

19 October 2017

### **Operational Update**

#### **Highlights**

- Upgrading of Line 2 crushing plant completed and throughputs increasing
- Development of the first full bench in the Yerbas Buenas trial mining pit near completion
- Copper mineralisation now visible on floor of mining pit and assays indicating 1.2%
   Cu

The company is pleased to announce that planned development of the demonstration processing plant and trial mine at the 100% owned Yerbas Buenas project in Chile is proceeding well.

#### **Demonstration Processing Plant**

The recommissioning and upgrading of the Line No. 2 crushing plant was successfully completed in early September to include a new cone crusher and belt magnet to produce -32mm pre-concentrates, increasing crushing capacity by over 200 tonnes per hour.



Figure 1 - Reconfiguration of Line  $N^{\circ}$  1 and upgrading of Line  $N^{\circ}$  2 completed – image shows Belt-Drum magnets that produce the pre-concentrate feed to the magnet plant.



Figure 2 – Crushing plant Line N° 1 and 2 showing -32mm pre-concentrate stockpiles

The crushing capacity of the project has been increased approximately 200% every two months since production first commenced in early March 2017 with site crushing capacity now at 440 tonnes per hour.

A tertiary crushing circuit is scheduled for installation to enhance grade and therefore product price by producing a -10mm product at a nominal iron grade of 58%.

A subsequent upgrade of line 1 before year end will increase overall crushing capacity by a further 150 tonnes per hour.

#### **Trial Mining Pit Development**

The Ground Magnetics program completed in April 2017 identified a total of seven major magnetic structures. The trial mining pit is located over 'YB1', the first of these structures to be developed by the company. This particular anomolie had been drilled in 2011 by Compania Minera del Pacifico , the iron ore division of CAP, Chiles largest iron ore producer and showed magnetite mineralisation down to 150m.



Figure 3– Mining pit looking north from Monolith Sur which marks the next magnetite outcrop area



Figure 4 - Development of mine pit looking south - shows first major bench completed October 2017

Pit modelling based on 3D inversion data from the geophysics program has now been used to develop a basic pit model and design down to the final expected depth of mineralisation to 150m below surface.

The first bench has now been expanded to design and development of the second bench is about to begin. Higher grade magnetite areas are now becoming more evident as the pit deepens.

The expanded pit will allow the scheduled increases in production planned over the next 2-3 months that will require two separate excavator and trucking sets to operate in different parts of the pit.

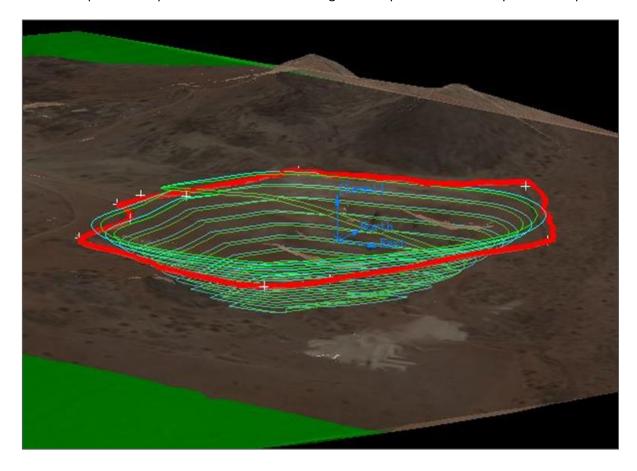


Figure 5 - Yerbas Buenas structure N° 1 showing pit design

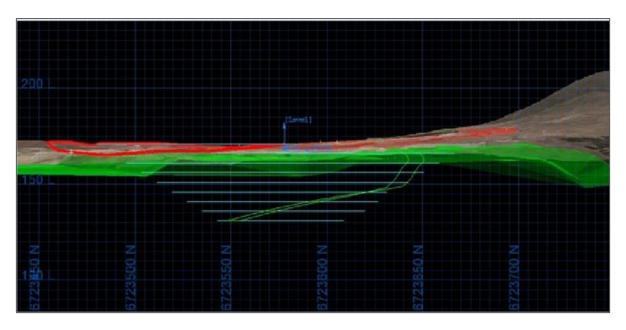


Figure 6 - Yerbas Buenas structure  $N^{\circ}$  1 showing pit design N-S section looking west. Image shows the edge of the mountains in the northern part of the tenement (right side of image)

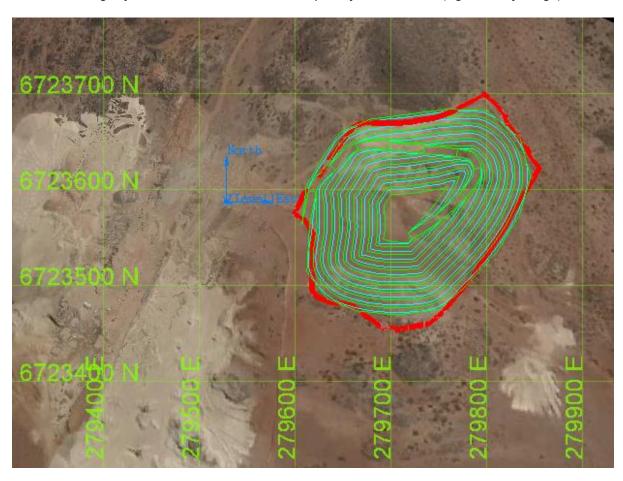


Figure 7 – Plan view of YB1 pit design currently being implemented

#### Geology

Copper mineralisation has recently become visible across the floor of the mining pit as it has been expanded. Chip sampling across the floor within the identifiable massive magnetite zones has identified the presence of sulphides associated with the magnetite and a subsequent grab sample yielded assays of 67.95% Fe with 1.2% copper.

Sample Code	Easting	Northing	Cu ppm	% Fe <sub>Total</sub>	% Davis Tube Recovery	% Fe <sub>DTT</sub>
YB334	279762	6723625	12,657	67.95	86.64	75.87

Table 1 – Analysis of a sample taken from the floor of the trial mining pit 5m below natural surface



Figure 5 – Typical massive magnetite being exposed on the floor of the mining pits first bench. These contain visble sulphides have been assayed and shown to contain copper.

The occurance of copper bearing material across large portions of the pit floor further support the companies view that mineralisation at the Yerbas Buenas project is consistent with the intrusive genesis of these lower IOA structures and the IOCG geology that is common along the Chilean Iron Belt.

The iron belt hosts numerous operating magnetite-copper-gold mines and many more projects under development. These include Lundin Minings large Candelaria copper mine, the Dominga project and another 15 mining operations all within a narrow 13-280km coastal belt from Yerbas Buenas.

Magnetite mineralisation at Yerbas Buenas effectively begins at surface which in itself is unusual in the iron belt and this has allowed the team to use the Tamrock drill to conduct reconnaisance drilling to the south of the main pit to check for continuity of grade. Several 10m Reverse Circulation holes were drilled at the Monolith Sur area 180m south of the current mining pit and confirm the extension of the YB1 structure to the south, consistent with the geophysics.

Remodelling of the 200m spaced geophysics data for the northern portion of tenement is being done and early indications show a large magnetic structure consistent with visible magnetite down the full eastern face of the mountain from RL620m to RL 160m within the gold/copper artisanal mining areas.

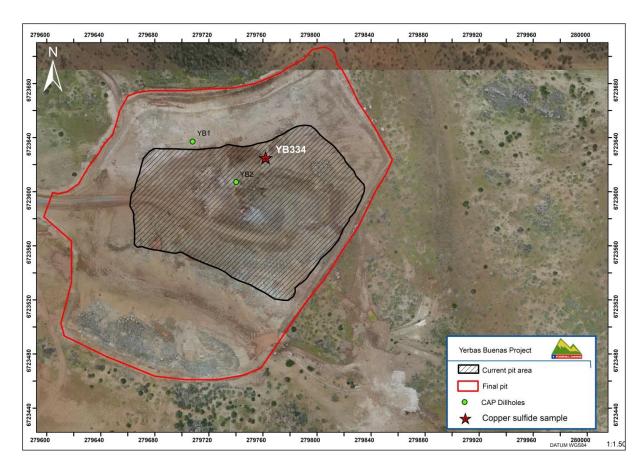


Figure 6 – Trial mining pit with completed outer boundary shown in Red and location of Sample YB334 taken from the floor of the pit and yielded the high iron and copper grade The pit floor is now 5-7m below natural surface.

#### **About Freehill Mining Limited**

Freehill Mining Limited is a mineral exploration company focused on creating shareholder wealth through the identification of mineral resources in Chile and development of its Yerbas Buenas magnetite project. The company has also identified copper and gold mineralisation on its tenements and will further develop these.

For further information contact:

Joe Fekete Company Secretary Freehill Mining Limited

+61 407282199

jfekete@freehillmining.com

<u>Competent Persons Statement:</u> The information in this report that relates to Exploration results is based on information compiled by Mr Peter Hinner a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy'. Mr Hinner is a full-time employee of the Freehill Mining Ltd and has sufficient experience that 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, Mineral Resources and Ore Reserves'. Mr Peter Hinner consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.'

# **JORC Code, 2012 Edition – Table 1 report**

# **Freehill Mining Limited**

### **Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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> <li>The sample was an exploration type grab sample taken from a 3m³ pile of massive magnetite that had just been excavated from the floor of the mining pit. The sample was typical of other pieces within the pile and was approximately 2kg in weight.</li> <li>Visual assessment of the magnetite piece showed visible sulphide mineralization.</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Not applicable – no drilling required to take the sample
Drill sample recovery	<ul> <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> <li>Not applicable for grab sample</li> </ul>
Logging	<ul> <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> <li>Sample was collected from the floor of the mining pit and logged on a sample log sheet</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <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> <li>No subsampling or splitting was done in the field and the sample was sent as a 'whole' sample to the laboratory for analysis. Sample labelled, logged into laboratory and given a barcode for subsequent analysis.</li> <li>Analysis of the copper was by 'Code 1F2 Total Digestion ICP-OES'. Analysis of gold was by FA-AAS. Códe 1A2-30: Au (30 gr/8ml FA/AAS) PR15 REV02</li> <li>Upon receival sample is crushed to 85% -10# tyler, then 500grs split off and pulverized to 95% -150#, and then 250 grs stored for further analysis.</li> <li>Laboratory standards and duplicates were run.</li> <li>Sample size was considered appropriate for the grain size of the</li> </ul>

Criteria	JORC Code explanation	Commentary
		mineral
Quality of assay data and laboratory tests	<ul> <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> <li>The assaying method of Total Digestion OCP-OES used for Cu was considered appropriate for measuring copper in magnetite rock and FA-AAS for gold, Volumetric analysis for Total iron</li> <li>No standards, duplicates or blanks submitted with the exploration sample</li> </ul>
Verification of sampling and assaying	<ul> <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> <li>Not applicable for grab sample</li> <li>Sample data were recorded onto logging sheets and subsequently recorded into the exploration database</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Sample locations were recorded using a Garmin 64s hand held GPS</li> <li>All digital data, maps and data products associated with the sample are provided in coordinate system: datum WGS84 and projection UTM zone 19S.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Not applicable., only single sample taken</li> <li>No sample compositing occurred</li> <li>Sample taken from within the mining pit and on the surface of a portion of protruding magnetite mantle</li> <li>No sample compositing occurred</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Not applicable. Only single sample taken.</li> <li>No sampling bias introduced due to mineralised structures orientation</li> </ul>
Sample security	The measures taken to ensure sample security.	Samples secured under a "chain of Custody' protocol and under the control of company personnel at all times. Company personnel delivered samples to the 'ActLab' assay laboratory for formal receival.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>No formal review has been undertaken and all work managed and under the control of the competent person.</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> <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> <li>The Yerbas Buenas Project is located on licenses held through Chilean subsidieries in which Freehill Investments currently has 100% ownership. Licenses are numbers 04102-2723-1, 04102-2714-2, 04102-2715-0, 04102-2755-K, 04102-2937-4 and total 398 hectares. All blocks owned outright with one block under a purchase agreement.</li> <li>The licences currently allow for the extraction of up to 5000 tonnes per month per block and an application is currently with Sernageomin, the Chilean mining authority, for expanded production to 40,000 tonnes per month;</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Two Reverse Circulation drill holes-SDHYB1101 &amp; 1102- completed by previous tenement holder Compania Mineria del Pacifico (CAP) in 2011 and referred to in prospectus section 2.5 of IGR</li> <li>Holes drilled to 101m &amp; 150m, Dip 70 degrees, azimuth 119, E6,723,594 N279,725 &amp; E6,723,564 N279,758</li> <li>Complete drill hole assays provided by CAP, photographs of drilling activity and hole collars, geophysics by Geoexploraciones,</li> <li>Samples assayed for Total %Fe and % magnetics by Davis Tube.</li> <li>50m line spaced ground magnetics survey completed over 800mx800m in 2010 by Geoexploraciones</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	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. 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. The primary intrusives unit is a diorite with veins of quartz-magnetite, disseminated magnetite. Andesitic porphyry occurs with abundant biotite, quartz with magnetite as well as hydrothermal breccia with magnetite. Yerbas Buenas shows some evidence evidence of IOCG mineralisation
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:	Not applicable – no drill holes completed by the company and all available material information has been provided.

Criteria	JORC Code explanation	Commentary
	<ul> <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>hole length.</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>	
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Not applicable – no weighted average grades or intersections reported</li> <li>No aggregate intersections were the subject of this announcement</li> <li>No metal equivalents were mentioned in this announcement</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Not applicable for geophysics survey program reporting.</li> <li>No intercept lengths or mineralisation widths were reported in this announcement.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	See Figure 6 and table 1 in body of report
Balanced reporting	<ul> <li>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.</li> </ul>	The results provided in this document are considered to be a balanced report of the information.
Other substantive exploration data	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.	The region around the project area is known to have copper and gold mineralization as well and magnetite. The current trial mining pit is being operated to extract magnetite. The recent presence of sulphides warranted a preliminary sample be taken for analysis to check for both Cu & Au. Some 106,000 tonnes of material has been extracted from the trial pit for processing assessment but not tested before for copper. Follow up sampling will now be undertaken.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Detailed mapping and rock-chip sampling of main geophysical targets are being undertaken together with sampling in a 1.2 Hec bulk sampling pit.</li> <li>First pass RC drilling of the identified magnetite structures at the Yerbas Buenas project are currently planned and estimated to be commenced Q1 2018.</li> </ul>