UR 1954/57-60

R.B. HILL'S AREA - SECOND REPORT

INTRODUCTION

A report on this area which covers applications for lease Nos. 18M/51, 32M/51 and 17M/52 (Zeehan Mineral Chart) was furnished to the Director of Mines. The report was dated 18th December, 1953 and is accompanied by a plan. Following the release of the report, Mr. Hill discussed the contents with the writer and pointed out several matters with which he disagreed. The chief points of disagreement were with reference to sample No. Z/87 and with conclusions Nos. 5 and 7 regarding Hill's present workings. It was maintained that sample No. Z/87 had not been taken in just the right place and that too much mullock had been included with the sample. The writer agreed, therefore, to retake this sample at a point selected by Mr. Hill and, if necessary, to modify the conclusions when the results of the assay were known. Two further samples were also taken at the same time in the North Tasmania area.

The writer's attention was drawn by Mr. Hill to an error with regard to No. 2 (Hughes') lode in the T.L.E. Area. This lode was worked from the main shaft and the shaft "of unknown depth" was actually a ventilation shaft 70 ft. deep.

SAMPLING

Results of the following samples are recorded in the table below:-

Z/87	Original sample taken across 9 ft. width at bottom of shaft in Hill's present workings. (chip sample across floor)
Z/91	Duplicate sample of Z/87. Taken at point selected by Mr. Hill 4 ft. south of position of Z/87.

Reg. No. 940 Sample taken by Mr. Hill December 1952 same locality as Z/87 and Z/91 stated to be "from 12" seam of metal on west wall".

Reg. No. 939 Sample taken by Mr. Hill December 1952 same locality as Z/87 and Z/91. Stated to be "composite sample from three seams in the lode 3 ft., 1 ft. and 10 inches respectively".

Z/88 Sample across north face Hill's workings as at 14/10/53. Horizontal width 3 ft.

Z/92 Sample taken from five truckloads of ore on the dump. Material from north end of drive several feet beyond position of Z/88.

Z/90 Sample from winze approximately 280 feet NW of Hill's shaft. Chip sample across north face - true width 2' 9" - portion of No. 3 lode.

Reg. No. 419 Check sale assay of 5 tons 13 cwt picked ore 26/6/53. Material from Hill's workings - north of shaft.

Sale Assay Derby and Co's sale assay - duplicate of Reg. No. 419.

No.	Ag (ozs)	Pb (%)	Zn (%)
Z/87	1.6	19.5	1.3
Z/91	1.3	15.6	5.6
Reg No. 940	3.5	30.5	37.0
Reg No. 939	8.2	70.4	4.7
Z/88	6.8	34.8	0.7
Z/92	3.5	32.0	23.1
Z/90	2.6	6.5	20.4
Reg.No. 419	5.9	52.9	13.2
Sale assay	5.7	52.2	13.7

With the exception of Derby and Co's sale assay, all assays were carried out by the Department of Mines Laboratory at Launceston.

DISCUSSION OF RESULTS

The critical point has been whether sample Z/87 truly represents the value of the lode at that point. Duplicate sample No. Z/91 taken at a point selected by Mr. Hill serves only to confirm No. Z/87. Actually Z/91 gives a lower value for lead and a higher value for zinc. With reference to Nos. 940 and 939, alleged to have been taken from specific seams occurring within 9 ft. of lode, the writer is forced to state that he was unable to see any seams of metal of widths 1 ft., 3 ft., 1 ft. and 10 ins. If these were present, there would be over 9 ft. width, 5 ft. 10 ins. of more or less clean metal. As far as could be seen when Z/87 and Z/91 were taken, the lode consists mainly of mullock with a few narrow seams scattered throughout.

In the light of these two samples, it is safe to say that, at this point, the lode contains approximately 18 per cent lead with a negligible quantity of silver and insufficient zinc to entail penalty. Taking lead at £85 sterling per ton, the value of this ore in place in the mine is about £19 per ton. Allowing mining costs at £5 per ton, the ore is then worth £14 per ton at the ore dump.

Samples Nos Z/88 and Z/92 roughly represent the same material, the former being a face sample and the latter a run of mine sample. In each case, the silver and lead contents are approximately the same but the zinc content shows wide variation. This indicates that the content of zinc is variable along the course of the lode. In order to get a rough approximation of value, it is permissible to average the two results. This gives 5 oz. silver, 33 per cent lead and 12 per cent zinc. With lead at £85 sterling per ton and silver at 6/6 per ounce, the value of the ore in the mine is £37 per ton or £32 in the ore dump, in each case less zinc penalty.

Sample No. Z/90 indicates clearly that this material must be considered as a zinc ore. Taking zinc at £80 per ton (sterling) the ore is worth approximately £20 per ton in the mine or £15 in the ore dump less lead penalty if any.

Sample No. 419 and the sale assay refer to the same material. According to the tariff submitted by Derby and Co. as at 11/1/54, material containing 55 per cent lead and 5 oz silver is worth £45 - 15 - 3 (Aust) at the Zeehan Railway Station. Zinc penalty is 55 U.S. cents per unit per long ton over 6 per cent zinc.

CONCLUSIONS

In view of the above results, it does not appear that any significant change can be made in the original conclusions. With reference to conclusion No. 5 the writer would reiterate that lack of silver content must be counterbalanced by increased lead content in spite of the fact that a unit of lead is worth three times an ounce of silver, While the lead content of the lode under discussion is reasonable, it still cannot be regarded as being particularly high. It may also be remarked that the lead content appears variable.

With reference to conclusion No. 7, this may have been rather too sweeping a statement. It does appear that No. 3 lode has a potential value. However, at this stage it cannot be stated that it is a company proposition. The lode has been tested to shallow depth only. A considerable amount of additional work at depth would be required before sufficient reserves of ore for a company could be considered proved.

Sgd. B.L. Taylor B.Sc. A.M.A.I.M.M.

REGIONAL GEOLOGIST

Zeehan.

23rd March 1954

The Director of Mines,
HOBART.