

ASX Announcement 28<sup>th</sup> April 2022

## **Drilling Results from the Llahuin RC Program in Chile**

- > Remaining results for the RC drilling program at Llahuin which began in December 2021 have been completed with 24 holes drilled for 2,787m in total
- ➤ The Central Porphyry returned a best result in hole 22LHRC022 of 104m at 0.51% CuEq from 6m to end of hole
- Best result at Cerro de Oro was in 22LHRC013 which intersected 51m at 0.48% CuEq from 7m depth to end of hole
- New target at the Southern Porphyry intersected a zone of 11m at 0.25% CuEq from 58m depth to be followed up also testing a previously untested IP target

Southern Hemisphere Mining Limited ("Southern Hemisphere", "SUH" or "the Company") (ASX: SUH) reports that all results from the latest RC drilling program have been received from the ALS Laboratory in Chile, with results from the remaining 13 holes reported in this release. Note holes were designed to test near surface higher grade and thus several holes end in mineralisation. The drillhole locations are shown in Figure 2.

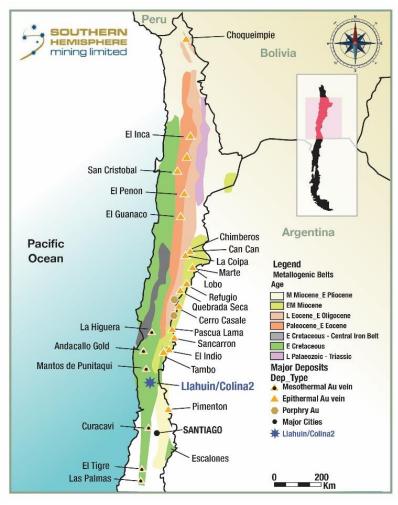


Figure 1. Llahuin/Colina2 Chile Location Map



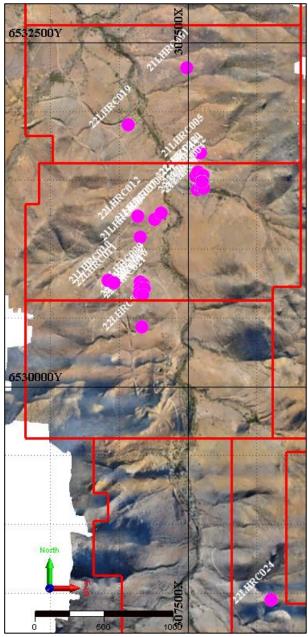


Figure 2 Llahuin RC Drillhole Location Plan

### **NEXT PROGRAM**

The next stage of drilling is starting this week and will comprise a small orientated diamond drilling program designed to verify structures and densities at both the Central Porphyry and Cerro De Oro deposits. Data from this program will guide further near surface drilling this year.

All of the assays have been received from the ALS laboratory in Chile and significant results are presented in Table 1 below.



Drillhole ID	From	То	Width	Target	Au ppm	Ag ppm	Cu %	Mo ppm	CuEq%
22LHRC013	7	58	51	Cerro de Oro	0.35	0.15	0.18	11	0.48
22LHRC014	1	63	62	Cerro de Oro	0.18	0.12	0.18	10	0.34
22LHRC015	0	110eoh	110	Central Porphyry	0.06	0.14	0.34	22	0.40
22LHRC016	1	99	98	Cerro de Oro	0.22	0.15	0.14	10	0.33
22LHRC017	0	95eoh	95	Cerro de Oro	0.22	0.22	0.16	11	0.35
22LHRC018	0	59eoh	59	<b>Central Porphyry</b>	0.13	0.34	0.44	5	0.56
22LHRC020	0	101eoh	101	Central Porphyry	0.08	0.21	0.39	15	0.48
22LHRC021	0	84	84	Cerro de Oro	0.22	0.10	0.16	8	0.35
22LHRC022	6	110eoh	104	<b>Central Porphyry</b>	0.07	0.58	0.44	10	0.51
22LHRC023	4	120eoh	116	Cerro de Oro	0.09	0.12	0.21	19	0.30
				Southern					
22LHRC024	58	69	11	Porphyry	0.08	0.26	0.18	1	0.25

JORC Table 1: Significant Intercepts from the Llahuin RC Drilling Program using a 0.1 Cu% cutoff.

NB: Copper Equivalent CuEq% calculated using Cu \$3.20lb, Au \$1850/oz Ag \$20/oz and Mo \$30/kg

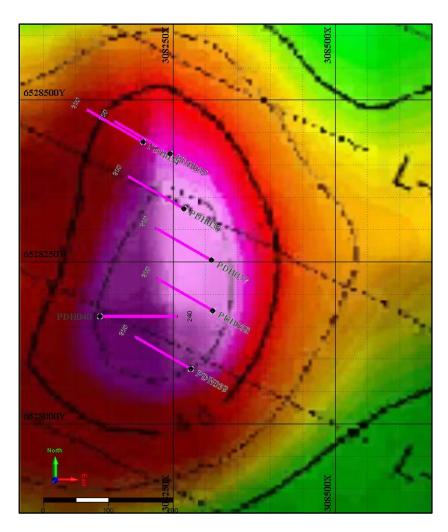


Figure 3 Southern Porphyry planned drillholes and IP target



Note there has been insufficient exploration to estimate a Mineral Resource at the Southern Porphyry target and it is uncertain if further exploration will result in the estimation of a Mineral Resource. Turnaround times for the laboratory have increased due to personnel issues associated with COVID.

Approved by the Board for release.

# Mark Stowell Chairman

#### **CONTACTS:**

For further information on this update or the Company generally, please visit our website at www.shmining.com.au or contact the company :

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#### **BACKGROUND INFORMATION ON SOUTHERN HEMISPHERE MINING:**

Southern Hemisphere Mining Limited is an experienced minerals explorer in Chile, South America. Chile is the world's leading copper producing country and one of the most prospective regions of the world for major new copper discoveries. The Company's projects include the Llahuin Porphyry Copper-Gold Project, the recently identified Colina 2 Gold prospect nearby, and the Los Pumas Manganese Project, all of which were discovered by the Company.

Llahuin Copper/Gold/Moly Project: Total Measured and Indicated Resources - JORC (2004) Compliant. As announced to the market on 18 August 2013.

Resource (at 0.28% Cu Equiv cut-off)	Tonnes Millions	Cu %	Au g/t	Mo %	Cu Equiv*
Measured	112	0.31	0.12	0.008	0.42
Indicated	37	0.23	0.14	0.007	0.37
Measured plus Indicated	149	0.29	0.12	0.008	0.41
Inferred	20	0.20	0.19	0.005	0.36

**Note: \*Copper Equivalent ("Cu Equiv"):** The copper equivalent calculations represent the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage. These results are exploration results only and no allowance is made for recovery losses that may occur should mining eventually result. It is the Company's opinion that elements considered have a reasonable potential to be recovered as evidenced in similar multi-commodity natured mines. Copper equivalent conversion factors and long-term price assumptions used are stated below:

Copper Equivalent Formula=  $Cu \% + Au (g/t) \times 0.72662 + Mo \% \times 4.412$  Price Assumptions- Cu (\$3.40/lb), Au (\$1,700/oz), Mo (\$15/lb)

Los Pumas Manganese Project: Total Measured and Indicated Resources - JORC (2004) Compliant. As announced to the market on 25 March 2011.

Resource (at 4% Mn cut-off)	Tonnes Millions	Mn %	SiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %	Al %	К%	Р%
Measured	5.27	7.39	57.85	2.78	5.62	2.88	0.05
Indicated	13.06	7.65	55	2.96	5.64	2.92	0.05
Measured plus Indicated	18.34	7.58	55.82	2.91	5.62	2.91	0.05
Inferred	5.39	8.59	51.44	2.72	5.49	2.69	0.06
Total	23.73	7.81					

Metallurgical studies have demonstrated greater than 38% Mn concentrates are achievable by DMS with low impurities and high silica product.

In relation to the above resources, the Company confirms that it is not aware of any new information or data that materially affects the information in the announcements, and all material assumptions and technical parameters in the announcements underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.



#### **COMPETENT PERSON / QUALIFIED PERSON STATEMENT:**

The information in this report that relates to copper and gold exploration results for the Company's Projects is based on information compiled by Mr Adam Anderson, who is a Member of The Australasian Institute of Mining and Metallurgy and The Australian Institute of Geoscientists. Mr Anderson 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 Anderson is a consultant for the Company and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

For further information, please refer to the Technical Reports and News Releases on the Company's website at www.shmining.com.au.



Appendix 1: JORC Table 1 Drillhole Data

Drillhole_ID	X_WGS	Y_WGS	RL	Dip	Azimuth	Depth
21LHRC001	307488	6532318	1374	-60	280	177
21LHRC002	307611	6531442	1368	-60	300	100
21LHRC003	307596	6531442	1362	-60	300	90
21LHRC004	307604	6531493	1366	-60	300	85
21LHRC005	307592	6531698	1342	-60	300	140
21LHRC006	307151	6531089	1340	-60	300	150
21LHRC007	307255	6531219	1326	-60	300	150
21LHRC008	307305	6531265	1320	-60	300	150
21LHRC009	307152	6530760	1349	-60	300	80
21LHRC010	306920	6530775	1389	-60	300	90
22LHRC011	306962	6530755	1380	-60	300	100
22LHRC012	307133	6531241	1339	-60	300	150
22LHRC013	307154	6530723	1361	-60	300	80
22LHRC014	307147	6530678	1370	-60	300	80
22LHRC015	307566	6531431	1333	-60	300	110
22LHRC016	307181	6530714	1364	-60	300	110
22LHRC017	307178	6530743	1357	-60	300	95
22LHRC018	307553	6531534	1340	-60	300	59
22LHRC019	307064	6531904	1298	-60	90	150
22LHRC020	307575	6531559	1346	-60	300	101
22LHRC021	307169	6530671	1370	-60	300	110
22LHRC022	307605	6531536	1346	-60	300	110
22LHRC023	307164	6530436	1443	-60	300	120
22LHRC024	308103	6528449	1549	-60	300	200



## **JORC Table 1**

#### Criteria

#### **JORC Code explanation**

# Sampling techniques

- 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.
- Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.
- Aspects of the determination of mineralisation that are Material to the Public Report.
- 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.

#### Commentary

- Drilling undertaken by Southern Hemisphere Mining Ltd. ("SHM" or "the Company") includes both Diamond (DDH) and Reverse Circulation (RC).
- Drilling has been carried out under Southern Hemisphere Mining (SHM) supervision by experienced drilling contractors with different contractors in different time periods (HSB Sondajes, Geosupplay, RMuñoz Perforaciones).
- The majority of the drilling completed by SHM comprises 187 RC, with 25 RC pre-collars to an average depth of 150 to 200m), followed DDH core by HQ NQ. 59 DDH core at depths greater than approximately 660 metres.
- SHM Exploration Drilling Summary Llahuin Copper-Gold Project:

SHM Exploration Drilling Summary - Llahuin Copper-Gold Project **DDH Metres (includes DDH Holes RC Holes** RC Pre- Collar RC Metres Zone RC pre-collar) Central 50 21 12.804.20 41 16.008.30 Porphyry Cerro De Oro 59 4 11.149.00 14 3.390.40 40 Ferrocarril 7.576.00 4 1.388.90 Other 14 2.203.00 (Regional) **New Drilling** 24 2.787 2021-2022 Total 187 25 36.519.20 20787.6

- Samples were obtained using both reverse circulation (RC) and diamond drilling (DDH).
- RC drilling produced a 1m bulk sample and representative 2m cone split samples (nominally a 12.5% split) were collected using a cone splitter, with sample weights averaging 5 kg.
- The DDHH core was cut using a manual core-saw and half core samples were collected on 2m intervals.
- Sampling techniques used are deemed appropriate for exploration and



## **JORC Table 1**

Criteria JORC Code explanation

#### Commentary

resource estimation purposes for this style of deposit and mineralization.

- Geological logging was completed, and mineralised sample intervals were determined by the geologists to be submitted as 2m samples for RC.
- During the last and recent drilling campaign 2021 2022, only RC drilling was used. Riffle split RC samples were collected for each metre of drilling to obtain 1m samples from which approx. 4kg was split and sent to the ALS La Serena laboratory in Chile. The 4kg sample is crushed to -2mm from which a 1kg sample is split and pulverized to 85% passing -75µm and a 30g charge is taken for standard fire assay with AAS finish. Any multi-element assays are done using Multi-Element Ultra Trace method combining a four-acid digestion with ICP-MS instrumentation. A four-acid digest is performed on 0.25g of sample to quantitatively dissolve most geological materials. Elements and detection limits are presented below. Drillcore is cut in half with a diamond saw and half the core is sampled on a one metre basis.

### **REPORTABLE ELEMENTS AND RANGES**

Method Code	Analyte	Unit	Lower Limit	Upper Limit
Au-AA23	Au	ppm	0.005	10.0

ME-MS61	Analytes	and Report	ing Ranges								
		Lower	Upper			Lower	Upper			Lower	Upper
Analyte	Units	Limit	Limit	Analyte	Units	Limit	Limit	Analyte	Units	Limit	Limit
Ag	ppm	0.01	100	Al	%	0.01	50	As	ppm	0.2	10000
Ba	ppm	10	10000	Be	ppm	0.05	1000	Bi	ppm	0.01	10000
Ca	%	0.01	50	Cd	ppm	0.02	1000	Ce	ppm	0.01	500
Co	ppm	0.1	10000	Cr	ppm	1	10000	Cs	ppm	0.05	500
Cu	ppm	0.2	10000	Fe	%	0.01	50	Ga	ppm	0.05	10000
Ge	ppm	0.05	500	Hf	ppm	0.1	500	In	ppm	0.005	500
K	%	0.01	10	La	ppm	0.5	10000	Li	ppm	0.2	10000
Mg	%	0.01	50	Mn	ppm	5	100000	Mo	ppm	0.05	10000
Na	%	0.01	10	Nb	ppm	0.1	500	Ni	ppm	0.2	10000



JORC Ta	<u>ıble 1</u>												
Criteria	JORC Code explanation	Comme	entar	y									
		P	ppm	10	10000	Pb	ppm	0.5	10000	Rb	ppm	0.1	10000
		Re	ppm	0.002	50	S	%	0.01	10	Sb	ppm	0.05	10000
		Sc	ppm	0.1	10000	Se	ppm	1	1000	Sn	ppm	0.2	500
		Sr	ppm	0.2	10000	Ta	ppm	0.05	500	Te	ppm	0.05	500
		Th	ppm	0.01	10000	Ti	%	0.005	10	Tl	ppm	0.02	10000
		U	ppm	0.1	10000	V	ppm	1	10000	W	ppm	0.1	10000
		Y	ppm	0.1	500	Zn	ppm	2	10000	Zr	ppm	0.5	500
Drilling	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast,		of wh conte 2mm Pulve to 40 analy Regia Cu ar At th and a indep	nole sar ent, at 7 ; Samp erization 0 gram vsis is go n metho nd 0.00 e time are in ac penden	mple, for degree 10 degree	or betwees Ceogeniz % pass Fire ass ric. The halysis A analy nce wir	ween 2 entigra zation sing -1 say for ne quo for Cu ytical I th ISO	2 and 2 ade (°C and sp 50 me r Au (1 ited de u and N proced	24 hour (); Prima (); Prima (); Spli (); Spli (); 100°C), (); Prection (); Prima (); Prima ()	s depe ary cru to a 1k, tting o , AAS, i limit is oted de as ISO he AAA	ending ( shing c g sub-s f pulve f Au is s 0.01 ( etectio 9001:2	upon nof sample sample rized r > 3 g/t Au; n limit	naterial then the Aqua is 0.001%
techniques	<ul> <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>	us mi	ing a nimal	face sa contar	C drillir mpling nination drilling	hamn n duri	ner wit ng san	th a 5 nple ex	25inch ktractio	diamet n.	ter bit,	ensuri	ng



early 2012) have been down hole surveyed using a non-magnetic gyroscopic instrument and showed minimal deviation <a href="#"></a>			
oriented. Only a total of 7 DDH holes from the Central Porphyry zone (drilled early 2012) have been down hole surveyed using a non-magnetic gyroscopic instrument and showed minimal deviation <2 degrees.  **Measures taken to maximise sample recovery and ensure representative nature of the samples.  **Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.  **Possures material**  **Description**  **Description	JORC Ta	able 1	
Prill sample recovery  Method of recording and assessing core and chip sample recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.  Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.  Processes material.  Method of recording and assessing core and chip sample recovery and ensure representative nature of the samples.  Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.  Method of recording and assessing core and chip sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.  Processes material.  Method of recording and assessing core and chip sample recovery and ensure representative nature of the samples are covery is acceptable. Rc driller lifts off between each metre to ensure acceptable. Rc driller lifts off between each metre to ensure sample recovery in degrade as sample recovery is excellent.  Core recovery was measured and recorded continuously from the start of core drilling to the end of the hole for each drill hole. Generally, the core recovery was sample intervals.  Drilling techniques to ensure adequate RC sample recovery and quality were applied.  Logging of all samples followed established company procedures which included recording of qualitative fields to allow discernment of sample quality. This included (but was not limited to) recording: sample ocorditions on the ratio of wet and dry drilling were met, with no bias detected between the differing sample conditions.  Historical DDH core recovery has not been quantitatively assessed. However, inspection of core photography has been undertaken, with good core recovery observed, and no material issues noted.  Methods taken to fine with less of the method (RC, Spitt) DDH core half, quarter, whole).	Criteria	JORC Code explanation	Commentary
	Drill sample	<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</li> </ul>	oriented. Only a total of 7 DDH holes from the Central Porphyry zone (drilled early 2012) have been down hole surveyed using a non-magnetic gyroscopic instrument and showed minimal deviation <2degrees.  The new drilling campaign - RC samples were weighed and weights recorded to ensure recovery is acceptable. RC driller lifts off between each metre to ensure sample separation between each metre. There doesn't appear to be a relationship between sample recovery and grade as sample recovery is excellent.  Core recovery was measured and recorded continuously from the start of core drilling to the end of the hole for each drill hole. Generally, the core recovery was >99%.  All DDH drilling utilized HQ and NQ core with sampling. undertaken via half core cutting and 2m sample intervals.  Drilling techniques to ensure adequate RC sample recovery and quality were applied.  Logging of all samples followed established company procedures which included recording of qualitative fields to allow discernment of sample quality. This included (but was not limited to) recording: sample  condition (wet, dry, moist), sample recovery (poor, moderate, good), sample method (RC:, split; DDH core: half, quarter, whole).  The majority of SHM drilling had acceptable documented recovery and expectations on the ratio of wet and dry drilling were met, with no bias detected between the differing sample conditions.  Historical DDH core recovery has not been quantitatively assessed. However, inspection of core photography has been undertaken, with good core recovery observed, and no material issues noted.
without further implication.			<ul> <li>Twin analysis of RC and DDH drilling has identified a slight sample bias</li> </ul>



JORC Ta	ible 1	
Criteria	JORC Code explanation	Commentary
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>The samples were detailed descriptions of RC chips and diamond core were logged qualitatively for lithological composition and texture, structures, veinlets, alteration and copper gold speciation. Visual quantitative percentage estimates were made for some minerals, including sulphides.</li> <li>Geological and geotechnical logging was recorded in a systematic and consistent manner such that the data was able used accurately with modern mapping and 3D geological modelling software programs. Field logging templates were used to record details relate to each drill hole.</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>Historically and in the last RC drill campaign the samples were collected into a green plastic bag which is then riffle split into a numbered calico bag for each metre of drilling. The majority of the RC samples were dry as holes were stopped if the RC drilling went wet. If significant groundwater was encountered an auxiliary compressor and booster were utilized to keep the sample dry. Field duplicates were not collected but can be split later to confirm results.</li> <li>HQ and NQ diamond core was sawn in half, with half core collected in a bag with sequential identification and submitted to the laboratory for chemical analysis, the other half was retained in the tray and stored. All DDH core was sampled at 2m intervals.</li> <li>Historical RC drilling was sampled at two metre intervals by a fixed cone splitter with two nominal 12.5% samples taken: with the primary sample submitted to the laboratory, and the second sample retained as a field duplicate sample. Cone splitting of RC drill samples occurred regardless of the sample condition. RC drill sample weights range from 0.8kg to 12kg, but typically average 4kg.</li> <li>The selected sample sizes and sample preparation techniques are considered appropriate for this style of mineralization.</li> </ul>
Quality of assay data	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	The assay technique utilized is "industry Standard" fire assay with AAS finish for gold which is a total digestion technique. Typical analytical methods are



JORC Ta	ble 1	
Criteria	JORC Code explanation	Commentary
and laboratory tests	<ul> <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>detailed in the previous section and are considered 'near total' techniques.</li> <li>The newest drilling - appropriate industry standard CRM' s and blanks were inserted into the sample stream at a rate of 1:10 samples for both standards and blanks. This is considered above industry standard.</li> <li>SHM undertakes several steps to ensure the quality control of assay results. These include, but are not limited to, the use of duplicates, certified reference material (CRM) and blank media:</li> <li>Historically, routine 'standard' (mineralised pulp) Certified Reference Material (CRM) was inserted at a nominal rate of 1 in 20 or in same case 25 samples.</li> <li>Blank material is inserted every 20 or 25 samples (Coarse un-mineralised quartz) at the logging geologist's discretion- with particular weighting towards submitting blanks immediately following mineralised field samples.</li> <li>Analytical laboratories provided their own routine quality controls within their own practices. No significant issues have been noted.</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>The company's exploration manager (QP) has made a site visit and inspected the sampling methods and finds them up to industry standard.</li> <li>Logging is completed into standardized excel spreadsheets which can then be loaded into an access front end customized database.</li> <li>There have been no adjustments to the assay data.</li> <li>All DDH sample intervals were visually verified using high quality core photography, with some selected samples taken within mineralized intervals for petrographic and mineralogic microscopy.</li> <li>All assay results have been compiled and verified by an independent consultant to ensure veracity of assay results and the corresponding sample data. This includes a review of QA/QC results to identify any issues prior to incorporation into the Company's geological database.</li> <li>No adjustment has been made to assay data following digital upload from original laboratory certificates to the database.</li> <li>Where samples returned values below the detection limit, these assay values were set to half the lowest detection limit for that element for the purposes of</li> </ul>



JORC 1	<u> Fable 1</u>	
Criteria	JORC Code explanation	Commentary
		<ul> <li>MRE.</li> <li>The capture of drill logging data was managed by a computerised system and strict data validation steps were followed. The data is stored in a secure database with access restricted to an database manager.</li> <li>Documentation of primary data, data entry procedures, data verification and data storage protocols have all been validated through internal database checks and by a third- party audit as part of the Llahuin MRE, in special in the construction of the NI 43-101 (different versions).</li> <li>Visualisation and validation of drill data was also undertaken in 3D through the use of multiple software packages MapInfo, Vulcan and MineSight with no errors detected.</li> <li>The field duplicate data for both RC and DDH has returned acceptable precision suggesting that there are no material issues with the sampling method at the point of sample collection.</li> <li>Umpire assays have returned acceptable precision suggesting no bias between laboratories.</li> <li>RC versus DDH twin holes has returned poor precision. The reason for this could be attributed to the fact that a large number of RC holes were drilled wet, and there is potential for wash- out of mineralization in the RC drilling as a direct result.</li> <li>The external consultants have previously noted that this may be a material issue for the resource, and recommended that SHM employ the use of DDH drilling for all resource definition drilling going forward. Since late 2011, only DDH drilling has been completed across the Llahuin project area, and external consultant noted suitable recoveries and sample procedures employed.</li> <li>AMS considers the data of sufficient accuracy and precision.</li> <li>All retained core and pulp samples are stored in a secured site and are available for verification if required.</li> </ul>



JORC Ta	ible 1	
Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole 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>The last campaign (2021-2022) the drill collars were surveyed by a Qualified Chilean Surveyor in datum UTM WGS 84, Zone 19S,</li> <li>Before the survey was generated by linking to the National Geodetic Network, Chile, using DGPS equipment with geodetic dual frequency. The instrument used was an Ashtech ProMark 500. The data was collected in differential mode RTK (Real Time). The survey was performed by Mr. Luciano Alfaro Sanders (Survey Engineer, and Perito Mensurador). A UTM projection was used, the International Reference Ellipsoid is 1924, La Canoa datum 1956, Time/Area 19. The survey is accurate to within 0.1m through use of a base / total station and survey equipment.</li> <li>Downhole surveys of reasonable quality; RC drilling has not been down hole surveyed due to magnetic interference; DDH has been gyroscope surveyed for old holes pre-March 2012.</li> <li>In 2021, SHM prepared high resolution drone orthophotography, and known infrastructure (roads, tenement pegs etc.)</li> <li>Topography at the project ranges from ~1200m to 1650m ASL.</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>In general, the drilling on a nominal 50m x 50m spacing consisting of RC and DDH drilling to establish continuity, but in many case the drillhole spacing is approx. 20 to 40m spaced holes in various locations.</li> <li>Drilling was completed within an existing resource and scout type drilling was completed in previously undrilled areas.</li> <li>No sample compositing has been applied.</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>Drilling was done perpendicular to the interpreted strike of the mineralisation to reduce sampling bias.</li> <li>The majority of drill holes have been orientated on two main directions (grid): 060° and 300°. The reasoning behind using two drill directions is to ensure that structures which may not outcrop, or may not be clear on the surface are tested systematically.</li> <li>The orientation of drilling is considered appropriate for this style of mineralization, and no sampling bias is inferred from drilling. In addition,</li> </ul>



JORC Table 1		
Criteria	JORC Code explanation	Commentary
		copper-gold porphyry mineralization is typically fairly homogenous meaning a limited chance of bias likely to be caused from drilling orientation.
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples were collected by a qualified consulting geologist and the samples were delivered to the lab by a company employee. Competent Person Reg No 0336.</li> <li>SHM has strict chain of custody procedures that are adhered to. All samples have the sample submission number/ticket inserted into each bulk sample bag with the id number clearly visible. The sample bag is stapled together such that no sample material can spill out and no one can tamper with the sample once it leaves SHM custody.</li> <li>All retained core and pulp samples are currently stored in a secured warehouse facility and are available for verification if required.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>As part of the Llahuin Project work, have conducted different independent review of the drill database, geological models, resource estimation and others. These reviews had found the data to be accurate and acceptable for purposes of SHM.</li> <li>For the last drilling campaign (2021-2022) no external audits or reviews were conducted.</li> </ul>

## **Section 2 Reporting of Exploration Results**

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

JORC Table 1		
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> </ul>	<ul> <li>The Llahuin Project is 100% owned by SUH.</li> <li>The security of tenure is considered excellent as the licence is 100% owned by SUH.</li> </ul>



JORC Table 1		
Criteria	JORC Code explanation	Commentary
	<ul> <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>	
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous drilling on the licence before SUH has been done to industry standard.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Exploration is targeting porphyry Cu-Au style-gold style mineralization hosted in Miocene intrusives (diorite).</li> </ul>
Drill hole Information	<ul> <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> <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> </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>	Appendix 1
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> <li>These relationships are particularly important in the reporting of Exploration</li> </ul>	<ul> <li>No data aggregation methods have been used.</li> <li>A copper equivalent was reported using the following metal prices Cu \$3.20, Au \$1850/oz, Ag \$20/oz and Mo \$30/kg.</li> <li>Exploration drilling was targeting near surface material in a porphyry Cu-Au</li> </ul>
between mineralisatio n widths and	<ul> <li>Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> </ul>	system. Therefore the mineralised widths are much greater than the drillhole depths for the Central Porphyry. Drilling at Cerro De Oro is partly infilling



JORC Ta	able 1	
Criteria	JORC Code explanation	Commentary
intercept lengths	<ul> <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>	historical drilling so therefore downhole widths have been reported and true widths are not established yet as the historical drilling appears to be too widely spaced. Drilling in all areas has been conducted perpendicular to the regional trend observed in outcrop.
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>	Appropriate maps have been included in the release.
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>	A range of grades were included in the release.
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.	<ul> <li>A drone magnetics survey was completed over the project area in 2021 by GFDas UAV Geosciences Santiago Chile. Survey specifications provided below.</li> <li>Company: GFDAS Drones and Mining Line direction: 90°-270° Line separation: 25m         Tie line Direction: 0-360         Tie lines separation: 250m         Flight Height: around 25m AGL following topography (according to operational safety conditions)         Registration Platform Mag: DJI M300 Drone         Registration Platform Topo/ortho: DJI Phantom RTK Pro Drone         Geoidal Model: EGM08         Flight speed: 5-10m/s         Mobile sampling: Fluxgate magnetometer, 25 Hz         Resolution: Digital Elevation Model 1 m and         Resolution: Orthophoto with 20 cm/pixel         Base sampling: Geometrics magnetometer sampling 30s.         Positioning: Phantom 4 RTK</li> </ul>



JORC '	JORC Table 1		
Criteria	JORC Code explanation	Commentary	
		Survey Module: The flight module uses a VTOL drone, powered by rechargeable electric batteries and a positioning system with three GPS antennas. The registration module was miniaturized, simplified and made of low weight components suitable for lifting by the drone. These correspond to the magnetometer, acquirer and analogue-digital converter.	
		Magnetic Survey: The data was corrected for Diurnal variances, micro levelled with the use of the tie lines by GFDAS Drones and Mining. They also applied the Reduction to the Pole process on the data (inclination -32.3° and 0.4° declination) that was supplied to our company.	
		Topographic flight plan: Due to the strong differences in the elevations of the terrain, it was flown from different points within the north-south polygons with differentiated flight height, to achieve a pixel resolution as requested. These flight heights had a range between 350 m and 460 m (AGL flight height). The overlaps of flight lines were between 75% and 80%, this was done depending on the flight height and detail required.	
		Historical IP and Magnetic Survey parameters	
		• Induced Polarization / Resistivity surveys, gDAS24 • Rx dipole length, a-sp of 200m, nominally up to n=30 (according to total line length) • Tx-poles stepped through at 200m intervals, along 200m spaced (Rx-Tx) lines, offset configuration • Transmitted signal of 50% duty cycle, square wave • 0.125 Hz base frequency (8s cycle, 2s-On, 2s-Off, 2s-On, 2s-Off) • Transmitter contacts prepared with multiple pits, lined with Al-foil, wetted with salted water. All Al-foil removed on completion and hole back filled. • Receiver contacts made with porous-pot electrodes (Cu-CuSO4) in small hand dug pits. • Readings per	

Offset pole dipole generally stacked over about 150 cycles (40 minutes) •



JORC Table 1		
Criteria	JORC Code explanation	Commentary
		Time Series data acquired (sampling @ 256Hz). 3.2  Magneto-Telluric survey, gDAS24 • Modified Scalar Magneto-Telluric (MT) setup, with multiple Ex-fields per Ey-field, and two local sites with pairs of Hy- and Hx-fields. • Remote site with one pair of Hy- and Hx-fields, located at 520525mE 7498563mN (UTM19S, PSAD56) • E-field dipoles of 200m length. • Magnetic coils buried to avoid wind noise. • Receiver contacts made with porous-pot electrodes (Cu-CuSO4) in small backhoe prepared pits. • Time Series data acquired with sampling rates (Fs) of 16, 256, 1024, 4096 and 32768Hz. Time Series records for each Fs of 1020 samples except for Fs=16Hz where the time series was acquired for 1019 samples.
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>Additional soil sampling is planned for the Llahuin Project.</li> <li>Further diamond drilling is planned for the project to provide orientated drillcore and additional SG measurements will be done on this. Orientation data will be used to plan further RC drilling this year.</li> </ul>