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1909 May the 24th I undersigned public superintendent of mines and M.J. examined the Copper occurrences in the Vormvik - Mountain, within the propriety of Hamre in Bygland, belonging to the farmer Ketil Bygland.

Since the inspection by the deputy superintendent mr. Henriksen 1907 the owner has made a good deal of working, having built a ropeway 350 metres long from the mines down to the shore of Lake Byglands fjord and having made rather much of mining labour in the orefield.

The Vormvik mountain consists of a coarsegrained granite (pegmatite) alternating with a schistons hornblend rock. The pegmatite and the schists are ordinarily lying in conform layers or banks, dipping about 30° against N.W., the granite often throwing branches into the hornblend. The copper ore layers are found at a point, where a series of perpendicular fissures have caused a such erosion of the mountain side, that there is now a perpendicular wall about 100 meter downwards from the top plateau of the mountain. The copper ore shows just at the edge of this abyss. At a short distance southwards a rivulet with a considerable waterflow throws itself out over the edge, forming a magnificent waterfall, the Rysefoss.

In times far away, it is said, some German people have tried to take out copper ore here and have smelted it in furnaces on the shore of the lake, where reddish slaggs are still to be observed. During the last two years mr. Ketil Bygland has worked very energetically in opening up the occurrences and has better luck than small mining people usually have. From the first point of claiming he has worked an open cut and further a tunnel, following a pegmatite layer, which in the whole length of the tunnel (about 25 meters) shows a considerable quantity of copper glance, partly grained, partly in greater lumps. In both sides of the cut and all around the tunnel the rock is richly impregnated with copperglance.

Bergarkivet.

Some meters northwards from these occurrences two other pegmatite layers or banks situated below the first, also show a copper glance impregnation of the same type.

Through mining work just at the edge of the abyss a good deal of ore has been thrown down into gravel beneath, where plenty of rich ore lumps are lying.

On the claim and on the shore beneath, at the end of the ropeway

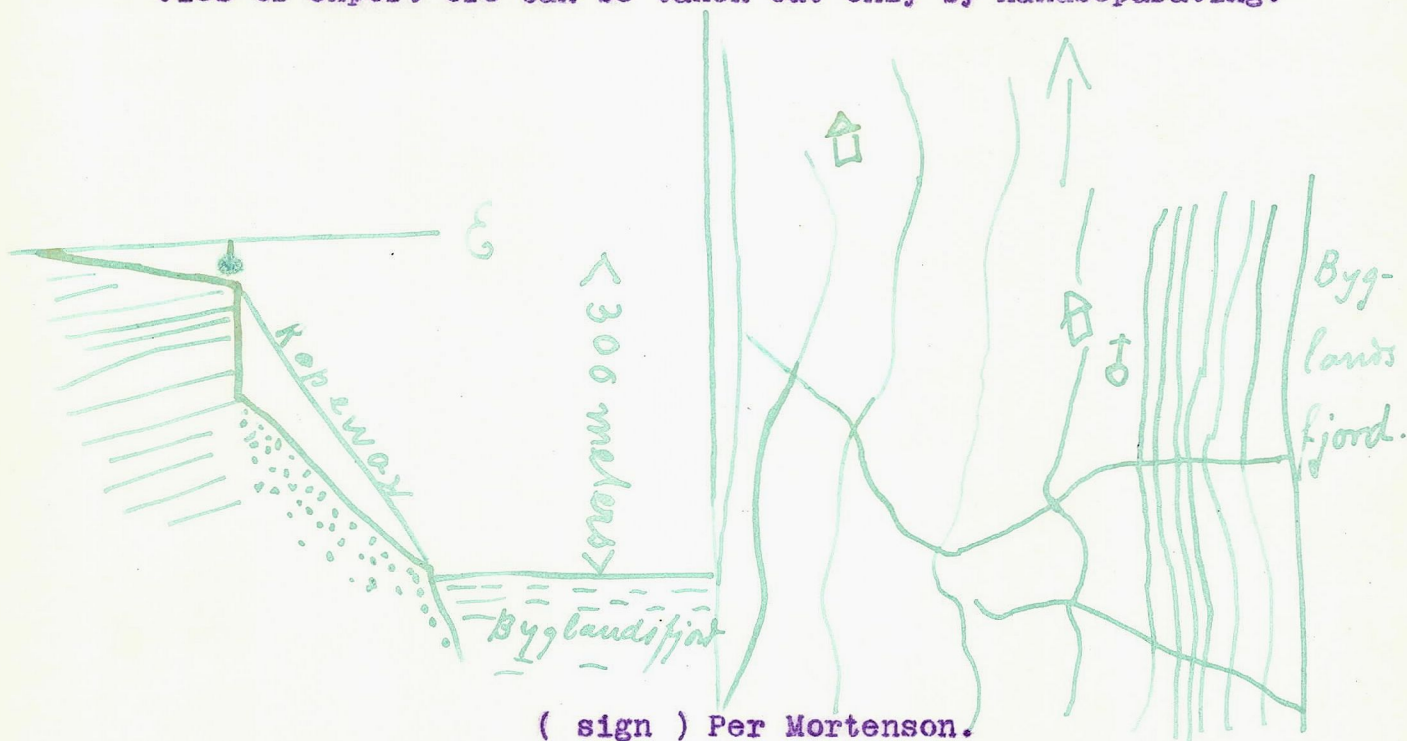
II.

there is stored a good deal of handseparated ore. 1908 was exported a 50 tons of the ore to an english buyer at a price of 100 kroner the ton. The percentage of this ore has not been made known to the seller.

Pyrits were not observed, but somewhat ^{pyrits} ore very rarely mixed into the glance. Also some oxudic iron ores are found somewhere together with the copperore.

From a heap of detritus I washed out a little quantity clean copper ore for a silver analyses, which has afterwards been made at the silver mines of Kongsberg and showed 0.0587 % Ag. = 587 grammes silver per ton.

If all payable ore should be utilized, a separating mill should be necessary; but by continuing the mining work considerable quantities of export ore can be taken out only by handseparating.



This being a true copy from the protocol of the bergmester (Public Superintendent of Mines) of the Western Mining District testifies.

Kristiansand S. May the 6th 1911

(sign) Per Mortenson.

Analyses :

1/ No 4651. Kind of ore : Copper glance.

Received : 13 August 1909

Result : 21,66% copper (cu)

(sign) Dr. O.N. Heidenreich.



III.

2/ Kristiania 23 August 1909. Copper glance.

Quantity : 3 kilogrammes.

Received 13/8 1909

Results : Copper (cu) 21 %

Silver (Ag) 0,02 %

(sign) Schmelck

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3/ Hamburg 4th February 1910

Results : Rich ore in lumps : 74 % Copper (Cu)

Main produce : 25 % " "

Poor ore : 3 % " "

Detritus : 17 $\frac{1}{2}$ % " "

Gravel : 37 $\frac{1}{2}$ % " "

Analysis made by F.V. Rieber, Hamburg.

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In fidem :