

## Press release

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### Stockholm

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## Exploration successes in 2016

**Boliden's exploration work has yielded successes at Garpenberg and Tara. Large parts of Garpenberg's mineral resources have been converted to reserves, while a new inferred mineral resource has also been announced at Tara. The exploration work at Kylylahti has not yielded any additional resources or reserves.**

"The substantial upgrade from resources to reserves at Garpenberg, which is Boliden's most profitable mine, and the extension of Tara's lifespan, are particularly pleasing, of course. In Finland, Kevitsa has given us a new position in nickel, but the results of the exploration work at Kylylahti have been disappointing," says Mikael Staffas, President Boliden Mines.

Exploration costs in 2016 totalled SEK 380 m (370). Boliden's strategy is to prioritise exploration work within existing mining areas, where geological conditions are favourable and the lead time from identification of a deposit to production is shorter than in conjunction with field exploration.

### Aitik

No extensive exploration work was carried out at Aitik during the year. The mineral reserve fell to 1,194 Mtonnes (1,226) and the changes in the mineral reserve effectively correspond to the year's extraction work. The extraction of molybdenum has been evaluated, leading to the conclusion that in the light of the anticipated price trend, investing in the extraction of molybdenum at Aitik is not profitable. Molybdenum consequently no longer forms part of Aitik's mineral reserve, but as conditions may change, it is still included in the mine's mineral resource. Work continues on the nearby Nautanen deposit with the aim of submitting an application for a mining concession in 2017. The reserve life at full production is estimated at 27 years.

### Garpenberg

Exploration successes and the conversion of mineral resources to mineral reserves have resulted in the addition of 36 Mtonnes to the mineral reserve, increasing it to 76 Mtonnes (40). The addition to the reserve has been proven by means of technical profitability studies. All of the new sections are showing good profitability, although they have meant a fall in Garpenberg's average grade. 17 Mtonnes has been added to the mineral resource, but the substantial upgrade to mineral reserve has resulted in a net reduction in mineral resources. The reserve life at full production is estimated at 29 years.

*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 5,500 employees and a turnover of SEK 40 billion. Its shares is listed on NASDAQ OMX Stockholm, segment Large Cap.*

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## **The Boliden Area**

In Kristineberg, Boliden has continued its exploration in the direction of Rävliiden, 2.5 km to the west of the Kristineberg ore. The mineral resource there has been increased and 2.7 Mtonnes has been upgraded from an inferred mineral reserve to an indicated. Rävliiden is reported under Kristineberg. Maurliiden Östra has been mined out and a final report submitted to the Mining Inspectorate of Sweden. There are, however, still some mineral resources which may, in future, be profitable to mine. Exploration in Renström and Kankberg has added new quantities to the reserves, but they fell short of the quantities extracted during the year, and the Boliden Area's total reserves fell to 8.9 Mtonnes (10.5) in 2016. The reserve life at full production is estimated at 7 years.

## **Kevitsa**

Boliden acquired Kevitsa in 2016, and production in the mine has proceeded according to plan. Boliden's more conservative calculations have resulted in slightly lower grades in this year's mineral reserve, and the total mineral reserve comprises 146 Mtonnes (154). The reserve life at full production is estimated at 16 years.

## **Kylylahti**

Production at Kylylahti has proceeded well, but mine-site exploration has not yielded any additions, infill drilling has actually resulted in some losses. The total mineral reserve has fallen to 1.9 Mtonnes (2.9) and the reserve life at full production is estimated at just over 2 years.

## **Tara**

The Tara Deep deposit at Tara has added 10 Mtonnes in the form of a new, inferred mineral resource (8.5% Zn and 1.8% Pb). The mineralisation is similar to Tara's other ores, but is at a greater depth of 1.2 – 1.9 km below the surface. Much of what was extracted elsewhere in the mine was replaced with new reserves. The total mineral reserve is 16.5 Mtonnes (17.0) and the reserve life at full production is estimated at 6 years. An investment in the expansion of the tailings dam, which is conditional upon the approval of the Irish authorities, will give the capacity for full production until 2026. Mineral resources, excluding Tara Deep, fell.

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## Mineral resource and mineral reserve calculations, 2016

Boliden's calculations and compilations are carried out in accordance with the recommendations of the Swedish industry organisation for mining and metal companies, SveMin, which are drawn up in accordance with international regulations. Boliden reports mineral reserves and mineral resources separately, which means that reported mineral reserves are not included in the mineral resources.

Mineral resources are concentrations of minerals in the bedrock from which there are reasonable prospects for eventual economic extraction. Mineral reserves are deducted from those parts of a mineral resource that can be mined and processed in accordance with the company's demands on profitability. Factors such as waste rock dilution, pillar offset and process recovery rates, etc., are taken into account in these calculations.

The mineral resources and mineral reserves that have been compiled and presented in this press release have been reviewed and approved by Gunnar Agmalm, Boliden's Mineral Reserves and Project Evaluation Manager, who is registered as a "Qualified Person" by SveMin and as a "Competent Person" in accordance with JORC.

The prices employed when calculating mineral reserves are planning prices, which are an anticipated average price for metals and currencies over the forthcoming business cycle. Boliden currently employs the following planning prices:

	Planning prices, 2016
Copper	USD 6,200/tonne
Zinc	USD 2,200/tonne
Lead	USD 2,100 /tonne
Gold	USD 1,100/troy oz.
Silver	USD 18/troy oz.
Molybdenum	USD 8/lb.
Nickel	USD 16,000/tonne
Cobalt	USD 12/lb.
Tellurium	USD 30/kg
USD/SEK	7.50
EUR/SEK	8.625
EUR/USD	1.15

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