

20 July 2018

# Caula Project – Maiden Vanadium Mineral Resource

Measured Vanadium Mineral Resource of 22 Mt at 0.37% V<sub>2</sub>O<sub>5</sub> is in addition to Caula's Graphite Mineral Resource of 5Mt at 13%TGC

# **Key Points**

- Total Maiden JORC Resource of 22 Mt @ 0.37% vanadium pentoxide (V₂O₅) (0.2 % grade cut-off) at the Caula Vanadium-Graphite Project in Mozambique
- The entire Vanadium Resource is in the Measured Resource category
- Vanadium Resource is subdivided into two zones:
  - Oxidised Zone 8.9 Mt @ 0.31% V<sub>2</sub>O<sub>5</sub> for 27,400 tonnes contained V<sub>2</sub>O<sub>5</sub> (0.2% grade cut-off)
  - Fresh Zone 13.1 Mt @ 0.41% V₂0₅ for 54,200 tonnes of contained V₂O₅ (0.2% grade cut-off)
- Total contained V<sub>2</sub>O<sub>5</sub> of 81,600 tonnes (~180 Mlb)
- Current V<sub>2</sub>O<sub>5</sub> price is of US\$18.50/lb (US\$40,500/tonne) (98% V<sub>2</sub>O<sub>5</sub>)
- Substantial scope for further growth in the Vanadium Resource through exploration
- Chinese vanadium demand jumped 15% in May 2018 from April as steel mills prepared to switch to making higher-strength steel<sup>1</sup>
- 3,000t of vanadium used in batteries in 2017, twice as much as reported in 2016<sup>1</sup>
- Following the merger of Mustang's ruby project with Fura, Mustang now ideally positioned to become a leading vanadium and graphite company

COMPANY INFORMATION

Mustang Resources Ltd ABN 34 090 074 785 ASX Code: MUS

Current Shares on Issue: 958,830,739

Market Capitalisation: \$14.38M as at 19 July 2018

# **COMPANY DIRECTORS**

Ian Daymond Chairman

Bernard Olivier Managing Director

Cobus van Wyk Chief Operating Officer

Christiaan Jordaan Director

Evan Kirby Director

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Source: Mining Journal 28 June 2018

**Mustang Resources Ltd (ASX: MUS, FRA: GGY)** is pleased to announce that its Caula Vanadium-Graphite project in Mozambique has taken another key step towards development with the completion of the maiden JORC-compliant vanadium Mineral Resource estimate.

The Mineral Resource, which is all in the Measured category, is 22Mt at 0.37% vanadium pentoxide  $(V_2O_5)$  for a total of 81,600 tonnes of contained vanadium pentoxide.

This is in addition to the existing graphite Resource at Caula of 5Mt at 13% Total Graphitic Carbon (TGC). Mustang is currently finalising an updated graphite Mineral Resource estimate.

Mustang Managing Director Dr. Bernard Olivier said the combination of the vanadium and graphite resources shows Caula is rapidly emerging as a highly valuable project.

"This is an exceptional result, with over 81,000 tonnes contained  $V_2O_5$ , particularly given that the entire JORC Resource is in the Measured category," Dr Olivier said.

"With vanadium pentoxide prices running at more than US\$40,000 per tonne (98%  $V_2O_5$ ), the Caula resource translates to a highly valuable resource.

"Furthermore, the potential of the project is even greater as our vanadium is mica-hosted and associated with the graphite mineralisation and potentially far cheaper to extract and recover through two simple processing steps, compared with most vanadium projects, where the vanadium is located in a complex titaniferous magnetite ore body."

### **Geology of the Caula Graphite Deposit**

The Caula deposit is located in northern Mozambique, the graphite mineralisation is hosted in quartzitic schists of the Xixano Complex. The most common lithologies include Graphitic Schists, Gneisses and thin Pegmatoidal zones. Sulphides are occasionally logged but are usually absent. The surrounding country rock consists of Quarzitic and Micaceous Schists and Gneisses.

The project area is situated in the Mozambique Belt of the East African Orogen, and contains highly metamorphosed meta-sediments and meta-volcanics. The rocks of the East-African Orogen are dated 850 – 620 Ma in which metamorphic facies vary from amphibolitic to granulitic.

The mineralised zone is contained within a reclined isoclinal fold structure which dips at roughly 60 degrees to the west (Figure 1). Due to the region's tectonic history these meta-sediments have been altered to the extent that no sedimentary structure remains.

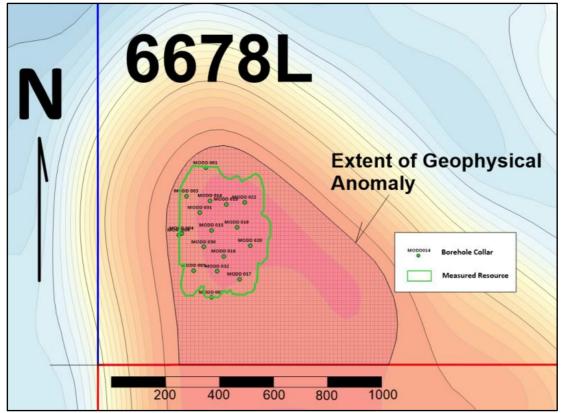


Figure 1. Locations of Drill holes and the plan view of mineralisation

#### **Drilling, Sampling and Sub-sampling Techniques**

The drilling program comprised of one RC (reverse Circulation) and 16 DD (Diamond Drilling) boreholes. The initial part of the hole was drilled with PQ (III) until the rock was competent to be drilled with HQ (III). Drill core was orientated wherever possible. The mineralised core was sampled as half (Leco analysis) and quarter (metallurgical test work) core, with the remaining quarter retained in the stratigraphic sequence in the core trays. Appropriate QA/QC samples (standards, blanks, duplicates and umpire samples) are inserted into the sequence as per industry standard.

#### Sample Analysis

Sample preparation and analysis was completed by SGS in Johannesburg. Sampling procedure which include drying, crushing, splitting and pulverizing ensures that 85% of the sample is 75 micron or less in size. A split of the sample is analysed using a LECO analyser to determine total carbon in graphite (TGC%) content. A second split of the sample is prepared for element analysis by XRF to determine  $V_2O_5$  content. Rougher and multiple re-grind and cleaner flotation, Final concentrate PSD and fraction assays.

# **Resource Estimation Methodology**

The geological models used for the resource estimation was created in Voxler (Version 4.2.584), a modelling package developed and distributed by Golden Software in Colorado. The deposit was divided into an upper oxidised zone and a lower fresh zone. Once a specific grade volume has been calculated a weighted average density is applied to the volume and a tonnage is determined.

Weighted averaging for sample length was applied. No grade truncations were applied. A cut-off grade of 0.2% has been applied. Grade-tonnage curves were produced and could be used to determine the effect of cut-off grades on remaining mineralised tonnages, but the drilled resource is calculated as intersected in-situ. The calculated grade is weighted for representative mass, as calculated in Voxler.

#### **Cut-off Parameters**

A 0.2%  $V_2O_5$  grade cut-off was applied. The modelling is limited by drilling extent. The drilling have not intersected and hence delineated the outer edge of barren host rock. The physical limits of the mineralisation will be established with additional future drilling.

Grade-tonnage curves were produced (See Figures 2 and 3) and the influence of various cut-off grades can be investigated. The physical deposit boundaries have not been intersected in the drilling work to date and hence the model is suspended within graphite and roscoelite mineralised rock. The western and northern deposit boundary (at shallow depth), is expected to be fixed with the next phase of drilling. The eastern and southern boundaries are open to at least 200m and several kilometres respectively.

#### **Caula Vanadium Resource Estimate**

The Caula Mineral Resource estimate is based on 16 diamond drillholes totalling 2,233.21 metres (484.72m in 2016 and 1,748.49m in 2017) and one reverse circulation (RC) drillhole totalling 99 metres (Figure 4). Drillholes are spaced approximately 85 metres apart along a 540 metre strike length. With the exception of drillhole MORC004 (-77°), all holes were drilled at inclinations of between 55° and 60° from the horizontal.

The drillhole samples were submitted to SGS in Randfontein (South Africa) for analyses as well as to SGS (Malaga) and Nagrom, Perth for metallurgical testwork. In total, 1,128 assay results were generated and these were used with the drillhole data to complete the Maiden Vanadium Resource estimate.

Grade estimation was completed using an inverse distance squared method. The deposit was divided into an upper oxidised zone and a lower fresh zone. Points of equal grade within the model boundary are draped with a wireframe shape (of which the anisotropy settings are defined in the gridder module) and the volume for the shape is calculated in Voxler. This is repeated for grades  $0.01\% \ V_2O_5$  to  $0.65\% \ V_2O_5$  for the oxidised zone and up to  $1.30\% \ TGC$  for the fresh zone.

Once a specific grade volume interval had been calculated (by difference) a weighted average density was applied to the volume and a tonnage determined.

The Mineral Resource estimate for the Caula Vanadium Deposit is reported using a cut-off grade of  $0.2\%~V_2O_5$  (vanadium pentoxide). The Measured Mineral Resource totals 22 million tonnes at an average grade of  $0.37\%~V_2O_5$  for 81,600 tonnes of contained  $V_2O_5$  (vanadium pentoxide).

The results of the Mineral Resource estimate are summarised in

Table 1 below.

Drillhole information and reporting in accordance with the JORC Code 2012 Edition are included as Appendices to this announcement.

Table 1. Measured Mineral Resource estimate for the Caula Vanadium Deposit (at 0.2% V2O5 cut-off grade)

Caula V <sub>2</sub> O <sub>5</sub>	Caula V₂O₅ Deposit – Mustang Resources – as at 17 July 2018 (0.2 % V₂O₅ Cut-off)											
Resource Block	Volume (M m³)	Density (ton/m³)	GTIS (Mt)	Average Grade (% V₂O₅)	Contained V₂O₅ (tonnes)	Resource Category						
Oxidised Zone	3.5	2.550	8.9	0.31	27,400	Measured						
Fresh Zone	4.9	2.650	13.1	0.41	54,200	Measured						
Total	8.4	2.609	22.0	0.37	81,600	Measured						

The grade-tonnage curve for the oxidised zone is shown in Figure 2 below. The Oxidised Zone displays the following grade-tonnage relationship: at a cut-off grade of  $0.1\%~V_2O_5$  the deposit will have as a balance 12.6Mt of mineralised tonnes at an average grade of  $0.26\%~V_2O_5$ , for 34 000 tonnes of contained graphite. At a cut-off grade of  $0.2\%~V_2O_5$  the deposit will have as a balance 8.9Mt of mineralised tonnes at an average grade of  $0.31\%~V_2O_5$ , for 27 400 tonnes of contained graphite. At a cut-off grade of  $0.3\%~V_2O_5$  the deposit will have a balance of 3.9Mt of mineralised tonnes at an average grade of 0.38%, for 14,800 tonnes of contained  $V_2O_5$ .

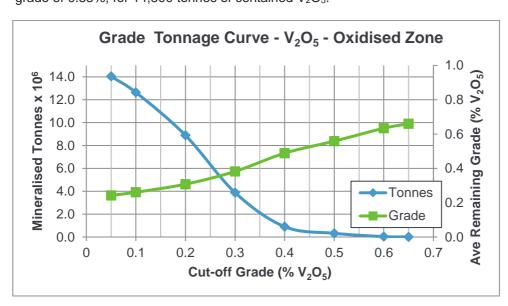


Figure 2. The V2O5 Grade-Tonnage curve for the Oxidised Zone of the Caula deposit.

Cut-Off Grade (% V <sub>2</sub> O <sub>5</sub> )	Tonnes (Mt)	Grade (% V₂O₅)	Contained V <sub>2</sub> O <sub>5</sub> (tonnes)
0.1	12.6	0.27	34 000
0.2	8.9	0.31	27 400
0.3	3.9	0.38	14 800
0.5	0.3	0.56	1 800

Table 2. The V2O5 cut-off grades and tonnages for the Oxidised Zone of the Caula deposit.

The grade-tonnage curve for the Fresh Zone is shown in Figure 3 below. For the Fresh Zone the following relationship is seen from the grade-tonnage curve; At a cut-off grade of 0.1% V<sub>2</sub>O<sub>5</sub> the deposit will have a balance of 17.1Mt mineralised tonnes at an average grade of 0.35% V<sub>2</sub>O<sub>5</sub>, for 60 200 tonnes of contained V<sub>2</sub>O<sub>5</sub>. At a cut-off grade of 0.2% V<sub>2</sub>O<sub>5</sub> the deposit will have a balance of 13.1Mt mineralised tonnes at an average grade of 0.41% V<sub>2</sub>O<sub>5</sub>, for 54 200 tonnes of contained V<sub>2</sub>O<sub>5</sub>. At a cut-off grade of 0.3% V<sub>2</sub>O<sub>5</sub> the deposit will have a balance of 9.3Mt mineralised tonnes at an average grade of 0.48%, for 44 900 tonnes of contained V<sub>2</sub>O<sub>5</sub>.

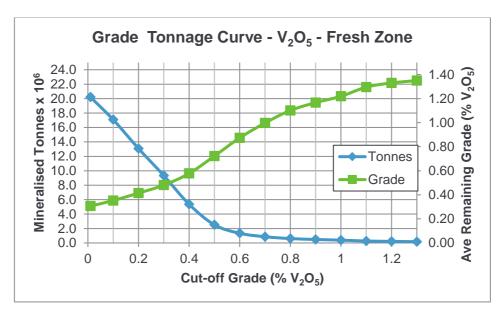


Figure 3. The Grade-Tonnage curve for the Fresh Zone of the Caula Graphite deposit.

Cut-Off Grade (% V₂O₅)	Tonnes (Mt)	Grade (% V₂O₅)	Contained V₂O₅ (tonnes)
0.1	17.1	0.35	60 200
0.2	13.1	0.41	54 200
0.3	9.3	0.48	44 900
0.5	2.5	0.72	18 200

Table 3. Cut-off grades and tonnages for the Fresh Zone of the Caula deposit.

#### **Mineral Resource Classification Criteria**

The resource is classified as Measured. The core losses in the DD boreholes were assigned  $0\% \ V_2O_5$  values as a conservative measure. The CP has no reason to doubt the input data from the core logging to the laboratory results. The estimate is conservative and probably understated in both tonnage and grade.

The surface area of 12.2 Ha is covered by 17 regularly spaced boreholes for an average grid of just less than 85 m squared.

In addition, the geovariance which was calculated over 13 ranges with 24 data-pairs shows a sill distance of 170m. This calculation is based on information from 16 boreholes, and may well change as it gets updated with new drilling information. Based on this geovariance, the drill spacing at an average of 85m is considered to be sufficient to determine a measured resource.

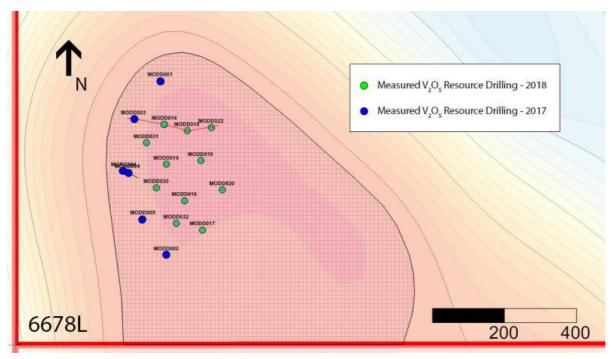


Figure 4. Mustang's Caula Graphite & Vanadium Project, EM depicting the graphitic anomaly and the exploration drilling to date

## **Mining and Metallurgical Methods and Parameters**

The resource estimation has assumed that the deposit could potentially be mined using open cut mining techniques. No assumptions have been made for mining dilution or mining widths, however mineralisation is generally broad.

Syrah Resources Ltd (ASX:SYR) has the Balama graphite project located down-strike on an extension of Caula mineralisation. In 2014 Syrah Resources (ref Syrah Resources "Update on Vanadium Metallurgy" dated 8 April 2014) reported the results of vanadium recovery testwork on their ore. It was noted that that the application of WHIMS and mica flotation processes to the graphite flotation tailings was effective in recovering vanadium and could achieve a combined concentrate grade of  $> 3\% \ V_2O_5$ . Further work showed that commercial grade vanadium pentoxide (>98% Purity) could be produced from this vanadium concentrate.

Mustang's metallurgical testwork conducted to date at Independent Metallurgical Operations Pty Ltd ("IMO") and Nagrom, both located in Western Australia, has shown that the vanadium reports to the tailings during the graphite flotation process. Vanadium recovery testwork on the flotation tailings showed that a portion of the vanadium could be recovered and concentrated by WHIMS (Wet High Intensity Magnetic Separator. Additional vanadium could be recovered from the WHIMS tailings by a froth flotation procedure aimed at recovering and concentrating micaceous minerals including roscoelite. This work is at a preliminary stage but it has demonstrated strong similarities between the Caula and Balama ores. Ongoing testwork is aimed at optimising vanadium recovery and concentrate grade.

## **Project Area Potential**

The Caula Project is located within a world-class graphite province and there is significant potential to expand the maiden Vanadium Resource estimate through ongoing exploration and drilling.

In the immediate vicinity of the Caula discovery, graphite mineralisation has now been defined over a 540m strike length. This mineralisation is up to 230m wide (estimated true thickness) and the depth is completely open-ended at the limit of the current drilling.

A new program of diamond and reverse circulation drilling has been planned to test for both up-dip and down-dip extensions to the Caula deposit in this area.

In addition to the potential to define additional graphite and vanadium mineralisation immediately adjacent to the Caula discovery, there is also very strong potential to define high grade graphite mineralisation over the much larger project area.

The Caula discovery is located at the northern end of a suite of large-scale geophysical (TEM) anomalies that extend over an 18km strike length within Mustang's tenements (see Figure 5). Drilling at the Caula site confirms a strong spatial correlation between the TEM anomaly and high grade graphite drill hole intersections. The larger-scale TEM anomaly has received minimal drilling to date and therefore remains largely untested.

Mustang proposes systematically to drill test the large-scale TEM target through progressive step out drilling from the Caula discovery. This drilling has commenced.

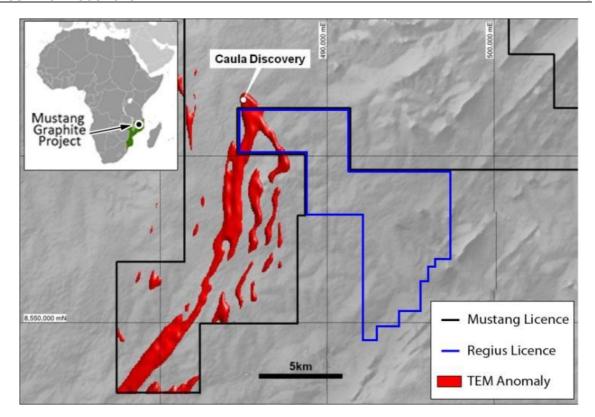


Figure 5. Large-scale untested SkyTEM anomaly within the greater Caula Graphite and Vanadium Project area.

The Company is extremely encouraged by the results received to date from its maiden Vanadium Resource Estimate and the Caula deposit as a whole. The combination of high grade drilling results, positive initial metallurgical testwork, a large  $V_2O_5$  maiden Measured Resource estimate, large-scale untested exploration targets and the project's location within a demonstrated world-class graphite-vanadium province confirm the project's potential to create significant future value for the Company.

As previously reported, due to unexpected delays in receiving the final vanadium and graphite assay results back from the independent laboratory, the completion of the maiden vanadium resource estimate as well as the upcoming graphite resource update was delayed. The delay further caused a delay in the estimated completion of the Scoping Study to Q3 2018.

# **Vanadium Pricing and Demand**

Worldwide, the major use of vanadium is as an alloying agent in full alloy and high strength low alloy steels. China has recently increased the minimum specification for reinforcing steel used in buildings and as a result, domestic vanadium consumption is expected to increase by 10,000 tonnes per year (Metal Bulletin, August 2017). The vanadium market has already experienced a structural shift, changing China from being a net exporter of vanadium to becoming a net importer of vanadium. The use of vanadium in vanadium redox flow batteries (VRFB batteries), used for large scale energy storage is set to drive a further increase in demand. Consequently, vanadium supplies have tightened and the price of vanadium has increased sharply over the last two years to current levels of US\$18.6/lb (~US\$40,500/tonne)<sup>2</sup>, making it the best performing battery metal of 2017<sup>3</sup>. Demand for vanadium is demand for and reasonably expected to increase due to use steel in development. Chinese vanadium demand jumped 15% in May over the prior month, as steel mills start preparing for the switch to higher-strength steel1. In 2017, 3,000t of vanadium was used in batteries, twice as much as reported in 2016, and this feeds into industry forecasts that these figures will at least double again in 20181.

For and on behalf of the Board

**Dr. Bernard Olivier Managing Director** 

Bernard Olivier

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<sup>&</sup>lt;sup>1</sup> Source: Mining Journal 28 June 2018 <sup>2</sup> Based on 18 July 2018 pricing of US\$18.6/lb (US\$40,500/tonne) for 98% Vanadium pentoxide delivered in China. Source: vanadiumprice.com

3 "Best performing battery metal of the year isn't cobalt", Mark Burton. Bloomberg. January 26, 2018

#### **COMPETENT PERSON'S STATEMENT:**

Information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Johan Erasmus, a Competent Person who is a registered member of the South African Council for Natural Scientific Professions (SACNASP) which is a Recognised Professional Organisation (RPO) included in a list posted on the ASX website. Mr Erasmus is a consultant to Sumsare Consulting, Witbank, South Africa which was engaged to undertake this work. Mr Erasmus has sufficient experience which is 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 by the 2012 Edition of the Australasian Code for Reporting of Exploration Results. Mr Erasmus consents to the inclusion of the data in the form and context in which it appears.

Information in this report that relates to the ore sorting and sample composites of the Caula Graphite & Vanadium Project's is based on information compiled by Dr. Evan Kirby, a Competent Person who is a registered member of the South African Institute for Mining and Metallurgy (SAIMM), which is a Recognised Professional Organisation (RPO) included in a list posted on the ASX website. Dr Kirby is a consultant who was engaged by the company to undertake this work. Dr Kirby is a Non-Executive Director of the company. Dr Kirby has sufficient experience, which is 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 by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Kirby consents to the inclusion of the data in the form and context in which it appears.

#### **FORWARD-LOOKING STATEMENTS:**

This document may include forward-looking statements. Forward-looking statements include, but are not necessarily limited to the Company's planned exploration program and other statements that are not historic facts. When used in this document, words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements. Although the Company considers that its expectations reflected in these 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 statement.

# **APPENDIX 1 – RC DRILLHOLE SUMMARY TABLE**

RC drillhole included in this Mineral Resource estimation. Drill hole coordinates WGS 84 UTM – Zone 37S. All TGC grades reported for the intersections seen below.

Drill Hole	East (m)	North (m)	Dip	Azimuth	EOH Depth (m)	From (m)	To (m)	Interval (m)	%TGC
MORC004	484939	8563344	-77.9	115.5	99	0	17	17	4.48
						22	78	56	12.40
						87	93	6	11.40

# **APPENDIX 2 – DD DRILLHOLE SUMMARY TABLE**

Note - drillhole coordinates WGS 84 UTM - Zone 37S.

DD drillholes drilled in November/December 2016 – refer to ASX announcement dated 6 November 2017 for additional information pertaining to these five drillholes

Drill Hole	East (m)	North (m)	Dip	Azimuth	EOH Depth (m)	From (m)	To (m)	Interval (m)	%TGC
						10	14	4	20.98%
						17.4	20.44	3.04	20.56%
						21.44	24.44	3	21.87%
MODD001	485,040	8,563,594	-55	153	65.68	26.44	35.44	9	14.03%
						38.44	42.44	4	12.44%
						43.44	53.86	10.42	17.58%
						59.44	65.68	6.24	9.34%
	T	T	ı	T	ı				
						19.04	21	1.96	19.58%
						31.64	33.05	1.41	8.43%
MODD002	485057	8563110	-55	43	63.14	37	43.06	6.06	13.16%
						44.71	46.76	2.05	8.62%
						56.54	58.13	1.59	14.50%
						62.69	63.14	0.45	8.06%
						14.85	21.42	6.57m	15.01%
						26.42	28.42	2m	5.52%
						30.63	31.31	0.68m	15.50%
						50.34	53.59	3.25m	13.60%
						63.11	64.42	1.31m	12.70%
			-55	115		66	66.78	0.78m	6.98%
						68	75.13	7.13m	21.10%
MODD003	484966	8563488			158.42	80.9	90	9.10m	13.53%
	.6.1566				2501.2	100	114	14m	13.09%
						116	122	6m	8.83%
						122	129	7m	18.15%
						129	137	8m	19.94%
						137	144	7m	13.76%
						144	146	2m	1.99%
						146	158	12.42m	19.53%
		•	•		•				
						17	20.54	3.54m	8.55%
						21.22	22	0.82m	7.98%
						22.89	24	1.15m	13.60%
						25.32	27	1.22m	10.30%
						27.39	28	0.65m	9.16%
						28.61	30	0.93m	6.89%
						30.05	32.54	2.35m	11.35%
						32.91	37.04	3.93m	17.08%
MODD004	484949	8563339	-60	91	97.04	37.32	39	1.68m	2.73%
						39	43	4m	12.50%
						43	45	2m	3.30%
						45	49	4m	17.52%
						56.54	59.54	3m	6.26%
						61.57	68.54	6.97m	17.69%
						70.42	79	8.58m	18.08%
						79	93.2	14.2m	10.98%
	1			<u> </u>		93.2	97.04	3.84m	1.47%

# DD drillholes drilled in November/December 2017

Hole ID		84 UTM ne 37s	EOH Depth	Dip	Azimuth	From	То	Interval	Average TGC	Average V <sub>2</sub> O <sub>5</sub>
	Easting	Northing	( <b>m</b> )			(m)	(m)	( <b>m</b> )	%	<b>%</b>
						17	39	22	16.2	0.31
						39	45	6	7.0	0.23
						45	55	10	17.6	0.35
					55	58	3	1.4	0.06	
					58	63	5	17.6	0.47	
MODD014	485052	8563473	143	53.42	104.55	63	68	5	Gneiss	Gneiss
MODD014	465052	6505475				68	104	36	16.5	0.60
						104	110	6	0.1	0.37
						110	118	8	11.0	0.48
						118	124	6	17.3	0.49
						124	137	13	11.6	0.32
						137	143	6	19.8	0.41

Hole ID	WGS 84 UTM - Zone 37s		EOH Depth	Dip	Azimuth	From	То	Interval	Average	Average
22010 22	Easting	Northing	(m)	2-p		(m)	(m)	(m)	TGC %	V <sub>2</sub> O <sub>5</sub> %
						17	31	14	16.7	0.36
					31	34	3	Gneiss	Gneiss	
				54.26	84.99	34	37	3	0.1	0.02
MODD015	485057	8563362	118			37	89	52	9.2	0.25
						89	95	6	3.7	0.07
						95	110	15	7.6	0.13
				110	118	8	Gneiss	Gneiss		

	Hole ID	WGS 84 UTM - Zone 37s		EOH Depth	Dip	Azimuth	From	То	Interval	Average	Average V <sub>2</sub> O <sub>5</sub> %
	22020 22	Easting Northing (m)	_	(m)			(m)	(m)	TGC %		
	MODD016 485	405407	485107 8563261				20	24	4	11.2	0.24
				80	54.46	70.90	24	35	11	1.7	0.15
		465107					35	49	14	8.6	0.26
							49	51	2	0.2	0.06

Hole ID		UTM - Zone 37s	EOH Depth	Dip	Azimuth	From	To (m)	Interval	Average	Average
	Easting	Northing	( <b>m</b> )	•		(m)	, ,	( <b>m</b> )	TGC %	V <sub>2</sub> O <sub>5</sub> %
						14	20	6	17.0	0.31
						20	23	3	6.1	0.23
						23	26	3	0.3	0.35
						26	38	12	Gneiss	Gneiss
						38	39.49	1.49	8.4	0.31
						39.49	47.66	8.17	Gneiss	Gneiss
						47.66	48.23	0.57	19.8	0.37
						48.23	50	1.77	Gneiss	Gneiss
					50	53	3	11.1	0.16	
					53	56	3	13.5	0.33	
MODD017	405150	8563180	131	53.71	67.48	56	64	8	13.0	0.30
MODDUTA	485158	8503180			67.48	64	70	6	1.8	0.08
						70	75	5	5.9	0.14
						75	78	3	0.2	0.02
						78	84	6	9.5	0.34
						84	94	10	6.4	0.10
						94	97	3	0.8	0.10
						97	107	10	7.1	0.15
					107	115	8	14.2	0.40	
					115	121	6	8.2	0.23	
					121	125	4	14.8	0.33	
						125	131.1	6.1	7.7	0.13

Hole ID		JTM - Zone 7s	Dip	Azimuth	EOH Depth	From	To (m)	Interval	Average	Average																	
	Easting	Northing			(m)	(m)		(m)	TGC %	V <sub>2</sub> O <sub>5</sub> %																	
						6	19	13	15.47	0.29																	
						19	20	1	1.29	0.28																	
						20	25	5	16.62	0.52																	
						25	28	3	5.78	0.48																	
						28	30	2	26.65	36.79																	
						30	34	4	0.92	0.10																	
						34	37	3	19.73	0.29																	
						37	44	7	2.87	0.12																	
				80							44	63	19	20.22	0.42												
			5 55			63	64	1	3.95	0.25																	
MODD018	485114	8563455			217.89	64	78	14	14.06	0.49																	
						78	79	1	1.93	0.11																	
						79	84	5	23.98	0.33																	
						84	86	2	8.31	0.26																	
						86	92	6	20.87	0.70																	
						92	99	7	9.07	0.32																	
						99	112	13	18.00	0.38																	
																								112	142	30	0.05
						142	165	23	15.97	0.49																	
				165	188	23	4.19	0.42																			
						188	220.89	32.89	16.14	0.78																	

Hole ID		JTM - Zone 37s	Dip	Azimuth	ЕОН	From	To (m)	Interval	Average	Average				
	Easting	Northing			Depth (m)	(m)	10 (,	(m)	TGC %	V <sub>2</sub> O <sub>5</sub> %				
						6.9	18	11.1	10.45	0.27				
						18	19	1	0.24	0.09				
						19	23	4	8.38	0.30				
						23	25	2	1.29	0.19				
						25	30	5	14.36	0.40				
						30	32	2	2.35	0.23				
				32	34	2	9.25	0.33						
				34	39	5	4.14	0.15						
					127.96		1			39	45	6	10.24	0.41
MODD019	485152	8563372	55	55 73		45	82	37	7.87	0.27				
						82	89	7	19.17	0.53				
						89	95	6	4.07	0.12				
						95	99	4	15.10	0.41				
						99	100	1	0.06	0.02				
						100	105	5	8.97	0.21				
						105	108	3	15.53	0.43				
						108	109	1	3.27	0.12				
						109	123	14	15.27	0.41				
						123	127.96	4.96	3.86	0.13				

Hole ID	WGS 84 UTM - Zone 37s		Dip	Azimuth	EOH	From	To	Interval	Average	Average
	Easting	Northing			Depth (m)	(m)	(m)	(m)	TGC %	V <sub>2</sub> O <sub>5</sub> %
						48	51	3	1.25	0.09
						51	57	6	15.77	0.35
				57	63	6	5.40	0.16		
				63	95	32	9.83	0.24		
MODD020	485212	8563291	55	62	125.29	95	98	3	1.26	0.03
						98	114	16	10.57	0.18
				114	118	4	1.14	0.03		
				118	123	5	15.42	0.43		
						123	125	2	0.05	0.02

Hole ID		WGS 84 UTM - Zone 37s								Azimuth	ЕОН			Interval	Average	Average
	Easting	Northing	Dip		Depth (m)	(m)	(m)	(m)	TGC %	V <sub>2</sub> O <sub>5</sub> %						
						22	23	1	14.21	0.40						
						23	24	1	0.05	0.09						
						24	34	10	16.43	0.32						
			55	55	161.29	34	38	4	1.77	0.21						
		8563465				38	41	3	14.08	0.60						
						41	42	1	1.67	0.51						
MODD022	485181					42	66	24	15.52	0.41						
						66	67	1	2.83	0.16						
						67	78	11	15.92	0.43						
						78	79	1	5.09	0.08						
						79	93	14	15.90	0.40						
						93	94	1	0.41	0.02						
						94	110	16	16.17	0.38						

	1	1		1	l	l
	1	110	116	6	6.02	
	1	116	132	16	9.71	
	1	132	133	1	0.21	

Hole ID		84 UTM - Zone 37s		Azimuth	EOH	From	To	Interval	Average	Average
	Easting	Northing	Dip		Depth (m)	(m)	(m)	(m)	TGC %	V <sub>2</sub> O <sub>5</sub> %
						7	20	13	14.16	0.33
						20	21	1	3.88	0.42
						21	25	4	12.26	0.25
				93	95.54	25	27	2	2.58	0.12
		8563297	55			27	35	8	13.30	0.31
						35	42	7	3.44	0.27
MODD030	485029					42	49	7	12.03	0.34
MODDOSO	403029					49	51	2	4.41	0.22
						51	57	6	15.77	0.29
						57	60	3	3.64	0.33
						60	61	1	19.30	0.35
						61	62	1	5.09	0.14
						62	65	3	12.27	0.30
						65	95.54	30.54	3.09	0.09

Hole ID		JTM - Zone 7s	Dip	Azimuth	Azimuth EOH		To (m)	Interval	Average	Average
	Easting	Northing			Depth (m)	(m)	,	(m)	TGC %	V <sub>2</sub> O <sub>5</sub> %
						15.44	23	7.56	9.98	0.27
						23	30	7	17.49	0.42
						30	31	1	1.23	0.63
						31	33	2	18.25	0.40
						33	36	3	6.37	0.09
		0500400		79	131.24	36	48	12	22.67	0.35
						48	49	1	2.37	0.06
MODDOOA	405004					49	51	2	17.25	0.27
MODD031	485001	8563422	55			51	56	5	6.14	0.18
						56	90	34	16.51	0.41
						90	94	4	0.30	0.02
						94	100	6	12.96	0.37
						100	101	1	0.69	0.03
						101	121	20	7.89	0.17
					121	124	3	2.48	0.09	
						124	131.24	7.24	12.53	0.30

Hole ID	WGS 84 UTM - Zone 37s		Dip	Azimuth	EOH Depth	From	То	Interval	Average	Average
Hole ID	Easting	Northing	Dip	Aziillulli	(m)	(m)	(m)	(m)	TGC %	V2O5 %
		8563199	55	63	87.59	6	7	1	0.43	0.19
	485085					7	23	16	15.06	0.28
						23	25	2	3.54	0.19
MODD032						25	63	38	12.00	0.26
						63	69	6	3.71	0.17
						69	71	2	17.15	0.70
						71	73	2	0.96	0.04

# **JORC CODE, 2012 EDITION - TABLE 1**

# Appendix to Announcement – 20 July 2018

# Section 1: Sampling techniques and data.

#### Criteria JORC Code Explanation **MUS Commentary** 2015 Field Program Sampling Nature and quality of techniques Samples have been taken from a Reverse Circulation (RC) drillhole sampling (eg cut channels, (MORC004) which was drilled by Mitchell Drilling, an Australian random chips, or specific company with a regional presence in Mozambique. Reverse circulation specialised industry standard measurement tools drilling was used to collect 1m samples (roughly 35kg) by an air cyclone appropriate to the minerals which was reduced to a 3kg sample by riffling. The drillhole collar under investigation, such as location was generated based on results from a recently flown airborne down hole gamma sondes, or SkyTEM EM survey (refer to previous MUS ASX announcements). handheld XRF instruments, A total of 77 intervals from RC drillhole MORC-004 were selected for etc). These examples should sampling. not be taken as limiting the Drillhole intervals were selected for sampling based on geological broad meaning of sampling. logging and samples showing no clear evidence of graphite Include reference to mineralisation have been excluded (except 1m into barren zones) from measures taken to ensure the analysis completed by SGS Randfontein, an accredited laboratory. sample representivity and the The samples were riffle split on a 50:50 basis, with one split pulverised appropriate calibration of any and analysed for Total Graphitic Carbon (TGC), Total Carbon (TC) and measurement tools or systems Total Sulphur (TS) using a Leco Furnace, and the remaining split held used. in storage. οf Aspects the determination of 2016 Field Program Five cored boreholes were drilled as part of the 2016 field program for mineralisation that Material to the Public Report. the Caula deposit. The diamond drilling (DD) was completed using a Boart Longyear LF 90 drill-rig and the core was recovered with HQ (III) In cases where ʻindustrv standard' work has been done equipment. The contractor used for the 2016 drill program is Major Drilling Group International, a Canadian-based operation with a local this would be relatively simple (eg'reverse circulation drilling presence in Mozambique. was used to obtain 1 m Drillhole collar locations were generated based on results from samples from which 3 kg was a flown airborne SkyTEM EM survey which was completed during 2015 pulverised to produce a 30 g (refer to previous MUS ASX announcements). Sampling is of HQ (III) DD core. A total of 298m of charge for fire assay'). In other cases more explanation may mineralisation were sampled over five DD boreholes. One DD hole be required, such as where (MOD004) have been twinned with an existing RC hole (MORC004) for there is coarse gold that has lithology and grade verification. The core is photographed in sequence as the core is packed inherent sampling problems. into the core trays at the drill site. Unusual commodities mineralisation types (eg The recovered DD core is cut lengthwise with a core splitting saw to produce 1m samples. Where lithological boundaries did not fit submarine nodules) warrant disclosure of detailed the 1m geometry or at end of hole sampling, the sample length was to information. be a minimum of 0.42m or a maximum of 1.68m. Core is halved for normal analyses. In the case of duplicate analyses (1 in 20), the core is quartered. In total 933kg of sample (Including duplicates) was taken over 296 samples for chemical analyses. The remaining core is halved in the mineralised zones to provide a quartered sample for metallurgical analysis. In total 334kg of sample over 296 samples was taken for metallurgical testwork. The remaining quarters and halves are retained in stratigraphic sequence in the core trays. The remaining core has been photographed, and the trays wrapped in cling-film, before it was put in container storage on site at the Mustang camp outside Montepuez. Samples were submitted for LECO analyses. Mineralised zone core as well as 1m boundaries into non-mineralised zone core were submitted for analysis. Initial metallurgical analysis and flow-sheet testwork was performed on 2 composited samples. The sampling was split between the oxidised and fresh mineralised zones. 2017 Field Program Eleven cored boreholes were drilled as part of the 2017 field program

Criteria	JORC Code Explanation	MUS Commentary
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).	MUS Commentary  for the Caula deposit. The diamond drilling (DD) was completed using Boart Longyear LF 90 drill-rigs and the core was recovered with PQ (III) and HQ (III) equipment. The contractor used for the 2017 drill program is Major Drilling Group International, a Canadian based operation with a local presence in Mozambique.  Drillhole collar locations were generated based on results from a flown airborne SkyTEM EM survey which was completed during 2015 (refer to previous MUS ASX announcements), and from the 2016 core drilling program.  Sampling is of PQ (III) and HQ (III) DD core. Sampling has been completed.  The core is photographed in sequence as the core is packed into the core trays at the drill site.  The recovered DD core is cut lengthwise with a core splitting saw to produce 1 m samples. Where lithological boundaries did not fit the 1m geometry or at end of hole sampling, the sample length was to be a minimum of 0.50m or a maximum of 2.00m.  Core is halved for normal analyses. In the case of duplicate analyses (1 in 20), the core is quartered.  The remaining core is halved in the mineralised zones to provide a quartered sample for metallurgical analysis.  The remaining quarters and halves are retained in stratigraphic sequence in the core trays. The remaining core has been photographed, and the trays wrapped in cling-film, before it is put in container storage on site at the Mustang camp outside Montepuez.  Samples were submitted for LECO analyses. Mineralised zone core as well as 1 m boundaries into non-mineralised zone core were submitted for analysis.  2015 Field Program  Reverse circulation drilling was used to drill a 5.5 inch diameter borehole (MORCO4). RC drill chips were collected by an air cyclone at 1m intervals for logging and sampling. Approximately 35kg per metre was collected by an air cyclone which was reduced to a 4kg sample by riffling.  Reflex Ezy shot tools were used to take down-hole survey measurements to record drilling equipment was HQ (III) sized.  Drilling was planned to b
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results</li> </ul>	2015 Field Program The condition and qualitative estimates of RC sample recovery for MORC004 were determined through visual inspection of the 1m sample

Criteria	JORC Code Explanation	MUS Commentary
Criteria	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.	bags and recorded at the time of sampling. A hard copy and digital copy of the sampling log are maintained for data verification. Recovery has been good with 35kg + being returned per metre drilled. Due to the early stage of exploration work for the Caula project, no relationship between sample recovery and grade is known to exist at this point.  2016 Field Program  The condition and qualitative estimates of DD sample recovery were determined through visual inspection and measurement of the drilling core runs and recorded at the time of recovery at the drill rig. A hard copy and digital copy of the sampling log are maintained for data verification.  Core recovery measurements are recorded for every borehole.  Where recoveries were found to be less than 95%, the drill runs were shortened to 1m, and drilling speed lowered to improve recovery.  In some instances in the oxidised zone (faulting, jointing and severe oxidation), core losses were unavoidable. These losses are recorded, and have been zero rated in terms of grade for the modeling of the Caula graphite resource. The average core recovery for the oxidised zone is 83.1%.  Recoveries in the fresh zone were very good at an average of 98.8%.  2017 Field Program  The condition and qualitative estimates of DD sample recovery were determined through visual inspection and measurement of the drilling core runs and recorded at the time of recovery at the drill-rig. A hard copy and digital copy of the sampling log are maintained for data verification.  Core recovery measurements are recorded for every borehole.  Where recoveries were found to be less than 95%, the drill runs were shortened to 1 m, and drilling speed lowered to improve recovery.  In some instances in the oxidised zone (faulting, jointing and severe oxidation), core losses were unavoidable. These losses are recorded, and have been zero rated in terms of grade for the modeling of the Caula graphite resource. The average core recovery for the oxidized zone is 91%.
Logging	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> <li>Recoveries in the fresh zone were very good at an average of 98%.</li> <li>2015 Field Program RC drill-chip samples were geologically logged by trained geologists. The drillhole (MORC004) is considered by MUS to be part of a maiden drill program aimed at identifying shallow graphite mineralisation. Mustang used the results from this maiden program to prioritise target areas, which then become the focus of the 2016 drillhole definition programs. Whilst the aim of this maiden drill program was not to produce a Mineral Resource estimate MORC004 was used for resource estimation purposes in this resource estimate.</li> <li>Logging of RC drill holes includes recording of lithology, mineralogy, mineralisation, weathering, colour and other features of the samples. RC Chip trays are photographed.</li> <li>Geological descriptions and estimates of visual graphite percentages on preliminary logs are semi-quantitative. All drillholes were logged in full.</li> <li>2016 Field Program</li> <li>All holes drilled were logged in full and sampled by the site geologists.</li> <li>All the logged information which includes depth, lithology, mineral assemblage, structural information, Cg mineralisation (laboratory data), collar survey and logging geologists are recorded in the field logging sheets and in digital format.</li> <li>The recovered core is recorded in sequence as digital photographs.</li> <li>The analytical samples were shipped by road to the SGS Randfontein laboratory in South Africa for analysis. The analyses were completed by SGS Randfontein, and have been used to estimate the grade of the Caula deposit in this CPR.</li> <li>Umpire samples have been identified and were dispatched to</li> </ul>

Criteria	JORC Code Explanation	MUS Commentary
		<ul> <li>5% each of standards, blanks and duplicates are included.</li> <li>Sample preparation is done by SGS in Johannesburg, before the</li> </ul>
		prepared samples are analysed for content determination.  • Sampling procedure include drying, crushing, splitting and
		pulverizing ensures that 85% of the sample is 75 micron or less in size. A split of the sample is analysed using a LECO analyser to determine
		<ul> <li>carbon in graphite content.</li> <li>The sample procedure standards followed are internal to SGS and</li> </ul>
		<ul><li>are listed below:</li><li>WGH 79 (Receive Sample Weight), SCR 32 (Sample Screening),</li></ul>
		CSA01V (Total Carbon by LECO), CSA05V (Graphitic Carbon by LECO), CSA06V (Sulphur by LECO).  QC measures include the submission of duplicate samples (5% of
		samples), blanks (5% of samples) and standards (5% of samples) over and above the internal controls at SGS.
		• The smallest core sample dimension after cutting is 29mm. The largest category flake size is > 8 mesh or 2.38mm. The sample size
		exceeds the target material size comfortably.     The metallurgical samples consist of quartered core, sampled and
		<ul><li>bagged generally per metre.</li><li>Sampling for metallurgical testing is complete, and included;</li></ul>
		Receipt of graphite samples, Formation of composites, Bond rod mill grindability, Head assay, Particle size distribution (PSD) and fraction
		assay on head samples, Rougher flotation, Rougher and multiple regrind and cleaner flotation, Final concentrate PSD and fraction assays.
		<ul> <li>The metallurgical composites were batched by the laboratory metallurgists once the results from the initial laboratory work at SGS</li> </ul>
		Randfontein had been received.
		2017 Field Program The majority of samples were moist (from the DD process) at recovery,
		with ambient temperatures sufficiently high to dry the oxidised core before the commencement of sampling.
		Field QC procedures were adopted as follows over and above the laboratory internal controls:
		• Insertion rate for blanks – at least 5% (1 in 20)
		<ul> <li>Insertion rate for standards – at least 5% (1 in 20)</li> <li>Insertion rate for duplicates – at least 5% (1 in 20)</li> </ul>
		<ul> <li>Umpire duplicates – at least 5% (1 in 20)</li> </ul>
		<ul> <li>Four Graphite standards (GGC008, GGC005, GGC003 and GGC002) were obtained from Geostats Pty Ltd to monitor analysis by</li> </ul>
		the laboratory for graphitic carbon, carbon and sulphur. As far as possible 1m DD composite sampling has been undertaken for
		this phase of the exploration program.
		<ul> <li>The core is split by saw and half core is submitted for analyses generally as 1 m samples. When a duplicate sample is submitted, the core is quartered.</li> </ul>
		<ul> <li>Mineralised samples are submitted for LECO analyses as well as for ICP Multi-element analyses.</li> </ul>
		<ul> <li>Within the total samples dispatched a random sequence of at least</li> <li>5% each of standards, blanks and duplicates are included.</li> </ul>
		• Sample preparation is done by SGS in Johannesburg, before the
		prepared samples are analysed for content determination.  Sampling procedure include drying, crushing, splitting and
		pulverizing ensures that 85% of the sample is 75 micron or less in size. A split of the sample is analysed using a LECO analyser to determine
		carbon in graphite content.  The sample procedure standards followed are internal to SGS and
		<ul><li>are listed below:</li><li>WGH 79 (Receive Sample Weight), SCR 32 (Sample Screening),</li></ul>
		CSA01V (Total Carbon by LECO), CSA05V (Graphitic Carbon by LECO), CSA06V (Sulphur by LECO).
		• QC measures include the submission of duplicate samples (5% of samples), blanks (5% of samples) and standards (5% of samples) over
		<ul><li>and above the internal controls at SGS.</li><li>The smallest core sample dimension after cutting is 29mm. The</li></ul>
	l	cacc. cc. cample american and outling to zonim. The

Criteria	JORC Code Explanation	MUS Commentary
Criteria  Quality of assay data and	The nature, quality and appropriateness of the	largest category flake size is > 8 mesh or 2.38mm. The sample size exceeds the target material size comfortably.  The metallurgical samples consist of quartered core, sampled and bagged generally per metre.  Sampling for metallurgical testing is complete, and included; Receipt of graphite samples, Formation of composites, Bond rod mill grindability, Head assay, Particle size distribution (PSD) and fraction assay on head samples, Rougher flotation, Rougher and multiple regrind and cleaner flotation, Final concentrate PSD and fraction assays. The metallurgical composites will be batched by the laboratory metallurgists once the results from the initial laboratory work at SGS Randfontein had been received.  2015 Field Program A total 77 samples were analysed by SGS Laboratories in South Africa
laboratory tests	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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	for Total Graphitic Carbon (TGC), Total Carbon (TC) and Total Sulphur (TS) using a Leco Furnace. Detection limits for these analyses are considered appropriate for the reported assay grades and adequate for this phase of the exploration program.  No geophysical tools were used to determine any element concentrations.  The assaying and laboratory procedures used are appropriate for the material tested.  SGS carried out sample preparation checks for fineness as part of their internal procedures to ensure the grind size of 85% passing 75 micron was being attained. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, and repeats as part of their in-house procedures.  2016 Field Program  • All samples are labelled with a unique sequential number with a sample ledger recording all samples.  • QA/QC samples are included in a random sequence at a frequency of at least 5% each for standards, blanks and duplicates.  • The laboratory uses internal standards in addition to the standards, blanks and duplicates inserted by Mustang.  • The standards are supplied by an external and independent third party. Four standards were used for the laboratory testwork; GGC-08 and GGC-05, GGC-03 and GGC-02.  • The blanks are made up from non- graphitic rock. The duplicates are a quartered sample of the original halved cores. The umpire samples were selected from the prepared pulps of initial samples.  • The detection limits are deemed sufficient for the purpose of the Caula Mineral Resource estimation.  • The samples were analysed by SGS, with sample preparation done at the Randfontein laboratory in Johannesburg. Sampling procedures are listed above and includes drying, crushing, splitting and pulverizing such that 85% of the sample is 75 micron or less in size. A split of the sample will be analysed using a LECO analyser to determine carbon in graphite carbon content.  • Laboratory testwork was completed during the first quarter of 2017, and the Metallurgy testwork followed on in the sec

Criteria	JORC Code Explanation	MUS Commentary
		umpire samples were selected from the prepared pulps of initial samples.
		<ul> <li>The detection limits are deemed sufficient for the purpose of the Caula Mineral Resource estimation.</li> <li>The samples were analysed by SGS, with sample preparation done at the Randfontein laboratory in Johannesburg. Sampling procedures are listed above and includes drying, crushing, splitting and pulverising such that 85% of the sample is 75 micron or less in size. A split of the sample were analysed using a LECO analyser to determine carbon in graphite carbon content.</li> </ul>
		Laboratory testwork were completed during the second quarter of 2018, and the Metallurgy testwork followed on in the second quarter and third quarter of 2018.
Verification of sampling and assaying	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.	2015 Field Program  Mr. Johan Erasmus, an independent geologist, visually verified the geological observations reported in the RC drillhole (MORC004). No twin holes have been drilled up to the end of the 2015 program. Sample information is recorded at the time of sampling in electronic and hard copy form. Data is documented by Mr. Johan Erasmus and primary data is kept in a Microsoft Access database. A copy of the data is stored in Mr. Erasmus' office as well as in Mustang's office in Pretoria, RSA. Verification was based on the use of duplicates, standards and blanks. Assay data was reported as received from the laboratory. No adjustments or calibrations have been made to any assay data. The laboratory data from borehole MORC004 was included in the resource estimation for the Caula graphite project.  2016 Field Program  • The Exploration Manager and field geologists are in the employment of Mustang, and external oversight is established with the contracting of Sumsare Consulting, a South-African consulting company. Sumsare is supplying an external Competent Person.  • The twinning of RC boreholes was done by DD in 1 instance as a correlation exercise. MODD004 was drilled as a duplicate for MORC004. A comparison of the analytical data obtained from these twinned holes was completed and statistically these samples were found to be sets from the same population (95% confidence).
		<ul> <li>The primary data is kept in the company office in Pretoria under the custodianship of the Exploration Manager. The CP has a duplicate dataset at his office in South Africa, and the company has a data set in the Australian office.</li> <li>Assay data is not adjusted, and is released to the market as it is received from the laboratory.</li> <li>2017 Field Program</li> <li>The Exploration Manager and field geologists are in the employment of Mustang, and external oversight is established with the contracting of Sumsare Consulting, a South-African consulting company. Sumsare is supplying an external Competent Person.</li> <li>The primary data is kept in the company office in Pretoria under the custodianship of the Exploration Manager. The CP has a duplicate dataset at his office in South-Africa, and the company has a dataset in the Australian office.</li> </ul>
		<ul> <li>Assay data is not adjusted, and is released to the market as it is received from the laboratory.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> </ul>	2015 Field Program Collar locations were surveyed with a Garmin 62/64s GPS Device. The Garmin devices typically have an error of +/- 7m. All spatial data was collected in WGS 84 and the datum used is UTM Zone 37 South. A DEM surface was produced by SkyTEM as part of the recent (2015) airborne geophysics program completed by Mustang.  2016 Field Program
	Quality and adequacy of topographic control.	A hand-held Garmin 62/64s GPS was used to site the drill holes (x, y horizontal error of 7 metres) and reported using WGS 84 grid and UTM datum zone 37 south.

Criteria	JORC Code Explanation	MUS Commentary
		<ul> <li>Topographic control is good due to the SkyTEM survey that was completed during 2015. A DEM surface was produced by SkyTEM as part of the EM geophysics program.</li> <li>The borehole dip and azimuth was surveyed at 3 m intervals from the bottom of the borehole with a Reflex EZ-Trac tool.</li> <li>Final borehole collar positions are to be surveyed with a differential GPS survey instrument, by an independent external surveyor.</li> <li>The core was oriented with a Reflex Tool.</li> <li>2017 Field Program</li> <li>A hand-held Garmin 62/64s GPS was used to site the drill holes (x, y horizontal error of 7 metres) and reported using WGS 84 grid and UTM datum zone 37 south.</li> <li>Topographic control is good due to the SkyTEM survey that was completed during 2015. A DEM surface was produced by SkyTEM as part of the EM geophysics program.</li> <li>The borehole dip and azimuth was surveyed at 3 m intervals from the bottom of the borehole with a Reflex EZ-Trac tool.</li> <li>Final borehole collar positions were surveyed with a differential GPS survey instrument, by an independent external surveyor.</li> <li>The core was oriented with a Reflex Tool.</li> </ul>
Data spacing and distribution	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.	2015 Field Program  MORC004 was drilled at an inclination of on average at -77 degrees. Due to the early stage of the exploration program, there is no nominal sample spacing. This borehole has been included in the 2017 resource estimation for the Caula project, since additional drilling was completed during 2016. Drillhole collars have been planned to test EM anomalies. Samples have been composited to a maximum of one metre for the RC samples.  2016 Field Program  The spacing of the five DD drillholes was at a grid of approximately 133m.  All five of the DD drillholes were inclined on average at between -55° to 60°. The collar details are tabulated in Appendix 1.  Sample compositing for the DD program has not been applied.  2017 Field Program  The spacing of the eleven DD drillholes was at a grid of approximately 80m.  All eleven of the DD drillholes were inclined on average at between -55° to 60°. The collar details are tabulated in Appendix 1.  Sample compositing for the DD program has not been applied.
Orientation of data in relation to geological structure	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.	2015 Field Program  The orientation of the RC holes were designed based on regional geology interpretations and designed to test the broad stratigraphy. The collar details are tabulated in Appendix 1.  No sampling bias is considered to have been introduced at this early stage of the project.  2016 Field Program  The orientation of the DD holes were planned based on the regional geology interpretation and planned to test the broad stratigraphy. The collar details are tabulated in Appendix 1.  No sampling bias is considered to have been introduced at this early stage of the project.  From the previous surface mapping of the area, the regional foliation dips at steep angles of between 50 and 70 degrees to the west.  The drilling was hence planned at an inclined orientation of 55° from the horizontal in an easterly direction across strike. From prior experience, drilling at angles shallower than 55° is usually problematic. The SkyTEM EM data was used to fix a strike direction.  The borehole dip and azimuth was surveyed at 3m intervals from the bottom of the borehole with a Reflex EZ-Trac tool.  Final borehole collar positions are to be surveyed with a differential GPS survey instrument, by an independent external

Criteria	JORC Code Explanation	MUS Commentary
Sample	The measures taken	surveyor.  The core was oriented with a Reflex Tool.  The structural analysis shows a regional foliation dip at an average of 59°. So far an association between structure and Cg grade has not been established, but hinge zones are suspected to improve Cg grades, and potentially flake sizes.  2017 Field Program  The orientation of the DD holes were planned based on the regional geology interpretation and planned to test the broad stratigraphy. The collar details are tabulated in Appendix 1.  No sampling bias is considered to have been introduced at this stage of the project.  From the previous surface mapping of the area, the regional foliation dips at steep angles of between 50 and 70 degrees to the west.  The drilling is hence planned at an inclined orientation of 55° from the horizontal in an easterly direction across strike. From prior experience, drilling at angles shallower than 55° is usually problematic. The SkyTEM EM data was used to fix a strike direction.  The borehole dip and azimuth was surveyed at 3m intervals from the bottom of the borehole with a Reflex EZ-Trac tool.  Final borehole collar positions were surveyed with a differential GPS survey instrument, by an independent external surveyor.  The core is oriented with a Reflex Tool.
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples were stored at the company's field base in a locked and sealed shipping container until it was dispatched to the laboratory in Johannesburg.</li> <li>Samples were transported in sealed containers by road to South Africa for analysis. The sample export procedure as required by the Mozambican government was followed, and the samples were delivered to SGS in Johannesburg for analysis.</li> <li>No signs of tampering were reported by the laboratory upon sample receipt.</li> <li>2016 Field Program         <ul> <li>Samples were stored at the company's field base until dispatched to the laboratory. Samples were transported in sealed containers by road, to South Africa for analysis.</li> <li>The sample export procedure as required by the Mozambican government was followed, and the samples were delivered to SGS in Johannesburg for analysis.</li> <li>The sample logistics between Mozambique and South Africa are handled in-house by Mustang.</li> <li>No signs of tampering were reported by the laboratory upon sample receipt.</li> <li>The sample export procedure as required by the Australian government was followed, and the samples were delivered to SGS Malaga in Perth.</li> <li>The sample export procedure as required by the Australian government was followed, and the samples were delivered to SGS Malaga in Perth for analysis.</li> <li>No signs of tampering were reported by the laboratory upon sample receipt.</li> <li>The remaining core is kept in a safe facility under guard at the site office in Montepuez in Mozambique.</li> </ul> </li> <li>2017 Field Program         <ul> <li>Samples are stored at the company's field base until dispatched to the laboratory. Samples are transported in sealed containers by road to South Africa for analysis.</li> <li>The sample export procedure as required by the Mozambican government is followed, and the samples are delivered to</li></ul></li></ul>
		The sample logistics between Mozambique and South-Africa are handled in-house by Mustang. The remaining core is kept in a safe facility under guard at the site office in Montepuez in Mozambique.

Αι	ıdits	or	The results of any	•	No external audits have been undertaken up to this stage of
re	views		audits or reviews of sampling	work.	
			techniques and data.		

# **Section 2: Reporting of exploration results**

Criteria	Explanation	MUS Commentary
Mineral tenement and land tenure status	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.	Mustang's Caula Graphite Project area consists of one prospecting & exploration licence 6678L covering a total area of 3 185.76ha The Licence is held in the name of Tchaumba Minerais S.A. Mustang Resources holds an 80% interest in Tchaumba Minerais S.A. via its wholly owned subsidiaries Balama Resources Pty Ltd (Australia) and Mustang Graphite Lda. The supporting documents are attached in Appendix 6. Refer to ASX announcement dated 20 October 2014 for full details regarding ownership and earn-in rights.  All statutory requirements were acquired prior to exploration work. All licences have been awarded and issued The Company is not aware of any impediments relating to the licence or the area.
Exploration done by other parties	Acknowledgmen t and appraisal of exploration by other parties.	No prior exploration work done by other parties on the licence areas except for the 1:250,000 geological maps generated by the Government of Mozambique and country wide airborne magnetics and radiometric geophysical surveys flown over the region by the Government of Mozambique.
Geology	Deposit type, geological setting and style of mineralisation.	The area is predominantly underlain by Proterozoic rocks that form a number of gneiss complexes that range from Palaeo to Neoproterozoic in age (Boyd et al., 20 10). The Mustang project area is underlain by metamorphic rocks of the Neoproterozoic Lurio Group within the Xixano Complex (Brice, 2012) in north-eastern Mozambique. The Xixano complex is composed dominantly of mafic to intermediate orthogneiss with intercalations of paragneiss, meta-arkose, quartzite, tremolite-rich marble and graphitic schist. Graphite rich units are comprised of sequences of metamorphosed carbonaceous pelitic and psammitic (sandstone) sediments within the Proterozoic Mozambique Belt (Brice, 2012). The metamorphic grade is typically of amphibolite facies.
Drill hole Information	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:  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.	Ten RC holes were drilled in late 2015 as part of an EM survey verification drilling program. Refer to ASX announcement dated 10 June 2015 for further information and results. Only one of these holes (MORC004) is used in this estimate. All the other holes were drilled on adjacent areas. Seven DD boreholes were drilled between October and November of 2016. These holes were drilled to draw a comparison with some of the RC holes drilled during 2015, and to collect data for an initial JORC (2012) compliant resource statement. Five of these boreholes were used in this resource estimate. The remaining two DD boreholes were drilled on adjacent areas. Eleven DD boreholes were drilled during November and December 2017. These holes were drilled to collect data for an updated JORC (2012) compliant resource statement. Information pertaining to drilling completed and used in this CPR is provided in Appendix 1 and Appendix 2.

Criteria	Explanation	MUS Commentary
		7
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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	Weighted average was applied for sample length. No grade truncations were applied. Grade-tonnage curves were produced and could be used to determine the effect of cut-off grades on remaining mineralised tonnages. The calculated grade is weighted for representative mass, as calculated in Voxler.
	be clearly stated.	
Relationship between mineralisation widths and intercept lengths	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 (eg'down hole length, true width not known').	No relationship between mineralisation widths and intercept lengths is known at this stage.  Assay grades have been reported and tabulated by sample interval for the 2014 drill program and are reported in ASX announcement dated 10 June 2015. These results are not used in this estimate.  Assay grades have been reported and tabulated by sample interval for the 2015 drill program and are reported in ASX announcement dated 10 June 2015. Only the results from Borehole MORC004 are used in this estimate. The cored DD program for 2016 has been completed with structural data collected from orientated core intersections. The structural analysis shows foliation that follows the regional orientation of the mineralised zones. The mineralised zone dips at an average of 59° to the west. Analytical results have been received from both the laboratory and metallurgical testwork. The laboratory and metallurgy work was completed during 2017.  The cored DD program for 2017 has been completed with structural data collected from orientated core intersections. The structural analysis is in progress. Samples have been submitted for laboratory and metallurgy testwork.
Diagrams	• 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.	Appropriate sections plans and diagrams are included in the body of the initial CPR.
Balanced reporting	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	The report is considered to be balanced.  The 2015 drilling and sampling results have been reported in the ASX announcement dated 10 June 2015. Borehole MORC004 was used in this CPR, since it occurs within the Caula project area.  The 2016 drilling and sampling results for five boreholes were used in the most recent CPR. These five boreholes occur within the Caula project area. Core from these five boreholes were used to determine Total Graphitic Carbon and Vanadium Pentoxide content.  The 2017 drilling and sampling results for eleven boreholes were used with the previous drilling results in the most recent Resource Statement. These

Criteria	Explanation	MUS Commentary
	Results.	seventeen boreholes occur within the Caula project area.
Other	• Other	Regional geological mapping and regional airborne geophysics (magnetics
substantive exploration	exploration data, if meaningful and material,	and radiometrics) have been obtained from the Mozambican Government.  In addition, Mustang commissioned an airborne EM geophysics survey
data	should be reported	(SkyTEM) across 6678L and the adjacent tenements. The geophysics
	including (but not limited	datasets were used to aid in interpretations and plan the 2015 and 2016
	to): geological observations; geophysical	drill-hole programs' collar locations.  Laboratory analyses were performed by SGS Randfontein in
	survey results;	Johannesburg, and % Total Graphitic Carbon, % Total Carbon and % Total
	geochemical survey	Sulphur was analysed for.
	results; bulk samples -	No bulk samples have been taken.
	size and method of treatment; metallurgical	Metallurgical testwork was completed on composite samples made up from quartered core samples of the five cored boreholes. Clays in the oxidised
	test results; bulk density,	zone (that increase settling times) have been observed as potential
	groundwater,	deleterious materials as part of this testwork.
	geotechnical and rock characteristics; potential	Eleven boreholes were completed during 2017. These boreholes are in the process of being sampled for metallurgy.
	deleterious or	Groundwater work and Geotechnical work have not yet been undertaken.
	contaminating	
	substances.	The first metallurgy testwork was completed by SGS Malaga in Perth. This was standard testwork requested to establish the metallurgical properties
		of this deposit before advanced flow-sheet development can be
		undertaken.
		The composited samples were tested for grindability and the Bond rod mill index suggests that the Caula host rock is softer than comparable graphite
		deposits.
		The settling time for the oxidised composite sample was noted to be longer
		due to the presence of clays in this zone.  Testwork on Met Sample 2 indicates that the sample is very amenable to
		beneficiation by froth flotation realising a final concentrate stream grading
		94.9% TGC at 96.3% recovery. After screening of the concentrate, >50%
		of the concentrate falls in the large and extra-large flake classes and was upgraded to >97% TGC.
		Testwork on Met Sample 1 indicates that the sample is amenable to
		beneficiation by froth flotation using a single stream flotation scheme,
		realising a final concentrate stream grading 97.5% TGC at 80.3% recovery. After screening of the concentrate, >43% of the concentrate falls
		in the large and extra-large flake classes and was upgraded to >97% TGC.
		Subsequent to the completion of the initial metallurgical testwork, an
		optimisation program was completed by Wave International and IMO which indicates that the + 180 micron flake from the oxide material can be
		upgraded to 98% TGC.
		Quarter core from all of the 2017 drilling was sent to Nagrom Laboratories,
		Perth for metallurgical testwork during 2018. This core has been catalogued and composites of core, representing various styles of
		mineralisation, have been selected for a range of metallurgical testwork.
		Three levels of compositing are being implemented, the first level
		combines samples from a continuous intersection in a single borehole.  The next level combines similar samples (in terms of grade and oxidation)
		from zones of boreholes. The third level combines similar samples (in
		terms of grade and oxidation) into master composites.
		A first level composite of core was selected to test the amenability of the deposit to sensor based ore sorting. The sample selected was a
		continuous portion of quartered NQ diamond drill core from 58m to 88m
		downhole in borehole MODD015. The sample was chosen to represent
		fresh material with moderate grades of graphite and vanadium and no
		visible barren rock intersections.  First level core composites from borehole MODD015 were also used for a
		preliminary investigation of the treatment characteristics of the deposit in
		the area covered by the 2017 drill program. Three composite samples
		were made up from continuous portions of diamond drill core. The oxide

Criteria	Explanation	MUS Commentary
		and transition samples were from 17 to 30, and 37 to 57 meters respectively. The fresh composite was a sub sample of the composite used to evaluate sensor based ore sorting. Grinding and froth flotation testwork for graphite concentrate recovery was carried out at the Independent Metallurgy laboratory, Perth. Results of this work demonstrate significantly improved performance in terms of graphite concentrate sizing compared with all previous metallurgical testwork.
Further work	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.	Additional areas on Prospecting Licences 5873L and 6678L have been identified for future drilling.  Potential extensions are discussed in the Interpretation and Conclusions in

# **Section 3: Estimation and reporting of mineral resources**

Criteria	Explanation	MUS Commentary
Database integrity	Measures     taken to ensure that     data has not been     corrupted by, for     example, transcription     or keying errors,     between its initial     collection and its use     for Mineral Resource     estimation purposes.	The project data is kept in set directories and before any results are released to the market, the CP and the Mustang Exploration Manager would check the calculations independently.  Manual checks between datasets as received from the laboratory and compared with the database.
	Data validation procedures used.	
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.  If no site visits have been undertaken indicate why this is the case.	The CP visited the site for extended periods during the phases of exploration. The date and duration of each visit is listed below;  - 19 Sept 2014 to 06 Oct 2014, 18 Days, site visit, EM Line preparation, drilling verification,  - 27 Oct 2015 to 26 Nov 2015, 31 Days, site visit, RC drilling verification, sampling verification.  - 06 Oct 2016 to 09 Dec 2016, 53 Days, site visit, DD drilling verification, logging and sampling checks and verification.  - 10 Nov 2017 to 8 Dec 2017, 28 Days, site visit, DD drilling verification, sampling verification.  - 17 Jan 2018 to 29 Jan 2018, 12 Days, site visit, DD drilling verification, logging and sampling checks and verification.

Criteria	Explanation	MUS Commentary
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both</li> </ul>	The geological mapping of this area is complicated by the relatively deep soil profile and the lack of outcrop. The single biggest element of confidence is provided by the extremely strong EM signature of the graphite mineralisation which occurs associated with the vanadium bearing roscoelite. The relationship between the EM data and the confirmed mineralisation by drilling is significant. The absence of EM response to non-mineralisation in the adjacent quartziztic schist is sufficient to accurately place exploration targets.  The graphite and roscoelite mineralisation is easy to distinguish and hence easy to delimit. Attaching boundaries to mineralised areas is not subject to complicated interpretation, since the resource boundaries are clear. The amphibolite to granulite facies of metamorphism has displayed a concentration of the graphitic and roscoelite mineralisation in the amphibolitic portion of the host rock. The granulitic proportion is the lesser lithology in terms of volume. Continuity along strike appears to be consistent within the similar EM signature. Continuity in the Z-direction is truncated by granulitic facies at infrequent intervals.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	This V <sub>2</sub> O <sub>5</sub> deposit is divided into an upper Oxidised Zone and a lower Fresh Zone. The plan footprint covers an area of 12.2 ha, and the plan width at this stage is 330 m. The top of the Oxidised Zone is between 13 and 20 metres below surface across the various boreholes. This elevation in the model is at an average of 517m above mean sea level (mamsl). This horizon was modelled as the top of the oxidised zone of mineralisation, with the base of this horizon determined by the lowermost of the oxidised logged samples. The average elevation for the base of the oxidised zone comes in at 480 mamsl. The depth of oxidation along trajectory varies between 51 and 66m for the cored boreholes, while the lowest depth of oxidation for the reverse circulation borehole is 59m (drilled at a steeper angle). In terms of depth this surface is a flat plane which is an average of 48m below surface (vertical). On average the Oxidised zone is then 37m thick. The base of the Fresh zone is delineated by the extent of drilling, and is truncated by drilling depth. The deeper fresh mineralised zone is open at depth, and hence the fresh model will significantly expand with future drilling. At the moment this zone is modelled to a vertical depth of 180 m in MODD018. This translates to a vertical thickness of at least 132m for the fresh zone.

Criteria	Explanation	MUS Commentary
Estimation	The nature and	The geological models used for the resource estimation was created in
and	appropriateness of the	Voxler (Version 4.2.584), a modelling package developed and
modelling	estimation technique(s)	distributed by Golden Software in Colorado.
Techniques	applied and key assumptions, including	The dataset was populated with the lithological, sample interval and quality data and then interrogated by the software for the required
	treatment of extreme	outcomes. Parameters controlling the modelling operation (such as
	grade values,	interpolator selection and conformable relationships) are defined and
	domaining, interpolation	maintained in the model framework.
	parameters and	The Gridder module interpolates scattered point data onto a uniform
	maximum distance of extrapolation from data	lattice. This type of lattice is used to create several types of output graphics, including Isosurfaces. A uniform lattice is a one-, two-, or
	points. If a computer	three-dimensional orthogonal array of data points arranged in the XYZ
	assisted estimation	directions with points equally spaced in each direction. The distance
	method was chosen	between data points in the X, Y, and Z directions is the same
	include a description of computer software and	throughout the lattice, but the X separation distance is not necessarily
	parameters used.	the same as the Y or Z separation distances. The range and resolution of the output lattice may be specified along with the interpolation
	The availability of	method and associated parameters. Point data is the input type for the
	check estimates,	Gridder module. The Gridder module creates a uniform lattice as an
	previous estimates	output. This lattice spacing is set to 25 x 25 x 25m³ for this project.
	and/or mine production	The gridding method used is the inverse of distance squared. For this horizontal sample spacing Kriging is not appropriate.
	records and whether	The remaining model geometry is defined by the settings of the
	the Mineral Resource estimate takes	anisotropy tool as defined for the X, Y and Z directions during gridding.
	appropriate account of	The maximum search radius in the Y-direction (N-S orientation) was
	such data.	set at 100 m. The maximum search radius in the X-direction (E-W orientation) was set at 50 m. The search radius for the vertical
	<ul> <li>The assumptions</li> </ul>	component (Z- dimension) is set at 1 m to coincide with the average
	made regarding	sampling width of 1 m along the drillhole trajectory. Structural
	recovery of by-	boundaries are not applied at this stage, since the drilled boreholes
	products.	were all terminated within the graphitic mineralised zone. The models
	Estimation of	are thus defined and delimited within an open mineralised zone.  The Isosurface module creates an isosurface through an input lattice.
	deleterious elements or other non-grade	An isosurface is a surface of constant value in a three-dimensional
	variables of economic	volume. In this instance the isosurfaces are various grades of $V_2O_5$ .
	significance (eg sulphur	The isosurface separates regions of less than the selected isovalue from regions with values greater than the selected isovalue. All points
	for acid mine drainage	on the isosurface have the same value i.e. 0.25% V <sub>2</sub> O <sub>5</sub> . This module
	characterisation).	provides a very quick method for constructing polygonal surface
	<ul> <li>In the case of</li> </ul>	models from a lattice. The algorithm computes lattice cell interactions
	block model	and combines them into triangle meshes for rendering. An Isosurface
	interpolation, the block size in relation to the	module can be exported to different file types, including IV, 3D DXF, and XYZC data files in the following data file formats: CSV, DAT, SLK,
	average sample	TXT, XLS, and XLSX. The component value is the same for every
	spacing and the search	point in the isosurface.
	employed.	A uniform grid with nodes is generated for each volume. Given the
	<ul> <li>Any assumptions</li> </ul>	drilling spacing, the grid cell size is set at 25 x 25 x 25 m <sup>3</sup> . It is pointless to grid to a smaller size given that the average borehole
	behind modelling of	spacing across the whole area came to an average of 85 m in a
	selective mining units. Any assumptions about	roughly straight line. Volumes were calculated for various grades
	correlation between	across the sample result range.
	variables.	The deposit was divided into an upper oxidised zone and a lower fresh zone. Once a specific grade volume has been calculated a weighted
	• Description of how the	average density is applied to the volume and a tonnage is determined.
	geological interpretation	Weighted averaging for sample length was applied. No grade
	was used to control the	truncations were applied. A cut-off grade of 0.2 % has been applied.
	resource estimates.	Grade-tonnage curves were produced and could be used to determine
	<ul> <li>Discussion of basis</li> </ul>	the effect of cut-off grades on remaining mineralised tonnages, but the drilled resource is calculated as intersected in-situ. The calculated
	for using or not using	grade is weighted for representative mass, as calculated in Voxler.
	grade cutting or capping.	A manual check estimate was completed and the tonnages and the
		grades compared very closely. No previous estimates have been
	The process of  validation, the checking	reported for this project, and hence no reconciliation could be done.
	validation, the checking	

Criteria	Explanation	MUS Commentary
	process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Provision or assumptions for the recovery of by-products have not been made. The only deleterious element that has been detected so far is the presence of clays in the oxidised zone. This is to be expected, and the influence on metallurgy would be to extend settling time in the process of separation.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The tonnages are estimated on a dry basis. The influence of moisture on the estimation of the Fresh Zone is considered to be negligible. The porosity of the host rock is very low. The Oxidised Zone may be influenced by moisture content in the shallower parts.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	A 0.2% grade cut-off was applied. The modelling is limited by drilling extent. The drilling have not intersected and hence delineated the outer edge of barren host rock. The physical limits of the mineralisation will be established with additional drilling programs. Grade-tonnage curves were produced and the influence of various cut-off grades can be investigated. The physical deposit boundaries have not been intersected in the drilling work and hence the model is suspended within graphite and roscoelite mineralised rock. The western and northern deposit boundary (at shallow depth), is expected to be fixed with the next phase of drilling. The eastern and southern boundaries are open to at least 200m and several kilometres respectively.
Balanced reporting	• 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.	The report is considered to be balanced. Based on the observed lithology and the influence of oxidation, the deposit is divided into an upper Oxidised Zone and a lower Fresh Zone. Grade differences between the two zones are observed, with the fresh zone showing an elevated grade.
Mining factors or assumptions	Assumptions     made regarding     possible mining     methods, minimum     mining dimensions and     internal (or, if     applicable, external)     mining dilution. It is     always necessary as     part of the process of     determining reasonable     prospects for eventual     economic extraction to	No assumptions have been made with respect to mining this deposit. This is a greenfields project and the specialist studies will be following in the various scoping and feasibility phases.

Criteria	Explanation	MUS Commentary
	consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	The metallurgy testwork was completed by SGS Malaga in Perth. This was standard testwork requested to establish the metallurgical properties of this deposit before advanced flow-sheet development can be undertaken.  The composited samples were tested for grindability and the Bond rod mill index suggests that the Caula host rock is softer than comparable graphite deposits.  The settling time for the oxidised composite sample was noted to be longer due to the presence of clays in this zone.  Testwork on Met Sample 2 indicates that the sample is very amenable to beneficiation by froth flotation realising a final concentrate stream grading 94.9% TGC at 96.3% recovery. After screening of the concentrate, >50% of the concentrate falls in the large and extra-large flake classes and was upgraded to >97% TGC.  Testwork on Met Sample 1 indicates that the sample is amenable to beneficiation by froth flotation using a single stream flotation scheme, realising a final concentrate stream grading 97.5% TGC at 80.3% recovery. After screening of the concentrate, >43% of the concentrate falls in the large and extra-large flake classes and was upgraded to >97% TGC.  Subsequent to the completion of the initial metallurgical testwork, an optimisation program was completed by Wave International and IMO which indicates that the + 180 micron flake from the oxide material can be upgraded to 98% TGC. At the moment, Nagrom in Perth is busy refining the processing flowsheet with continuing metallurgical testwork.
Environment al factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a green-fields project, may not always be well advanced, the status of early consideration of these potential	No environmental assumptions have been made. This is a greenfields project and the specialist studies will be following in the various scoping and feasibility phases.

Criteria	Explanation	MUS Commentary
	environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.  The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.  Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Density data for the first 5 DD boreholes was taken from the recovered core and determined on site during the field sampling process. The 11 DD holes that were drilled during 2017 was analysed for density by Pycnometer, and 243 samples were submitted for density determination. The weighted air dry density for the oxidised zone is calculated to be 2.550 tonne/ m³. The weighted air dry density for the fresh zone is calculated to be 2.650 tonne/ m³. These densities are comparable to similar geological settings, and will hence result in realistic resource tonnage estimates.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.  • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).  • Whether the result appropriately reflects the Competent	The resource is classified as Measured. The core losses in the DD boreholes were assigned 0% $V_2O_5$ values as a conservative measure. With additional drilling in the future, the confidence in the estimate may very well improve. The CP has no reason to doubt the input data from the core logging to the laboratory results. The estimate is conservative and probably understated in both tonnage and grade.

Criteria	Explanation	MUS Commentary
	Person's view of the deposit	
Audits or reviews.	The results of any audits or reviews of Mineral Resource estimates.	No reviews or audits have been completed for this deposit.
Discussion of relative accuracy/con fidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.  • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation.  Documentation should include assumptions made and the procedures used.  • These statements of relative accuracy and	The geovariance for the Caula deposit is calculated over 13 ranges with 24 data-pairs. The range is estimated to be 170 m and the sill grade is 0.025 % V <sub>2</sub> O <sub>5</sub> . The nugget value is 0.012% V <sub>2</sub> O <sub>5</sub> , and the variance is 0.013%. This calculation is based on information from 16 boreholes, and may well change as it gets updated with new drilling information. Based on this geovariance, the drill spacing at an average of 85 m is considered to be sufficient to determine a measured resource.  There is no current operation in place and hence no site-specific production data for comparisons to be made.

Criteria	Explanation	MUS Commentary
	confidence of the estimate should be compared with production data, where available.	