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Tittel

Report on the Geological Examination of the L. Bleikvand Sulphidic Ore Body in Norway

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Bergdistrikt

1: 50 000 kartblad

19261

1: 250 000 kartblad

Mosjøen

Fagområde

Geologi

Dokument type

Forekomster (forekomst, gruvefelt, undersøkelsesfelt)

Bleikvassli
Bleikvatn
Grønfjelddalen

Råstoffgruppe

Malm/metall

Råstofftype

Pb,Zn,Ag, Au

Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse

Vedlagt feltkartskisse, Avskrift av opprinnelig rapport

Beskriver det mineraliserte området Ved L. Bleikvann med malførende soner i heng av et granittisk flak. hevder at malmen har kontaktmetamorf opprinnelse.. Gir en kort beskrivelse av 3 røskegrøfter i Grønfjelddalen der sinkblende og blyglans opptrer. Også nevnt flyttblokker med sinkbl ved Røssvatnet ved Värntresket.

Report
on

the geological examination of the L. Bleikvand sulphidic ore body in Norway.

With a geological field sketch map
by

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I left Saxnäs on the Kult-lake August 13 in the morning and Storuman, the end station of the Inland Railroad, August 14 for Mo i Ranen/Norway. The morning of the 15 I spent for visiting the zink- and lead deposit at Grönfjelddalen in Dunderlandsdalen and in the afternoon I went to Bleikvaslien by combined motor- and auto-travel. The 16, 17, 18 I made a geological reconnaissance of the greater environs of Bleikvand to the east, taking an overlook of the topography and morphology even to the Swedish Jofjäll north of Jovattnet, meanwhile the 19 and 20 were spent for a closer examination of the ore body and its geology. The 14th in the morning I turned back to Joesjö on the Swedish side and from there I debarked via Tärna and Slussfors to Storuman the 22nd and finished my trip at Borga the 23rd in the evening.

The orebody is, as yet pointed out by v. Post, a contact-metamorphic one, the sulphide ore concentration lying nearly directly on the contact surface of a sheet of a white slightly micaceous granite, which forms the nearly always silicified bottom of the body. This sheet is not shown on the Norwegian government geological map, only its thicker southwestern thicker continuation south of L. Bleikvand is marked, because in its thinner part it is strongly deformed by southeastward folding and overthrusting movements, whereby the closeness to the somewhat variegated mica schist is made perfect, specially on the weathered surfaces and as the granite contains here and there small quantities of garnet nearest to the bottom contact. The dimensions of the body in section with the earth surface seems to have been underestimated as laid bare by v. Post rather than overestimated, because the survey trenches 1 - 7 have not always met exactly with the hanging and the bottom walls, on the other side the dip - judging from the dip of walls - of the body seems to be irregular and in general smaller than given by v. Post, and the field dip seems to be only 18° to SW.

In the hanging wall the neighbourhood of the granitic sheet is manifested by rising crystallinity of the mica schist /increasing quantity and dimensions of the garnet, lack of chlorite, greater massiveness of the rock/ and by the appearance of irregular lumps and lenses, strongly contorted, of quartz; other indications represent irregular distributed spots of rusty /sulphide/ impregnations, whose number increase when approaching the contact line. The mica schist becomes more micaceous in this direction and strongly foliated and the mica itself acquires a characteristic yellowish tint of the leuchtenbergitic habit.

In the wider hanging wall, west of L. Bleikvand, there follow mighty crystalline limestones, alternating with mica schists of a lower crystallinity /containing chlorite/ and with these limestones are associated here and there black graphitoid schists and metamorphic basic extrusives, which occasionally are followed by small pyritic impregnations and rusty zones derived of them. They deserve no attention. There seems to be no granitic intrusions the complex between L. Bleikvand and Rössåen in the west.

The granitic sheet crosses swamp ground SSW of L. Bleikvand and the Bleikvaselv just opposite the mouth of Moldåen, where it disappears underneath the glacial drift coverings. A good section of the granite is shown in the swamp just east of n in Bleikvaslien /of the government geological map sheet Hatfjelldal/ Oslo 1925/ on the newly constructed autored and the granite is somewhat richer in dark mica and garnet and strongly foliated. A recent gossan formation is seen at the forest land southwest of the first S in the same cited word /Cited map/ and seems to be the continuation of the gossan formations marked on the adjoined map at the southeast corner of the L. Bleikvand. Some rusty zones and small

gossan formations were observed at n in Tuven and SW hereof near the path from Tustervatnet to Bleikvaslien, perhaps the continuation of the above, but no granite were met with on the hasty reconnaissance.

The northern continuation of the granite sheet from a point where lastly perceived about 600 mENE of the trench No 1 seems to cross the Kjökkenbugt and the peninsula between it and St. Bleikvand, and the probable continuation of the sheet is seen on the northern shore of this lake on the SE upper slope of the mountain north off the farm Finneset, at se of this name / cf cited map /, where the structure and bright colour of the rock zone indicate a granite, with some rusty zones in the hanging. Perhaps this continuation belongs to the copper and zink deposits, which by the population are reported to be closely connected with the mounts Okstinderne and their western slope. / personal communication with the "postopner" at Fineide. /

The granite sheet is subjected to some transversal deformations whose nature is difficult to define but which seems to be connected with the eastward overtrusting movemants to which the east-west stike of the phyllite - limestone complex of Varntrasket - Favnvatnet are due and which are stretching as far as to Jofjall-Tjäter-Gieravardo on the swedish side. This complex is somewhere and not seldom characterised by variegated but not very great deposits of sulphides. / Cf the report by v. Post of Favnvatnet and below / but the transversal movement seems to have affected only the upper part of the sediment pile, underneath only producing some smaller "Blattverschiebung". To this group of movements belongs certainly the diastrophism of the orebody at the trench No 5 and its formation of brecciated ore as also the thickening and bending of the granite sheet in this part of the area. Traces of this movement are also seen somewhere in the underlying formation, and to this group may be counted also the abrupt intersection of the ore lenses in the amphibole rock south of the farm Bleikvasfossen / of below /.

The bottom formations underneath the granite sheet consist of a mighty bulk of grayish micashists strongly folded and at different intervals alternated with limestone complexes, which always are associated with extrusive hornblende rocks and graphitoid / alun / shales. These contain always small quantities of sulphidic impregnations, which in their part cause rusty zones and limonite wheatherings in the limestone without practical value. Unto the top of the Kongsfjeld 1056 there are no granitic intrusions of that white colour in these series and therefore no purpose to expect heavier ore concentrations, but south of o in Kongsfjeld and north of R in Rösvasbgt / cf cited map / there seems to be some granitic intrusions of that white colour, which characterises the Trondhjem series and which are accompanied by limonite gossans in the valley to the south between the farms Svartvasmyren and Rösvasbugta.

South of the farm Bleikvasfossen on the bottom of the little rivulet there are seen in the nearly dense amphibole rock some lenses of sulphidic ore in general measuring 0.2 x 2.- meter but one of them was about 2 x 10 meter. The central part of the later one contained big cubes of pyrite in the centrum and a mixture of galena and sphalerite with pyrite in the extern parts. The elongation of these lenses goes in N85 W with a steep northern dip. They are often cut and dislocated by faults which run i N20E. Both these faults and the direction of the lenses belong to the above mentioned transversal dislocations. On the southern wall of the same rivulet some 10 meter far downstream there is seen a layer in the alunslate consisting of dense pyrrhotine with the characteristic yellowish weathering and smell of such a body. Near the bridge of this rivulet some boulders of the same dense pyrrhotine where met with, probably deriving from the last mentioned locality and measuring some 0,3 m³. The rusty zone advertised by v. Post SW of the lower waterfall of Bleikvasfoss seems to belong to the same type. All these outcrops in the alun slate and in the amphibole rock although they belong to the outer contact zone of the hanging granite, seem not to deserve greater attention as bigger ore producers. Even in other localities of the bottom contact of the granite there are some ore indications as f.ex. exactly east of the southern end the visible ore body, but they are insignificant and consist of dark limonite/iron pyrite/ veins some centimeter thick. The impregnation in the hanging wall above the granite seems to represent, although without any conspicuous concentration, a relative enrichment of copper pyrite.

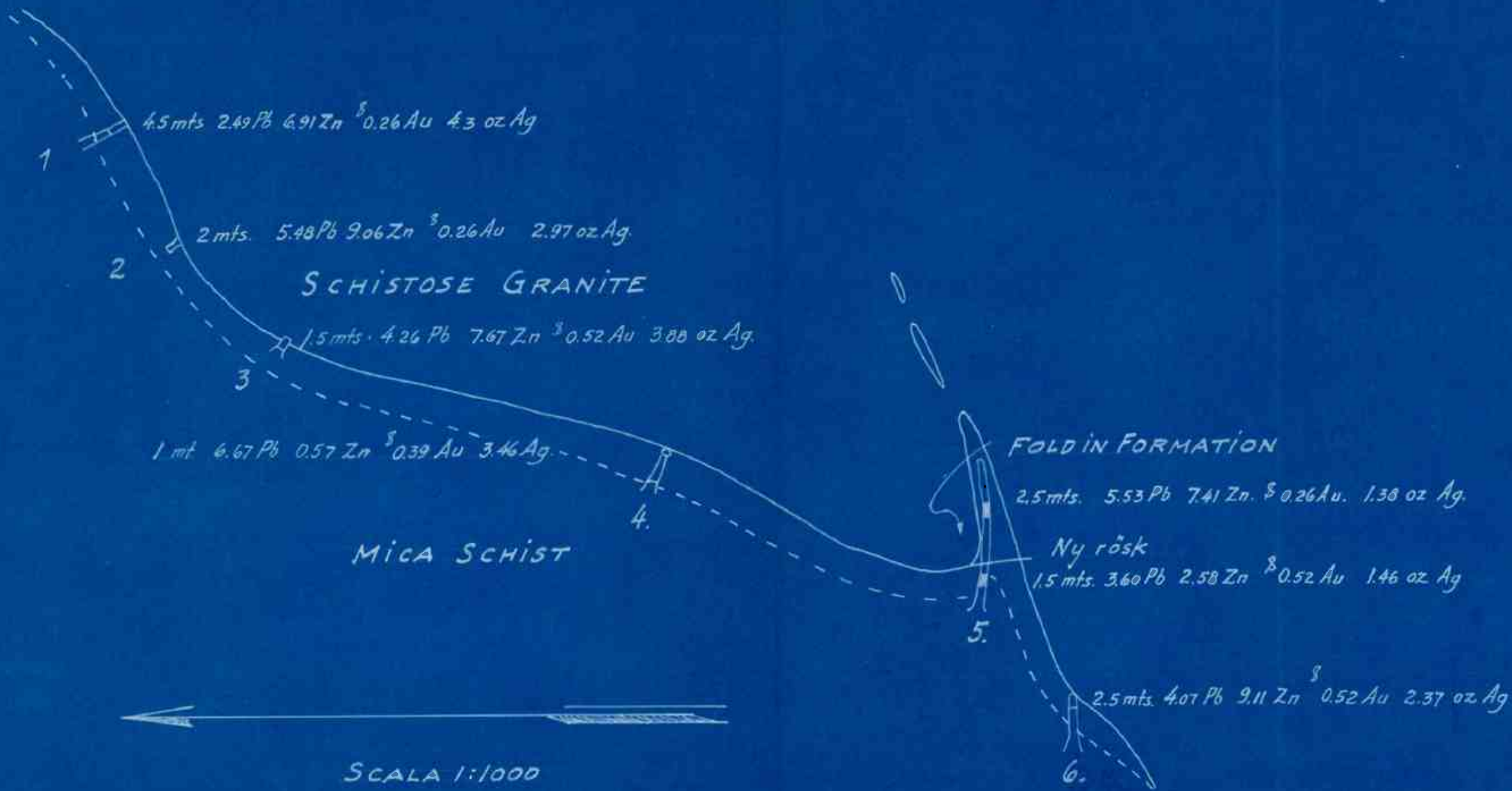
The general impression of the ore in the hanging wall of the granite is a good one and in spite of the low angles of α it seems to be persistent. For electrical prospecting in first order the swampy grounds south of the ore, body unto the treshold of the upper waterfall and then the northern continuation of the red cross marked on the map, succeeding secondly farther on the shore of the Kjökkenbugt, ought to be tried. Afterwards arises the question of crossing the river and continue in the hilly country W and SW of the upper waterfall. Then a testing experience may be made on the peninsula between Kjökken-bugten and S. Bleikvand, on its lowest part. The northern shore of the lastnamed lake may not be worked with electric apparatus without previous prospecting and geological work. For further details see the adjoined geological sketch map.

The country north off the lake Favnvatnet is too extended one for giving some conclusive judgements after only a few days runover. There are on several points north of Sivertgaarden and Valen / farms / recent gossan formations and wells ~~rich~~ with rich limonite incrustations, but the general metamorphic stage of the rocks is a lower one and dense and semicrystalline limestones are more abundant than in the western field even than on the official map and with them alunsates, which with their pyrite content often produce a disproportionel limonitic weathering as to raise great expectations with only small fundament. But it is sure that there are veins of dense sphalerite unto 0,5 meter thick and of unknown length, which perhaps in spite of the isolated position were worth of prospecting, especially when considering the analogic veins in the eastern continuation on the Swedish side. There are known on the Swedish side to localities of dolomitic limestone with lumps of silverantimon tetraedrites besides the common sulphides. But there are not known any granitic intrusions in these parts of the mountain chain, only smaller intrusions of gabbroid and peridotitic rocks, which knowledge with the experience on the Caledonian range in general does not approve ore bodies of greater dimensions in proportion to their isolated position. On the shore of Rös Vand at Varuträsket and north off there were encountered several boulders of glassclear quartz matrix abundantly intervoven with rich and dense sphalerite incrustations, and as the glacial transport was directed westward in this part of the mountains, their origin from the Akfjeldet is quite sure.

In the Grönfjelldal area south of the road near the farm Snasen there were visited three prospecting trenches across a couple of ore veins measuring about 2 cm each and consisting of prevailing dense sphalerite in the upper part and of prevailing galena in the lower part. In the first trench there were counted 14 veins of the first type and 7 - 10 of the second one, but in the second distant some ten meter in the strike the number of veins were lower and in the third hereto the second type was lacking. The country rock is a soft browngray micashist of low crystallinity, which alternates with a white crystalline limestone and the general dip is southward. No granite or magmatic rock is seen in the immediate surroundings, but farther northward in the hanging there was crossed a considerable white granitic sheet indicated also on the official geologic map. Further southward there is also given on the map a granitic intrusion. Personal communication of Mr. Ro of Mo i Rana point out that these ore veins are very persistent following the windings of the limestone in the hanging wall for several kilometers, and that there exists other streaks of the same kind partly in analogic position with some small copper content, which may be true. The localities are very interesting as representing parallel zones to the famous iron ore bodies /haematite/ of Dunderland, once described by J. H. L. Vogt and whose exploitation recently has been taken up anew. But the veins seem not to be enough persistent in the strike and would compel to very extensive workings and to repeated and persistent testings as to lead to prosperous economies. In every case the localities deserve extensive geologic and prospecting field work before considering the case of practical evaluation.

1928 Aug. 29.

H. Backlund.
(sing).



BLEIKVATNET LEAD ZINC PROSPECT.

7 2 mts 1.77 Pb 3.05 Zn ⁸0.39 Au 8.02 Ag