



Bergvesenet

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Rapportarkivet

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Tittel Report on the mines of Konnerud				
Forfatter L. Sturbelle		Dato 02.12 1918	Bedrift	
Kommune Drammen	Fylke Buskerud	Bergdistrikt Østlandske	1: 50 000 kartblad 18143	1: 250 000 kartblad
Fagområde Økonomi Drift	Dokument type	Forekomster Konnerud Gruber		
Råstofftype Malm/metall	Emneord Cu Pb Zn			
Sammendrag Rapporten gir en kort beskrivelse av forekomsten og driften og en kalkulasjon angående nødvendig investering av ny kapital.				

Stårhelle:

1184

Copy.

Norges Geologiske Undersø

Bergarkivet

Rapport 39

Report.

mineral, so far as the mine is in Norway,
on the mines of Konnerud.
spot the fashion in an electric furnace.

In this manner, you are not obliged to concentrate

1. Situation. The mines of Konnerud are situated on a hill of 350 meters height, to the south of the Drammen River and 5 kilo-meters in birds-eye view from the city of Drammen, that is an important port for steamers of any tonnage.

2. Geology. The couch is a contact formation, in the calcareous metamorphic silurians. The mineral veins have a direction N-S, some also E-WW. Veins of diabase cross the former in a direction N-S.

form of ore may The veins are chiefly couch veins of parallel direction, and the declination varies from vertical to horizontal, but these veins have mostly a declination of 25-30 degrees on the horizontal. Numerous couches are visible.

3. History. The mines has been explored by the ancients in the 18th century for rich argentiferous lead. From 1866 to 1872 it has been explored by Englishmen for zino, and a Belgian concern has studied it up from 1905 to 1913. This concern, which all the times has had money difficulties, has stopped the work for the same reason.

4. Mineral. The mineral is mixed. It contains blende and galens, and pyrites of copper, but is exempted for iron pyrites. The gangue is composed of calcareous ore, grenades and epidote. In an electro-metall In this report I cannot analyse in details the different couches, but after the calculation undertaken with any exactitude desirable, I can say that more than 3000.000 tons of mineral are

visible, at the same time much more than this quantity is probable.

The details of this ovaluation are at the disposal of any interested.

b. Levatory and triage

c. Repairing The mineral one can reckon with gives the analysis:-

d. Vine material

e. Several Zn findings 12%

f. Base of PbIs 2%

g. Diverse Cu -5%

Ag 60 gr/ton

Bi 1 kg/ton.

Norges Geologiske Undersøkelse

Bergarkivet.

The best means to arrive at all the elements in this mineral, so far as the mine is in Norway, is to undertake on the spot the fushion in an electric furnace.

In this manner, you are not obliged to concentrate the mineral to 40 % of zinc or more, as it is neccessary by the Belgian or rhenane method. Further the lead is retained entirely, either in the destilled zinc, or in the bottom of the bowl. The bismuth and the silver are dissolved in the latter, at the same time the copper rests in the scoria or in the ore. Consequently, by a subsequent refinement of the lead in an electrolytic way, you will find all the bismuth, all the silver and the zinc. The copper in form of ore may be sold to a Norwegian copper refinery, per instance Røros.

The advantage of this process is that the lavatory is simplified, as you are not obliged to separate the different elements, and that the loss will be minimal. According to experiments undertaken there is no difficulty in concentrating the zinc down to 30 - 35%, whilst the concentration at more than 40 % is difficult. In the first case one can reckon with an output of more than 80 % Zn, whilst in the second case 60 % is the limit.

In the Calculation following I will then assume a partly lavation with the only prospect of washing our a part of the gangue, whilst the separation of the metals is undertaken in an electro-metallurgic way.

5. Necessary capital.

a. Burchase, cash	90.000 kroner	
Shares	170.000	"
Royalty	0.25	"
Redemption	90.000	"
		pr. trilled ton
		Kr. 350.000
b. Lavatory and triage		" 210.000
c. Repairing shop		" 20.000
d. Mine material		" 50.000
e. Several buildings		" 30.000
f. Base of rails		" 200.000
g. Divers		" 70.000
		<hr/>
Total		Kr. 930.000

This capital is necessary and sufficient, even at the actual prices which will go down.

6. Exploration expenses and probable benefit. I am obliged to calculate these on basis of the present wages and prices on materials, whilst for the value of the products I reckon: For the zinc Kr. 630, for the lead Kr. 450,- for the silver Kr. 100/kg., for the bismuth Kr. 12/kg.

I suppose a production of 90 tonstrilled mineral per day, and 300 days per annum. This production is not exaggerated and could be brought to 150 tons.

a. Extraction	Kr. 420,-
b. Triage	" 120,-
c. Rolling	" 120,-
d. Examination work in gallery	" 60,-
e. " " " shaft	" 40,-
f. Administration	" 60,-
g. Divers	" 50,-
h. Lavatory	" 760,-

tøtal Kr.1630,-

The value of one day's production is:

25 tons of washed mineral, containing 30 % Zn, 2,9% Pb, 90 gr. Ag. and 1,5 Bi. You will get:

For the Zinc	Kr. 80,-
" " Lead	" 9,-
" " Silver	" 6,-
" " Bismuth	" 12,-

or Kr.110,- per ton



and for 25 tons.....Kr. 2.775,-
Further 1 ton galens of 70 % Pb. " 330,-

For the production Kr. 3.105,-
Expenses of exploration " 1.630,-
Diff. Kr. 1.475,-

Transport to the raffinery of 26 tons,
by truck, Kr. 15/t..Kr. 390,-
Packing og 1 ton " 50,- Kr. 440,-

Daily benefit Kr. 1.035,-

or in round letters Kr. 1.000,- which represents an annual benefit of Kr. 300.000,- or about 32% of the capital.

Drammen. 2nd December 1918.
(sign) L. Sturbelle.