

THE STANNITE-BEARING ORES OF OONAH AND ZEEHAN-QUEEN
MINES.

ZEEHAN.

The stannite-bearing ore-bodies of the Oonah and Zeehan-Queen Mines at Zeehan seem to be worthy of investigation. They have been worked in both mines and they appear to be persistent, and maintain their metal contents at depth.

Many years ago a smelting plant was erected at Zeehan to treat the ores, but the metallurgical difficulties proved insurmountable and the works were closed without achieving any good result. I have endeavoured to get information from the late metallurgist, Mr. J.H. Levings of Waratah, and from Mr. Hartwell Conder of Strahan, who is still connected with the Company, but, although both are desirous of assisting me, they feel indisposed to make statements from memory. All I can do at present therefore is to give an account of the nature of the ore and refer you to the descriptions by the late W.H. Twelvestrees and by L.K. Ward appearing in Bulletin 8 of the Tasmanian Geological Survey.

The Oonah type of ore contains pyrite, stannite and chalcopyrite, but in different proportions in the several lodes and in the one lode. With these minerals are found small proportions of cassiterite, bismuthenite, wolfram, galena, antimonial lead ores and tetrahedrite.

Analyses of bulk samples of the ore as mined show:-
silver in the proportion of 22oz. per ton.

tin	"	"	"	4.5	per cent
Copper	"	"	"	5.5	" "
bismuth	"	"	"	0.4 to 0.45	per cent
iron	"	"	"	26 to 27	" "
sulphur	"	"	"	29	" "
silica	"	"	"	22 to 27	" "
Alumina (slate)	"	"	"	4 to 5	" "

The paragenesis has not been worked out.

The Zeehan-Queen type of ore consists essentially of pyrite, stannite, chalcopyrite and galena with quartz, but little else in addition.

An analysis of selected ore showed the following contents.

tin	-	8.5	per cent
lead	-	6.0	" "
copper		5.9	" "
silica		7.0	" "

silver in the proportion of 57 oz. per ton.

A bulk sample of 20 tons of ore contained:-

tin	in the proportion of	14	per cent
copper	"	"	16 " "
silver	"	"	78 oz. per ton.

As a rule the stannite, chalcopyrite and pyrite components only are intimately associated, the other metallic minerals being dissociated or distributed in the forms of blebs, veinlets, bands and bunches in gangue minerals such as siderite and quartz.

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