

OUTSTANDING RECOVERIES OF GOLD, COPPER AND COBALT AT ROVER 1

Castile Resources Limited (ASX:CST) (“Castile” or “the Company”) is pleased to report that extremely high gold, copper and cobalt individual metal recovery rates have been achieved from downstream processing of the bulk flotation concentrate. Previously, Castile had reported Rover 1 recovery rates of all the metals reporting to a single bulk concentrate (see ASX: CST 3 September 2021). The downstream processing enables the production of direct metal at site with the tabulated recovery rates from the bulk concentrate as follows:

Table 1: Individual Metal Recoveries From Bulk Concentrate

Metal	Recovery Rate
Gold	98.0%
Copper	99.4%
Cobalt	99.1%

GOLD

Tracking the primary metal products through the process route shows an estimated 21.4% of the gold reports to simple gravity recovery. Of the remaining gold, 72.4% reports to the bulk concentrate. Recovery of gold from the bulk concentrate is 98.0% resulting in an overall total gold recovery of 92.8%.

COPPER

With regard to copper, 97.8% of the copper contained in Rover 1 ore reports to the bulk flotation concentrate. Downstream proceeding of the concentrate converts 99.4% of the copper to solution. Electrowinning then recovers 98% of the copper in solution resulting in an overall total copper recovery of 95.3%.

Table 2: Total Recoveries from Rover 1 Ore (METS Engineering)

COMMODITY	Gold	Copper	Cobalt
Gravity Recovery	21.4%		
Bulk Flotation Recovery	72.4%	97.8%	88.0%
Recovery from Bulk Concentrate	98.0%	99.4%	99.1%
Solution Recovery		98.0%	95.0%
TOTAL RECOVERY	92.8%	95.3%	82.8%

Mark Hepburn, Managing Director of Castile Resources commented:

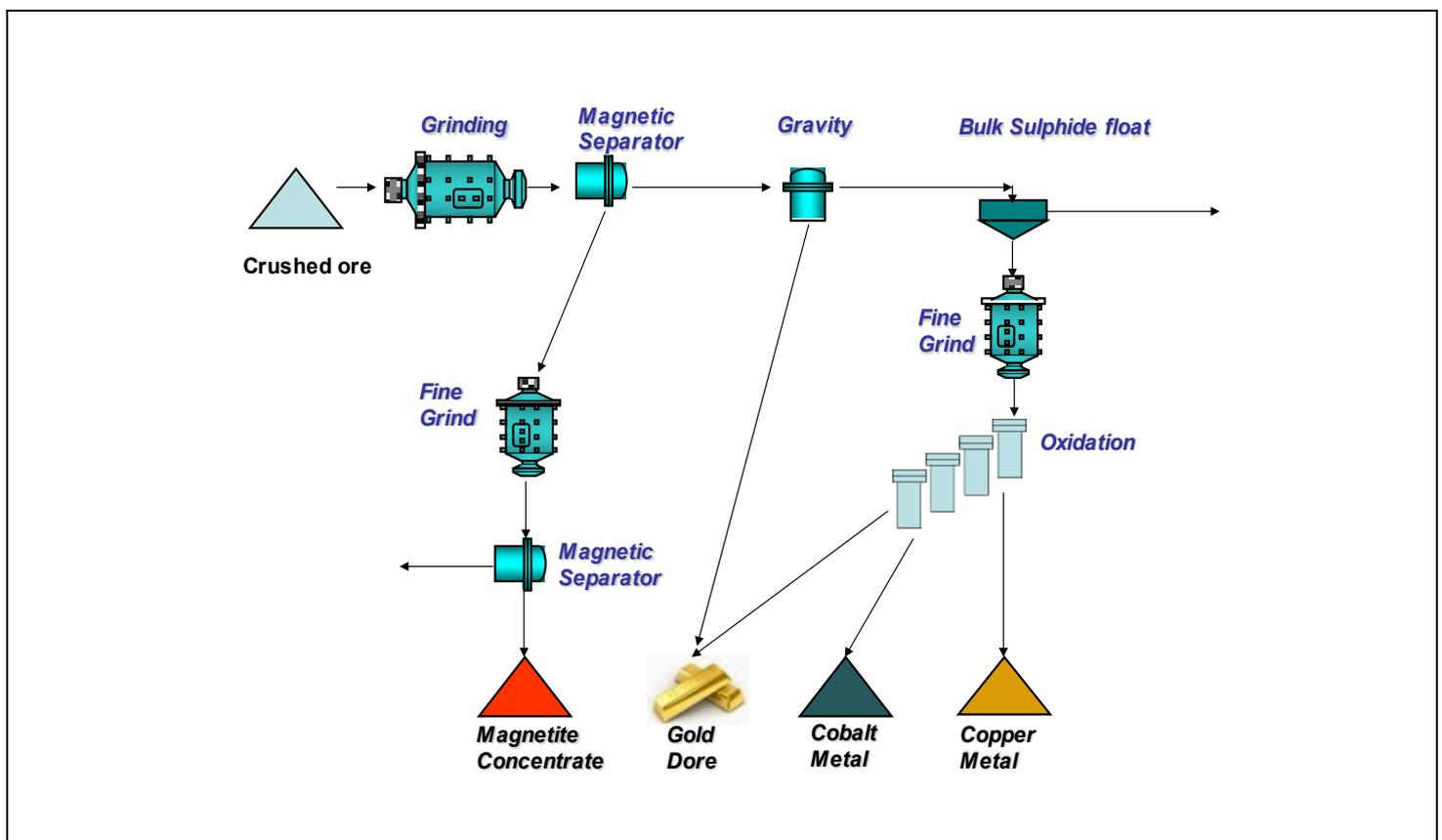
“Our goal of finding the best method of extracting maximum value from each tonne that we mine has been achieved. As opposed to the traditional route of concentrate sales to overseas markets, the boutique scale of the project enables the application of site-based downstream processing to produce primary metals. This results in the maximisation of recovery of key metals and fast turnaround times in cashflows for the financial modelling in the Pre-Feasibility Study.

This is a clear winner in the pathway to future development at Rover 1. Castile will produce a gold bullion and the critical “clean energy” sector metals of copper and cobalt. These are required products for the rapidly expanding power storage and low carbon industrialisation sectors including the power storage and motor vehicle electrification industry.

A major benefit of the downstream processing route is the increased recovery of pure cobalt metal. This makes the project a key source of ethically mined cobalt and one of the very few in the western-world.

Another huge bonus for the project is the anticipated fourth revenue stream from the magnetite extracted from the plant tail product. We are not simply producing a raw material for steel manufacture; this magnetite will be processed to produce a higher value product (95%+ magnetite) for use as a density modifying industrial mineral. Production of this magnetite will also significantly minimise the environmental footprint of the operation by reducing waste and tailings storage requirements (See ASX:CST 19 November 2021).”

Figure 1 Indicative Processing Flow Sheet for Rover 1



The recoveries of these four key elements into high purity forms reduces the environmental footprint from subsequent transport and provides key products for future use within Australia. This methodology aligns with the NT Governments' push for value-add industry and production. Work is underway for the design and costing of a processing plant to support the mining studies.

Bismuth recoveries were low, and as a consequence that metal will no longer be pursued in the flowsheet as a by-product.

KEY OUTCOMES OF RECENT METALLURGICAL TESTWORK

These recovery result build on the information presented in "Outstanding Metallurgical Results from Rover 1" (3 September 2021), building on the recovery of the Gravity Gold and Bulk Flotation. The test work results presented above in Tables 2 and 3 were carried out at 180°C, 1,702kPa. Two other tests were carried out at 200°C and 2,254kPa and 220°C and 3,018kPa. All tests were carried out for 120 minutes. The full set of results from the test work are shown below in Table 3:

Table 3 – Recovery of Rover 1 Concentrate (METS Engineering)

Commodity	Temperature (°C)	Pressure (kPa)	Gold	Copper	Cobalt
Test 1	180	1,702	98.0%	99.4%	99.1%
Test 2	200	2,254	97.1%	99.5%	98.9%
Test 3	220	3,018	99.7%	99.6%	99.6%

Total Gold Recovery 93%

Early stage gravity separation recovers an estimated 21.4% of the gold. Downstream processing enables a further 76.6% of the gold is recoverable by a small scale carbon in leach (CIL) process enabling with an overall 98.0% of contained gold to be produced as a gold dore bar.

Total Copper Recovery 95%

Copper is contained within the bulk sulphide float (97.8% recovered), then oxidised and dissolved into solution. At 180°C and 1,702kPa, 99.4% of the copper contained within the concentrate is dissolved into the solution. This solution then passes through a small scale electrowinning process (SX-EW) to extract the contained copper, producing copper plate.

Total Cobalt Recovery 83%

The bulk sulphide float contains 88% of the Cobalt. The downstream processing recovers 99.1% of the contained cobalt to be converted to cobalt metal by an electrowinning process.

Total Magnetite Recovery 68%

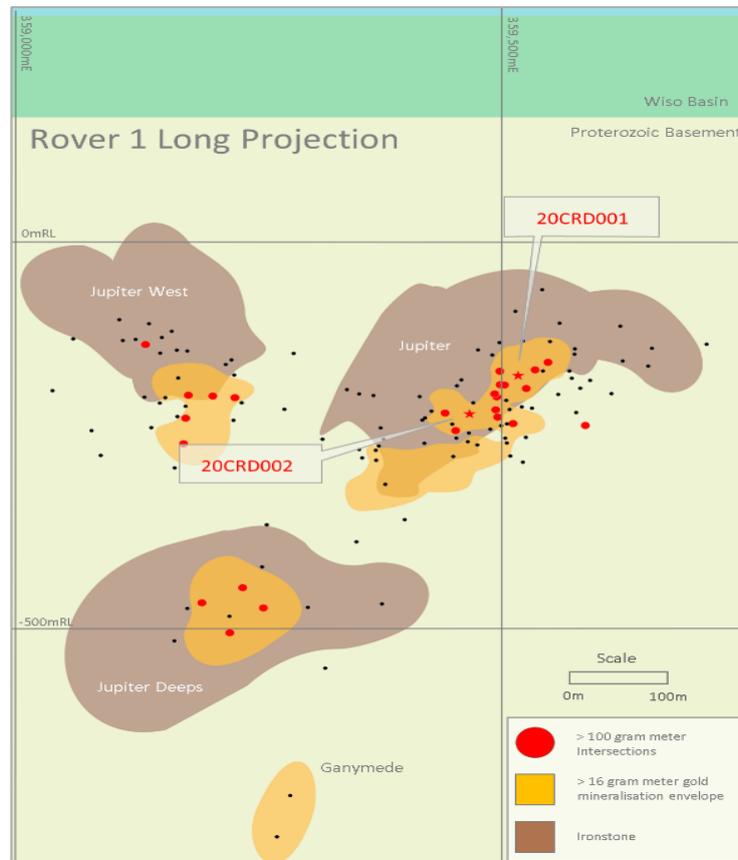
The magnetite which occurs as one of the primary gangue minerals of the ore, will be separated via magnetic separation prior to the sulphide float. This will allow the production of the high grade magnetite as previously announced in "ASX:CST 19 November 2021 New Environmentally Sustainable Product at Rover". On the test work that was completed for this announcement, 67.7% of the contained magnetite was able to be separated into the P₉₅53µm product containing 96.4% magnetite which Castile has now had certified to Australian Standard.

SUPPLEMENTARY INFORMATION

Samples used for the metallurgical test work were taken from holes 20CRD001 and 20CRD002. Please see announcements “Stunning Gold Intercepts from Rover 1 – Amended” (14 October 2020) and “Castile receives Significant Copper Results from Rover 1” (20 October 2020) for the results of 20CRD001 and “Rover 1 Drilling Program Delivers more significant Copper Gold Intercepts” (2 November 2020) for the results of 20CRD002.

These two holes were logged and assayed by Castile Resources Geologists. Ten intervals were selected for the Metallurgical Test work to provide a representative sample of the ore body and delivered to the ALS Laboratory in Perth, providing sufficient mass for the test work which is being managed by METS Engineering. A single composite was created from these intervals to represent the ore body, weighing approximately 350kg. From hole 20CRD001 intervals 479.95m – 492m, 493m – 508.75m, 509.45 – 511.4m, 518.0 – 520.15m, 521.0 – 522.5m and 527.0 – 536.0m were selected. From hole 20CRD002, intervals 541.6m – 563.08m, 564.0m – 566.0m, 567.0m – 573.0m and 578.8m – 588.0m were selected. The location of holes 20CRD001 and 20CRD002 are shown below. (See Figure 3).

Figure 2: Long projection of Rover 1



All material for the test work were recovered from these diamond holes in Figure 2. The holes were drilled at HQ size to enable sufficient material to be gathered for the test work. This material was stage crushed and rotary split five ways. The five splits were used in the following fashion:

- Grind establishment to determine the P₈₀ 106µm targeted grind size.
- Mineralogy Test work via QEMSCAN
- Determine the Head Assays of the composite
- Determine the size fraction of the valuable minerals (gold, copper, cobalt, bismuth, and magnetite)
- Sighter and sequential floatation test work.

Previous Test work Completed

Three stages of test work have been conducted prior to the oxidation work:

- Preliminary work to understand the rock mass, including comminution, strength and bond work analysis. The results of these tests are contained in “Outstanding Metallurgical Test Results from Rover 1” (20 September 2021).
- Sighter tests were then carried out for the bulk sulphide float, followed by a bulk sulphide float. The results of this test work are summarised below:

Table 4 Bulk Floatation Test Results

Test Number	Lime Addition for Rougher Stage (g)	Lime Addition for Scavenger Stage (g)	MIBC (Ro 1, 2, 3 & Scav) (Drops)	Mass Contained in Ro Conc (g)	Mass Contained in Tail (g)
BF1991	10.59	2.11	26, 40, 20 & 10	11,263.3	48,736.7
BF1992	9.22	3.64	50, 25, 5 & 4	11,251.4	48,748.6
BF1993	10.93	3.83	50, 25, 6 & 4	11,000.5	48,999.5
BF1994	9.45	3.89	55, 25, 10 & 25	10,706.6	49,293.4
BF1995	9.30	5.62	51, 25, 20 & 15	11,122.1	48,877.9

Table 5 summarises the results obtained from the Bulk Floatation Test work.

Table 5: Recoveries from Bulk Flotation Testing of Rover 1 Ore (METS Engineering)

Commodity	Gold	Copper	Cobalt	Bismuth
Gravity Recovery	21.4%			
Bulk Flotation Recovery	72.4%	97.8%	88.0%	89.7%
TOTAL RECOVERY	93.8%	97.8%	88.0%	89.7%

The figure below (Figure 3) shows the bulk floatation test work.

Figure 3 –Bulk Flotation Test



The magnetite test work was announced in “New Environmentally Sustainable Product at Rover” (19 November 2021). In this test, the ore (sized at P₈₀106µm) was passed over a Low Intensity Magnetic Separator (LIMS) set at 600 gauss. This magnetic fraction was then reground to 53µm (to meet the specification of the Industrial Mineral). This reground material was then repassed over the LIMS unit and then screened to size fractions to produce the high grade Industrial Mineral.

A summary of the results is shown below:

Table 6: Magnetite Quality

Sample	Magnetite Fe ₃ O ₄ %	Al ₂ O ₃ (%)	SiO ₂ (%)	Total Fe (%)	FeO (%)	SG
P ₆₀ 53µm Concentrate	96.6	0.33	2.99	66.0	28.8	4.8
P ₉₅ 53µm Concentrate	96.4	0.26	2.05	67.3	30.1	4.9

For both products, sizing specifications were obtained as shown below in Tables 7 and 8.

Table 7: P₆₀ 53µm Magnetite Concentrate

Size (µm)	Weight (g)	Weight (%)	Weight % <
75	111.9	23.0	77.0
53	76.2	15.7	61.3
45	35.3	7.3	54.1
-45	262.9	54.1	0.0
Total	486.3	100.0	

Table 8: P₉₅ 53µm Magnetite Concentrate

Size (µm)	Weight (g)	Weight (%)	Weight % <
75	7.7	1.7	98.3
53	21.8	4.7	93.7
45	16.1	3.5	90.2
-45	419.5	90.2	0.0
Total	465.1	100.0	

Oxidation Test work

Three oxidation tests were carried out simultaneously, investigating the impact of changing pressures and temperatures. All three tests were carried out over a period of 120 minutes at the ALS Laboratory and contained 200g of material that had previously been floated and stored from the bulk floatation process. The material from the float was then reground to P₈₀45µm, simulating feed to an autoclave with distilled water added to achieve the desired density. The results of the three tests (after 120 minutes) are below:

Table 9 Oxidation Test Work

	Test 1 HY11815	Test 2 HY11816	Test 3 HY11817
Temperature (°C)	180	200	220
Total Pressure (kPa)	1,702	2,254	3,018
Gold Recovery	98.0	97.1	99.7
Copper Recovery	99.4	99.5	99.6
Cobalt Recovery	99.1	98.9	99.6
Bismuth Recovery	24.6	15.8	15.7

The gold recovery numbers from Table 9, are from subsequent extraction utilising standard Carbon in Leach. The gold is extracted quickly (within two hours). The tests were carried out utilising Perth Tap Water and adding lime and cyanide.



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Further Enhancement Opportunities

The metallurgical engineering works as discussed above have set the primary process route for the project. Opportunity for minor finessing to enable further enhancement of cobalt and gold to the bulk floatation concentrate exists by evaluating alternative flocculants to enable a larger mass pull to concentrate.

In addition, another oxidation test is planned to use the same bulk floatation material but without the step of further regrinding to 45µm. It is hoped that this will enable similar recovery without that regrinding step and simplify the process route.

Competent Person Statement

The information contained in this report is based on, and fairly and accurately represent the information and supporting documentation prepared by Damian Connelly. Mr Connelly is a full time employee of METS Engineering who are a Contractor to Castile, and a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Connelly has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Connelly consents to the inclusion in the report of the matters based on the results in the form and context in which they appear.

Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> • <i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i> • <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> • <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> • <i>In cases where ‘industry standard’ work has been done this would be relatively simple (e.g. ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i> 	<ul style="list-style-type: none"> • Diamond Drilling <p>All data used in resource calculations at Rover 1 has been gathered from diamond core. Multiple sizes have been used historically. This core is geologically logged and subsequently halved for sampling.</p>
Drilling techniques	<ul style="list-style-type: none"> • <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> • <i>In cases where ‘industry standard’ work has been done this would be relatively simple (e.g. ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i> 	<ul style="list-style-type: none"> • All geology input is logged and validated by the relevant area geologists, incorporated into this is assessment of sample recovery. No defined relationship exists between sample recovery and grade. Nor has sample bias due to preferential loss or gain of fine or coarse material been noted.
Drill sample recovery	<ul style="list-style-type: none"> • <i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).</i> • <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> • <i>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.</i> 	
Logging	<ul style="list-style-type: none"> • <i>Whether core and chip samples have been</i> 	<ul style="list-style-type: none"> • Diamond core is logged geologically and

Criteria	JORC Code explanation	Commentary
	<p><i>geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<p>geotechnically.</p> <ul style="list-style-type: none"> • Logging is quantitative in nature. • All holes are logged completely.
<p>Sub-sampling techniques and sample preparation</p>	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • Diamond Drilling - Half-core niche samples, sub-set via geological features as appropriate. • Core undergoes total preparation. • The sample preparation process consists of; <ul style="list-style-type: none"> ○ Crushing using a vibrating jaw crusher to achieve a maximum sample size of 4mm. ○ The sample is then weighed, and if the sample weight is greater than 3.2kg, the sample is split into two using a Jones-type Riffle splitter. ○ The crushed sample is then pulverised in a Labtech LM5 Ring Mill for 6 minutes. For samples weighing greater than 3.2kg the first portion is removed and second portion is homogenised in the same machine. Once complete the first portion is put back in the LM5 and both portions are homogenised. ○ From the pulverised sample, approximately 200g is taken as a master sample which stays in Alice Springs, while a second sample of approximately 150g taken and sent to for assaying. These samples are collected via a scoop inserted to the bottom of the bowl. The remaining sample is transferred to a calico bag for storage. ○ For every 20th sample, an approximately 25g sample is

Criteria	JORC Code explanation	Commentary
		<p>screened to 75 microns to check that homogenising has achieved 80% passing 75 microns.</p> <ul style="list-style-type: none"> • QA/QC is ensured during sampling via the use of sample ledgers, blanks, standards and repeats. • QA/QC is ensured during the assays process via the use of blanks, standards and repeats at a NATA / ISO accredited laboratory. • The sample sizes are considered appropriate to the grainsize of the material being sampled. • The un-sampled half of diamond core is retained for check sampling if required.
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>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.</i> • <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i> 	<ul style="list-style-type: none"> • Analysis of drill core for Au, Ag, Bi, Co and Cu was carried out in Perth in the following manner; <ul style="list-style-type: none"> ○ Gold (Au-AA25 scheme – lower detection limit = 0.01ppm, upper detection limit = 100ppm). A 30g charge of prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents and then cupelled to yield a precious metal bead. ○ The bead is then dissolved in acid and analysed by atomic absorption spectroscopy against matrix-matched standards. ○ Samples returning assay values in excess of 100g/t Au were repeated using the Au-AA26 method. ○ Silver, bismuth, cobalt and copper (ME-OG62) - A prepared sample is digested using a 4 acid digest. ○ The subsequent solution is analysed by inductively coupled plasma - atomic emission spectroscopy or by atomic absorption spectrometry. • No significant QA/QC issues have arisen in recent drilling results. • These assay methodologies are appropriate for

Criteria	JORC Code explanation	Commentary
		the resource in question.
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Anomalous intervals as well as random intervals are routinely checked assayed as part of the internal QA/QC process. • Virtual twinned holes have been drilled in several instances with no significant issues highlighted. • Primary data is loaded into the drillhole database system and then archived for reference. • All data used in the calculation of resources are compiled in databases which are overseen and validated by senior geologists. • No primary assays data is modified in any way.
Location of data points	<ul style="list-style-type: none"> • <i>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.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • All data is spatially oriented by survey controls via direct pickups by the survey department. Drillholes are all surveyed downhole, deeper holes with a Gyro tool if required. • All drilling and resource estimation is undertaken in MGA grid. • Topographic control is generated from a combination of remote sensing methods and ground-based surveys. This methodology is adequate for the resource in question.
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>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.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • Data spacing is variable dependent upon the individual orebody under consideration. This approach is appropriate for the Mineral Resource estimation process and to allow for classification of the resource as it stands. • Compositing is carried out based upon the modal sample length of each individual domain.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • Drilling intersections are nominally designed to be normal to the orebody as far topography / economics allows. • Development sampling is nominally undertaken normal to the various orebodies. • It is not considered that drilling orientation has introduced an appreciable sampling bias.

Criteria	JORC Code explanation	Commentary
Sample security	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> Samples are delivered to a third party transport service, who in turn relay them to the independent laboratory contractor. Samples are stored securely until they leave site.
Audits or reviews	<ul style="list-style-type: none"> <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> Site generated resources and reserves and the parent geological data is routinely reviewed by the Castile Corporate technical team.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <i>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.</i> <i>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.</i> 	<ul style="list-style-type: none"> The Tennant Creek Project comprises 5 granted exploration leases. Native title interests are recorded against the Tennant Creek tenements. The Tennant Creek tenements are held by Castile. Several third party royalties exist across various tenements at Tennant Creek, over and above the Northern Territory government royalty. Castile operates in accordance with all environmental conditions set down as conditions for grant of the leases. There are no known issues regarding security of tenure. There are no known impediments to continued operation.
Exploration done by other parties	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> The Tennant Creek area has an exploration and production history in excess of 100 years. The Rover area in particular has an intensive exploration history stretching from the 1970's. On balance, Castile work has generally confirmed the veracity of historic exploration data.
Geology	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> The Tennant Creek Project is located in the 1860-1850Ma Warramunga Province is approximately centred on the township of Tennant Creek, and contains the Paleoproterozoic Warramunga Formation. This is a weakly metamorphosed turbiditic



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		<p>succession of partly tuffaceous sandstones and siltstones which includes argillaceous banded ironstones locally referred to as 'haematite shale'.</p> <ul style="list-style-type: none"> • Copper in the form of chalcopyrite occurs around the upper margins of the quartz magnetite ironstones and in the silicified BIF or haematitic shales that often form an alteration transition to the adjacent chlorite alteration envelope. Although copper levels in the upper quartz magnetite portion of the ironstones is usually very low, pervasive sub-economic copper levels can persist throughout this zone. Economic levels of copper are dominantly contained in the lower massive magnetite portion or in massive magnetite “veins” identified in the magnetite quartz zones. The massive magnetite zones grade laterally and at depth into magnetite chlorite stringer zones. Gold content increases where the content of magnetite veining and chlorite alteration decreases and there is an increase in early haematite dusted quartz veins and indurated sediments and fine chlorite veining related to the mineralisation phase. The transition from massive magnetite copper mineralisation to magnetite quartz chlorite stringer gold mineralisation is also the zone of increased bismuthinite mineralisation. • Lead and zinc mineralisation at Explorer 108 is associated with a brecciated dolomitised sediment unit, consisting of irregular, generally narrow, domains or veins of semi-massive sulphides (sphalerite and galena). A basal “high-grade” zone is present at the contact of the dolomite and lower felsic units.
<p>Drill hole Information</p>	<ul style="list-style-type: none"> • <i>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:</i> <ul style="list-style-type: none"> ○ <i>easting and northing of the drill hole collar</i> ○ <i>elevation or RL (Reduced Level – elevation</i> 	<ul style="list-style-type: none"> • No exploration results are being reported.

Criteria	JORC Code explanation	Commentary
	<p>above sea level in metres) of the drill hole collar</p> <ul style="list-style-type: none"> ○ dip and azimuth of the hole ○ down hole length and interception depth ○ hole length. <ul style="list-style-type: none"> ● 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. 	
Data aggregation methods	<ul style="list-style-type: none"> ● In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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 be clearly stated. 	<ul style="list-style-type: none"> ● No exploration results are being reported. ● Results are reported on a length weighted average basis. ● Results are reported above a 5gm Au / Au Eq. cut-off / 5% Pb + Zn / 2.5% Cu. ● Results reported may include up to two metres of internal dilution below a 0.5g/t Au / Au Eq. cut-off / 0.5% Pb + Zn / 0.5% Cu. ● Metal equivalent values are reported based on the ratio of prevailing commodity prices which are given above.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> ● These 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 (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> ● No exploration results are being reported. ● Interval widths are downhole width unless otherwise stated.
Diagrams	<ul style="list-style-type: none"> ● 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. 	<ul style="list-style-type: none"> ● No exploration results are being reported.
Balanced reporting	<ul style="list-style-type: none"> ● 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 	<ul style="list-style-type: none"> ● No exploration results are being reported.

Criteria	JORC Code explanation	Commentary
	<i>avoid misleading reporting of Exploration Results.</i>	
Other substantive exploration data	<ul style="list-style-type: none"> <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i> 	<ul style="list-style-type: none"> No exploration results are being reported.
Further work	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> Exploration and mine planning assessment continues to take place at the Tennant Creek Project.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<ul style="list-style-type: none"> <i>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.</i> <i>Data validation procedures used.</i> 	<ul style="list-style-type: none"> Drillhole data is stored in a Maxwell's DataShed system based on the Sequel Server platform which is currently considered "industry standard". As new data is acquired it passes through a validation approval system designed to pick up any significant errors before the information is loaded into the master database. The information is uploaded by a series of Sequel routines and is performed as required. The database contains diamond drilling (including geotechnical and specific gravity data), face chip and sludge drilling data and some associated metadata. By its nature this database is large in size, and therefore exports from the main database are undertaken (with or without the application of spatial and various other filters) to create a database of workable size,

Criteria	JORC Code explanation	Commentary
		preserve a snapshot of the database at the time of orebody modelling and interpretation and preserve the integrity of the master database.
Site visits	<ul style="list-style-type: none"> • <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> • <i>If no site visits have been undertaken indicate why this is the case.</i> 	<ul style="list-style-type: none"> • Mr Russell visits site on an “as required” basis.
Geological interpretation	<ul style="list-style-type: none"> • <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i> • <i>Nature of the data used and of any assumptions made.</i> • <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i> • <i>The use of geology in guiding and controlling Mineral Resource estimation.</i> • <i>The factors affecting continuity both of grade and geology.</i> 	<ul style="list-style-type: none"> • Mining of similar deposits in the region provides confidence in the current geological interpretation. • No alternative interpretations are currently considered viable. • Geological interpretation of the deposit was carried out using a systematic approach to ensure that the resultant estimated Mineral Resource figure was both sufficiently constrained, and representative of the expected sub-surface conditions. In all aspects of resource estimation the factual and interpreted geology was used to guide the development of the interpretation. • The structural regime and the presence of intrusive source bodies are the dominant controls on geological and grade continuity at the Tennant Creek Project.
Dimensions	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • Individual deposit scales vary across the Tennant Creek Project. • The Rover 1 deposit is mineralised a strike length of >540m, a lateral extent of up +70m and a depth of over 650m.
Estimation and modelling techniques	<ul style="list-style-type: none"> • <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i> • <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate</i> 	<ul style="list-style-type: none"> • All modelling and estimation work undertaken by Castile is carried out in three dimensions via Surpac Vision. • After validating the drillhole data to be used in the estimation, interpretation of the orebody is undertaken in sectional and / or plan view to create the outline strings which form the basis of the three dimensional orebody wireframe. Wireframing is then carried out using a combination of automated stitching algorithms and manual triangulation to create an accurate three

Criteria	JORC Code explanation	Commentary
	<p><i>takes appropriate account of such data.</i></p> <ul style="list-style-type: none"> • <i>The assumptions made regarding recovery of by-products.</i> • <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i> • <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> • <i>Any assumptions behind modelling of selective mining units.</i> • <i>Any assumptions about correlation between variables.</i> • <i>Description of how the geological interpretation was used to control the resource estimates.</i> • <i>Discussion of basis for using or not using grade cutting or capping.</i> • <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i> 	<p>dimensional representation of the sub-surface mineralised body.</p> <ul style="list-style-type: none"> • Drillhole intersections within the mineralised body are defined, these intersections are then used to flag the appropriate sections of the drillhole database tables for compositing purposes. Drillholes are subsequently composited to allow for grade estimation. In all aspects of resource estimation the factual and interpreted geology was used to guide the development of the interpretation. • Once the sample data has been composited, a statistical analysis is undertaken to assist with determining estimation search parameters, top-cuts etc. Variographic analysis of individual domains is undertaken to assist with determining appropriate search parameters. Which are then incorporated with observed geological and geometrical features to determine the most appropriate search parameters. • An empty block model is then created for the area of interest. This model contains attributes set at background values for the various elements of interest as well as density, and various estimation parameters that are subsequently used to assist in resource categorisation. The block sizes used in the model will vary depending on orebody geometry, minimum mining units, estimation parameters and levels of informing data available. • Grade estimation is then undertaken, with ordinary kriging estimation method is considered as standard, although in some circumstances where sample populations are small, or domains are unable to be accurately defined, inverse distance weighting estimation techniques will be used. Both by-product and deleterious elements are estimated at the time of primary grade estimation if required. It is assumed that by-products correlate well with gold. There are no assumptions made about the recovery of

Criteria	JORC Code explanation	Commentary
		<p>by-products.</p> <ul style="list-style-type: none"> The resource is then depleted for mining voids and subsequently classified in line with JORC guidelines utilising a combination of various estimation derived parameters and geological / mining knowledge. This approach has proven to be applicable to Castile's gold assets. Estimation results are routinely validated against primary input data, previous estimates and mining output. Good reconciliation between mine claimed figures and milled figures was routinely achieved during past production history.
Moisture	<ul style="list-style-type: none"> Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	<ul style="list-style-type: none"> Tonnage estimates are dry tonnes.
Cut-off parameters	<ul style="list-style-type: none"> The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> The Rover 1 reporting cut-off grade is 2.5g/t Au.
Mining factors or assumptions	<ul style="list-style-type: none"> 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 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. 	<ul style="list-style-type: none"> Not considered for Mineral Resource. Applied during the Reserve generation process.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> 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, 	<ul style="list-style-type: none"> Not considered for Mineral Resource. Applied during the Reserve generation process.

Criteria	JORC Code explanation	Commentary
	<p><i>this should be reported with an explanation of the basis of the metallurgical assumptions made.</i></p>	
<p>Environmental factors or assumptions</p>	<ul style="list-style-type: none"> 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 greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	<ul style="list-style-type: none"> Castile operates in accordance with all environmental conditions set down as conditions for grant of the respective leases.
<p>Bulk density</p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Bulk density of the mineralisation at the Tennant Creek Project is variable and is for the both lithology and alteration / mineralisation dependent. For modern drilling, field technicians perform density test-work on core samples on a campaign basis every three months. All density measurements have been determined using the simple water immersion technique. The samples from all holes were well below the base of oxidation and were in generally competent, non-porous rock.
<p>Classification</p>	<ul style="list-style-type: none"> The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (i.e. 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 Person's view of the deposit. 	<ul style="list-style-type: none"> Resources are classified in line with JORC guidelines utilising a combination of various estimation derived parameters, the input data and geological / mining knowledge. This approach considers all relevant factors and reflects the Competent Person's view of the deposit.

Criteria	JORC Code explanation	Commentary
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of Mineral Resource estimates. 	<ul style="list-style-type: none"> Resource estimates are peer reviewed by the site technical team as well as Castile's Corporate technical team.
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> 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 confidence of the estimate should be compared with production data, where available. 	<ul style="list-style-type: none"> All currently reported resources estimates are considered robust, and representative on both a global and local scale. No production data exists to compare the resource estimate against.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.
Site visits	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.
Study status	<ul style="list-style-type: none"> The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <i>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</i> 	
Cut-off parameters	<ul style="list-style-type: none"> <i>The basis of the cut-off grade(s) or quality parameters applied.</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.
Mining factors or assumptions	<ul style="list-style-type: none"> <i>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</i> <i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i> <i>The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.</i> <i>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</i> <i>The mining dilution factors used.</i> <i>The mining recovery factors used.</i> <i>Any minimum mining widths used.</i> <i>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</i> <i>The infrastructure requirements of the selected mining methods.</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i> <i>Whether the metallurgical process is well-tested technology or novel in nature.</i> <i>The nature, amount and representativeness of metallurgical test work undertaken, the</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.

Criteria	JORC Code explanation	Commentary
	<p><i>nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i></p> <ul style="list-style-type: none"> • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications? 	
Environmental	<ul style="list-style-type: none"> • The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. 	<ul style="list-style-type: none"> • No reserve has been stated for the Tennant Creek Project
Infrastructure	<ul style="list-style-type: none"> • The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed. 	<ul style="list-style-type: none"> • No reserve has been stated for the Tennant Creek Project
Costs	<ul style="list-style-type: none"> • The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private. 	<ul style="list-style-type: none"> • No reserve has been stated for the Tennant Creek Project
Revenue factors	<ul style="list-style-type: none"> • The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange 	<ul style="list-style-type: none"> • No reserve has been stated for the Tennant Creek Project

Criteria	JORC Code explanation	Commentary
	<p><i>rates, transportation and treatment charges, penalties, net smelter returns, etc.</i></p> <ul style="list-style-type: none"> <i>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</i> 	
Market assessment	<ul style="list-style-type: none"> <i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i> <i>A customer and competitor analysis along with the identification of likely market windows for the product.</i> <i>Price and volume forecasts and the basis for these forecasts.</i> <i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.
Economic	<ul style="list-style-type: none"> <i>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</i> <i>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.
Social	<ul style="list-style-type: none"> <i>The status of agreements with key stakeholders and matters leading to social licence to operate.</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.
Other	<ul style="list-style-type: none"> <i>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</i> <i>Any identified material naturally occurring risks.</i> <i>The status of material legal agreements and marketing arrangements.</i> <i>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.

Criteria	JORC Code explanation	Commentary
	<i>unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</i>	
Classification	<ul style="list-style-type: none"> <i>The basis for the classification of the Ore Reserves into varying confidence categories.</i> <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i> <i>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.
Audits or reviews	<ul style="list-style-type: none"> <i>The results of any audits or reviews of Ore Reserve estimates.</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</i> <i>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.</i> <i>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</i> <i>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i> 	<ul style="list-style-type: none"> No reserve has been stated for the Tennant Creek Project.



ASX Announcement

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