

Q50/63

J.E. Ridgway.

Preliminary Report Comstock Magnetite Deposits, Zeehan District

64-375

PRELIMINARY REPORT  
COMSTOCK MAGNETITE DEPOSITS  
ZEEHAN DISTRICT  
TASMANIA

264E

63  
000

M. S. REPRODUCED 264002 Q50

PRELIMINARY REPORT - COMSTOCK MAGNETITE DEPOSITS

ZEEHAN DISTRICT - TASMANIA

INTRODUCTION:

Preliminary examinations of these deposits were made by the writer in December 1963 and again in January 1964. None of the underground workings was inspected but arrangements were made to have all of the adits opened up for further investigations.

In 1939 when most of the underground workings were open for inspection the deposits were examined by Mr. F. Blake and Mr. T.D. Hughes, both geologists of the Tasmanian Geological Survey, and in 1940 Mr. F. Blake submitted a report (unpublished) on the occurrence.

In 1958 diamond drilling was carried out under the supervision of Mr. T.D. Hughes (Chief Geologist, Tasmanian Geological Survey) and a report by him appears in Technical Report No. 3 pp. 42 - 54.

LOCATION AND ACCESS:

These deposits, of which the Tenth Legion appears to be the largest, are situated 5 miles west of Zeehan and are approximately 35 miles by road from Strahan Harbour - 2 miles by jeep track, 3 miles by road along the Zeehan - Trial Harbour road and 30 miles along the old railway formation from Zeehan to Strahan.

Mr. J. Fagan, local road contractor, gave me a tentative figure of £60,000 for making this road suitable for ore cartage by heavy trucks.

GEOLOGY:

The iron deposits occur for the most part in Serpentine dykes in metamorphosed calcareous sediments.

ORE DEPOSITS:

The iron consists almost entirely of magnetite. At the outcrop there are minor amounts of hematite and limonite and material at the mouth of some of the adits shows small amounts of iron pyrites. There are eleven separate lodes over a length of about half a mile and within an area of some 270 acres. (See Plan and Section by F. Blake, Govt. Geologist).

No. 1            The Tenth Legion outcrop is 1,700 feet long and varies in width between 50 feet and 170 feet with an average width of 110 feet.

No. 2            This lode outcrop is 500 feet long with an average width of 35 feet.

No. 3            This lode outcrop is 600 feet long with a maximum width of 250 feet - average width 140 feet.

No. 4            Lode outcrop is 200 feet long and has an average width of 125 feet.

No. 5            This lode outcrop is 460 feet long and 73 feet average width.

001

- No. 6 This lode outcrop is 690 feet in length and has an average width of 100 feet and consists chiefly of magnetite and limonite boulders.
- No. 7 Lode outcrop is 280 feet long and 65 feet wide, consisting chiefly of magnetite and limonite boulders.
- No. 8 Lode outcrop is 330 feet long and 50 feet wide and consists of magnetite, limonite boulders and scree. A trench has revealed solid magnetite 50 feet wide in the northern end.
- No. 9 Lode outcrop is 240 feet long and 60 feet wide.
- No. 10 This lode outcrop is 680 feet long with an average width of 55 feet.
- No. 11 This lode outcrop is 590 feet long with an average width of 60 feet.

ASSAY VALUES:

One sample taken by the writer from the eastern end of the Tenth Legion lode for metallurgical research, yielded 66.2% HCl soluble iron. Two samples of the magnetite ore from the dumps at the mouth of No. 3 adit yielded the following:

Clean magnetite ore	66.2% HCl Sol. Iron
Sulphide bearing magnetite ore	64.2% " " "

The accompanying Table No. 1 in F. Blake's Report shows the results of sampling by Mr. T.D. Hughes in 1939 from the underground workings. Mr. F. Blake's Report is attached hereto.

ASSAY PLANS:

Plans prepared by Mr. F. Blake, Government Geologist, are attached hereto.

DRILLING:

Results of drilling are contained in Technical Report No. 3, Tasmanian Department of Mines - forwarded herewith.

TONNAGE ESTIMATES:

The following estimated tonnages are based on planimeter areas making use of the plans of Mr. F. Blake and specific gravity of 4.6.

<u>Lode No.</u>	<u>Surface Area sq. feet</u>	<u>Tonnage per vertical foot</u>
No. 1	189,000	23,000
No. 2	19,000	2,300
No. 3	86,000	10,700
No. 4	25,000	3,100
No. 5	36,000	4,500
No. 6	69,000	8,600
No. 7	15,000	1,800
No. 8	18,000	2,200
No. 9	11,000	1,300
No. 10	39,000	4,800
No. 11	37,000	4,600
		TOTAL
		66,900

To a vertical depth of 50 feet there are probably 3 million tons of high grade magnetite ore available for open cut mining.

PREVIOUS TONNAGE ESTIMATES:

F. Blake 1940 - Lodes 1, 2, 3, 5, 9, 10 and 11. Proved to depths of lowest adit. Tonnages calculated according to average percentage of magnetite as indicated by sampling - 2,719,730 long tons.

T. Hughes 1958 - Tenth Legion - No. 1 lode only. Based on Diamond Drillholes, Adits and Outcrops. 3,000,000 long tons of 50% Fe to a depth of 200 feet.

CONCLUSION:

This occurrence, consisting of 11 separate lodes, all of which are potential producers of high grade magnetite, probably contain 3 million tons of high grade ore to the comparatively shallow depth of 50 feet.

Ore is known to persist to at least 200 feet below the surface in Tenth Legion and it is possible that the wider lodes can be open cut to at least 100 feet before the waste to ore ratio becomes excessive. If this proves to be the case it may be anticipated that a tonnage of high grade magnetite ore in excess of 5,000,000 tons would be available for opencutting in these lodes.

*J. E. Ridgway*  
J. E. RIDGWAY,  
Consulting Geologist.

BRISBANE.  
20th January, 1963.