

ASX Release: 29 January 2019 ASX Code: VMC

YOUANMI VANADIUM PROJECT POSITIVE METALLURGICAL TESTWORK CONFIRMS VANADIUM LEACH EXTRACTIONS UP TO 81.6% ACHIEVED

Venus Metals has received a further positive report from METS Engineering Group regarding additional sighter test work leaching of the vanadium oxide ores at the Company's Youanmi vanadium project. The testwork was designed to give further understanding of the metallurgical characterization of the vanadium oxide ores at Youanmi.

SUMMARY RESULTS

A composite sample (Composite 2) totalling some 48kg from five historical oxide diamond drill cores was prepared and utilized in this test work. METS report the following positive conclusions

- The ore is amenable to beneficiation, recovering 80% of the vanadium and rejecting 40% of the mass (the beneficiation results have been previously reported in the ASX release dated 16th October 2018).
- Vanadium extractions up to 81.6% using sulphuric acid from crushed oxide samples are technically achievable and indications are that results are repeatable.
- These extractions are better than the results reported in the ASX release dated 5th September 2018 where initial sulphuric acid test leaching shows 67% vanadium extraction.
- Multiple acid systems may be capable of enhancing these extractions.

Table 1 Acid Leach Recovery

Composite 2. Crushed to -1mm

Test ID	% of	Residence	Leach Feed	Recovered	V₂O₅
	Solids	Time (hr)	Grade V ₂ O ₅ %	Grade V ₂ O ₅ %	Recovery (%)
T7 Sulphuric acid at 80° C	10	24	0.58	0.47	81.6

Composite 2 -1mm +0.75mm (beneficiated)

Test ID	% of Solids	Residence Time (hr)	Head Grade V ₂ O ₅ %	Recovered Grade V ₂ O ₅ %	V₂O₅ Recovery (%)
T8 Sulphuric acid at 80°C	10	24	0.76	0.60	79.9

Please Direct Enquiries to:



RECOMMENDATIONS FROM METS

- 1. Based on the testwork results, further process development is progressing in order to determine the appropriate flowsheet to complete the scoping study.
- 2. In light of the substantial increase in knowledge of the oxide vanadium deposit following the recently completed 139 hole, 5919m RC drill program, further testwork will be driven by a robust geo-metallurgical approach.
- 3. This will involve linking of the geology and metallurgy together to optimize future testwork.
- 4. The testwork will concentrating in particular on high grade sections of the deposit located in the top 30m.
- 5. In excess of 100 tonnes of drill samples are now available for this test work.

Commenting on the results, Mr Matt Hogan, MD of Venus metals said "The METS test work leaching results show that evaluation of our Vanadium project is proceeding as planned. Vanadium extractions in excess of 80% is great result. The next phase for the project will be the updated JORC resource following receipt of all assays. This is expected in February. Further test metallurgical test work can be planned once the JORC resource evaluation is completed".



Bibliography

- L. Widenbar, 2015, "Youanmi Vanadium Project Resource Estimate Summary Report January 2015"- Internal Communications
- 2. METS internal communications dated 24 January 2019
- VMC ASX releases dated 6 February 2015, 27 March 2018, 19 July 2018, 5 September 2018 16 October 2018 and 13 December 2018.

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 for the Youanmi Vanadium 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 Engineering Group. 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.

The information in this release that relates to the Youanmi Vanadium Project is based on information compiled by Mr Barry Fehlberg, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Fehlberg is Exploration Director of Venus Metals Corporation Limited. Mr Fehlberg has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves'. Mr Fehlberg consents to the inclusion in the release of the matters based on his information in the form and context that the information appears.

JORC Code, 2012 Edition – Table 1

Youanmi Vanadium Project

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	 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.
	 An oxide composite sample was formed from YMDD001, YMDD002, YMDD003, YMDD004 and YMDD005.
	 A sub sample was assayed via XRF and returned a reading of 0.58% V₂O₅.
Drilling techniques	 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	No recovery issues were reported in the historical reports.
recovery	 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	 Diamond drill (DD) core was comprehensively geologically and geotechnically 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 of historical 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	 Down hole geophysical logging was carried out historically in eleven holes.
data and laboratory tests	 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.
	 The oxide composite for the beneficiation testwork was split into sub samples for testing.
	 The oxide composite and beneficiation testwork product samples were assayed at the Iron Ore Technical Centre (ALS) via XRF.
	 The leach feed and solid residue samples were sent to Nagrom for XRF analysis and ALS for XRF analysis.
	The leach liquor samples were sent to Nagrom for ICP analysis.
Verification of sampling and assaying	No independent verification of sampling and assaying has been reported.

Criteria	Commentary
Location of data points	 The Diamond drillhole locations were located using a Garmin GPS 72. Geodetic datum: GDA 94, Projection zone: 50
Data spacing and distribution	 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	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 jointly owned 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 the 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	For the current testwork no new drillhole data/samples were used
Data aggregation methods	For the current testwork no new drillhole data/samples were used
Relationship between mineralisation widths and intercept lengths	No new drill results reported.
Diagrams	No diagrams reported.

Criteria	Commentary
Balanced reporting	 Reports on previous metallurgical results can be found in ASX releases that are available on our website, including announcements dated 5 September 2018 and 16 October 2018.
Other substantive exploration data	 Updated Vanadium resource estimates in accordance with JORC 2012 guidelines previously reported in ASX announcement dated 6 February 2015.
Further work	 In light of the substantial increase in knowledge of the oxide vanadium deposit following the recently completed RC drill program, further testwork will be driven by a robust geo-metallurgical approach once assays are received.
	 This will involve linking of the geology and metallurgy together to optimize future testwork.
	 The testwork will concentrating in particular on high grade sections of the deposit located in the top 30m.
	 Future testwork will aim to build on the beneficiation and hydrometallurgy.