URMISCB/70-70

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PRELIMINARY REPORT ON THE MANGANESE DEPOSITS, DIAL RANGE.

LOCATION etc

The location, access and history of these deposits have been dealt with fully in the report by F.Blake, Acting Government Geologist in March 1940.

Geology.

The rocks consist of an interbedded series of mudstones, breccias and breccia-conglomerates, probably of Cambro-Ordovician age .According to Twelvetrees th these or overlain by the massive Dial Conglomerates which cover the mountain tops. The rocks strike from North East to a little East of North, and the dips vary from nearly vertical to low angles to the south-west.No folding was observedon lease M 71/ 38, but outside the lease there is evidence of sharp asymmetrical folding.

Manganese Deposits.

The manganese deposits occur in parallel lines and four of these are in the lea lease under consideration.In each case the occurrences are associated with the base of the interbedded breccia- conglomerates.The manganese ores occur as localised concentrations along these horizons.The exposures are too poor and the prospecting too limited in scope to state whether there are any other enrichments along the extensions of these belts.

In open-cuts No.2 and No.3.,thin limonitic bands and iron-manganese seams partly replace the bedrock.This when weathered gives a surface concentration of manganese which extends down the hillside beyond the solid outcrops.The largest of these concentrations has for its maximum dimensions a length of 400ft and a width of 200ft.As can be seen from the plan and section ther has been insufficien t exploratory work to assess the grade and amount of ore that is available.A trench

should be excavated from the western boundary of this outcrop through the shaft in No.3 cut.This would be about200ft long and would give a cross-section of the deposit.At present there is no such trench or deposit.

Apart from the adit near where the pack track crosses the gully on the eastern side of the lease there has been no additional prospecting since Blake's report. This adit is 65 ft long and the portal is on a bed of breccia-conglomerate dipping westerly at 45°.No manganese was noticed in this exposure although the manganese ore outcropping on the track 100ft. to the south is probably on this bed. The adit is badly directed for exploratory work as it is at too oblique an angle the the strike of the beds and thus to the probable extensions of the ore bodies. If the adit is to be extended the direction of driving should be ~~xxkxxxxdx~~ swung to the north-west.It has not been extended sufficiently far to determine whether there is a persistence in depth of the other two ore bodies which outcrop on the pack track.

As there are no new exposures other than those available to F.Blake no useful purpose could have been served by collecting samples for assaying.No additional evidence is thus available regarding the grade of ore.

Conclusions and Recommendations.

The present investigations indicate:-

1.That there are four distinct belts of manganese ore.

2.The ore bodies occur as concentrations near the bases of the breccia conglomerates

Even the largest of these bodies has been insufficiently prospected to form estimates of the total amount of ore that is available.

The evidence from the various cuts although not conclusive does not suggest a vertical extension at depth of the ore.Exploratory work to prove extension in

permitters persistence in depth should be formulated to test the the extension of the ore down the dip of the beds rather than vertically.

The structural factors controlloing the formation of the deposits are such that hold possibilities of recurrence of similar occurences beyond the limits of the present lease. Prospecting for these should be directed along the strike of the beds of up the Dial Creek valley and to the bases of the beds of breccia-conglomerates.

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16/11/43

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