

ASX Announcement

29 January 2025

**QUARTERLY ACTIVITY REPORT
FOR THE PERIOD ENDED 31 DECEMBER 2024**

Highlights:

- RC drilling extends strike of the Cerro-Ferro system by 15% to 2.2km, ahead of H1 2025 JORC resource upgrade including results of:
 - 105m @ 0.64% CuEq from surface to EOH, incl. 16m @ 0.85% CuEq from surface and 26m @ 0.91% CuEq from 78m 24LHRC065
 - 132m @ 0.48% CuEq from surface incl. 60m @ 0.67% CuEq from surface 24LHRC058
 - 81m @ 0.49% CuEq from 2m to EOH, incl. 48m @ 0.58% CuEq from 30m 24LHRC055
 - 122m @ 0.41% CuEq from 2m, incl. 48m @ 0.52% CuEq from 66m 24LHRC048
 - 16m @ 0.51% CuEq from 102m 24LHRC051
- Potential feeder zone at Cerro identified from RC drilling, pre-collars in place for diamond tails to be completed Q1 2025
- Magneto-Telluric (MT) survey field data acquisition for refinement of deep, potentially large, copper targets completed

Southern Hemisphere Mining Limited (“Southern Hemisphere” or “the Company”) (ASX: SUH, FWB: NK4) reports the quarterly activity for the period ended 31 December 2024.



Figure 1: Location map of Southern Hemisphere’s projects in South America.

EXPLORATION ACTIVITIES

Llahuin Copper-Gold-Moly Porphyry Project 100%

The Company completed a positive RC drilling program which extended the already large strike of 1.9km to 2.2km, aiding in the planned JORC resource upgrade and subsequent progression towards mining studies. The reported work is part of the process to substantially increase the copper and gold endowment of the Llahuin Project from the current Independent Mineral Resource Estimate (MRE) of 680,000t copper equivalent (measured indicated and inferred categories) completed in 2013, the Company is in the process of incorporating all drilling results and re-interpretation, re-logging, and other work completed since the 2013 MRE; this will also include all results from the diamond drilling planned to commence Q1 2025.

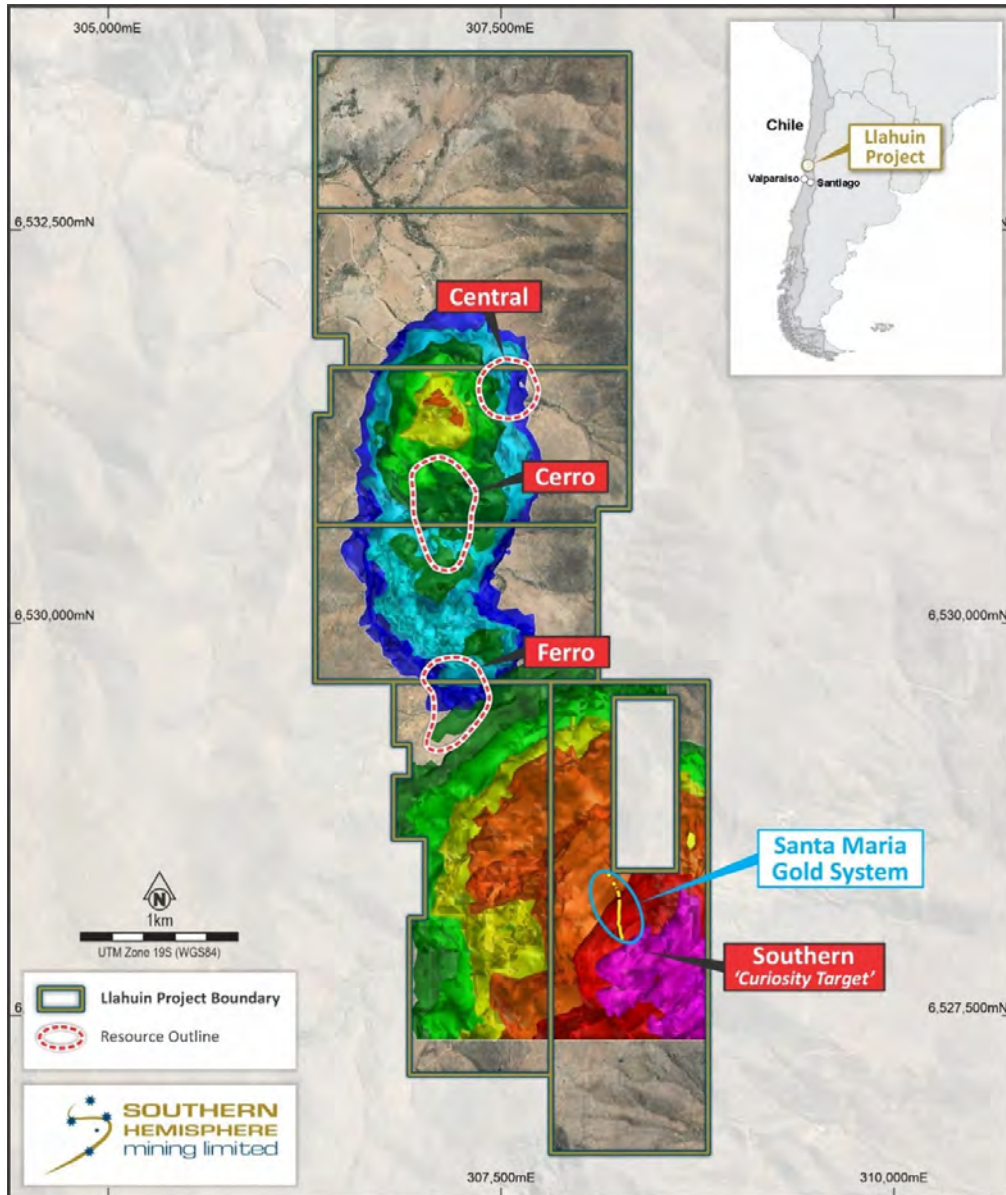


Figure 2: Plan showing geochemical footprint models thematically colour scaled from blue (moderate probability) through to reds and magentas (high probability).

RC drilling and diamond tail programs

The recent RC drilling started to define a new zone south of the Ferro zone with wide intercepts recorded in the drilling. The drilling has extended the zone for over 300m to the southwest and the mineralisation is open in that direction and requires further drilling to better define the extension.

Three drill sections have been completed to date and show the mineralisation to be flat lying, higher than resource grade, manto-style mineralisation at this stage.

The relevant area is circled in yellow in the map below.

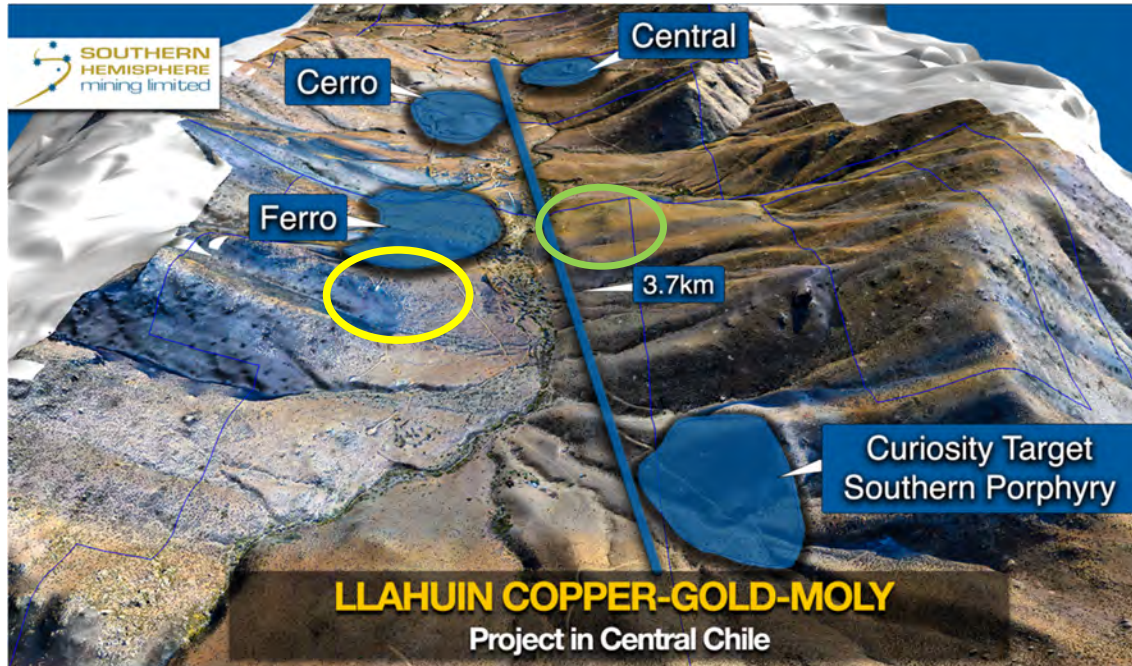


Figure 3. 3D view looking northeast from Southern Porphyry (SP) to Central Porphyry, showing the scale of the Llahuin mineralising system with Ferro extension in yellow circle, and the newly identified East Porphyry zone in the green circle (colluvium cover up to 5m deep).

Cerro Feeder Zone identified for deeper drilling

Testing the western extents at Cerro with holes 24LHRC064 and 24LHRC065 intersected similar, to the already defined near surface mineralisation. Several RC holes are ready for diamond tails to be completed Q1 2025.

Positive RC drilling has defined a feeder zone within the Cerro Deposit which is now ready for diamond drilling to extend the zone at depth.

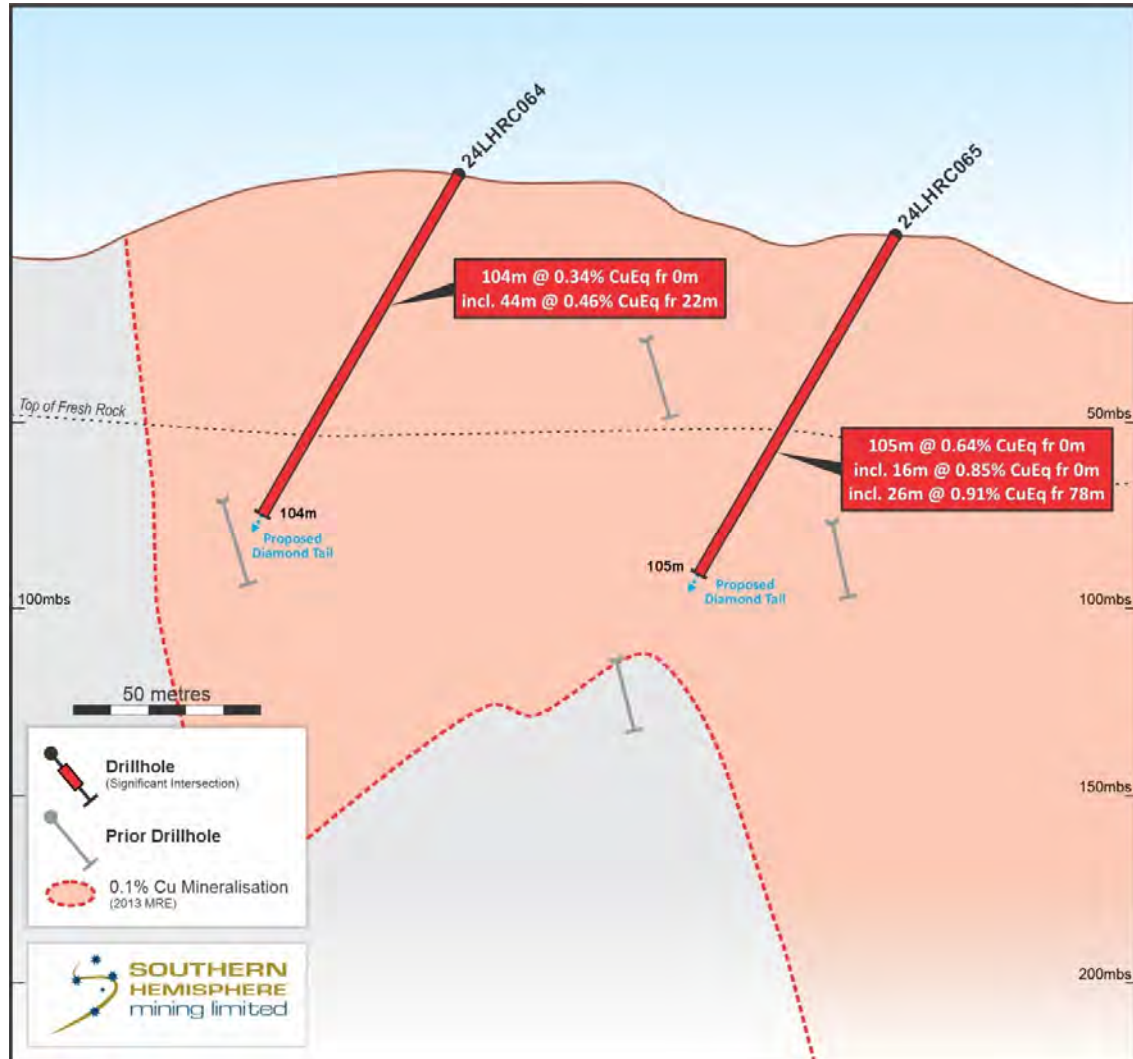


Figure 4. Cross section showing holes 24LHRC064 and 24LHRC065, which are both planned for diamond tails in the upcoming drilling campaign.

Geophysics and Modelling

A fault zone model has been completed by Fathom Geophysics to advance the understanding of the mineralising and barren faults for better targeting of future drilling.

The Company has engaged Southern Rock Geophysics to extend and infill the historical MT survey at Llahuin. The MT survey is expected to assist with deep hole targeting at Cerro-Ferro and the Southern Porphyry target and will complement the Fathom deposit footprint models, as well as the IP dataset that covers most of the concession holdings and key targets.

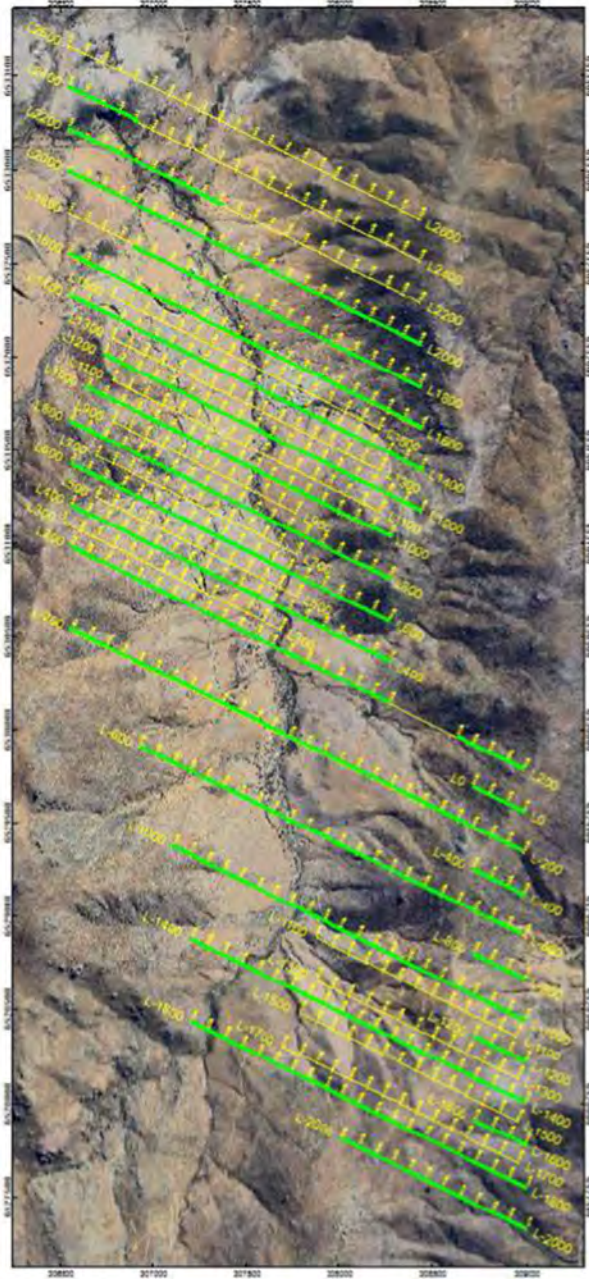


Figure 5. MT data collection – green lines are the completed survey. Infill yellow lines recently determined not required.

The Magneto-Telluric Deep Target Study

MT data acquisition, for refinement of deep large copper targets, has been completed and the data is being processed and integrated with the Company’s existing MT data, which covers part of the Curiosity Target in the Southern Porphyry.

The MT dataset will be integrated with and interrogated against the existing IP, aeromagnetic, and geochemical prospectivity mapping datasets. The aim is to identify new “blind” shallow targets under the colluvial cover sequence, and augment and refine the deeper targets beneath Cerro/Ferro and Curiosity.

Los Pumas Battery Metals Manganese Project 100%

The Los Pumas Project is an advanced manganese deposit for which Southern Hemisphere is seeking offtake/JV funding/sale for a long life mine to produce:

- Agriculture products for soil improvement;
- Electrolytic Manganese for steel making; and/or
- High-Purity Manganese Sulphate Monohydrate (“HPMSM”) to supply the Electric Vehicle (“EV”) and energy storage markets.

Southern Hemisphere is actively marketing this project, and welcome any inquires to cosec@shmining.com.au

Lago Lithium Brine Project 100%

The Company’s main focus has been the expansion drilling at Llahuin, therefore no exploration activities took place during the quarter under review on the strategically obtained Lago Lithium Brine Project, located in the renowned lithium-rich Atacama region of Chile and covering an area of approximately 27km². The Salar de Atacama is widely recognised for its exceptional lithium deposits operated by the world’s largest lithium brine producers, SQM and Albemarle.

Southern Hemisphere is actively marketing this project, and welcome any inquires to cosec@shmining.com.au



Figure 6: Location of the nine new lithium brine concessions

CORPORATE ACTIVITIES

Additional information required by ASX Listing Rule 5.3:

As at 31 December 2024, the Company had \$2.95m cash available and the following payments of:

- \$792k on exploration activities (refer to item 1.2(a) of the attached Appendix 5B), relating to drilling, assays, field expenses and geological consulting costs (ASX Listing Rule 5.3.1);
- There were no mining and development activities during the quarter (ASX Listing Rule 5.3.2); and
- \$93k on payments to related parties or their associates (refer to item 6.1 of the attached Appendix 5B) which included (ASX Listing Rule 5.3.5) Director's fees, consulting fees, equipment hire, office lease expenses and superannuation.

The Directors have again taken the opportunity to accumulate and increase their shareholdings, purchases during the quarter totalled approximately \$22k.

The Company's VAT tax consultant in Chile has filed a VAT refund. Accumulated VAT returns are indicatively A\$3.5m and subject to review and approval of government taxation authorities.

Approved by the Board of Directors

CONTACTS:

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

Cosec@shmining.com.au

Ph 08 6144 0590

References:

LLAHUIN COPPER-GOLD PROJECT

ASX Release – Drilling Commences at Llahuin Copper-Gold Project, Chile – 10 October 2024.

ASX Release – Presentation – Bremer Bay Conference – 29 October 2024.

ASX Release – Interim Drilling Results Demonstrates Major Strike Extension – 11 December 2024.

ASX Release – Interim Drilling Results – Amended – 13 December 2024.

ASX Release – Higher Grade Copper & Strike Extension At Llahuin, Chile – 28 January 2025.

LOS PUMAS BATTERY METALS MANGANESE PROJECT

ASX Release – Company Presentation – Los Pumas Manganese Project, Chile – 20 May 2024.

ASX Release – Intension to Demerge Battery Minerals Asset – 5 July 2023.

LAGO LITHIUM BRINE PROJECT

ASX Release – Application for the Lago Lithium Brine Concessions in Chile – 10 July 2023.

Southern Hemisphere confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements, and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcements.

BACKGROUND INFORMATION ON SOUTHERN HEMISPHERE MINING LIMITED:

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-Moly Project and the Los Pumas Battery Metals Manganese Project, both 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
Total M+I+I	169	0.28	0.128	0.008	0.40

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:

Notes on copper recovery from historical testwork

- "Recoveries of copper vary between 75% Cu and 91% Cu with the weighted average of the results being 84% Cu, which is a typically acceptable commercial level";
 - "Recoveries of gold vary between 41% Au and 57% Au, which is in line with expectations given the relatively low gold grades within the deposit"; and
 - "Flotation concentrates produced during testing contained the resource weighted average copper grade of 28% Cu and 4.9g/t Au. They also contained low levels of deleterious materials in the concentrate. Given that these tests were designed to set parameters and were not optimized, the results indicated good flotation process characteristics".
- Copper Equivalent Formula= Cu % + Au (g/t) x 0.72662 + Mo % x 4.412
Price Assumptions- Cu (\$3.20/lb), Au (\$1,700/oz), Mo (\$12.50/lb)

Los Pumas Manganese Project: Total Measured and Indicated Resources - JORC (2012) Compliant. As announced to the market on 3 May 2023.

Resource (at 2.5% Mn cut-off)	Tonnes	Mn %	Al%	Fe2O3%	K%	P%	SiO2%	SG%
Indicated	23,324,038	6.21	5.71	2.78	2.98	0.05	57.07	2.15
Inferred	6,940,715	6.34	5.85	3.05	2.83	0.05	54.61	2.14
Indicated plus Inferred	30,264,753	6.24	5.74	2.84	2.95	0.05	56.50	2.15

Total JORC Resources for the Los Pumas Manganese Project at a 2.5% Mn cut-off.

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.

Tenement List

Project	Tenement	Interest Acquired during the Qtr	Interest Disposed of during the Qtr	Interest Held at the end of the Qtr
Llahuin	AMAPOLA 1 1 AL 20	-	-	100%
Llahuin	AMAPOLA 2 1 AL 20	-	-	100%
Llahuin	AMAPOLA 3 1 AL 20	-	-	100%
Llahuin	AMAPOLA 4 1 AL 20 - RED 1/18	-	-	100%
Llahuin	AMAPOLA I 1 AL 300 RED 1/228	-	-	100%
Llahuin	AMAPOLA II 1 AL 300 RED 1/256	-	-	100%
Llahuin	AMAPOLA 5	-	-	100%
Llahuin*	AMAPOLA 6 1 AL 4	-	-	-
Llahuin*	AMAPOLA 7 1 AL 80	-	-	-
Los Pumas	AWAHOU 1 AL 20	-	-	100%
Los Pumas	EMANUEL 1 AL 20	-	-	100%
Los Pumas	PUTRE I AL 20	-	-	100%
Los Pumas	PUTRE II AL 20	-	-	100%
Los Pumas	LLUTA I 1 AL 60 RED 1/54	-	-	100%
Los Pumas	LLUTA II 1 AL 300 RED 1/285	-	-	100%
Los Pumas	PUTRE 6, 1 AL 20 RED 1/11	-	-	100%
Los Pumas*	PUTRE 5	-	-	-
Lago*	SOCAIRE 1	-	-	-
Lago*	SOCAIRE 2	-	-	-
Lago*	SOCAIRE 3	-	-	-
Lago*	SOCAIRE 4	-	-	-
Lago*	SOCAIRE 5	-	-	-
Lago*	SOCAIRE 6	-	-	-
Lago*	SOCAIRE 7	-	-	-
Lago*	SOCAIRE 8	-	-	-
Lago*	SOCAIRE 9	-	-	-
Colina	COLINA2 1 AL 30	-	-	100%

* Applications in progress

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

SOUTHERN HEMISPHERE MINING LIMITED

ABN

17 140 494 784

Quarter ended ("current quarter")

31 DECEMBER 2024

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(792)	(926)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(213)	(482)
	(e) administration and corporate costs	(88)	(318)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	16	17
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(1,077)	(1,709)
2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation	-	-
	(e) investments	-	-
	(f) other non-current assets	-	-

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Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	10
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	-	10
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	-	-
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	4,039	4,663
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,077)	(1,709)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	10
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-

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Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	(13)	(15)
4.6	Cash and cash equivalents at end of period	2,949	2,949

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	449	539
5.2	Call deposits	2,500	3,500
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,949	4,039

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	93
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments..

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Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1 Loan facilities	400	364
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	400	364
7.5 Unused financing facilities available at quarter end		36
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		
Merchant Holdings Pty Ltd, an entity related to the Chairman, Mark Stowell provided an unsecured loan facility of \$400,000 at an interest rate of 7.65%p.a, with a maturity date of 26 September 2024 or such other date as agreed by the parties.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(1,077)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(1,077)
8.4 Cash and cash equivalents at quarter end (item 4.6)	2,949
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	2,949
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	2.74
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
N/A	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
N/A	
8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
N/A	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 29 January 2025

Authorised by: By the Board
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.