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Report

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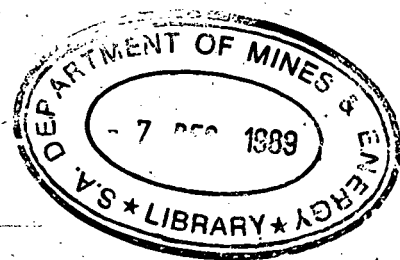
SOUTH AUSTRALIA

Geological Survey
Regional Mapping Section

Report on Erugunda Manganese
Mine, Blinman

Mineral Claim No. 1856

by
B. B. Webb
Senior Geologist



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12th Sept, 1961

Rep. Bk. 53/66
G.S. No 2110
8/12 1278/61

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GEOLOGICAL SURVEY

REPORT ON MINING

MANGANESE MIN. PLANT

MINEAL CLAIM NO. 1856

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REGIONAL MAPPING SECTION

MINING REVIEW 115 : 112 -114

12th September, 1961

Rept. No. 63/66
G.S. No. 2110
D.L. 1270/61

REPORT ON ERUGUNDA MANGANESE

MINE, BLIEMAN

MINERAL CLAIM NO. 1856

INTRODUCTION

This mine, situated 10 miles east of Blüman, was previously the subject of a detailed report by S.B. Dickinson (Mining Review 76, pages 72-79), a copy of which is included in this report. The reader is referred to this earlier report for information with regard to grade, reserve tonnage etc. Only minor work appears to have been carried out on the mine since this earlier report. The present investigation was carried out, at the request of the lessee, with the object of determining the relationship of a new exploratory adit (being driven from the western side of the mine area) to the existing workings previously described by Dickinson.

A theodolite survey of the area concerned was carried out on August 8th and 10th. Because of the need to establish accurately the relative levels of the old and new workings, the survey was carried through to include the surface features of the old workings. Slight survey differences were noted between the resulting plot and Dickinson's previous map, so that it was necessary to re-survey much of the area.

The results of the present study are set out on the accompanying plan and cross section. For convenient reference, the old workings are labelled so as to correspond with Dickinson's map (Open Cut A, Adit I, etc.). Different letters are used for workings not previously shown.

GEOLOGY

The general features are described by Dickinson. The manganese deposits occur in basal Cambrian limestones and shales, near their contact with underlying quartzites and siltstones of the Precambrian Mariabon Series ^{?Pound} (2244 Quartzite equivalents). The area covered by the present mapping was extended to include the outcrop of this contact. The Cambrian succession commences with 30 feet of soft grey siltstones, overlain by sandy limestones, passing upwards into dolomite limestones and shales, with some dark oolitic limestone bands. Mineralisation does not extend below the basal siltstones of the Cambrian succession.

The general flat north-easterly dip of the limestone succession is interrupted by a zone of steep dips, striking in a general east-west direction, through the central area of the lease. This is the "fold axis" shown on Dickinson's map. Distribution of outcrops north and west of the new exploratory adit (Adit 2) suggest that here this fold passes to a fault or crush zone, as indicated on the plan.

Manganese mineralisation appears to be associated with minor crush or fault zones, and to locally follow the bedding of the country rock for limited distances.

DESCRIPTION OF WORKINGS AND MANGANESE OCCURRENCES

Except for the new exploratory adit (adit L) and some additional work from open cut B, the workings are fully described in Dickinson's report.

The limits of underground workings from Open Cut A and Adit I are taken from Dickinson's map. Adit J, (in open cut B) has since been driven for a distance of 30 feet in a south westerly direction, following a crush zone with manganese. At the entrance to the adit the mineralised crush zone, which dips to the south east at 60° , is on the hanging wall and appears to be about 6 feet wide. It narrows down and steepens in dip when followed to the south west, and in the face of the adit is about 6 inches in width, and dip is vertical. At the entrance to Adit J, on south side of open cut B, the crush zone has been stoped underfoot for a distance of about 25 feet below adit level, but these workings were inaccessible.

The exploratory adit L had advanced 110 feet from the portal at the time of the present inspection. A narrow (12 inch) band of manganese was showing in the face, dipping with the country rock, striking obliquely across the direction of the adit heading.

As the adit heading progresses this band will be better exposed, and depending on results of this work, may warrant further exploration.

The anticipated position of the adit heading, in relation to the workings off open cut A, (if the present direction is maintained,) is indicated on the accompanying plan and cross section. At approximately 250 feet from the portal the centre line of the adit will be 10 to 15 feet south of the underhand stope off Adit I, and the back of the adit approximately 10 feet below the floor of this stope.

The flat dip of the ore in the bottom of this stope suggests the ore may be turning to follow the bedding, as indicated in the cross section. The main crush zone is expected to occur north of the anticipated adit heading, as shown. It is probably an extension of the mineralised crush zone in adit J, and if so, will probably steepen and may pinch out in depth. Cross-cutting northward off the adit heading will assist in determining the amount of ore available from the crush zone, and establish if the ore in the bottom of the stope has turned over as suggested in the cross-section.

It is anticipated that as the adit heading progresses eastwards the strike of the country rock will swing round to be almost parallel with the adit, and may tend to "slab off" the back of the adit.

Recent prospecting in the area immediately south east of the main lease has resulted in the discovery of a narrow "bedded" seam of manganese ore (trial pit N on map). Trenching along the line of the lode is needed to determine whether the occurrence warrants further work. Ore available on present indications would appear to be limited to about 40 tons.

Further prospecting along the line of the inferred crush zone north of adit L is desirable. Manganese mineralisation was noted along the lower road 100 feet north west of the entrance to adit L, which may be related to this structure. The area is largely covered by scree and rubble.

CONCLUSIONS AND RECOMMENDATIONS

If it is desired to continue exploration from the new adit heading it is suggested that at a distance of 250 feet from the portal a cross cut to the north be put in to test the ore available below the old workings. At a suitable point a rise connection could be put through from this cross cut into the old workings to assist in ventilation.

Surface prospecting along the line of the inferred crush zone north of adit L, on either side of the observed manganese occurrence, is recommended.

Opening up of the deposit of trial pit N is also recommended.

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