

Exploration news

LKAB reported on January 12 mineral resources of rare earth metals exceeding 1 Mt of rare earth oxides. LKAB has started to prepare a drift, several km's long, at a depth of approximately 700 m in the existing Kiruna mine towards the Per Geijer deposit to be able to investigate it at depth and in detail. The plan is to be able to apply for an exploitation concession in 2023. The rare earth elements occur together with phosphorus in the mineral apatite, in what is mainly an iron ore deposit, and which may therefore be produced as by-products. More extensive studies show an increase from 400 Mt of mineral resources with high iron content to over 500 Mt, and that the Per Geijer deposit contains up to seven times the grade of phosphorus as the orebodies that LKAB mines in Kiruna today.

In a Q4 report **Oz Minerals** announced that five projects are underway in partnership with **Mineral Prospektering i Sverige AB**. At the Skellefte, Rockliden, Sadjem Dokkas and Painirova projects, geophysical surveys were completed in the quarter, with targets identified and drilling planned for H1 2023. At Lannavaara permitting was completed with drilling and downhole EM planned in 2023.

On November 18, **Copperstone Resources AB** announced that Copperstone has in the last two years carried out extensive core drillings at Viscaria, which has now been compiled into a mineral resource estimate according to the PERC-2017 standard. In total, the mineral resource has increased to 93 Mt, which corresponds to an increase of almost 80% since the acquisition of Vis-

caria in 2019. The total copper tonnage has increased to 817.7 Kt.

District Metals Corp reported on September 21 assay results for five drill holes from the 2022 drill program at the polymetallic Gruvberget Property located in Bergslagen. A total of 1,144 m in five drill holes was completed at the Gruvberget North zone. All the drill holes were 30 to 60 m step outs below historical drill intercepts where four out of five holes intersected polymetallic sulphide mineralization that remains open at depth and partially along strike.

Gold Line Resources Ltd announced on November 24 initial result from its 2022 drill program at the Company's Paubäcken Project. The first hole in the Phase 2 drill program has intercepted 14.55 m averaging 2.44 g/t Au incl. 0.85 m at 9.60 g/t Au and 1.1 m at 9.14 g/t Au from 142.25 m depth.

Grängesberg Exploration Holding AB presented on December 16 results from the Feasibility Study for the resumption of mining at the Dannemora Mine. Among other things, the study states that Dannemora can become a producer of high-quality iron ore with a very low carbon footprint. The study has been compiled and signed by **SLR Consulting Limited**. An updated mineral resource estimate (JORC 2012 compliant) is 32.20 Mt, with 34.91% Fe, measured and indicated; and 5.94 Mt at 33.33% Fe, inferred. The probable ore reserves in the Dannemora mine are estimated at 31.11 Mt, with 32.10% Fe, at a cut-off grade of 15%.

Gungnir Resources Inc reported on September 7 assays from Lappvattnet Ni deposit. Highlighted results were 2.14% Ni over 3.3 m in one drill hole,

5.15% Ni over 0.73 m in a second drill-hole and 9.8 m of 0.82% Ni and 349 g/t Silver over 1.72 m in a third drillhole. On October 18, Gungnir announced one of the top drill intersections at the Lappvattnet Ni deposit at 9.0 m of 2.35% Ni including 5.66 m of 3.02% Ni. On December 1, Gungnir reported further near surface drill results. Highlighted holes include one which cut 7.0 m of 1.16% Ni and a second which intersected a new footwall nickel target approximately 75 m below the main Lappvattnet deposit. Gungnir reported on January 4 the highest-grade nickel intercept drilled to date at the Lappvattnet nickel deposit. One hole drilled 4.04% Ni over 5.76 m within a broader interval of 1.49% Ni over 18.28 m starting at a down-hole depth of 57.72 m.

Talga Group Ltd reported on September 20, drill results from exploration at the Vittangi Graphite Project. Earlier this year Talga completed a 36-hole diamond drill program of the ca. 2 km long "Niska Link" graphite target at Vittangi and released assay results of the first 13 drillholes. The assay results from the balance of 23 drill holes have been received, showing further zones of high-grade graphite mineralisation over substantial downhole widths. Maximum grades reach 50.3% Cg (at 43 m) and the Niska Link zones, along with adjacent Niska South and North deposits, remain open at depth and along strike.

Barsele Minerals Corp provided on January 16 an operational update regarding 2022 exploration activities within the Barsele Gold-VMS Project area. Diamond drilling within the 34,533-hectare property totaled 4,252 m in 14 completed core holes. Since late 2015, a total of 162,691 m of overburden penetration

and core collection has been tabulated from a total of 436 drill holes. Analytical results for all 14 drill holes from the 2022 drilling program are presented in the news release.

On December 22, **Ragnar Metals Ltd** presented assays for two holes at Tullsta Nickel Project. One hole returned an upper zone of 30 m at 0.78% Ni, 0.46% Cu and 0.08% Co from 167 m; and lower zone of 42 m at 0.23% Ni, 0.18% Cu from 389 m; including a high tenor massive sulphide zone of 2.9 m at 1.14% Ni, 0.38% Cu. Assays for a second hole returned an upper zone of 86 m at 0.26% Ni and 0.24% Cu from 187 m; and a lower zone of 46 m at 0.32% Ni and 0.29% Cu from 322 m; including a high-grade massive sulphide zone of 2 m at 0.94% Ni and 0.66% Cu.

Beowulf Mining plc announced on January 24 positive economic results from the Scoping Study for Kallak North, part of the Kallak Iron Ore Project being developed by the Company's subsidiary **Jokkmokk Iron Mines AB**. It presents a 'Base Case' which is solely focused on the Kallak North deposit. It incorporates a Mineral Resource Estimate with effective date of 9 May 2021 and an economic assessment for a mining operation producing up to 2.7 Mtpa of high-grade iron concentrate over a production life of 14 years.

Kendrick Resources Plc announced on October 24 that a 1 tonne metallurgical sample from the Airijoki Vanadium-copper project is being shipped to the United Kingdom for Low Intensity Magnetic Separation testwork at a recognized laboratory. Soil geochemistry over two of the Airijoki vanadium – copper licences has been completed and samples are to be dispatched for analysis. Detailed soil and rock chip sampling is specifically targeting copper, following the discovery of widespread copper anomalism across the Airijoki block of licences.

In a December Quarterly Activities Report **Alicanto Minerals Limited** reported a successfully recommenced drilling at the Greater Falun Project. Assay results from its first diamond drillhole at

the Skyttgruvan-Naverberg target confirmed multiple zones of significant mineralisation including up to 744 g/t silver, up to 1.9% copper, and anomalous gold values up to 0.65 g/t within broader zones of zinc mineralisation. Alicanto has also entered a binding agreement to acquire the world-class Falun Mine and its prospective surrounding tenure. Towards the end of the Quarter, drilling recommenced at the Sala Project targeting step-out Resource growth and near mine targets associated with high-grade silver and zinc.

Pallas Metals AB announced in a Q3 report, recent advances on its Orrvik Lithium Project. The Company has completed 8 drill holes and 6 surface channel cuts. The pegmatite at the main 'Stenbackberget' occurrence has been intersected in all holes and surface channel cuts. This host rock stretches over a horizontal distance of 420 m. It remains open for drill testing along both ends and down dip and has an estimated true width between 1.5 to 8.2 m. Preliminary assay results from the first 3 surface channel cuts suggest the pegmatite is highly anomalous in rubidium with associated lithium and cesium credits.

Mining news

In a Q4 report **Boliden** announced that Aitik's milled volume was lower than both the previous quarter and the fourth quarter of 2021. The production of metal in concentrate for all metals decreased compared to the previous quarter and the fourth quarter 2021. The copper grade was 0.17% (0.23), and the gold grade was 0.08 g/t (0.12). The Boliden Area's milled volume was higher than in both the previous quarter and the fourth quarter of 2021. During the quarter, test mining of ore was conducted in the Rävliiden deposit in the Kristineberg mine. Initially, ore from Rävliiden will be mined using the existing infrastructure in the mine. However, a new drift to the Rävliiden deposit that will allow fossil-free production is in the process of construction. Garpenberg's

milled volume was higher than the previous quarter but lower compared to the fourth quarter of 2021. Reinforcements in the transport infrastructure work was carried out during the quarter aimed at achieving an increase in milling capacity of 3.3 Mt. The zinc grade during the fourth quarter was 3.6% (3.7), and the silver grade was 108 g/t (105).

In a Year-end Report **LKAB** announced that the delivery volume decreased somewhat because of lower production volumes and amounted to 25.8 (27.0) Mt for the full year and 6.4 (6.8) Mt for the quarter. Production has remained affected by disruptions at the pelletizing plants in Kiruna where measures are being taken to increase production stability. Production volumes amounted to 25.0 (26.7) Mt for the full year and 6.3 (6.7) Mt for the quarter.

Mandalay Resources Corporation

announced on January 13 its production and sales results for the fourth quarter and full-year 2022. Saleable Production for the Year Ended December 31 at Björkdal was 41,247 ounces gold.

Lovisagruvan AB announced in a Q4 report that ore production amounted to 32,818 t (37,019), a decrease of 11%. At the beginning of the year, the production target was 40,000 t, but during the first half of the year, production was lost due to an unexpectedly high level of sick leave and a lack of loading and truck capacity.

News from SGU

New reports:

Malmer, industriella mineral och bergarter i Norbergs kommun, Västmanlands län. Rapport och meddelanden 151.

Malmer, industriella mineral och bergarter i Fagersta kommun, Västmanlands län. Rapport och meddelanden 152.