension of the Marwest deposit. Two ‘shoots’ of shallow dipping gold mineralisation have been defined (see **Figure 7-2**), extending from the oxide zone to fresh rock with the potential to extend down plunge to the southwest towards the Trident gold deposit.



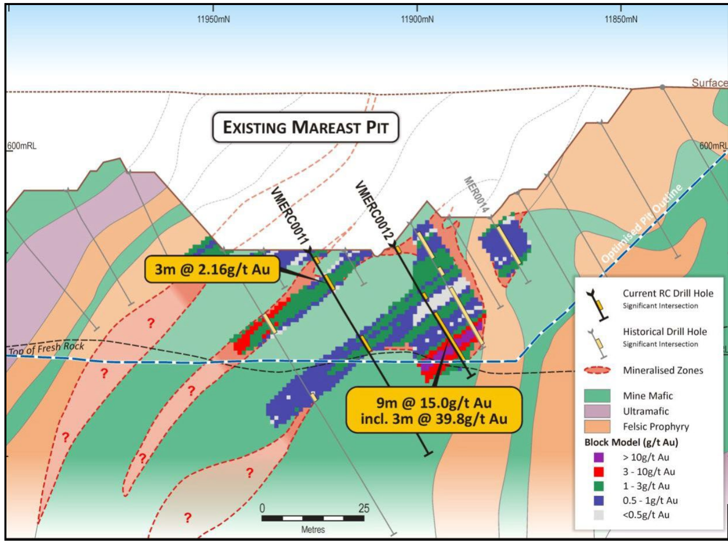
TRIDENT



TRIDENT WEST



MARWEST AND MARS



MARWEST AND MARS

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Trident Corridor Cross Sections

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Mareast and EastMareast

The Mareast deposit is located 2km northeast of Trident at the northeast end of the Trident Corridor (**Figure 7-1**). Mineralisation is hosted by thick mafic units that are interpreted to be analogous to the Mine-Mafic package that hosts the Plutonic gold deposit (see **Figure 7-1**). The mafic units are overlain by the hangingwall Trident ultramafic and intruded by felsic 'porphyries'.

Mineralisation is associated with quartz veining and sulphides in sheared and fractured mafic rocks and appears to be controlled by shallow plunging flexures between steeply dipping fault zones.

The Mineral Resource defined at Mareast is predominantly transitional oxide material that lies below the existing historical open pit, mined during the Resolute Mining Marymia operation that closed in 2001. EastMareast is located immediately along strike to the northeast of Mareast and has not been previously mined.

7.2.2 Triple-P Corridor

The Triple-P Corridor extends from the Triple-P and Zone-B deposits west to the Albatross and Flamingo deposits and the Exocet deposit 3km to the west of Triple-P. All of these deposits have been previously mined by open pits and are generally associated with north-south trending geology and fault structures, linked by being in the hangingwall of an east-west trending D3 thrust fault (**Figure 7-1**), similar to the major fault that occurs in the footwall of the Plutonic gold deposit.

Triple-P and Zone-B

The Triple-P deposit is located 2km south of Trident at the northeast end of the Triple-P Corridor. Mineralisation is hosted by thick mafic units that are interpreted to be analogous to the Mine-Mafic package that hosts the Plutonic gold deposit (see **Figure 7-3**). The mafic units are overlain by right-way-up sedimentary units, underlain by the Trident ultramafic and intruded by felsic "porphyries" (see **Figure 7-3)**.

Mineralisation is associated with quartz veining and sulphides, predominantly arsenopyrite, in sheared and fractured mafic rocks, and appears to be controlled by shallow plunging flexures between steeply dipping fault zones.

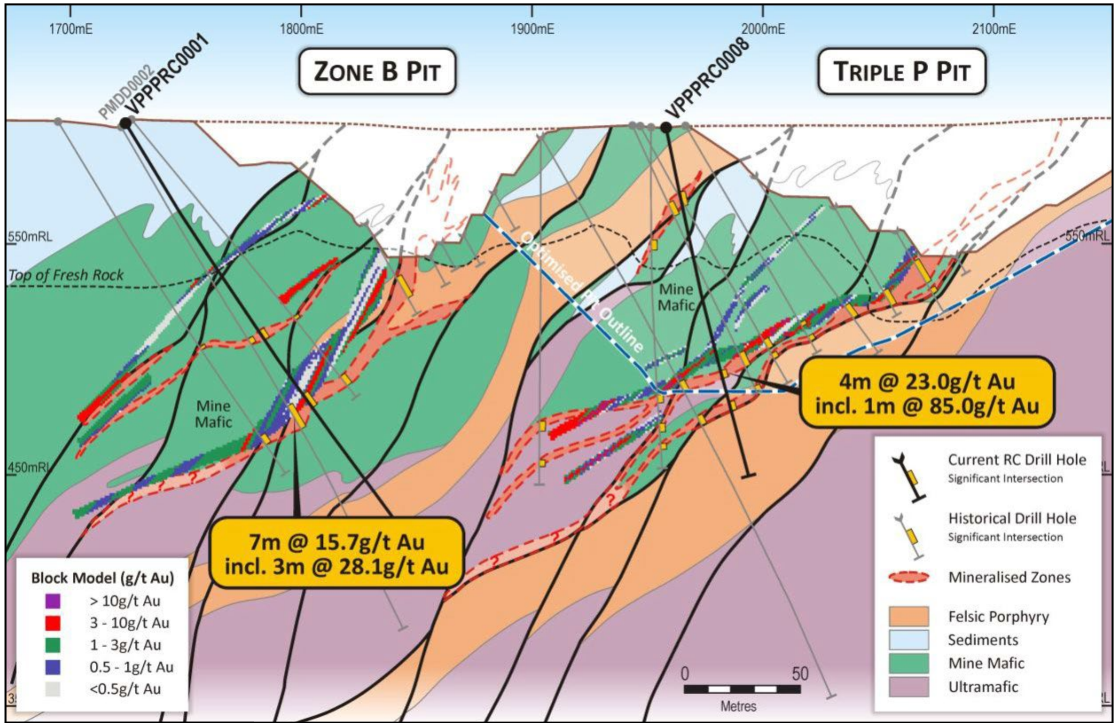
The Mineral Resource defined at Triple-P is predominantly transitional oxide and fresh material that lies below/down dip to the west of the existing historical open pit mined during the Resolute Mining Marymia operation.

Zone-B is interpreted to be the strike fault off set of the Triple-P mineralisation that is duplicated on the cross-section below. Mineralisation is associated with shallow dipping and plunging flexure in low-angle thrust faults.

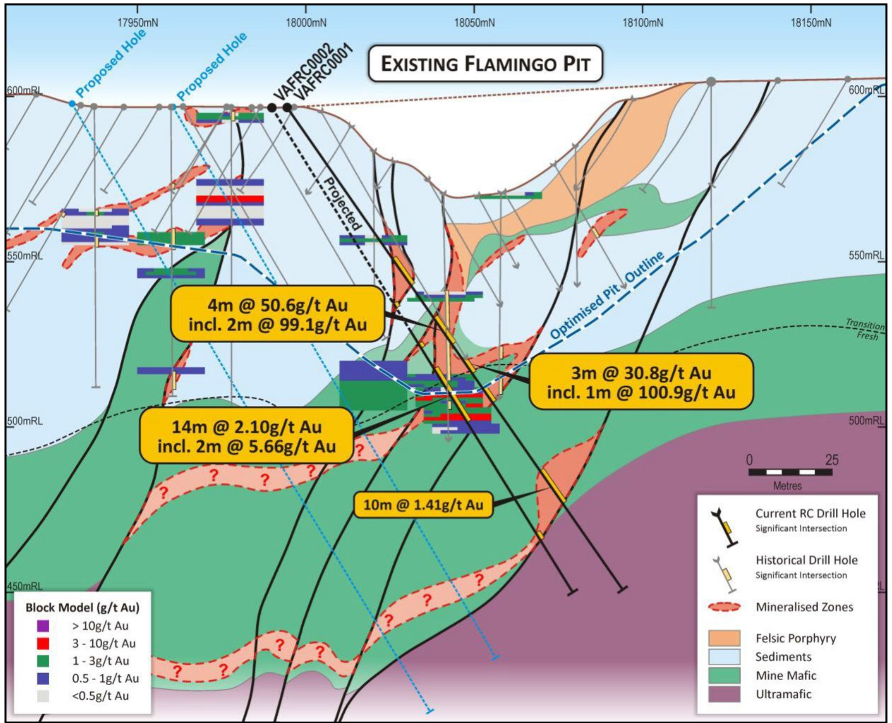
Albatross and Flamingo

The Albatross and Flamingo gold deposits are located 1km southwest of Trident within the Triple-P Corridor (**Figure 7-1**). Mineralisation previously mined in shallow open-pits is hosted by sedimentary units, erratically distributed, and associated with steeply dipping, north-south trending faults and shallow dipping link-zones between these structures.

Deeper RC drilling below these open pits has intersected high-grade gold mineralisation associated with shallow west-dipping and northwest plunging zones of oxidised to semi-oxidised quartz-sulphide mineralisation close to the upper boundary of the interpreted Mine-Mafic unit (**Figure 7-3**). The shallow dipping mineralisation is associated with corridors of steeply dipping fault structures that are interpreted to have caused dilation and mineralisation across this contact zone.



TRIPLE P AND ZONE B



ALBASTROS AND FLAMINGO

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Triple P Corridor Cross Sections

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7.2.3 PHB Corridor

The PHB Corridor extends from the K2 deposit northeast through the PHB-1 deposit to K1. K2 and K1 have been previously mined by open pit and PHB-1 is un-mined. The deposits are generally associated with a northeast – southwest corridor of steeply dipping, predominantly mafic, units with hangingwall ultramafic units more prevalent at K1 (**Figure 7-1**).

K2

The K2 gold deposit is located 15km northeast of Trident at the southwestern end of the PHB Corridor. Mineralisation is hosted by steeply westerly dipping mafic units that are interpreted to be analogous to the Mine-Mafic package that hosts the Plutonic gold deposit (see **Figure 7-1**). The mafic units are overlain and underlain by folded and thrusted ultramafic units and interlayered with sulphidic sedimentary units.

Mineralisation is associated with quartz veining/silicification and sulphides in sheared and fractured mafic rocks and appears to be controlled by shallow plunging flexures in steeply dipping fault zones.

Three key lode structures have been identified at K2: Main Lode, Central lode and West Lode. The majority of the K2 underground resource is associated with the Main Lode, which was the key zone of production in the previously mined K2 open pit operated by Resolute as part of the historical Marymia gold operation that closed in 2001 (**Figure 6-1**).

PHB-1 (K3)

The PHB deposit lies immediately along strike from K2 and was formerly referred to as K3 in previous Mineral Resource statements. Mineralisation is hosted by the steep westerly dipping mafic units and interlayered sulphidic sedimentary units and associated with quartz veining/silicification and sulphides in sheared and fractured mafic rocks and appears to be controlled by shallow plunging flexures in steeply dipping fault zones.

A majority of the open pit resources defined at PHB-1 are associated with steep easterly dipping flexures in West Lode. However, recent drilling has intersected high-grade mineralisation associated with the Central Lode and extensions of the Main lode structure, which are poorly tested and represent priority exploration targets in the PHB-1 area (see longitudinal projection and cross-section in **Figure 7-4**.

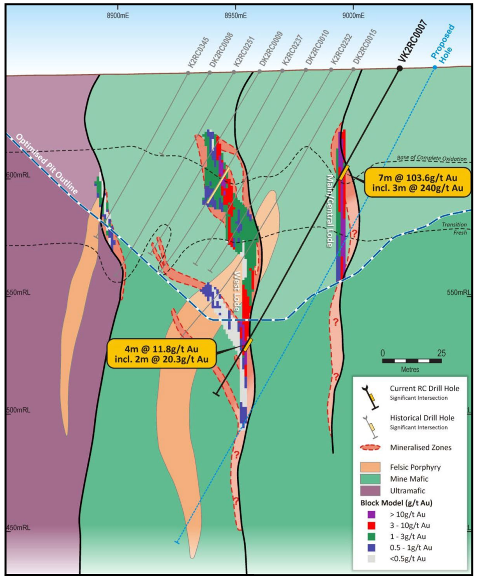
K1

The K1 gold deposit is located 2km along strike to the northeast of K2 at the northeastern end of the PHB Corridor (**Figure 7-1**).

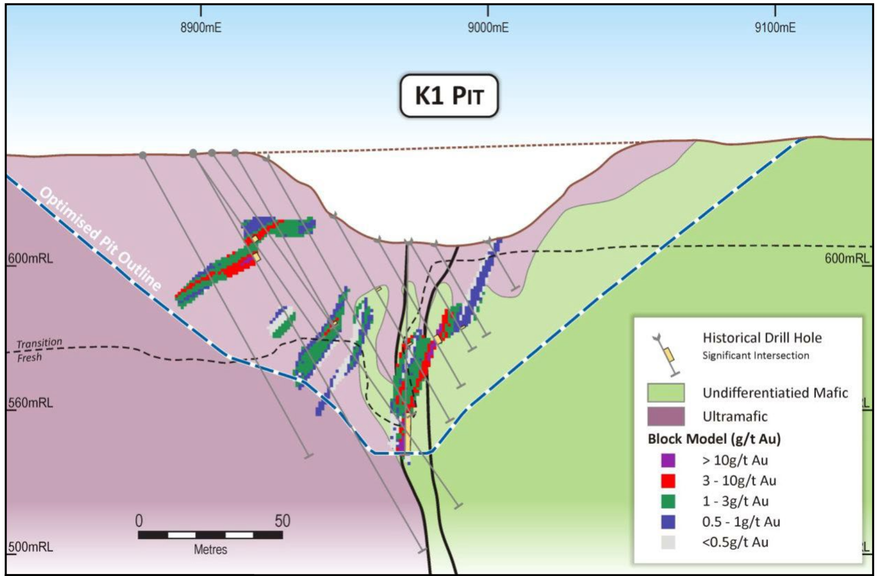
The geology of the K1 area is composed of a series of north-south trending (on a local grid) amphibolite, ultramafic and mafic-derived metasedimentary lithological slices, all metamorphosed to lower amphibolite facies. Based on previous work, it is known the thin (2-3 m) auriferous lodes found in these lithologies are controlled by geological structures (predominantly folding followed by shearing and brecciation). Previous drilling indicates these lodes are relatively continuous for several hundred metres along strike and, based on current drilling results, remain open in places down dip (**Figure 7-4**）.

Although these lodes are relatively continuous both along strike and down dip, higher gold grades and zones of mineralisation are observed around redox zones associated with the BOCO and TOFR.

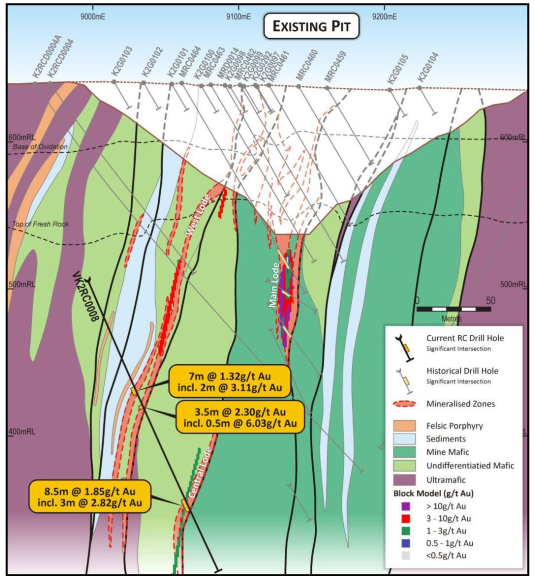
In the K1 Pit, gold mineralisation occurs parallel to lithology boundaries, being more or less confined to the package of amphibolites and BIF, with zones of high gold grade located along contacts preferentially on the western limb and within the hinge of northerly plunging, asymmetric D2 folds in the area of felsic to intermediate porphyry boudins. Gold is associated with silicified zones, millimetre-wide, layer-parallel quartz stringers in BIF and irregular veinlets in amphibolite parallel to the D1 foliation. D3 folding and thrusting have deformed and offset the mineralised zones.



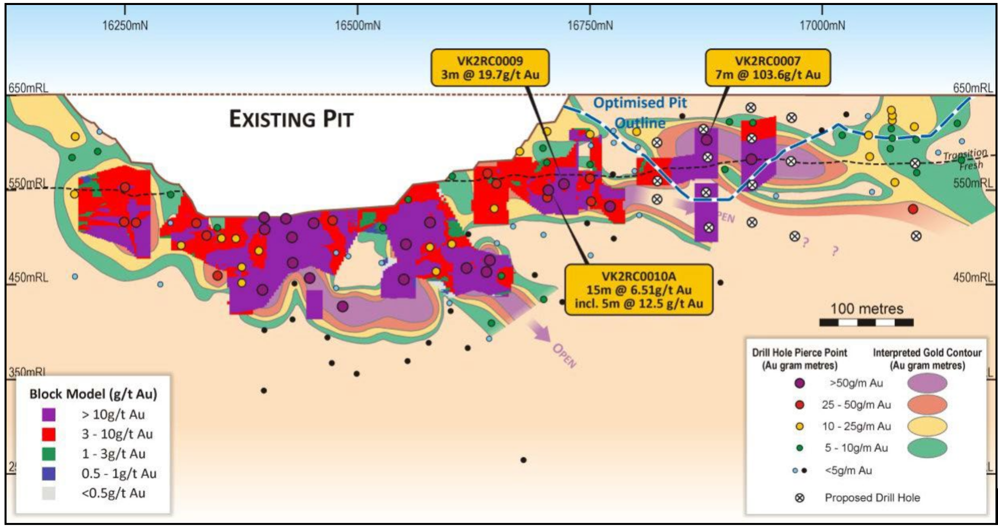
PHB-1 (K3)



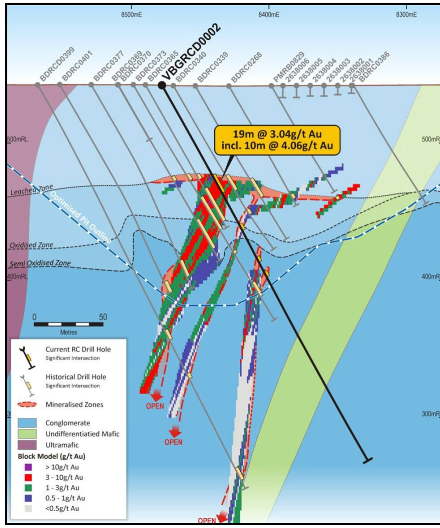
K1



K2



K2 LONGSECTION



CINNAMON

LEGEND	CLIENT	PROJECT
	catalyst METALS LTD	NAME: TRIDENT GOLD PROJECT
		DRAWING: PHB and Cinnamon Corridor Cross Section
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE		FIGURE NO. 7-4 / PROJECT NO. ADV-AU-00572 / DATE August 2023

RPMGLOBAL

Characteristic alteration minerals in mafic host rocks include quartz, hornblende, biotite, K-feldspar, calcite and, to a lesser extent, scheelite and titanite. Alteration minerals in BIF comprise hornblende and biotite as well as quartz. Gold is associated with the alteration minerals and with two opaque mineral assemblages:

(i) an early sulphide-dominated assemblage of pyrite-pyrrhotite-chalcopyrite, galena; and

(ii) a later telluride-bearing assemblage of hessite-petzite-altaite-Bi telluride-galena.

Significant metasomatism associated with gold mineralisation is restricted to a proximal halo around auriferous zones, where SiO_2 and K_2O are consistently enriched and MnO is lost. The main metals accompanying gold mineralisation are Ag, Te, Pb, W and Cu. Sulphur and Fe are variably enriched and reflect the heterogeneity in the sulphide assemblage of the ore.

7.2.4 Cinnamon

The Cinnamon gold deposit is located in the central conglomerate domain of the Marymia Greenstone Belt (**Figure 7-1**), located approximately 8km southeast of Trident along the northwestern conglomerate basin boundary ('Cinnamon Corridor' – **Figure 7-1**).

Mineralisation is associated with shearing within the chlorite-biotite-altered matrix of the conglomerate unit. The conglomerate mostly consists of granodioritic clasts within a mafic-derived matrix. Minor quartz veining/silicification and sulphides (pyrrhotite, chalcopyrite) has been observed in the foliated/sheared chlorite - biotite altered matrix.

Drilling has confirmed the presence of high-grade shoots of gold mineralisation within a lower-grade envelope in upper and lower flexures that dip moderately to the northwest in the oxide/transition zones, and steeply in the primary/fresh zone (**Figure 7-4**).

The geology at Budgie comprises, from north to south, a greenstone package of basalt, dolerite-gabbro intrusives, talc-chlorite±carbonate ultramafic schists, and quartz sericite±chlorite schists, which overlies a package of pelites, arkosic sandstones and conglomerate. All contacts are interpreted to dip moderately to steeply to the northwest. Mineralisation is hosted almost exclusively within the conglomerate unit situated between a footwall mafic volcaniclastic and felsic volcaniclastic in the hanging wall. The sequence is cut by steeply dipping cross-faults striking 140°. The major lode set strikes slightly oblique to bedding at -45°/080, whereas a crosscutting lode set is oriented at - 70°/130 on BMA_M grid. It has been found that mineralisation has thickened at the oxide/transitional and transitional/primary boundaries, creating a depleted zone in the near-surface oxides.

7.2.5 Other Deposits

Parrot

Mineralisation at Parrot is situated adjacent to a grid north dipping faulted contact between a package of fine to medium-grained clastic metasediments and black shales and an underlying fine-to-medium-grained amphibolite unit. Mineralisation occurs within the altered footwall amphibolite. The lodes are layer parallel. The alteration assemblage associated with gold mineralisation is quartz – biotite – pyrite, with a halo of silicification surrounding gold-bearing lodes.

The Parrot deposit is a structurally complex zone with three generations of faulting. A layer parallel fault occurs at the mafic/metasediment contact, grid NW-SE trending structures and a grid E-W series of faults.

Gold mineralisation is hosted within a fine to medium-grained amphibolite unit which is overlain to the north by fine to medium-grained clastic sediments and black shales. The unit generally dips 40o to the grid north and the dip ranges from sub-vertical in the west to layer parallel in the east. The mineralisation has a strike length of 320m and is open with depth (to the north).

Rosella

Rosella mineralisation is contained wholly within fine to medium-grained clastic sediments as a shear zone trending 30o towards the NW. The alteration assemblage associated with gold mineralisation is a very subtle silica-sulphide alteration assemblage with locally biotite-rich sediments with narrow tuffaceous bands. A NW-SE trending sub-vertical fault displaces the mineralisation approximately 150 metres in a northerly direction (interpreted sinistral sense of movement). Beyond this fault, along strike to the east, the mineralisation fades out.

Skyblue (BGA, 2004)

At Skyblue to the west, 6 RC holes were drilled for 1,188 metres. Drilling was aimed at finding high-grade extensions 1.2-1.4km along strike from the Cinnamon resource. The drilling was planned due to the presence of a high gold soil anomaly, interpreted cross faulting of the mafic conglomerate units, and to test the potential for Cinnamon-style mineralisation at depth. Drill holes intersected only barren mafic volcaniclastics, which occur in the footwall at Cinnamon.

Further exploration to the north may locate mineralisation, although it is likely that the Skyblue area lies within an up-faulted block, relative to Cinnamon, and therefore the mineralised conglomerates have been removed.

Harpoon

The geology at Harpoon comprises indurated transported alluvium and locally pisolitic laterite, overlying an undifferentiated oxidised zone which in turn overlies dominantly sediment and locally ultramafic (komatiite). Currently defined mineralisation is predominantly concentrated in the oxide zone and is also locally present within fresh sediments.

Skyhawk

The Skyhawk - Tomahawk prospects lie on the boundary of the lower mafic sequence and the central sedimentary sequence. The local geology is dominated by a grid east-west trending package of mafics and mafic-derived metasediments, with lesser shales and ultramafics. The shale units are possibly correlative with the shales in the vicinity of the Pigeon prospect.

Overlying the residual clays is a transported overburden, commonly between 10 and 15m thick. Mineralisation within the prospect occurs within the laterites, as supergene enrichment and primary mineralisation. Lateritic mineralisation is largely what was identified by Resolute I BMA during their operation of the project, and is largely confined to the Tomahawk prospect, with the Skyhawk laterite mineralisation already exploited. The primary source for the mineralised, transported laterites has yet to be identified. Supergene mineralisation is relatively patchy and of low grade. The primary mineralisation is commonly associated with quartz veining or around the contacts between different lithologies and appears to be generally parallel to the contacts.

Apollo

The Apollo, Pythagoras and Hermes prospects are located on a 3km mineralised trend, parallel to and 1.5km away from the K1-K2 trend. The geology consists of a gently westerly dipping sequence of narrow sediments, including conglomerates, mafics and ultramafics. Apollo and Pythagoras were mined by open pit method by Resolute, producing 4,000 and 5,800 ozs, respectively.

In the north (Apollo) stratigraphy is dominated by sediments which decrease in their abundance to the more mafic-dominated stratigraphy in the south (Hermes). Units include Mafic cobble conglomerate and other meta-sediments, mafic units including meta-basalts and amphibolites and minor ultramafic units; quartz-biotite schists and thick packages of amphibolites and garnetiferous amphiboles; thick silicified amphibolites and meta-basalts with minor graphitic shales. Minor biotite-silica sulphide alteration was encountered.

IBIS

The main mineralisation is hosted by bleached quartz veined, clay-altered unit (felsic dyke?) within relatively fresh basalt. The zone is open in all directions and further drilling is planned. Strongly anomalous arsenic was also recorded (up to 1300ppm). (A35168- 1991, based on holes PBP2101-2102).

Mineralisation at PBP 5855 is the down dip extension of the 5m zone recorded in 1991. Unfortunately drilling down dip and along strike suggests this zone pinches out rapidly and probably has no economic potential. The intersections in PBP 5856 & 5866 probably don't represent small discontinuous horizons. (A37565 1992) \. The local stratigraphy from west to east consists of medium to coarse-grained amphibolite (dolerite/gabbro), shales and carbonaceous shales, feldspar-porphyry, mafic-derived metasediments, ultramafics, and mafic amphibolite. Mineralisation is associated with lithological unit contacts, which are interpreted to dip moderately to the northwest and are moderate to intensely sheared, possibly as a result of folding and/or thrusting.

40 RC holes for 1,639 metres were drilled. The holes were oriented at -60°/180 grid south. The 3 programmes of drilling successfully closed off mineralisation along strike and down dip and sterilised an area for the waste dump.

Mining at Ibis occurred from June to August. 52,700 tonnes were mined at 2.4 g/t for 4,000 ounces. (Barrick 70185, 2004)

8. DEPOSIT TYPES

Catalyst is exclusively exploring for gold deposits. The deposits in the Marymia Project area are classified Archean Orogenic Greenstone gold deposits. The gold mineralisation is predominantly structurally controlled and occurs within a series of north-east trending corridor hosted in a variety of lithologies ranging from ultramafic and mafic volcanic rocks, metasediments, felsic intrusive, volcanoclastic units, and banded iron formations.

The gold deposits are hosted in rocks that are generally highly deformed (four or more fold events) and metamorphosed (up to amphibolite facies). Mineralisation is early in the paragenesis, (syn- to post-D1 isoclinal folding) with folded mineralisation commonly observed. The literature review identified several structural themes that appear to control mineralisation:

- Proximity to major E-W trending fault. The entire belt is cut by several of these and forms major bounding faults to mineralised trends. The MMR fault has already been identified at Plutonic as a major cross-basin fault. Evidence of two folding events – gold tenor increases with complex fold interference patterns suggesting that the areas must be subject to more than early fold and thrust deformation.
- Evidence of NE and N-S trending faults – the former is evident in magnetics, but the latter is quite subtle and only obvious when looking at Max Au.

There is no “preferred” host rock, but mineralisation is interpreted to be precipitating where there are rheological, chemical and permeability contrasts. This is obvious when there is a mapped lithological change, but not in the mass of basalt. It is quite likely that there are changes in basalt chemistry and texture (i.e., going from Mg to Fe rich, usually translating from massive/variolitic to pillowed/breccia facies) that are not reflected in the map. The large volume of volcaniclastics sandstones and conglomerates which host mineralisation on the eastern trends suggests that there may be remnant volcanic centres that are the source of these sediments which are often very good buttresses to strain if subvolcanic domes and massive flows remain. An example of this includes the Thunderbox deposit near Leonora, where a remnant dacitic dome and apron is emplaced within a mafic volcaniclastic pile and is the preferred host rock.

9. EXPLORATION

Several generations of exploration have been completed over the Project which has been undertaken by previous owners. Work completed includes geochemical sampling, geophysical surveys, reverse circulation, and diamond drilling. These works have been completed in various amounts across the tenements, resulting in the delineation of Mineral Resources and various identification of mineralisation which are considered to have exploration upside. In addition to the definition of mineralisation, various conceptual targets have been identified as outlined in **Section 9.1**.

As detailed in **Section 6**, systematic exploration commenced in the 1990s which included geochemical sampling across both the Project area and the adjacent Plutonic mine area. As shown in **Figure 9-1** this programme led to the identification of numerous gold anomalies which resulted in Project-wide geophysical IP and magnetic surveys being completed.

Catalyst has not yet undertaken exploration activities on the tenements.

9.1 Exploration Potential

The production history of the area has been focused on open pit mining of the oxide material and drilling has predominately focused on the nominal top 80-100m. Outside of the Mineral resources reported in this Report, there are a number of areas that have had open pit mining but not sufficient drilling to define Mineral Resources.

The depth to the top of saprock and fresh is often deeper than drilling across the Project and there remains excellent potential for the discovery of additional mineralisation that would be potentially amenable o both open pit and underground mining. However, given the complexity and apparent sporadic nature of higher grades within the known deposits, any deeper drilling needs to be based on acquiring a better geological and structural understanding of the local controls of the gold mineralisation.

A review by previous workers highlights the potential in the tenements as described by Saliba (2023). Nine high-priority targets (**Figure 9-1**) have been identified outside of the current Mineral Resources and known mineralised areas including:

9.1.1 Neptune

This prospect lies within a fault block bound by two major E-W trending faults cutting through an antiformal skinned greenstone-granite sequence. This is the same fault block that hosts the Trident and Wedgetail prospects, which are to the east of Neptune. There is limited data on this prospect, thus the high ranking due to a low data availability score.

9.1.2 Desert Greenstone

The Desert Greenstone target covers the length of an E-W trending fault that cuts through a series of folded, thin-skinned, granite-greenstones. Magnetics suggest that the area is also dissected by NE and NNE trending faults. Only limited surface geochemistry and RAB in the dataset with no anomalous Au values. The area hosts the Desert Greenstone Cu prospect, of which the nature of Cu mineralization is unknown.

9.1.3 Pluto

The Pluto prospect sits within the same E-W bound block that hosts the Prickley's deposits and to the north of Neptune within an interpreted synform that is cut by a complex series of faults. The area has been tested with soil sampling (lag), but no anomalous values were returned. Only minimal drilling, with low to medium max Au values. This drilling was an extension of Trident deposits rather than testing the Pluto trend. GSWA mappings show the presence of BIF, a good reactive rock type and rheological contrast to granite.

9.1.4 Spotted Harrier

Spotted Harrier sits in the core of the antiform that hosts the Triple P and Exocet deposits. the area is cut by major E-W faults and local NE trending faults. Surface geochemistry and drilling are limited to the northern limb with low-grade Max Au. The site has good rheological contrasts between ultramafic, basalts and granites, but there is no evidence of reactive rock types or strong permeability contrasts.

9.1.5 Cantor

Cantor sits along strike of a WSW fault that cuts through K2, which propagates through a synform-antiform pair in thin-skinned granite-greenstone. The area is cut by a number of NNE and NE trending faults and is covered by surface geochemistry, with sporadic anomalous Au values. Surface anomalies have been tested with RAB which returned moderate to high Max Au grades. Barrick map doesn’t show any greenstone in the area, but the Marymia 100K GSWA map sheet shows that there are ultramafic, shales, and quartz-sericite schists contrasting well against granite.

9.1.6 Euclid

Euclid sits in between the PHB and Apollo trends within tight NE trending fold and thrust complex cut by numerous E-W trending faults. The area has been tested with surface geochemistry, returning sporadic Au anomalies. These surface geochemistry anomalies have been tested with RAB, returning low to moderate Max Au values, however broad gaps in drilling remain. The prospect area is dominated by basalt, but contacts with ultramafic and sediments can be interpreted as good rheological contrasts.

9.1.7 Honeyeater

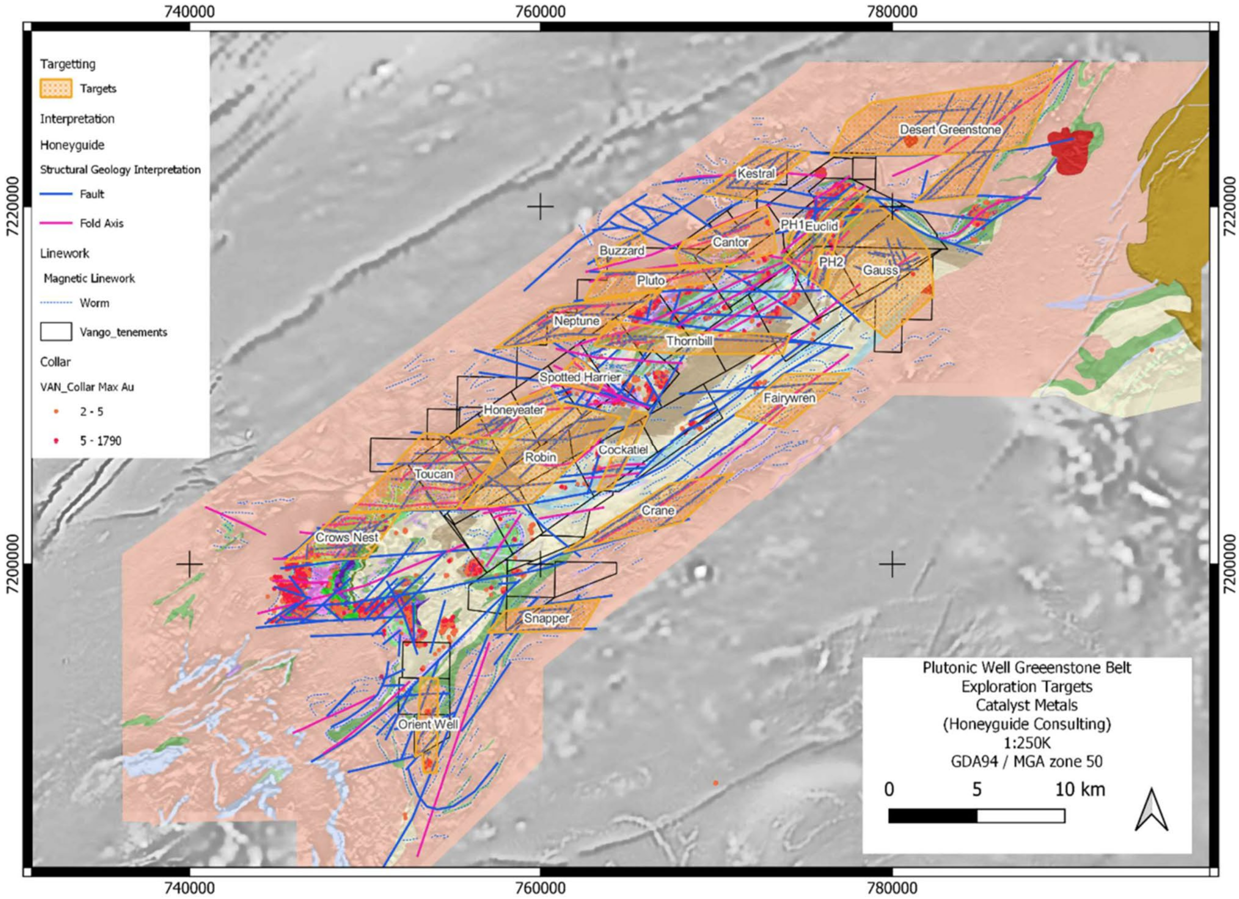
Folded and thrusted ultramafic and mafic stratigraphy bound by two major E-W trending faults, with numerous NE trending faults within the fault block. The fold pattern is simple compared to Toucan (to the SW), which displays a fold interference pattern that is from two generations of folding. The area has been tested with surface geochemistry returning no Au anomalies, however, limited RAB and RC drilling with low to moderate Max Au results. The area is comprised of ultramafic and mafic rocks thrusted up against granites. There is no evidence of reactive rock types or strong permeability contrasts.

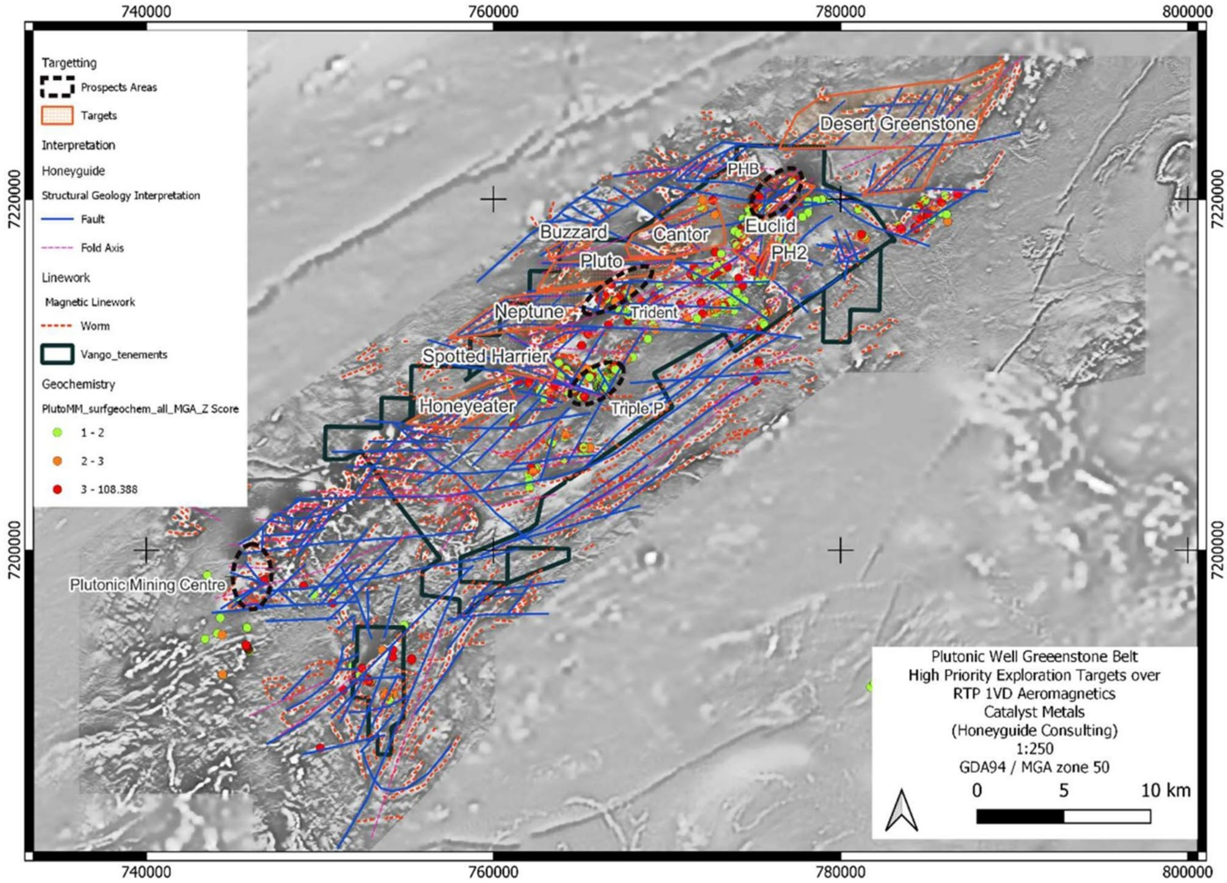
9.1.8 Buzzard

Buzzard is located on a sheared NW limb of an antiform cut by NE trending faults. The prospect has not been tested with surface geochemistry or drill testing. No outcrop in the area, but Barrick map suggests the area is dominated by BIF (which can be roughly confirmed with magnetic data), which suggests a good rheological and reactive rock-type site.

9.1.9 PH2

The target sits to the SW of the Apollo\/Pythagoras trend, bound by a major NW trending fault (the same fault that bounds Gauss). The target is cut by a North-South trending fault. The area is covered with surface geochemistry, but no anomalous Au values were returned. No RAB/AC is drilled in the area. There is good rheological contrast potential between gabbros and sediment. There may be potential from differentiation of the gabbro, which may host some more brittle and reactive layers.





RPMGLOBAL

LEGEND	CLIENT	PROJECT
N	catalyst METALS LTD	NAME: TRIDENT GOLD PROJECT
		DRAWING: Grey Scale Magnetics and High Priority Regional Targets
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE		FIGURE NO. 9-1 / PROJECT NO. ADV-AU-00572 / DATE August 2023

10. DRILLING

Drilling on the property has been under via a number of methods and generations dating back to the 1980s. While numerous reverse air blast (RAB), and aircore (AC) programs have been undertaken, the Mineral Resources reported in the Report are based on the Diamond Drilling (DD) and Reverse Circulation (RC) methods only, as such, only these drilling methods are discussed in Section 11 and 12.

10.1 Pre-2020 Resource Estimate Drilling

Several drilling contractors (all independent of the companies) have undertaken exploration across the deposits, however, similar drilling and sample collection methods were utilised as outlined in Section 11. Given this, the different generations of drilling, nor the company which undertook the exploration are not the basis for reporting the drilling summary (Table 10-1). As noted in Section 14, the current resource estimates were completed and initially reported in 2020 with a total of 363,258m from 4,826 holes completed across the deposits which have Mineral Resources reported. As summarised in Table 10-1 the majority of drilling prior to 2020 was completed utilising the RC method (4,578 holes for 325,578), with the DD targeting the depth extensions, particularly in the Trident and K2 underground resource areas (248 holes for 37,680m). The number of holes varies between deposits with the K1 and K2 deposits having a significant amount of drilling along with other mined-out open pit areas.

A significant variety of drill spacings have been utilised across both the deposits and generations of drilling, however, this has typically resulted in bwtween 20m by 20m to 40m by 40m being utilised in the Mineral Resource estimates. Drill collar location plans are shown in Figure 7-1 along with various cross sections in Figure 7-3 to 7-5 for each of the Mineral Resource areas reported in the Report.

10.2 Post 2020 Drilling

Following the completion of the resource estimates, Vango undertook several drilling campaigns between 2020 and 2022 across both the resource areas and previously mined areas with limited exploration to further refine mineralisation and test depth extensions. A total of 137 holes were completed for 28,099m of drilling, the majority of which was using RC method (Table 10-1). These holes were spread relatively evenly across the deposits and undefined mineralised areas (not reported). A review of the results however numerous significant intercepts can be reported across the deposits as shown in Table 10-2. The significant intercepts are reported based on a minimum of 2m downhole thickness with at least 2 g/t Au across the 2m. Graphical reviews of these intercepts show the majority of these occurred outside of the reported resource areas, highlighting the upside in the known deposits.

While it can be seen numerous drillholes completed within the resources reported, the amount of drilling completed since the estimates being finalised is not considered suitable to underpin an update to the Mineral Resources with suitable levels to achieve the required classifications. Rather these holes are viewed as highlighting the upside of the projects with further drilling required to allow geological and grade interpretation to be undertaken in these areas.

Table 10-1 Summary of Drilling Pre-2020 and Post 2020 by Deposit

Period	Deposit	DD	Meters	RC	Meters	Total	Meters
Pre-2020	Trident	32	3,886	28	7,580	60	11,466
	Trident West	6	530	154	15,221	160	15,751
	K1	34	3,577	1,098	69,946	1,132	73,523
	K2	99	19,893	905	56,535	1,004	76,428
	Cinnamon	13	3,431	96	13,927	109	17,358
	EastMAreast			142	3,287	142	3,287
	MarEast	3	190	198	14,770	201	14,960
	Marwest&Mars	12	944	355	27,239	367	28,183
	PHB1(K3)	14	2,400	275	23,679	289	26,079
	Triple P and Triple P Sth	19	1,172	329	16,741	348	17,913
	Triple P and Zone B UG	11	1,321	500	37,262	511	38,583
	Wedgetail			123	5,948	123	5,948
	Albatross&Flamingo	5	336	375	33,443	380	33,779
	Total	**248**	**37,680**	**4,578**	**325,578**	**4,826**	**363,258**
Post-2020	APOLLO			3	471	3	471
	EXOCET			5	786	5	786
	IBIS			5	813	5	813
	K1			11	2,100	11	2,100
	KOOKABURRA			4	745	4	745
	MAREAST			8	1,116	8	1,116
	MARWEST			7	1,477	7	1,477
	NEPTUNE	4	1,573			4	1,573
	PARROT			12	2,133	12	2,133
	PHB1	6	2,148	12	2,914	18	5,062
	PIGEON			5	862	5	862
	PRICKLEY			8	1,230	8	1,230
	REDFIN			5	759	5	759
	ROSELLA			5	801	5	801
	SKYHAWK			13	2,162	13	2,162
	SPECKLED			5	843	5	843
	TRIDENT	7	1,972	12	3,194	19	5,166
	Total	**17**	**5,693**	**120**	**22,406**	**137**	**28,099**

Note: Summarised from data provided by the Client.

Table 10-2 Significant Intercepts Post 2020 Drilling

Deposit	Drillhole	From (m)	Interval (m)	Au (g/t)
Apollo	VAPRC0003	80	2	5.94
Exocet	VEXRC0002	69	5	1.4
PHB1	VHBRC0010	150	5	1.3
	VHBRC0010	170	5	1.7
	VHBRC0010	182	2	2
	VHBRC0010	193	12	1.3
	VHBRC0010	210	4	1.4
	VHBRC0011	230	2	3
	VHBRC0011	266	15	1.2
	VHBRC0012	131	5	2.7
	VHBRC0012	144	3	1.5
	VHBRC0012	176	4	1.3
	VHBRC0013	173	4	2
	VHBRC0013	184	4	1.4
	VHBRC0013	218	4	1.2
	VHBRC0014	69	11	1.8
	VHBRC0019	209	4	3.8
	VHBRC0020	149	3	4.9
	VHBRC0021	232	7	3.1
	VHBRC0021	260	9	1.4
	VHBRC0022	117	3	6.1
	VHBRCD0006	124	10	1.8
	VHBRCD0007	88	4	4.2
	VHBRCD0007	154	7	1.5
	VHBRCD0008	87	4	6.4
	VHBRCD0008	290	6	1.9
	VHBRCD0008	301	7	2.1
	VHBRCD0009	44	3	1.4
	VHBRCD0015	223	2	4.3
K1	VK1RC0018	128	6	7.3
	VK1RC0019	101	7	1
	VK1RC0020	90	4	2.9
	VK1RC0020	105	3	5.6
	VK1RC0021	78	4	5
	VK1RC0021	188	10	1.9
	VK1RC0022	95	6	1.2
	VK1RC0023	82	2	2.3
	VK1RC0027	161	11	4.7
	VK1RC0027	205	3	2.9
	VK1RC0028	119	4	3.7
MarEast	VMERC0030	94	10	3.1
	VMERC0034	115	6	1
MarWest	VMWRC0029	190	2	2.9
Parrot	VPARC0007	120	8	1
	VPARC0011	80	15	5.8
Pigeon	VPIRC0004	113	4	6.3
Prickley	VPKRC0006	116	3	4.3
Redfin	VRERC0001	96	6	1.2
	VRERC0001	126	3	5.8
Rosella	VRORC0001	80	3	10.0
	VRORC0004	83	9	4.7
Skyhawk	VSKRC0003	55	6	6.6
	VSKRC0004	21	6	1.9
	VSKRC0004	39	6	1.4
	VSKRC0006	59	3	2.5
	VSKRC0007	52	16	4.4
	VSKRC0009	111	11	2.6
	VSKRC0010	116	7	6.6
Trident	VTRRC0059	191	2	7.1
	VTRRC0059	221	2	11.9
	VTRRC0060	212	3	2.4
	VTRRC0066	137	10	23.6
	VTRRC0067	223	3	3.3
	VTRRC0068	110	7	8.7
	VTRRC0068	122	2	3.3
	VTRRC0068	129	4	6.3
	VTRRC0069	161	4	6.1
	VTRRCD0064	321.63	13	3.67

Note: Summarised from data provided by the Client.

11. SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Pre-Vango Drilling (2014)

Reverse Circulation (RC) details and QAQC information were available for Homestake and Barrick Drilling, later Resolute. The RC drilling utilised a 5.5" drill bit with samples collected at the rig using a riffle splitter at 1 m intervals to collect 3 - 5 kg samples in calico bags, with the remaining sample dropped into a catchment sump.

Diamond drilling utilised PQ3, HQ3 and NQ2 core diameter. The core was halved using a diamond saw and sampled at 1 m intervals to geological contacts. The minimum core sample length was 30 cm and the maximum core length was 1.2 m. Broad zones of material that were deemed to be barren were not sampled. HQ3 cores drilled through the mineralised zones were quartered for assaying, density determination and metallurgical test work. Diamond drilling and sampling methods for Resolute are not known, however, the methodology for selecting sampling intervals appears consistent.

All RAB drilling was sampled in 4 m composites. Any 4 m composite samples returning a grade greater than 0.12 g/t Au were selected for re-sampling down to a 1 m composite.

The pre-Vango Drilling can be separated into two generations, pre and post-2002. Details are provided below.

11.1.1 Pre-2002

The Plutonic Mine Laboratory was used as the screening laboratory for the "first pass" analysis of the samples. All samples were crushed in a jaw crusher to less than 4 mm (50% passing 1 mm). The sample size was reduced through a 12 mm aperture 50:50 riffle splitter to approximately 800 g. This sample was then pulverised to 90% passing 75 microns using a Labtechnic ring mill to produce a 100 - 150 g pulp sub-sample. All assays greater than 0.3 g/t or located within interpreted lode structures were forwarded to an accredited Minlabs Assay Laboratory for analysis.

At Minlabs in Perth, the samples were crushed with a hammer mill to 500 microns and a 300 – 500 g sample split was pulverized to minus 75 microns using a Labtechnics ring mill.

11.1.2 Post-2002

The Plutonic Mine Laboratory was used as the screening laboratory for the "first pass" screening as per the pre-2002 drilling, however, samples were further analysed at the Amdel laboratory.

At Amdel in Perth, samples of up to 4 kg were pulverized in a single pass to a grind size of 90% passing 106 microns using Labtechnics MIXERMILL4000 to ensure suitable homogenisation. A representative 250 g of this product was taken and used as the analytical sample.

11.1.3 QAQC

LaboratoryMethodology

The following procedures were used at the Plutonic Mine Laboratory during this period:

- A representative 150 g of the prepared sample is taken and then used as the analytical sample. A 30 g charge is aqua regia digested for analysis by AAS to a detection limit of 0.01 ppm Au; and
- One standard, one blank and one duplicate are submitted with each 50 sample rack for internal quality control monitoring.

The assay analysis procedures used at MinLabs pre-2002 included ten samples then one replicate was used and if the batch contained 43 samples then four replicates were used. Information provided to RPM indicates that Quality control results were only available for the 2003 drilling, however, later reports indicate that the same protocol was used consistently until at least 2007.

The following procedures were used at Amdel:

- The 150 g pulp was analysed as the analytical sample. A 50 g charge was then fire-assayed using an AAS finish to a detection limit of 0.01 ppm Au; and
- The laboratory also performed its internal quality control using standards and re - assaying techniques. With each rack of samples (different batches are not put in the same rack) 1 blank, 2 standards and between 1 and 4 replicates are used (i.e. if the batch contains only

Field QAQC

Standard and blank analysis, grid size tests and check sampling were used in the QAQC program during the drilling program prior to Vango taking ownership of the Project. Check assays and an umpire laboratory check was undertaken at Genalysis.

The insertion of standards and blanks with primary samples was used to determine the accuracy of the assaying at the primary laboratories. The quality analysis was undertaken by inserting 200 g of standard pulp of known grade every 25 m in each drill hole. Quality assurance was undertaken on the assay values returned from the screening laboratory (Plutonic Mine Laboratory) and the principal laboratory (Amdel). The returned values were graphed and interpreted against the expected gold value of the standard to assess the laboratories accuracy and precision over time.

Standards

A total of 18 pulp standards were used during the surface development drilling programs in 2003. The standard pulps were manufactured by Gannet Holdings and ranged in grade from 0.11 g/t to 49.9 g/t Au. The pulps were rated as Level 3, (ISO Guide 35; 19899 (E) Standards).

The Plutonic Mine Laboratory reported a negative bias for all the standards. Overall 22% of the results fell outside warning levels. Standard 304 shows a distinct negative bias with all grades falling between -0.01 - 0.061 g/t Au less than the expected grade of 1.9 g/t Au. Investigation into the lower grade determined that Standard 304 contained approximately 26% sulphur and was not an appropriate standard for aqua regia digest. The standard was immediately discontinued.

Of the 3,973 standards returned from the Plutonic mine Laboratory, 58 (1.5%) returned grades outside of the warning limits. Of these 25 standards were found to be standards not submitted to Amdel, database errors, and submission errors with another four values attributable to sample swapping. Of the remaining standards, 19 were followed up with fire assay analysis of which two again reported higher than anticipated grades. The remaining 13 samples could not be explained. Quality assessment of the standard pulps assayed by the Plutonic Mine Laboratory indicates the aqua regia technique fails the 3rd standard deviation quality control limits. It also highlights a negative bias as the Plutonic Mine laboratory reported on average 21.5% lower than the expected value of the standard pulps. Overall the Plutonic Mine Laboratory did not achieve the theoretical pass criteria for standard pulp analysis, however, it is highlighted these assays were not utilised in the resource estimates, but rather as s pre-screening for the accredited laboratory.

Fire analysis by Amdel of standards ST49, ST228 and PluMay indicated accuracy and precision with all standard pulp analyses except for two PluMay results falling within three standard deviations. Standards ST04, ST48, ST70, ST86, ST148, ST207, ST304 and PluAug99 display a clear positive bias, however, the majority of results fall within three standard deviations. Assay by fire analysis for ST304 appears to be more consistent with analysis by fire assay with all but one result reporting within three standard deviations. Standards ST14 and ST43 show almost a cyclic trend with periods of standard pulps reporting under the expected value and other periods reporting over the expected value. Standards ST18, ST42, ST136 and ST274 all display a negative bias relative to the expected value. As only three samples of standard ST274 were analysed in 2003 a definitive bias cannot be determined. As with aqua regia analysis, only one sample of ST02 was assayed and returned a value significantly higher than the expected value. Of 1,033 standard pulps analysed by the principal independent laboratory, Amdel, in 2003, 43 (4%) reported outside the three standard deviation limits. Amdel reported four standard pulp samples to be of insufficient size for analysis.

Blanks

Bunbury Basalt, supplied by Gannet Holdings, and barren granite RC chips were used as the control blank samples for surface development drilling during this period. Blank samples were inserted in zones of expected mineralisation (in the case of RC samples) and between every routine sample exhibiting mineralisation (in the case of diamond core samples) to check for contamination during sample preparation and accuracy.

A total of 1,403 coarse blank samples were analysed by the Plutonic Mine Laboratory. Assessment of the RC blank results indicates that 1,351 blanks passed the accuracy criteria by assaying below 0.1g/t Au. A further 11 blanks were not assayed and 41 samples reported >0.1 g/t Au. Seven blank samples returning grades of greater than 1 g/t Au by aqua regia analysis were reported. Of the 41 samples reported by Plutonic Mine Laboratory as >0.1 g/t Au, 15 were resolved with fire assay analysis, whereas 1 sample was reported as >0.1 g/t Au. Two blank samples were identified as standard pulps, 1 as database error and a further 3 as contamination.

A total of 295 coarse blank RC assay sub-samples were analysed at Amdel during 2003 of which 5 assay sub-sample pulps were reported as "not received". Amdel was requested to insert quartz washes between every sample within mineralised zones in 2003. A total of 24 (3%) quartz wash samples returned a grade of >0.1 g/t Au indicating that some contamination occurred during sample preparation.

Check Sampling

Check sampling was performed to determine whether the sampling procedure was producing assay sub-samples that were representative of the original sample. This was achieved by re-splitting the RC field residue every 20 m through a 1:8 riffle splitter and submitting to the Plutonic Mine Laboratory. Plutonic Mine Laboratory prepared and assayed the check sample using the same techniques used for the primary sample. The primary assay sub-sample was forwarded to the principal laboratory, Amdel for analysis by fire assay.

In 2003, a total of 985 paired data for aqua regia results and 492 paired data for aqua regia/fire assay results were available for analysis. Quality assessment of the check samples at each laboratory was undertaken by using the use of scatter plots and QQ plots. QQ plots of original aqua regia results against original fire assay results indicated analysis by aqua regia to generally have a negative bias relative to fire assay. QQ plots of original aqua regia results against check aqua regia results indicated a negative bias of original aqua regia relative to check aqua regia. QQ plots of original fire assay results against check fire assay results show a variable bias. In general, there was less than a 10% variation between the original and check fire assay results.

Genalysis Laboratory acted as the umpire laboratory in 2003 and Amdel forwarded a total of 699 assay sub-sample pulps to Genalysis. The test work indicates some scatter for results less than 10 g/t Au and a closer correlation for assay results greater than 10 g/t Au. Overall the majority of samples fall within the +- 10% variation indicating good repeatability of pulps and confirming the accuracy of Amdel results.

Sizing Analysis

The grind size specified and utilised at the Plutonic Mine Laboratory was 90% passing 106 microns. In 2003, 1,660 grind size checks were carried out at the Plutonic Mine Laboratory and 984 by Amdel on sample pulps that had been prepared at Plutonic Mine Laboratory. Amdel tested one sample per job to provide a check on the Plutonic Mine Laboratory grinding. Grind size checks were conducted on randomly chosen samples.

Results show that a total of 1,465 (88%) passed the Plutonic Mine laboratory's quality control criteria. Checks carried out at Amdel show that 848 of the 954 (86%) checks passed the quality control criteria. Tests indicate that in most instances, the Plutonic Mine Laboratory passes the quality control criteria for sample sizing.

Survey Control

Surveys control of collar positions was undertaken using total station methods by the mine surveying team. The records for surveying methods by subsequent operators are relatively limited.

Downhole survey methods have not been captured in the information provided, it is stated by previous operators that surveys were done with either a gyroscope or DEMS probe. DEMS readings falling outside of acceptable magnetic levels were ignored, however, less than 1% of the drill holes the during this period had no downhole surveys. The majority of holes were surveyed with a single shot survey at the end of the hole as was standard during this period of exploration. The remainder of the holes were surveyed with multi-shot surveys ranging from 3 to 62 survey shots generally at 30 m intervals.

11.2 Post-2014 Drilling

11.2.1 QAQC

Dampier Gold

Standards

Searle (2012) stated that "QAQC programs were in place for all HGAL and DAU drilling. A comprehensive review of results suggests that no bias is present in the data set and that the assay data is suitable for resource estimation. "

The Data has been reviewed once again and results show that standards were inserted every 20-25 samples and there is no indication of any significant bias to the assay results from this phase of work.

Blanks

Blank material was inserted every 40-120 samples and results were satisfactory for all samples except for one high value likely to be a mislabelled blank/standard.

Check Sampling

Dampier Gold sampling had duplicates taken every 40-100 samples and showed a satisfactory correlation to original data for mineralisation of this style (See plot in Appendix). DGL(2012)

Vango

QA/QC sampling has been conducted on all sampling completed by Vango at a total rate of 15% of all sampling being a standard, blank or duplicate sample.

Standards

Standards were inserted every 20 samples throughout the sampling, whether RC or Diamond drilling. An unlabelled sachet of certified standard material sourced from Geostats was inserted with value ranges typical of those found throughout the Trident deposit area. 392 Standards have been submitted in total.

A total of 9 pulp standards were used during the surface development drilling programs. The results for each standard are listed below.

Table 11-1 Vango Standards Utilised

Standard Values		**Intertek**	**Samples**
Standard_No	Au	Average	No of samples
G305-2	0.32	0.3	48
G311-7	0.425	0.42	18
G901-9	0.69	0.68	49
G903-6	4.13	4.12	24
G910-7	0.51	0.51	16
G910-8	0.63	0.63	30
G911-6	0.17	0.17	34
G914-10	10.26	10.49	124
G914-4	0.2	0.2	49

Intertek has reported within acceptable accuracy and precision levels around the expected standard value. Some anomalous results were likely due to mislabelling of standards and these were reassigned where obvious. The results indicate the fire assay results from Intertek are of sufficient quality to be acceptable for use in resource estimation.

Blanks

Washed sand material was submitted every 20 samples throughout the program. This material is designed to check the labs were sufficiently cleaning the prep equipment between samples. A total of 299 blanks were collected.

All blanks passed by reporting below 0.05g/t.

The results indicate the fire assay results from Intertek are unlikely to have been significantly biased and are of sufficient quality to be acceptable for use in resource estimation.

Check Samples

Duplicates were taken from all drilling completed by Vango on a basis of one per 20 samples. This resulted in a total of 316 duplicates from across the drilling at Trident as an example. Duplicates were collected as a second split at the cyclone in the case of RC drilling, or as quarter core samples from the diamond drilling.

Results generally show a good correlation (0.9026 Spearman correlation) between the original and duplicate for this style of mineralisation. Due to the particularly high-grade nature of some samples, there is a strong "nugget effect" that can be observed with high-grade samples directly above and below lower-grade material. The duplicates show the gold within the mineralised zones to be heterogeneous to some extent. To test the consistency a section of one hole was resampled using a quarter core over a key interval (see Tabke 11-2). The results were that the replicate samples of the same metres varied significantly, however, the overall intercept was similar. This has also been observed in proximal drillholes where individual metres can vary widely but overall intersections are broadly consistent and locally continuous within the mineralised zones.

The results indicate the sampling methods and lab procedures are of sufficient quality to be acceptable for use in resource estimation.

RPM considers these procedures to be industry standard and regards the sample security and the custody chain to be adequate.

Table 11-2 Trident Re-sampled Hole

	From	To	Primary	Replicate
VTRDD0001	198.5	199.5	0.37	0.27
VTRDD0001	199.5	200.5	3.22	7.08
VTRDD0001	200.5	201	20.73	1.4
VTRDD0001	201	201.5	17.11	27.85
VTRDD0001	201.5	202	4.53	3.9
VTRDD0001	202	202.5	16.5	14.14
		total	62.45	54.65
		4m intercept	15.61	13.67

11.3 Sample Security

All drilling activities have been undertaken by contractors independent of the Company. Due to the style of drilling undertaken within the Project the Company and previous workers' personnel have mostly undertaken AC, RC and DD core sample handling. The sample security measures undertaken include the following:

- Samples for the Mineral Resource estimates have been derived from surface drilling. The independent drilling crews are responsible for delivering the samples and core to the storage facilities, the personnel were responsible for cutting the core and placing the cut core in bags for delivery to the preparation laboratory facilities which are also managed by the Company's Geology Department. Together with the cores, and RC samples, the geology staff provide the laboratory, with a report with the amount and the number of samples and sample tickets to each core is provided. Before submission, duplicates and SRMs were included in the batches and documented within the sample runs. Batches are sent to the analytical laboratories with a report detailing the analysis method required for each element. The chain of custody is kept all the time by the onsite personnel.
- Following submission, samples are managed and prepared by independent internationally accredited laboratory personnel.
- RPM notes that, although the personnel responsible for handling the samples were employed by the various companies during the sampling process, all personnel are supervised by senior site geologists and geotechnicians. In addition, photos are taken of all core trays prior to sampling. Core was clearly labelled for sampling; a suitable paper trail of sampling can be produced, and duplicate samples were taken to ensure no sample handling issues arise.

12. DATA VERIFICATION

The QP author Jeremy Clark visited Marymia, accompanied by Mr Paul Quigley, Catalyst's Manager Geology. No physical activities were occurring onsite at the time of the visit, however, historical open pit workings were observed which are consistent with the interpreted geology.

RPM has completed a review of the drilling and sampling procedures and is of the opinion that international standard practices were being utilised with no material issues being noted by RPM during all generations of drilling. The QA/QC samples all showed suitable levels of precision and accuracy to ensure confidence in the sample preparation methods employed by the Company and primary laboratory, which are .

Catalyst provided a walkthrough of their data input/upload process, validation routines, export process, and database security / backups. The selective original data review and site visit observations carried out by RPM did not identify any material issues with the data entry or digital data.

The QP Author reviewed the work procedures and can confirm that these are consistent with the Company staff's and previous owners' routine actions. These practices are aligned with current industry best practice guidelines for exploration.

In addition, RPM considers that the onsite data management system meets industry standards which minimizes potential 'human' data-entry errors and no systematic fundamental data entry errors or data transfer errors; accordingly, RPM considers the integrity of the digital database to be sound and suitable to underpin the Mineral Resource estimates.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

The majority of deposits that have Mineral Resources reported having undergone metallurgical testing at some point in the past. Some of this testing has included comminution testing, leaching testing, or a combination of both. Additionally, some deposits have been processed in the processing circuits of either the now-decommissioned and removed Marymia processing plant or the Plutonic Gold Mine processing plant.

GR Engineering, Como Engineers, and RPM have conducted several metallurgical reviews on available test work reports. However, it was not possible to determine the origin of many of the samples representing the various deposits. Despite this limitation, the degree of testing and regional representation provides some confidence in the gold extraction and recovery properties from the different deposits, especially in regard to the lithologies of oxide, transition, and fresh (sulphide).

Table **13-1** provides a list of the reviewed metallurgical testwork reports. Some of these reports were not available for RPM to review but were referenced in previous metallurgical reviews by GR Engineering or Como Engineers and are marked with an asterisk.

Table 13-1 Metallurgical Test Work Reports

Date	Vendor	Title
Nov/1990	Normet	*Marymia oxide and sulphides Cyanide leach testwork - 23/242
Apr/1991	Normet	*Keillor I, Marymia Metallurgical testwork Oxide/Sulphide grind optimisation. - 23/268
Apr/1991	Normet	*Report on bulk density and Bond Work Index Determination of Keillor I and Keillor 2 Samples. 23/272
Jun/1991	Normet	*Physical testwork conducted on Keillor I and Keillor II samples. 23/272C
Jun/1991	Normet	*Keillor II, Marymia Metallurgical Testwork, Oxide and Transition Samples. 23/272B
Jul/1991	Normet	*Marymia Metallurgical testwork Oxide, Transition Sulphide samples for Keillor I and II. 23/296
Aug/1991	Normet	*Physical testwork conducted on Marymia samples.23/296B
Mar/1993	Normet	*Marymia Testwork K1WO, K1WT samples. 23/588
Mar/1993	AMMTEC	*Cyanidation testing of K1 Marymia Sulphide Gold ore for Resolute Resources. A3674
Jul/1993	AMMTEC	*Metallurgical testing of Triple P Gold ore Composites (D,E and F) for Resolute Resources. A3844
Aug/1993	AMMTEC	*Physical and cyanidation testing of Triple P gold ores for Resolute Resources Limited. A3857
May/1994	AMMTEC	*Albatross Cyanidation testing of Albatross Oxide ore. A4139
Jan/1995	AMMTEC	*Metallurgical testing of Triple P gold ores for Resolute Resources Limited. A4469
Jan/1996	AMMTEC	*Metallurgical Testwork on ore from the Marymia Gold Mine A5280
Jun/1997	OreTest	Gravity Concentration and Cyanidation Tests on Parrot Ore 52/258
Jul/1996	OreTest	*Gravity and cyanidation testwork on Triple P deeps' ore. 6890
Aug/1996	OreTest	Skyhawk-Budgie - Cyanide Leach on Laterite Ore 6935
Feb/1997	OreTest	Metallurgical Testwork on ore from the Marymia Gold Mine 7075
Mar/1997	Mason Geoscience	Petrographic descriptions of four rock samples with electron microbe study
Aug/1997	OretTest	Gravity and cyanidation testwork on Trident ore from the Marymia gold project 7360
Dec/2020	Plutonic Gold Mining	Inhouse leach tests for Redfin, Barra, Bream,
Jul/2018	ALS	Metallurgical Testwork conducted upon a Plutonic Dome Gold Ore Composite for Como Engineers Pty Ltd A19022
Jan/2019	ALS	Metallurgical Testwork on Trident West Ore A19640
Feb/2019	ALS	Metallurgical Testwork conducted upon a Plutonic Dome Gold Ore Composite for Como Engineers Pty Ltd A20305

Although gold extraction and recovery rates may differ between deposits and even within different lithologies and the deposits themselves, some general assumptions can be made based on the standard metallurgical tests that have been performed across multiple deposits.

Table 13-2 provides a summary of the estimated recoveries for each deposit's lithologies as assumed by Vango Mining for resource estimation, as well as by Como Engineering and GR Engineering based on their review of metallurgical test work report data.

Table 13-2 Metallurgical Recovery Assumptions

Deposit	Oxide			Transition			Fresh		
	Vango	Como/ALS	GRES/Historic	Vango	Como/ALS	GRES/Historic	Vango	Como/ALS	GRES/Historic
Trident West O/C	93.0%	97.3%		93.0%			90.0%		
Marwest and Mars O/C	93.0%			93.0%			90.0%		
Mareast O/C	93.0%			93.0%			90.0%		
EastMareast O/C	93.0%			93.0%			90.0%		
Wedgetail O/C	92.0%	87.0%		92.0%			92.0%		
PHB-1 (K3) O/C	93.0%	97.3%		93.0%	98.5%		90.0%		
K1 O/C	93.0%	94.0%	95.3%	93.0%	92.8%	94.3%	90.0%	91.7%	92.1%
Triple P, Triple-P Sth O/C	92.0%	96.7%	97.1%	92.0%			86.0%		76.7%
Albatross-Flamingo O/C	93.0%	93.9%		93.0%			90.0%		
Cinnamon O/C	93.0%	94.0%		93.0%	91.2%		90.0%	96.8%	
Trident UG							90.0%	88.8%	
K2 UG				92.0%		92.0%	92.0%	91.1%	93.2%
Triple-P/Zone-B UG				94.0%			86.0%	97.4%	

In sections where neither GR Engineering nor Como Engineers reported any data, there was no metallurgical test work available for that particular deposit lithology. Vango Mining has made some standard recovery assumptions for each deposit based on its lithology, which are mostly validated by the assumed recoveries from GR Engineering and Como Engineers. Although some recovery assumptions made by Vango Minerals are not supported by validating recovery numbers from either GR Engineering or Como Engineers, they may still be considered regionally consistent for the purposes of resource estimation.

RPM believes that the metallurgical recovery estimates utilized by Vango Metals are appropriate for the purpose of resource estimation as reported in **Section 12**. However, RPM acknowledges that more extensive metallurgical testing on specific deposits and proposed ore sources would be necessary for the purpose of advanced process plant design.

14. MINERAL RESOURCE ESTIMATE

Definitions for resource categories used in this report are consistent with those defined by CIM (2014) and adopted by NI 43-101. In the CIM classification, a Mineral Resource is defined as “a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction”. Mineral Resources are classified into Measured, Indicated, and Inferred categories. A Mineral Reserve is defined as the “economically mineable part of a Measured and/or Indicated Mineral Resource” demonstrated by studies at Pre-Feasibility or Feasibility level as appropriate. Mineral Reserves are classified into Proven and Probable categories, however, RPM notes that no Mineral Reserves are reported in this Report.

14.1 Statement of Mineral Resources

A Mineral Resource statement has been independently reported by RPM in accordance with the CIM Definition Standards. Information contained in this Report is based on information provided to RPM by the Client or the Company and verified where possible by RPM. All statistical analysis and Mineral Resource estimates were carried out by RPM’s sub-consultant and reviewed were possible by RPM. All resources were developed using three-dimensional digital estimates for the concentrations of the Au with Mineral Resource models based on the statistical analysis of the data provided. RPM considers the Mineral Resource estimate meets the general guidelines for CIM Definition Standards for reporting Mineral Resources at the Indicated and Inferred confidence levels as reported in **Table 14-1.** The Mineral Resources have been reported at mineralised 0.5g/t Au for open-cut resources and 3 g/t Au for the underground resource. Further details on reporting can be found in **Section 14.12.**

RPM is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

Table 14-1 Marymia Project Mineral Resource Estimate as at 22nd February 2023

Area	Deposit	Mineralised COG	Indicated			Inferred		
		Au (g/t)	Quantity (Kt)	Au (g/t)	Ounces (k)	Quantity (Kt)	Au (g/t)	Ounces (k)
Open-cut	Trident West	0.5	253	1.1	9			
	Marwest & Mars	0.5	688	2	45			
	Mareast	0.5	486	1.9	30			
	EastMareast	0.5	237	1.1	8			
	Wedgetail	0.5	185	1.7	10			
	PHB-1 (K3)	0.5	604	2	39	238	1.4	11
	K1	0.5	743	1.8	42	837	1.7	47
	Triple-P & Triple-P Sth	0.5	633	2.1	42	486	1.4	21
	Albatross & Flamingo	0.5				853	1.4	38
	Cinnamon	0.5	1,472	1.8	86	536	1.9	32
	Total OP		**5,300**	**1.8**	**311**	**2,950**	**1.6**	**150**
UG	Trident	3	945	9.4	285	645	6	125
	K2	3	197	10.6	67	177	7	40
	Triple-P & Zone-B	3				170	4.3	24
	Total UG		**1,142**	**9.6**	**352**	**992**	**5.9**	**189**
Total Mineral Resource			**6,442**	**3.2**	**663**	**3,942**	**2.7**	**339**

Note:

1. *The Statement of Estimates of Mineral Resources has been compiled under the supervision of Dr. Spero Carras, who is a sub-consultant of RPM and a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralization and type of deposit and to the activity that they have undertaken to qualify as a Qualified Person as defined in the CIM Standards of Disclosure.*
2. *All Mineral Resources figures reported in the table above represent estimates based on drilling completed up to 23 February 2023. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.*
3. *Mineral Resources are reported on a dry in-situ basis.*
4. *Mineral Resources are reported in line with Section 14.12.*
5. *The Mineral Resources referred to above, have not been subject to detailed economic analysis and therefore, have not demonstrated to have actual economic viability*
6. *The Mineral Resources have been reported at a 100% equity stake and not factored for ownership proportions.*

RPM highlights that geological and internal dilution has been included in the mineralised interpretations, however, no ore loss or dilution factors have been applied. As such, the Mineral Resources are considered undiluted.

14.2 Resource Database

A comprehensive dataset was provided to RPM which included predominately three types of sampling that were utilised within the estimate and resultant classification of the resources. These included reverse circulation (“RC”) holes, reverse air blast (“RAB”) and surface diamond holes (“DD”). All utilised in the resource estimates have been completed as outlined in **Section 11** and shown graphically in **Figure 7-1**. The combined database of all assets contains the records from 248 DD holes,4,578 RC holes and 195 RAB. RPM notes that only Albatross & Flamingo deposit includes RAB drilling (validated by RC and AC drilling), all others are RC and DD only.

All drilling data was collected directly through the Company or previous owners through field activities or provided by third parties. The datasets per asset have been validated and uploaded for storage within the Company database. The final dataset used for the Resource models was based on all information available in April 2020, however, as discussed in Section 10, further drilling has been completed since then. A summary of the drilling data per deposit can be seen in **Table 14-2**.

Table 14-2 Summary of Data Used in the Mineral Resource Estimates

Deposit	DD	Meters	RC	Meters	Total	Meters	Mineralised (m)
Trident	32	3,886	28	7,580	60	11,466	1,400
Trident West	6	530	154	15,221	160	15,751	2,000
K1	34	3,577	1,098	69,946	1,132	73,523	6,000
K2	99	19,893	905	56,535	1,004	76,428	585
Cinnamon	13	3,431	96	13,927	109	17,358	2,520
EastMarEast			142	3,287	142	3,287	600
MarEast	3	190	198	14,770	201	14,960	1,009
Marwest & Mars	12	944	355	27,239	367	28,183	1,091
PHB1(K3)	14	2,400	275	23,679	289	26,079	2,500
Triple P and Triple P Sth	19	1,172	329	16,741	348	17,913	8,000
Triple P and Zone B UG	11	1,321	500	37,262	511	38,583	
Wedgetail			123	5,948	123	5,948	625
Albatross & Flamingo	5	336	375	33,443	380	33,779	3,800
Total	**248**	**37,680**	**4,578**	**325,578**	**4,826**	**363,258**	**30,130**

Note: Summarised from data provided by the Client.

RPM notes that all drill hole collars have been converted from UTM coordinates to a local mine grid. This results in two rotations to north-south orientation or east-west orientation.

14.3 Geological Interpretation

The interpretation of the gold mineralisation was based on geological logging and geochemistry, primarily using cut-off grades as shown in **Table 14-3**. All holes interpretations were based on resource and exploration drillhole information only, with no surface, pit wall or face mapping used to inform outcropping mineralisation boundaries as this was not provided to RPM.

Geological interpretations of the lithological units, the geological structure, alteration and the different lodes of mineralisation were used to guide and interpret the shape of the mineralised wireframes. This has resulted in numerous domains and objects being interpreted per deposit as shown in **Table 14-3**.

Wireframed solids were constructed based on sectional interpretations using a variety of downhole lengths and as well as the inclusion of geological dilution as shown in **Table 14-3**. Additional geological dilution downhole was added to the lodes to allow for the uncertainty associated with lode structures that are not definitive and visible in colour and as a result, their edges will need to be defined by assay grade control. This is referred to as shape dilution (reference “Concepts for Calculating Recoverable Reserves for Selective Mining in Open Pit Gold Operations”, Carras 1984). The following process was utilised to define the intercepts which were included in the wireframes:

- Samples on each hole were selected based on the parameters shown in **Table 14-3**. Once selected and the intercept exceeds the minimum mining width (excluding the geological dilution)the total weighted grade was determined. If the grade is above the COG the intercept was included in the wireframes.

- If the intercept was below the minimum mining width, the intercept was expanded to the minimum mining width and no geological dilution was included. The intercept grade was calculated and if above the COG was included.

In addition to the interpretation of the mineralised lodes, several of the deposits, including Trident and K1 also included the interpretation of internal waste zones. These zones were larger than the Internal Waste dilution included in the geological interpretation and were separated for grade estimation purposes.

Oxidation surfaces were constructed using drilling geological weathering codes. RPM was provided with weathering logging data which was used to create a base of oxidation surface and the top of fresh rock to further constrain the mineralised domains and allow the separation of material types into oxide, transition and fresh. RPM reviewed the surfaces and considers them reasonable for the style of mineralisation and deposit lithologies.

Table 14-3 Interpretation Parameters

Deposit	No Shapes	COG (g/t)	Min downhole (m)	Int Dil (m)	Edge Dil (m)	Drill spacing (m)
Trident	7	3	3	3	na	20 by 20
Trident West	69	0.5	3	1	0.5	20 by 20
K1	169	0.5	3	1	0.5	25 by 25
K2	49	3	3	1	0	25 by 25
Cinnamon	58	0.5	3	1	0.5	25 by 25
EastMareast	34	0.5	3	1	0.5	25 by 20
MarEast	51	0.5	3	1	0.5	25 by 20
Marwest & Mars	62	0.5	3	1	0.5	20 by 20
PHB1(K3)	166	0.5	6	2	0.5	25 by 25
Triple P and Triple P Sth	116	0.5	3	1	0.5	20 by 20
Triple P and Zone B UG	20	3	3	1	0	20 by 20
Wedgetail	24	0.5	3	1	0.5	25 by 20
Albatross & Flamingo	150	0.5	3	1	0.5	20 by 20

Note: Summarised from data provided by the Client.

14.4 Sample Selection

The wireframes of the mineralized zones were used to define the Mineral Resource intersections. Separate intersection files were generated for each resource domain. A review of sample length indicated that a 1m sample length was the predominate sample length, however, weighted lengths to 0.5m were utilised and created using the following method:

- Samples weighted to 0.5m were created based on individual samples.
- Any samples over 0.75m were split into two samples
- Any sample over 1.2m was split into equal lengths at multiples of 0.5m

The 0.5m weighted composites were checked for spatial correlation with the wireframe objects and coded for the object number by RPM for both location and grade, no issues were noted.

14.5 Treatment of High-Grade Assays

The statistical analysis of the composited samples for Au inside the mineralised wireframes was used to determine the high-grade cuts that were applied to the grades in the mineralised objects before they were used for grade interpolation. All assays above the cut value were assigned the cut value. This was done to eliminate any high-grade outliers in the assay populations which would result in conditional bias within the resource estimate. The high-grade cuts applied to the composites were determined from the Denham cutting method and reviewed via log histograms and log probability plots for each deposit resulting in the high-grade cuts as shown in **Table 14-4** for all deposits other than Trident which are shown in **Table 14-5**.

Table 14-4 Top-Cuts Applied to Deposits

Deposit	Cut Value (g/t)			Metal (%)	Samples
	Domain				
	Main	Other	Other		
Trident West	50			10	3
K1	40			7%	5
K2	60		50	27	4
Cinnamon	30			2	1
EastMarEast	na				0
MarEast	40			14	2
Marwest & Mars	50			10	4
PHB1(K3)	40 (SW)	25 (NW)	20	34	6
Triple P and Triple P Sth	60 (Central)	25 (South)		6	3
Triple P and Zone B UG	20			5	
Wedgetail	na				
Albatross & Flamingo	50			5	2

Note: Summarised from data provided by the Client.

Table 14-5 Top-Cuts Applied to Trident UG

Number	Domain	Cut value	Metal (%)
Domain 1	Main Flat (High grade)	140	8
Domain 1	Main flat (low grade)	55	4
Domain 2	Vertical (High grade)	120	3
Domain 2	Vertical (Low grade)	70	4
Domain 3	Eastern	50	0
Domain 4	Horizon Near transition	20	0
Domain 5	Flat Dipping	30	0
Domain 6	Flat Dipping	15	0
Domain 7	All others	30	0

Note: Summarised from data provided by the Client.

14.6 Trend Analysis

Variography

Mineralization continuity was confirmed via variography. Variography examines the spatial relationship between composites and seeks to identify the directions of mineralization continuity and quantify the ranges of grade continuity. Variography was also used to determine the random variability or 'nugget effect' of the deposit. The results provide the basis for determining appropriate kriging parameters for resource estimation.

Experimental variograms were interpreted for a variety of domains within each object depending on the number of samples and orientation of each domain. All variography was completed using Surpac software and reviewed in Supervisor software to validate the outcomes.

Generally, a single structured spherical model was found to model the experimental variogram reasonably well in addition to the nugget. The orientation of the plane of mineralization was aligned with the interpreted wireframe for the main objects. The experimental variograms were calculated with the first direction aligned along the main mineralization continuity while the second direction was aligned in the plane of mineralization at 90° to the first orientation. The third direction was orientated perpendicular to the mineralization plane, across the width of the mineralization.

The variograms displayed reasonable structure. Interpreted variogram parameters are shown in **Table 14-6**.

Table 14-6 Variogram Analysis by Deposit

Deposit	Domain	Bearing (o)	Dip	Plunge	Nugget	Structure 1				Structure 2			
						C1	A1	Semi1	Minor1	C2	A2	Semi2	Minor2
Trident	Flat				0.55	0.45	40	2	10				
	Vert				0.55	0.45	30	1.5	10				
Trident West	67	90	22	5	0.6	0.4	50	2	16				
	69	0	0	-24	0.5	0.5	50	1	12	0.2	50	1.2	10
	65/18	90	68	5	0.3	0.5	30	1.2	10				
	68/57	90	45	5	0.3	0.7	50	2	15				
K1	43/58/147	0	0	-80	0.45	0.55	50	1.25	12.5				
	112/115/	0	0	70	0.3	0.7	30	1.5	10				
	143/144	0	0	-90	0.5	0.5	20	1	5				
	151/154/165/166/169	0	0	-70	0.45	0.55	30	1.5	6				
K2	49	0	0	-90	0.6	0.4	60	2	20				
	41	0	0	-90	0.5	0.5	40	1.6	16				
	21	0	0	-90	0.5	0.5	40	1.6	16				
Cinnamon	19/28/30/34/37/48/49/54/55/57/58	90	0	60	0.6	0.4	60	1.5	20				
	16/31/39/40	90	0	60	0.5	0.5	40	2	10				
	18/23/25/26	90	0	70	0.65	0.35	40	2	20				
EastMarEast	10/16/17	0	-70	0	0.8	0.2	30	1	10				
	19/20	90	0	40	0.6	0.4	60	2	15				
	31	90	0	65	0.6	0.4	60	2	15				
	33	90	0	35	0.6	0.4	60	2	15				
	34	90	0	65	0.6	0.4	60	2	15				
MarEast	45/50/51/52/53/55/56/54/58	60	0	45	0.5	0.5	50	1.67	12				
Marwest & Mars	51/55/59/62/65/66/67/68	0	-35	0	0.55	0.45	30	1	10				
PHB1(K3)	21/22	350	0	-85	0.35	0.65	25	1	8.33				
	151	90	-85	0	0.4	0.6	50	2	10				
	163	345	0	-85	0.35	0.65	25	1	6.25				
	17/100/152	90	-90	0	0.35	0.65	25	1	8.333				
Triple P and Triple P Sth	1	0	0	-85	0.85	0.15	50	2	15				

Deposit	Domain	Bearing (o)	Dip	Plunge	Nugget	Structure 1				Structure 2			
						C1	A1	Semi1	Minor1	C2	A2	Semi2	Minor2
	21/22	350	0	-85	0.35	0.65	25	1	8.333				
	148/151	90	-85	0	0.4	0.6	50	2	10				
	161/162/163	345	0	-85	0.35	0.65	25	1	6.25				
	170/209	350	0	-85	0.5	0.5	25	1	8.33				
Triple P and Zone B UG	NA												
Wedgetail	22/23/24/21	90	0	-50	0.65	0.35	40	2	13				
Albatross & Flamingo	NA												

14.7 Block Models

SURPAC block models were created to encompass the full extent of each resource area as currently defined within the licence boundary. A variety of block sizes were utilised however they were predominantly smaller than the closest drill spacing per deposit, as such no sub-blocks were utilised. The Extent and Block sizes are shown in **Table 14-7**.

Table 14-7 Block Model Parameters

Deposit	Northing (m)		Easting (m)		Elevation (m)		Blocks Size (m)		
	Min	Max	Min	Max	Min	Max	East	North	Elev
Trident	11,800	12,500	18,800	20,300	250	550	1	5	1
Trident West	11,750	12,350	18,900	19,700	315	550	2.5	1	1
K1	17,600	19,400	8,700	9,500	500	700	1	2.5	1
K2	16,050	17,350	8,650	9,350	250	700	1	2.5	1
Cinnamon	8,050	8,800	25,900	26,800	300	650	2.5	1	2.5
EastMareast	11,625	11,925	22,975	23,525	525	660	2.5	0.5	1
MarEast	11,750	12,200	22,250	23,000	500	700	2.5	1	1
Marwest & Mars	11,950	12,500	22,200	21,100	350	700	2.5	1	1
PHB1(K3)	16,300	17,500	8,600	9,500	400	700	1	2.5	1
Triple P and Triple P Sth	1,300	2,250	1,450	2,350	400	650	1	2.5	1
Triple P and Zone B UG									
Wedgetail	10,650	11,050	21,500	22,500	450	700	2.5	1	1
Albatross & Flamingo	7,400	8,600	17,650	18,350	370	650	2.5	1	1

14.8 Search Strategy and Grade Interpolation Parameters

Each mineralised wireframed object was used as a hard boundary for the interpolation of Au. That is, only composites (0.5m weighted) inside each object were used to interpolate the blocks inside the same object. The Ordinary Kriging (OK) algorithm was selected for grade interpolation of Au for the majority of the main domains within each deposit however where composite numbers were low inverse distance (ID) was utilised as shown in **Table 14-8.** The OK and ID algorithms were selected to minimise smoothing within the estimate and to give a more reliable weighting of clustered samples and the high-grade tenor of the mineralisation.

A combination of isotropic and anisotropic search ellipsoids in the major and semi-major directions was used for the interpolation process based on the variograms, the number of samples to be used to estimate a block and the relative orientations of the mineralisation, however, an anisotropic parameter was used in the minor direction (across strike). The search ellipsoid orientations used for interpolation matched the general orientation of the mineralised lodes in each domain. Typically a single pass was used however both Trident West and the Triple P deposits utilised 2 passes. For un-estimated blocks the average grade for the domains was assigned. as shown in **Table 14-8**

Discretisation was 2 by 1 by 1 (points per block), for all blocks estimated.

Table 14-8 Estimation Methods and Parameters by Deposit.

Deposit	Method	Domain	Orientation (o)			samples		Pass 1 Search Radii (m)			Pass 2 Factor
			bearing	dip	plunge	min	max	major	semi	minor	
Trident	OK	Flat	0	-30	0	4	32	70	35	7	na
		Vert	0	-70	0	4	32	40	26.67	4	na
	ID^3	1,2,3,4	0	-27	0	4	32	40	40	4	na
		5,6,7,8	0	-70,-30	0	4	32	40	20	4	na
		9,10,11	0	6,-20	0	4	32	40	40	40	na
		12	0	-30	0	4	32	40	30	4	na
		13	0	-30	0	4	32	40	20	4	na
		14	0	-50	0	4	32	40	40	4	na
		15	0	-30	0	4	32	40	20	4	na
		16	0	-70	0	4	32	40	30	4	na
		17	0	-30	0	4	32	70	35	7	na
		18,19,21,22,23	0	-30	0	4	32	40	40	4	na
Trident West	OK	67	90	5	22	4	32	50	25	3.125	2
		69	0	-24	0	4	32	50	50	4.17	2
		65	90	5	68	4	32	50	41.66	5	2
		18	9	5	45	4	32	30	27.5	3	2
		68/57	9	5	45	4	32	45	27.5	3	2
	ID^3	all others	0	-15 to -50	0	4	32	20	20	3.33	2
K1	OK	43/58/147	0	0	-80	4	32	50	40	10	na
		112/115/	0	0	70	4	32	30	20	3	na
		143/144	0	0	-90	4	32	20	20	4	na
		151/154/165/166/169	0	0	-70	4	32	30	20	5	na
	ID^2		0	0	variable	4	32	20	20	2.5	na
K2	OK	49	0	0	-90	4	32	60	30	3	na
		41	0	0	-90	4	32	40	25	2.5	na
		21	0	0	-85	4	32	40	25	2.5	na
	ID^3	1,3,12,24,29,30,32,33,35,38,44	variable	variable	variable	4	32	40	25	2.5	na
		all others	90/270	-70 to -90	0	4	32	25	25	2.5	na
Cinnamon	OK	19/28/30/34/37/48/49/54/55/57/58	90	0	60	4	32	60	40	3	na
		16/31/39/40	90	0	60	4	32	40	20	4	na
		18/23/25/26	90	0	60	4	32	40	20	2	na

Deposit	Method	Domain	Orientation (o)			samples		Pass 1 Search Radii (m)			Pass 2 Factor
			bearing	dip	plunge	min	max	major	semi	minor	
	ID^2	3/7/8/21/27/33/36/45	0	0	0	4	32	40	40	4	na
		all others	180	-15-70	0	4	32	30	20	3	na
EastMarEast	OK	10/16/17	0	-70	0	4	32	30	30	3	na
		19/20	90	0	40	4	32	60	30	4	na
		31	90	0	65	4	32	60	30	4	na
		33	90	0	35	4	32	60	30	4	na
		34	90	0	65	4	32	60	30	4	na
	ID^2	all others	0	-25 to -60	0	4	32	25	25	2.5	na
MarEast	OK	45/50/51/52/53/55/56/54/58	90	0	35-45	4	32	50	33.33	4.17	na
	ID^2	all others	0	-20 to -80	0	4	32	20	20	2	na
Marwest & Mars	OK	51,55,59,62,65,66,67,68	0	-35 -55	0	4	32	30	30	3	na
	ID^3	all others	0	-5 to -65	0	4	32	30	20	2	na
PHB1(K3)	OK	21/22	350	0	-85	4	32	25	25	3	na
		151	90	-85	0	4	32	50	25	5	na
		163	345	0	-85	4	32	25	25	4	na
		17/100/152	90	-90	0	4	32	25	25	3	na
	ID^2	all others	90/270/350	0/-85/-90	0	4	32	25	25	3	na
Triple P and Triple P Sth	OK	1	0	0	-85	4	32	50	25	3.33	2
		21/22	350	0	-85	4	32	25	25	3	2
		148/151	90	-85	0	4	32	50	25	2.5	2
		161/162/163	345	0	-85	4	32	25	25	4	2
		170/209	350	0	-85	4	32	25	25	3.33	2
	ID^2	all others	270	0 to -80	0	4	32	50	25	2.94	2
Triple P and Zone B UG											na
Wedgetail	OK	22/23/24	90	0	-50	4	32	40	20	3.1	na
		21	0	-50	0	4	32	40	20	3.1	na
	ID^2	all others	0	-30 to -55	0	4	32	20	20	3	na
Albatross & Flamingo	ID^2	all	0	0-80	0	4	32	30	15	2	na

14.9 Bulk Density

Historical records indicate Bulk Density Determinations were completed on the majority of deposits where resources have been reported. These were determined by wax coating samples and immersing in water with a summary per deposit shown in **Table 14-9**.

No relation can be interpreted between grade and density, this is as expected for the style of mineralisation, with Rock types of granite and serpentinite appearing to have a relationship with density, as would be expected and inline with simialr deposits in te region.

Table 14-9 Bulk Density Values by Deposit

Deposit	Oxide	Transition	Fresh
Trident	1.8	2.4	2.9
Trident West	1.8	2.4	2.9
K1	2.0	2.4	2.8
K2	2.0	2.5	2.9
Cinnamon	1.8	2.3	2.7
EastMarEast	2.0	2.4	2.8
MarEast	1.8	2.4	2.9
Marwest & Mars	1.8	2.4	2.8
PHB1(K3)	1.9	2.4	2.8
Triple P and Triple P Sth	1.8	2.4	2.8
Triple P and Zone B UG	1.8	2.4	2.8
Wedgetail	2.0	2.4	2.8
Albatross & Flamingo	1.6	2.2	2.6

14.10 Block Model Validation

A two-step process was used to validate the estimation for the Project as outlined below:

- Swats plots including different estimation methods, and
- Visual Inspection of the Blocks;

14.10.1 Depletion Areas

Open-cut mining has been undertaken in several areas within the project. This mining is restricted typically to the upper 60m of the oxide material, however, is variable in depth and extent. A detailed topographic survey was used to deplete known mining areas. While depletion has been undertaken based on final mining, RPM is aware backfilling of waste and tails material was undertaken post mining. Refer to Section 14.2 for discussion.

14.11 Classification

Mineral Resources were classified in accordance with the CIM Standard. The Mineral Resource was classified as Indicated and Inferred Mineral Resource on the basis of data quality, sample spacing, lode and grade continuity.

As noted in the geology interpretation the mineralisation varies between the deposit, resulting in geological and grade continuity variations, which is illustrated when the variograhic interpretation are compared between the deposits' main lodes. While all show moderate to high nugget, and short ranges there are variations. While there are variations observed, within the closer spaced drillholes (20m by 20m) all deposits both show good continuity of the main mineralised lodes along strike and down dip with relative consistency evident in the thickness of the structures, along with the continuity of structure between sections. While there is good geological continuity along strike and down dip, there is evidence, and it is interpreted, that local variation of grade and thickness will occur between the current drill spacing arising from the type structures resulting in discontinuous pods of mineralisation.

Given the likelihood of further local grade variation with further drilling, within the good geological continuity, RPM considers the current data suitable to provide a good estimate of tonnage and metal content within the current drilling spacing on a global scale. RPM considers the infill and extension drilling undertaken, allows for good confidence in the grade and geological continuity within the 20m or closer spacing allowing interpretation between section and down dip. As such, RPM considers 20m by 20m spacing suitable for the Indicated classification, which was selected based on variogram ranges (60% of the sill range) and visual confirmation of structure and grade continuity. RPM however considers that further drilling is required to allow a confirmed estimate of local grade and metal distribution as such no measured resources are reported. All other areas are reported as the Mineral Resource as Inferred within the 40m by 40m drilling spacing areas and extrapolated to 30 m from the nearest drill hole or half the distance to the next section.

14.12 Mineral Resource Reporting

14.12.1 Cut Off Grade

The Mineral Resources wireframes were completed to a cut off grades of 0.5 Au g/t within the open-cut and 3 g/t for the underground areas. These cut off grades refer to individual intercepts where the combined intercept (inclusive of geological dilution) is above the respective COG. Given this sample and intercept selection method, it was assumed that the entire wireframe and mineralisation material in the model will be extracted. As such, all resources, open-cut and underground, were reported at a 0g/t COG, with internal dilution (except for the defined waste and declassified material) assumed to be required to be extracted.

The open pit vs underground resource areas were determined using a whittle optimisation. A pit shell was utilised to determine the potential maximum depth of potential open pit mining, within which the above-mineralised lodes were utilised to report the Mineral Resource.

Two sets of optimisations were undertaken to determine the potential depth of open pit Mineral Resources based on the sample resource estimates. These were undertaken in 2020 and 2023. Below is a summary of the inputs. RPM notes that backfilling of K1 via tails material and Triple P and Marswest with waste was undertaken. This material was assumed to be ‘mined’ as part of the revenue analysis of the pit optimisation process.

14.12.2 2020 Optimisation

The 2020 pit shell was generated with resources using the operating parameters which are based on similar mining operations in Western Australia (as provided by a third-party consultant) and the preliminary metallurgical study completed by the Company as shown by deposit in **Table 14-10.**

Table 14-10 Pit Optimisation Parameters

Deposit	Price (AUD)	Proc Rec(%)	Slope (º)	State Royaly (º)
K1	2,500	92	40	2.5
Cinniman	2,500	92	40	2.5
EastMarEast	2,500	92	45	2.5
MarEast	2,500	92	40	2.5
Marwest	2,500	92	40	2.5
PBH 1	2,500	92	40	2.5
Triple P & Sth	2,500	92	30	2.5
Wedgetail	2,500	92	45	2.5
Trident West	2,500	92	40	2.5
Trident West	2,500	92	40	2.5

14.12.3 2023 Pit Optimisation

As the Mineral Resource estimates were initially reported in 2020, to confirm the pit optimisations were still suitable to delineate the open pit resources. To update the optimisations utilised a gold price of AUD2,800 (based on the spot price at the time of reporting) and inflated the mining and processing costs by 32% to account for cost increases.

The outcome of the pit optimisation was very similar as such there was no variation in the Mineral Resource statements between 2020 and 2023.

Pit Optimisation Disclaimer

RPM highlights that the pit optimisations were used to define the depth and extent to report the open-cut Mineral Resource. Furthermore, it is noted that given the drill density, strike length and variation in mineralisation tenure the potential open pitiable depth varies, as such the application of a consistent depth is considered not appropriate and the use of a pit optimisation to define variable depths is suitable within the indicated areas.

AUD 2,500 and 2,800 was selected to determine the maximum depth of potential open pit mining based on historical prices (last 5 years at the time of reporting). RPM notes that these prices is above the current long-term consensus forecast, however, notes that the AUD gold price was higher in the past 5 years and currently is, as such utilised a higher price to determine the ***maximum*** depth of potential open-cut mining based on the current resource.

While a detailed schedule and options analysis has not been completed to confirm the optimal mining method, given the sub-vertical continuous style of mineralisation within sheet-like shears occurring near surface within the currently defined resource areas, open pit mining is likely to be appropriate for near surface mineralisation and underground for the deeper area, pending the option analysis. Additional mining design and more detailed and accurate cost estimate mining studies and test work are required to confirm the viability of extraction.

RPM notes that the pit shells were completed to report the resource contained within to demonstrate reasonable prospects for eventual economic extraction and highlights that these pits do not constitute a scoping study or a detailed mining study which along with additional drilling and test work, is required to be completed to confirm economic viability. It is further noted that in the development of any mine, it is likely that given the location of the Project, that CAPEX is required and is not included in the mining costs assumed. RPM has utilised operating costs based on in-house databases of similar operations in the region and processing recoveries based on preliminary test work as outlined in **Section 13**, along with the price noted above in determining the appropriate cut-off grade. Given the above analysis RPM considers both the open pit and material below the pit to demonstrate reasonable prospects for eventual economic extraction, however, highlights that additional studies and drilling is required to confirm economic viability.

RPM highlights that geological and internal dilution has been included in the mineralised interpretations, however, no ore loss or dilution factors have been applied. As such, the Mineral Resources are considered undiluted.

15. MINERAL RESERVE ESTIMATE

No Mineral Reserves Reported

16. MINING METHODS

16.1 Summary

The potential of underground mining at Trident has been assessed by Catalyst in their recently compiled Scoping Study referred to in the 19 July ASX announcement titled Trident Scoping Study. This Scoping Study, reported in accordance with the ASX Scoping Study Guideline 3, is the basis of the PEA presented in this Report. The PEA is based on low-level technical and preliminary economic evaluations with a considered accuracy of +/- 50% which is insufficient to support estimation of Mineral Reserves. There is no assurance of an economic development case at this stage, or certainty that the conclusions of the PEA will be realised.

Development of Trident proposes to use an owner-operator mining team, and the mining cost basis is from Catalyst's nearby operating Plutonic Mine which utilises similar mining methodologies. This PEA assumes that Trident ore will be processed at the Plutonic processing facility and be an incremental ore source to the base load being processed at Plutonic. This assumption is the basis for this study's processing and general and administrative costs. RPM notes that Plutonic Mine has Mineral Reserves declared, which supports the ongoing operation of the Mine.

The selection of Mining method was undertaken by Entech Pty Ltd, whereby suitable mining methods for mining the Trident orebody were based on a combination of key geological and geotechnical factors, combined with findings from previous studies.

The conditions and constraints that guided the underground mining method selections were as follows:

- Underground workings will be accessed through a portal in the Marwest pit.
- A mixture of sub-vertical and flat dipping mining areas.
- Medium to high-grade nature of the orebody.
- Findings of additional studies, including geotechnical findings and recommendations.

The mining methods assessed aim to utilise standard high-capacity mobile underground mining equipment. Production level intervals were selected to match the limitations of the proposed mining fleet as well as orebody geological and geotechnical properties.

The medium to high-grade nature of the orebody means that maximising orebody extraction is of key importance. To achieve higher orebody extraction, a method utilising backfill is necessary given the anticipated geotechnical conditions.

An engineered cemented fill is recommended due to the varying orebody widths, anticipated wall exposures, flat dipping areas of the orebody unsuitable to other backfill types, and the ability to achieve greater extraction and lower dilution.

The Trident underground is proposed to be accessed via the existing Marwest pit. A recent geotechnical inspection of the pit has been conducted, identifying minor clean-up works and ground support requirements, along with a potential portal location has been identified. A cost allowance has been made for the clean-up of the Marwest pit. Geotechnical drilling has been planned to assess the final portal and decline position.

16.2 Geotechnical

In December 2019, Peter O'Bryan & Associates completed a preliminary geotechnical assessment of underground mining at the Trident Deposit. Some aspects of the design, such as decline dimensions, and drive profiles have been adjusted since this study was conducted, however, the key recommendations have been followed. Entech recommends, and RPM agree that an updated geotechnical study is required when CYL progresses to higher accuracy studies, however, the current study is of suitable accuracy to support a PEA.

Ground conditions influencing development and production in proposed underground mining were investigated using the following criteria:

- Current geological interpretations
- Review of the Trident site
- Empirical methods and experience in identifying possible stoping methods
- Inspection of core photographs from geotechnical cores
- Structural geological data obtained from geotechnical cores
- General geotechnical data obtained from exploration/resource definition cores
- Experience in geotechnical assessment and review in similar geological and geotechnical settings.

Assessment and analysis of future underground access development and stoping have been based on:

- Consideration of general geological conditions
- Structural geological assessment
- Kinematic stability analysis for underground openings
- Empirical assessment of achievable stoping spans (without and with artificial support)
- Pillar stability assessment
- Experience-based assessment of expected pit wall conditions above and around the proposed decline portal position.

16.2.1 Ground Conditions

Ground conditions in weathered and transitional ground vary from poor to fair. Ground conditions in fresh rock are influenced dominantly by structure and lithology and range variously from poor to good. It is not realistic to nominate ‘average conditions’ because the distribution of conditions is not uniform and it is possible for zones of good and poor quality to be juxtaposed, and the behaviour of underground openings will be dictated by the capacity of the weakest material or structure exposed in, or possibly located close to, the opening.

Underground opening stability at Trident will be governed by local structural geological conditions and the strength of the rock units exposed in, or located close to, the opening. Given the relatively shallow depths at which mining will be performed, rock stress magnitudes are expected to be moderate.

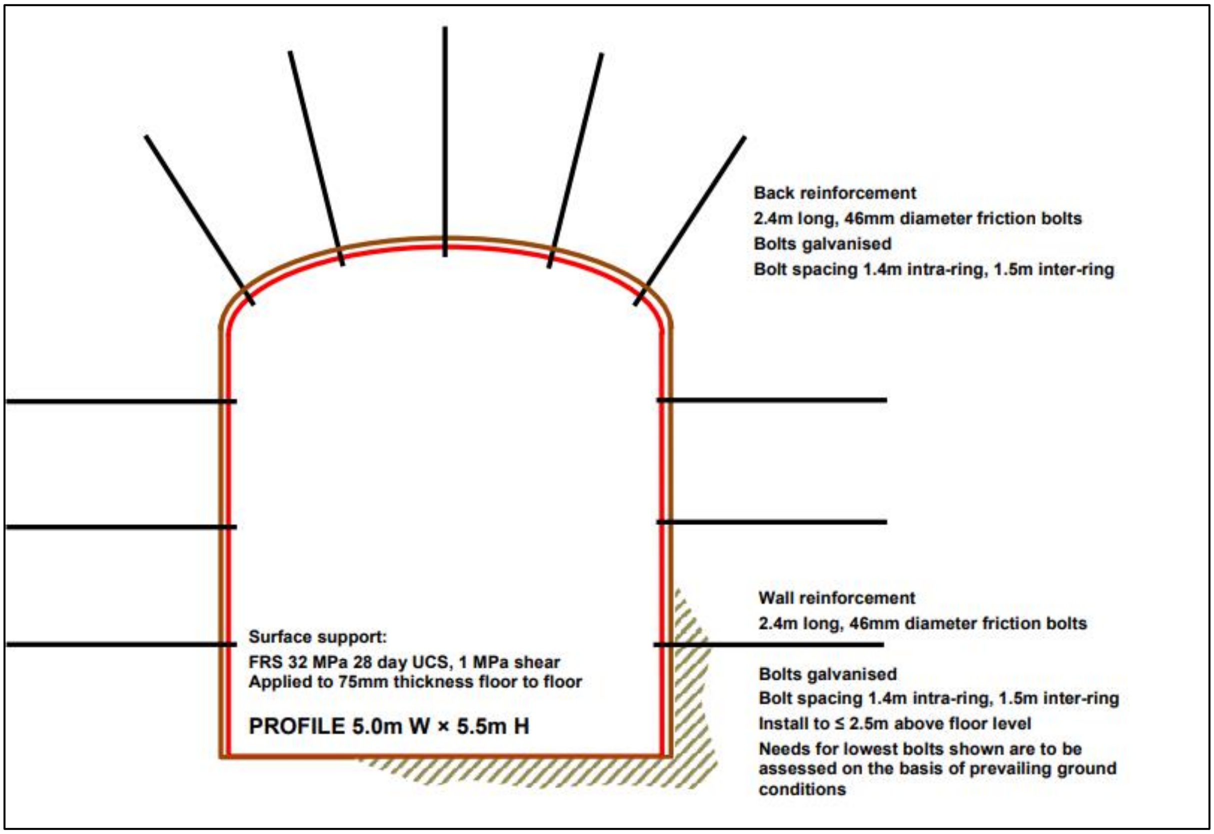
16.2.2 Decline Development

The minimum support standard to be applied once consistently competent ground is encountered in the Trident decline comprises:

- 75 mm thick fibre-reinforced shotcrete (FRS) (≥ 32 MPa 28-day UCS, shear strength ≥ 1 MPa) installed from floor level to floor level.
- 2.4 m long, 46 mm diameter galvanised friction bolts installed on a 1.4 m × 1.5 m pattern.
- This scheme should also be applied to 5 m wide access drives/ cross-cuts.

Requirements for sidewall reinforcement may vary with location. Accordingly, it will be necessary to check needs and locally amend (increase/ decrease) bolting density.

Figure 16-1 Proposed Trident Decline & Cross-cut Minimum Support Standards



16.2.3 Accesses & Upper Levels Ore Drives

Accesses and ore drives within steeply dipping zones will have support schemes using the same elements as those applied in the decline, with adjustments to bolt numbers and FRS thickness amended to suit dimensions and ground conditions.

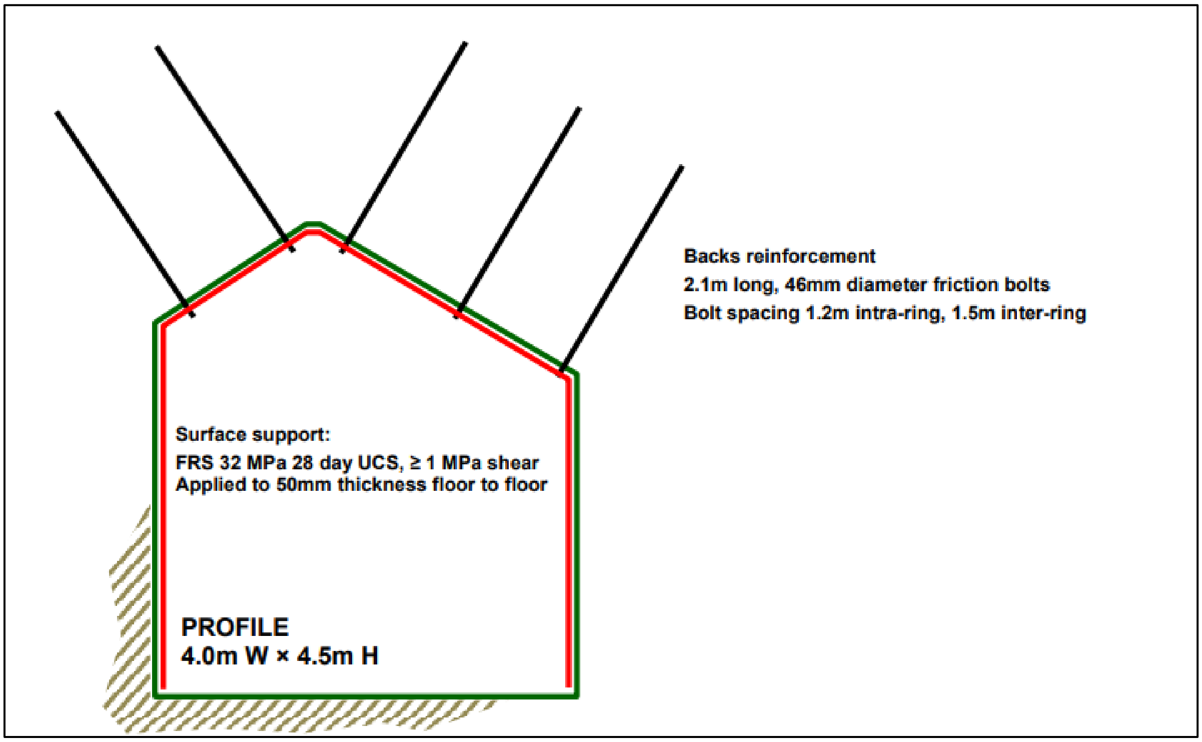
Analysis indicates that 50 mm FRS floor-to-floor cover, with pattern bolting using 2.1 m long 46 mm diameter friction bolts at 1.5 m × 1.5 m spacing shoulder to shoulder, and as required on sidewalls, is an appropriate support scheme for 4.0 m wide × 4.5 m high semi-arched ore drives.

16.2.4 Mid & Lower Levels Ore Drives

Shanty-back profiles are to be adopted for flat dipping mid and lower levels along strike ore drives. These drives are to be supported by 50 mm FRS floor-to-floor cover, with pattern bolted backs using 2.1 m long 46 mm diameter friction bolts at 1.2 m intra-ring and 1.5 m inter-ring spacings, with additional bolts into sidewalls as required.

It is possible that local ground conditions may necessitate the use of mesh support in addition to that provided by FRS. Mesh affords additional protection and improves the service life of the FRS.

Figure 16-2 Recommended Support for Ore Drives



16.2.5 Stoping in Steeply Dipping Zones

Stope dimensions in the Trident steeply dipping zones are to be limited according to the following hydraulic radii (HR) values:

- Stope backs ⇒ HR ≤ 4.2 m unsupported ≤ 6.5 m supported.
- Sidewalls ⇒ HR ≤ 4.4 m unsupported (limiting span)
- Endwalls ⇒ HR ≤ 7.8 m unsupported

This assumes that access is available to install cable bolts to provide an adequate and relatively uniform support density over the stope back area. Minimum level drive standard ground support (bolts and mesh) would be installed as the area is developed, with cable reinforcement as required for stoping.

Moderation of back spans may be necessary where/ if there is limited access to install appropriate reinforcement in wider stoping zones, noting that the unsupported HR for backs at depth is ~ 4m.

It is inferred that the locations, orientations, and profiles of access development would not allow for uniform reinforcement of stope sidewalls or end walls (the usual case with long hole bulk stoping methods). Endwall spans will be dictated by sidewall and/ or back limitations, and the assessed maximum sustainable span will not be required.

16.2.6 Stoping in Moderately Dipping Zones

Stoping in moderately steeply dipping zones will be carried out using ‘jumbo long hole stoping’ (JLS) from a series of on-strike ore drives.

For this phase of assessment, it is considered reasonable to adopt an unsupported span of 10m for evaluation and preliminary design purposes.

Subsequent to completion of ore drive development, cable bolt reinforcement is to be installed along the entire drive length.

Cable bolts are to be 5 m long, twin 15.2 mm diameter bulbed strand (500 kN ultimate tensile capacity). Strand bulbs are to be ≥ 20 mm in diameter at 1 m centres on each strand, with bulbs offset between strands.

Cable bolting is to be completed in both the active drive and the immediately overlying up-dip drive before stoping is commenced.

16.2.7 Further Geotechnical Assessment

Assessment to date has been based on information derived from exploration cores and the amount of information available varies across the deposit. There are needs for further pre-mining investigation to confirm/ refine or adjust the inferences/ assumptions made to date.

Allowances are required for dedicated geotechnical drilling to assess the character and competence of likely wall rocks. It is inferred that such work would be performed following further pit optimisation and the development of preliminary mining plans and sequences.

Hydrogeological investigations must be reviewed to assess the requirements of, and prospective measures to achieve, adequate pit dewatering and wall depressurisation. At this stage, it has been assumed that wall rocks will be dry and largely depressurised (or able to be adequately depressurised). Undissipated groundwater pressures acting within pit walls represent a (possibly major) destabilising influence, hence the need to understand the groundwater regime.

As well as pre-mining investigation, it is considered essential that design re-assessments, and where necessary design adjustments, be made based on observational techniques (mapping and wall stability monitoring) employed during future pit development.

Regular geotechnical review of ground conditions during operations is recommended.

16.3 Hydrology

In October 1997, Woodward-Clyde conducted a groundwater investigation and discovered a relatively high east-west aquifer transmissivity to the north of the proposed decline area. The primary factors influencing the porosity and permeability of the aquifer were identified as follows:

- The over-thrust granitoid units.
- The sheared contact zone between the granitoid units and the underlying ultramafic units, dips in a north-westerly direction.
- The cross-cutting faults orientated in a north-south direction.

Rockwater in 2002 conducted a study to evaluate the hydrogeological conditions related to the proposed underground mining. The study determined that groundwater primarily occurs within the weathered profile and the fractured contact between the granite and ultramafic units. Some drillholes indicated that the upper contact of the ultramafic interval had experienced weathering, likely due to water flow along the fractured contact. Based on core photographs showing minimal fracturing in the ultramafic rocks and the absence of mineral deposits on fracture surfaces, it was inferred that the underlying rock mass is predominantly dry, indicating a lack of significant groundwater flow. Drillers' comments from recent drilling support this observation, stating that there is only minor or negligible water inflow below the granitoid shear contact.

In Rockwater's sensitivity analyses, it was determined that the rate of underground dewatering could range from 2 to 7 litres/second depending on the parameters used for analysis. It is important to note that the modelling assumed no intersection between underground development or stoping activities and any shear or fault structure (including known or suspected cross-fault structures) that could hydraulically connect with the main shear zone at the granitoid contact. This also includes the assumption that ungrouted geotechnical and exploration drillholes would not introduce any inflow.

16.4 Initial Cut-Off Grade Estimation

Previous mining study findings calculated a 3 g/t incremental cut-off grade for stope optimisation. On this basis, CYL completed a set of stope optimisations at 3 g/t which Entech utilised in the final mine design and scheduling.

Review of the mining costs and revenue inputs as outlined in Section 21 supports the use of the cut-off grade in the PEA.

16.5 Stope Shape Generation

Entech reviewed, and has found suitable, the stope optimisations provided by CYL. The variable nature of the orebody means that sub-level spacing varies throughout the mine production area. For this reason, the shapes resulting from the stope optimisations were then combined over different vertical and horizontal extents depending on the applied sublevel in that area. The sublevel extents vary from 5 m in flat-lying areas to 15 m in sub-vertical dipping parts of the orebody. On progression to the next level of study, it is recommended to re-run the stope optimisation process to better align to the sub-level intervals, however, this is not material to the study outcome and is considered to be an optimisation process.

16.5.1 Stope Optimisation Parameters

Mineable stopes were designed by CYL using the following process:

- 3 g/t stope COG.
- Create optimised stope shapes using Deswik's Stope optimiser (DSO) mining software.
- Combine stope sections where appropriate to match the sublevel spacing.
- Using the 5 m sections produced by the software, design stopes to adhere to the geotechnical parameters (post-optimisation mining factors applied).

DSO utilises several parameters to produce an optimised stope shape. These parameters include but are not limited to, COG, minimum mining width, and amount of unplanned dilution. Dilution and recovery factors were applied post-optimisation. DSO parameters for selective mining areas are shown in **Table 16-1**.

In addition to the stoping and design parameters applied, operating and capital costs are summarised in **Section 21**.

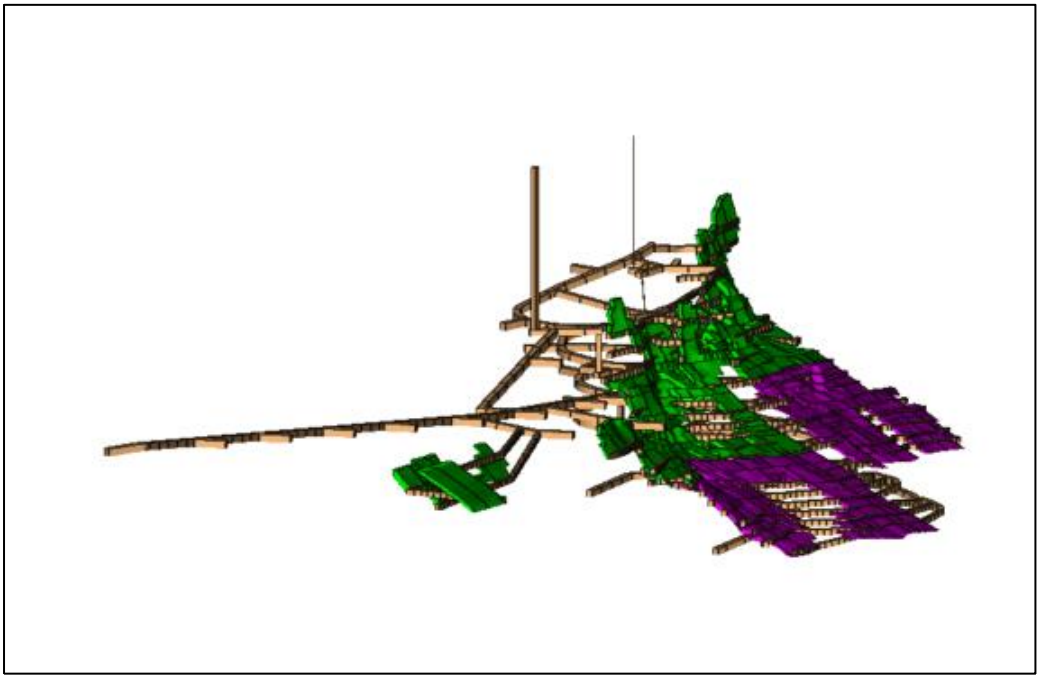
Table 16-1 Long Hole Stoping Mining Areas

Stoping Parameter	Value
Stoping COG (g/t Au)	3.0
Min. Mining Width (m)	4.0
Vertical Level Interval (m)	5-15
Section Length (m)	5-6
HW Dilution (m)	0
FW Dilution (m)	0
Min. Parallel Waste Pillar Width (m)	10

16.5.2 Stoping Methodology

Long hole stoping with an engineered paste fill (LHS PF) was selected, with modified applications in the more vertical parts of the orebody versus those used in flatter lying areas of the orebody.

Figure 16-3 Isometric view of Subvertical LHS PF (Green) and flat lying LHSPF (Purple)



The changes in the mining method applied in the more vertical versus flatter lying areas of the orebody are to try and achieve high recovery in the flat-lying areas. In some cases, achieving high recovery in flat-lying areas of the orebody will involve the use of additional mining equipment (small dozers to clean the footwall) and different production drilling and blasting techniques to those employed in more vertical areas.

The mining methods don't vary in terms of the key components of the stoping cycle which will be a slotting activity, production drilling, bogging, and paste filling.

The geotechnical section of the document describes the use of 'jumbo long hole stoping', where Entech has adapted this and stope drilling in flat-lying lodes is proposed to use a production drill, not a jumbo.

16.5.3 Longhole stoping with paste fill

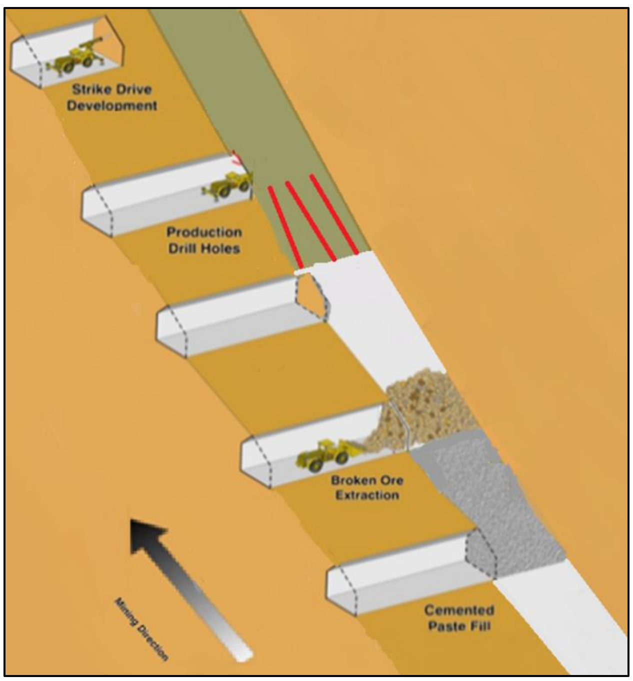
In the more vertical areas of the orebody, the dip can be as flat as 45 degrees but typically ranges from 60-80 degrees. Stope widths range from 4-15 m. In steeper and wider areas this does support more bulk mining methods, allowing a larger sub-level spacing to be applied. The flat-lying areas range from completely flat, up to 45 degrees dip.

LHS PF is a mechanised mining method which is well understood in underground mining environments. This application would utilise varying sublevels of 5-20 m, a bottom-up extraction sequence, and generally consider 64/76 mm downhole production drilling. Some blind areas, with no top-level access, will also utilise uphole production drilling; however, this makes up a small % of total material mined (<10%).

The stoping panels are planned to be subdivided into strike openings of ~15 m, which are then backfilled with a low-strength PF. The next panel has a slot opened and the process is repeated. Where stopes are extracted underneath a paste-filled stope, a higher strength paste fill would be required. Low-strength PF is often 3-4% by volume, with higher strength requiring 5-6% cement by volume. These are estimated cement percentages as an example only, and a dedicated backfill study is recommended for the next level of study.

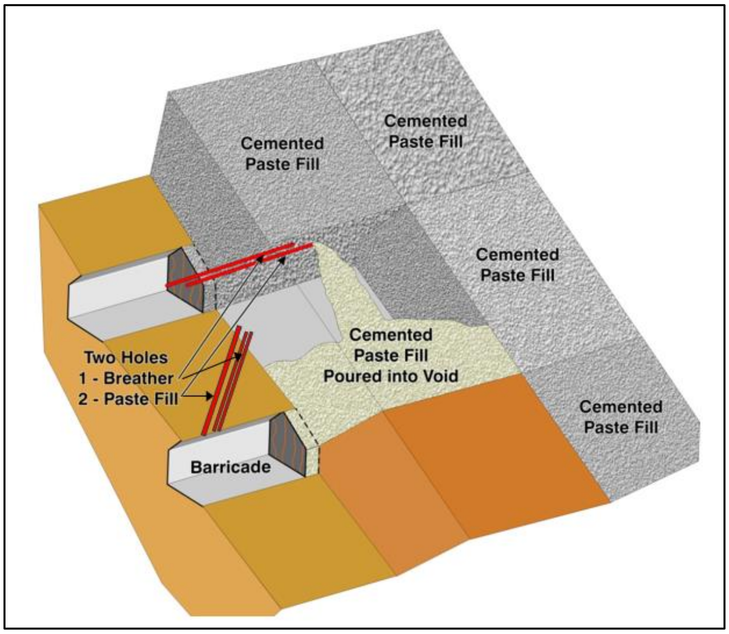
Mining method selection, including sub-level spacing and stope sizes, follows the geotechnical recommendations. The typical mining sequence is detailed in **Figure 16-4** showing, the development, drilling, bogging, and filling cycles.

Figure 16-4 Example Bottom-up Mining with Pastefill Mining Cycle



In **Figure 16-5** two alternate methodologies for paste filling are shown. If there is top access to a stope, the preferred methodology is to run paste-fill polylines directly into the void to fill the stope. This is planned to be the most common process of paste filling stopes. If top access is not available, a paste fill and breather hole are utilised to fill the stope.

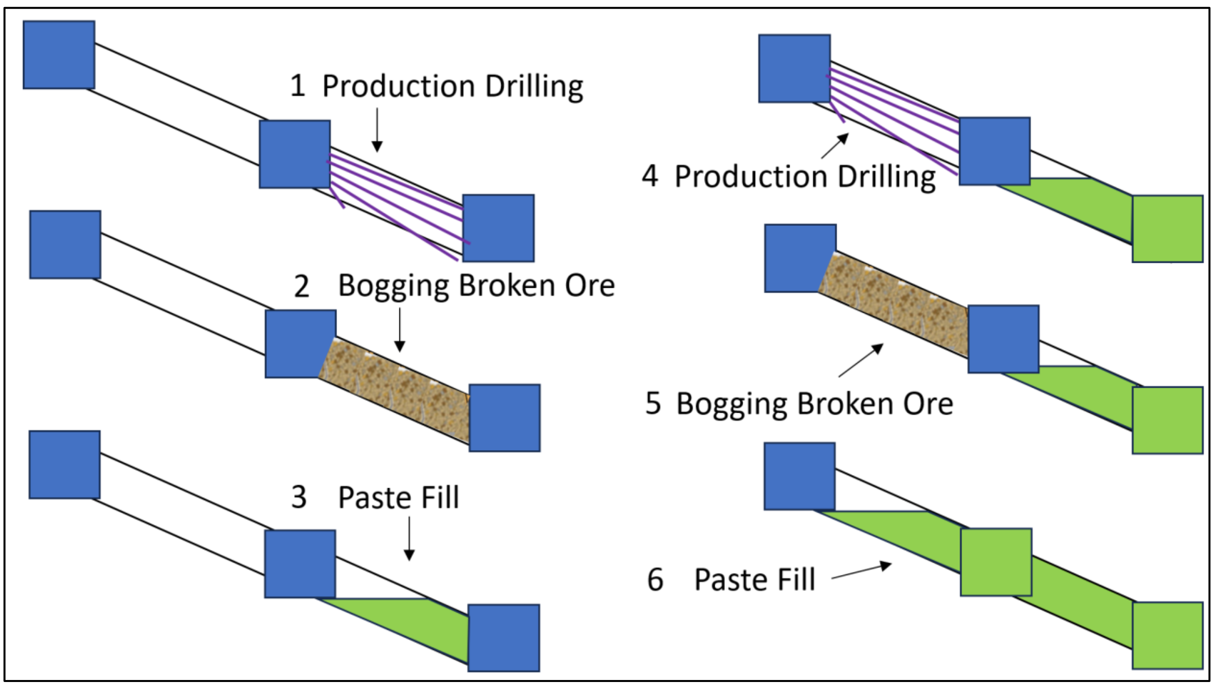
Figure 16-5 Example of Alternative Paste Fill Deposition Methods



16.5.4 Flat Lying Stopes

In the flat-lying mining areas, a similar sequence of mining cycle is undertaken with an example shown in **Figure 16-6.**

Figure 16-6 Example of Mining Cycle in Flat Lying Areas



In flat dipping areas ranging between 15 to 40 degrees, recovering all the ore on the footwall can be challenging. The design utilises sublevel spacings that aim to limit production drill holes to a maximum of 10 m – 12 m. The drill holes are proposed to be on a dump and dip orientation that will "slash" or "throw" the ore off the footwall.

It is anticipated that in some areas ore may remain on the footwall of the stope. In this case, a small tele-remote dozer would be used to clean the footwall by pushing ore down the footwall to the lower primary bogging drive. The small dozer utilises a tail-rope system to pull the dozer to the top drive for each pass of “sweeping” or “cleaning” the footwall. High-pressure water could also be utilised in washing down the footwall.

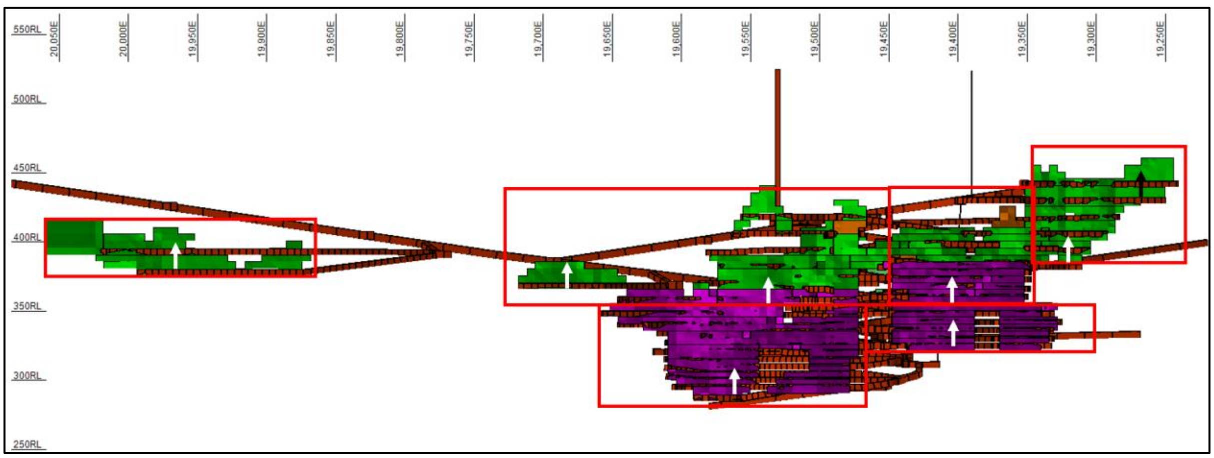
It is recommended that alternate design iterations are considered in the next study to trade-off steepening the footwall greater than the natural rill angle of approximately 40 degrees or flattening the footwall angle further in very low dipping areas (<15 degrees), to allow tele-remote bogging and avoid the necessity for use of the small dozer.

16.5.5 Sequence

The underground mining sequence follows a bottom-up sequence. The mine is broken into several production areas, to allow multiple simultaneous mining fronts and improve the production profile. Due to the orientation of the access and nature of the orebody, the decline meets approximately the halfway point of the orebody’s vertical extent. Levels are mined longitudinally, typically back to a central access.

This means there is a natural break point to commence the initial bottom-up sequences, and this also aligns with the transition point between the vertical and flatter lying parts of the orebody. Depicted in **Figure 16-7** below, are the different bottom-up mining fronts represented by the red outlined polygons.

Figure 16-7 Red Boxes Show Where Bottom-up Sequences Commence



16.6 Modifying Factors

Ore dilution and mining recovery factors have been estimated for development and stoping activities. 15% dilution and 90% recovery have been applied to all stoping activities.

The recovery of all ore contained within a planned stope is generally not achieved due to:

- Ore loss on stope walls resulting from under-break (typically due to poor drilling and/or blasting results).
- Planned insitu pillars.
- Inability to bog all ore from the stope due to remote bogging difficulties.

Typically, a 95% ore recovery factor is applied to stoping activities, however, it is acknowledged that some of the stope shapes will require further refinement in the next study. As such a further 5% recovery loss has been applied to the stope shapes as a conservative approach to account for future redesign.

The dilution allowance is for unplanned dilution of the stope shape, in addition to dilution from mining against paste fill. The block model includes a 3 m minimum ore width, and as such there is likely duplication of dilution in cases where the ore is less than 3 m. Future iterations of resource modelling may look to consider modelling the true orebody width and applying minimum mining width in the stope optimisation stage to remove any potential dilution duplication.

Lateral development assumes 0% dilution. A mining recovery of 100% has been assumed for all lateral development.

Operating costs are detailed in **Section 21**.

16.7 Backfill

The proposed backfill to be used underground is an engineered pastefill. This is proposed to primarily use a lower strength cement paste fill, with a higher strength cement paste fill to be utilised where mining underneath the paste fill. A backfill study is recommended to advance Trident to the next level of study inclusive of reticulating or transporting the fill to the operations from the Plutonic processing facilities.

16.8 Underground Development Design

The mine access and development has been designed to suit the selected mining strategy and focuses on operational efficiency. The mine design utilises design work from the most recent internal mining study in combination with the CYL optimisation shapes. All aspects have been reviewed by Entech and deemed suitable for the primary goal of the generation of a software-based mining schedule, estimation of mining costs, and project economic evaluation.

The mine is planned to be accessed by a decline portal located in the Marwest Pit with the lateral development layout as illustrated in **Figure 16-8, Figure 16-9, and Figure 16-10**,

Figure 16-8 Long Section Looking South - Trident Underground Development Layout

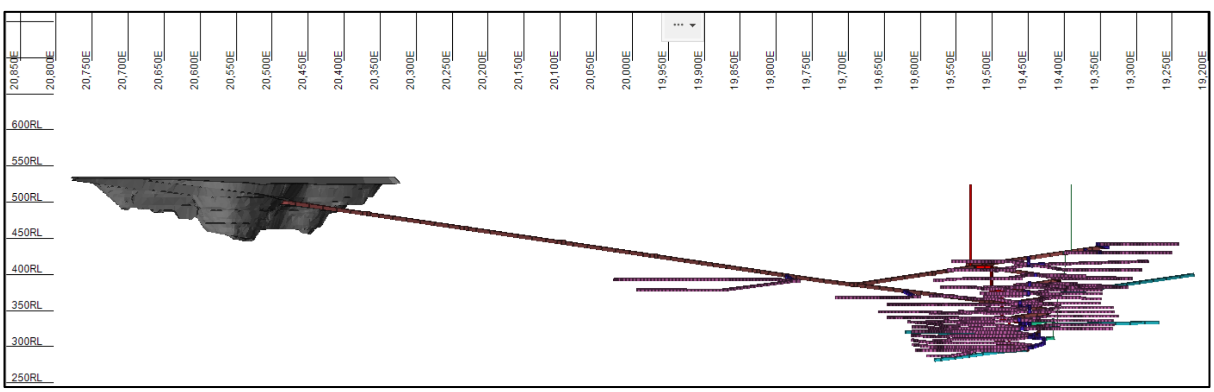


Figure 16-9 Enlarged Long Section Looking South

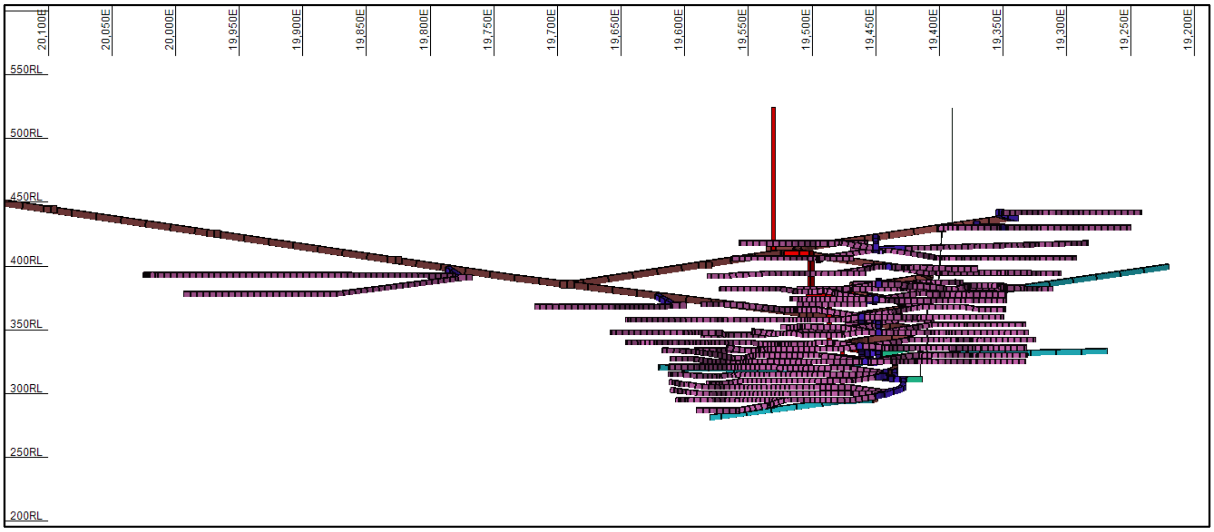
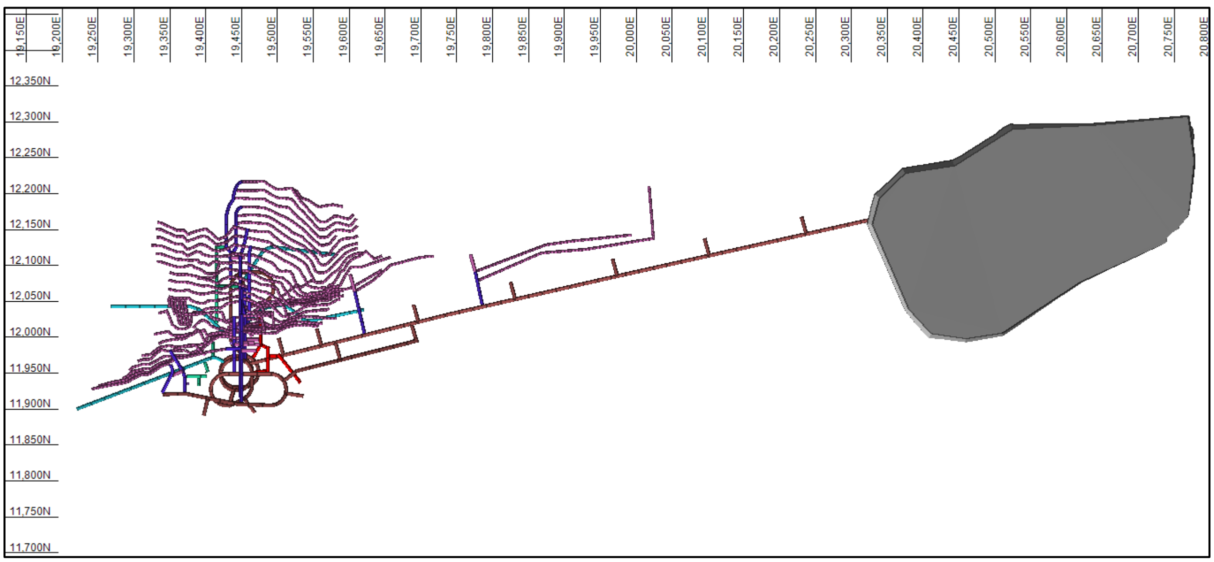


Figure 16-10 Plan View - Trident Underground Development Layout



The decline profile for the new access decline from Marwest Pit is designed at 5.5 mW x 5.8 mH to accommodate the use of up to a 60 t truck. Decline gradients are at -1:7, and decline standoffs to the orebody vary from 20-40 m and are maintained at a 40 m stand-off where possible.

Lateral development is planned to be mined by twin-boom jumbos, and vertical development is excavated by conventional raisebore machines.

16.8.1 Vertical Development

Vertical development is separated into capital and operating development, with capital development consisting of escapeway rises, and ventilation return rises. The surface leg of the escapeway rise is planned at 1.3 m diameter to be excavated with a conventional raisebore excavation. The surface leg of the ventilation return rises are planned as 4.0 m diameter conventional raisebore excavations. Internal ventilation return raises could utilise longhole rises and would require modelling in an appropriate ventilation software package in the next study.

Operating development consists of stope slots which are excavated utilising 1.8 m x 1.8 m longhole rises of up to 15 m lengths which are accounted for in the production drill factor.

16.9 Underground Mine Schedule

An integrated life of mine design was prepared using Deswik mine planning software. The mine is planned to produce at a peak rate of circa 360,000 t per annum resulting in a mine life of ~5 years with peak production reached in year 3. The major constraints on the underground scheduling were as follows:

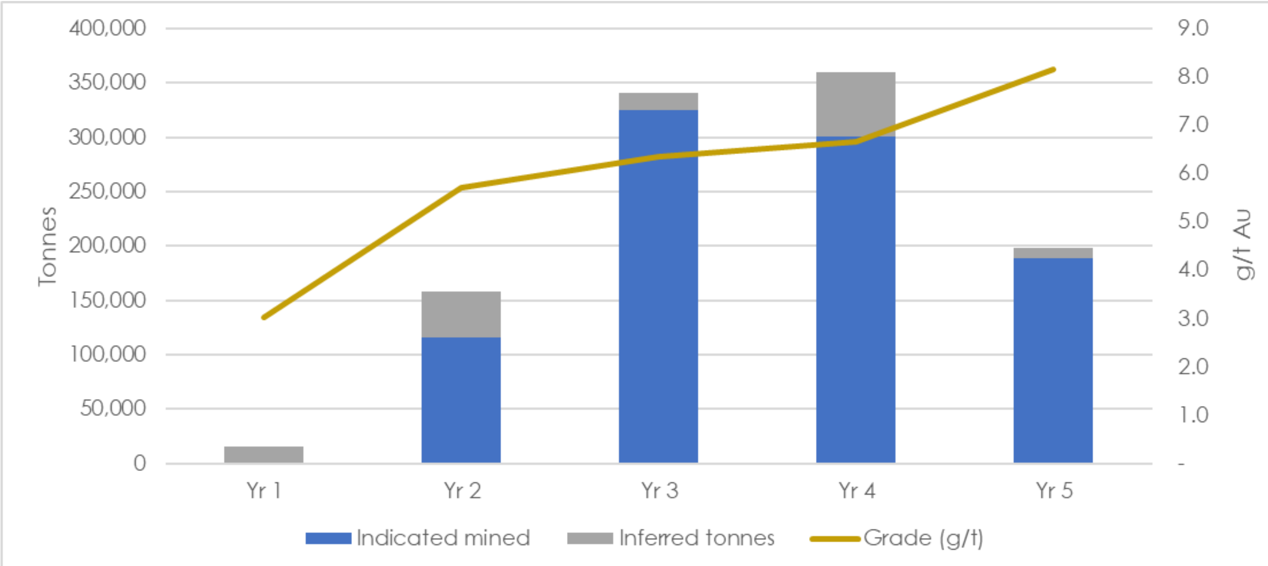
- Ensure a smooth ramp-up to steady ore production.
- Minimise variations in development rates and production to avoid additional project costs due to under-utilisation of equipment.
- Establish capital development at an appropriate interval ahead of production activities to defer capital spend; and
- Stope production can only commence once the main return airway and second egress are established.

The underground mining work was summarised into individual activities that provided a sufficient detail for PEA-level mine scheduling and reporting. An annualised summary of the key mining physicals and schedule is detailed in **Table 16-2** and graphical by resource category in **Figure 16-11**.

Table 16-2 Key Physicals per Annum

Physical	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Capital Lateral Development	m	4,577	1,852	1,452	603	639	30
Operating Lateral Development	m	7,750	550	1,668	2,664	2,390	479
Total Lateral Development	m	12,327	2,402	3,120	3,267	3,029	509
Capital Vertical Development	m	206	0	139	36	31	0
Operating Vertical Development	m	198	0	143	39	16	0
Total Vertical Development	m	403	0	281	75	47	0
Production Drilling	m	233,794	0	29,240	69,456	78,417	56,681
Waste Tonnes	t	560,855	180,705	173,117	73,977	108,993	24,063
Backfill Tonnes	t	422,232	11,563	65,358	130,068	140,873	74,370
Development Ore Tonnes	t	347,413	15,393	73,282	133,965	106,462	18,311
Development Ore Grade	Au (g/t)	6.4	3.0	5.6	6.9	6.0	11.3
Development Ore Metal	Au (Oz)	71,815	1,500	13,276	29,928	20,442	6,669
Stope Ore Tonnes	t	725,930	0	84,804	207,357	253,734	180,036
Stope Ore Grade	Au (g/t)	6.8	0	5.8	6.0	7.0	7.8
Stope Ore Metal	Au (Oz)	157,707	0	15,704	39,865	56,837	45,300
Total Ore Tonnes	t	1,073,343	15,393	158,086	341,323	360,196	198,346
Total Ore Grade	Au (g/t)	6.7	3.0	5.7	6.4	6.7	8.1
Total Ore Metal	Au (Oz)	229,521	1,500	28,980	69,793	77,279	51,969
Indicated Ore Metal	Au (Oz)	209,587	0	23,278	66,988	69,028	50,294
Inferred Ore Metal	Au (Oz)	19,934	1,500	5,703	2,804	8,252	1,675
Haulage	tkm	2,460,458	247,282	466,232	637,030	749,489	360,423

Figure 16-11 LOM Production Schedule



16.10 Underground Mine Productivity

The mine productivity of the various equipment has been derived by Entech, based on similar mining methods, production rates, and mining fleet.

16.10.1 Jumbo Development

The development productivities are based on using modern electric-over-hydraulic twin boom jumbo drills (e.g., Sandvik DD420-60 or equivalent). These drill 45 mm blastholes for development rounds and will be used for the installation of ground support.

Maximum development advance rates in single headings were set to **4 m/d** for capital development and priority headings, and **4 m/d** for secondary headings and ore drives. These advance rates are assumed to include all activities and delays related to the development cycle, including drill rig up, drill rig down, face drilling, charging and firing, re-entry, bogging, ground support installation, services installation, shift change and meetings, meal breaks, breakdowns, maintenance, face markup and geology/survey control delays.

Jumbo fleet requirements have been estimated by Entech with a maximum of 280 m /month estimated at any point in the schedule, requiring one twin boom jumbo.

16.10.2 Production Drilling

The production drilling requirements have been estimated by applying a calculated drill yield (ore tonnes per drill metre) to each stope’s evaluated tonnage. The drill yield is applied as an average of 3 t/dm where it is anticipated a higher drill yield may be achieved in the subvertical areas of the orebody, and a lower drill yield achieved in the flatter dipping areas of the orebody.

A drilling rate of 250 m / day has been applied to drilling in LHS stopes. These drilling rates are assumed to include all activities and delays related to production drilling, including drill rig up, drill rig down, slot drilling, production drilling, shift change and meetings, meal breaks, breakdowns, maintenance, services installation, and geology/survey control delays.

16.10.3 Stoping Cycle

Based on utilising an LH517 loader, and the remote and conventional bogging assumptions, instantaneous bogging rates are shown in **Table 16-3** by bogger tramming distance.

Table 16-3 Stope Bogging Factors and Rates

Factors	LHS
% Remoting	60%
% Free Bog	40%
Activity	**unit/ day**
Bogging	1000 (t/day)
Back Filling	500 (cu.m/day)

16.10.4 Materials Handling

The material handling requirements are based on utilizing a 60t trucking fleet. The productivity of the trucking fleet is estimated to be **90,000 tkm/month per truck**. All ore material from the underground is planned to be hauled to the temporary surface ROM and then hauled via surface fleet to the Plutonic processing facility. Waste material will be stored at the Waste Rock Landform (See Section 18.8.2).

16.11 Mining Fleet

Assumptions for mine equipment requirements have been derived from industry experience, benchmark rates, and first-principles estimates. **Table 16-4** provides a summary of the peak number of units required for mine development and production. This represents the equipment necessary to perform the following duties:

- Excavate the lateral and decline development in both ore and waste.
- Install all ground support including rockbolting and surface support.
- Maintain the underground road surfaces.
- Drill, charge, and bog (including remote bogging) all stoping ore material.
- Backfilling material.
- Drill slot rises for production stoping; and
- Install all underground services for development and production.

Table 16-4 Fleet Numbers

Equipment	Max Quantity
Sandvik DD422i Twin-boom jumbo	1
Sandvik LH517 Loader	2
Sandvik TH663i Truck	2
Sandvik DL431 Drill	1
Charmec MC605 Charge Up	1
Normet MF50VC Fibrecrete Sprayer	1
Normet LF700 Agitator Truck	1
Sandvik 34R Raisebore	1
Cat 12H Grader	1
Volvo VL120 UG IT	1
Volvo VL90 Workshop IT	1
Cat D4 Dozer	1
Cat 740 Watercart	1

RPM notes that all equipment will be sourced from the operation Plutonic Mine operated by CYL.

16.12 Ventilation and Associated Infrastructure

Ventilation requirements have not been modelled in specialised ventilation modelling software. Software ventilation modelling of the mine plan is recommended in the next stage of the study to increase the accuracy of the study. The proposed ventilation network for the Trident underground at this stage is considered relatively simple, as such the level of accuracy is suitable for a Preliminary Economic Assessment.

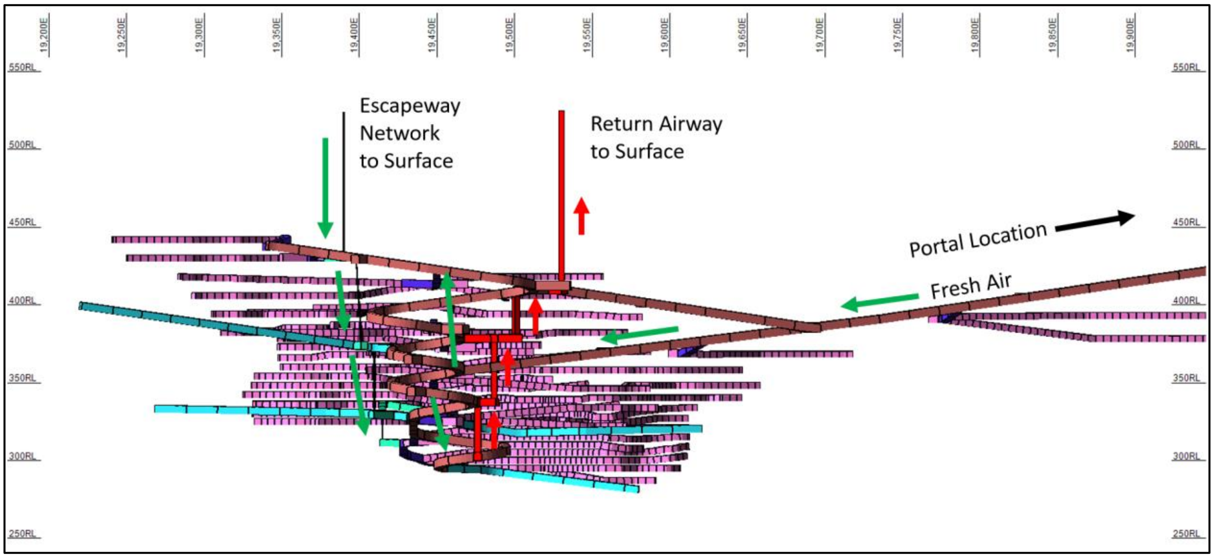
It is proposed that fresh air will enter the decline network via the portal and be distributed via the decline to a series of return air rises which dispel the exhaust air to the surface. Primary fans are planned to be located on the surface in a push-pull system, whereby the primary fan will pull the air up the return air network and draw into the portal. This network would also result in fresh air being drawn down the escapeway network, which could potentially also serve as fresh-air bases in the case of an emergency.

Ventilation requirements are not anticipated to exceed 220 m^3/s, which would result in the decline air velocity being between 5-6 m/s. Based on industry experience this is considered suitable for dust suppression in an underground environment of similar scales as the Proposed Project. If it was deemed required in later studies, the proposed 1.3 m diameter escapeway network could be increased in diameter to facilitate further fresh air to be brought into the underground.

Also noted in this section of the report is that an Asbestiform Minerals Assessment was conducted on behalf of Vango in 2019. Entech recommends that this report be updated in the next level of study, and any recommendations arising be incorporated into future ventilation planning.

The primary ventilation network is shown in **Figure 16-12** below, where fresh air enters the mine depicted by the green arrows and exhaust airflow follows the red arrows and is dispelled via the return air rises to surface.

Figure 16-12 Primary Ventilation Flows



17. RECOVERY METHODS

Preliminary metallurgical testwork has been performed on the Trident orebody, as well as nearby orebodies, such as the Triple P, K1 and K2 by several mining companies over the past 30 years. These ores have successfully been treated at the Marymia (decommissioned) and Plutonic (operational) plants historically as outlined in **Section 6**.

Testwork, commissioned by Como Engineers and conducted by ALS Metallurgy, Report A19022, showed that the Trident fresh ore is suitable for treatment via a typical crush, grind and leach process, with final gold recoveries being ~90%, as shown in the **Table 17-1**.

Table 17-1 Summary of cyanidation testwork – Trident Underground

PLUTONIC DOME COMPOSITE: DIRECT CYANIDATION TESTWORK										
Composite ID	Test No. (JR)	Grind Size P_{80} (µm)	% Au Extraction @ hours				Au Grade (g/t)		Consumption (kg/t)	
			2	8	24	48	Calc'd Head	Leach Residue	NaCN	Lime
PD Composite	3853	106	82.88	85.98	89.31	89.93	8.89	0.90	0.82	0.20
	3854	75	82.96	85.04	88.21	89.85	8.43	0.86	0.95	0.18

The samples selected were high-grade assaying at 7.38g/t and having estimated grades of 8.89g/t and 8.43g/t, with almost 90% being extracted after 48 hours of leaching, of this, almost 82% was extracted after only 2 hours of leaching and 89% after 24 hours. The grind size for these tests was a P80 pf 106µm and 75µm, which is typical for processing gold ores.

Cyanide consumption is considered medium to high at 0.82kg/t and 0.95kg/t and the lime consumption was very low at 0.20kg/t and 0.18kg/t.

While the overall recoveries of the Trident ore were high at ~90%, the leach residue grades also contained elevated levels of gold, at 0.90g/t and 0.86g/t. A short diagnostic leach test was performed on the residues and it showed that most of the gold was recovered via aqua regia, indicating that the gold in the residue is likely associated with sulphides.

Additionally, testwork performed on Trident West ore, sample ID VTRMET0100 identified as oxide to transitional ultramafic rock, ALS Metallurgy report A19640, showed very high gold recoveries at varying cyanide concentrations and grind sizes, with leach residue grades varying from 0.03g/t to 0.07g/t from head grades between 1.85g/t and 2.07g/t. Indicating that the metallurgical characteristics of the Trident orebody change at depth and lithology.

Hardness testing of the Trident underground ore showed that the Bond Ball Mill work index of the Trident fresh ore was 13.3kWh/t. This is considered medium and is consistent with an ultamafic orebody.

Based on the limited metallurgical testwork to date on the Trident fresh ore, the metallurgical recovery assumption is expected to be 89%, being the average recovery of the two tests after 24 hours of cyanidation, with the consideration that additional testwork is required to better understand the gold leaching within different areas of the defined orebody.

Given the level of accuracy of the PEA, the testwork completed, and specifically the assumed recovery in the LOM plan and OPEX is considered suitable, however, further work is required for ore type characterisation and recoveries.

17.1 Process Plant Strategy

Processing of the Trident underground ore is to be via the Plutonic, PP1 processing plant. The Plutonic processing plant is an established processing plant consisting of a three (3) stage crushing circuit, followed by a primary SAG mill, then two (2) secondary ball mills, for a nominal throughput of 210tph, or ~1.7Mtpa annualised with a target P80 of 75µm.

The cyanidation circuit consists of two (2) leach tanks and six (6) CIL carbon adsorption tanks, each having a volume of 1,020m3, giving a nominal residence time of ~24 hours at 210tph. Cyanidation tailings are thickened prior to discharge to the tailing storage facility. Major reagents added are typical of a gold processing plant, being lime, cyanide, oxygen and lead nitrate.

Processing is conducted in good quality raw water sourced from two main production borefields as well as process water returned from the tailings thickener and tailing storage facility.

Given that the Plutonic plant is an established operation, historical operating costs are generally well understood and reliable. A review of recent operating costs suggests that the processing OPEX for Trident via the Plutonic plant is $20.50/t.

It is important to note that the Trident underground ore will form part of an overall blend of the feed to the Plutonic mill and will unlikely to be the sole source of feed.

18. PROJECT INFRASTRUCTURE

Given the development status of the Project, no onsite infrastructure is located within the Marymia tenement package other than an exploration camp and haulage roads as noted in Section 4. RPM does, however, note that the Project was in operation from 1993 to 2006. All infrastructure associated with this operation has been removed except for the haulage roads. The Project is adjacent to the operating Plutonic Mine which will support ongoing operations.

The Trident development will utilise existing support infrastructure at the Plutonic Gold Mine which is a well-established mine with associated services and infrastructure. The Mine can be accessed by aircraft or by road and operates as a fly-in/fly-out operation and maintains a camp on-site for the employees and contractors. The camp has a capacity for 500+ persons and includes wet and dry mess facilities, a recreational oval, a gymnasium, and an entertainment room.

Electricity at Trident will be provided by diesel gensets and has been considered as part of the underground mining cost model. A haulage route that is well maintained exists between Trident and Plutonic and it is anticipated that these roads will serve as a suitable haulage and service road between the Plutonic mill, and the Trident Project and associated infrastructure. Detailed assessment of these access roads will be required in the next phase of the study to assess their suitability for heavy haulage.

18.1 Tailings Storage Facility

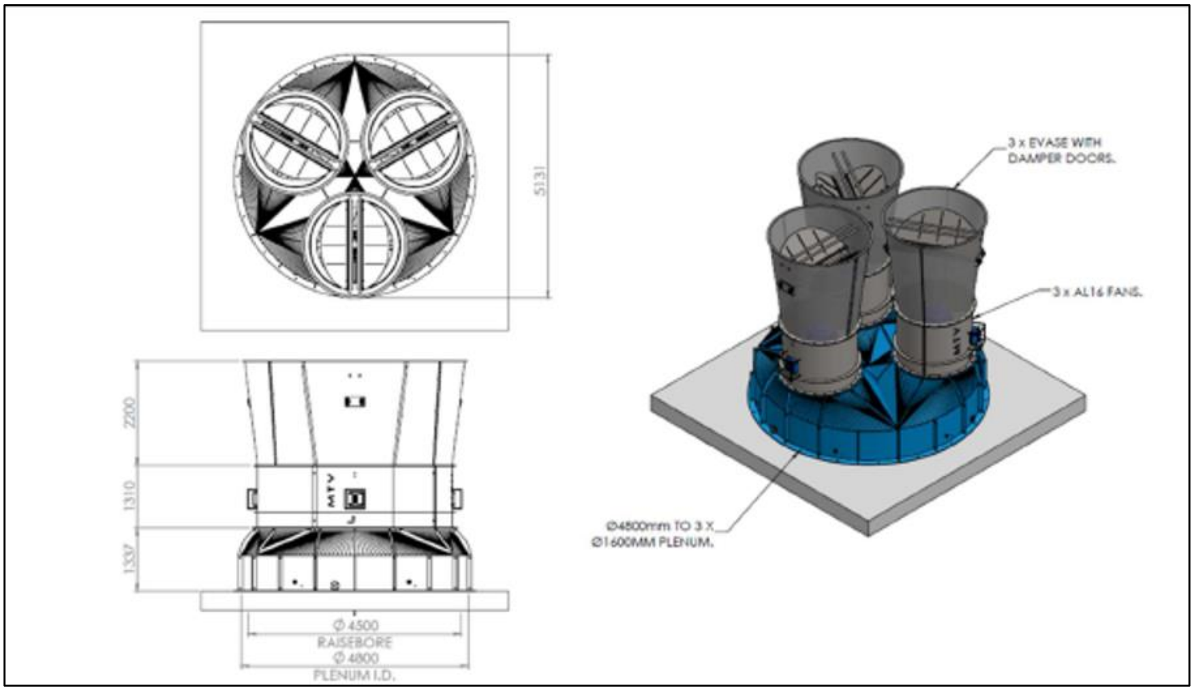
Tailings from the Plutonic Gold Mine CIL circuit gravitate to the carbon safety screen. Screen oversize gravitates to the clean-up sump and is returned to the circuit. Screen undersize is piped into a splitter box where the slurry is directed to either the tailings thickener, to bypass the thickener directly to the tailings pump hopper, or to the paste backfill plant. Currently, tailings are sent to a paddock-style TSF with expansion work scheduled to commence in 2023.

Given the relatively small scale of the LOM plan, it is envisaged that the tails material from the Project can be incorporated into the tails management systems already in place at the Mine. RPM highlights that a Mineral Reserve estimate was prepared and reported as at 30th June 2022 which accounts for the TSF management systems.

18.2 Primary fans

Surface fans offer greater access for maintenance purposes. **Figure 18-1** provides an example of a vertically mounted fan station with three fans seated on a plenum. Fans must be self-closing when switched off to prevent airflow reversal. This is provided for illustrative purposes only and requires the mine plan to have a simulation completed as part of further studies in an appropriate ventilation software to complete this modelling.

Figure 18-1 Illustration of a vertically mounted surface fan provided by MTV.



18.3 Electrical Power

The main high voltage (HV) feed to the underground mine will be supplied from a 1MVA surface substation which is supplied from an onsite diesel genset. The long-term HV feed could be reticulated through mine service holes to avoid long cable runs down the decline. Removing the cable from the decline also removes it as a hazard as it is less likely to be hit by heavy equipment.

This underground feed will be distributed through the mine at 11kV to a single 1MVA (megavolt ampere) 11kV / 1kV step-down transformer. Power supply to the primary underground fans will be via a single 1MVA 11kV / 415V transformer.

Peak power requirements are anticipated to reach ~1.2 MW.

18.4 Service Water

Water captured by the dewatering system is settled and a portion is recycled for use at the underground mine. It is managed internally where it is captured and distributed to working areas.

18.5 Dewatering

It is estimated that the maximum dewatering rate for the underground mine will peak at approximately 10 L/s, however, this is more likely to be between 2 and 7L/s including all mine service and ground inflow water as detailed in **Section 16.2**.

A primary pumping system has been designed based on WT103 'Wear Tuff' helical rotor pumps. This pump type is commonly used in Australian underground mining and can be easily installed and maintained. The primary pumping system will consist of banks of two mono pumps that are situated ~120 m apart vertically,

The proposed dewatering system for the underground mine has the capacity to dewater the mine at a rate of up to 20 L/s, which will meet the currently estimated maximum requirements and will enable timely dewatering of the workings during periods of increased water flows or localised flooding of headings. A further hydrology study is recommended as part of the next study.

18.6 Compressed Air

An underground compressor will be placed at the Marwest portal that will supply compressed air to the underground.

18.7 Underground Communications

A leaky-feeder UHF (ultra-high frequency) radio system will provide the primary means of communication within the mine underground. The key components of the system will comprise:

- Radio head-end unit located on the surface.
- Leaky-feeder cable installed throughout the mine (and associated amplifiers); and
- UHF radios will be installed on all mobile equipment and some fixed equipment.

18.8 Mine Facilities

18.8.1 Run of Mine (ROM) Pad

A localised ROM (run of mine) Pad is to be established close to the pit crest with all ore from the mine will be transported to the surface via 60t trucks. The material at the localised ROM stockpile will then be loaded onto a surface haul truck to be delivered to the ROM pad adjacent to the processing plant located at the Plutonic Mine.

18.8.2 Waste Rock Landform

Waste material generated from the underground mine will be direct tipped onto a surface Waste Rock Landform (WRL). The WRL footprint will be sufficient to account for the planned underground waste volume (~300,000 cu.m).

There is no anticipated Potentially Acid Forming (PAF) waste. Waste material will also be used to create suitable road base for underground usage as well as general construction material. It is however noted that Asbestiform materials is noted in the waste material which will be required to be managed.

18.8.3 Workshops

Mining workshops, associated surface facilities and tooling and the costs associated with workshop operations have been included in the rates applied in the cost estimate for the underground mine.

18.8.4 Fuel Storage

Diesel will be stored on surface licensed facilities provided and are included in the rates.

18.8.5 Explosives Storage

A surface magazine compound will be used for underground mining. It will consist of a cleared area and fence.

Key components of the facility include:

- Securely fenced yard to contain the individual magazines.

- Appropriate ground surface/pad to prevent flooding of the facility and to enable use in all weather conditions.
- Earthing for all magazine containers and security fence.
- Fire extinguishers.
- Signage and MSDS (material safety data sheets); and
- A system for ensuring the safe and secure storage of explosives (for example, an explosives management plan).

19. MARKET STUDIES AND CONTRACTS

No marketing studies have been undertaken given the early stage of the Project and gold being a freely tradeable commodity. RPM does, however, notes that a Gold Price of AUD 2,700 has been assumed for the PEA (as detailed in **Section 16 and 22**), which is below the current spot price and long term consensus price as at August 2023.

20. ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

20.1 Environmental Studies

The environmental and heritage values of the Project area have been assessed historically when the Marymia Project was in operation between 1993 and 2006. More recently, additional baseline studies were completed to inform environmental impact assessment and support regulatory applications for a planned recommencement of mining operations at Trident. A summary of the environmental setting of the Project is provided below.

20.1.1 Hydrology

The Project is located in the Gascoyne River Catchment, adjacent to the topographical divide of the Gascoyne River and the Lake Carnegie catchments. The two catchments cover an area in excess of 75,000 sq.km and 68,000 sq.km, respectively. The top of the drainage divide runs approximately along the road between the Marymia camp and the Trident deposit. A small portion of the Project is also traversed by the Gascoyne River and Tributaries Surface Water Area, proclaimed under the *Rights in Water and Irrigation Act 1914*. No significant watercourses exist within the vicinity of the Project area and the relatively minor creeks and drainage lines that do exist are ephemeral and only flow for short periods following heavy rainfall. Runoff from this catchment generally reports off-site in a north-westerly direction via a combination of sheet flow and shallow concentrated flow in a number of relatively minor creeks and drainage lines (Vango, 2020).

20.1.2 Hydrogeology

The Project is located in the Gascoyne Groundwater Management Unit and is situated over the Meekatharra aquifer and Edgerton Aquifer. Groundwater flow is generally westwards, with groundwater depths averaging between 50 and 60 m throughout the Project (MBS, 2019). Two types of aquifers are found in the Project: alluvial and fractured-rock. Alluvial aquifers are recharged by direct infiltration of rainfall or by infiltration of surface water during periodic stream-flows. Aquifers in basement rock tend to have a narrow, elongated geometry limiting their storage capacity. Recharge to this type of aquifer occurs predominantly as leakage from overlying alluvial systems (Rockwater, 2004).

Rockwater analysed the chemistry of the groundwater at Trident in 2019 against the Australian Drinking Water Guidelines. The analysis showed salinities were low with total dissolved solids (TDS) concentrations of 626 mg/L and 746 mg/L. The chemistry was dominated by calcium and bicarbonate ions and the pH was near neutral (ranging 6.95 to 7.01). Both the bores analysed during the assessment exceeded TDS and Hardness (as $CaCO_3$) against aesthetic guideline limits and arsenic and nitrate against health guideline limits (Rockwater, 2019).

20.1.3 Biodiversity

Biodiversity surveys were undertaken in 2018/2019 by Onshore Environmental (flora) and Bamford Consulting (fauna) over Trident and Marwest Project areas. The surveys are reported to have been undertaken in accordance with relevant Western Australian Environmental Protection Authority Guidelines. Key results from these surveys are summarised as follows:

- No threatened flora species, fauna species or vegetation communities protected under Western Australian or Commonwealth legislation were recorded.

- Several flora taxa listed as “priority” species[2] by the Western Australian Department of Biodiversity, Conservation and Attractions (DBCA) have been recorded in Project tenements. Geospatial locations of these species are available to enable minimisation of impacts where possible.
- No fauna species listed under as “priority” species by DBCA were recorded in the survey area around Trident and Marwest.
- No weeds of national environmental significance or declared species have been identified in flora surveys.

On the basis of this information, the Project does not appear to support any unique terrestrial flora or fauna assemblages or vegetation units.

The Project occurs within the outer extent of the buffer zone of the Three Rivers Plutonic Priority Ecological Community, which is comprised of a large calcrete deposit that hosts a rich subterranean community. As the majority of mineralisation is hosted in Banded Iron Formation (BIF) and granite geologies of the greenstone belt, the prospect for stygofauna to be located within the Project area is expected to be low (Bennelongia, 2019).

20.1.4 Mine Waste

According to the Project Mine Closure Plan (MCP) (Vango Mining Limited 2020) the Marymia Project includes 26 Waste Rock Dumps (WRDs” that were predominantly constructed prior to 1998. Waste rock characterisation for the majority of these landforms was not undertaken at the time of construction.

Waste rock characterisation completed by MBS Environmental in 2020 was provided to Catalyst in 2023. The assessment identified:

- Waste rock was non-acid forming with relatively low sulfur content and high carbonate content.
- Most waste rock samples reported enriched levels of bismuth, chromium and nickel typical of ultramafic lithologies, however, no metals were considered soluble under (expected) neutral to alkaline conditions and corresponding water-soluble concentrations were considered environmentally insignificant.
- Acetic acid leachate results identified nickel and manganese in fresh and transitional rock. Manganese concentrations were not considered to be limiting for plant growth, and elevated nickel was restricted to ultramafic fresh rock providing minimal bio-accessible nickel to plant roots.
- Oxide material was reported as moderately to highly sodic indicating the potential for high dispersion and is recommended to not be exposed on slopes of the WRL without the use of rock armouring to prevent erosion.

Asbestiform material is present at Trident West and is likely to be found throughout the entire ultramafic unit. Management is required based on regulatory guidelines as the airborne concentrations of asbestos may exceed safety limits of 0.1 fibres per millilitre on a Time-Weighted Average (TWA-8 hour) basis for workers. Tailings from Trident West have not been analysed, however, they are considered likely to contain possibly higher concentrations of asbestiform minerals compared to the waste rock.

A fibrous minerals management plan was formulated in 2019 by MBS Environmental for the Marymia Project. Further details relating to mine closure are provided in **Section 20.4.**

[2] Identified by the WA environmental regulator as of conservation concern, but not listed for protection under legislation.

20.2 Project Permitting

In considering the principal legislation relevant to mining operations in Western Australia, RPM notes the following permits to be in place for the Trident Project:

Native Title Act 1993 (Commonwealth)

- Trident is located in the Gingirana Native Title area. A spatial overlay of Indigenous Land Use Agreements (LGATE-067) indicates that there is no agreement in place with traditional owners. In the Gingirana Native Tile Determination, the Project mining tenements are listed as *Other Interests – Mining Interest* in Schedule 4 of the Extract from the Native Title Register. Order 9 from the Determination states:
  - Except as otherwise provided for by law, the relationship between the native title rights and interests described in orders 3 and 4 and the other interests is as follows: (a) the Determination does not affect the validity of those other interests; (b) to the extent of any inconsistency between the other interests described in Part 1 of Schedule 4 and the continued existence, enjoyment or exercise of the native title rights and interests: (i) the native title rights and interests continue to exist in their entirety, but the native title rights and interests have no effect in relation to the other interests to the extent of the inconsistency during the currency of the other interests; and (ii) otherwise the other interests co-exist with the native title rights and interests, and for the avoidance of doubt, the doing of an activity required or permitted under those interests prevails over the native title rights and interests and their exercise, but does not extinguish them".
- RPM's interpretation of Order 9 is that the Project mining tenements do not have any obligations under the *Native Title Act (1993)*, e.g., there is no requirement to have Indigenous Land Use Agreements in place in the Gingirana Native Title area.

Aboriginal Heritage Act 1972 (WA) and *Aboriginal Cultural Heritage Act 2021 (WA)*

The *Aboriginal Cultural Heritage Act 2021* (ACH Act) (WA) gained Royal Assent on 21 December 2021 providing a framework for the recognition, protection, conservation, and preservation of Aboriginal cultural heritage within Western Australia. The legislation came into effect on 1 July 2023 to replace the *Aboriginal Heritage Act 1972* (AH Act), however the *Aboriginal Heritage Legislation Amendment and Repeal Bil 2023* (the Bill) was introduced to Parliament on 9 August 2023. The Bill will repeal the ACH Act and reinstate the *Aboriginal Heritage Act 1972* (AH Act) with amendments. The Project is required to comply with the ACH Act until the Repeal Bill commences.

The Project will be subject to obligations under the AH Act with regards to the protection and avoidance of disturbance to places of importance or significance to Aboriginal people. Several Aboriginal heritage surveys have been undertaken in the Project area since 1991, the most recent being by Aaron Raynor in 2020 for exploration drilling. GIS data from available reports and abstracts has been previously compiled. This record is incomplete and does not include all heritage sites as full reports with precise locations and survey areas were not always available. .

Under Section 17 of the AH Act it is an offence to impact an Aboriginal site as defined by Section 4 of the Act unless the Minister grants a Section 18 consent in accordance with the Act. A Section 18 consent enables the owner of the land to use the land for a defined purpose, which would otherwise be in breach of Section 17.RPM understands the Project infrastructure will be located on rehabilitated land previously disturbed from historic mine workings except for the expansion area of the approved WRL. The footprint of the WRL was approved in NOI 4092 that states no archaeological sites were recorded in a survey completed in 1996.

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act; Commonwealth)

There are currently no approvals in place under the EPBC Act. The 2017 and 2020 Mine Closure Plans (MCPs) for the Project state that the Project is unlikely to impact any Matters of National Environmental Significance (MNES) during operations or closure. Review of supporting information generally supports this conclusion.

Environmental Protection Act 1986 (EP Act, WA) Part IV (Environmental Impact Assessment)

The Project has never been formally assessed under Part IV of the *Environmental Protection Act 1986* (EP Act). The Administrative Agreement between DMIRS and the Environmental Protection Authority (EPA) defines criteria where DMIRS will refer mining proposals or mine closure plans to the EPA. A review of Project documentation indicates that the existing Project does not trigger any of these criteria, however, this should be re-evaluated for any future operations. It is considered unlikely, based on existing information, that mining at Trident (with offsite processing) will trigger referral and assessment under Part IV of the EP Act.

Environmental Protection Act (WA) Part V, (native vegetation clearing)

There are currently no active Native Vegetation Clearing Permits in place at the Project. Future activities are likely to require a native vegetation clearing permit where clearing exceeds 10 ha per tenement per financial year.

Environmental Protection Act (WA) Part V (works approval and licensing for prescribed premises)

There are currently no active works approvals or licences for the Project as there are no active prescribed premise activities occurring. Future operations are likely to trigger a works approval and licence for the following prescribed premise activities as follows:

- Category 6 – Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore (50,000 tonnes or more per annum).
- Category 54 – Sewage facility: premises on which sewage is treated (excluding septic tanks); or from which treated sewage is discharged onto land or into waters (100 m^3 or more per day).
- Category 64 – Class II putrescible landfill site (20 tonnes or more per annum).
- Category 70 – Screening, etc. of material: premises on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated (more than 5,000 but less than 50,000 tonnes per year).

Mining Act 1978 (WA)

Numerous mining proposals and notices of intent provide approvals for historic operations and landforms. Commitments made in Mining Act approvals are still in force although many are not relevant to the Project whilst in care and maintenance. A site-wide MCP was approved for the Project in 2017. Additional Mining Act approval is required for the proposed operations at Trident. An updated mine closure plan was submitted in 2020 for the Marymia Project, however, RPM notes an update to tenement conditions in June 2023 advising the next MCP is due March 2026. The 2020 MCP is currently not listed on the tenement conditions.

Rights in Water and Irrigation Act 1914 (WA)

Groundwater abstraction in Western Australia is regulated under the *Rights in Water and Irrigation Act 1914* (RIWI Act). Currently no Groundwater Licence (GWL) is in place for Trident. RPM understands that an application for a GWL to support mineral exploration is currently under assessment. A review of the GWL abstraction limit should be undertaken prior to the recommencement of mining.

Future Approvals

RPM notes that Catalyst proposes a LOM plan that takes the operations beyond their existing approvals. This is likely to include:

- Development of the Trident underground.

- Associated mine dewatering, waste rock stockpiling and support infrastructure.
- Offsite processing.

RPM is aware that Catalyst is progressing environmental approval applications to enable recommencement of mining at Trident including:

- A Mining Proposal for Small Scale Operations and associated Mine Closure Plan to enable development of an exploration drive from Marwest open pit to the Trident deposit that has been submitted (17 July 2023) and is currently under assessment by the regulators.
- A Mining Proposal and Mine Closure Plan for development of the Trident underground and associated infrastructure that is in progress to be submitted Quarter 3 CY2023.
- A Works approval for prescribed premises activities (largely mine dewatering and discharge) associated with Trident underground and Mareast Pit was submitted on the 28 July 2023 and is currently under assessment. A submission for an environmental licence is required to be submitted upon the completion of the dewatering infrastructure.
- A Native Vegetation Clearing Permit (NVCP) is required where clearing exceeds 10 ha per tenement per financial year.
- A Groundwater abstraction licence application for Trident was submitted on 31 May 2023 and is currently under assessment and will require amendment for mining operations.

Based on the target schedule for mining operations at Trident for Q4 CY 2024, RPM considers that all required environmental approvals are likely to be obtained based on current regulatory timeframes.

20.3 Social or Community Requirements

The Project is located in the Shire of Meekatharra, with the township of Meekatharra being the nearest regional centre, located 180 km to the southwest. The nearest residence is the Marymia Pastoral Homestead, located approximately 45 km northeast of the Project and is situated in the Marymia Pastoral Station (3114/1124) (Vango, 2020).

As stated in **Section 20.2**, the Project is located in the Gingirana native title area. It is RPM's understanding that there is no agreement in place with traditional owners.

Given the limited number of heritage sites that occur within the Project tenements and in light of community and regulatory expectations around Free, Prior and Informed Consent (FPIC), further consultation with the Traditional Owners and the development of a Cultural Heritage Management Plan is recommended to be an important component of future mining activities.

20.4 Mine Closure Requirements

The Marymia Project has been on care and maintenance since 2006 and a substantial amount of disturbance has been rehabilitated. The 2020 MCP identifies the status of mine closure and rehabilitation across the entire Marymia Project, of which the Trident Project is a subsection, and provides a closure task register. It also identified several knowledge gaps that require filing to contribute to effective mine closure and rehabilitation. These are:

- Refinement to the rehabilitation materials balance.
- Assessment for the generation of pit lakes and the effect on local groundwater quality at the Project.
- Hydrological assessment to ensure long-term stability of Trident Pit and WRD, which may be subject to flooding.

- Landform completion criteria. Preliminary completion criteria are provided however further assessment is needed to refine these criteria. Historically rehabilitated landforms act as a long-term trial for informing future rehabilitation practices. As such, completion criteria for newly rehabilitated landforms can be derived from the study of historic landforms. Separate completion criteria will be required for historically rehabilitated landforms.

A Closure Cost Estimate was developed by RPM, formally Blueprint Environmental Strategies Pty Ltd, in 2021 for the Marymia Project, based on the 2020 MCP Task Register. The Closure Cost estimate was calculated using Version 4.07 of the Queensland Government's Estimated Rehabilitation Cost Calculator for Mining (ERC Calculator). The ERC Calculator has a function allowing users to input custom rates for individual items. In this instance the default ERC Calculator rates were typically retained unless otherwise specified within the ERC Calculator. The cost calculation methodology, assumptions and exclusions are detailed in the Marymia Gold Mine – Closure Cost Estimate Report (March 2022).

The total estimated rehabilitation cost in 2021 for the Marymia Project was AUD 3.6 M. A breakdown is provided in **Table 20-1**. The relatively low cost given the extensive disturbance is a reflection of the level of rehabilitation that has been completed to date. An update to the closure cost estimate is required to include proposed mining and infrastructure disturbances from the development of the Project. RPM highlights that the required closure cost of the Project are likely immaterial to the NPV presented in Section 22. Furthermore, given that the Plutonic Mine is assumed to be operating well past the closure of Trident based on the PEA, the Company will continue the Project on a care and maintenance process prior to the full closure of the mine.

Table 20-1 Breakdown of Total Estimated Rehabilitation Cost

Aspect	Amount ($AUD)
Exploration	3,609
Infrastructure	792,982
Waste Rock Landforms	1,151,379
Tailings Storage Facilities	193,742
Pits	301,423
Mobilisation / Demobilisation	337,500
Project Management (10%)	278,064
Environmental Monitoring and Management (10%)	278,064
Contingency (10%)	278,064
Total	**3,614,827**

The Project is also required to pay an annual fee under the *Mining Rehabilitation Fund Act 2012 (MRF).*

The 2021 MRF liability for Marymia was $85,427.01. A review of publicly-available MRF data indicates that a similar liability was reported for 2022. This will be an annual ongoing cost that will increase if disturbance increases and decrease if rehabilitation is undertaken.

21. CAPITAL AND OPERATING COSTS

21.1 Assumptions

The Capital and Operating costs outlined below reflect the LOM Schedule, which is summarised in **Section 16.9**. The forecast costs assume all Inferred Mineral Resources (13% of the ore quantity) are included as ore unless otherwise noted. The below cost information has been provided by the Client and reviewed by RPM. RPM highlights the following:

- Costs are presented in AUD unless otherwise denoted.
- All costs are real with no inflation applied.
- The capital and operating cost estimates were prepared at a level of accuracy of ±35%.
- This estimate was prepared with a base date of June 2023.

21.2 Basis Of Estimate

As part of the mining cost estimate, Entech and CYL utilised recent actuals from the Plutonic Mine based on similar production rates and mining activities. The rates are assembled as fully variable schedule of rates, which were applied to mining physicals (unit costs per tonne). Where Trident mining activities, such as the use of shotcrete and pastefill, aren't utilised at Plutonic, costs were estimated based on similar operations to ensure these items were suitably accounted for in the cost models presented in this Report. Additional capital infrastructure costs and non-mining costs were estimated by Entech and CYL as outlined below.

21.3 Infrastructure Capital

The LOM infrastructure capital includes the supply and installation of infrastructure items to support the Project. **Table 21-1** shows the breakdown of the surface infrastructure capital. RPM notes that these capital items are also included in the Mining Services outlined in **Table 21-2** Underground Capital Costs breakdown.

Table 21-1 Infrastructure Capital

Description	AUD (Million)
Contractor and Owner Establishment	*2.96*
Portal	*1.29*
Escapeway	*0.30*
Ventilation	*2.25*
Pumping	*0.63*
Electrical	*2.25*
Pastefill Plant	*7.00*
Offices & Other	*0.47*
Safety	*0.53*
Survey	*0.34*
Total	***18.01***

21.4 Summary of Underground Capital Costs

The estimated mining capital costs are summarised in **Table 21-2**. These costs include the waste capital development such as the decline, along with the construction of all underground mining services such as ventilation etc.

Table 21-2 Underground Capital Costs breakdown

Description	Value (AUD Million)
Lateral	40.9
Vertical	2.4
Drilling	0.0
Mine Services*	25.1
Overheads	0.6
Total Capital	**69.0**

Note: this includes the AUD 18M of Infrastructure Capital*

21.5 Summary of Operating Costs

21.5.1 Operating Lateral Development

Lateral operating development includes the following types of development drives:

- All Ore Drives.
- Waste development off the footwall access drives; and
- Level stockpiles.

The associated costs include:

- Costs associated with jumbo development.
- Costs associated with ground support.
- Allocation of underground management and technical staff salaries and on-costs.
- Costs associated with the loading and hauling of ore and waste material; and
- An allocation of diesel fuel based on the tonnage of development ore and waste moved.

21.5.2 Stoping

Costs included in ore stoping include:

- Costs associated with stope drilling, blasting, loading and haulage.
- An allocation of diesel fuel based on the tonnage of stope ore moved.
- Allocation of costs associated with underground services installation and maintenance.
- Allocation of underground power generation cost.
- Allocation of underground management and technical staff salaries and on-costs, and
- Allocation of messing, accommodation, and FIFO costs attributable to underground mining personnel.

21.5.3 Mine Overheads

Mine overheads related to the underground mine include:

- General consumables.
- Personal protective equipment (PPE); and
- Safety and training.

21.5.4 Summary of Underground Mining Operating Costs

LOM operating costs were estimated based on actual site costs at the Plutonic Mine and the LOM physical schedule. A breakdown of the operating unit costs is shown in **Table 21-3**.

Table 21-3 Operating Cost Unit Costs

Description	Unit	Value
Lateral	AUD/t ore	55.16
Stoping	AUD/t ore	39.08
Backfill	AUD/t ore	23.60
Haulage	AUD/t ore	0.30
Overheads	AUD/t ore	1.22
Grade Control	AUD/t ore	10.00
Total Mine Operating	**AUD/t ore**	**129.36**

21.6 Surface Haulage Costs

Haulage from the Trident ROM stockpile to the Plutonic ROM stockpile is estimated to be AUD 5.8/t ore.

21.7 Processing Costs

Based on the recent performance and actuals of the Plutonic Plant the processing cost is forecast to be AUD 20.5 /t ore.

21.8 G&A

Catalyst has assumed annual administrative overheads of AUD 5.58/t which averages around AUD 1.5m per annum over the life of mine. Administrative synergies are anticipated by leveraging existing site infrastructure and support services at Plutonic. Further work is required in future studies to validate and refine these estimates, however are considered suitable for a PEA level of accuracy.

21.9 Royalties

Catalyst has applied the 2.5% state government royalty to all gold sales. No private royalties are held over the Project tenements.

22. ECONOMIC ANALYSIS

As part of RPM's process to justify the economic viability of the reported Mineable Quantities of the PEA, a revenue cash flow analysis was completed for the LOM schedule incorporating Inferred Mineral Resources as ore feed. The analyses were based on the following:

- All variable unit costs for the mine life, including mining, ore processing and handling, transportation costs, overheads and royalty costs, as shown in **Section** Error! Reference source not found.;
- The forecast production schedules as shown in **Section 16.9**;
- CAPEX costs, as outlined in **Section 21.4.** No allowance has been made for any potential salvage value of fixed plant or infrastructure at closure or closure costs. Also, capital previously expended (sunk cost) is not included in the assessment of economic returns;
- Applied the forecast prices as agreed with the Company AUD 2,700 per troy ounce. RPM is not a price forecast expert and has relied on third-party and expert opinions; however, considers them reasonable;
- A discount rate of 5%, which was selected based on the limited capital required and well-established community relations;
- For the purposes of confirming Project economics, no company tax rate was applied; and
- State levies and royalties of 2.5%.

It is assumed that the existing infrastructure at Plutonic including camp facilities, airstrip and tailings facility will support the Trident development. In addition, existing access roads between Trident and Plutonic are considered suitable for the proposed haulage route with only minor upgrades. The key assumptions are outlined in **Table 22-1**, and LOM schedule and parameters are outlined in **Table 22-2**.

Table 22-1 Key assumptions

Key assumptions		
Discount rate	*%*	5%
Gold price	*AUD/oz*	2,700
State royalty	*%*	2.5%
Ore tonnage from Indicated Mineral Resources	*%*	87%
Ore tonnage from Inferred Mineral Resources	*%*	13%
Processing cost	*AUD/t*	20.50
Processing recovery	*%*	89%

Table 22-2 Key operational parameters

Operation Parameters	Units	Total	Year				
			1	2	3	4	5
Total Development	*m*	***12,327***	2,402	3,120	3,267	3,029	509
Waste Tonnes	*t*	***560,855***	180,705	173,117	73,977	108,993	24,063
Total Ore Tonnes	*t*	***1,073,343***	15,393	158,086	341,323	360,196	198,346
Total Ore Grade	*g/t Au*	***6.7***	3	5.7	6.4	6.7	8.1
Total Ore Metal	*oz*	***229,521***	1,500	28,980	69,793	77,279	51,969
Indicated Ore Tonnes	t	***929,599***	0	115,655	324,655	300,951	188,338
Inferred Ore Tonnes	t	***143,744***	15,393	42,431	16,667	59,245	10,009
Indicated Ore Metal	*oz*	***209,587***	-	23,278	66,988	69,028	50,294
Inferred Ore Metal	*oz*	***19,934***	1,500	5,703	2,804	8,252	1,675
Recoveries	*%*		89%	89%	89%	89%	89%
Gold Produced	*oz*	***204,274***	1,335	25,792	62,116	68,779	46,252

22.1 Financial outputs

The PEA indicates Trident has the potential, given its medium to high-grade resource, to generate robust cashflows over the life of mine with a pre-tax cashflow Net Present Value (NPV) of AUD 246 M, and IRR of 132% and results in an annual average C1 cash cost of AUD 817/oz and an AISC is AUD 1,046/oz. The pre-production capital investment of AUD 36 M includes mine infrastructure and development, with the project benefitting from the existing processing and site support infrastructure located at Plutonic.

The estimated annual cashflows are shown in **Table 22-3** and graphically in **Figure 22-1**.

Figure 22-1 LOM Discounted Cashflow Summary

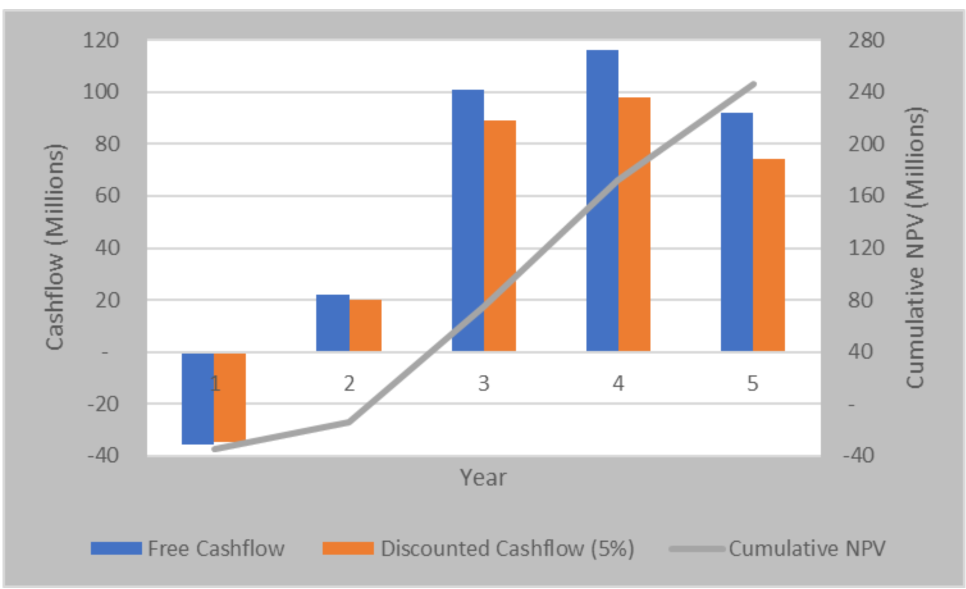
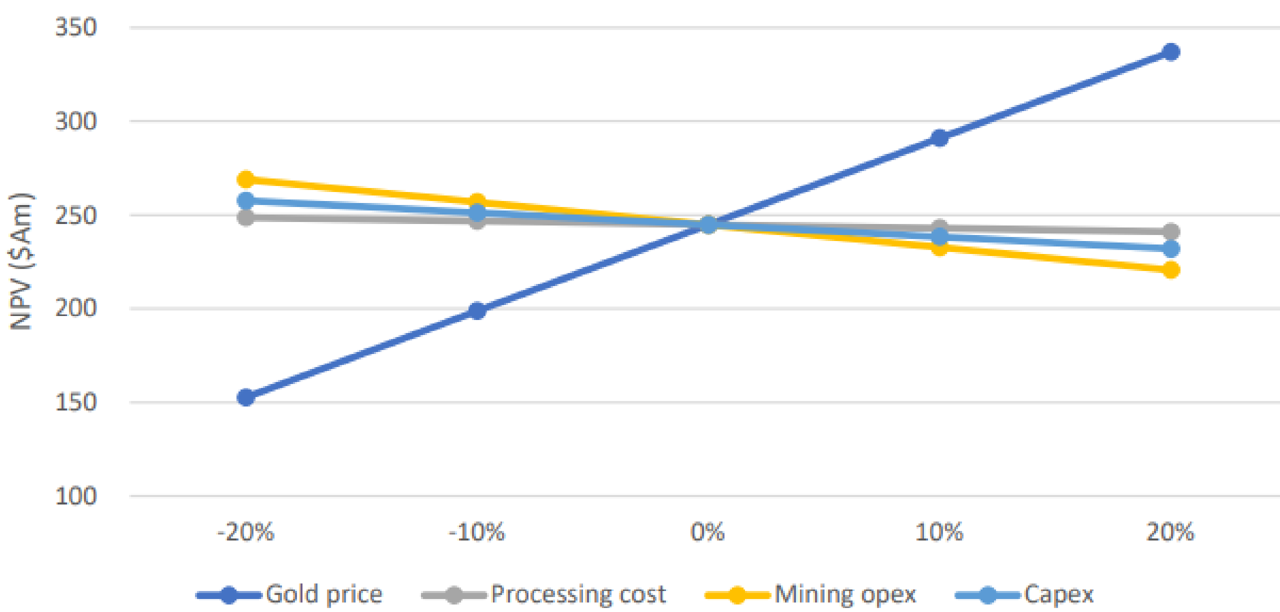


Table 22-3 Annual Undiscounted and Discounted Cashflow

Discount	Annual Output	Unit	Year 1	2	3	4	5	Total
	Total Annual Cost	AUD Million	**-39**	**-47**	**-67**	**-70**	**-33**	**-256**
Undiscounted	**Pre tax Annual Cashflow**	AUD Million	-35	22	101	116	92	**296**
	Pre Tax Cummulative Cashflow	AUD Million	-35	-13	88	204	296	**296**
	Post Tax Cummulative Cashflow	AUD Million			61	143	207	**207**
5% Discounted	**Pretax Annual Cashflow (5% Discount)**	AUD Million	-35	20	89	98	74	**246**
	Cumulative Cashflow	AUD Million	-35	-14	74	172	246	**296**
	Cummalative	AUD Million	-35	-14	74	172	246	**246**
	Post Tax Cummulative Cashflow	AUD Million			52	121	172	**172**
Tax Rate		%	30	30	30	30	30	

Sensitivity analysis was conducted by varying commodity price, processing costs, mining operating costs, and capital costs to assess their impact on the project's NPV. A range of ±20% was applied to each of these key inputs with the project NPV being most sensitive to gold price. The resulting NPV's from the sensitivity analysis are shown in **Figure 22-2**.

Figure 22-2 Sensitivity Analysis



In addition to the key parameters analysis, a sensitivity analysis was also conducted on the discount rate. The selected discount rate of 5% was varied up to 10%, which resulted in a 15% variance in project NPV as shown in **Table 22-4**.

Table 22-4 Discount rate sensitivities

Discount rate	Unit	NPV (pre-tax)	IRR (%)
5%	*AUD M*	246	132%
8%	*AUD M*	22	
10%	*AUD M*	207	

The economic analysis demonstrates that the project is most sensitive to gold price, but even with ±20% variance to key inputs, the project NPV's are robust and warrant progressing to the next level of study.

23. ADJACENT PROPERTIES

As noted in Sections 3 and 4, the Trident Project is located adjacent to the Plutonic Gold Mine which is currently owned and operated by CYL. The Plutonic Gold Mine is located in the south-western extremity of the Belt (Figure 4-2), which extends over 70 km strike length and averages 20 km in width. Because of its remote location, the Belt largely escaped the attention of the gold prospectors in the late 19th and early 20th centuries and remained unknown until 1986, when stream sediment sampling revealed gold mineralisation at Plutonic in the southwestern part of the belt. By 2010 Plutonic ranked as the sixth largest gold camp in Western Australia with an estimated total endowment of 12.2 Moz of gold.

The closest active adjacent property, aside from Plutonic, is Sandfire's DeGrussa copper operation, located approximately 30 km to the southwest. Construction and development of the project were completed in 2012, with initial open pit mining completed in 2013, before underground mining commenced. RPM understands that underground mining ceased in September 2022 with current operations and ore being sourced from existing stockpiles.

The closest recently active gold mine is the Andy Well mine, part of Meeka Gold Ltd's Murchison Gold Project (formerly owned and operated by Doray Minerals Ltd, - now Meeka Gold Limited) is located 120 km due south-west from Marymia. There are no other significant gold assets or gold processing facilities within a 120 km radius of Marymia.

24. OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading

25. INTERPRETATION AND CONCLUSIONS

- The PEA demonstrates that the medium to high-grade nature of the combined gold mineralisation and the thickness and size of the deposit suggest reasonable expectations that the Project has potential for eventual economic extraction using underground mining techniques and employing conventional mineral processing methods to recover the gold via the existing Plutonic Gold Mines processing facilities that are located in close proximity to the Project and owned and operated by CYL.
- Gold mineralisation occurs in a large number of deposits and prospects throughout the Plutonic – Marymia Gold Belt, with the main deposit at the Plutonic Gold Mine on the southern end. Mineralisation regularly occurs as shallow dipping, layered parallel lodes, although steep lodes and minor quartz-vein-hosted deposits also occur. Regionally within the greenstone belt, mineralised host rocks vary from amphibolites to ultramafics and banded iron formation (BIF). Lateritic and supergene enrichment are common throughout the Belt and have been mined locally. Biotite, arsenopyrite, and lesser pyrite/pyrrhotite are common minerals generally accepted to be associated with gold mineralisationThe mineralized domains show variation in thickness and geometry, however, the drill density has allowed the delineation of coherent bodies of mineralisation.
- Several generations of exploration have been completed over the Project which has been undertaken by previous owners. Work completed includes geochemical sampling, geophysical surveys, reverse circulation, and diamond drilling. These works have been completed in various amounts across the tenements, resulting in the delineation of Mineral Resources and various indications of mineralisation which are considered to have exploration upside.
- The sampling and assaying methodology and procedures were satisfactory for the majority of drilling campaigns. QA/QC protocols were adequate and a detailed review of the data did not show any consistent bias or reasons to doubt the assay data.
- The Project exhibits a moderate to a high degree of structural complexity. The block models are defined by drilling on predominately 20 m by 20 m drill spacings with extension out to 80 m by 80 m drill spacing. Therefore there is potential for the tonnage and overall geometry variations between modelled and actual mineralization.
- The Trident Mineral Resource is classified as an Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. The deposit shows reasonable continuity of the main mineralised lodes along strike and down dip with relative consistency evident in the thickness of the structures, along with the continuity of structure between sections. While there is good geological continuity along strike and down dip, there is evidence, and it is interpreted, that local variation of grade and thickness will occur between the current drill spacing arising from the type structures resulting in discontinuous pods of mineralisation. These Mineral Resources used to underpin the production target were prepared by Mr Spero Carras who is a Qualified Person.
- The preliminary production target for Trident is based on the Mineral Resource for the Trident Project comprising underground resources at a cut-off grade of 3.0g/t Au of 945kt at 9.4g/t Au in the Indicated category and 645kt at 6.0g/t Au in the Inferred category.
- Mining is proposed to be undertaken via conventional underground mechanised mining methods incorporating appropriate modifying factors for dilution and recovery for both development and stoping activities. No Mineral Reserve estimate has been classified or reported. As part of the mining cost estimate, Entech used recent actuals from CYL's Plutonic operation. The rates are assembled as fully variable schedule of rates, which were applied to mining physicals.
- Trident ore will be transported and processed at the Plutonic processing facility. It is assumed that Trident will be an incremental ore source to a base load being processed at Plutonic. The Plutonic plant is an established operation, and historical operating costs are generally well understood and reliable.
- Metallurgical Testwork, commissioned by Como Engineers and conducted by ALS Metallurgy, Report A19022, showed that the Trident fresh ore is suitable for treatment via a typical crush, grind and leach process, with final gold recoveries being ~90%. Hardness testing of the Trident underground ore showed that the Bond Ball Mill work index of the Trident fresh ore was 13.3kWh/t. This is considered medium and

is consistent with an ultamafic orebody. A significant amount of additional metallurgical testwork will be required for Trident as it is progressed into higher confidence project stages.

- The geochemical characterisation of waste rock from Trident has indicated that potential seepage or runoff from waste rock is expected to be neutral to alkaline, non-saline and contain very low concentrations of environmentally significant metals and metalloids. There is no considered potential for acid generation from waste rock. It is not considered to present any significant environmental risks to the relatively fresh to brackish aquifers in the project area.
- Environmental studies have been completed and include flora and fauna surveys and did not record any threatened or priority ecological communities. Groundwater assessments have also been undertaken and will be subject to additional work in the DFS.
- The Trident Development will utilise existing support infrastructure at the Plutonic Gold Mine which is a well-established mine with associated services and infrastructure. The mine can be accessed by aircraft or by road and operates as a fly-in/fly-out operation and maintains a camp on-site for the employees and contractors.
- Electricity at Trident will be provided by diesel gensets and has been considered as part of the underground mining cost model. A haulage route between Trident and Plutonic exists and it is anticipated that these access roads will serve as a suitable haulage and service road between the Plutonic mill, and the Trident Project and associated infrastructure.
- For these reasons, the Project has the potential for economic returns and RPM recommends that the Project proceeds to a pre-feasibility study.

26. RECOMMENDATIONS

26.1 Key Recommendations Identified

RPM highlights that global resource estimates, particularly with Indicated and Inferred levels of confidence, are suitable only for medium to long-term mine planning and economic analysis and should not be the basis for detailed short-term production planning. In production environments, these types of estimates are used by the mine geology teams to guide grade control drilling and sampling to confirm the location and grade of the mineralisation prior to production. This process is industry standard practice and aims to minimise the inherent risk of mining and geology.

While not suitable for detailed mine planning, the estimates can be of significant use in exploration and resource drill planning to further refine and target key areas. As a result, based on its review of the status of the Projects and data quality, RPM recommends that the following be undertaken.

26.1.1 Geology and Mineral Resources

Based on the outcomes of the resource estimate, RPM recommends additional drilling be undertaken. There is good potential to expand the resource base and, importantly, increase confidence in the known resource areas which is required to make informed investment decisions. Based on its review RPM recommends that future drilling should aim to define the following:

- Complete additional geological diamond drilling to improve orebody definition.
- Target mineralisation along strike to increase the resource base. This is considered regional exploration and should focus on the known deposits outside of the current resource base. This Is particularly the case for areas that are considered conceptual in nature, or where drilling has been undertaken to post the 2020 estimates, such as high-priority target Skyhawk. Resource drilling in extensional areas adjacent to, and down plunge of, the high-grade areas within the resource. This presents exploration upside in the medium to short term and should be a high priority for drilling due to the potential impact on project economics.
- Infill drilling of high-grade areas within potentially mineable areas of the resource. Infill drilling should target the material within the underground optimisation envelopes (as outlined in this Report), along with the down plunge of key zones in areas of assumed economic viability. Each stage of further drilling is contingent on successful results of the previous.

RPM recommends a budget of at least AUD 500,000 for the exploration expenditures for H2 2023/2024, however, any exploration budget should be dependent on results given the status of the Project.

26.1.2 Mining

Based on the outcome of the mining aspects of the PEA, it is recommended that CYL should proceed to the next level of study, and suggests the following areas are addressed as part of those further studies:

- Complete an updated geotechnical review of the revised mine plan, including numerical modelling and in situ stress measurements to confirm assumptions made for mining of the shallow dipping orebodies. Consideration should be given to the collection of adequate samples representative of the rock mass to be encountered in those areas. Material Property Testwork in combination with geotechnical logging data will allow for rockmass characterisation and subsequent classification.
- Undertake additional numerical modelling to assist in the simulation of void creation underground and the sequence of the extraction to determine how these impact surrounding mine geometries and identify any problematic regions, allowing the advance redesign of development or production fronts where needed.
- Undertake further geotechnical drilling and logging as required in areas of key infrastructure such as the portal location and initial decline position, in addition to planned holes at intervals along the decline strike and other key infrastructure locations.

- Complete new stope optimisations to better align with appropriate sub-level spacings and assess if the mine plan has the potential for an expanded economic footprint. Subsequently, regenerate a revised mine plan and mine schedule.
- Complete a backfill study to trade-off backfilling options, suitability of paste fill, and update capital and operating backfill costs.
- Update mine services designs for ventilation requirements in addition to power, dewatering and utility requirements. This includes their underground reticulation, installation, and maintenance as well as the surface infrastructure and layout requirements.
- Complete a first principle's cost build-up to increase confidence in the estimation of mining costs.
- Assess whether an updated hydrological study is required.
- Assess whether an updated fibrous materials study is required.
- Perform detailed surface infrastructure itemization and costing.

26.1.3 Mineral Processing

Although preliminary metallurgical testwork has been performed on the Trident orebody by several mining companies over the past 30 years the following additional work packages are recommended to be completed to move the metallurgical knowledge of the Project forward to the feasibility study level:

- Undertake additional variability sample testing to determine if there is any significant variance in the mineralogy of the deposit to assist in finalising grade recovery relationships for all expected mineralisation at Trident.
- Undertake bench scale cyanidation studies using the Plutonic flowsheet. Should results indicate poor recovery, gold deportment studies should be undertaken.
- Complete further analysis on whether asbestos in the form of tremolite is localised to thick veining, which can be visually identified and possibly managed by geologists during mining, or whether it is mixed throughout the ultramafic rocks at Trident.
- Assess any implications of Asbestiform mineralisation on treatment and handling requirements both at the Trident Project as well as at the Plutonic processing facilities.
- Optimise the process flowsheet for Trident mineralogy and confirm that the Plutonic Gold Facilities will be suitable.

Undertake Paste studies on the Plutonic Gold tailings stream and the Trident expected tailings stream to confirm that either or both streams are suited for use in paste generation for the implementation of backfill at the Trident operations.

26.1.4 Mine Waste and Water

- Undertake stability analysis of existing and proposed waste dump structures.
- Develop a detailed site-wide water balance including flood inundation potential
- Undertake additional analysis on groundwater inflow rates for the proposed underground workings. This study would focus on capturing and rectifying any data gaps from the PEA with regard to dewatering strategies, groundwater flow modelling, and key items captured in the preliminary hydrogeological study

26.1.5 Environmental, Permitting, Social and Closure

Based on the review of environmental, permitting, social and closure information available RPM recommends the following to be undertaken:

- Develop and implement an environmental and social management system (ESMS) and associated management plans (EMPs) covering the construction, operating and closure phases of the project.
- Increase organisational capacity to enable implementation of the Project in compliance with regulatory permits and conforming to ESMS requirements.
- Completion of tailings characterisation.
- Completion and submission of environmental and heritage approval applications under relevant State legislation. Update the closure cost estimate to include the proposed operations at Trident.

26.1.6 Economic Analysis

Review the operating and capital assumptions for any revised underground mining plans and generate a new financial model.

26.1.7 Estimated Budget for Recommendations

The estimated budget to complete the main activities recommended above is AUD 2.5M, as outlined in Table 25.1.

Table 26-1 Estimated Budget for Recommendations

Area	Estimated Budget
Geology and Mineral Resources	
Infill drilling	
Geological modelling	
Analysis of variability of Asbestiform Mineralisations	
Develop a Geomet model	
Exploration Drilling	
Sub-total – Geology and Mineral Resources	$600,000
Mining & Geotechnical	
In-situ stress measurements and instrumentation	
Geotechnical drilling of shallow dipping ore zones	
Hydrogeological study	
Backfill Trade-off Study	
Numerical modelling	
Material Strength Testing	
Mining Method Refinement Optimisation	
Equipment Selection	
Cost Estimation	
Mine Ventilation Modelling	
Dewatering, Power, Utilities Requirements	
Maintainenance and Support Infrastructure design.	
Project Execution Planning and Risk Assessments	
Sub-total – Mining	$600,000
Mineral Processing	
Complete variability sample testing	
Complete bench scale cyanidation studies and if necessary gold deportment studies	
Additional Asbestiform mineralisation testwork	
Assess implications of Asbestiform Minerealisation on Treatment and Handling Requirement	
Optimise process flowsheet and confirm suitability of Plutonic Gold Processing facitility	
Undertake Paste Studies	
Sub-total – Mineral Processing	$300,000
Waste and Water Management	
Stability analysis of waste dumps	
Develop detailed site-wide water balance	
Prepare site-specific hydrometeorology report	
Undertake additional analysis on groundwater inflow rates.	
Sub-total – Waste and Water Management	$250,000
Environment, Permitting, Social, Closure	
Develop and implement ESMS and associated management plans	
Completion of tailings characterisation	
Completion and submission of environmental and heritage approval applications under relevant State legislation	
Update the closure cost estimate to include proposed operations	
Sub-total – Environment, Permitting, Social and Closure	$270,000
Capital and Operating Costs & Financial Modelling	
Firm up capital and operating costs assumptions	
Financial Model	
Sub-Total - Financial Analysis	$50,000
Technical Report/ Feasibility	$250,000
Total Estimated Cost - Next Phase of Study	**$2,320,000**

27. REFERENCES

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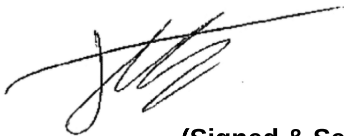
28. DATE AND SIGNATURE PAGE

This report titled Trident Preliminary Economic Assessment, Technical Report and dated 01 September 2023 was prepared and signed by the following authors:



(Signed & Sealed)

Jeremy Clark, Member of AIG

Dated at Adelaide, Australia

01 September 2023.

29. CERTIFICATE OF QUALIFIED PERSON

Jeremy Lee Clark
54 Ridgeland Drive
Teringie, South Australia, 5072
Phone: +61427 931 195
jclark@rpmglobal.com

I, Jeremy Lee Clark, MAIG, of Adelaider do hereby certify:

- I am working as an associate Principal Geologist for RPM Advisory Services Pty Ltd. Of Level 10/201 Miller St, North Sydney NSW 2060
- This certificate applies to the technical report entitled *Trident Preliminary Economic Assessment, Technical Report* with an effective date of 09 May 2023 (the "Technical Report").
- I am a registered member of the Australian Institute of Geoscientists ("AIG") number 3567.
- I am a graduate of the Queensland University of Technology and hold a B App Sc in Geology, which was awarded in 2001. In addition, I am a graduate of Edith Cowan University in Australia and hold a Graduate Certificate in Geostatistics, which was awarded in 2006.
- I have been continuously and actively engaged in the assessment, development, and operation of mineral Projects since my graduation from university in 2001.
- I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101").
- I am responsible for the preparation of all Sections with the exception of Section 14, 15, 16, 18, 21, 22, 24, 25 and 26 of the Technical Report.
- I have had no prior involvement with the properties that are the subject of the Technical Report.
- To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading as of the effective date of the report, May 9, 2023.
- I am independent of Catalyst Metals Ltd in accordance with the application of Section 1.5 of NI 43-101.
- I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
- I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Signed and dated at Adelaide, 01 September 2023.

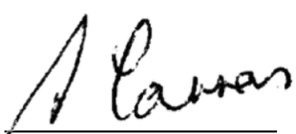
Jeremy Lee Clark, MAIG (QP)

Dr Spero Carras
Carras Mining Pty Ltd
Unit 12, 15–21 Collier Road, Morley WA 6062
Phone: 08 93752299
patches@iinet.net.au

I, Dr Spero Carras of Perth, do hereby certify:

- I am working as the Executive Director of Carras Mining Pty Ltd, Unit 12, 15-21 Collier Road, Morley WA 6062.
- This certificate applies to the technical report entitled *Trident Preliminary Economic Assessment, Technical Report* with an effective date of 01 September 2023 (the “Technical Report”).
- I am a registered Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy (“AusIMM”) number 107972.
- I am a graduate of the Western Australian Institute of Technology in Applied Physics, the West Australian School of Mines in Mining Engineering and hold a Doctorate in Geostatistics from the University of Leeds, England.
- I have been continuously involved in the assessment and operational issues of gold mining operations in Australia and worldwide since 1980.
- I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators (“NI 43-101”).
- I am responsible for the preparation of Section 14 of the Technical Report.
- I have had no prior involvement with the properties that are the subject of the Technical Report.
- To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading as of the effective date of the report, 9 May 2023.
- I am independent of Catalyst Metals Ltd in accordance with the application of Section 1.5 of NI 43-101.
- I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
- I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Signed and dated at Perth, 01 September 2023.



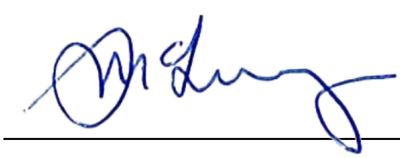
Dr Spero Carras, FAUSIMM (CP)

Shane McLeay
Entech Pty Ltd
8 Cook, West Perth WA 6005, Australia
Telephone: +61 (0)8 6189 1800
Email: shane.mcleay@entechmining.com

I, Shane McLeay, B.Eng (mining), FAusIMM, do herby certify that:

- I am Principal Consultant of Entech Pty Ltd, an independent mining consultant, with an office at 8 Cook St, West Perth, Western Australia, Australia;
- I am a graduate from the Western Australian School of Mines, Curtin University Australia in 1995 with a B.Eng (mining). Hons. I have practised my profession continuously since 1995. My relevant experience for the purpose of the Technical Report is: Over 20 years of gold and base metals industry experience in feasibility studies, operational mine start-up, mine costing and steady state production;
- I am a Fellow of the Australasian Institute of Mining and Metallurgy;
- I have read the definition of "Qualified Person" set out in National Instrument 43- 101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "Qualified Person" for the purposes of NI 43-101;
- I have had prior involvement with the property that is the subject of the Report, having assisted with study work on the K2 and Trident deposits;
- I am responsible, either wholly or partly, for Sections 15, 16, 18, 21, 22, 24, 25 and 26;
- I am an independent "qualified person" within the meaning of section 1.5 of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators;
- I have read NI 43-101 and Form 43-101F1 and have prepared and read the report entitled "Trident Preliminary Economic Assessment, Technical Report" dated August 30, 2023 for Catalyst Metals Ltd. in compliance with NI 43-101 and Form 43-101F1;
- That, at the effective date of this technical report August 30, 2023, to the best of my knowledge, information, and belief it contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Signed and dated at Perth on 01 September 2023.



Shane McLeay, FAusIMM (QP)

30. APPENDIX 1

IMPORTANT INFORMATION ABOUT THIS DOCUMENT

1. Our Client

This report has been produced by or on behalf of RPM Advisory Services Pty Ltd ("RPM") solely for Catalyst Metals Ltd. (the "Client").

2. Client Use

The Client's use and disclosure of this report is subject to the terms and conditions of the engaging Agreement under which RPM prepared the report.

3. Notice to Third Parties

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- *RPM has prepared this report having regard to the particular needs and interests of the Client, and in accordance with the Client's instructions and in accordance with the terms and conditions of its engagement. It did not draft this report having regard to any other person's particular needs or interests. Your needs and interests may be distinctly different to the Client's needs and interests, and the report may not be sufficient, fit or appropriate for your purposes.*
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4. Independence

RPM provides advisory services to the mining and finance sectors. Within its core expertise it provides independent technical reviews, resource evaluation, mining engineering, environmental assessments and mine valuation services to the resources and financial services industries.

RPM have independently assessed the subject of the report (the "Project") by reviewing pertinent data, which may include Resources, Reserves, existing approvals, licences and permits, manpower requirements and the life of mine plans relating to productivity, production, operating costs and capital expenditures. All opinions, findings and conclusions expressed in this report are those of RPM and specialist advisors.

Drafts of this report were provided to the Client, but only for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in this report.

RPM has been paid, and has agreed to be paid, professional fees for the preparation of this report. The remuneration for this report is not dependent upon the findings of this report. RPM does not have any economic or beneficial interest (present or contingent), in the Project, in securities of the companies associated with the Project or the Client

5. Inputs, subsequent changes and no duty to update

RPM has created this report using data and information provided by or on behalf of the Client. Unless specifically stated otherwise, RPM has not independently verified that data and information. RPM accepts no *liability for the accuracy or completeness of that data and information, even if that data and information has been incorporated into or relied upon in creating this report (or parts of it).*

The conclusions and opinions contained in this report apply as at the date of the report. Events (including changes to any of the data and information that RPM used in preparing the report) may have occurred since that date which may impact on those conclusions and opinions and make them unreliable. RPM is under no duty to update the report upon the occurrence of any such event, though it reserves the right to do so.

6. Inherent Mining Risks

Mining is carried out in an environment where not all events are predictable.

Whilst an effective management team can identify the known risks and take measures to manage and mitigate those risks, there is still the possibility for unexpected and unpredictable events to occur. It is not possible therefore to totally remove all risks or state with certainty that an event that may have a material impact on the operation of a mine, will not occur.

The ability of any person to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond RPM's control and that RPM cannot anticipate. These factors include, but are not limited to, site-specific mining and geological conditions, management and personnel capabilities, availability of funding to properly operate and capitalize the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, unforeseen changes in legislation and new industry developments. Any of these factors may substantially alter the performance of any mining operation.

7. Limitations and Exclusions

RPM 's report is based on data, information reports, plans and tabulations, as applicable, provided by Client or on behalf of the Client. The Client has not advised RPM of any material change, or event likely to cause material change, to the operations or forecasts since the date of assets inspections.

The work undertaken for this report is that required for a technical review of the information, coupled with such inspections as RPM considered appropriate to prepare this report.

Unless otherwise stated specifically in writing, the report specifically excludes all aspects of legal issues, commercial and financing matters, land titles and agreements, except such aspects as may directly influence technical, operational or cost issues and where applicable to the JORC Code guidelines.

RPM has specifically excluded making any comments on the competitive position of the relevant assets compared with other similar and competing producers around the world. RPM strongly advises that any potential investors make their own comprehensive assessment of the competitive position of the relevant assets in the market.

8. Indemnification

The Client has indemnified and held harmless RPM and its subcontractors, consultants, agents, officers, directors and employees from and against any and all claims, liabilities, damages, losses and expenses (including lawyers' fees and other costs of litigation, arbitration or mediation) arising out of or in any way related to:

- *RPM 's reliance on any information provided by Client; or*
- *RPM 's services or materials; or*
- *Any use of or reliance on these services or materials by any third party not expressly authorised by RPM,*

save and except in cases of death or personnel injury, property damage, claims by third parties for breach of intellectual property rights, gross negligence, wilful misconduct, fraud, fraudulent misrepresentation or the tort of deceit, or any other matter which be so limited or excluded as a matter of applicable law (including as a Competent Person under the Listing Rules) and regardless of any breach of contract or strict liability by RPM.

– END OF REPORT –

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