



25 August 2021

## Freehill Advances Phase 1 Mining Operations at Yervas Buenas

**Freehill Mining Limited (ASX: FHS 'Freehill' or 'the Company')** is pleased to provide this update to shareholders on the intended start-up of the first phase of mining operations at the 100%-owned Yervas Buenas magnetite project in Chile. The Company is making solid progress advancing towards a low CAPEX and OPEX first phase operation with an initial approval to produce 5,000 tonnes per month of finished product.

As reported last month, Freehill engaged highly respected mining consultant Dean David FAusIMM, CP (Met) of DD Consulting to provide an in-depth analysis of all of the test work to date, including the assessment of three types of process options for the operation; 68%+ Fe grade pellet feed, 63% Fe grade HG fines and 53% Fe grade LG fines. This report has now been completed and the key findings and conclusions are:

- Freehill can crush the Yervas Buenas magnetite ore to -3 mm and produce a relatively high grade concentrate (52% to 62% Fe) with low technical risk given the simplicity of the proposed plant which will include a primary and secondary crusher, and three tertiary crushers;
- The product would be suitable for sale as feed to a pellet feed production facility and may be suitable for sinter feed;
- The YB ore has the potential to provide very high-grade magnetite concentrate, probably a premium product suited for feeding direct reduced (DR) ironmaking;
- Magnetite concentrates are the highest-grade natural iron ore products generated and may attract a premium price. The benchmark price referenced daily is set by the most common traded iron ore product, hematite fines and at a grade of 62% Fe.

**Images 1 and 2** shows the flowsheet and equipment required to produce a 62% Fe to process 250 tonnes per hour (t/h) of ore.

### **Recommendation and next steps**

The report recommends that Freehill should commence production of 5,000 tonnes of finished product per month to generate first cash flow. The report also advises that the Company reviews the historical Davis Tube Test procedure and modify it so that it provides more realistic results at all sample head grades. This includes repeating critical Davis Tube work, especially for Yervas Buenas core samples.

Freehill also confirms that it is assessing proposals from local experienced contract miners to commence phase 1 mining and processing operations at an existing pit and stockpile at Yervas Buenas. This approach will result in limited upfront CAPEX by Freehill. Concurrently, the feasibility work is continuing on modelling a larger-scale processing operation.

### **Comment:**

**Chief Executive Officer Paul Davies said:** *"The findings of the DD Consulting report confirm that we can produce a high grade magnetite concentrate from the YB ore, and that our product may attract a premium price. Initial CAPEX and OPEX is likely to be minimal and our planned approach for this first phase is to secure terms with an experienced local contract miner that has the necessary manpower and equipment. Negotiations are progressing and we are approved for this first phase of mining and processing. Freehill is also assessing a number of sales channels to ensure it achieves the best pricing for its product. We will continue to update shareholders on progress to first production."*

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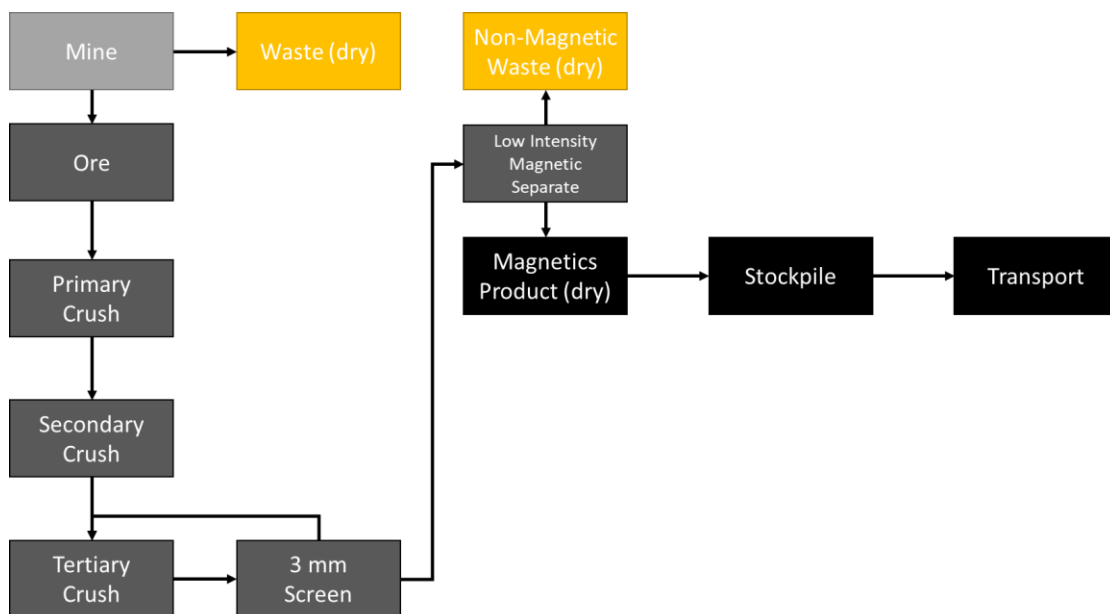
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**Image 1: Flowsheet to Prepare and Upgrade -3mm Crushed Ore (52%-62% Fe Product)**

Major Equipment for 250 t/h Feed												
	C106 Primary Crusher	HP500 Secondary Crusher	HP500 Tertiary Crusher / HPGR	2.5 MW Primary Ball Mill	2.5 MW Secondary Ball Mill	Dry Primary LIMS	Dry Primary MIMS	Wet Primary LIMS	Wet Secondary LIMS	Concentrate thickener	Dewatering Screen	Concentrate Filter
Pellet Feed	1	2		1	1			Y	Y	Y		Y
-0.5 mm	1	2		1				Y			Y	
-3 mm HG	1	1	3				Y					
-3 mm LG	1	1	3			Y						
-9 mm	1	2				Y						
Ore	1					Y						

**Image 2: Major equipment requirements to process 250 tonnes per hour (t/h) of ore through each of the preceding flowsheets are compared in this table**

This announcement has been authorised by the Board of Freehill Mining Limited.

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### **About Freehill Mining Limited**

Freehill Mining Limited (ASX: FHS) is a mineral exploration company focused on the development of its 100%-owned Yerbas Buenas magnetite project in Chile. Freehill has defined two inferred magnetite resources (JORC 2012) at Yerbas Buenas and is identifying gold and copper mineralisation in the northern part of the property as well as copper and gold mineralisation at the 100%-owned El Dorado tenements immediately to the north of Yerbas Buenas. Freehill plans to recommence mining operations at its Yerbas Buenas magnetite mine in 2021 and continue to advance the development of the larger scale magnetite resource.

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**Competent Person’s Statement**

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Ross Corben, BSc (Geology), who is a Fellow of the Australasian Institute of Mining and Metallurgy and a consultant of Freehill Mining Limited and 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 in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr Corben consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

**JORC Code, 2012 Edition**

**Table 1 report for Yerbas Buenas Project**

**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"><li>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.</li><li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li><li>Aspects of the determination of mineralisation that are Material to the Public Report.</li><li>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘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 (eg submarine nodules) may warrant disclosure of detailed information.</li></ul>	<ul style="list-style-type: none"><li>Diamond drilling (both HQ &amp; NQ core size) carried out by DV Drilling to obtain samples.</li><li>Samples sawn into half core &amp; accurately weighed by electronic platform balance and the assay portion bagged immediately.</li><li>Sample length was modified to keep samples at a nominal 5kg weight with most samples being 2 metres in length.</li><li>Magnetic susceptibility measurements taken on all samples and recorded.</li><li>Instrument calibrated against a magnetic standard regularly.</li><li>Raw drill samples delivered to laboratory, total sample dried, crushed to ¼”, then Boyd crusher to 10# and then 800g subsample pulverized to 200# (75 microns).</li><li>Assaying done by Lithium Borate Fusion XRF.</li><li>Samples also analysed by Davis Tube Recovery (DTR), LOI and Magnasat.</li></ul>
Drilling techniques	<ul style="list-style-type: none"><li>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).</li></ul>	<ul style="list-style-type: none"><li>Diamond drilling was the method chosen for all holes drilled.</li><li>Core diameter was HQ diameter in weathered rock and surficial sands, and NQ diameter in competent rock.</li><li>Coretech CSD 1300G drill rig used.</li></ul>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Core recoveries were observed during the drilling and any core loss was noted in the geological logs.</li> <li>Samples were checked by for volume, moisture content, possible contamination and recovery.</li> <li>Some core loss was apparent and noted (generally &lt;5%) in the weathered portion of the holes, however this was generally minor.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All sample intervals logged by a qualified geologist with experience in magnetite deposits in Chile to a level appropriate with the style of mineralization.</li> <li>Logging was both qualitative and quantitative</li> <li>Core orientation, lithology, alteration, mineralization level, weathering, magnetic susceptibility and sample length were all logged &amp; transferred to an Excel spreadsheet.</li> <li>All core was photographed both wet &amp; dry prior to cutting.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>All core cut using a standard electric diamond saw to half core.</li> <li>The preparation of samples followed industry practice.</li> <li>Assay sample intervals were then marked by the geologist and ½ core samples bagged into plastic bags and dispatched to ALS Coquimbo, Chile for ore preparation.</li> <li>Ore preparation was a standard PREP-31 method which involved oven drying, crushing to -2mm and a 250g sub-sampled pulverized of 85% passing 75 micron using LMS mills.</li> <li>QA/QC sampling involved blank material certified standard pulps &amp; duplicates.</li> <li>ALS laboratory also carried out internal standard QA/QC procedures.</li> <li>Sample sizes are considered appropriate to the grain size of the material being sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All assaying of sample pulps conducted at ALS Iron ore Technical Centre Perth which is an accredited assay laboratory.</li> <li>Assays on pulps include XRF of all samples, Magnasat testing of all samples and DTR testing of a subset of samples</li> <li>Laboratory QA/QC samples involving the use of blanks, duplicates, standards (certified reference materials), replicates as part of in-house procedures.</li> <li>Both ALS laboratories are ISO 9001 accredited.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>All drill hole data was logged on paper and then digitally entered into Excel by Freehill geologists at the site office.</li> <li>All digital data was verified and validated by Freehill's consultant before loading into the drillhole database.</li> <li>Significant intersections were verified by magnetic susceptibility meter and visual colour assessment.</li> <li>One twinned hole was done, which compared YB-016 with YB-039.</li> <li>Both analogue and digital versions of all drilling logs, geological logs etc stored in multiple backup locations.</li> <li>No adjustments were made to the assay data.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches,</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole locations were located by V60 Trimble 220 system DGPS (20 holes).</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>mine workings and other locations used in Mineral Resource estimation.</i></p> <ul style="list-style-type: none"> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Topographic LIDAR drone survey carried out over the MRE area</li> <li>• All holes were 'downhole' surveyed using a Reflex Ezy-Gyro instrument to confirm drillhole deviation.</li> <li>• All digital data, maps and data products reporting are provided in coordinate system: datum WGS84 and projection UTM zone 19S.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <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></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drillhole line spacing is a nominal 100 metre with holes spaced along the line between 50 &amp; 75 metres.</li> <li>• Drillhole spacing is considered appropriate for the level of confidence quoted.</li> <li>• MRE assay samples were composited to 2 metre intervals.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Drillholes were oriented between -50° &amp; -65° (though 1 hole was drilled vertically) to the east which was considered to be perpendicular to the YB-6 mineralisation.</li> <li>• Hole positions are not considered to have introduced a sampling bias.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Chain of custody was strictly controlled, with all samples in the possession of drilling contractor or company staff at all times until delivered to ALS Coquimbo.</li> <li>• Samples were transported to the ALS Coquimbo by Freehill staff where they were bar coded upon receipt.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audit of data has been completed to date.</li> </ul>

## 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"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Yerbas Buenas Project is located on 6 licences held through Chilean subsidiaries of which Freehill Investments Pty Ltd currently has a 100% interest.</li> <li>Licences are numbers 04102-2723-1, 04102-2714-2, 04102-2715-0, 04102-2755-K, 04102-2937-4 &amp; 04102-3522-6 for a total of 478 hectares.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Two RC drillholes, SDHYB1101 &amp; 1102, completed by previous tenement holder Compania Mineraria del Pacifico (CMP) in 2011.</li> <li>Complete drillhole logs and assays provided by CMP.</li> <li>Samples assayed for Total %Fe and % magnetics by Davis Tube.</li> <li>50m line spaced ground magnetics survey completed over 800m x 800m by Geoexploraciones in 2010.</li> <li>200m line spaced ground magnetics survey completed over 4.8km<sup>2</sup> by Ingegloab in 2014.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The deposit occurs within the El Tofo and Atacama Fault region with those projects lying along the El Tofo Fault being primarily iron bearing whilst those along the Atacama Fault tending to be predominantly copper bearing.</li> <li>The central area is characterised by three dominant intrusive structures. The structural setting is one of NE-SW trending subvertical tabular bodies with apatite the primary gangue.</li> <li>The primary intrusive unit is a diorite with veins of quartz-magnetite and disseminated magnetite.</li> <li>Andesitic porphyry occurs with abundant biotite, quartz with magnetite as well as hydrothermal breccia with magnetite.</li> <li>Yerbas Buenas shows some evidence of IOCG mineralisation.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>total drillhole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>See Table 4 YB-6 Drillhole Collar Data of the report for details.</li> </ul>

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Criteria	JORC Code explanation	Commentary
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are not being reported.</li> <li>• No aggregate intercepts were used in the estimation.</li> <li>• No metal equivalents are being reported.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>• Exploration intercepts are not being reported.</li> <li>• Where possible drill holes are oriented to cut at right angles across the mineralisation.</li> <li>• Down hole widths are considered as true widths.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections are available in the body of the Mineral Resource Estimate.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The reporting of results in this report is considered balanced.</li> <li>• No other exploration data, that is considered meaningful and material, has been omitted from this report.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are not being reported.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Further infill drilling is recommended to overcome limitations incurred during the current drilling of YB-6.</li> <li>• Further drilling to the south to test the extent of mineralisation</li> <li>• Follow up RC 'in-fill' drilling of the YB6 magnetic structure is planned for Q2 2020 to upgrade the resource category</li> </ul>

### 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"> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Data stored in Micromine 2018 database.</li> <li>Data provided in a consistent format &amp; imported using a software importer to minimise human errors.</li> <li>Minimal human handling of assay data.</li> <li>Data validation occurred via several stages initially via excel spreadsheets followed by Micromine's internal database validation program which prevents the duplication of data, typographical errors and maintain coding consistency between geologists.</li> <li>The data then underwent database validation and QA/QC procedures prior to database generation.</li> <li>Assay values have been subjected to random reconciliation with laboratory certified values to ensure agreement.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person was onsite between Oct 2019 &amp; Dec 2019 as most of the drilling was undertaken.</li> <li>Drill sites were inspected &amp; locations verified.</li> <li>Local geology witnessed at multiple locations.</li> <li>Drilling &amp; sampling procedures were witnessed.</li> <li>Discussions were held with field geologists about mineralisation structure, local &amp; regional geology.</li> <li>Advice provided on improvements to logging &amp; sampling procedures to increase confidence.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <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 of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The geological model confidence is moderate.</li> <li>Geological logging &amp; surface mapping allow extrapolation of drill intersections between drillholes.</li> <li>Current data spacing &amp; quality is sufficient to imply, but not verify, grade continuity.</li> <li>Logged lithologies were used alongside assay results to establish &amp; constrain mineralisation.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The YB-6 anomaly block model extends approximately 630 metres in length by 250 metres in width.</li> <li>The depth extent is from natural surface to -130 mRL &amp; this is approximately 250 metres.</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>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.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> </ul>	<ul style="list-style-type: none"> <li>Micromine 2018 was used to create a geological model &amp; define the anomalous mineralisation envelope through a combination of geological model &amp; assay interpolations.</li> <li>The mineralisation envelope was statistically interrogated using variography to define parameters for the estimation.</li> <li>Block estimation was undertaken using Ordinary Kriging (OK) in Micromine.</li> <li>Kriging parameters were defined using %Fe as the primary variable.</li> <li>Estimation has been carried out for %Fe &amp; %Fe<sub>3</sub>O<sub>4</sub>.</li> <li>Drill hole spacing is variable, &amp; the block sizes were chosen to reflect the best compromise between spacing &amp; the necessity to define the geological detail of the deposit.</li> <li>Block sizes are 10m along strike, 5m across strike &amp; 2m vertically.</li> <li>As there are no extreme values, no top-cut has been applied.</li> <li>Block model validation has been carried out by several methods, including:</li> </ul>

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| Level 7, Edificio Seville, Avenida Del Mar La Serena, Chile South America



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>Drill Hole Plan and Section Review</li> <li>OK Model versus ID<sup>2</sup> Model</li> <li>All validation methods have produced acceptable results.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages reported are on a dry basis.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource has been reported at a range of cut-offs from 0% Fe to 40+% Fe.</li> <li>An economic cut-off of 10% Fe is recommended.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Mining methods would be via an open pit combined with an onsite processing plant suitable to the deposit scale and geometry.</li> <li>Mining factors such as dilution and ore loss have not been applied.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Metallurgical test-work as undertaken during a trial mining operation confirms DTR analyses via lab-scale test-work.</li> <li>The use of conventional magnetite processing during trial mining operation with crushing to -6mm and can produce an Fe concentrate with low deleterious elements (SiO<sub>2</sub>, P, S, Al<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub> &amp; V).</li> <li>Delivery and sale to a local pellet feed plant over 24 months has confirmed the suitability of concentrate as a pellet feed.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Tailings – Based on a 15% Mass recovery, ~85% mass will be deported to the tailings fraction.</li> <li>Crushing to -6mm is an entirely dry process. No water used</li> <li>Given the lack of toxicity, negligible prospectivity for acid mine drainage, availability of low-density land area and bulk handling methods, it is envisaged that waste will be adequately handled should mining occur.</li> <li>There are no other known significant environmental impediments to the project's viability from the currently available information.</li> </ul>
Bulk density	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>Bulk density was based on an algorithm developed from Freehill's relative density measurements on drill core that were matched to known assay grades.</li> <li>The algorithm was compared to similar algorithms developed at similar magnetite deposits &amp; found to be consistent with them.</li> <li>No voids were encountered in the drilling</li> </ul>

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Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource comprises Inferred Resources classification only, reflecting the confidence in the deposit.</li> <li>Geological modelling, data density, data geometry and variography form the basis for the classification.</li> <li>The classification of the Mineral Resource considered qualitative and quantitative criteria.</li> <li>The criteria considered included the geological model, logging data, sampling techniques, data quality, data distribution, variography, deleterious materials with consideration of factors such as induration and overburden.</li> <li>The result reflects the Competent Persons view of the deposit.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>The current Mineral Resource estimation has been internally peer reviewed by Geos Mining and found to meet the criteria for eventual economic extraction.</li> </ul>
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>The relative accuracy of the resource estimate is reflected in the JORC resource category.</li> <li>The Inferred Resources are considered global in nature.</li> </ul>