Department of Mines
South Australia

Report on

IRON KING MAGNETITE DEPOSIT

P.L.19, HD. ADAMS, CO. HANSON

by

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ENGINEERING GEOLOGY & MINERAL RESOURCES SECTION

CONTENTS

Abstract
1. Introduction
2. Location & Access
3. Geology
4. Conclusion & Recommendation
Appendix A: Assay
Appendix B: Photographs 1 & 2

Plan Ref.

No.	Title	Scale
S 1439	Iron King Magnetite Deposit P.L.19, Hd. Adams Sketch Plan	Approx. 100' to 1"

March, 1957

D.M. 1525/56.

G.S. 660

H.O. 44/45

7

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IRON KING MAGNETITE DEPOSIT

P.L.19, HD. ADAMS, CO. HANSON

Abstract

An apparently isolated small magnetite deposit 25 miles north-east of Hawker is described. It is probably too small to exploit. Drilling is not recommended at this stage. A ground magnetometer survey is recommended.

1. INTRODUCTION

When inspecting talc and asbestos prospects near Shaggy Ridge H.S., about 25 miles north-east of Hawker, the writer was shown a prominent ironstone peak known locally as the Silver King. This is apparently the "Iron King" mentioned on p.63 of the Record of Mines of S.A. (H.Y.L.Brown, 1908) and reported on by the Govt. Geologist in 1897 under the term "Iron King Syndicate Works". (It is not the recorded Silver King silver-lead occurrence, which is at Baratta).

The deposit was very briefly inspected en route to the talc and asbestos prospects. A representative sample was taken and assayed. Results are included. A sketch plan and photographs are appended.

2. LOCATION AND ACCESS

Shaggy Ridge H.S. is reached from Hawker by following the Warcowie and Wilippa road. After passing the ruined Warcowie H.S. (left) two gates are reached at 24.4 miles from Hawker P.O. That on the right is labelled Shaggy Ridge and the house is ½ mile south over a rise. The Iron King is a further 4 miles south along a very winding rough track over hilly country well wooded with native pine. Guidance from the elderly Crossman Brothers, who live at the house, is desirable. A 4-wheel drive vehicle is desirable.

3. GEOLOGY

Slates and quartzites form the country rock, striking east-north-east and dipping very steeply or vertically. The ironstone outcrops occur along the crest of a ridge apparently along the strike. The prominent peak lies 150 feet west of a new dog fence aligned at 305° and is 60 feet wide, extends

about 100 feet along the ridge and has a maximum height of about 20 feet.

It is composed of massive magnetite with some hematite. On its north-east side is an old shaft with grey-green argillite debris. This may have been sunk for gold and silver which was first sought after here.

Immediately east of the dog fence and on the south side of the ridge crest is another old shaft with copper-bearing rock in the dumps (azurite and malachite in grey slates)

About 550 feet east along the ridge is another smaller outcrop 55 feet long and 10 feet wide and a still smaller one 30 feet east. These outcrops are also of massive magnetite with a little hematite.

No clear dip is apparent in the magnetite.

To the south is a valley and beyond it, about 300 yards south of the outcrops, is a quartzite ridge with a general dip SE at about 40°. To the north outcrops are absent. The rocks are mostly probably of upper Proterozoic age.

Assay

A representative sample taken from all the outcrops was assayed at Parkside Laboratories (T. R. Frost, Chief Analyst) and shows the following results:

	%
Iron (Fe)(~~as ferric oxide~~)	66.32
Total insolubles	3.48
Titanium dioxide (TiO_2)	0.10
Manganese oxide (MnO)	0.05
Alumina (Al_2O_3)	0.09

Details are given in the appended copy of the assay.

4. CONCLUSION

A brief examination of the deposit shows that although it is apparently of high quality iron ore it seems likely to be too small and remote to be of economic value at present. Drilling is not recommended, at this stage but it is suggested that a

ground magnetometer survey be undertaken.

A.R.Crawford

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GEOLOGIST

ENGINEERING GEOLOGY & MINERAL RESOURCES SECTION

ARC:JAH.
20.3.57.

RDA1174/56.

20th December, 1956.

Chief Geologist,
Exhibition Building,
North Terrace,
ADELAIDE.

Samples marked as under, yielded on analysis:-

Mark	A1863/56
Silica (SiO_2)	1.31%
Ferric Oxide (Fe_2O_3)	94.75
(Iron(Fe)	66.32)
Alumina (Al_2O_3)	0.09
Titanium Dioxide (TiO_2)	0.10
Calcium Oxide (CaO)	1.31
Magnesium Oxide (MgO)	0.15
Phosporus Pentoxide (P_2O_5)	0.22
Sulphur Trioxide (SO_3)	0.49
Manganese Oxide (MnO)	0.05

Type of Material: ARC - 50 Iron (locally Silver King) magnetite deposit

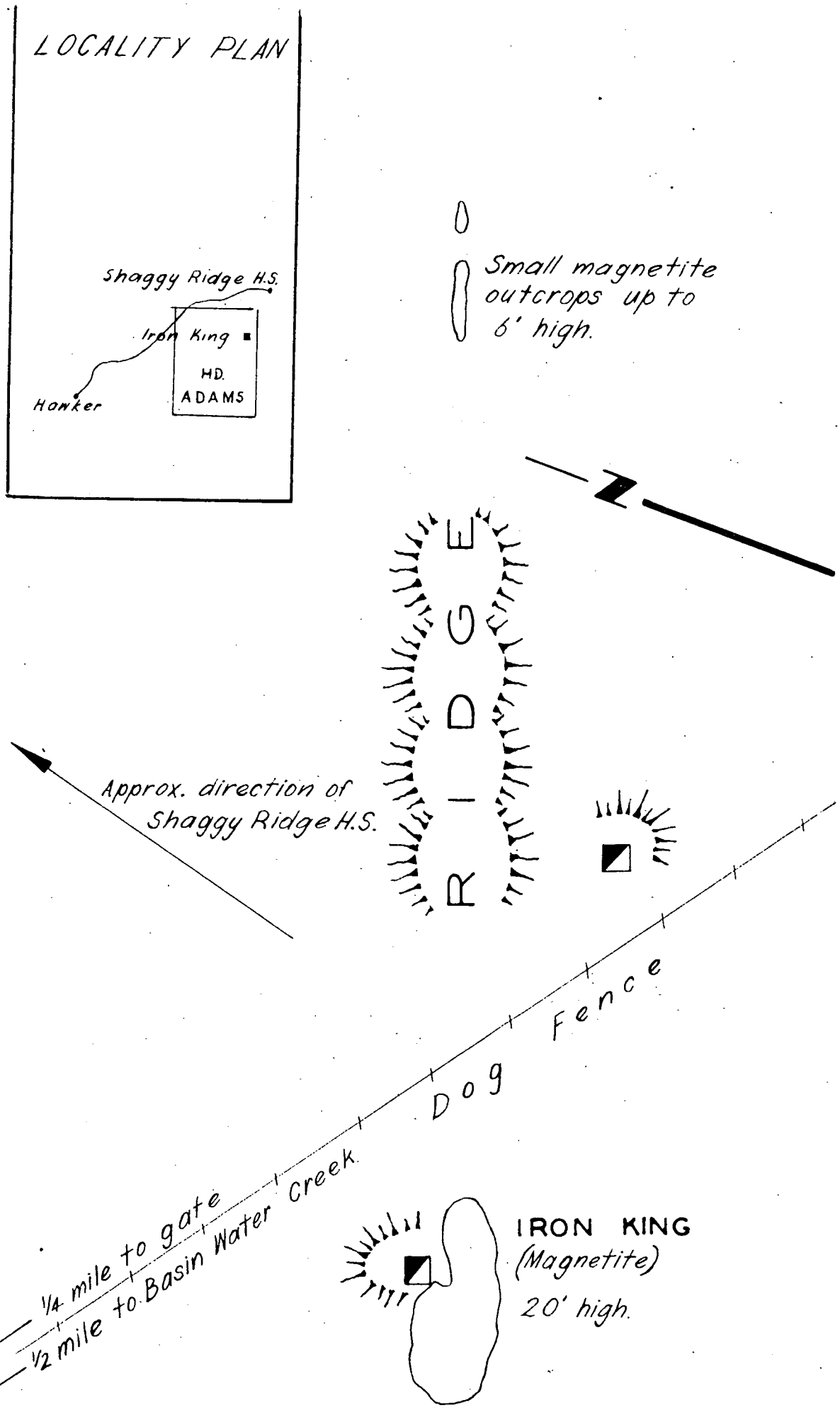
Locality: County Hanson 25M N.E. of Hawker

Source: A. R. Crawford D.M.

Thomas R. Frost
CHIEF ANALYST

Photo 1: Panorama looking NNW from south of Iron King

Photo 2: Iron King from WSW. Debris from old shaft on left



To accompany report by A.R. Crawford

S.A. DEPARTMENT OF MINES					
		B.F.	Iron King Magnetite Deposit. P.L. 19 Hd. Adams Sketch Plan		100 ft. to 1 inch S1439 Fe5 Dec 2-4-57