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TASMANIA MINES LIMITED

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EXPLORATION LICENCE 39/89

BLYTHE RIVER

N.W. TASMANIA

ANNUAL REPORT -- YEAR 2

(23 February 1991 - 22 February 1992)

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Burnie, 18/01/92

EXPLORATION LICENCE Nº 39/89 - BLYTHE RIVER

ANNUAL REPORT - YEAR 2

C O N T E N T S

EXPLORATION LICENCE Nº 39/89 - BLYTHE RIVER

ANNUAL REPORT - YEAR 2

FIGURES - TABLES

FIGURES

TABLES

1. INTRODUCTION/SUMMARY

Exploration Licence 39/89, covering 9km² east of the Kara tungsten magnetite mine was initially acquired to investigate the magnetite resource potential of three magnetite skarn zones previously identified and delineated at the Kara Nº 2 region.

During Year 2 of EL tenancy, two of the above mentioned skarns were investigated as follows:-

1.1 Kara Nº 2 South Skarn

Previous Year 1 work showed this deposit to consist of high grade magnetite (58-66% Fe) and unusually low SiO_2 values (<3%). A 100 tonne bulk sample of this magnetite has been processed through the Kara Nº 1 mill, partially to assess its crushing and grinding characteristics and provide a source of lump magnetite ore of a commercial grade, and partially to beneficiate it to a minus 2.5mm fines product and assess its recoverable values and chemical content.

Additional bulk samples of this magnetite have also been investigated by both AFPM Research Dept - Burnie and to BHP Raw Materials Supply Dept.

Results to date have been extremely encouraging, especially with regard the utilisation of the magnetite as a low silica fines (-2.5mm +0.5mm) product in the AFPM Dars Project Burnie.

In December 1991, Tasmania Mines proceeded with the application of a mining leaase (ML 20M/91) covering 38Ha over the Kara Nº 2 South Skarn Deposit, and this application is currently being processed.

1.2 Kara Nº 2 East Zone

Preliminary surface geologic/sampling work on this deposit showed the skarn to have potential for additional reserves of high grade magnetite with a similar low silica content to the Kara Nº 2 South Zone.

The deposit is currently being percussion drilled and approval has been granted to extract a 100 tonne bulk sample for test work on processing through the Kara Nº 1 Mill.

Further exploration work is proposed for Year 3 within EL39/89.

2. GENERAL

2.1 Location

EL39/89 covers a total area of 9km² located in the upper reaches of the Blythe River situated approximately 30km south of Burnie.

The licence lies east of the Kara tungsten-magnetite mine operated by Tasmania Mines Ltd, and embraces the magnetite skarn zones constituting the "Kara Nº 2 Group" - Main, East, and South Zones - please refer to Figure Nº 1.

Access to the area is good, initially by sealed road from Burnie to Hampshire, then either by Rogetta Road or Blythe Road past the Upper Natone Forestry Commission, both of which lead south off the Hampshire to Upper Natone Road.

Vehicular access within the licence area could be described as poor, and except for forest tracks, the main means of access over most of the area would be by foot.

In the main, the licence area would be described as undulating but dominated by the Blythe River which transgresses the eastern section of the area. Most of the area is underlain by granite, this land supporting eucalypt plantations. The remainder of the land is underlain by siliceous sediments and metamorphosed skarn zone which either support button grass scrub or stunted regrowth vegetation.

2.2 Tenement Information

EL39/89 was granted to Tasmania Mines Ltd under ETA Nº 120 Application on 23 February 1990.

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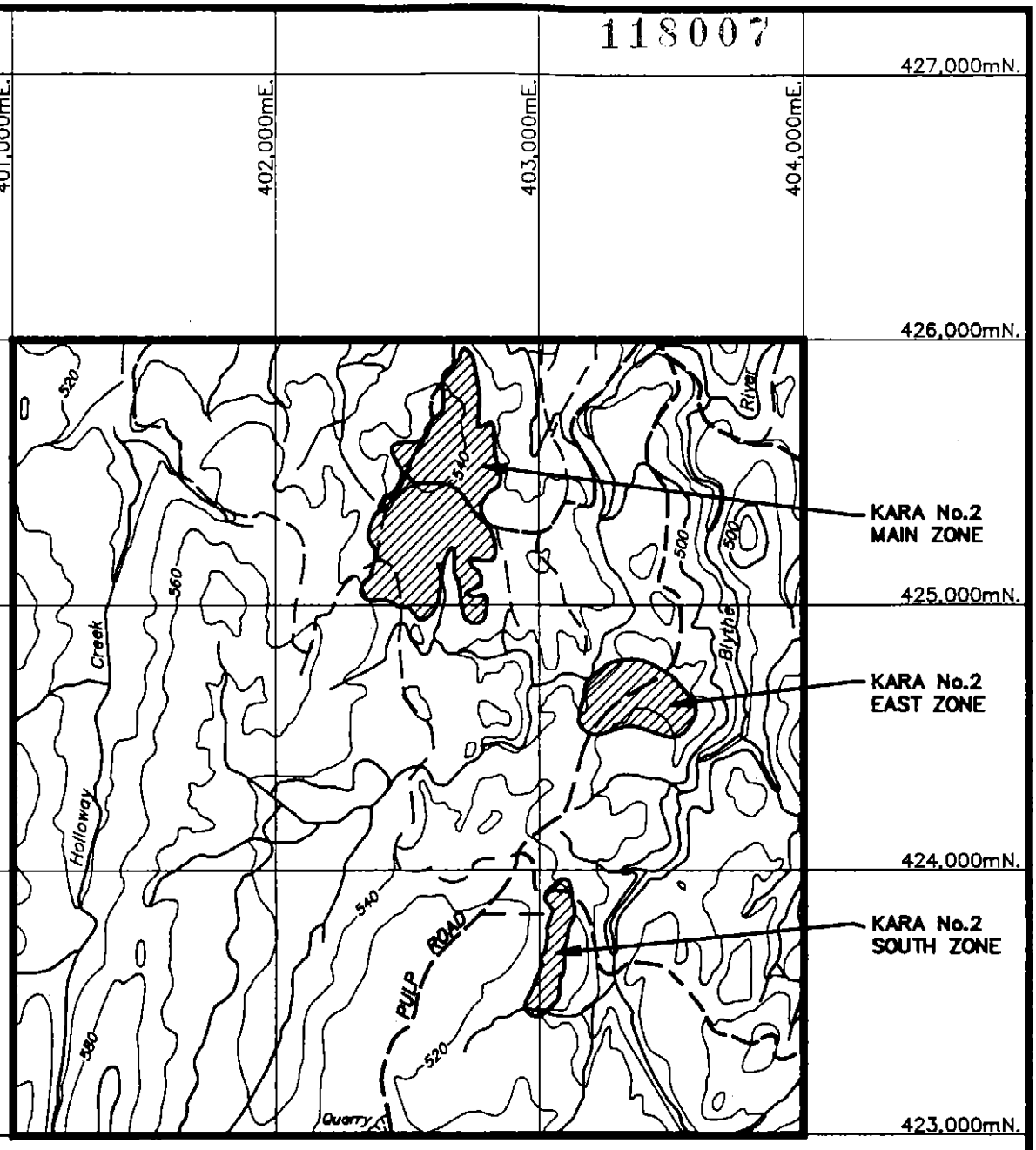

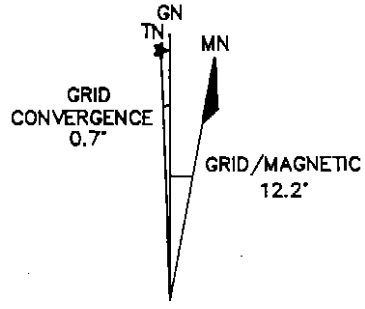

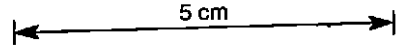

E.L. 39/89

KARA No.2 REGION

LOCATION PLAN

DATE: FEB. 1991 SCALE: 1:25,000

FIG. 1

The area covered by the licence totals 9km², and originally formed part of the Tasmania Mines Ltd EL17/68 which in 1987 was reduced in size from 74km² to 21km², and eventually relinquished in 1990.

In December 1991 an application for a mining lease covering 38~~km~~ ha of the Kara Nº 2 South Deposit was made.

No other exploration licence are currently held adjoining EL39/89.

2.3 Regional Geology - Previous Exploration

The EL39/89 area was acquired to cover and investigate the three magnetite skarn zones known as the "Kara Nº 2 Group". As shown on Figure Nº 1, these skarns occur either within or along the western flank of the main Housetop Granite intrusive, the latter occupying a large part of the eastern and central sections of the EL. The western section of the area is characterised by the Ordovician Transitional Beds - predominantly siliceous sediments which are differentially metamorphosed along the contact with Housetop Granite.

When the area was originally covered by EL17/68, exploration was primarily undertaken to assess its potential for tungsten mineralisation within the magnetite skarns and greisenous zones. An assessment of this potential was made by geologic mapping and extensive geochemical drainage sampling. After areomagnetic flying and follow up ground magnetic studies, three magnetite skarn zones were identified - Kara Nº 2 Main, South and East Zones. One of these - the Kara Nº 2 Main Zone was subjected to detailed exploration work and other investigations - namely geologic mapping, grid ground magnetic survey, trending/sampling, geochemical sampling and both percussion and diamond drilling programmes (Dept of Mines, Tasminex NL, McIntyre Mines and Tasmania Mines Ltd).

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During Year 1 of EL39/89, the Kara Nº 2 South Skarn received detailed attention. This previously unexamined deposit was investigated by geologic and ground magnetic surveys and subjected to two programmes of percussion drilling. Results were encouraging, showing high grade in-situ magnetite values (58-66% Fe) and unusually low SiO^2 values (<3%). A 100 tonne bulk sample was collected from this deposit for future test work.

3. EXPLORATION AIMS - PHILSOSPHY

Although the Kara Nº 2 East and South Skarn deposits had previously been indentified by reconnaissance geologic work and sampling, both deposits warranted more detailed investigations in order to calculate their true economic potential and assess whether they would provide a future source of magnetite ore to supplement the Kara Nº 1 deposit currently being mined by Tasmania Mines Ltd.

Work undertaken during Years 1 and 2 of EL39/89 was of such nature to assess the above mentioned objectives.

The actual nature of completed and current exploration work at the Kara Nº 2 South and East magnetite deposit has, and is, as follows:-

- Complete surface mapping and detailed grid ground magnetic surveys, delineating in detail the extent and nature of these deposits.

- Complete shallow percussion drilling programmes.

- Bulk sample collection - 100 tonne sample, and complete both laboratory bench scale test work and treatment of the sample at the Kara Nº 1 Mill

4. EXPLORATION WORK COMPLETED - YEAR 2

4.1 Kara Nº 2 South Skarn

The 100 tonne bulk sample of magnetite ore collected from the south-central section of this deposit was used to undertake a number of tests and investigations during the year. This work included the following:-

4.1.1 APPM Research Dept, Burnie

Samples were submitted to investigate the potential of this magnetite for use in the Dars Project. Specific requirements were a low (<3%) silica content.

Test work included analysis and mineralogy, the results of which are documented on Table Nº 1.

4.1.2 BHP Raw Materials Supply Dept

A small sample was subjected to crushing and grinding to minus 6.0mm on a laboratory scale, and the resultant size fractions analysed to assess if any beneficiation could be achieved by sizing. These sizing-analytical results, plus mineralogical work are itemized in Table Nº 2.

4.1.3 Tasmania Mines Limited

The largest proportion of the bulk sample was processed on two separate occasions through the Kara Nº 1 treatment plant.

On both occasions the ore was fed into the mill, passed through the primary jaw crusher, trommel, secondary jaw crusher and rod mill, attaining a minus 2.5mm-plus 0.5mm end product. On the first test (Test A) the above size fraction was also passed over magnetic separators, and on the second occasion (Test B) this cleaning operation was avoided.

Test A results of sampling/analytical work are documented on Table Nº 3 and Test B results shown on Table Nº 4.

Subsequent sizing and analytical work completed by APPM Research Dept on the final minus 2.5mm magnetite/hematite product acquired from the above two test runs are shown on Table Nº 5.

4.1.4 General Discussion

All the above work shows the Kara Nº 2 South iron deposit to consist of high grade Fe low silica mixed magnetite/hematite/goethite material. As mined the deposit showed 67.4% Fe values, and as such, could provide a source for lump magnetite ore in the +6mm -20mm size range. Future test work will be run to investigate recoveries of material. In the meantime additional bulk samples of the ore are being tested on a commercial scale by APPM in their Dars Project.

4.2 Kara Nº 2 East Skarn

Surface investigations and reconnaissance ground magnetic runs were made over this deposit. The surface material of magnetite was more weathered than the Kara Nº 2 South deposit, and a large proportion of

hematite, limonite and goethite was incorporated with magnetite. However, sampling of some of the least exposed surface material showed a high iron content (66% Fe) and again a low SiO^2 content (0.5%).

Permission was sought to undertake shallow percussion drilling, and if results were satisfactory, to acquire a 100 tonne bulk sample for processing through the Kara N° 1 treatment plant.

This drilling work is currently underway - 71.3 metres having been drilled to date (7/1/92).

5. CONCLUSIONS - PROPOSED WORK

As stated, Year 2 work on the Kara Nº 2 South deposit has provided extremely favourable results, the material can be utilised commercially as a low silica magnetite fines product (APPM) and possibly as a lump ore (+6mm). A mining lease application has been made over this section of the EL, but in the meantime further evaluation work will continue both at this deposit and also that found at Kara Nº East.

Proposed exploration work during the 3rd year term of EL39/89 would include the following:-

5.1 Kara Nº 2 South

- Complete a reserve evaluation of the deposits high grade Fe material.
- Finalise a ML application (38Ha).

5.2 Kara Nº 2 East

- Finalise the surface geologic appraisal of this deposit.
- Complete the shallow percussion drilling programme (in progress).
- Acquire a 100 tonne representative bulk sample of magnetite from this deposit.
- Process the above bulk sample at the Kara Nº 1 mill, evaluating the potential of this material as fines (<2.5mm) or lump magnetite (6-20mm).
- Complete a tonnage and grade evaluation of the deposit.

TABLE N° 1

KARA N° 2 SOUTH - MAGNETITE

LOW SILICA MAGNETITE SAMPLE

APPM DESIGNATION - KARA 2S N° 25975

Fe_2O_3	-	91.8%
Al_2O_3	-	1.5%
SiO_2	-	0.7%
CaO	-	NIL
MgO	-	0.2%
Na_2O	-	Trace
SO_3	-	Trace
LOI	-	1.3%

MINERALOGY:-

Goethite	-	15-20%
Hematite	-	15-20%
Magnetite	-	60-70%

RAW MATERIALS INVESTIGATION
TECHNOLOGY DEPARTMENT

DATE: 5TH APRIL 1991

TO: SUPT. RAW MATERIALS SUPPLY

SUBJECT: RESULTS FOR SAMPLE OF TAS. MINES KARRA No.2.

Sample of Karra No.2 lump ore(Approx. 3kg) was crushed to 90% minus 6.0mm. Chemical analysis of individual screen fractions was conducted to establish any potential for benificiation by size.

1.0 RESULTS - Head Sample

1.1 SIZING.

(MM)	%Cum
+8.00	3
+4.00	21
+2.00	54
+1.00	72
+0.50	81
+0.25	90
+0.125	94
-0.125	(6)
MS	2.73
SMD	0.47

1.2 CHEMICAL ANALYSIS

T.Fe	65.6
SiO2	0.48
Al2O3	1.27
CaO	.05
Mn	1.28
MgO	.43
P	.017
Zn	.156
K2O	<.001
TiO2	.23
L.O.I	0.57

TABLE N°2 - (CONTINUED)

1.3 Analysis by Size.

Size	% Ret	Fe	SiO2	Al2O3	CaO	Mn	MgO	P	Zn	TiO2
+8.0	3	65.7	.48	1.16	.02	1.27	.43	.011	.157	.25
+4.0	18	66.0	.38	1.15	.01	1.37	.47	.010	.162	.27
+2.0	33	66.0	.37	1.12	.01	1.33	.46	.012	.154	.24
+1.0	18	65.6	.42	1.21	.01	1.30	.43	.013	.149	.24
+0.5	9	66.2	.46	1.26	.01	1.29	.45	.015	.146	.23
+0.25	9	66.2	.54	1.45	.01	1.30	.42	.016	.147	.23
+0.125	4	65.3	.73	1.73	.02	1.26	.40	.022	.145	.23
-0.125	6	63.1	1.30	2.40	.14	1.13	.41	.040	.137	.21

(K2O .001 or less down to +.125. -.125 = .003)

2.0 MINERALOGY (Crushed Product)

Predominate medium/dense magnetite exhibiting pronounced micro fissures. Minor to extensive oxidation to martite along cracks resulting in variable particle mineralogy/morphology. In a majority of cases these cracks are infilled by later stage goethite/limonite. Some discrete goethite/limonite particles are also present.

RAW MATERIALS INVESTIGATION

TABLE Nº 3

TASMANIA MINES LIMITED

KARA Nº 2 - BULK SAMPLE TEST WORK

INCORPORATING MAGNETIC SEPARATION

TEST A

MILL RUN 31 OCTOBER 1991

	Fe %	SiO_2 %	Al_2O_3 %	P %	S %
KARA 2 - CONC PRODUCED	68.8	0.59	1.13	0.008	0.008
MILLFEED	67.1	0.87	1.46	0.010	0.008
CONVEYOR 2 (AFTER TOMMEL WASH)	67.7	1.03	1.48	0.011	0.011
KARA 2 SCREEN U/S	68.6	1.14	1.50	0.007	0.008
KARA 2 MAG. U/F	61.2	4.10	2.44	0.063	0.036
ROD MILL FEED	67.5	0.84	1.48	0.13	0.005

SIZING OF CONCENTRATE PRODUCT

+2MM	=	4.0%
+6MM -2MM	=	58.6%
-0.6MM	=	37.4%

TABLE Nº 4

TASMANIA MINES LIMITED

KARA Nº 2 SOUTH - BULK SAMPLE TEST WORK

NO MAGNETIC SEPARATOR

TEST B

	Fe %	SiO_2 %	Al_2O_3 %	P %	S %
KARA 2 - CONC PRODUCED	67.4	0.35	1.14	0.0121	0.015
MILL FEED	67.5	0.30	1.28	<0.01	0.02
CONVEYOR 2 (AFTER TROMMEL WASH)	66.7	0.31	1.24	<0.01	0.02
ROD MILL FEE (LUMP >6MM)	66.6	0.49	1.29	<0.01	0.015

TABLE Nº 5

APPM RESEARCH DEPT - BURNIE

TEST WORK ON REP SAMPLES OF 40T PROCESSED BY TASMANIA MINES TEST A & B

	TEST A (WITH MAG SEP)	TEST B (NO MAG SEP)
CHEMICAL ANALYSIS (WT%)		
Fe_2O_3	93.8	92.18
Al_2O_3	1.1	1.25
SiO_2	0.4	0.71
CaO	0.1	0.07
MgO	0.3	0.28
SIZE DISTRIBUTION (%RETAINED)		
2.36mm	1.0	2.1
2.00mm	2.0	3.0
1.70mm	1.7	4.0
1.00mm	12.6	20.9
0.50mm	41.4	33.6
0.30mm	25.2	20.5
0.15mm	11.7	10.3
<0.15mm	4.4	5.6
MINERALOGY		
Magnetite	85%	70%
Hematite	7.5%	15%
Goethite	7.5%	15%