



TECHNOLOGY
METALS AUSTRALIA LIMITED

ASX Announcement

31 May 2018

ACN: 612 531 389

T: 08 6489 1600

F: 08 6489 1601

E: investors@tmtlimited.com.au

Suite 9, 330 Churchill Avenue,

Subiaco WA 6008

www.tmtlimited.com.au

Directors

Michael Fry:
Chairman

Ian Prentice:
Managing Director

Sonu Cheema:
Director and Company Secretary

Issued Capital

32,800,001 ("TMT") Fully Paid Ordinary Shares

22,500,000 Fully Paid Ordinary Shares classified as restricted securities

14,800,000 Unquoted Options exercisable at \$0.25 on or before 31 December 2019 – 13,700,000 classified as restricted securities

3,000,000 Unquoted Options exercisable at \$0.35 on or before 12 January 2021

10,000,000 – Unquoted Options exercisable at \$0.40 on or before 24 May 2020 – 3,333,334 vest on 15 September 2018

ASX Code: TMT

FRA Code: TN6

HIGH PURITY +99% VANADIUM PENTOXIDE PRODUCT CONFIRMED AT GABANINTHA

HIGHLIGHTS

- DOWNSTREAM PROCESSING TESTWORK DELIVERS V_2O_5 PRODUCT WITH HIGH PURITY IN EXCESS OF 99%.
- CONFIRMED CONVENTIONAL SALT ROAST / WATER LEACH PROCESSING IS ABLE TO DELIVER A HIGH PURITY VANADIUM PRODUCT AT GABANINTHA.
- TESTWORK ON LARGER COMPOSITE SAMPLES UNDERWAY TO GENERATE FINAL PRODUCT FOR END USERS.
- PRE-FEASIBILITY STUDY ON TRACK FOR DELIVERY IN JUNE 2018.

BACKGROUND

Technology Metals Australia Limited (ASX: TMT) ("Technology Metals" or the "Company") is pleased to provide an update on metallurgical testwork activities at its Gabanintha Vanadium Project ("Gabanintha" or "Project"). The final stages of the initial downstream processing testwork, involving the precipitation of ammonium metavanadate and subsequent generation of high purity V_2O_5 product, has now been completed.

This work has delivered a V_2O_5 product with a purity in excess of 99% from an ammonium metavanadate precipitate that recovered ~97.4% of vanadium from a leach solution generated from salt roasting of magnetic concentrate from Gabanintha.

Previous testwork has definitively shown that the massive magnetite and fresh disseminated magnetite zones at Gabanintha are amenable to conventional salt roast / water leach processing with very high recoveries of vanadium in to solution at significantly less salt addition than other conventional salt roast leach operations.

Gabanintha hosts a Global Mineral Resource ("Global Resource") estimate, reported in accordance with the JORC Code 2012, of 119.9 Mt at 0.8% V_2O_5 and 9.7% TiO_2 including an outstanding high grade component of 55.0 Mt at 1.1% V_2O_5 and 12.7% TiO_2 and an Indicated Mineral Resource of 21.6 Mt at 0.9% V_2O_5 and 11.2% TiO_2 .

Managing Director Ian Prentice commented; "This is a very exciting outcome for the Company, confirming the extremely high quality of the Gabanintha vanadium deposit and the scope to deliver a premium product direct from the mine gate."

METALLURGICAL TESTWORK – DOWNSTREAM PROCESSING

Metallurgical testwork completed by the Company to date, under the supervision of the Company's metallurgical consultant METS Engineering Group Pty Ltd ("METS") and based on representative samples collected from diamond drilling completed in 2017, has definitively shown that magnetic concentrates produced from all zones of the massive magnetite and the fresh disseminated magnetite are amenable to conventional salt roast / water leach processing. The magnetic concentrates delivered very high vanadium recoveries and rejection of gangue minerals from the high grade fresh and transition material and the disseminated medium grade fresh material.

Vanadium grades reporting to the magnetic concentrate ranged from 1.27 to 1.34% V_2O_5 for these ore types, with weight recoveries ranging from 85.6% for the massive high grade fresh composite to 33% for the disseminated medium grade fresh composite.

Downstream processing testwork, focused on the extraction of vanadium pentoxide (V_2O_5) from the magnetic concentrates utilising salt roast / water leach processing has definitively shown that magnetic concentrates produced from all zones of the massive magnetite and the fresh disseminated magnetite are amenable to this conventional processing route. This work demonstrated very high recoveries of vanadium in to solution at significantly less salt addition than other conventional salt roast leach operations. This lower salt (reagent) requirement is interpreted to be due to the very low silica grades present in the magnetic concentrates, a very important factor for the efficient and effective salt roasting of vanadium concentrates.

Testwork, conducted by ALS Metallurgy Services, has now progressed to precipitation of ammonium metavanadate (AMV) from a leach solution and the subsequent precipitation of a V_2O_5 final product. For this phase of work a sample of blended magnetic concentrate, representing approximately 85% massive fresh and 15% massive transitional material, was mixed with sodium carbonate and roasted for 2 hours at 1,200°C. The roasted calcined material was then water leached to ensure complete dissolution of sodium vanadate to the leach solution.

Desilication of the leach solution, which was completed with minimal vanadium loss, generated a clean solution for the AMV precipitation step. The AMV precipitate, which was filtered from the remaining leach solution, delivered a >99% recovery of vanadium. The AMV precipitate was then calcined to generate a final V_2O_5 product (see Figure 1), with a purity in excess of 99%. Impurities within the final V_2O_5 consist of a small volume of alumina, chromium, potassium and sulphur.



Figure 1: Photograph of High Purity +99% V_2O_5 Product From Gabanintha

Ongoing testwork is being completed on larger composite samples with the aim of generating final product (both AMV and V₂O₅) to be provided to potential vanadium end-users. It is expected that the larger volumes of solution, combined with some minor refinements to the testwork program, could result in the delivery of even higher purity of the final V₂O₅ product.

The current round of testwork has confirmed the use of conventional salt roast / water leach processing techniques to recover a very high purity V₂O₅ product at Gabanintha. The solution produced from the leaching testwork is regarded as extremely clean and low in solution impurities. This has confirmed that the material from the Gabanintha deposit is well suited to produce a very high purity V₂O₅ product without the requirement of additional costly contaminant removal steps. Further testwork is currently being conducted to examine how the purity of the V₂O₅ can be further enhanced to produce a niche ultra-high purity V₂O₅ product specifically for the Vanadium Battery and Aeronautical industries, which may attract substantial premiums to the 98% V₂O₅ product pricing index.

GABANINTHA PRE-FEASIBILITY STUDY

Wave International (“**Wave**”), a resource development / engineering consultant with demonstrated experience in the vanadium and battery minerals sector and extensive feasibility study experience, has been engaged by the Company to develop the processing flowsheet, complete basic plant engineering and site / infrastructure assessments, specify and quote on major long lead items, provide capital and operating cost estimates to pre-feasibility study (“**PFS**”) level and generate a Project financial model.

Wave is also co-ordinating with the Company and its other consultants to produce a PFS report. The other consultants engaged in the PFS are:

- METS for ongoing metallurgical testwork and product assessment.
- CSA Global for resource / geological work and mining study work, involving the generation of conceptual open pit designs, a preliminary mining and production schedule, mining capital and operating cost estimates, and
- Integrate Sustainability for environmental, heritage and statutory approvals advice and support.

The PFS on the Gabanintha Vanadium Project is on track for delivery to the Company in June 2018. The scope of the PFS is to:

- assess potential processing flowsheet options, with a focus on the extraction of vanadium using conventional salt roast / leach processing,
- provide conceptual open pit mine designs / pit optimisations,
- provide indicative capital expenditure estimates,
- provide indicative operating cost estimates, and
- based on the initial production profile, produce a project cashflow estimate.

Financial modelling in the PFS will be based on the currently defined Indicated mineral resource of 21.6 Mt at 0.9% V₂O₅ out of a total Indicated and Inferred mineral resource of 119.9 Mt at 0.8 V₂O₅. The study will also assess the scope of the balance of the resource to extend the Project life. The Company is of the view that the quantum of the Indicated resource is a factor of drill density, with scope to materially increase the volume of the Indicated resource with further drilling, particularly on the Southern Tenement.

FUTURE WORK

The Company's ongoing activities are focused on:

- the delivery of the PFS report,
- ongoing metallurgical testwork to optimise the application of the conventional salt roast / leach processing and to assess potential to produce co-products, and
- drilling designed to further expand the Global Mineral Resource, particularly in the area of the Southern Tenement, and to increase the quantity of Indicated Resource through infill (100 m spaced) and extensional drilling to further validate grade and geological continuity.

The Company will incorporate recommendations from CSA Global in its planning for further resource drilling, with this work expected to incorporate a component of diamond drilling to provide bulk samples for metallurgical testwork at the Southern Tenement, to provide geological / structural data relating to the various mineralised lodes and to provide geotechnical data to be incorporated in to open pit designs. Results from this work are expected to be incorporated in to a definitive feasibility study ("DFS") which the Company expects to commence directly after delivery of the PFS.

VANADIUM

Vanadium is a hard, silvery grey, ductile and malleable speciality metal with a resistance to corrosion, good structural strength and stability against alkalis, acids and salt water. The elemental metal is rarely found in nature. The main use of vanadium is in the steel industry where it is primarily used in metal alloys such as rebar and structural steel, high speed tools, titanium alloys and aircraft. The addition of a small amount of vanadium can increase steel strength by up to 100% and reduces weight by up to 30%. Vanadium high-carbon steel alloys contain in the order of 0.15 to 0.25% vanadium while high-speed tool steels, used in surgical instruments and speciality tools, contain in the range of 1 to 5% vanadium content. Global economic growth and increased intensity of use of vanadium in steel in developing countries will drive near term growth in vanadium demand.

An emerging and likely very significant use for vanadium is the rapidly developing energy storage (battery) sector with the expanding use and increasing penetration of the vanadium redox batteries ("VRB's"). VRB's are a rechargeable flow battery that uses vanadium in different oxidation states to store energy, using the unique ability of vanadium to exist in solution in four different oxidation states. VRB's provide an efficient storage and re-supply solution for renewable energy – being able to time-shift large amounts of previously generated energy for later use – ideally suited to micro-grid to large scale energy storage solutions (grid stabilisation). Some of the unique advantages of VRB's are:

- a lifespan of 20 years with very high cycle life (up to 20,000 cycles) and no capacity loss,
- rapid recharge and discharge,
- easily scalable into large MW applications,
- excellent long term charge retention,
- improved safety (non-flammable) compared to Li-ion batteries, and
- can discharge to 100% with no damage.

Global economic growth and increased intensity of use of vanadium in steel in developing countries will drive near term growth in vanadium demand.

The global vanadium market has been operating in a deficit position for the past five years (source: TTP Squared Inc), with a forecast deficit of 9,700 tonnes in 2017. As a result, vanadium inventories have been in steady decline since 2010 and they are forecast to be fully depleted in 2017 (source: TTP Squared Inc). Significant production declines in China and Russia have exacerbated this situation, with further short term production curtailment expected in China as a result of potential mine closures resulting from environmental restrictions and the banning of the import of vanadium slag.

The tightening supplies of vanadium are resulting in a global shortage, with prices appreciating dramatically since mid 2017, with reports indicating that vanadium pentoxide prices have rallied further in 2018 to in excess of US\$14/lb V_2O_5 , from a low of less than US\$4/lb V_2O_5 in early 2017.

For, and on behalf of, the Board of the Company,

Ian Prentice
Managing Director
Technology Metals Australia Limited

- ENDS -

About Technology Metals Australia Limited

Technology Metals Australia Limited (ASX: TMT) was incorporated on 20 May 2016 for the primary purpose of identifying exploration projects in Australia and overseas with the aim of discovering commercially significant mineral deposits. The Company's primary exploration focus is on the Gabanintha Vanadium Project located 40 km south east of Meekatharra in the mid-west region of Western Australia with the aim to develop this project to potentially supply high-quality V₂O₅ flake product to both the steel market and the emerging vanadium redox battery (VRB) market.

The Project consists of six granted tenements (and two Mining Lease applications). Vanadium mineralisation is hosted by a north north west – south south east trending layered mafic igneous unit with a distinct magnetic signature. Mineralisation at Gabanintha is similar to the Windimurra Vanadium Deposit, located 270 km to the south, and the Barambie Vanadium-Titanium Deposit, located 155 km to the south east. The key difference between Gabanintha and these deposits is the consistent presence of a high grade massive vanadium – titanium – magnetite basal unit, which results in an overall higher grade for the Gabanintha Vanadium Project.

Data from the Company's 2017 drilling programs (85 RC holes (for 8,386 m) and 13 HQ diamond holes (for 1,235.5 m) at the Northern Block and 23 RC holes (for 2,232 m) at the Southern Tenement) has been used by independent geological consultants CSA Global to generate a global Inferred and Indicated Mineral Resource estimate, reported in accordance with the JORC Code 2012 edition, for the Project. The Resource estimate confirmed the position of the Gabanintha Vanadium Project as one of the highest grade vanadium projects in the world.

Table 3: Global Mineral Resource estimate for the Gabanintha Vanadium Project as at 5 March 2018

Technology Metals Gabanintha Vanadium Project - Global Mineral Resources as at March 2018										
Material	Classification	Tonnage (Mt)	V2O5%	Fe%	Al2O3%	SiO2%	TiO2%	LOI%	P%	S%
Massive magnetite	Indicated	14.5	1.1	49.2	5.1	5.8	12.8	-0.2	0.007	0.2
	Inferred	40.5	1.1	48.3	5.5	6.5	12.7	0.2	0.007	0.2
	Indicated + Inferred	55.0	1.1	48.5	5.4	6.3	12.7	0.1	0.007	0.2
Disseminated magnetite	Indicated	7.1	0.6	29.9	12.6	24.4	7.8	2.9	0.032	0.1
	Inferred	57.7	0.6	27.2	13.7	26.7	7.2	4.0	0.024	0.2
	Indicated + Inferred	64.9	0.6	27.5	13.5	26.4	7.2	3.9	0.025	0.2
Combined	Indicated + Inferred	119.9	0.8	37.1	9.8	17.2	9.7	2.1	0.016	0.2

* Note: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V₂O₅ lower cut-off for the Massive magnetite zone and using a nominal 0.4% V₂O₅ lower cut-off for the banded and disseminated mineralisation zones. The Mineral Resource is quoted from all classified blocks within these wireframe solids above a lower cut-off grade of 0.4% V₂O₅. Differences may occur due to rounding.

Capital Structure	
Tradeable Fully Paid Ordinary Shares	32.8m
Escrowed Fully paid Ordinary Shares ¹	22.5m
Fully Paid Ordinary Shares on Issue	55.3m
Unquoted Options ² (\$0.25 – 31/12/19 expiry)	14.8m
Unquoted Options (\$0.35 – 12/01/21 expiry)	3.0m
Unquoted Options ³ (\$0.40 – 24/05/20 expiry)	10.0m

1 – 22.5 million fully paid ordinary shares will be tradeable from 21 December 2018.

2 – 13.7 million unquoted options are subject to restriction until 21 December 2018.

3 – 3.33 million unquoted options vest on 15 September 2018, application for quotation will be made for 6.66 million of the unquoted options.

Forward-Looking Statements

This document includes forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Technology Metal Australia Limited's planned exploration programs, corporate activities and any, and all, statements that are not historical facts. When used in this document, words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should" and similar expressions are forward-looking statements. Technology Metal Australia Limited believes that its forward-looking statements are reasonable; however, forward-looking statements involve risks and uncertainties and no assurance can be given that actual future results will be consistent with these forward-looking statements. All figures presented in this document are unaudited and this document does not contain any forecasts of profitability or loss.

Competent Persons Statement

The information in this report that relates to Exploration Results are based on information compiled by Mr Ian Prentice. Mr Prentice is Managing Director of the Company and a member of the Australian Institute of Mining and Metallurgy. Mr Prentice has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("**JORC Code**"). Mr Prentice consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based on information compiled by Mr Aaron Meakin. Mr Meakin is a Principal Consultant with CSA Global and a Member of the Australian Institute of Mining and Metallurgy. Mr Meakin has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("**JORC Code**"). Mr Meakin consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Processing and Metallurgy for the Gabanintha project is based on and fairly represents, information and supporting documentation compiled by Damian Connelly who is a Fellow of The Australasian Institute of Mining and Metallurgy and a full time employee of METS. Damian Connelly has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Damian Connelly consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

For personal use only

APPENDIX 1

JORC Code, 2012 Edition – Table 1

1.1 Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> A combination of reverse circulation (RC) and diamond drilling was completed across the project area to obtain 1m samples as follows: <ul style="list-style-type: none"> 85 RC holes for 8,386m on the Northern Block 13 HQ diamond holes for 1,235m on the Northern Block For the RC drilling 1m samples were cone split off the rig cyclone, with sample weights of nominally 2 to 3 kg collected. Duplicate 2 to 3 kg samples were collected from every metre sample. Duplicate samples were submitted for analysis for every 20 m down hole, ensuring duplicates were submitted for mineralised zones (based on geological logging and hand-held Olympus Vanta XRF results). For the diamond drilling 1m samples were cut half core except where duplicates were presented to the lab and the primary sample was quarter core (one in every 20 to test the consistency of sample preparation) with samples typically 2 to 6 kg being collected. Six ~0.5m whole core samples were collected for metallurgical testwork. Individual samples were assayed for every interval, with a representative half core being kept for the majority of intervals drilled. Standards were submitted for analysis for every 20m down hole, testing QC of the XRF analysis. Blank material (sand) was presented to the lab every 50th sample to test the cleanliness of the crushing procedure at the lab. Samples analysed by XRF spectrometry following digestion and Fused Disk preparation. This ASX release dated 4 April 2018 reports on downstream processing testwork completed on previously drilled diamond core samples from the Gabanintha Vanadium Project. Four of the previously selected vanadium bearing titaniferous magnetite composites were used for

Criteria	JORC Code explanation	Commentary
		downstream salt roast / water leach processing testwork – representing massive oxide, transitional and fresh and disseminated fresh material.
Drilling techniques	<ul style="list-style-type: none"> • Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> • RC drilling utilised a 5.5" face-sampling hammer • HQ3 triple tube (for oxide) and HQ2 (below weathering surface) diamond core was drilled and oriented using a reflex ACT III tool and holes were surveyed using a Reflex Gyroscope.
Drill sample recovery	<ul style="list-style-type: none"> • Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> • RC sample recovery was assessed based on the estimated bulk sample collected for each metre. Each bag was not weighed. For 1 in 3 holes a spring gauge was used to ensure the cone split remained within the 2 to 3 kg range. • Diamond drilling sample recovery was assessed based on the measured lengths of presented core, grinding marks and core loss noted in the drillers log with >95% recovery below the base of complete oxidation (which ranges from 5-70m across the mineralised units). Recoveries approached 100% in all but the faulted intervals in the fresh rock. • There does not appear to be any relationship between recovery and grade except that the massive mineralisation approximates 100% recovery as it does not weather easily.
Logging	<ul style="list-style-type: none"> • Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> • Drill samples were logged in the field, with the total length of holes logged in detail. • RC drill chips for every meter were collected in trays and photographed. • Drill core was collected in trays, photographed, cut and palletised by hole near site for reference. • Basic geotechnical logging of the diamond core was undertaken including collecting recovery, rock quality designation (RQD) and fracture orientation data.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> • For the RC drilling duplicate 2 to 3 kg samples were collected from every metre sample. • Samples were cone split at the drill rig and represent approximately 5% of the total material for each metre sampled. • Most samples were dry. • Samples were dried and pulverised in the laboratory and fused with a lithium borate flux and cast into disks for analysis. • Field duplicates were submitted such that there were at least 1 duplicate sample for every 20 samples analysed. • For diamond drilling half core was taken using a V notched slider on a manual diamond core saw, except for one in

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<p>twenty samples where quarter core was presented to the lab as the primary sample and a duplicate quarter core presented with a different sample number.</p> <ul style="list-style-type: none"> • The core saw cuttings were cleared every 30 samples and between high and low-grade samples and when chips were dislodged • Samples were collected in calico bags, double bagged in polweave bags and triple bagged in bulk bags to ensure no sample loss. Calico bags were dried then emptied and crushed in jaw crushers then pulverised in ring mills at Intertek Genalysis • Samples were fused with a lithium borate flux and cast in to disks for analysis by XRF. • Diamond twin drilling has been completed for 5 holes from the previous RC program with the RC under reporting grade only marginally suggesting the sample size has been appropriate to the material being sampled. Any loss of fines in previous RC drilling is not contributing to a systematic 'upgrading' of V₂O₅ or TiO₂ • Standards were submitted for analysis for every 20m down hole, validating QC of the XRF analysis • Blank material (sand) was presented to the lab every 50th sample to test the cleanliness of the crushing procedure at the lab. <ul style="list-style-type: none"> • Pulverised samples from every interval (overwhelmingly one metre samples) were fused with a lithium borate flux and cast in to disks and analysed by XRF spectrometry – method FB1/XRF77. • Field duplicates, appropriate certified reference materials (CRMs) including crushed standards derived from previous RC drilling, laboratory check samples and blanks were used. • Quality control procedures demonstrate acceptable levels of accuracy and precision have been achieved. CRM materials inserted to the sample stream at the laboratory have performed acceptably, and field duplicate samples have performed well. Blanks have not shown signs of target element enrichment. • Initial compositing of samples was completed by Intertek Laboratories under the supervision of METS. • Salt roast / water leach testwork was completed by ALS metallurgy under the supervision of METS.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> Significant intersections correlate with mineralised zones as defined from geological logging. All sampling was completed by an independent geologist Mr John McDougall BSc. (Hons). MAIG. The estimation of significant intersections has been verified by an alternate company personnel. There were no adjustments to assay data. Where the half metre core for metallurgical testwork was removed the intersection was reported excluding this interval.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> The grid system used for collar positions was MGA94 – Zone 50. Planned hole collar positions were located using hand held global positioning system (GPS). Collars were later located by differential GPS (DGPS). The coordinates correlate well so DGPS hole position data has been verified. RL's are also derived from the DGPS and were collected to +/- 0.10m. The accuracy has been rounded for presentation. Down hole surveys were completed using an Axis Gyro every 30m down hole and at the collar and end of hole.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> The drill data in the Northern Block is on nominal 100m and 200m line spacing with holes located every 40 to 50m along the drill lines. 13 diamond holes were drilled in the Northern Block with 5 twins of previous RC drilling and a broad spread of locations to measure representative density data. Detailed airborne magnetics supports strike and down dip continuity assumptions of the massive magnetite zone which is known to host high grade mineralisation. This continuity has been additionally supported by drilling data. Data is considered appropriate for use in estimating a Mineral Resource. No sample compositing is applied to the resource numbers.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> The drilling has been completed at an orientation that would have been unlikely to have introduced a sampling bias. The drill holes are drilled orthogonal to the measured strike +/-10°, the apparent thickness is 0.85 X the true thickness, drill deviations were not noticeably higher through the mineralised zone
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Samples were collected in calico, polyweave and bulk bags, sealed securely and transported by Company personnel until handover to a commercial transport company, which delivered the samples by road transport to

Criteria	JORC Code explanation	Commentary
		the laboratory.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> A representative from the independent geological consultants, CSA Global, visited the site during the infill and extensional drilling program in the Northern Block and found drilling and sampling procedures and practices to be acceptable. No other audits or reviews have been completed to date.

1.2 Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> The areas drilled are located on current Prospecting Licences 51/2942, 51/2943 and 51/2944 and Exploration Licence 51/1510. The tenements are granted and held by The KOP Ventures Pty Ltd, a wholly owned subsidiary of Technology Metals Australia Limited.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> RC drilling was completed in 1998 by Intermin Resources NL under an option agreement on tenements held by Oakland Nominees Pty Ltd – consisting of GRC9801 to GRC9805 (on Prospecting Licences 51/2164) and GRC9815 to GRC9817 (on Prospecting Licence 51/2183). The areas drilled are located on current Prospecting Licences 51/2943 (GRC9801, GRC9802), 51/2944 (GRC9803, GRC9804, GRC9805) and 51/2942 (GRC9815 to GRC9817) held by The KOP Ventures Pty Ltd, a wholly owned subsidiary of Technology Metals Australia Limited. Exploration prior to this drilling included geological mapping and limited rock chip sampling completed across a zone of outcropping vanadiferous titanomagnetite layered mafic igneous unit by various parties.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> Massive vanadiferous titanomagnetite within an intrusive medium to coarse grained anorthositic gabbroic layered sill roughly 1 km thick in the Gabanintha formation. Fractionation within the intrusive body forms cumulate layers of magnetite near the base of the intrusion. Occurs both in outcrop and extending down dip in parallel layers with a dip of ~60-65 degrees steepening in the northern zone to >70 degrees.
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: 	<ul style="list-style-type: none"> Not relevant. Exploration results are not being reported. All relevant material from previous drilling has been reported to the ASX on the following dates: 9th March 2017, 4th April

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	2017, 19th April 2017, 31 st August 2017, 14 th September 2017, 18 th October 2017 and 7 th December 2017.
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Not relevant. Exploration results are not being reported.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> Not relevant. Exploration results are not being reported.
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> Appropriate diagrams contained in the report to which this Table 1 applies.
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> Not relevant. Exploration results are not being reported
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> Not relevant. Exploration results are not being reported.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> Further drilling is expected to consist of infill and extensional drilling, particularly in areas of current nominal 200m line spacing. Diamond drilling expected to collect further samples for metallurgical testwork and geotechnical data. Further downstream processing testwork underway.

