MCKEOWN MINING PTY LTD
EL 23/98 HAMPSHIRE

EXPLORATION REPORT
AND
RELINQUISHMENT REPORT

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IMPORTANT NOTE

This report is not intended for use as a public document or, in whole or in part, in a public document.

This report has been prepared using information and data available to the author at the time of writing. Any perceived inaccuracies should be communicated to the author.

ABBREVIATIONS

EL	Exploration Licence
EL 23/98	Exploration Licence 23/98
MRT	Mineral Resources Tasmania
TML	Tasmania Mines Ltd
Tasminex	Tasminex N.L.

CONTENTS

1 INTRODUCTION

McKeown Mining Pty Ltd's Exploration Licence 23/98 (EL 23/98) covers 33 square kilometres near Hampshire, excluding 38 hectare Mining Lease No 20M/91. Access to the Exploration Licence (EL) is by way of Mount Road southwards from Burnie to Hampshire, then eastwards along the Hampshire to Upper Natone Road for about three kilometres to the Rogetta Road turnoff, than along the Rogetta Road which runs through the EL.

The EL was granted for a five year period due to expire on the nineteenth of February 2004.

EL 23/98 is located on land previously owned by the Van Dieman's Land Company. The land is now Private Property, Multiple Use State Forest, RFA CAR Reserve - Informal Reserve, and RFA CAR Reserve - Old Park Forest Reserve. A small area within the EL, south of Upper Natone, is covered by Tasmania Mines Ltd's Mining Lease 20M/91 over the Kara No 2 South deposit.

There are several iron ore occurrences known on the EL and the purpose of the exploration undertaken by McKeown Mining was to identify iron ore which could be mined and processed inexpensively for specialty end uses. After scrutiny of existing data, it was decided to concentrate investigations on the area known in earlier times as Pearson's prospect and later as the Kara No 2 Main deposit. Unfortunately, the result of exploration and testwork was that a reliable supply of iron ore of a consistent quality could not be won from Pearson's prospect for the proposed uses. Consequently, a decision was made to relinquish the Licence when renewal came due in February 2002.

This report describes the exploration undertaken on EL23/98 and is also the relinquishment report for Exploration Licence 23/98.

2 GEOLOGY OF EL23/98

The geology of the area covered by EL23/98 has been described in previous reports prepared by MRT staff or held in the MRT open file system and will not be repeated here, for example, Seymour (1989) and McKeown (1993). In summary, the geology consists of Silurian and Ordovician sedimentary rocks which have been intruded and contact metamorphosed by Devonian granite and later covered in part by Tertiary basalt. Within the Ordovician sequence, contact skarns occur in part and are preserved as roof pendants on the underlying granite. The

skarns are magnetite-garnet skarns with traces of scheelite and tin. No economic deposits of scheelite or tin have been discovered in the skarns but alluvial tin shedding from deep leads beneath the Tertiary basalt are known in the area, for example, at Crane's prospect (Hughes, 1958).

3 PREVIOUS EXPLORATION

Late in the nineteenth century, George Renison Bell was the first to report occurrences of magnetite in the Hampshire Hills. Magnetite deposits are now being worked at the Kara mine and are known to extend, albeit discontinuously, north of Kara to Hampshire and Highclere. East of Kara, on EL 23/98, magnetite deposits are known at Pearson's prospect and at Kara No 2 South where small scale mining has taken place in the recent past, and at Kara No 2 East. Until 1985, Pearson's prospect was subject to Consolidated Mining Lease No 26M/64 held in the name of A. & D.D'O. Pearson.

Despite the occurrence of several relatively large magnetite deposits in the Hampshire area, the deposits were not mentioned by Twelvetrees and Reid (1919) in their report on the iron ore deposits of Tasmania but the deposits were visited and described by Reid (1924). In the 1950s and 1960s the magnetite deposits on EL 23/98 were once again the subject of examination by personnel of the Tasmania Department of Mines (Hughes 1952 and 1958, Jack 1964 and 1965). After the discovery of scheelite at Kara by Tasminex N.L. (Tasminex) in the 1970s, the area was explored by Tasminex, later renamed as Tasmania Mines Ltd (TML) (Whitehead 1987, 1989, 1990, 1991, 1992 and McKeown 1993, 1994, 1995a and 1995b). A report on the iron ore potential of the area was made by staff of Savage River mines in 1976 (Gardner, 1976).

The exploration by TML did not locate any scheelite ore on the area covered by EL 23/98 but did confirm the existence of the magnetite deposit at Pearson's prospect and two smaller magnetite deposits at Kara No 2 East and Kara No 2 South. TML completed two diamond drillholes at Pearson's prospect (see 3 PEARSON'S PROSPECT) in the 1980s. Also, TML applied for and was granted a Mining Lease over Kara No 2 South and iron ore from this deposit was mined for a brief period in the 1990s.

The compilation of existing data during the tenure of EL23/98 was considerably hampered by the poor presentation of plans in some older exploration reports, particularly by the submission of plans lacking co-ordinates or any other feature which would enable the location of the data

presented on the plans to be determined and plans showing incorrect scale.

4 PEARSON'S PROSPECT

4.1 INTRODUCTION

After an examination of the available geological and magnetic data during 1999 and 2000, followed by field inspection of outcrops on EL 23/98 during 2000, staff of McKeown Mining concluded that the most area most likely to meet its objectives was Pearson's prospect. Consequently, exploration was concentrated on this area during late 2000 and 20001.

The magnetite deposit at Pearson's prospect outcrops on a low ridge near 402 500E and 5 425 500N and there is a small quarry in weathered magnetite near 402 900E 5 425 000N. Aerial photographs show that, by the late 1970s, the whole area at Pearson's had been cleared of vegetation and nearly every large tree had been felled. Today, there are few large eucalypts still standing but the area is covered with low scrub regrowth, typified by tea tree and cutty grass, which in places is impenetrable on foot or by light vehicle.

Jack visited Pearson's prospect, carried out a ground magnetic survey, and prepared a geological map in 1963 (Jack, 1964). In 1964, the Tasmania Department of Mines drilled six diamond drill holes to test the magnetic anomalies identified the previous year (Jack, 1965). Tasminex completed 37 diamond drill holes in the 1970s (McKeown, 1993). Tasmania Mines carried out a ground magnetic survey and pushed two shallow trenches with a bulldozer in the 1980s and drilled 21 percussion holes (Whitehead, 1991).

The ground magnetic survey by Tasmania Mines Ltd confirmed Jack's interpretation and the map prepared by Jack (1964) is still a good representation of the extent of the magnetite deposit and the geology of the area. Unfortunately, because the plan of the Tasmania Mines' magnetic data shows neither co-ordinates nor any cultural information, it has not been possible to locate the relative positions of the two magnetic surveys nor the absolute position of the Tasmania Mines' magnetic survey.

In 1985, Tasmania Mines was sufficiently encouraged by the results of its ground magnetic survey to complete two diamond drill holes, DDH505 and DDH506 on a line near the southern end of the magnetic survey grid, near 402 600E 5 425 300N.

4.2 TASMANIA MINES' GROUND MAGNETIC SURVEY

The results of the ground magnetic survey carried out by Tasmania Mines were reported in 1987 (Whitehead, 1987). This survey was over an area 1100 metres from north to south and 250 metres from east to west on east-west lines generally 50 metres apart. The data reported were hand plotted and hand contoured although the contouring is enigmatic. As has already been mentioned, the relative and absolute location of this magnetic data is not known; the baseline is not shown; the scale shown on the plan is incorrect; the notations indicating distance along each line from the baseline are incorrect. It was decided to re-interpret the Tasmania Mines data in an attempt to identify in the interpretation the eight anomalies identified by Jack (1964) and, so, determine the relative positions of the two surveys. Consequently, in late 2001, the Tasmania Mines' magnetic data were entered into digital form but many attempts to process the data to reveal anomalies relating to those of Jack were unsuccessful.

The only way which remained to relate the two surveys was to locate the collars of Tasmania Mines' diamond drillholes DDH505 and DDH506, the locations of which are known only relative to the Tasmania Mines' magnetic survey grid. Despite concerted efforts, it was not possible to locate the collars of these holes because the area where they were drilled is a swamp now covered by thick regrowth.

It can only be concluded that the ground magnetic data reported by Tasmania Mines is now useless because neither the relative nor absolute location of the data were not reported at the time the magnetic data were reported.

4.3 DRILL HOLES

Five of the six drillholes reported by Jack (1965) intersected magnetite bearing skarn with total iron content generally in the range of 30% to 60%.

Tasminex drilled 37 diamond drill holes at Pearson's but the records of these drillholes are incomplete (McKeown, 1993) and no better conclusion than that of Jack (1964 and 1965) can be made using these records. TML drilled 21 percussion holes across the central part of Pearson's in 1990 and Whitehead concluded that the "magnetite content of the deposit is lower and the zone is more weathered than anticipated" (Whitehead, 1991).

Logs of the two Tasmania Mines' drillholes, DDH505 and DDH506, are included in

Whitehead (1987) and are not reproduced here. Both holes were collared on the same drill site and intersected high grade magnetite beneath about 30 metres of clay resulting from the weathering of skarn..

4.4 SIZE OF THE RESOURCE

Jack estimated that the "total of possible reserves indicated in the eight largest anomalies is estimated to be 200,000 tons of 45% Fe. As well as this high grade ore there is an additional amount of 250,000 tons of lower grade material indicated in the smaller anomalies and as extensions to larger anomalies."

Gardner (1976) "inferred the presence of 500,000 tonnes of ore" at five different locations at Pearson's. He estimated the magnetite content at just over 50% Davis Tube Recovery.

Results of exploration during the tenure of EL23/98 do not suggest that the size of the resource is larger than estimated previously.

4.5 USEFULNESS OF THE RESOURCE

A potential customer for the magnetite at Pearson's was contacted in 2001. A small number of samples taken from the surface along the ridge near the centre, and from the quarry in the south-eastern corner of, Pearson's were assessed by the customer. The quality of the samples was just sufficient to encourage the consideration of the deposit for commercial exploitation if the quality could be assured.

Subsequently, a sample was submitted to a mainland laboratory for testing to assess whether simple methods could be used to ensure that quality could be maintained during routine production. Unfortunately, this was not the case and the anticipated costs of a suitable processing method were assessed to be so high as to render the exploitation of the deposit unprofitable.

5 CONCLUSION

Exploitation of the magnetite resource at Pearson's is considered to be unprofitable at the present time. Consequently, the decision has been made to relinquish EL23/89.

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