



22 February 2019

## Induced Polarisation Survey Identifies Large Anomaly at Yervas Buenas

- **Induced Polarisation survey over prospective copper & gold area completed**
- **Survey has identified large structure that extends from surface to over 400m in depth and is open to the east, south & north**
- **Second potential large structure identified to south**

Freehill Mining Limited ("Freehill" or "the company", ASX:FHS) is pleased to report the completion of the first round of geophysics over the copper prospective northern portion of its Yervas Buenas project.

Last year Freehill commissioned ground magnetics and induced polarisation (IP) surveys at the Yervas Buenas Project in Region IV, Chile. The IP survey targeted a potential source of significant copper mineralisation which is common at surface in the area which contains numerous artisanal copper and gold workings.

Data review work completed shows that the IP survey has outlined moderately strong chargeability anomalies in the north east portion of the survey area. The shallow portion of the anomaly is located in a pronounced quebrada (ravine) where the chargeable material may be located near surface.

High resistivities are associated with both the chargeability anomaly in the north-east part of the grid and with most of the strong magnetic anomalies in the northern portion of the grid. A significant break in resistivities immediately west of the major magnetic anomalies is indicative of a major structure or contact.

The geology of Yervas Buenas shows a complex lithology consisting primarily of various types of andesites on the eastern portion of the grid and mixed andesites and diorites on the western portion of the grid.

### Induced Polarisation Structure

Figure 1 shows the relative location of the magnetic structure YB7 relative to the newly identified IP structure. The map should be viewed in conjunction with Figure 3 that provides detailed plan views of the Induced Polarisation survey at varying depths. An additional structure to south appears at 200m depth and a new survey is currently under way to assess its size and geometry.

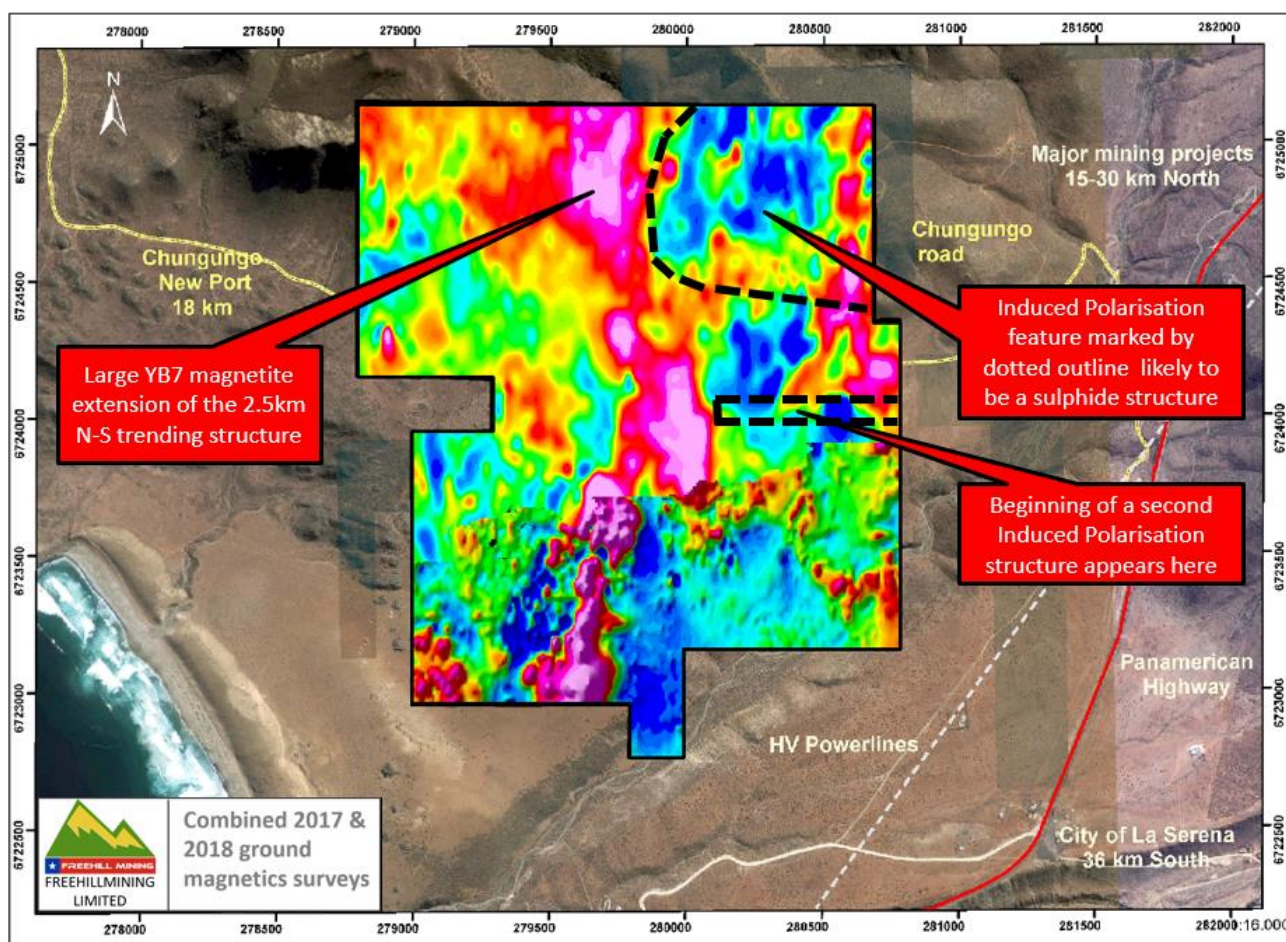


Figure 1- Yervas Buenas Project displaying Ground Magnetic RTP Image & Location of IP Anomaly

Copper and gold sulphide mineralisation is common at a number of nearby deposits including Higuera, Dominga, and Caballo Blanco. Typically, the copper and gold mineralisation is located within or near the magnetite zones, but is generally associated with sulphide mineralisation events rather than the magnetite.

The copper and gold zones are often controlled both structurally and stratigraphically, with resulting complex geometries that can be difficult to understand during the initial stages of exploration. IP surveys are routinely used to identify sulphide mineralisation prior to drilling.

The Yervas Buenas IP anomaly is located in the north-east corner of the project area immediately east of the YB7 magnetite target (see Fig 1).

The chargeability anomaly on the northeast portion of the grid correlates with copper-gold workings, tourmaline breccias, and a deep, weak to moderate magnetic anomaly. Consequently, the anomaly may be indicative of IOCG-style mineralization.

The shallow portion of the chargeability anomaly in the quebrada will be mapped and sampled in detail to determine the possible chargeable source. Following mapping, the chargeability anomaly east of the quebrada will be drilled.

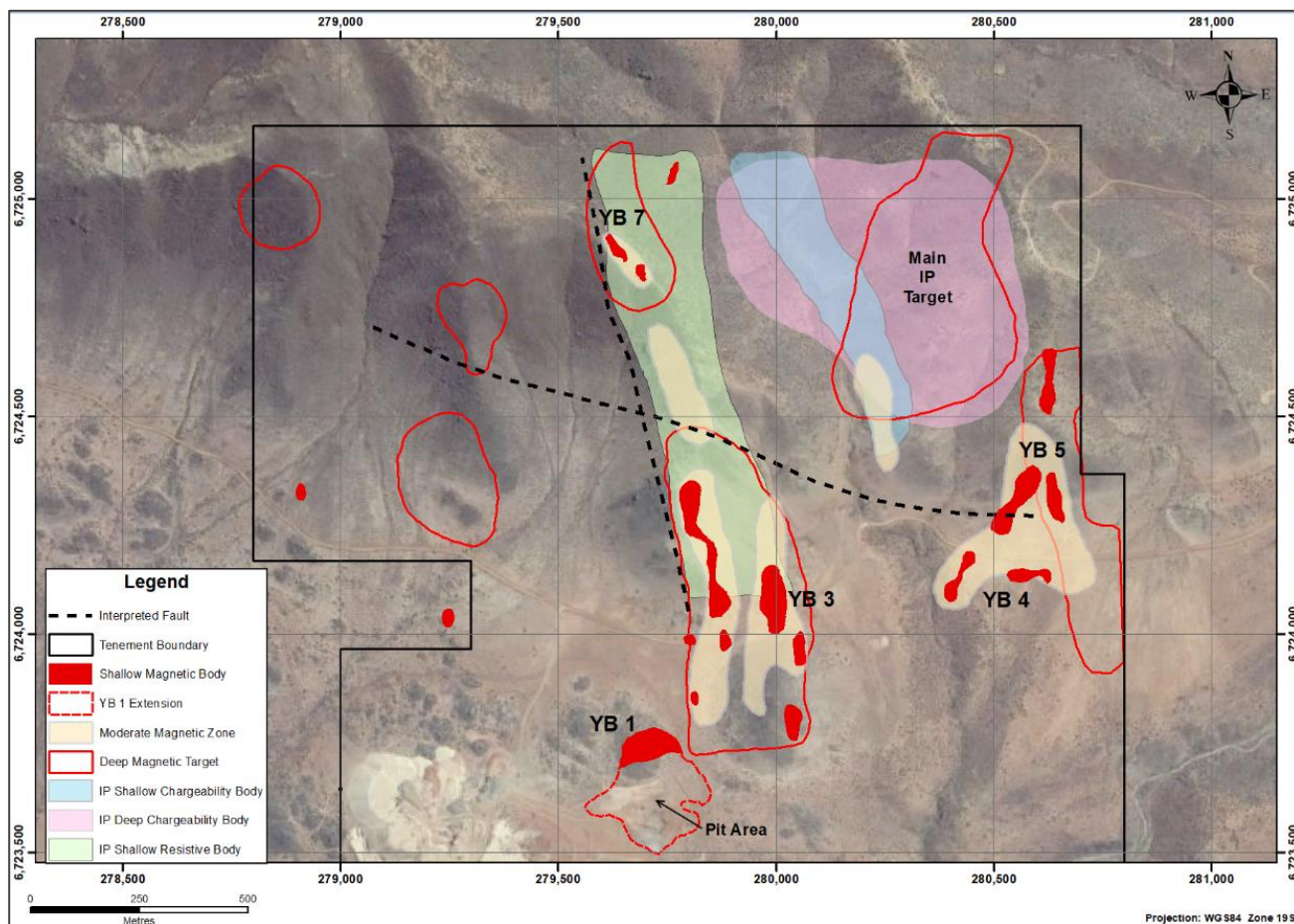


Figure 2- Yerbas Buenas Interpretation Summary Showing Magnetic, Chargeability, and Resistivity Features.

Figure 2 above displays shallow strongly-magnetic targets (magnetite) in dark red and deeper moderately-magnetic targets are shaded in beige.

The main shallow and deep chargeability anomalies are shaded in mauve and light blue. A resistive body that correlates closely with the YB3-YB8 body is shaded in pale green.

Interpreted structures are shown in black. The NNW-trending interpreted structure is based on a strong resistivity break on each of the IP lines. The WNW interpreted structure is based on distortion in the resistivity and chargeability anomalies on the southern 3 lines.

The 200m, 300m and 400m plan images all show the emergence of another IP structure on the southern most IP line and this is currently being surveyed with additional lines.

The chargeability inversion plots shown in plan and presented in Figure 3 all clearly show a structure that widens out to the east and extends to the north as it deepens. It is open to both the north and east.

Detailed cross sections for each IP line are provided in Figure 6. Line 6724100N shows the emergence of what appears to be another potential sulphide structure. Three additional IP lines have now been run and data is being interpreted.



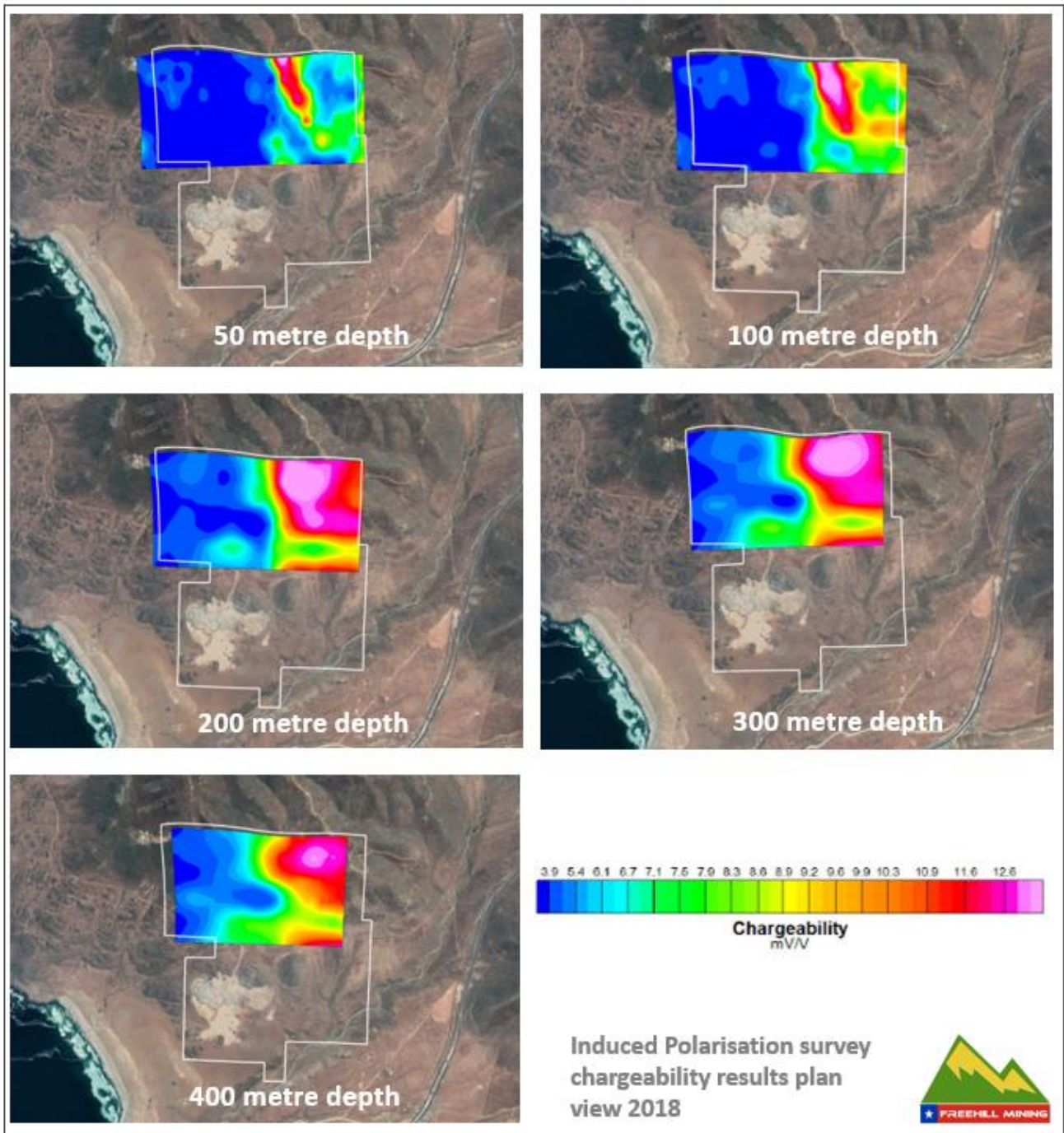
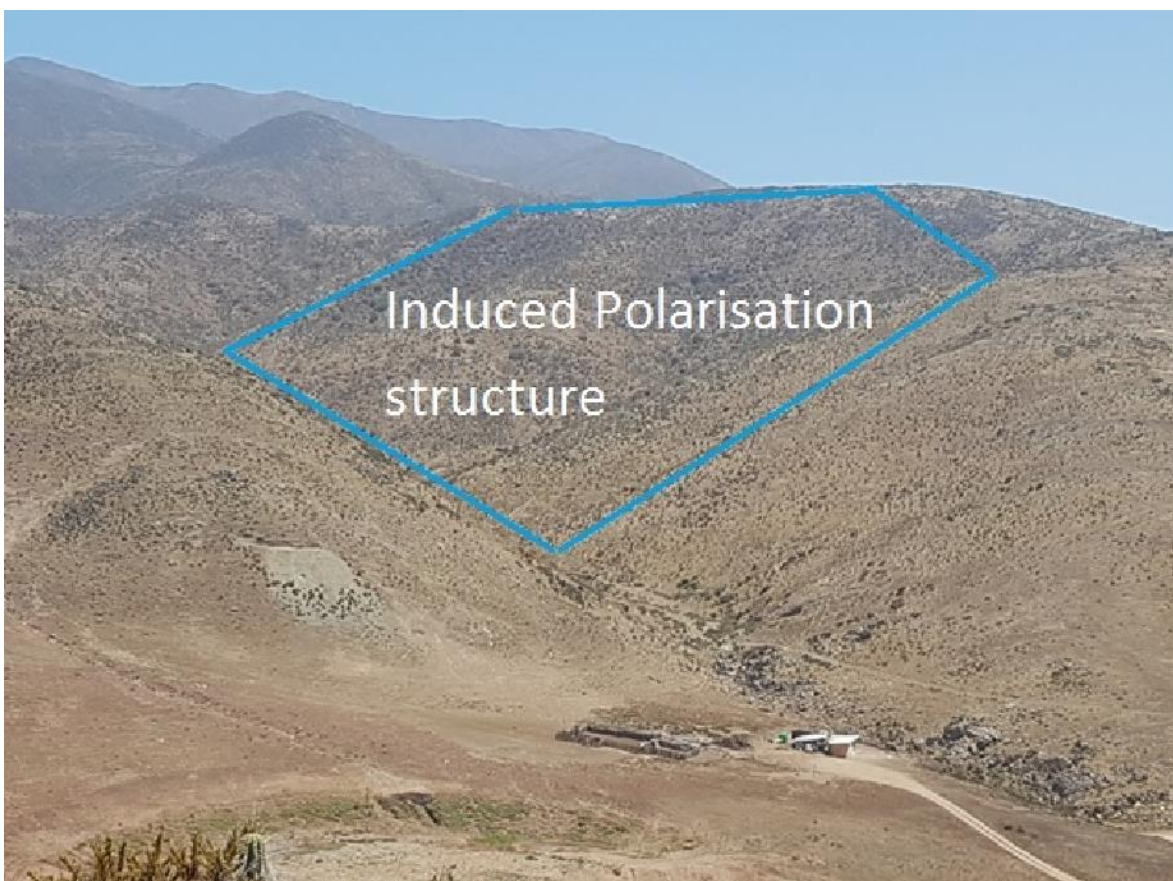


Figure 3- IP Chargeability Inversion Plots at 50, 100, 200, 300 & 400 Metre Depths



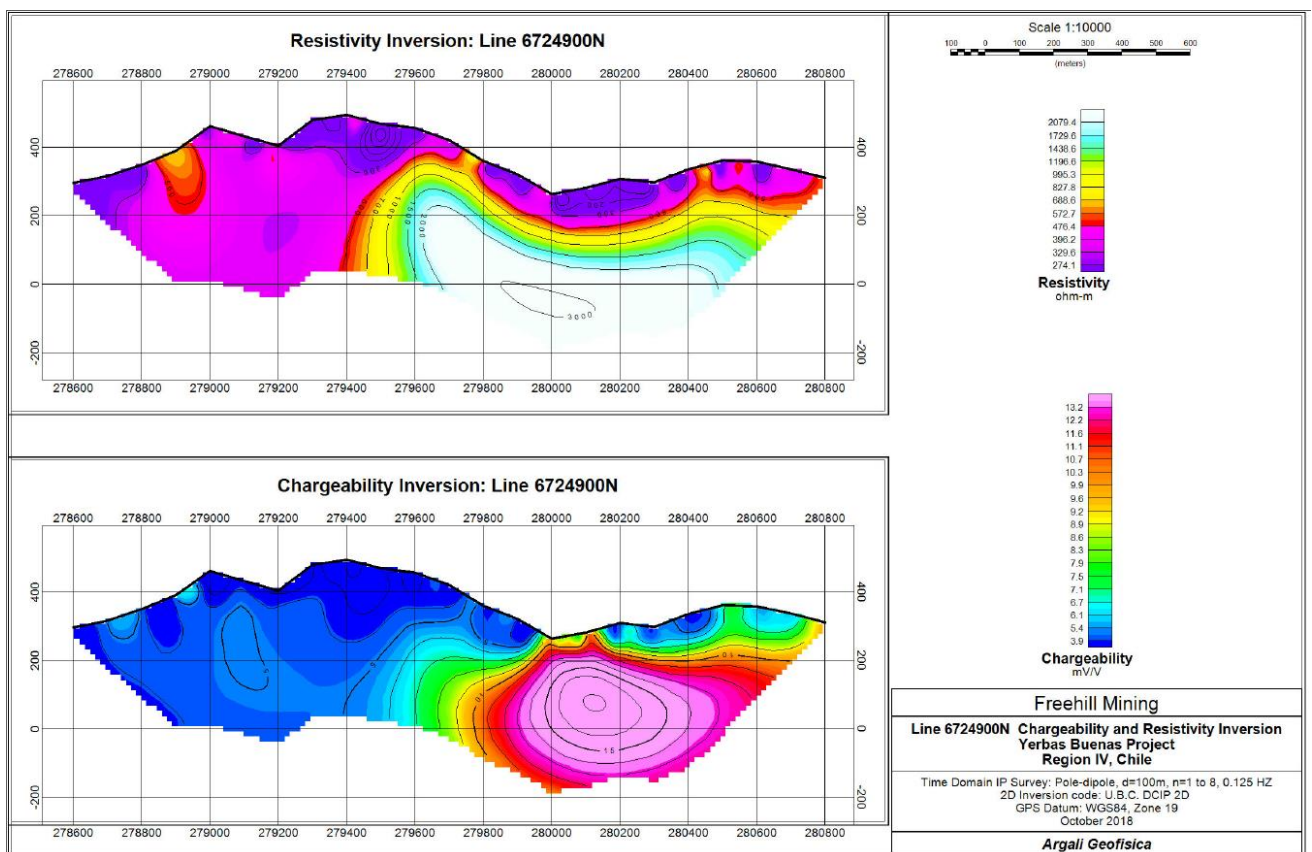
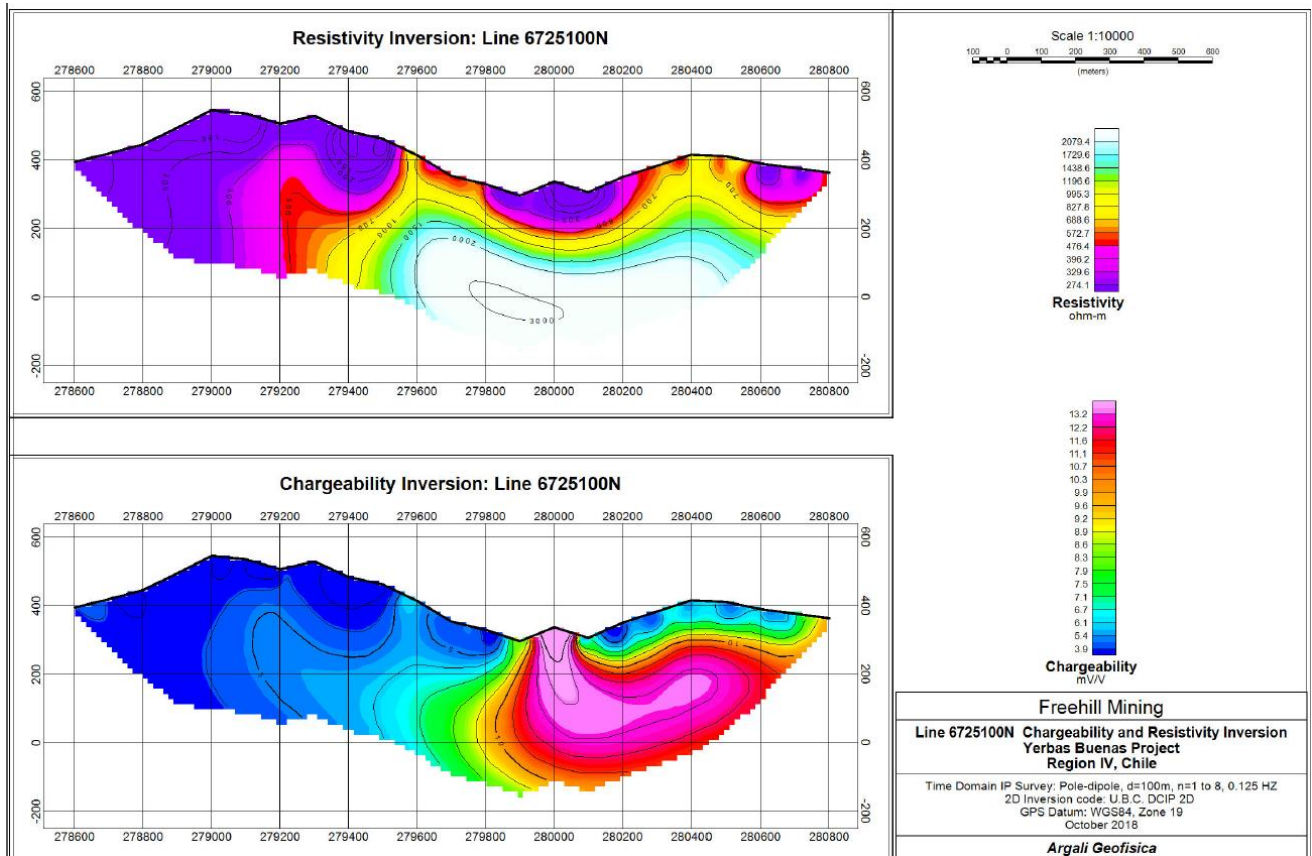


*Figure 4- Photos of Artisanal Mining & Native Copper Mineralisation*



*Figure 5- Photo looking North-East Showing the IP Anomaly and only 1200m from trial mining area*





Freehill Mining Ltd – iron ore producers | ACN 091 608 025 | [www.freehillmining.com](http://www.freehillmining.com)

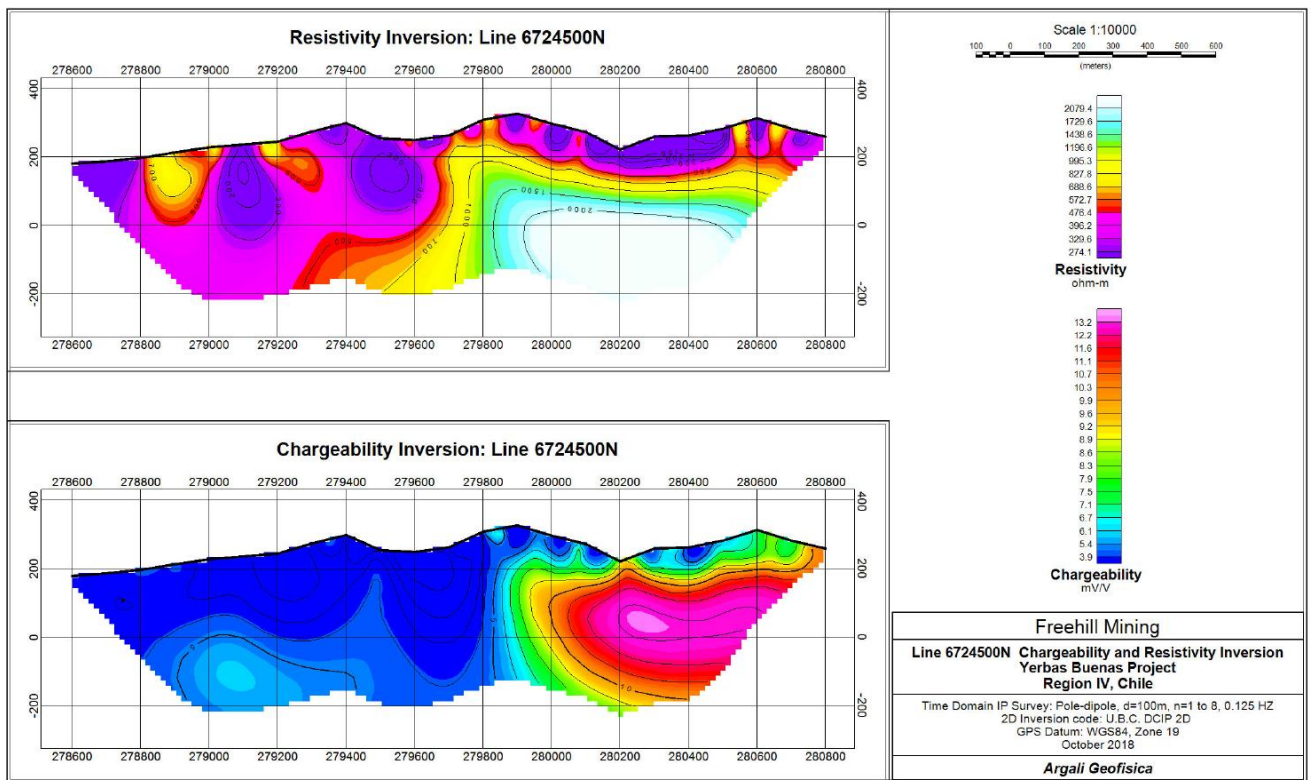
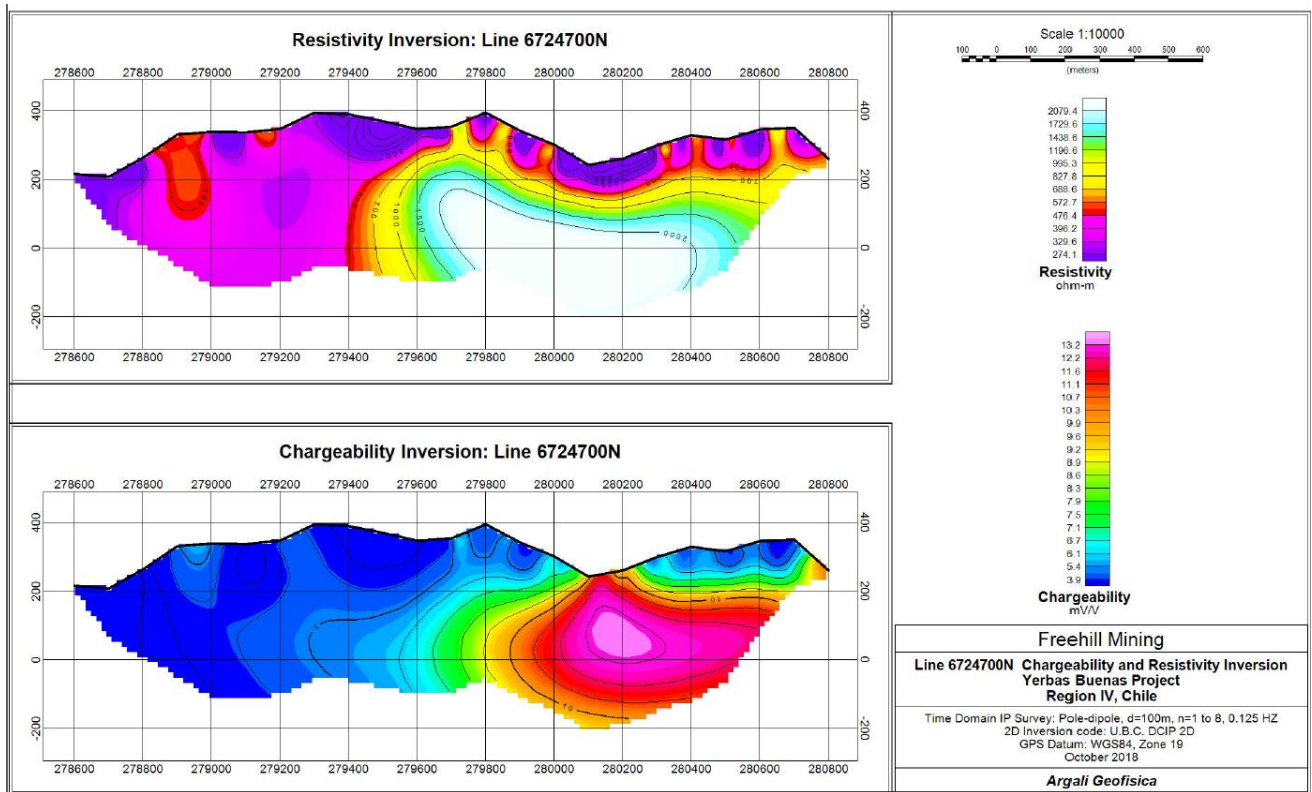
| Tel: +61 03 86021700

Melbourne Office

| 88 Miller Street, West Melbourne, Vic 3003 | email: [info@freehillmining.com](mailto:info@freehillmining.com)

La Serena, Chile office

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



Freehill Mining Ltd – iron ore producers | ACN 091 608 025 | [www.freehillmining.com](http://www.freehillmining.com)

| Tel: +61 03 86021700

Melbourne Office

| 88 Miller Street, West Melbourne, Vic 3003 | email: [info@freehillmining.com](mailto:info@freehillmining.com)

La Serena, Chile office

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

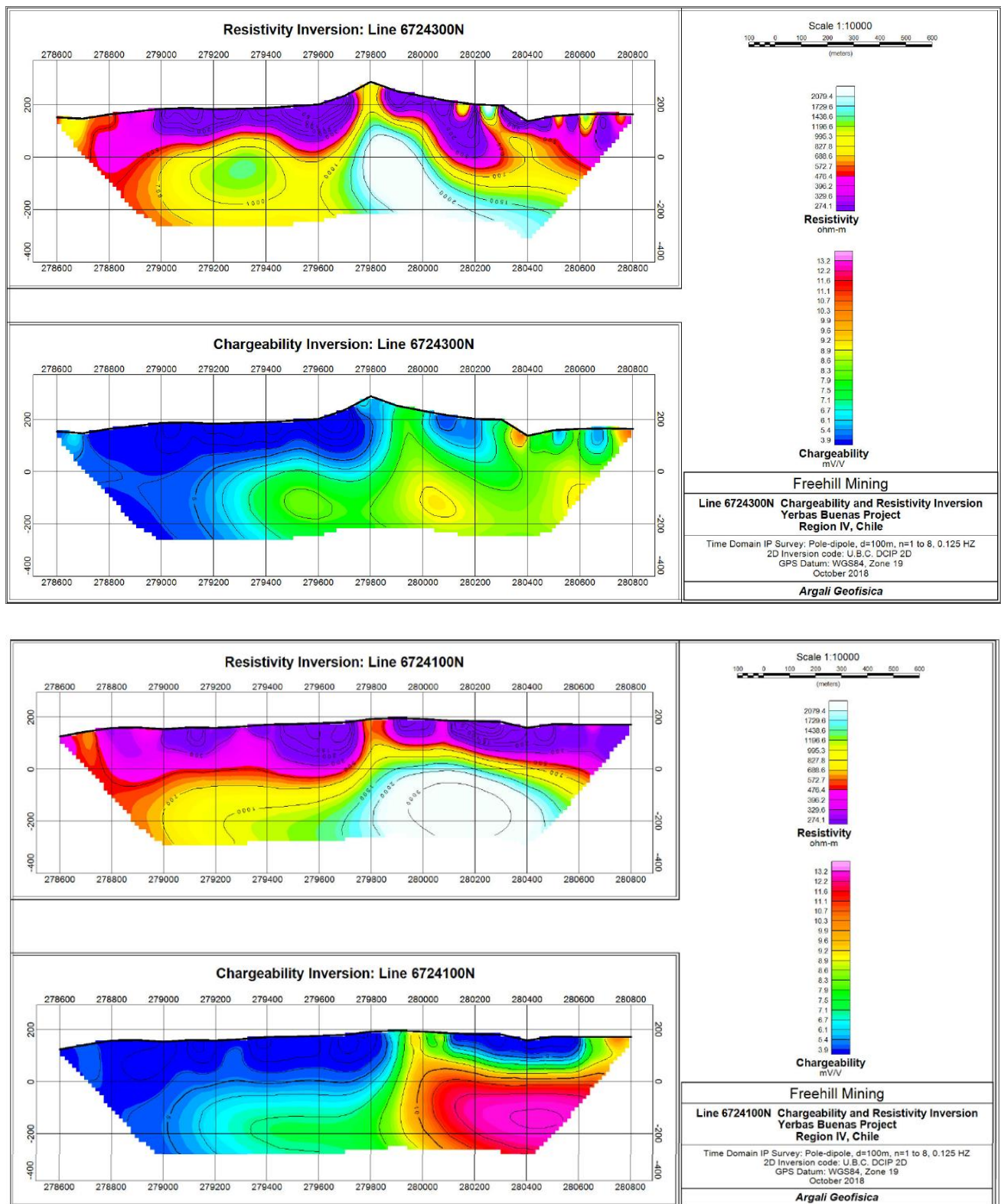


Figure 6- Chargeability and resistivity Inversion plots for the 6 IP lines completed in northern area



## Management Commentary

**Freehill's Chief Executive Officer Peter Hinner commented:** "The completion of the IP survey is a significant step forward in verifying the presence of what we believe is a large sulphide structure that may host the copper and gold mineralisation typically found at surface in the area. A drilling program is already being planned for the second quarter that will target the anomaly.

"Yerbas Buenas is shaping up as a significant Chilean magnetite project with established offtake agreements and third party processing operations available to us only 30 kilometres from site. We look forward to updating shareholders with results from the recent drill campaign and geophysics survey. Discovering this large IP anomaly so close to other copper and gold mineralisation is a great development and substantially improves the project's potential for gold and copper mineralisation."

### **Competent Persons Statement:**

*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 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' (the JORC Code 2012). 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.*

## About Freehill Mining Limited

Freehill Mining Limited (ASX: FHS) 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 plans to undertake further mineral exploration programs on these at a later date.

### **For further information, contact:**

Ray Mangion  
Chairman  
Freehill Mining Limited  
+61 411 237 559

Paul Davies  
Chief Financial Officer  
Freehill Mining Limited  
+61 419 363 630

**Media & investor relations inquiries:** Ben Jarvis, Six Degrees Investor Relations: +61 413 150 448



Follow [@FreehillMining](https://twitter.com/FreehillMining) on Twitter



Follow [Freehill Mining](https://www.linkedin.com/company/freehill-mining) on LinkedIn

Freehill Mining Ltd – iron ore producers | ACN 091 608 025 | [www.freehillmining.com](http://www.freehillmining.com)

| Tel: +61 03 86021700

Melbourne Office

| 88 Miller Street, West Melbourne, Vic 3003 | email: [info@freehillmining.com](mailto:info@freehillmining.com)

La Serena, Chile office

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

# JORC Code, 2012 Edition – Table 1 report

## Freehill Mining Limited

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Not applicable for geophysics survey programme reporting. No drilling carried out by Freehill Mining Ltd</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>Not applicable for geophysics survey programme reporting.</li> </ul>
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>Not applicable for geophysics survey programme reporting.</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>Not applicable for geophysics survey programme reporting.</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>Not applicable for geophysics survey program reporting.</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</li> </ul>	<ul style="list-style-type: none"> <li>Induced Polarisation survey completed on E-W lines</li> <li>Dipole spacings of 100m expanded through 8 separations and 6 lines</li> <li>Elrec Pro 10-channel Time Domain Receiver &amp; GDD 5000 Transmitter (5.0 kWatt) used</li> <li>0.125 Hz, 2 second on – 2 second off (time domain)</li> <li>Ground magnetics survey carried out</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	<p>on 50m line spacings for 59.3 line kms</p> <ul style="list-style-type: none"> <li>• Base station data corrections done daily, QA/QC and processing completed by Agarli geofisica geophysicist.,</li> <li>• All digital data, maps and data products associated with this report are provided in coordinate system: datum WGS84 and projection UTM zone 19S.</li> <li>• area was surveyed with E-W oriented survey lines because of N-S oriented magnetic anomaly trends observed in historical 200m spaced ground magnetic survey data</li> <li>• Base Station GEM GSM19T Overhauser sampling every 30 secs and GEM GSM19T roving unit with integrated GPS sampling continuously at 1 sec intervals.</li> <li>• Earth's magnetic field In the survey area has approximate values of inclination -29.7 0 , declination 0.32 0 and magnetic field strength of 23,400nT and corrections made on this basis</li> <li>• TMI, TMIRT, 1VD &amp; 2VD data processing carried out</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable for geophysics survey programme reporting.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>• <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></li> <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>• GPS 0.7m SBAS (WAAS, EGNOS, MSAS) &lt; 1.5m non-SBAS and considered more than sufficient for the survey being conducted</li> <li>• All digital data, maps and data products associated with the geophysical report are provided in coordinate system: datum WGS84 and projection UTM zone 19S.</li> </ul>
Data spacing and distribution	<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>• Geophysics ground magnetometer lines completed on 50m spacings over whole survey.</li> <li>• IP lines had 100m dipole spacings with E-W orientation and 6 lines spaced from the northern tenement boundary southwards.</li> </ul>
Orientation of data in relation to geological structure	<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>• East-West survey line direction which were perpendicular to interpreted strike of magnetite structures</li> <li>• East-West survey line direction which were perpendicular to interpreted strike of expected sulphide structures</li> <li>•</li> </ul>
Sample security	<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>• Not applicable for geophysics survey programme reporting. All geophysics data collected was backed up on a daily basis by Agarli Goefisica</li> </ul>
Audits or	<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>• None completed</li> </ul>

Criteria	JORC Code explanation	Commentary
reviews		

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<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 Yervas Buenas Project is located on licenses held through Chilean subsidiaries in which Freehill Investments currently has a 50% interest. Licenses are numbers 04102-2723-1, 04102-2714-2, 04102-2715-0, 04102-2755-K, 04102-2937-4 and total 398 hectares</li> <li>Freehill Investments Pty Ltd has a right to acquire the remaining 50% interest in these subsidiaries. The licences allow for the extraction of up to 5000 tonnes per month and application currently with Sernageomin, the Chilean mining authority, for expanded production to 40,000 tonnes per month;</li> </ul>
<i>Exploration done by other parties</i>	<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 Reverse Circulation drill holes- SDHYB1101 &amp; 1102- completed by previous tenement holder Compania Mineria 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 % magnetite by Davis Tube.</li> <li>50m line spaced ground magnetics survey completed over 800mx800m in 2010 by Geoexploraciones</li> </ul>
<i>Geology</i>	<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. 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. Yervas Buenas shows some evidence of IOCG mineralisation</li> </ul>
<i>Drill hole Information</i>	<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:</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for geophysics survey programme reporting.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<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>◦ 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 style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Not applicable for geophysics survey programme reporting.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Not applicable for geophysics survey programme reporting.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• See Figure 1 and 2 in body of report</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• This document is considered to be a balanced report of the geophysics survey, and subsequent processing and targeting</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable for geophysics survey programme reporting.</li> </ul>
Further work	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Detailed mapping and rock-chip sampling of main geophysical targets are being undertaken together with sampling in a 0.5 Hec bulk sampling pit</li> <li>• Surface sampling, mapping and trenching/pitting of the IP anomaly is planned for Q1 2019 where it appears to be exposed at surface.</li> <li>• First pass RC drilling of the identified magnetite structures at the Yervas Buenas project are currently planned and estimated to be commenced Q2 2019.</li> </ul>