UR 1957/64-65

# HIGHCLERE IRON AREA

## INTRODUCTION

A geological survey of an area in the vicinity of the Highclere iron deposits was undertaken in conjunction with a ground geophysical survey recently carried out by officers of the Mineral Resources Bureau. For the latter purpose grid lines had been surveyed and these were also used as geological traverses.

Accompanying this report is a geological map of the area together with a series of geological sections drawn along the grid lines.

## LOCATION AND ACCESS

The iron deposits are situated 1½ miles east of Highclere Railway Station, 15 miles from the shipping port at Burnie. They are located on Lots 419 and 420 of the Van Dieman's Land Company's Emu Bay Block subdivision and occur largely within abandoned mineral lease 347P/M of 20 acres, covering portion of Lot 420. From the Burnie - Highclere road, immediately south of Highclere, access to the deposits is available in a distance of 1½ miles.

## PREVIOUS LITERATURE

The following unpublished reports by officers of the Department of Mines contain references to the iron deposits:-

Q.J. Henderson, 1936 - "Iron Deposits at Highclere"

D.E. Thomas and Q.J. Henderson, 1943 - "Some Iron Deposits in the Vicinity of Burnie"

## GENERAL GEOLOGY

The oldest rocks in the area consist of quartzites and phyllites probably of Pre-Cambrian age. These basement rocks are intruded along the eastern boundary by Devonian granite and both are overlain in places by thin remnants of Tertiary basalt flows. Consolidated grits of Lower Tertiary age, representing alluvial deposits along the course of a former valley, occur below the basalt to the east.

With the exception of the granite, solid rock exposures throughout the area are almost non-existent, since basalt boulders, soil and iron scree over most of the surface screen the underlying rocks from view.

## THE IRON DEPOSITS

The iron deposits presumably occur in the Pre-Cambrian rocks and there is little doubt that they are genetically related to the granite as they occur sub-parallel to, and within a few hundred feet of, the intrusive contact.

The iron of the outcrops consists principally of dense and crystalline magnetite but some hematite is

also present, notably as part of the extensive scree spreading out in all directions. Iron ore is exposed as three small outcrops along a general north-easterly trend and also at two other places where there is some doubt as to the solid nature of the occurrences. None of these stand more than a few feet above the general surface level.

The largest and most northerly of the defined outcrops, measuring 150 feet by 100 feet, is located immediately east of the zero point on the survey base line, where it is cut by the oo/E traverse.

The next in size, 125 feet by 50 feet, occurs on the base line southerly from zero point and is here 150 feet south-west of the northern body. The third and smallest of these outcrops is 500 feet further to the south west on traverse line extending westerly from oo/500S, where the dimensions are 75' by 30 feet.

At 300 feet north of the latter outcrop large boulders of magnetite, over a distance of 75 feet, suggest the presence of another ore body where it is cut by the western traverse from oo/500S. North-east of this, at 1400 feet, a small outcrop or lage boulder of iron occurs on the south side of Yuralla road.

CONCLUSIONS

No prospecting has been undertaken on these iron deposits and the visible indications are not sufficient to define the attitude and size of the ore bodies below the surface.

The possibilites suggested are that

(1) the three defined outcrops may be surface indications of a more continuous ore body at depth and

(2) in the area covered by iron scree between the two doubtful outcrops, further ore bodies may exist.

Although no major iron ore deposits appear possible in this locality, prospecting is warrented to define the iron bodies and determine ore reserves which might be exploited as an adjunct to any larger deposits elsewhere in the State.

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24th April, 1957.

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