

## Press release

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### Stockholm

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## Christer Fuglesang inaugurated Boliden Garpenberg

**Know-how and innovation were the theme at the inauguration of Boliden's expansion of the Garpenberg mine, at which Christer Fuglesang, Professor of Space Physics at the Royal Institute of Technology and ESA astronaut, officiated. Christer Fuglesang, who travelled to the depths this time, not the heavens, signed a silver plaque at the 1,054m level in the presence of Boliden's President & CEO, Lennart Evrell, and students from the Royal Institute of Technology, the Luleå University of Technology and the Swedish School of Mining and Metallurgy in Filipstad.**

"Metals play a key part in virtually all technical research and development, one way or another. The weightlessness of space makes it the perfect place to test certain metal properties in order to develop better alloys and catalysts, for example. But it all starts in a mine like this, which is why I am so delighted to have this chance to visit the fascinating new operations at Boliden Garpenberg and to see the importance of scientific expertise and technological development in this link in metals' value chain," said Christer Fuglesang.

The Garpenberg expansion would not have been possible without successful exploration and sector-leading technological development. Fifteen years ago, the mine seemed to be approaching the end of its lifespan – the turnaround came with the discovery of the Lappberget ore body, which was both richer and larger than any previously mined in the area. Boliden has invested SEK 3.9 billion in the new mining facility which, by the end of 2015, will be producing 2.5 million tonnes of ore per year.

"The investment is the second biggest in Boliden's 90-year history, and the demands it has made on everyone involved have been exceptionally high, but we have successfully realised our plans, and the new facilities were brought on line in the spring of this year. The expansion enables an increase in Garpenberg's productivity, cuts the unit cost, and improves the mine's environmental performance, thereby boosting Boliden's competitiveness in the global market," says Boliden's President & CEO, Lennart Evrell.

The 150 guests were given the chance to see some of the high-efficiency and largely automated methods now employed at Garpenberg, where the use of the latest equipment and shorter ore transportation routes have reduced the energy consumption per tonne of ore produced. The newly built concentrator on the surface enables the operators there to monitor and control the processes, down to the smallest detail, via a wireless network. Underground, there are autonomous loading machines that enable the operator to remotely control loading and unloading, while the ore haulage process is entirely automatic. This enhances safety and will also, in the longer term, boost productivity because the machines can work, even when

the mine is empty. The system, known as AutoMine, is only in use in a handful of mines in the world.

The ventilation in the mine stopes is also automated and runs on an on-demand basis, thereby saving on the energy needed to run the fans and provide heating. Water consumption per tonne of ore produced has also been reduced, due to more efficient management and updated equipment. Advanced nitrogen and water purification systems will also help ensure that there is no increase in the mine's environmental impact.

**Facts and figures:**

Mining of the deposits at Garpenberg, outside Hedemora, began way back in the 13<sup>th</sup> century and the oldest letters patent still in existence for mining operations at Garpenberg were issued in 1354 by the Swedish King Magnus Eriksson. This means that Garpenberg is the oldest mining area in Sweden that is still operational. Boliden acquired Garpenberg in 1957, since when exploration work has resulted in a substantial increase in the mine's ore reserves. Today's Garpenberg mine produces complex ores containing zinc, copper, lead, gold and silver – a metal mix that has helped bring about the mine's favourable cost position.

In 2013, Garpenberg produced:

Ore: 1,495 ktonnes

Zinc: 70,267 tonnes

Copper: 517 tonnes

Lead: 25,352 tonnes

Gold: 277 kg

Silver: 162 tonnes

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For further information, please contact:

Marcela Sylvander, Group Communications, +46 (0)733 244 551

*Boliden is a metals company with a commitment to sustainable development. Our roots are Nordic, but our business is global. The company's core competence is within the fields of exploration, mining, smelting and metals recycling. Boliden has a total of approximately 4,800 employees and an annual turnover of approximately SEK 34 billion. Its share is listed on NASDAQ OMX Stockholm, segment Large Cap.*