BARRAMBIE TEST WORK PRODUCES +90% PURITY TITANIUM SLAG AT HIGH RECOVERIES

Highlights

- Receipt of highly encouraging initial Chinese metallurgical results
- Clean mixed mineral concentrate produced with combined Titanium, Vanadium and Iron levels of >92%
- Metallurgical processing of mineral concentrate gave recoveries of >90% TiO_2 and high recoveries for pig iron and vanadium product streams
- Results provide strong encouragement that a simple and conventional processing pathway can be developed to extract titanium, vanadium and iron products
- Supports next stage of Pilot-scale metallurgical test work

Project developer, Neometals Ltd (ASX: NMT)("Neometals" or the "Company"), is pleased to announce highly encouraging results from its initial metallurgical test work program at The Institute of Multipurpose Utilisation of Mineral Resources – Chinese Academy of Geological Sciences (IMUMR) based in Chengdu in Sichuan Province. IMUMR is rated as one of the top metallurgical institutes in China and has extensive experience in the mineral processing and smelting of Vanadium Titano-Magnetite (VTM) deposits including extensive work on the Panzhihua and Chengde VTM deposits in China.

IMUMR have concluded first stage beneficiation and metallurgical test work on a 20kg diamond core sample of Barrambie project mineralistion which was taken from the high titanium grade eastern zone of the deposit.

The Neometals sample was put through a standard flowsheet based on grinding, magnetic concentration and pelletizing and a high grade combined titanium/vanadium mineral concentrate was produced. A standard reduction smelt of the concentrate generated a high-grade titanium slag and pig iron with associated vanadium product. The titanium slag was cleaned via a simple process aimed at producing a slag suitable for chloride route pigment production. The results of the smelting and slag cleaning were a titanium slag that is potentially suitable as feedstock for titanium dioxide production and a vanadiferous pig iron that is potentially suitable as feedstock for iron and vanadium pentoxide production.

Chris Reed, Neometals Managing Director said "*We are pleased with these initial results which confirm a simple process flowsheet can recover a high-purity titanium product for potential users of the phase 1 Barrambie DSO operation. Barrambie is a unique tier 1 project that offers a range of development alternatives including the possibility for separate titanium and vanadium operations in due course. The results establish the potential value-in-use of DSO for negotiations with potential customers who seek quality feedstocks from low-risk jurisdictions that are amenable to simple and conventional processing*".

Neometals is undertaking a dual track evaluation of development alternatives for its 100% owned Barrambie Titanium and Vanadium project in Western Australia. Barrambie is one of the world's highest grade hard rock titanium deposits and hosts significant levels of high grade vanadium. Optionality afforded by distinct high-grade zones and co-product streams has driven Neometals to consider a staged development approach. The Company is investigating direct shipping ore ("DSO") being toll beneficiated and smelted in China as a phase 1 operation with a parallel phase 2 development utilising on-site processing options. This includes a potential update of the 2009 Definitive Feasibility Study based on an 11,200 tpa Vanadium Pentoxide operation, along with the scheduled piloting of the Neomet hydrometallurgical process.

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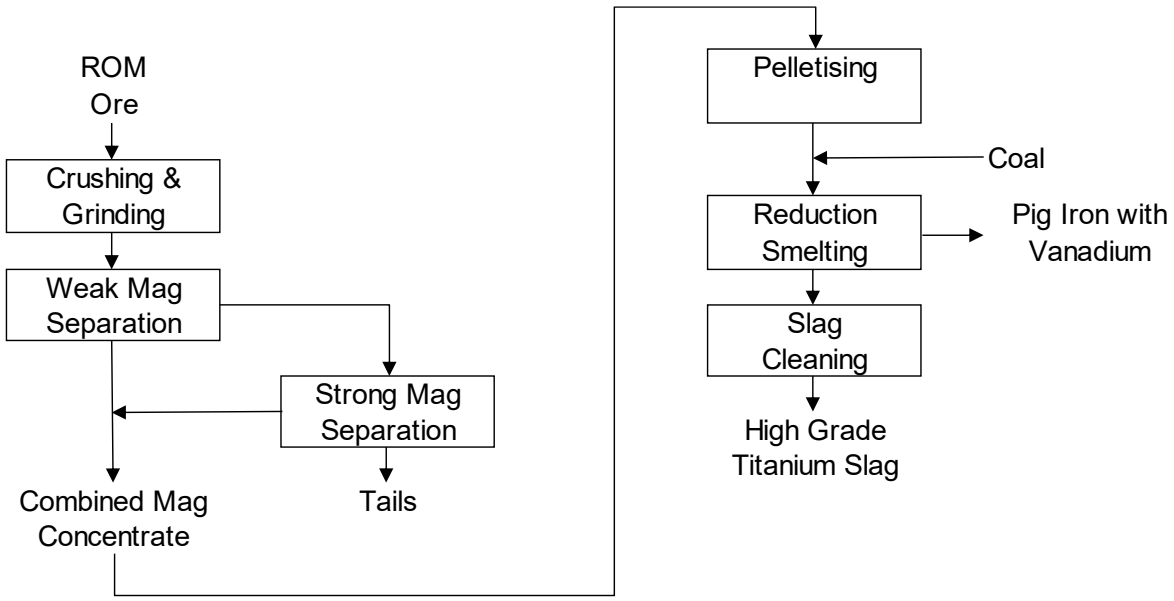
Test Program and Results

A block flowsheet of the process tested at IMUMR is shown below.

Figure 1 – Block Flow Diagram



Results from the test work are shown below:

Table 1 – Head Grade of Sample

Element	Fe_2O_3	TiO_2	V_2O_5	S	SiO_2	Al_2O_3	CaO	MgO
Content （%）	45.41	29.81	0.70	0.022	10.34	8.59	0.06	0.07

The mineral concentrate produced was 68.21% of the feed mass with an **86.6**% titanium and **80.1**% vanadium Recovery. Table 2 shows the grade of mixed mineral concentrate produced from the beneficiation test work.

Table 2 – Grade of Mixed Mineral Concentrate

Element	Fe_2O_3	TiO_2	V_2O_5	S	SiO_2	Al_2O_3	CaO	MgO
Content （%）	54.73	38.00	0.81	0.014	2.44	1.95	0.07	0.05

Table 3 – Grade of Slag and Cleaned Slag

Number	Product name	TiO_2	Fe_2O_3	V_2O_5	SiO_2	CaO	MgO	Al_2O_3	MnO
1	Slag	78.81	3.48	1.26	6.02	0.25	0.13	4.78	0.34
	Clean slag	**91.25**	1.95	1.34	0.80	0.20	0.14	2.09	0.22
2	Slag	79.11	2.07	0.77	5.79	0.26	0.13	4.98	0.28
	Clean slag	**91.65**	0.64	0.71	1.00	0.24	0.11	1.51	0.18
3	Slag	75.67	1.82	0.87	5.70	0.33	0.11	4.68	0.31
	Clean slag	**89.07**	0.88	0.89	1.03	0.24	0.12	1.22	0.16

During the slagging and cleaning process recovery of Titanium was **>90%** and recovery of Vanadium was between **60 and 70%.**

The quality of the Titanium slag produced is likely suitable for the Chloride Route TiO_2 pigment production process and contains low levels of impurities with the exception of slightly elevated vanadium. It should be emphasized that this is initial test work and IMUMR is confident that with further work the vanadium content can be brought into specification by optimizing the smelting charge and operating parameters.

Next Steps

An approximately 4 tonne representative bulk sample of the 40 tonne Barrambie DSO currently on a ship to China will be put through extensive further testing with this test work expected to be completed by year end. In parallel with this larger scale test work, NMT will continue increasing its marketing efforts in China to secure offtake partners for DSO.

The Company has completed mine planning activities for a DSO operation and has been working with turn key mining solutions provider Adaman Resources to complete a comprehensive DSO operating cost model. The Barrambie project has a granted mining lease over the Resources and previously received full environmental approval for a large primary vanadium mining and processing operation. The Company is currently completing updates to some of the previous environmental studies and expect to commence seeking approvals for a DSO operation this quarter.

As it relates to phase 2 development options with integrated titanium/vanadium production on site at Barrambie, Neometals is running the following activities in parallel to DSO efforts:

1. Updating the operating and capital cost section of the Company's 2009 Definitive Feasibility Study on a primary vanadium operation; and

2. Ongoing test-work and piloting programs related to production of titanium dioxide hydrolysate , vanadium pentoxide and iron oxide product utilising the Neomet patented hydrometallurgical process.

ENDS

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About Neometals Ltd

Neometals Limited ("Neometals" - ASX:NMT) is a developer of industrial mineral and advanced materials projects. Neometals has two key divisions – a fully integrated Lithium business and a Titanium-Vanadium development business. Both are supported by proprietary technologies that assist downstream integration through revenue enhancement and cost efficiencies.

Neometals owns a 13.8% stake in the Mt Marion lithium mine near Kalgoorlie, which operates one of the world's biggest lithium concentrators. Neometals holds an offtake option, which forms the backbone to its fully-integrated lithium business aspirations which include a Lithium Hydroxide Refinery and Lithium-ion Battery Recycling process. The 100%-owned Barrambie Titanium-Vanadium Project in WA's Mid-West is one of the world's highest-grade hard-rock titanium-vanadium deposits.

Neometals' strategy focuses on de-risking and developing long life projects with strong partners and integrating down the value chain to increase margins. The company aims to leverage its cashflows to grow opportunities that provide sustainable mineral and material solutions to customers and to return value to shareholders.

COMPETENT PERSONS STATEMENT

Metallurgy

The information in this report that relates to metallurgical test work results is based on information compiled and / or reviewed by Mr Gavin Beer who is a Member and Chartered Professional of The Australasian Institute of Mining and Metallurgy.
Mr Gavin Beer is a consultant to the Company and has sufficient experience relevant to the activity which he is undertaking to be recognised as competent to compile and report such information. Mr Gavin Beer consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

COMPLIANCE STATEMENT

The information in this report that relates to Mineral Resource Estimates Barrambie Titanium Project are extracted from the ASX Announcement entitled "Updated Barrambie Mineral Resource Estimate" lodged 17 April 2018. The Company confirms that it is not aware of any new information or data that materially affects the information included on the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the 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 have not been materially modified form the original market announcement.

JORC Table 1, Section 1, Sampling Techniques, and Data

Criteria	Commentary
Sampling techniques	Metallurgical drilling comprises 20 PQ core holes. Core was ¼ cut for assaying in 1metre lengths.
Drilling techniques	Metallurgical drilling was conducted by PQ coring technique.
Drill sample recovery	A qualitative logging code was used to record recovery for the DD drilling. Recovery of samples is considered to be good.
Logging	Geological logging of core was carried out recording lithology, major minerals, oxidation, colour, texture, mineralisation, water and recovery. The logging was carried out in sufficient detail to meet the requirements of resource estimation and mining studies.
Sub-sampling techniques and sample preparation	All samples were dried, crushed to approximately 2mm, split and pulverised.
Quality of assay data and laboratory tests	No field QAQC data was conducted by Neometals. Intertek Genalysis conducted their own internal QAQC, with no issues being reported.
Verification of sampling and assaying	Data was recorded in the field on paper logs and transferred to individual .xls files prior to merging with project database. No twin holes were drilled and no verification of significant intersections by independent laboratories has been undertaken.
Location of data points	Drill collar and azimuth were pegged in the field using GDA94 system by independent surveyors.
Data spacing and distribution	Metallurgical holes were spaced at 50m intervals along the strike of the Barrambie TiO_2 deposit.
Orientation of data in relation to geological structure	Metallurgical holes were drilled within plane of the Barrambie mineralisation.
Sample security	Samples were stored onsite and transported to the laboratory on a regular basis by Neometals employees.
Audits or reviews	No audits or reviews of sampling techniques and data have been conducted.

JORC Table 1, Section 2, Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	The Barrambie mineralisation is within 100% owned granted mining lease M57/173 in the Eastern Murchison Goldfields. No known impediments exist to operate in the area.
Exploration done by other parties	No relevant exploration has been completed by other parties to acknowledge or appraise at this time.
Geology	The ferrovanadium titanium (Ti-V-Fe) deposit occurs within the Archaean Barrambie Greenstone Belt, which is a narrow, NNW-SSE trending greenstone belt in the northern Yilgarn Craton. The linear greenstone belt is about 60 km long and attains a maximum width of about 4 km. It is flanked by banded gneiss and granitoids. The mineralisation is hosted within a large layered, mafic intrusive complex (the Barrambie Igneous Complex), which has intruded into and is conformable with the general trend of the enclosing Greenstone Belt. From aeromagnetic data and regional geological mapping, it appears that this layered sill complex extends over a distance of at least 25 km into tenements to the north and south of M57/173. The layered sill varies in width from 500 m to 1700 m. The sill is comprised of anorthositic magnetite-bearing gabbros that intrude a sequence of metasediments, banded iron formation, metabasalts and

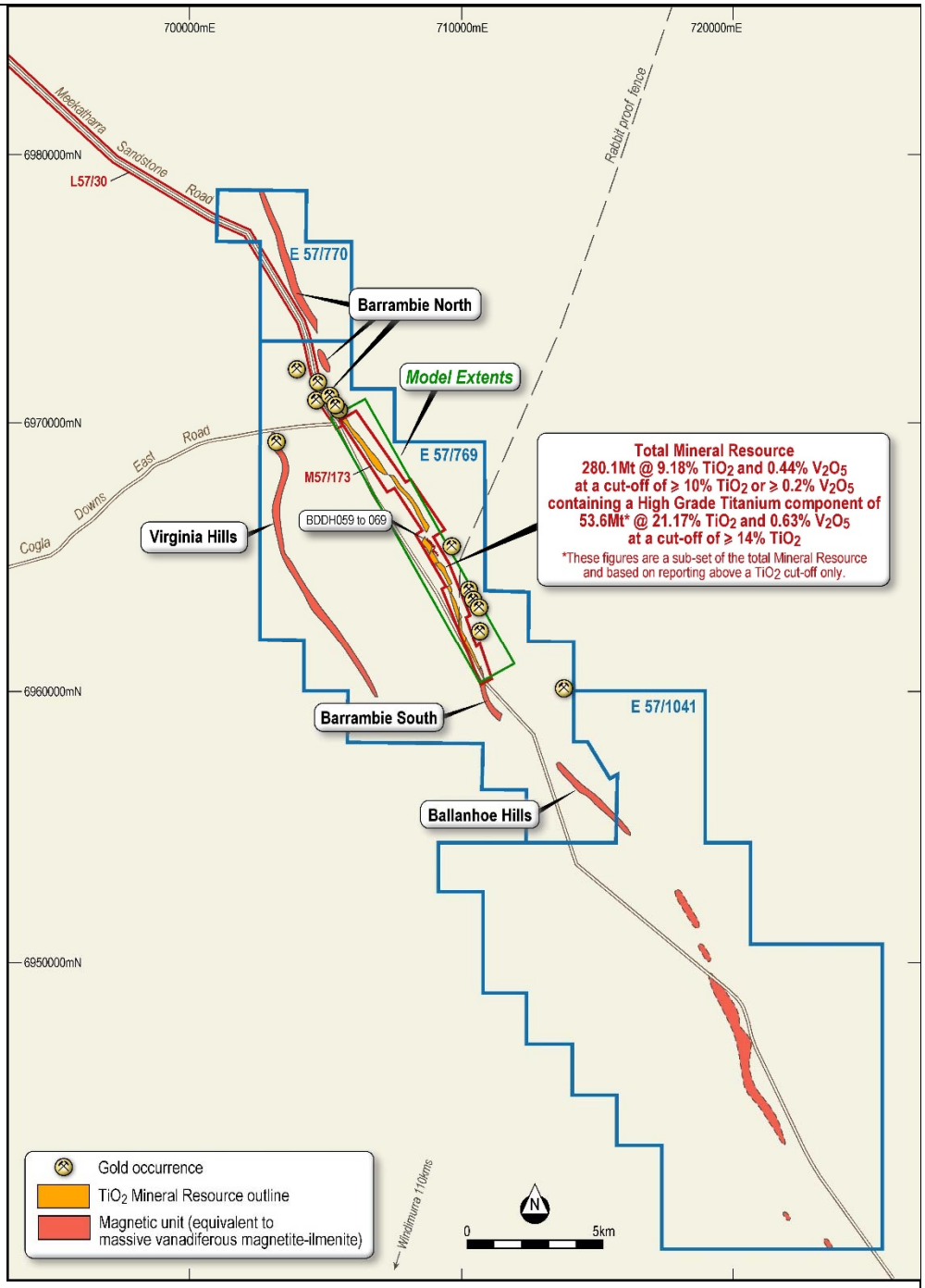
	metamorphosed felsic volcanics of the Barrambie Greenstone Belt. The metasediment unit forms the hanging-wall to the layered sill complex. Exposure is poor due to deep weathering, masking by laterite, widespread cover of transported regolith (wind-blown and water-borne sandy and silty clay), laterite scree and colluvium. Where remnant laterite profiles occur on low hills, there is ferricrete capping over a strongly weathered material that extends down to depths of 70 m. Ti-V-Fe mineralisation occurs as bands of cumulate aggregations of vanadiferous magnetite (martite)-ilmenite (leucoxene) in massive and disseminated layers and lenses. Within the tenement the layered deposit has been divided into five sections established at major fault offsets. Cross faults have displacements that range from a few metres to 400 m. The water table occurs at about 35 m below the surface (when measured where the laterite profile has been stripped).
Drill hole Information	

Target	Drill Hole	Co-ordinates GDA 94		dip	Azimuth	Depth	from	to	width	TiO_2%	V_2O_5%	sample
	Number	Easting	Northing				(m)	(m)	(m)			
Barrambie	BDDH050	710200	6962100	-85	240	71	0.0	71.0	71.0	22.9	0.57	Qtr PQ core
	BDDH051	710138	6962189	-85	60	71	0.0	71.0	71.0	25.9	0.58	Qtr PQ core
	BDDH052	710111	6962247	-90	000	71	0.0	71.0	71.0	18.6	0.42	Qtr PQ core
	BDDH053	710064	6962308	-90	000	71	0.0	71.0	71.0	32.1	0.72	Qtr PQ core
	BDDH054	710056	6962383	-90	000	71	0.0	71.0	71.0	17.8	0.51	Qtr PQ core
	BDDH055	710050	6962473	-80	240	71	0.0	71.0	71.0	22.2	0.66	Qtr PQ core
	BDDH056	710047	6962530	-90	000	71	0.0	71.0	71.0	27.4	0.67	Qtr PQ core
	BDDH057	710043	6962586	-85	60	71	0.0	71.0	71.0	24.3	0.56	Qtr PQ core
	BDDH058	710028	6962692	-85	60	71	0.0	71.0	71.0	24.4	0.59	Qtr PQ core
	BDDH059	709075	6965106	-85	240	71	0.0	71.0	71.0	34.1	0.86	Qtr PQ core
	BDDH060	709028	6965172	-90	000	71	0.0	71.0	71.0	27.9	0.58	Qtr PQ core
	BDDH061	708988	6965210	-85	60	71	0.0	71.0	71.0	32.3	0.75	Qtr PQ core
	BDDH062	708933	6965291	-80	240	71	0.0	71.0	71.0	22.5	0.62	Qtr PQ core
	BDDH063	708965	6965426	-70	240	71	0.0	71.0	71.0	14.4	0.57	Qtr PQ core
	BDDH064	708906	6965506	-85	60	71	0.0	71.0	71.0	32.4	0.82	Qtr PQ core
	BDDH065	708874	6965545	-90	000	71	0.0	71.0	71.0	10.8	0.39	Qtr PQ core
	BDDH066	708850	6965587	-85	240	71	0.0	71.0	71.0	31.9	0.59	Qtr PQ core
	BDDH067	708816	6965626	-80	240	71	0.0	71.0	71.0	23.5	0.52	Qtr PQ core
	BDDH068	708773	6965663	-80	240	71	0.0	71.0	71.0	33.1	0.69	Qtr PQ core
	BDDH069	708714	6965740	-70	60	64.8	0.0	64.8	64.8	26.0	0.55	Qtr PQ core

Samples taken for metallurgical testing were a composite of mineralisation from BDDH0059 to 069.

For further information refer to announcement titled "Barrambie Titanium Project - Update" dated 8th November 2017.

Data aggregation methods	For the metallurgical drilling within the Barrambie high grade deposit, all assays for the hole assayed have been aggregated.
Relationship between mineralisation widths and intercept lengths	Metallurgical holes were drilled entirely within the plane of the ore hence do not reflect true width of the orebody.

Diagrams	 Plan of the location of Diamond Holes BDDH0059 to 069.
Balanced reporting	All results have been reported.
Other substantive exploration data	See ASX announcements 17th April 2018, 8th November 2017, 11 September 2017 and 6 December 2013 for further information regarding the Barrambie deposit.
Further work	Further metallurgical work is planned and discussed in this announcement.