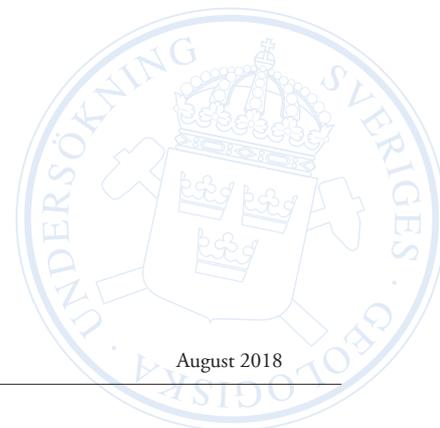


What's up in Sweden

## EXPLORATION NEWSLETTER

August 2018



### EXPLORATION NEWS

**Dragon Mining Ltd** advised on May 14 that the Permit for test mining operations at its Fäboliden Project has now gained legal force and the Company will now progress test mining activities at Fäboliden. **Dragon Mining** confirmed on July 10 that it has submitted an application to the Land and Environment Court to secure an Environmental Permit for full scale mining operations at its Fäboliden Gold Project.

**Gungnir Resources Inc** reported on July 10 that the first three drill holes for 2018 have been completed at Knaften, with two drillholes each cutting arsenopyrite mineralization. Drilling tested a disseminated-style gold zone with arsenopyrite serving as an indicator of gold.

On June 27, **OZ Minerals** announced it has entered into an earn-in agreement with private explorer **Mineral Prospektering i Sverige AB** to explore for Iron Oxide Copper-Gold mineralisation in the Norrbotten district.

**Tertiary Minerals Plc** provided on July 13 an update on the Exploitation Permit re-assessment for the Sturman Fluorspar Project. The Mining Inspectorate has now received the opinion of The County Administrative Board of Västerbotten (CAB). The CAB is not satisfied that the mitigation measures proposed by the Company enable the co-existence of reindeer husbandry and the Tailings Storage Facility operation. The CAB has therefore advised against grant of the Mine Permit in its current form.

**Talga Resources Ltd** advised on May 9 it has commenced an internal restructure of its assets that includes establishing a new wholly owned Swedish domiciled subsidiary - **Talga Battery Metals AB** - to house its four prospective cobalt projects in northern Sweden.

**MRG Metals Ltd** announced on July 13 an updated JORC code (2012) Mineral Resource Estimate for the Norrliden Project. It is 5.2Mt @ 2.1% Zn, 0.4% Cu, 0.2% Pb, 0.3 g/t Au, 29 g/t Ag calculated using a 1% Zn Eq. cut-off grade.

**EMX Royalty Corp** announced on March 1 drill results from **Boreal Metals Corp.**'s first five holes totaling 1,146.7 m of a diamond drill program at **EMX's Gumsberg** royalty property. Intercepts from one hole include 10.94 m (122.30-133.24 m) averaging 16.97% zinc, 8.52% lead, 656.70 g/t silver, and 0.76 g/t gold (true width estimated at 20-50% of reported interval length). On May 2, **EMX** announced additional drill intercepts reported by **Boreal**, including 3.7 m averaging 19.27% zinc, with 17.66 g/t silver and 0.25%

lead in one hole, and 6.7 m averaging 7.01% zinc, with 11.14 g/t silver and 0.44% lead in a second hole (true widths estimated at 80-100% of reported interval lengths). On April 1, **EMX** announced the execution of an option agreement, through its wholly owned subsidiary **Eurasian Minerals Sweden AB**, for the Riddarhyttan project to diversified global miner **South32 Ltd**.

On March 26, **Leading Edge Materials** provided an update on the first of a range of research projects aimed at capturing added value opportunities for the Norra Kärr rare earth element project. **Leading Edge Materials** has partnered with a research team at the **Institut de Chimie et Biochimie Moléculaires et Supramoléculaires** in Lyon, France to investigate the extraction and separation of hafnium and zirconium from a process material previously considered to be waste. On June 21, **Leading Edge Materials** provided results from mineral processing test work undertaken on the nepheline/feldspar by-product material. Testwork completed at the **Geological Survey of Finland** on a bulk sample delivered promising results.

On June 21, **Lovisagruvan AB** advised that the mining inspector announced consent for the transfer of the mining concession Vindfall K No. 1 from **Svenskt Bergsbruk AB's** bankruptcy estate to **Lovisagruvan's** wholly owned subsidiary **Lovisagruvan Utveckling AB**. The latest estimate of mineral resources in the Vindfall deposit was carried out in 2012 by **Wiking Mineral AB**, which reported an indicated mineral resource of 312,870 t with 54 g/t Ag, 0.3% Cu, 8.5% Zn and 2.9% Pb.

**Nordic Iron Ore AB** announced on May 18 its appointment of **Golder** to undertake the Definitive Feasibility Study for their flagship low-cost and fully permitted Blötberget Iron Project. Prior studies and an exploration programme have demonstrated the potential to develop a decline access, approx 3 Mtpa underground operation.

**Erris Resources Plc** provided on June 18 an update on **Centerra Gold** Joint Venture Exploration Programme. A mag survey at Brännberg have highlighted multiple anomalies that tie in with mineralisation intersected in historic drilling. In parallel with the mag survey, an IP survey started on 8 June. In addition, a series of test lines of soil samples have been taken across the main strike of the mineralisation.

**Copperstone Resources AB** presented on May 17 an update on the drilling programme at Granliden Hill. Mineralisation consisting of interspersed chalcopyrite veins has been intercepted. This mineralisation is associated with a vertical resistive Natural Source Audio-

frequency magnetotelluric feature which has considerable strike and depth extent and is being drill-tested for the first time. Potassic alteration was intercepted over several hundred meters. This helps substantiate the porphyry style of mineralisation proposed for the genesis of the Cu sulphides historically drill tested on the project. Geochemistry commensurate with Adakite provides further validation for porphyry style mineralisation.

**Aura Energy Ltd** advised on May 23 that the results from its Häggån Battery Metals Project orebody modelling study has defined a high-grade Vanadium zone close to surface and resulted in a new overall resource estimate. The orebody modelling confirmed the Global Resource of 15.1 Billion lbs V<sub>2</sub>O<sub>5</sub>. The modelling work defined a new significant high-grade near-surface Vanadium zone of 90 Mt at 0.42% V<sub>2</sub>O<sub>5</sub> at a 4000 ppm cut-off.

**Beowulf Mining Plc**, focused on the Kallak magnetite iron ore project, announced on April 12, that it has been in communication with The Government, and understands that the Government's review of submissions made by interested parties, regarding the Company's application for an Exploitation Concession for Kallak North, continues. The Government cannot give a definitive timing for a final decision.

**Botnia Exploration AB** announced on June 7 that GeoVista AB has compiled a feasibility study of the Vindelgransele gold mines project. On July 4, **Botnia** announced a new mineral reserve estimate for the fäbodtjärn gold deposit: Probable mineral reserve: 116 kton with 7.7 g/t gold - cutoff 0.0 g/t and Indicated Mineral Resource: 85 kton with 5.9 g/t gold - cutoff 0.0 g/t. Mineral resources are reported excluding mineral reserves.

**Barsele Minerals Corp** reported on February 26 that an independently verified mineral resource estimate has been completed on the Barsele Gold Project. The study concludes that drilling to date along the Avan--Central-Skiråsen gold zones at a 1.75 g/t gold cut-off has outlined an Inferred Resource of 15,279,000 t grading 2.91 g/t gold and an Indicated Resource of 2,399,000 t grading 2.50 g/t gold. On April 12, **Barsele Minerals** reported that it has filed the technical report in support of the Independent Updated Mineral Resource Estimate.

## MINING NEWS

On July 30, **Kaunis Iron AB** announced the first blast in the Kaunisvaara iron mine and the first ore truck headed for the Railway at Pitkäjärvi.

In a Q2 Interim Report, **Lundin Mining Ltd** announced that zinc production of 16,845 t and lead

production of 3,914 t were lower than the prior year quarter driven by lower head grades as a result of mine sequencing and higher than planned dilution and ore loss.

In a Q2 production report, **Mandalay Resources Ltd** announced that production at Björkdal was 14,017 ounces gold in the second quarter of 2018, as compared to 16,112 ounces gold in the second quarter of 2017.

In a Q2 Interim Report, **Boliden** announced that milled volume at Aitik decreased to 9.3 Mt (10.4). Production at the beginning of the quarter was affected by winter conditions and the ongoing low crusher availability. Milled volume was higher than in the first quarter, but mining occurred in low grade areas, and the copper grade was 0.28% (0.29). The new crusher came on line at the end of the second quarter and ramping up is proceeding according to plan. Milled volume in the Boliden Area was lower than in both the first quarter and the previous year. The mining out of the Mauriliden open pit during the quarter, coupled with a disadvantageous ore mix and lower grades, resulted in a decrease in the production of metal in concentrate. Garpenberg's milled volume remained stable and high. Mining occurred in areas similar to those in the first quarter, with low zinc grades and high silver grades. Production of zinc in concentrate increased in comparison with the previous quarter but decreased in comparison with the previous year. Zinc and silver grades are expected to total 4.0% and 115 g/tonne, respectively, in 2018.

In an interim report for Q1, **LKAB** reported that production and delivery volumes remained stable during the first quarter of the year. The production volume for the quarter reached a new record of 7.3 (7.2) Mt. Delivery volumes for the quarter amounted to 6.8 (6.6) Mt, with pellets accounting for 84 (86) percent of this.

## SUSTAINABILITY NEWS

**LKAB** announced on June 20 that the pilot plant for fossil-free steelmaking is now moving into the next phase. Trials will be scaled up and process technology will be developed for producing steel with hydrogen instead of coal and coke. **LKAB** announced on July 4 that it is now investing in pilot plant facilities and, together with **Ragn-Sells AB**, will industrialise an innovative technology for upgrading mine waste from iron ore production. This may result in **LKAB** producing phosphorus and rare earth metals.

## NEWS FROM SGU

SGU presents two new reports on the bedrock geology in northern Sweden as a result of the Barents project:

Geology of the Northern Norrbotten ore province, northern Sweden, Rapport och meddelanden 141.

Synthesis of the bedrock geology in southern Norrbotten County, northern Sweden, Rapport och meddelanden 144.

# SGU

Sveriges geologiska undersökning  
Geological Survey of Sweden

Mineral Resources Information Office  
Skolgatan 11, SE-939 31 Malå, Sweden  
Phone: +46 953 346 00  
e-mail: minko@sgu.se

Head Office:  
Box 670, SE-751 28 Uppsala, Sweden  
Phone: +46 18 17 90 00  
Fax: +46 18 17 92 10  
www.sgu.se

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Editor: Daniel Larsson