

The Company Announcements Officer Australian Securities Exchange Ltd via electronic lodgement



### The following is an *Inside Briefing* interview with Southern Hemisphere Mining Managing Director, Mr Trevor Tennant

In this interview, Trevor Tennant provides an update on Southern Hemisphere Mining Limited (ASX: SUH, TSX-V: SH – market capitalisation: ~\$19 million, 172.9M shares on issue). Southern Hemisphere is an emerging copper-gold company focused on Chile, which is progressing the Llahuin Porphyry Copper/Gold project in joint venture with leading Canadian base metals miner Lundin Mining Corporation (TSX: LUN). Southern Hemisphere also has a farm-in deal with Anglo American at its Chitigua Copper Project in northern Chile.

Highlights of this interview include:

- Southern Hemisphere's strategic US\$40M alliance and farm-in agreement with Lundin Mining over the Llahuin Project in Chile's coastal cordillera, where scoping studies are underway on a potential 12Mtpa copper-gold operation producing 50,000tpa of copper metal equivalent;
- Lundin Mining has agreed to proceed to the next phase of the joint venture, under which it has the option to sole fund US\$10M of expenditure to earn 51% of the project, as well as upcoming project milestones including an imminent resource upgrade;
- US\$25M Farm-in agreement with Anglo American over the Chitigua Project, located on the Western Fault; and
- New business development initiatives including ongoing discussions for the Lundin Mining/Southern Hemisphere joint venture to acquire a new high-grade zone located 4km from Llahuin.

# Inside Briefing: Southern Hemisphere has an extensive portfolio of mineral projects in Chile and has secured joint ventures on two of them with leading global mining companies. Can you explain the Company's business model, commodity focus and development strategy?

**Trevor Tennant**: Southern Hemisphere Mining commenced trading on the TSX-V (the Toronto Venture Exchange) in January 2008. Our focus was on copper and our strategy was to maximize our chances of exploration success by having four groups of projects located in different regions across Chile.

During the difficult period of the global financial crisis, we had to respond by identifying a project closer to potential cash flow and so in 2009 we focused on the Los Pumas Manganese project, situated in the extreme north of Chile. We quickly completed a resource drill-out and conducted a preliminary economic assessment by early 2010, which indicated a robust case for development. However, the price of manganese plummeted and the project has since been idled apart from the environmental approval process that is continuing.

To gain wider shareholder support, we dual listed on the ASX in January 2010 by issuing shares at 25 cents per share to raise \$8 million and increasingly focused on copper. We also raised \$20 million at 42 cents per share in February 2011 to advance our copper exploration.

The larger porphyry targets in our portfolio at Chitigua, Las Santas and San Jose required very extensive and expensive exploration programs, and therefore needed to be farmed out and funded by suitable larger mining companies. We were successful in completing sufficient exploration at Chitigua to attract the attention of one of the world's largest mining companies, Anglo American, and we completed a farm-in agreement with Anglo on January 31, 2013, to sole fund ongoing exploration. We are currently seeking partners for the Las Santas and San Jose Projects.

Our recent main focus has been on the Llahuin Project, which was acquired in mid-2010 and is located on the coastal cordillera in central Chile, with excellent logistics and a higher grade core, starting from surface. To date we have completed 54,000m of drilling, and on November 2, 2012 we completed a farm-in arrangement on this project with Lundin Mining Corporation, a global base metals miner. Our ongoing strategy is to progress, with suitable partners, larger targets which require significant funding for exploration and development, while identifying other opportunities for higher grade projects that we may be able to develop ourselves.



## Inside Briefing: What is the structure of your joint venture with Lundin Mining Corporation at the Llahuin Copper-Gold Project and what attracted them to this project? What is your funding commitment over the next few years? What are the next key milestones from a joint venture perspective?

**Trevor Tennant**: There are three phases to the agreement with Lundin Mining. The initial phase comprised a US\$5 million private placement to Lundin Mining of shares at \$0.25 per share and a commitment from them to fund US\$3 million of project expenses and we also committed US\$3 million. At this point, Lundin Mining will have earned a notional 20% of the project and can progress to sole fund another US\$10 million of project expenses to earn an additional 31% in the project. This initial phase has to be completed by November 2015.

The second phase is an option for Lundin Mining to earn a further 14% in the project to take them to 65% by sole funding by November 2016, an additional US\$10 million of project costs. The third and final phase is an option for Lundin Mining to earn a further 10% in the project to take them to 75% by sole funding by November 2018 a further US\$12 million. Therefore, if Lundin complete all three phases, they would have funded US\$35 million of project costs and made a US\$5 million private placement in the Company, at a significant premium to market.

To date, the initial phase US\$6 million of committed funds have been called and Lundin has informed us that they intend to continue and commence the sole funding of the initial phase of the project.

Lundin Mining were attracted to the Llahuin Project as it met their criteria, which included projects that are located within the coastal cordillera and do not have the high infrastructure expenses of the high Andean projects. The Llahuin Project is only 1,300m above sea level, is located close to the town of Combarbala and the main north-south Pan American highway, has opportunities for sourcing a water supply and has a high tension power-line extending over the property.

Most importantly, the Llahuin Project does have an easily accessible, higher grade core and a low strip ratio. This will allow for a strategy of higher grade feed during the early stages of the project. Also, the project does have the opportunity of being of adequate scale to provide approximately 50,000 tonnes per annum of copper metal equivalent.

Inside Briefing: You have so far defined a JORC compliant Mineral Resource at Llahuin of 145Mt grading 0.4% copper equivalent, including a higher grade core of 51Mt grading 0.5% copper equivalent. When do you expect to announce an upgrade to this resource estimate? What is the potential scale of the project based on the drilling you've completed so far? How big a resource would you need to justify economic development?

**Trevor Tennant**: We are currently working on the next resource assessment and will be announcing the results of this resource upgrade this quarter. The scale of a potential mine development at Llahuin is 35,000 tonnes per day or 12 million tonnes per year. This will require a reserve of 180 million tonnes. Copper metal equivalent production will then be approximately 50,000 tonnes per year.

This is similar mineralization and tonnage potential to Teck Cominco's Carmen de Andacollo Copper mine, located 120km north of Llahuin, which has 476Mt grading 0.35% Cu and 0.12g/t Au and produces 66ktpa copper and 55kozpa gold.

Inside Briefing: What is the development timetable at Llahuin? Can you provide a broad outline of the likely scope and economics of an operation in terms of CAPEX and OPEX? What infrastructure is available in the region and where would the product be exported?

**Trevor Tennant**: The Llahuin Project is managed through a technical committee that meets each month. At present we are the operators but Lundin has the right but not the obligation of becoming the operators in November 2013.

The timetable for moving towards the development of the Llahuin Project depends on the success we may have in the further acquisition of an additional potentially higher grade zone located just 4km from Llahuin. Initial discussions have been positive and should this joint acquisition with Lundin be consummated, we will then have another substantial drill program that could change and further enhance the development metrics of the project.

We have completed a desktop study on potential economic outcomes for the Llahuin Project that were based on the last resource estimate completed in September 2012. It is important to note that this desktop study is not a TSX-V NI43-101 compliant preliminary economic assessment.



As part of this desktop exercise, total order of magnitude capital costs were estimated to be US\$680 million, of which the concentrator plant was estimated to be US\$290 million and the mining fleet to be US\$90 million. It has to be noted that these estimates were derived from benchmarking and are only order of magnitude estimates.

Mining costs were estimated to be US\$1.85 per tonne and general administration costs US\$4.6 million per year. Order-ofmagnitude process operating costs were estimated to be US\$7.85 per tonne. The most significant cost input representing 50% of these costs is power and we allowed a delivered energy cost of US\$0.14 per KW/hr

The envisaged process plant is a typical crush, grind and float plant. The product is a copper concentrate with gold credits and there could be a separate float segment to recover molybdenite. Metallurgical test work indicates a low work index and a clean premium grade concentrate, which will be trucked to point of sale. The project is halfway between La Serena and Santiago so export ports are available at either Coquimbo or San Antonio.

## Inside Briefing: What other opportunities are there in the immediate vicinity of Llahuin? Is there an opportunity to cooperate with Lundin on the acquisition, exploration and development of other copper assets in Chile?

**Trevor Tennant**: The deal with Lundin Mining defines two areas. The internal area measuring 14km by 20 km is the area of interest and any prospects within this area are subject to the described joint venture deal. The prospect 4km from Llahuin, which is subject to discussions on potential acquisition, is located within this area.

Then there is an area of 50km by 50km that surrounds the area of interest that is called the area of obligation and noncompetition. Within this broader area we have defined interesting prospects, and the terms of relative ownership in the acquisition and development of projects within this area are subject to good faith negotiations.

Both Southern Hemisphere and Lundin Mining have agreed to proceed with the acquisition of a prospect within this area of obligation and non-competition and have agreed terms on an option deal with the vendor. Terms between Southern Hemisphere and Lundin Mining are yet to be finalized, although discussions are underway. This prospect has until very recently been the focus of artisanal mining activity and the target here is both IOCG and porphyry-style mineralization

## Inside Briefing: Can you explain the structure of the farm-in joint venture with Anglo American on the Chitigua, Carboneras and Meteoritica Projects? What attracted Anglo to these assets? What work program is planned and when do you anticipate further results?

**Trevor Tennant**: The deal with Anglo American was signed on January 31, 2013. The structure of the deal is that Anglo commit to spend US\$1.5 million and deliver 3,000m of drilling. Should they decide to stay with the project, they commit a further US\$8.5 million of sole funding on exploration to earn 60% of the project. They then have the option to sole fund a further US\$15 million to earn a further 15% to take them to 75%. They also pay Southern Hemisphere US\$150,000 each year during the earn-in period. Should they go all the way, they sole fund a total of US\$25 million to earn 75% of the project.

The Chitigua target is a large-scale porphyry which is located on the Western Fault, which is the richest metallogenic zone in the world for copper and hosts the largest copper mines in Chile, including the better known La Escondida and Chuquicamata mines. Anglo was attracted to this property because of its address, the size of the property (172 sq km) and the results of our exploration works that included an IP survey, 20 reverse circulation holes and seven diamond drill holes.

Anglo have moved fast and already concluded a heli-mag survey, set up a camp and have a team of geologists and field assistants conducting mapping and geochemical surveys. They expect to define drill targets and commence drilling in July/August this year

Inside Briefing: You mentioned earlier that Southern Hemisphere has an advanced manganese project in northern Chile. What is the plan for this asset? What is the near-term development potential of some of your other mineral projects in Chile? What other milestones should investors look out for in the coming months?

**Trevor Tennant**: The Los Pumas Manganese Project is situated in region 15 in the extreme north of Chile. We completed a resource drill-out, delineated a final Measured plus Indicated Ore Resource of 18.3 million tonnes grading 7.6% Mn and conducted a Preliminary Economic Assessment, which was completed in October 2010 using a price of US\$7.00 per manganese unit FOB. This indicated a robust case for development, indicating an IRR of 43% and an NPV of US\$90 million using a 10% discount rate.



However, the price of manganese has since plummeted and the project has been idled apart from the environmental approval process that is continuing. The sales price of manganese is making a slow recovery but is still not back to the sales prices of early 2010. The price recovery may accelerate as currently the Chinese port stocks of manganese ore are down to only two months of consumption and Chinese steel production is still increasing. Nevertheless, the current price at US\$5.60 per manganese unit CIF China port, is well below what was projected when the Preliminary Economic Assessment was completed in October 2010. This project is now on care and maintenance apart from the progress of an environmental approval.

## Inside Briefing: Market conditions are currently very challenging for junior explorers. What strategies is Southern Hemisphere implementing to ensure the Company can survive the downturn and ultimately create value for your shareholders?

Trevor Tennant: Southern Hemisphere has proved to be very successful in adapting to external economic conditions.

The discovery and drill-out of the Los Pumas Manganese Project in 2009 and the subsequent switch back to copper exploration that led to the discovery and resource drilling on the Llahuin Project in mid 2010, was a good illustration of this.

The successful conclusion of farm-in agreements with Lundin Mining and Anglo American demonstrated the practical consideration that the financial requirements of going alone on these projects are well beyond the scope of a small cap company.

We understand the exploration environment in Chile and have a lot of experience in identifying and securing quality project opportunities. I have been based in Chile for 3 years and have developed an excellent network of contacts in-country. I believe there are still many exciting untapped opportunities in Chile.

There is an exciting future for our company with the potential successes from our Llahuin and Chitigua projects and the possibility of expanding the scope of the relationship with Lundin Mining Corporation by making further joint acquisitions in the vicinity of the Llahuin Project. We also have the potential of progressing a small mine development strategy at the El Arrayan, Mantos Grandes and Romeral prospects, all of which are well suited to this approach.

Our strategy of bringing in competent partners at our large-scale targets and seeking out higher grade prospects that we can develop ourselves will yield good results for our shareholders.

Inside Briefing: Thank you, Trevor.

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#### Forward-Looking Statements:

This Inside Briefing includes "forward-looking statements" as that term within the meaning of securities laws of applicable jurisdictions. Forward-looking statements involve known and unknown risks, uncertainties and other factors that are in some cases beyond Southern Hemisphere Mining Limited's control. These forward-looking statements include, but are not limited to, all statements other than statements of historical facts contained in this presentation, including, without limitation, those regarding Southern Hemisphere Mining Limited's future expectations. Readers can identify forward-looking statements by terminology such as "aim," "anticipate," "assume," "believe," "continue," "could," "estimate," "expect," "forecast," "intend," "may," "plan," "potential," "predict," "project," "risk," "should," "will" or "would" and other similar expressions. Risks, uncertainties and other factors may cause Southern Hemisphere Mining Limited's actual results, performance, production or achievements to differ materially from those expressed or implied by the forward-looking statements (and from past results, performance or achievements).

These factors include, but are not limited to, the failure to complete and commission any mine facilities, processing plant and related infrastructure in the time frame and within estimated costs currently planned; variations in global demand and price for copper and gold; fluctuations in exchange rates between the U.S. Dollar, the Chilean Peso and the Australian Dollar; failure to recover the resource and reserve estimates of the Project; the failure of Southern Hemisphere Mining Limited's suppliers, service providers and partners to fulfill their obligations under construction, supply and other agreements; unforeseen geological, physical or meteorological conditions, natural disasters or cyclones; changes in the regulatory environment, industrial disputes, labour shortages, political and other factors; the inability to obtain additional financing, if required, on commercially suitable terms; and global and regional economic conditions.

Readers are cautioned not to place undue reliance on forward-looking statements. We assume no obligation to update such information.

The information concerning production targets, total order of magnitude capital costs and order of magnitude process operation costs in this announcement are not intended to be forecasts and not supported by a NI 43-101 compliant feasibility study. They are internally generated targets and estimates set by the board of directors of Southern Hemisphere Mining Limited. The ability of the company to achieve these targets and estimates will be largely determined by the company's ability to secure adequate funding, implement mining plans, resolve logistical issues associated with mining and enter into off take arrangements with reputable third parties.

It is common practice for a company to comment on and discuss its exploration in terms of target size and type. The information relating to exploration targets should not be misunderstood or misconstrued as an estimate of Mineral Resources or Ore Reserves. Hence the terms Resource(s) or Reserve(s) have not been used in this context. The potential quantity and grade is conceptual in nature, since there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource.

In terms of the reported Mineral Resources, Southern Hemisphere Mining cannot assume that all or any part of an inferred mineral resource will be upgraded to measured and indicated mineral resources or will eventually become mineral reserves that are economically mineable.

#### \*Copper Equivalent (or "Cu Eq"):

The copper equivalent calculations represent the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage. Only gold and copper analysis results have been taken into account in the copper equivalent calculation. 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) x 0.72662

Price Assumptions- Cu (US\$3.40/lb), Au (US\$1,700/oz)

#### Competent Person / Qualified Person Statement:

Mr Trevor Tennant 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 current drilling results and consents to the inclusion of exploration results and other such information in this Inside Briefing in the form and context in which it appears.