

ASX Announcement

Quarterly Activities Report for period ending 31st December 2017

Highlights:

Gabanintha Project

- Highly encouraging leach test results received from initial Neomet hydrometallurgical process test work.
- Definitive ore concentrate test work nearing completion. Inputs to be applied to flow-sheet design and PFS mining and processing studies.
- Environmental base line sampling surveys completed. Information to form part of future Environmental Impact Assessment and mining development proposal.
- Mining Agreement with Native Title group under consideration.

VSUN Energy

- Working with suppliers and regulators on the compliance of domestic scale Vanadium Redox Flow Battery (VRB) systems.

Blesberg Project

- Laboratory results for all drilling received.
- Opportunity for niche, high-value feldspar product with accessory mineral credits.
- Project deal re-negotiated around feldspar development.

Corporate

- China focused marketing consultant, Mastermines engaged to promote AVL.
- Unlisted Options exercised raising \$1.008 million.
- Cash at Bank - \$3.4 million.

25.01.2018

ASX ANNOUNCEMENT

Australian Vanadium Limited

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Projects:

Gabanintha – Vanadium
Coates - Vanadium
Blesberg –Feldspar/Lithium/Tantalum
Nowthanna Hill - Uranium/Vanadium



WESTERN
AUSTRALIA

● GABANINTHA ● PERTH
● PORT HEDLAND ● PORT GERALDTON

Activities for the December 2017 quarter for Australian Vanadium Limited (“AVL” or “the Company”) are as follows:

GABANINTHA VANADIUM PROJECT

On 5th September 2017, AVL announced a significant resource upgrade for its Gabanintha vanadium project near Meekatharra in Western Australia. The upgrade resulted in a 96% increase in Mineral Resource tonnes which further strengthens the economic viability of the project and its global significance.

The Gabanintha vanadium project is currently one of the highest-grade vanadium projects being advanced globally, with an upgraded Mineral Resource of 179.6Mt at 0.75% vanadium pentoxide (V₂O₅) made up of a Measured Mineral Resource of 10.2Mt at 1.06% V₂O₅, an Indicated Mineral Resource of 25.4Mt at 0.62% V₂O₅, and an Inferred Mineral Resource of 144Mt at 0.75% V₂O₅.

The Mineral Resource includes a distinct massive magnetite high-grade zone of 92.8Mt at 0.96% V₂O₅ consisting of Measured Mineral Resource of 10.2Mt at 1.06% V₂O₅, Indicated Mineral Resource of 4.8Mt at 1.04% V₂O₅, and Inferred Mineral Resource of 77.8Mt at 0.94% V₂O₅. The Mineral Resources are reported in compliance with the JORC Code 2012 (see AVL ASX Announcement 5 September 2017).

Metallurgical Leach Test Work

AVL is evaluating both traditional and non-traditional processing routes as it looks to maximise the value of its world class Iron-Titanium-Vanadium resource at Gabanintha.

In 2017, AVL sent core samples to be tested through a standard Neomet bench scale testing facility in their Montreal, Canada laboratory. These first tests were conducted free-of-charge to the Company. Initial test work focused on Gabanintha's high-grade and low-grade oxide ROM (run of mine) material.

The aim of the HCl leach test was to determine the leachability of potentially valuable metals (Fe, Ti, V) in Gabanintha material. Two near-surface oxide samples of drill core were selected from AVL's 2015 drill programme. One sample was of high grade material (from GDH 915 13-14m, 16-17m and 19-20m), the other of low grade material (from GDH 912 30-40m less 32-33m, 34-35m and 36-37m).

For the high-grade material, after 1 hour in contact with HCl, the acid dissolved 95.7% of vanadium, 87.3% of iron and 0.7% of titanium. Titanium in the solids upgraded from 8.8w.t.% (in the starting material) to 23.4w.t.% in the pulp (residue material). This result represents a high vanadium and iron selectivity in comparison to the titanium.

For the low-grade material, after 1 hour in contact with HCl, the acid dissolved 88.1% of vanadium, 96.6% of iron and 33.2% of titanium. A summary of the test results can be seen in Table 1 below.

Test	Time	Solution [g/L]			Solids [w.t.%]			Extraction [%]		
	[hr]	V	Ti	Fe	V	Ti	Fe	V	Ti	Fe
High Grade Material	1	2.9	0.18	123	N.R	N.R	N.R	95.7	0.7	87.3
Low Grade Material	1	0.83	2.2	43.1	N.R	N.R	N.R	88.1	33.2	96.6

N.R: Not Reported

Table 1: Abridged Results after 1 hour of Testing

Importantly the samples were not pre-concentrated i.e. they were from ROM material. It is anticipated that irrespective of refinery route (pyrometallurgical or hydrometallurgical), the Gabanintha ROM material will be physically beneficiated. Sedgman indicated ROM material was sufficient for initial leach characterisation and specified their desired grind regime.

The Company will consider with Sedgman an additional test work programme using the Neomet process following the completion of other ongoing test work.

Metallurgical Bench Scale Test Work

Internationally recognised consultants Wood Group (formerly AMEC Foster Wheeler) were appointed to commence follow-up metallurgical test work (see ASX announcement dated 4 October 2017). AVL is currently undertaking detailed comminution, magnetic separation and de-silication test work at Bureau Veritas Metallurgical Laboratories under the management of a Wood Group Consultant and an AVL engineer. Work is being conducted using diamond drill core from Gabanintha.

The test work program commenced in November 2017 and work completed to date includes:

- Comminution tests including SMC, Abrasion and Bond Ball Mill Index tests, and
- Magnetic Separation test work including Davis Tube Recovery.

Ongoing work includes:

- Low Intensity and High Intensity Magnetic Separation, and
- Desilication and Exploratory flow sheet test work.

The test work programme is scheduled for completion by the end of January 2018. Results, analysis and interpretation will be prepared thereafter and should be available later in the March Quarter.

The aim of the test work is to provide inputs at a pre-feasibility study (PFS) level for the development of a concentrator plant flowsheet for the Gabanintha project.

Environmental Studies

Throughout 2017, AVL and its environmental consultant have completed flora, fauna and sub-terranean fauna baseline studies covering both autumn and spring seasons over the Gabanintha resource area and the surrounding environments which are most likely to be affected by future mining and processing activities.

The final sub-terranean fauna field survey was completed during the quarter and an additional trip conducted to collect specimens from the traps that were set in the previous survey. The goal of this survey is to establish whether or not stygofauna and/or troglifauna communities are present. Final results and reporting are expected in the 2nd Quarter of 2018.

Hydrology investigations have commenced, but more intense activity is envisaged once more details of the planned operation emerge from project feasibility work.

On completion of the baseline work on the environment factors affecting Gabanintha, the Company expects that it will have sufficient information to prepare and submit an Environmental Impact Assessment (EIA) alongside a mining development proposal.

Mining Agreement

AVL attended a meeting in Meekatharra of the Yugunga-Nya Native Title group during the Quarter where discussions were held about Gabanintha and the Company's activities. Further discussions will be held during 2018 with the aim of finalizing a Mining Agreement ahead of the granting of the Company's mining lease application (M51/878). A draft Mining Agreement supplied by the lawyers acting for the Yugunga-Nya Native Title group is currently being considered by the Company.

Planned Activities at Gabanintha

Current and anticipated activities on the Gabanintha vanadium project include:

- Completion of metallurgical test work and reporting of results;
- Pit optimisation work to integrate latest metallurgical test results;
- Follow up test work to finalise Gabanintha process flow sheet design;
- Definition of PFS Scope;
- Completion of PFS;
- Negotiation of Mining Agreement with Native Title Claimant Group, and
- Advancing Mining Licence M51/878 to be granted.

VSUN ENERGY

Australian Vanadium Limited's 100% owned subsidiary, VSUN Energy was launched in early 2016, (see ASX announcement dated 10 March 2016), with a remit including advancing the profile of vanadium energy storage in Australia.

VSUN Energy continues to market commercial vanadium energy storage systems suitable for business and stand-alone microgrids through to utility scale opportunities. During the period the Company continued its marketing activity and advanced a number of leads to proposals and detailed review prior to approval. Notably, there was a rise in requests for information about large scale systems in the multi-megawatt range.

To facilitate installation of vanadium flow batteries on most Australian networks, the power control system must be approved by the Clean Energy Council. VSUN Energy continues to assist Italian company Elpower with accreditation. Elpower Inverters are currently used in redT Energy Vanadium Flow Machines.

Residential VRB

VSUN Energy continues to work with Schmid Energy Systems in Germany on the supply of a domestic scale Vanadium Redox Flow Battery (VRB) system. Work is ongoing to ensure compliance with Australian standards for grid attached installations. This mainly involves integration of the BMS (Battery Management System) with Australian approved inverters. Systems for installation in off-grid settings are available for order now.

The base model Everflow VRB system is a 5kW/15kWh unit, which supplies 5kW of power with 15kWh of energy storage, providing 3 hours at a constant load of 5kW. In typical Australian residential environments, this system will provide 4-8 hours of energy. The Everflow Systems are also available in 30kWh and 45kWh sizes for greater energy independence.

On completion of the inverter integration work, VSUN Energy intends to import a number of systems for sale and installation in domestic and small scale off-grid settings.

Laboratory Scale Vanadium Flow Cell Constructed

VSUN Energy's engineer successfully constructed a laboratory scale vanadium flow cell for electrolyte testing and demonstration purposes. This work will allow VSUN Energy to easily verify the quality and performance of electrolyte prepared in its pilot plant. The Company can scale up the test to use a larger commercial stack configuration. The aim being to build a working small-scale battery and developing experience in battery construction. Figure 1 shows the small single VRB cell lighting a 1.5v lamp, using only the energy stored in a few ml of charged vanadium electrolyte. The unit is being refined for demonstration and more detailed testing purposes at its location at a University of WA laboratory.

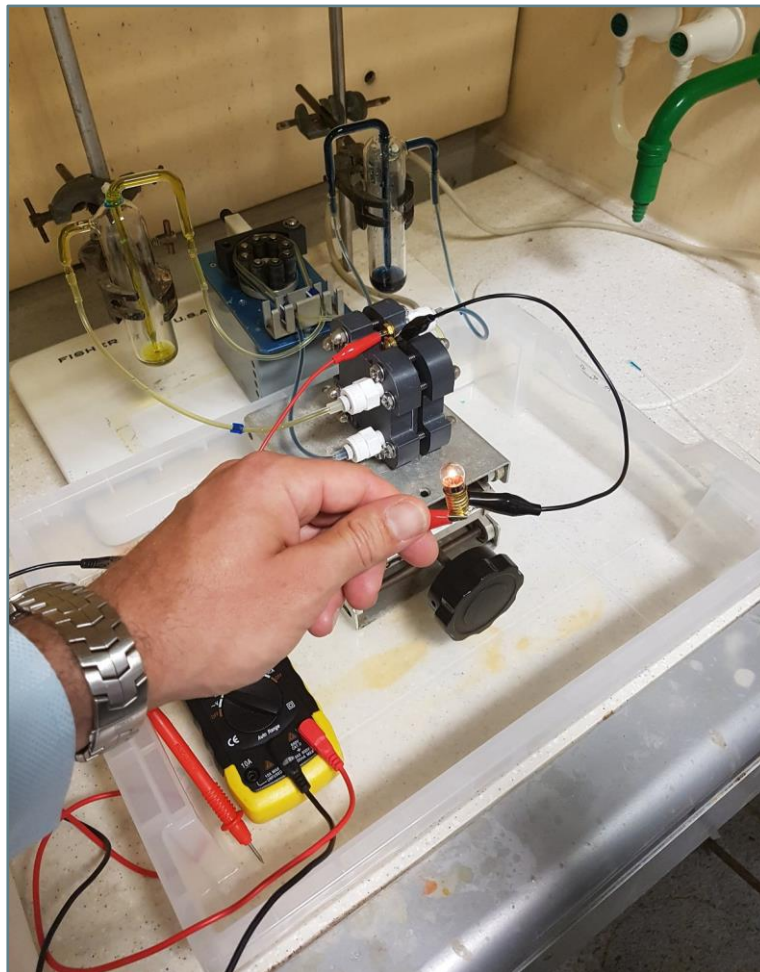


Figure 1 - Working VRB model

BLESBERG FELDSPAR-LITHIUM-TANTALUM PROJECT

Project Background

The Blesberg Project is located approximately 80km north of Springbok in the remote Northern Cape Province of South Africa. It lies at the western end of the Northern Cape Pegmatite Belt. This belt extends from Violsdrif in the west for about 450 km towards the east. The deposit is one of the largest known economically mineralised and exploited pegmatite deposits in the Pegmatite Belt. Mining at Blesberg commenced in 1925. The main products from later mining were beryl, bismuth, tantalite-columbite, spodumene, feldspar and mica. Feldspar production from the mine was reported to be of very high quality, with the feldspar being pure white and unstained by iron oxide.

Drilling Results

AVL's objective at Blesberg is to assess the value of any Lithium-Caesium-Tantalum (LCT) pegmatites present there, including the volume of ceramic grade feldspar and of high value by-products of spodumene, beryl and tantalite.

During 2017, the Company completed 41 holes (3,128m) of Reverse Circulation (RC) drilling under the targeted budget requirements (see ASX announcement dated 23 November 2017). The programme was designed to achieve a drill intersection spacing of 50m, sufficient to allow good resolution of the pegmatite geometry and mineral distribution.

Drilling results confirmed the extension of the pegmatite beyond the historical mine particularly to the west under shallow cover, amenable to simple open cut methods. Lithium, beryl and tantalum minerals were identified in drill cuttings. However, assays of these minerals in drilling were disappointing overall and indicate that the Blesberg pegmatites are highly zoned. Beryl, spodumene and tantalum mineralisation occurs in intense, but isolated areas along the drilled length of the pegmatite body.

The high purity of the large crystalline feldspars observed in drilling support a feldspar focus at Blesberg, including the possibility of by-product extraction of lithium, beryl and tantalum minerals. Samples from the drilling and existing excavation are being collected to complete first-pass, low-cost metallurgical recovery tests. Confirming the recovery of a significant portion of the high-quality feldspar is central to any future development of the project.

The Company aims to proceed to calculate and report a mineral resource estimate in accordance with the 2012 JORC Code as part of its agreement with the project vendors.

Earn-In Deal Renegotiated

Following the receipt and analysis of the results at Blesberg, the company has concluded that there is only localised development of low-grade LCT mineralisation. The drilling has, however, identified extensive pegmatite development containing a high quality and proportion of glass/ceramic quality feldspar. Since the value proposition of the project has changed significantly compared to the original earn-in deal, which was centred on lithium and tantalum mineralisation, AVL suspended the remainder of the cash payments of USD750,000 due under the agreement to the vendors of Southern African Tantalum and Lithium Mining Pty Ltd (SALT) and renegotiated an agreement that more accurately represents the potential value of the project.

Under the agreed terms AVL is required to spend up to A\$50,000 on:

- metallurgical test work to determine feldspar product recovery and mineralogy, and
- calculating and reporting a mineral resource estimate in accordance with JORC 2012 for the Blesberg deposit.

AVL and SALT are working together to promote the Blesberg asset globally to feldspar users.

CORPORATE

Mastermines

At the end of October 2017, the Company appointed China focused marketing company Mastermines to assist AVL with developing relationships in Asia with steel and battery market participants, (see ASX announcement dated 23rd October 2017). Mastermines is a mining materials promotion and marketing consultancy with an experienced China-focused team. The consultancy undertook a successful initial trip to China during December 2017. During the visit, meetings took place with both new and existing AVL contacts in the vanadium sector, building relationships for future supply chains. The visit included meetings with the vanadium electrolyte supplier for the world's largest battery currently under construction. The 200MW/800MWh vanadium flow battery currently being built by Rongke Power on the Dalian peninsula is being installed to provide peak-shaving and to enhance grid stabilisation. Feedback on the trip has provided technical and commercial requirements from potential partners.

The Company will undertake a follow-up trip with Mastermines to China early in early 2018.

Vanadium Market

The Company has benefited from a significant increase in the price of Vanadium products in the last Quarter. Continuing tight global supply conditions have resulted in strong interest in advanced, high quality, potential new sources such as Gabanintha. Ferrovandium pricing moved from US\$40/kg to USD60/kg between October 2017 and early January 2018. Vanadium pentoxide (V_2O_5) pricing likewise increased from USD7.40/lb to USD9.40/lb in the same period.

Other possible reasons for increased vanadium prices include:

- China's recent ban on the import of vanadium slags;
- The introduction of revised standards for the tensile strength of rebar steel products which will result in such products having increased vanadium content and;
- a global increase in awareness and interest in vanadium flow batteries. The Chinese government last year issued a directive for large vanadium flow batteries to be installed for the storage of more of its increasing renewable energy generation.

AVL's ongoing work on advancing the high grade Gabanintha deposit towards feasibility and potential development is receiving attention from a wide variety of sectors of investors and vanadium users.

Capital Raising

During the quarter the Company received a total of \$1,007,719 through the exercise of 68,496,427 unlisted options at 1.4712 cents per share. A total of 73,463,926 unlisted options expired unexercised on 31 December 2017.

Research & Development Tax Incentive Scheme

On 27 November the Company announced the receipt of \$158,659 from the Federal Government's Research and Development Tax Incentive. AVL's R&D work was focused on new mining and processing techniques for the Company's Gabanintha vanadium project.

Cash Position

As at the 31 December 2017, the Company had \$3.4 million in cash and cash equivalents.

For further information, please contact:

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About Australian Vanadium Limited

AVL is a diversified resource company with an integrated strategy with respect to vanadium, seeking to offer investors a unique exposure to all aspects of the vanadium value chain – from resource through to steel and energy storage opportunities.

AVL is advancing the development of its 100%-owned, world-class Gabanintha vanadium project. The Gabanintha vanadium project is currently one of the highest-grade vanadium projects being advanced globally with existing Mineral Resource of 179.6Mt at 0.75% vanadium pentoxide (V₂O₅), made up of a Measured Mineral Resource of 10.2Mt at 1.06% V₂O₅, an Indicated Mineral Resource of 25.4Mt at 0.62% V₂O₅, and an Inferred Mineral Resource of 144Mt at 0.75% V₂O₅, reported in compliance with the JORC Code 2012 (see AVL ASX Announcement 5 September 2017).

The Mineral Resource includes a distinct massive magnetite high-grade zone of 92.8 Mt at 0.96% V₂O₅ consisting of Measured Mineral Resource of 10.2Mt at 1.06% V₂O₅, Indicated Mineral Resource of 4.8Mt at 1.04% V₂O₅, and Inferred Mineral Resource of 77.8Mt at 0.94% V₂O₅.

AVL is aiming to develop a local commercial production capacity for high-purity vanadium electrolyte, which forms a key component of vanadium redox flow batteries (VRB). AVL, through its 100%-owned subsidiary VSUN Energy Pty Ltd, is also actively marketing VRB in Australia.

Zone	Classification	Mt	V ₂ O ₅ %	Fe %	TiO ₂ %	SiO ₂ %	Al ₂ O ₃ %	LOI %
HG	Measured	10.2	1.06	41.6	12.0	11.6	8.6	4.2
	Indicated	4.8	1.04	41.9	11.5	12.0	8.0	3.6
	Inferred	77.8	0.94	41.2	10.7	12.7	7.9	3.3
	Sub-total	92.8	0.96	41.3	10.9	12.6	8.0	3.4
LG 2-5	Measured	-	-	-	-	-	-	-
	Indicated	20.5	0.52	24.3	7.1	27.9	17.6	8.4
	Inferred	61.8	0.50	26.2	7.0	26.9	16.1	7.2
	Sub-total	82.4	0.51	25.7	7.0	27.2	16.5	7.5
Trans 6-8	Measured	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-
	Inferred	4.5	0.66	28.4	7.2	24.5	16.6	8.4
	Sub-total	4.5	0.66	28.4	7.2	24.5	16.6	8.4
Total	Measured	10.2	1.06	41.6	12.0	11.6	8.6	4.2
	Indicated	25.4	0.62	27.7	7.9	24.9	15.8	7.5
	Inferred	144.1	0.75	34.4	9.0	19.2	11.7	5.2
	Sub-total	179.6	0.75	33.8	9.0	19.6	12.1	5.4

Table 2 .Gabanintha Project – Mineral Resource estimate by domain and resource classification using a nominal 0.4% V₂O₅ wireframed cut-off for low grade and nominal 0.7% V₂O₅ wireframed cut-off for high grade (total numbers may not add up due to rounding)

Tenement Schedule

Tenement Information as Required by Listing Rule 5.3.3 For the Quarter Ended 31 December 2017					
Project	Location	Tenements	Economic Interest	Notes	Change in Quarter %
Western Australia	Gabanintha	E51/843	100% Granted		Nil
		E51/1396	100% Granted		Nil
		E51/1534	100% Granted		Nil
		E51/1576	100% Granted		Nil
		E51/1685	100% Granted		Nil
		E51/1694	100% Granted		Nil
		E51/1695	100% Granted		Nil
		P51/2566	100% Granted		Nil
		P51/2567	100% Granted		Nil
		P51/2634	100% Granted		Nil
		P51/2635	100% Granted		Nil
		P51/2636	100% Granted		Nil
		MLA51/878		100% On application	Nil
Western Australia	Nowthanna	M51/771	100% Granted		100%
Western Australia	Peak Hill	E52/3349	0.75% NSR Production Royalty		Nil
Western Australia	Coates	E70-4924-I	100% Granted		100%
South Africa	Blesberg	(NC) 940 PR		Earning 50.03%	Nil

Competent Person Statements – Gabanintha Project

The information in this report that relates to Exploration Results and Exploration Targets is based on and fairly represents information and supporting documentation prepared by Mr Brian Davis (Consultant with Geologica Pty Ltd). Mr Davis is a shareholder of Australian Vanadium Limited. Mr Davis is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Davis consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

The information in this report that relates to Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd) and Mr Brian Davis (Consultant with Geologica Pty Ltd). Mr Davis is a shareholder of Australian Vanadium Limited. Mr Barnes and Mr Davis are members of the Australasian Institute of Mining and Metallurgy and have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Barnes is the Competent Person for the estimation and Mr Davis is the Competent Person for the database, geological model and site visits. Mr Barnes and Mr Davis consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.



The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resource or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the competent person's findings are presented has not been materially modified from the original market announcement.

Competent Person Statement – Blesberg Exploration Program

The information relating to the Blesberg Lithium-Tantalum Project exploration program reported in this announcement is based on information compiled by Mr Vincent Algar. Mr Algar is a Member of The Australian Institute of Mining and Metallurgy (AusIMM) and a full-time employee of the Company. Mr Algar has more than 25 years' experience in the field of mineral exploration. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Mr. Algar consents to the inclusion in the report of the matters based on the information made available to him, in the form and context in which it appears.

Concept Study Parameters – Cautionary Statement

The Concept Study in this report (nominal +/- 50% accuracy) is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the current conclusions of the Concept Study will be realised. There is a moderate level of geological confidence associated with Measured Indicated and Inferred Mineral Resources and there is no certainty that further exploration and development work will result in the estimation of Ore Reserves or that the production target itself will be realised. The Company advises the Concept Study results and production targets reflected in this announcement are highly preliminary in nature as conclusions are drawn from the average grade of Measured, Indicated and Inferred Resources. A generic mining cost per tonne of material moved and an average resource grade has been used to determine overall mining and processing costs as opposed to a detailed mining block model evaluation to produce a detailed mining schedule.

Forward Looking Statements

This announcement may contain certain "forward-looking statements" which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to Resource risk, metal price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the countries and states in which we sell our product to, and government regulation and judicial outcomes. For more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Companies other filings. Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publicly any revisions to any "forward looking statement" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.