VENUS METALS
CORPORATION LIMITED

ASX Release: 19 July 2018 **ASX Code: VMC**

YOUANMI VANADIUM PROJECT

METALLURGICAL TESTWORK DELIVERS HIGH GRADE VANADIUM CONCENTRATES

The Directors of Venus Metals Corporation Limited ("Venus" or the "Company") are pleased to announce the results of preliminary metallurgical testwork on eleven historical diamond drill core samples from the Youanmi Vanadium Project, Western Australia. This testwork was carried out on two composites; oxide and fresh to assess the response of these materials to conventional magnetic concentration methods used for similar vanadium deposits in Western Australia.

HIGHLIGHTS:

- **Vanadium-enriched magnetic concentrate grades averaging 1.40% V_2O_5** have been obtained from fresh rock drill core assaying 0.71% V_2O_5. Concentrate grades up to **1.46% V_2O_5** were obtained.
- **Vanadium-enriched magnetic concentrate grades averaging 1.32% V_2O_5** have been obtained from oxidised material assaying 0.67% V_2O_5. Concentrate grades were reported up to **1.37% V_2O_5.**
- **Importantly, the test work has shown an excellent rejection of deleterious elements and compounds for downstream processing**
  - Up to 98.6% rejection for silica
  - Up to 99.0% rejection for calcium
  - Up to 93.8% rejection for alumina

These results show that the **V_2O_5 grade can be doubled** for both the fresh rock and oxide Youanmi samples by producing a magnetic concentrate whilst rejecting significant amounts of gangue constituents present in the material.

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The testwork also shows there is a relative ease to crushing the drill core material prior to magnetic separation as outlined by low to moderate comminution work indices.

Venus Metals Managing Director Matthew Hogan comments: **"These excellent results give the Company great confidence to advance our Vanadium Project. Being able to produce a high-grade Vanadium concentrate of 1.40% V_2O_5 by a simple process is significant. The Company is advancing discussions in relation to new process technologies for our concentrate which involve potentially fully integrated battery development opportunities".**

Youanmi Vanadium Project Overview:

Venus's Youanmi Vanadium deposit is located on tenement E57/986 (198.5 km^2) which is about 42km southeast of the world class vanadium mine at Windimurra, owned by Atlantic, a subsidiary of Droxford International Limited (Figure 1). Youanmi Vanadium has good access to major infrastructure such as gas pipeline, roads and port facilities. Venus holds a 90% interest and the prospector holds a 10% interest in this tenement.

JORC 2012 Vanadium Resource:

Widenbar and Associates ("WAA") has reviewed the historical drilling, sampling and assaying data and produced a high-grade Inferred Resource of **167.7 Million tonnes @ 0.41% V_2O_5, 7.52% TiO_2 and 24.6% Fe** (0.25% V_2O_5 cut-off) for a **Vanadium Pentoxide resource of 683,000 tonnes** (ASX release dated 6 Feb 2015).

The diamond drill core samples used for the metallurgical test work are located within this high-grade inferred resource (Figure 2).

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Metallurgical Testwork

The Company commissioned METS Engineering Group ("METS") to develop a series of metallurgical tests suitable for the diamond core composite samples to assess the response of this ore to the conventional magnetic concentration methods used for similar vanadium deposits (refer ASX release 27 March 2018). The aim of this testwork was to:

a) assess the ore's physical properties to determine the ease of crushing and grinding and;
b) assess the upgrade of vanadium into a magnetic concentrate and to assess the quality of this magnetic concentrate produced

The testwork showed low to moderate comminution work indices, indicating favourable impacts on the comminution circuit and that magnetic separation was able to produce a Vanadium-enriched magnetic concentrate whilst rejecting significant amounts of gangue constituents that were present in the ore.

This testwork was carried out on two composites; oxide and fresh. These composites were made up from historical half core sections, selected to include a spread through the orebody and to target the average grade of high-grade domains present within the orebody. The testwork was carried out at the Iron Ore Technical Centre, part of ALS Metallurgy, Wangarra, Western Australia and was broken down into two areas:

a) Comminution and Physical Testing; and
b) Beneficiation

The comminution and physical testing consisted of in-situ density measurements, Bond Crushing Work index ("CWi"), Bond Abrasion Index testing ("Ai"), SAG Mill Comminution testing ("SMC") and Bond Ball Mill Work Index ("BBWi"). Overall the results from the physical testing are positive. Low CWi's of 8.6 kWh/t for the fresh composite and 3.8 kWh/t for the oxide composite indicating low power requirements for the crushing circuit. Abrasion Index values of 0.0876 for the fresh composite and 0.0223 for the oxide composite indicate low wear on equipment and low media consumption in the grinding circuit. The SMC results can be seen in Table 1.

Table 1: SMC Results

Composite	DWi (kWh/m^3)	SG	SCSE (kWh/t)
Fresh	6.3	3.8	8.58
Oxide	1.4	2.87	5.50

The Drop Weight Index ("DWi") is a measure of the resistance of the sample to impact breakage. The Youanmi samples reported DWi's of 6.3 kWh/m^3 for fresh and 1.4 kWh/m^3 for the oxide. These values are in the 45th and 3rd percentiles respectively when compared to all historical SMC DWi results (40,000 global results). The BBWi testing is currently underway as it required initial beneficiation results to allow for a closing screen to be chosen so that the data is more relevant.

The beneficiation testwork consists of Davis Tube Recovery ("DTR") testing to evaluate both sensitivity to grind size and magnetic field intensity during separation, wet Low Intensity Magnetic Separation ("LIMS") to confirm these conditions and higher intensity magnetic separation methods to investigate methods to improve vanadium recovery, particularly for the oxide composite. The grind sensitivity testing has indicated that the material is moderately sensitive to grind size when considering vanadium grade and recovery and the grade of gangue contaminants into the magnetic concentrate, which can be seen in Table 2. Importantly this testing has shown that a relatively coarse grind size of nominal P_{80} 106 µm is capable of reducing combined silica and alumina to 3.59%. This testing has also shown that a coarse grind size of P_{80} 150 µm is capable of achieving combined silica and alumina levels below 5%.

Table 2: Fresh Grind Size Sensitivity Testing Results

Grind Size		V_2O_5	Fe	TiO_2	SiO_2	Al_2O_3	Mass (%)
Feed	Assay	0.71	36.4	11.5	16.05	10.05	
P_{80} 150	Assay (%)	**1.34**	56.7	11.6	2.15	2.71	
	Recovery (%)	80.4	66.3	43.2	5.6	11.5	42.3
P_{80} 106	Assay (%)	**1.39**	58.4	11.0	1.24	2.35	
	Recovery (%)	76.5	62.5	37.5	3.0	9.1	38.3
P_{80} 75	Assay (%)	**1.42**	59.4	10.6	0.93	2.11	
	Recovery (%)	73.5	59.5	34.0	2.2	7.6	36.5
P_{80} 45	Assay (%)	**1.46**	60.5	10.1	0.64	1.79	
	Recovery (%)	73.2	58.6	31.3	1.4	6.2	34.8

The magnetic field intensity testing has indicated that it is not particularly sensitive to the range tested; 2000 gauss, 3000 gauss and 4000 gauss, approximately corresponding to 600 gauss, 900 gauss and 1200 gauss on a wet LIMS which can be seen in Table 3.

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Table 3: Fresh Magnetic Intensity Testing Results

Magnetic Field Intensity (Gauss)		V_2O_5	Fe	TiO_2	SiO_2	Al_2O_3	Mass (%)
Feed	Assay (%)	0.71	36.4	11.5	16.05	10.05	N/A
4000	Assay (%)	**1.35**	57.7	10.8	1.2	2.22	
	Recovery (%)	74.5	61.5	36.2	2.9	8.8	38.9
3000	Assay (%)	**1.39**	58.4	11.0	1.24	2.35	
	Recovery (%)	76.5	62.5	37.5	3.0	9.1	38.3
2000	Assay (%)	**1.42**	59.1	11.0	1.24	2.37	
	Recovery (%)	72.7	60.3	38.1	2.9	8.9	37.4

The testing for the oxide composite can be found in Table 4 and Table 5. As expected the oxide composite shows a greater sensitivity to both grind size and magnetic field intensity during separation.

Table 4: Oxide Grind Size Testing

Grind Size		V_2O_5	Fe	TiO_2	SiO_2	Al_2O_3	Mass (%)
Feed	Assay	0.67	32.19	11.35	21.40	11.50	N/A
P_{80} 150	Assay (%)	**1.31**	56.5	11.9	2.83	2.44	
	Recovery (%)	37.8	35.7	20.2	2.8	5.0	20.7
P_{80} 106	Assay (%)	**1.32**	56.66	11.4	2.17	2.22	
	Recovery (%)	30.2	26.9	15.3	1.6	3.1	15.5
P_{80} 75	Assay (%)	**1.35**	59.00	11.0	1.62	2.02	
	Recovery (%)	25.1	22.9	12.2	1.0	2.3	12.6
P_{80} 45	Assay (%)	**1.37**	59.52	10.3	0.90	1.72	
	Recovery (%)	18.8	17.0	8.5	0.4	1.3	9.1

Table 5: Oxide Magnetic Intensity Testing Results

Magnetic Field Intensity (Gauss)		V_2O_5	Fe	TiO_2	SiO_2	Al_2O_3	Mass (%)
Feed	Assay (%)	0.67	32.19	11.35	21.40	11.50	N/A
4000	Assay (%)	**1.25**	54.42	11.1	2.64	1.98	
	Recovery (%)	31.3	29.8	14.4	2.2	3.1	17.4
3000	Assay (%)	**1.32**	56.66	11.4	2.17	2.22	
	Recovery (%)	30.2	26.9	15.3	1.6	3.1	15.5
2000	Assay (%)	**1.32**	57.54	11.5	2.12	2.04	
	Recovery (%)	27.8	25.3	18.2	1.4	2.5	14.0

Further Metallurgical work

Metallurgical testing is on-going in order to assess methods of recovering additional vanadium from both composites (fresh and oxide) and to assess options for the extraction of valuable by-product minerals from the magnetic concentrates produced.

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Bibliography

1. L. Widenbar, 2015, "Youanmi Vanadium Project Resource Estimate Summary Report January 2015"- Internal Communications
2. METS File Note J5022 dated 17 July 2018
3. VMC ASX releases dated 6 February 2015 and 27 March 2018.

Exploration Targets

The term 'Exploration Target' should not be misunderstood or misconstrued as an estimate of Mineral Resources and Reserves as defined by the JORC Code (2012), and therefore the terms have not been used in this context.

Forward-Looking Statements

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Venus Metals Corporation Limited planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Venus Metals Corporation Ltd believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

Competent Person's Statement

The information in this report that relates to the Processing and Metallurgy Youanmi Vanadium Project is based on and fairly represents, information and supporting documentation compiled by Damian Connelly who is a Fellow, CP (Met) 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.

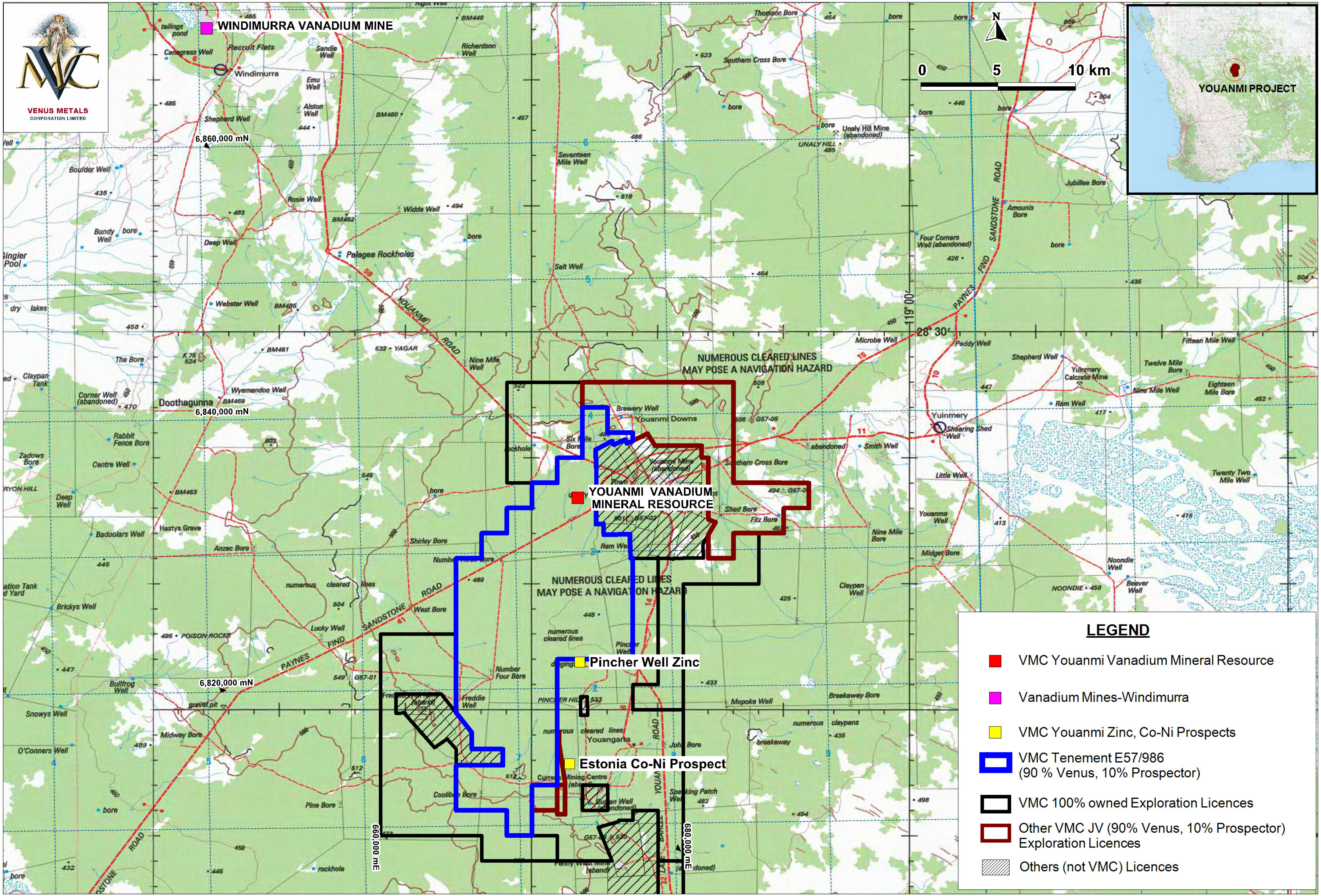

Figure 1. VMC Youanmi Vanadium Project Location Map

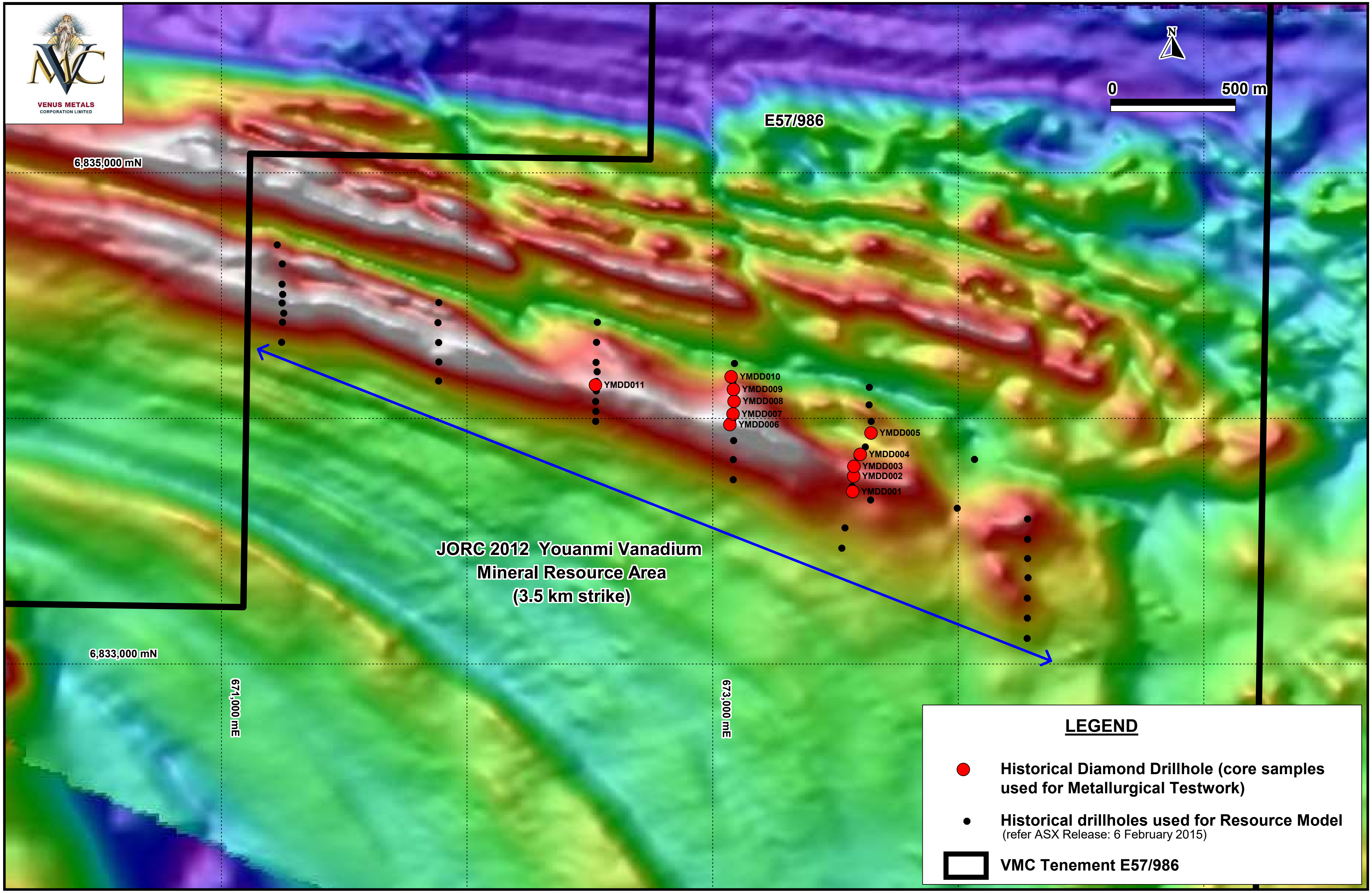

Figure 2. Location of Diamond Drillholes used for Youanmi Vanadium Metallurgical Testwork shown on Aeromagnetic Image

JORC Code, 2012 Edition – Table 1

Youanmi Vanadium Project

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Venus Metals Corporation (VMC) has not conducted any exploration drilling or sampling on the tenement. • The exploration data were obtained from Open File WAMEX Reports on historical exploration Reverse Circulation (RC) drilling conducted by Australian Gold Resources (AGR) during 1998-1999. • Sampling has been by Reverse Circulation drilling, collected every 1m through a cyclone and riffle splitter. 4m composite samples were also collected via scoop and spear sampling from the residue bags. • In 2010, Youanmi Metals Pty Ltd carried out a drill program of 11 diamond drill holes, aimed primarily at assessing the iron ore potential of the Vanadium and Titanium bearing magnetite horizons. • To ensure accuracy in diamond drilling and sampling, downhole surveys were carried at the bottom of each hole, using a 'Camtech' digital camera. Electronic core orientation surveys were carried out after each 3m run in fresh/ competent rock, using a 'Reflex ACT' device to enable accurate orientation of the drill core. Magnetic susceptibility measurements and 'Niton' XRF readings for Fe, Ti and V were also carried out. • Diamond Core samples correspond to selected geological contacts (especially magnetite layers, ranging from 0.3 to around 1.1m) were marked out during the logging process and were cut to half on site using an Almonte core saw and these half cores were sent for assaying. • This ASX release dated 19th July 2018 reports on preliminary metallurgical testwork completed on previously drilled diamond core samples from the Youanmi Vanadium Project • Two composite samples of vanadium bearing titaniferous magnetite were selected representative of oxide and fresh material • Composite weights were 77.82 kg for fresh and 80.41 kg for oxide, with 1 kg sub samples used for grinding and Davis Tube Recovery (DTR) work and 10 kg sub samples to be used for Low Intensity Magnetic Separation (LIMS) testwork • The head assays for the composites were 0.71% V_2O_5 for the fresh composite and 0.67% V_2O_5 for the oxide composite • Individual samples were subject to DTR testing at 3000 Gauss at four different grind sizes being P80 150, 106, 75 and 45 μm.
Drilling techniques	• Reverse Circulation drilling by Australian Gold Resources (AGR) during 1998-1999 • Most RC holes in the program were drilled vertically with a few at -60°dip. • In 2010, 11 diamond holes were drilled using triple tube PQ3 and were drilled at dip varying -58 to -61 and azimuth varying between 0 and 5°N.
Drill sample recovery	• No recovery issues were reported in the historical reports. • There is no apparent relationship between sample recovery and grade. • Core recovery in diamond holes was generally good, with excellent recoveries in fresh rock and reasonable recoveries in weathered material.
Logging	• RC drill samples were geologically logged and the downhole magnetic susceptibility was also conducted as per the historical report. Drillhole geological logging, assay data and metallurgical testing were used to support resource estimation of V2O5. • Diamond drill (DD) core was comprehensively geologically and geotechnically

Criteria	• Commentary
	logged. The geotechnical logging includes core recovery, RQD, rock strength, weathering and fracture counts, magnetic susceptibility measurements and 'Niton' XRF readings for Fe, Ti and V.
Sub-sampling techniques and sample preparation	• Sampling has been by Reverse Circulation drilling, collected every 1m through a cyclone and riffle splitter. 4m composite samples were also collected via scoop and spear sampling from the residue bags. • Sampling of diamond holes was at irregular intervals determined by geological logging. In addition to the geological logging geotechnical logging like magnetic susceptibility measurements and 'Niton' XRF readings for Fe, Ti and V were also carried out, to ensure the accuracy of selected core samples. These selected cores were cut to half on site using an Almonte core saw and these half cores were sent for assaying.
Quality of assay data and laboratory tests	• The methods used for assay analysis of RC drill samples are lithium meta-borate fusion XRF at AMDEL (XRF4) and fusion XRF at Analabs (X408). • Blanks were inserted every 30th sample. • A vanadium standard was inserted in each sample batch for holes YOUC19 to 40. • Down hole geophysical logging was carried out in eleven holes. • The half cut core samples were pulverized and analyzed for elements using acid test method (AT) followed by ICPMS/ICPOES. Also fusion XRF (11) method were also used for identifying the mineral composition. • Compositing of samples was completed by ALS Metallurgy, under supervision of METS. • Magnetic beneficiation testwork and analysis of resulting concentrates and non-magnetic tailings was completed by ALS Metallurgy, under supervision of METS • All samples, composites, size fractions, DT magnetics and non-magnetics were analysed by fused disc XRF
Verification of sampling and assaying	• No independent verification of sampling and assaying has been reported.
Location of data points	• The RC drill hole locations (collar) were located using GPS. • Grid systems used were Geodetic datum: AGD 84, Vertical datum: AHD and Projection: AMG, zone: 50. • The Diamond drillhole locations were located using a Garmin GPS 72. Geodetic datum: GDA 94, Projection zone: 50
Data spacing and distribution	• Within the resource area, RC drilling was completed on 640m spaced sections with drill hole spacing of 80m. Additional 40m spaced drill holes were aimed at defining the tenor of mineralisation in fresh rock and the dip of the stratigraphy. • The DD holes were drilled at selected locations along historical RC drill hole lines within the Youanmi layered intrusive complex, where magnetite (Fe-Ti-V) bearing gabbroic rocks can be mapped at surface.
Orientation of data in relation to geological structure	• RC drilling is vertical; with the average dip of the magnetite rich units being approximately30° to 50° the hole orientation with respect to the mineralisation dip is appropriate. • DD drilling is approximately at right angle to dip and 90° to strike.
Sample security	• Details of sample security not given in historical reports.
Audits or reviews	• No audits or review have been located.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• The Youanmi Project tenement E57/986 is currently an Exploration License Application (ELA) and is being jointly applied for by Venus Metals Corporation Limited (90%) and Legendre, Bruce Robert (10%).
Exploration done by other parties	• The tenement area was historically explored by many explorers since 1967. Australian Gold Resources Limited (AGR) explored extensively for vanadium resources within historical tenement E59/419.
Geology	• The project area lies on the northern part of the Youanmi layered intrusion. Most of the area of interest is east-west striking with layering dipping to the south. At the eastern edge of intrusion area the layering swings round to a north-south strike and a westerly dip. The dip appears to become gradually shallower towards the bend: from approximately 50° at a distance of 5km west of the bend to 30° adjacent to the bend. A dip of only 10° was recorded in outcrop within the bend itself. A number of northwest faults offset the strata with an apparent sinistral displacement (displacement is only apparent because the same effect would be achieved by down throw of the eastern block). Chloritisation and the development of a weak foliation has been recognised in RC drilling near one of the northwest faults with an apparent displacement of 1½km. Faulting is more complicated in the area of the bend where a number of broadly northeast striking faults and narrow shears are also recognised. • Gabbro (ranging from leucocratic to melanocratic), anorthosite, fine-grained gabbro, magnetite-gabbro and magnetite have been recognised in drilling and outcrop. The target zone is characterised by meter-scale layering of magnetite, magnetite-gabbro, anorthosite and leucogabbro. Leuco to melano gabbro is more common away from the target zone. • The magnetite bearing horizons appear to be more resistant to weathering and therefore the top of fresh rock is generally at a higher relative level than in adjacent weathered gabbro. However in the areas where the regolith has been stripped the saprolite derived from magnetite-in horizons has proved more resistant to erosion and often form the tops of the breakaways. Depth to fresh rock (Top of Fresh Rock-TOFR) in the higher ground is usually about 35m, but can be up to 55m.
Drill hole Information	• The Exploration Target is based aerial magnetics data which has been compared with the geophysics in the drilled area of the Inferred resource. No drilling is available for the exploration target area.
Data aggregation methods	• Not applicable
Relationship between mineralisation widths and intercept lengths	• Mineralisation width assumptions for the exploration target area are based on drill intercepts in the resource model area..
Diagrams	• Plans are provided in the accompanying report.
Balanced reporting	• Not applicable
Other substantive exploration data	• To assess the stratigraphy, structure and correlation between magnetic units and zones of high vanadium grade, AGR carried out low-level high resolution aeromagnetic survey by Universal Tracking Systems (UTS) during September 1999. The aeromagnetic survey covered an area of 30 square kilometers, for 650 lines totaling 3km was flown in the northern area. Radiometrics and digital elevation data were also collected. The magnetic contrast between magnetite units and surrounding rock is so high (>5,000 nT) that the low relative signal to noise ratio allows data to be filtered to the 4th vertical derivative.
Further work	• Recent modelling and resource estimation will define further infill and extension

Criteria	Commentary
	drilling. • Metallurgical Testwork is ongoing to recover additional vanadium from both composites • Program of downstream testwork using the concentrate produced from the LIMS testwork