SOUTHERN HEMISPHERE UPGRADES MEASURED AND INFERRED RESOURCES AT LLAHUIN COPPER-GOLD PROJECT

Latest drilling converts additional resources to Measured, boosts higher grade core 18%

Highlights:

- 26% increase in Measured Resource to 112Mt grading 0.42% Cu Equivalent (“Cu Equiv”)* for Llahuin Copper-Gold Project:
  - containing 344,000t of copper and 433,000oz of gold
- Indicated Resource – 37Mt grading 0.37% Cu Equiv.
  - containing 86,000t of copper and 165,000oz of gold
- 20% increase in Inferred Resource to 20Mt grading 0.36% Cu Equiv.
  - containing 40,000t of copper and 119,000oz of gold
- 18% increase in tonnage within higher grade central core to 60Mt grading 0.5% Cu Equiv.
- Additional drilling planned for December 2013 to further grow resource inventory.

Southern Hemisphere Mining Limited (ASX: SUH, TSXV: SH) (“Southern Hemisphere” or the “Company”) is pleased to report a further significant increase in the Measured category of the Mineral Resource for its Llahuin Copper-Gold Project (“Llahuin Project”) in central Chile, providing further confidence in the robustness and quality of the deposit ahead of additional resource extension drilling planned for later this year.

The June 2013 Mineral Resource update includes the most recent drilling up to 31 March, 2013 under the Llahuin Joint Venture arrangements with global base metals miner Lundin Mining Corporation (“Lundin”).

Lundin recently committed to proceed with the next phase of sole-funded exploration expenditure at Llahuin, comprising US$10 million to increase its interest from currently 20% to 51%. Lundin can earn up to 75% of the Llahuin Project in three phases by spending a total of up to US$35 million.

A large proportion of the recent drilling has consisted of in-fill drilling, resulting in a substantial amount of material within the Indicated Resource category being upgraded to the Measured Resource category, which now stands at 112Mt grading at 0.42% Cu Equiv and equates to 344,000 tonnes of copper and 433,000 ounces of gold.

This represents a 26% increase in Measured Resource tonnage, compared with the JORC and NI 43-101 Mineral Resource estimate completed in September 2012, using the same 0.28% Cu Equiv cut off.
The results from additional drilling within the higher grade core in the Central Porphyry Zone have increased the Measured Resource in this section to 60Mt, representing an 18% tonnage increase, when compared with the September 2012 resource estimate.

This has further enhanced production flexibility by providing additional measured resource that can become higher grade feed during the initial stages of production. This significantly enhances the financial robustness of the Project and represents an important strategic development for production scheduling and economics.

The Inferred Resource of 20Mt grading 0.36% Cu Equiv. has increased by 20 per cent compared with the September 2012 Mineral Resource.

The overall Measured and Indicated Resource has increased compared with the September 2012 Mineral Resource (Measured and Indicated) of 145Mt and currently sits at 149 Mt grading 0.42% Cu Equiv. The slight increase reflects Southern Hemisphere’s focus on infill drilling within the Central Porphyry Zone.

Southern Hemisphere’s Managing Director, Mr Trevor Tennant, said the increase in the Measured resource category gave the Company greater confidence in the quality and potential of the Llahuin Project as the foundation for future mine development.

“The next steps for this Project will be to further expand the resource in the Cerro de Oro Zone and Ferrocarril Zones with ongoing drilling as these zones remain open. Comments contained within the independent resource estimate note that there are two higher grade drill hole intercepts at depth within the Ferrocarril Zone which require further drilling in the surrounding area.

We believe we have a very significant copper-gold project on our hands at Llahuin and we are looking forward to progressing it to the next level.”

Fig 1 – Measured, Indicated and Inferred resources as at June 2013 using 31 March 2013 data cut-off date:
A cut-off grade of 0.28% Cu Equiv was selected to report the resource as the resultant head grade of 0.42% Cu Equiv is considered to have a reasonable likelihood of being economic based upon cost and revenue calculations made by the Company.
## TOTAL MEASURED AND INDICATED RESOURCES

<table>
<thead>
<tr>
<th>Cu Equiv % Cutoff</th>
<th>Tonnes million</th>
<th>Cu %</th>
<th>Au g/t</th>
<th>Mo %</th>
<th>Cu Equiv %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.26</td>
<td>173</td>
<td>0.28</td>
<td>0.12</td>
<td>0.007</td>
<td>0.39</td>
</tr>
<tr>
<td>0.28</td>
<td>149</td>
<td>0.29</td>
<td>0.12</td>
<td>0.008</td>
<td>0.41</td>
</tr>
<tr>
<td>0.30</td>
<td>127</td>
<td>0.30</td>
<td>0.13</td>
<td>0.008</td>
<td>0.43</td>
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</tbody>
</table>

## TOTAL INFERRED RESOURCES

<table>
<thead>
<tr>
<th>Cu Equiv % Cutoff</th>
<th>Tonnes million</th>
<th>Cu %</th>
<th>Au g/t</th>
<th>Mo %</th>
<th>Cu Equiv %</th>
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<tbody>
<tr>
<td>0.26</td>
<td>26</td>
<td>0.19</td>
<td>0.17</td>
<td>0.005</td>
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<tr>
<td>0.28</td>
<td>20</td>
<td>0.20</td>
<td>0.19</td>
<td>0.005</td>
<td>0.36</td>
</tr>
<tr>
<td>0.30</td>
<td>15</td>
<td>0.21</td>
<td>0.21</td>
<td>0.005</td>
<td>0.38</td>
</tr>
</tbody>
</table>

*Fig 2 – Zone tonnage at 0.28% Cu Equiv cut off included in Resource Estimate - Grades shown are Cu Equiv %*

<table>
<thead>
<tr>
<th>Zone</th>
<th>Measured (Mt)</th>
<th>Indicated (Mt)</th>
<th>Total Measured &amp; Indicated (Mt)</th>
<th>Inferred (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Porphyry</td>
<td>101.2@0.43%</td>
<td>7.3@0.34%</td>
<td>108.5@0.42%</td>
<td>2.8@0.32%</td>
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<tr>
<td>Cerro de Oro</td>
<td>10.8@0.39%</td>
<td>15.2@0.38%</td>
<td>26.0@0.38%</td>
<td>15.6@0.37%</td>
</tr>
<tr>
<td>Ferrocarril</td>
<td>14.4@0.37%</td>
<td>14.4@0.37%</td>
<td>28.8@0.37%</td>
<td>15.2@0.34%</td>
</tr>
<tr>
<td>Total (rounded)</td>
<td>112@0.42%</td>
<td>37@0.37%</td>
<td>149@0.41%</td>
<td>20@0.36%</td>
</tr>
</tbody>
</table>

Chart below shows the growth of the Llahuin Project Mineral Resource during last 12 months of drilling

### Chart 1: Maiden and Updated JORC Tonnages

- **Measured (Mt)**
- **Indicated (Mt)**
- **Inferred (Mt)**

**Resource March 30, 2012**
- Measured: 64.9
- Indicated: 41.3
- Inferred: 12.2

**Resource March 31, 2013**
- Measured: 112.0
- Indicated: 36.9
- Inferred: 19.9
Higher Grade Core

The Resource Estimate shows that the higher grade core area of the Central Porphyry contains 60 Mt at 0.50% Cu Equiv. using 0.36% Cu Equiv cut off, which is an 18% increase on the higher grade core Mineral Resource estimate completed in September 2012. The higher grade core would be easy to access as it is near to surface and has no pre-strip requirement.

**Fig 3 – Higher Grade Core Resource**

<table>
<thead>
<tr>
<th>Cu Equiv Cutoff</th>
<th>Tonnes million</th>
<th>Cu %</th>
<th>Au g/t</th>
<th>Mo %</th>
<th>Cu Equiv %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.34</td>
<td>70.6</td>
<td>0.34</td>
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<tr>
<td>0.36</td>
<td>60.3</td>
<td>0.35</td>
<td>0.15</td>
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</tr>
<tr>
<td>0.38</td>
<td>52.0</td>
<td>0.37</td>
<td>0.16</td>
<td>0.008</td>
<td>0.52</td>
</tr>
</tbody>
</table>

**Chart 2: Total Llahuin Copper/Gold Project Metres Drilled by Zone**

The June 2013 Llahuin Mineral Resource upgrade statement, which was independently prepared by Andes Mining Services, is based on a total of 223 drill holes, including 29,348m of Reverse Circulation drilling and 25,361m of Diamond Core drilling.

**Fig 4 – Contained Metal Summary**

<table>
<thead>
<tr>
<th>Resource Category</th>
<th>Copper t</th>
<th>Cu %</th>
<th>Gold oz</th>
<th>Au (g/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>344,000</td>
<td>0.31</td>
<td>433,000</td>
<td>0.12</td>
</tr>
<tr>
<td>Indicated</td>
<td>86,000</td>
<td>0.23</td>
<td>165,000</td>
<td>0.14</td>
</tr>
<tr>
<td>Inferred</td>
<td>40,000</td>
<td>0.20</td>
<td>119,000</td>
<td>0.19</td>
</tr>
</tbody>
</table>

Geology

Refer to the July 18, 2011 ASX and TSXV News Release for Llahuin Copper Project geological information. All drill hole locations for the Llahuin resource drilling programs are available on the Company’s website at www.shmining.com.au.
Sampling and Analysis Procedures
5kg samples were taken from each two metre interval. The samples are derived from riffle splitting each intercept. The samples were sent to Andes Analytical Assay Ltda (Chile) in Santiago for sample preparation and analysis. Duplicate samples were taken on a 1 in 20 basis. The cores from DDH holes were halved and each 2m interval of halved core submitted for analysis. Analysis was undertaken using fire assay (for gold analysis) with an atomic absorption spectrometry finish. Andes Analytical Assay Ltda (Chile) is an independent full service commercial laboratory accredited under ISO 9001:2008. Standard samples and repeat analyses were used by the laboratory to provide checks on the assay results.

Fig 5 – Location Map showing the Llahuin Central Porphyry Zone, Cerro de Oro Zone and Ferrocarril Zone
Compliance
The independent Canadian National Instrument 43-101 (“NI 43-101”) compliant resource estimate and statement for the Llahuin Copper-Gold Project was completed by Mr Bradley Ackroyd, Regional Manager and Principal Consulting Geologist with Andes Mining Services Ltd, based in Lima, Peru. Mr Ackroyd has visited the project area and conducted independent resource determinations in compliance with NI 43-101.

In summary, Mr Ackroyd states that the Llahuin Resource has been estimated by Ordinary Kriging within 0.10% grade shells for Cu, Au and 0.01% for Mo. Exceptions to this approach include a 0.15% Cu grade shell for Central Porphyry and a 0.005% Mo grade shell utilized for Cerro De Oro and Ferrocarril. These grade shells represent natural breaks in the grade population. Mineralisation occurs in all lithologies except the Eastern Diorite.

The model has been estimated into 10m (X) x 10m (Y) x 10m (Z) parent cells utilising 2m composites. A minimum of 2 composites and a maximum of 16 composites are required to populate a cell with an estimate. There has been no capping of grades. Resource estimations have been completed without any restriction placed upon the number of drill holes required to make a block estimate. Portions of the Central Porphyry, Cerro De Oro and Ferrocarril deposits have been estimated with sample support from a single drill hole, and these areas are classified as both Inferred and Indicated resources.

The Ferrocarril Zone, although outcropping and drilled systematically, has been classified as Indicated and Inferred as this zone requires more detailed logging, mapping, and drilling to elevate it to Measured status. In addition, Mr Ackroyd has noted two high grade Au and Mo drill hole intercepts at depth within the Ferrocarril zone (RC-LLA-141 and DDH-LLA-031 respectively) which lack sample support from surrounding drill holes. More drilling is required to test the robustness of these high grade intercepts.

Both the Central Porphyry and Cerro De Oro Zones are classified as Measured where drilled on a 50x50m grid with strong sample support and grade continuity. Indicated Resource has been assigned where drilling has been completed on a wider spacing than 50x50m and up to 100x100m. The majority of the Inferred Resource has been projected a further 100m at depth.

*Copper Equivalent (or “Cu Equiv” or “Cu Equivalent”)
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 for the June 2013 Resource Update are stated below:
Copper Equivalent Formula= Cu % + Au (g/t) x 0.77203 + Mo % x 3.906
Price Assumptions- Cu (US$3.20/lb), Au (US$1,700/oz), Mo (US$12.50/lb)

-ENDS-

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**Mineral Resources**

Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

**Competent Person / Qualified Person Statements**

**Mr Bradley Ackroyd**

Information in this News Release relating to mineral resources is based on information compiled by Mr. Bradley Ackroyd, a Member of the Australian Institute of Geoscientists (Qualified Person / Competent Person). Mr. Ackroyd is an independent resource consultant and has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC code 2004).

Mr. Ackroyd consents to the inclusion in this News Release of the matters based on his information in the form and context in which it appears.

**Mr Trevor Tennant**

Mr Trevor Tennant, Managing Director of Southern Hemisphere Mining Limited, is a Fellow of the Australasian Institute of Mining and Metallurgy, is a ‘Competent Person’ as defined in the 2004 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ and is a ‘Qualified Person’ under National Instrument 43-101 - ‘Standards of Disclosure for Mineral Projects’.

Mr Tennant has reviewed the design and conduct of this resource drilling campaign, supervised the preparation of the technical information in this release and has the relevant experience and competence of the subject matter.

Mr Tennant consents to the inclusion of exploration results and other such information in this News Release in the form and context in which it appears.