DEPARTMENT OF MINES
SOUTH AUSTRALIA

RB 66/157

Rept.Bk.No. 66/157
G.S. No. 4044017
D.M. 285/68

MANGANESE PROSPECT:

Section 432, Hd. Louth

- A.C. Larsen -

## INTRODUCTION

A request to inspect a manganese prospect held under Mineral Claim No. 5210, was received in a letter from Mr. A.C. Larsen, dated 20th February 1968. The prospect, in Section 205, Hd. Louth, is located 15 miles north of Port Lincoln, approximately 1 mile west of the small township of White Flat. An inspection was carried out on 11th April, 1968.

## GEOLOGY

The area inspected is located in the northeast quadrant of the Lincoln 1inch to 1mile geological sheet (A.R. Johns, 1958). Basement rocks consist of gneisses, schists and quartzites of Archaean age, which occur in isolated outcrops mainly on the upper slopes of hills and ridges. For the most part the ground surface is covered with soil, with alluvium covering the floors of creek valleys.

The ground surface is generally hilly, with from 100 to 200ft. difference in level between ridge crests and valley floors.

## THE MANGANESE DEPOSIT

Manganese occurs in restricted outcrop on the upper slopes of a ridge, together with occasional small outcrops of

gneiss and abundant surface fragments of quartzite (See plan). The total area of outcrop is approximately 400 sq.ft., in three separate exposures.

One of the outcrops has been worked in the past by means of a pit 6ft. in diameter. Although the pit is now filled with spoil and its depth is unknown, the manganese deposit is here exposed to a depth of 2ft.

The material at the surface is generally soft, porous and somewhat friable. It is grey to brown in colour and is thoroughly iron-stained. At a depth of 1ft. or less it becomes very hard and dense in places, having a grey to purple metallic appearance. A sample of this material (A76/68), submitted by the applicant to the Australian Mineral Development Laboratories for analysis, contained :

| Mn (%) | Fe (%) | Pb (p.p.m.) | Ag (p.p.m.) |
|---|---|---|---|
| 36.0 | 18.4 | 50 | 2.5 |

## CONCLUSIONS AND RECOMMENDATIONS

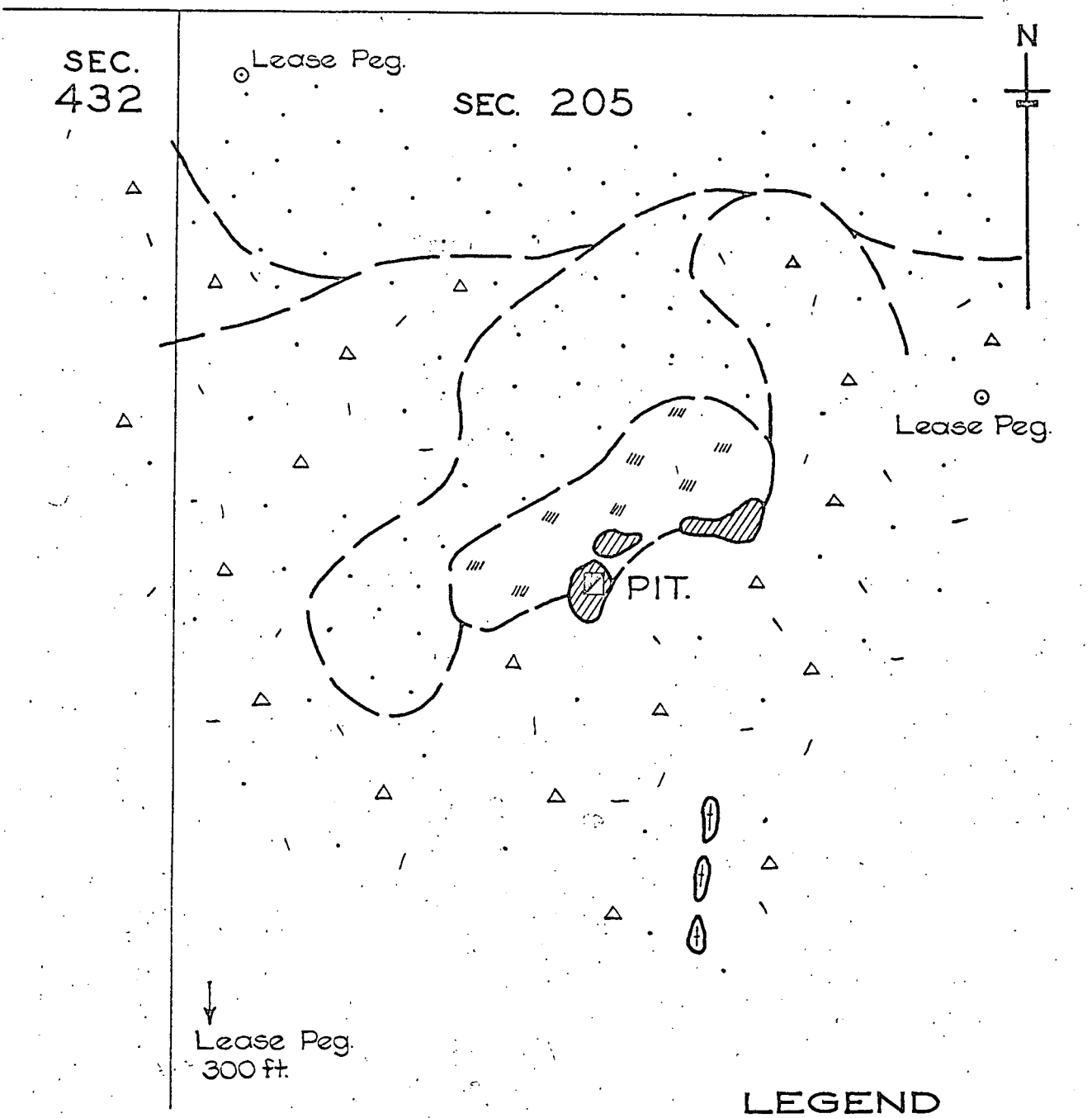
The surface exposure of the deposit is extremely restricted, and determination of the quality of the material, and reserves, is difficult.

It is recommended that the applicant explore the surface extent of the deposits by means of pits or trenches, so that systematic sampling may be carried out and a more definite evaluation of the prospect may be made.

It should be noted that specifications for metallurgical grade manganese demand 46%Mn content.

JACP:CC
12.6.1968

J.A.C. PAINTER
ASSISTANT SENIOR GEOLOGIST
HYDROGEOLOGY SECTION - PT. LINCOLN BRANCH



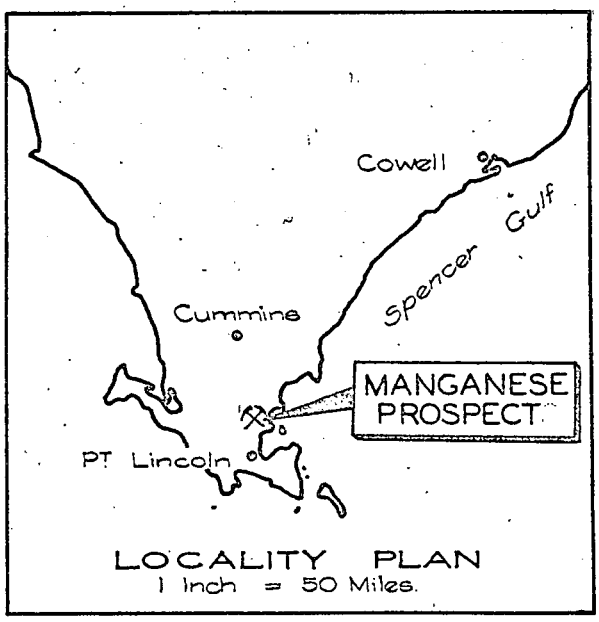

## LEGEND

- SOIL.
- SOIL, surface fragments of quartzite.
- SOIL, surface fragments of manganiferous material.
- MANGANESE DEPOSIT OUTCROP.
- GNEISS outcrop.

SCALE

50 0 50 100

FEET.




LOCALITY PLAN
1 Inch = 50 Miles.

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|---|---|---|---|
| | Drn. J.A.C.P<br>Tcd. A.M.C.D<br>Ckd. L.V.W.<br>Exd. | MANGANESE PROSPECT<br>SEC. 432. HD. LOUTH<br>A. C. LARSEN | SCALE: 1 inch = 50 feet<br>S6646<br>Dn. 11.<br>DATE: 14 June '68. |