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McINTYRE MINES (AUSTRALIA) PTY. LTD.

EXPLORATION LICENCE 17/68

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REF. No. 19,113/84				

In support of an application for an extension of Exploration Licence 17/68 for a period of twelve months from November 4th 1984, McIntyre Mines (Australia) Pty. Ltd., for and on behalf of Tasminex N.L. and McIntyre Mines, provide the following two reports:-

Report A - E.L. 17/68. Proposed work programme and estimated expenditures, 4th November 1984 to 3rd November 1985.

Report B - E.L. 17/68. Preliminary summary report of completed work and statement of expenditures, 4th November 1983 to 15th September 1984.

C.H. Whitehead
 C. H. Whitehead,
 McIntyre Mines (Australia) Pty. Ltd.

18th September 1984.

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REPORT A

McINTYRE MINES (AUSTRALIA) PTY. LTD.

E. L. 17/68 & C. L. 105M/77

PROPOSED WORK PROGRAMME & ESTIMATED EXPENDITURES

PERIOD - 4th NOVEMBER 1984 TO 3rd NOVEMBER 1985

(Submitted by McIntyre Mines (Australia) Pty. Ltd., for and on behalf of Tasminex N.L. and McIntyre Mines (Australia) Pty. Ltd.)

C. H. Whitehead,
Project Manager.

18th September 1984.

INTRODUCTION AND SUMMARY

In support of an application for the renewal of E.L. 17/68 for a further period of 12 months from November 4th 1984 to November 3rd 1985, McIntyre Mines (Australia) Pty. Ltd. (for and on behalf of Tasminex N.L. and McIntyre Mines) submit details of a proposed work programme and estimated exploration expenditures for the period in question.

The proposed programme of exploration work is confined to the area embraced by E.L. 17/68, and is exclusive of pre-production and development work being carried out in the area covered by Consolidated Lease 105M/77. It is envisaged that proposed activities will be continuous throughout the twelve month period, and is in fact a continuation of ongoing activities currently underway by McIntyre Mines.

Estimated exploration expenditures for the proposed work programme to November 3rd 1985 are calculated at \$251,245. Application is made for the renewal of exploration rights for the entire area of 75 sq. kms. at present covered by E.L. 17/68. Attached Plan No. 1 shows the locations of proposed exploration activities.

In support of this application, an additional report (attached) summarises preliminary details of the nature and results of work completed during the initial ten month period of the current term of E.L. 17/68. For this 10 month period, total actual exploration expenditures amounted to \$160,329.

Details of the proposed work programme are as follows:-

1. Exploration Diamond Drill Programme

Drilling of an exploratory nature is proposed over a 8 month period being concentrated at an area where previous surface exploration work has been finalised and successful in outlining potential zones of magnetite skarn buried beneath Tertiary basalt and sediments. Exploration drilling is required to confirm the presence of these subsurface skarns and of course investigate any possibility of associated tungsten mineralisation.

The drilling programme would be in-house operated using the McIntyre Mines drill crew and Tasminex N.L. Joy Sullivan drill rig.

During the forthcoming year, it is proposed to concentrate exploration drilling along the eastern limb of the Kara synclorium investigating the mineralised potential of probable buried magnetite skarns in the Ordovician sequences in the region between the known Eastern Ridge skarn deposits and Location L. 5.

Between these areas, which are entirely masked by Tertiary cover, a definite positive, narrow, N - S trending magnetic anomaly can be detected. Three specific magnetic anomalies are found along this trend, extending in total a strike distance of 1100 metres. Overlying Tertiary basalt: sediment cover is interpreted to be at least 45 - 50 metres thick.

An initial seven drill holes are planned with an estimated 1400 metres of drilling. Drilling at right angles across the delineated magnetic anomaly, drill sites would be planned along the following north coordinates:

- 6600N, 6700N, 7050N, 7100N, 7250N, 7300N and 7550N.

Dependent upon progressive results, the above proposed exploratory drilling could be modified at any time during the eight month period. If successful results are obtained and more extensive infill drilling required, supplementary budgets will be requested and if obtained, outside drill contracting services attained.

If time permits, an additional single exploratory diamond drill hole is proposed for the Limestone Creek area, investigating the metamorphised Gordon Limestone sequences at depth towards a projected granite cupola.

2. Surface Exploration Investigations

Ground surveys, both regional and detailed are planned at the following areas and regions. (Please refer to accompanying Plan 1.

- i) A continuation of the current ground magnetic - geological survey of the S.W. trending St. Valentines Creek area.
- ii) A detailed ground magnetic survey of the Limestone Creek location, plus preliminary evaluation of the known wollastonite deposits (work originally planned for current term of E.L. 17/68).

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- iii) A general geologic survey of the Mount Misery region. This survey will be supplemented by a regional pan concentrate geochemical samples programme of the regions drainage. The mapping should assist in finalising the geologic interpretation of the overall E.L. area.

3. Magnetite Skarn Evaluations

These are two fold in nature:-

- i) Continuation of metallurgical test work on Kara magnetite, investigating its application and potential usage in the coal washery heavy media field.
- ii) Detailed surface appraisals of the Kara No. 2 Main Skarn and the Bobs Bonanza Eastern Skarn Zone, will be completed. This work will consist of surface delineation of the skarns, compilation of geologic mapping, ground magnetic surveys, surface rock sampling and possible trenching. Such investigations are currently underway at Bobs Bonanza.

4. General

It is envisaged the above programme will be continuous, but can be completed within the twelve month period in question.

It will be undertaken by McIntyre Mines personnel (drilling crew, prospector, field assistant) supervised by a geologist, all of whom have been fully acquainted with the Kara region for a number of years. - Operations will be based from the established offices at Burnie.

5. Estimated Expenditures

It is believed that the required Department of Mines minimum expenditure for E.L.'s covering an area of 75 sq. kms. (\$37,500) will be exceeded.

Although the proposed work programme and estimated expenditures are both subject to modifications and changes dependent upon unforeseen circumstances, it is estimated that the exploration expenditures for the above programme during the twelve month period to November 3rd 1985 will total \$251,245.

A breakdown of the proposed total project expenditure is as follows:-

	\$
Office, Rent, services	14,400
Administration, general	15,420
Salaries - contract rates	48,060
Diamond Drilling variable	100,575
Surface exploration variable	38,500
Magnetite evaluation	34,290
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Total	251,245
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C. H. Whitehead,
Project Manager,
McIntyre Mines (Australia) Pty. Ltd.

18th September 1984.

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REPORT B

McINTYRE MINES (AUSTRALIA) PTY. LTD.

& TASMINEX N. L.

PRELIMINARY REPORT OF

COMPLETED WORK PROGRAMME & EXPLORATION EXPENDITURES

E. L. 17/68 & ASSOCIATED MINING TENEMENTS

PERIOD - NOVEMBER 4th 1983 TO SEPTEMBER 15th 1984

C. H. WHITEHEAD,
McINTYRE MINES (AUSTRALIA) PTY. LTD.

18th SEPTEMBER 1984.

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PRELIMINARY REPORT OF COMPLETED WORK PROGRAMME & STATEMENT OF EXPENDITURES

EXPLORATION LICENCE 17/68

PERIOD - 4th NOVEMBER 1983 TO 15th SEPTEMBER 1984

1. INTRODUCTION

In support of an application for the renewal of E.L. 17/68 for a further period of twelve months from November 4th 1984, the following report itemises details of work completed, and actual expenditures incurred, during the initial 10 months of the current term of E.L. 17/68.

A final annual report compiling detailed results of the work programme will be presented to the Department of Mines on completion of the current term of the Exploration Licence - November 3rd 1984.

Work has been continuous throughout the current term, and activities have been designed at further evaluating the economic potential of the 75sq. kms of the area. Work programmes have consisted of surface exploration and diamond drilling activities in the outside sections of the E.L. area, and also detailed investigations (mine planning, economic, etc.) of the main Kara WO_3 bearing skarns. Attached Plan No. 2 shows the specific locations of areas worked during the current term, and an itemised summary of completed and in progress work is given below.

Total actual exploration expenditures for the initial ten months period to August 31st 1984 amounted to \$160,329.

2. SURFACE EXPLORATION WORK

A. Location L. 1

Detailed grid surveys were completed at this poorly exposed magnetite skarn location in the north-eastern corner of the E.L. Surveys consisted of:-

- Establishing a systematic grid over the location, with north-south grid lines spaced at 20m intervals.
- Geologic mapping.
- Ground magnetic surveys along 20m grid lines, readings at 5m intervals.
- Geochemical soil sampling at 10 metre intervals along alternate grid lines. Samples assayed for WO_3 , Sn, Mo.
- Pan concentrate sampling of areas drainage.

The work was aimed at further delineating the actual extent of this skarn and its relationship with the bordering Housetop granite, plus investigating its possible tungsten or "other mineral" potential. Soil samples recorded no apparent tungsten or molybdenum anomalism. Some randomly distributed samples recorded a 400 - 600ppm Sn values, but in-fill sampling and analysis was disappointing in outlining any Sn trends or specific anomalous zones.

B. Hampshire Magnetite Skarn Zone

Grid geochemical soil sampling of the northern portion of the previously delineated (Oct. 1983) ground magnetic anomaly was completed. Assays revealed only slightly above background tungsten values, with no apparent anomalous trends. Tin and molybdenum assays were negative.

Geologic mapping of the Hampshire granite stock and contact with country rocks was also completed.

C. Loudwater Creek - Hampshire Magnetite Region

In-fill detailed ground magnetics were completed in this region extending north from the Loudwater Creek - Companion River junction. Over an area of approx. 600m x 350m, grid lines were established at 40 metre intervals and readings spaced at 5 metres. The area was surveyed and tied into the Hampshire Magnetite region. Base maps and ground magnetic maps were prepared.

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D. St. Valentines Creek Area

Reconnaissance ground magnetic surveys have been initiated at this area south of Kara South, investigating a south-westerly trending aeromagnetic zone of middle order intensity.

3. DIAMOND DRILL PROGRAMME

A drilling programme consisting of 10 holes were completed by McIntyre Mines during the period mid March to mid August 1984. The programme was entirely exploratory in nature, and intended to investigate a number of previously delineated prospective areas in the E.L. area. Four such areas were investigated, and summary results are briefly as follows:-

A. Kara South

- 5 Holes, DDH'S 338 - 342, total metreage 176.16m. The objective of drilling was to elucidate the local geologic setting, and also to assess the potential of WO_3 mineralisation along the eastern flanks of the Kara South Zone. Results were favourable with regard the former objective, but WO_3 mineralisation proved to be low grade and inconsistent both along strike and down dip from surface exposures.

B. Kara N. Magnetite Anomaly

- 1 Hole, DDH 343, was drilled to a depth of 182.35m. The objective was to prove the presence and investigate a magnetite skarn body (or bodies) in the north eastern portion of the anomaly (7350N). Drilling showed 2 magnetite skarn zones separated and overlain by marble units of the Gordon Limestone sequence, but associated scheelite mineralisation was very poorly developed and subeconomic.

C. Companion Skarn Zone

- Two holes DDH'S 344 and 345 were drilled on Section Line 6680N, total metreage 143.57m. The holes proved the existence of skarn, extensively oxidised and showing only narrow (minus 2m) low grade WO_3 mineralised intersections.

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D. Kara North - 266 Zone Extension

- Two holes DDH 346 and 347 were collared to investigate the possible southerly strike extension of the 266 Zone mineralisation. Drilling was on Section Line 6900N, ie. 70m south of known mineralisation. Unfortunately both holes were abandoned in faulted ground prior to the target horizon of the skarn zone being intersected.

4. DETAILED STUDIES - E.L. 17/68 & ASSOCIATED MINING TENEMENTS

A number of detailed studies were completed during the current year. These included:-

A. Pre - Development Programme

Studies constituting this programme, originally initiated by McIntyre Mines in 1981, were completed in early December 1983 and final reports completed during December 1983 and January 1984. Investigations were classified into seven categories (see below) for which separate reports were written:-

- Exploration work
- Infill - extension drill programmes
- Exploration drilling programmes
- Metallurgical investigations
- Ore reserve studies
- Mine planning - Production, Economic Studies
- Miscellaneous studies - marketing, environmental

The two main objectives of the 'programme' were -

- To assess the economic viability of the open pit development of the two main tungsten bearing deposits at Kara No. 1 and Kara N.
- To evaluate the overall economic potential of the Kara Properties and E.L. 17/68 area.

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In the evaluation of the development of Kara 1 and Kara North, geological reserves of scheelite bearing ore at both deposits increased to 1,446,096 tonnes at 0.78% WO_3 , and mineable reserves of scheelite ore increased to 1,049,000 tonnes at 0.84% WO_3 .

Investigations in the overall E.L. 17/68 area show that:-

- The total geologic ore reserves increased to 1,994,936 tonnes grading 0.78% WO_3 .
- A new zone of high grade scheelite mineralisation was outlined at Location L. 5.
- Magnetite concentrates could have a potential application in the coal washery industry.

B. In House Feasibility Study

During the first quarter of the current term, McIntyre Mines affiliated Company - Superior Oil Minerals Division completed a feasibility study of the Kara Properties. The main objective of the study was to assess the economic feasibility of the Kara No. 1 and Kara N. deposits, and to evaluate the economic potential of the whole region covered by E.L. 17/68.

The former study included developing a geologic ore reserve model for the two above deposits, compilation of open pit designs, a mine planning study, and production - economic analyses. The base parameters used in the production scenario consisted of open pit development at a rate of 500 tpd, mineral processing by gravity concentration, and in the attempt to maintain initial capital costs to a minimum, the utilisation of a mining contractor.

C - Production Plan - Financing Schedule

The preparation of a detailed production plan and financing schedule, outlining the proposed development and mining of the Kara No. 1 and Kara North deposits was completed by McIntyre Mines Ltd. during the period January to July 1984.

A copy of this report was submitted to the Director of Mines on 31st July 1984.

5. C. L. 105M/77 INVESTIGATIONS

During the initial 10 month period of the current term, a number of miscellaneous investigations were carried out within and around the Kara No. 1 magnetite skarn deposit. These included:-

A. Metallurgical Investigations

Test work on weathered tungsten ore and non magnetic tailings was completed to investigate the possible application of the alkaline EDTA leach process for the extraction of tungsten. The WO_3 content of samples ranged from 0.4% to 2.00% WO_3 , the tungsten content generally being of a non - scheelite variety. The experiments, particularly on the two tailing dump samples were disappointing and all leach trials showed a low degree of tungsten extraction.

B. Surveys, Reserve Reconciliations Etc.

- Surveys of the Kara No. 1 area were completed in mid March 1984 and mid May 1984. New base plans, contoured at 2.5 metre intervals were compiled at a scale of 1:500.
- Bench plans and cross sectional plans of the Kara No. 1 deposit were modified and updated in March 1984.
- In view of the Tasminex N.L. mine operations during the period 1st June 1983 to 15 March 1984, a reconciliation of ore reserves was completed.
- In June 1984, the mine engineering consultants - Pincock, Allen and Holt Inc. Tucson, recalculated the Kara No. 1 mineable ore reserves, and updated the original mine plans and production schedule.

6. WORK IN PROGRESS

Current activities within E.L. 17/68 include:-

- Surface regional ground magnetic surveys in the St. Valentines area south of Kara South.
- Preparation of additional composite bulk samples of magnetite skarn for the proposed testwork and investigation regarding their potential as heavy medium in the coal washery field.

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7. EXPENDITURES

Actual expenditures incurred by McIntyre Mines (Australia) Pty. Ltd. for the initial 10 month period of the current term from November 1st 1983 to August 31st 1984 have totalled \$160,329.

Attachment "A" itemises details of these actual expenditures, and breakdown into categories, E.L. 17/68 and C.L. 105M/77.

Details of expenditures incurred for the final two month period of the current term of E.L. 17/68 to November 3rd 1984 will be submitted as soon as available.



C. H. Whitehead,
McIntyre Mines (Australia) Pty Ltd.

18th September 1984.

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ATTACHMENT 'A'STATEMENT OF EXPENDITURES - E. L. 17/68 & C. L. 105M/77TEN MONTH PERIOD - NOVEMBER 1st 1983 TO AUGUST 31st 1984

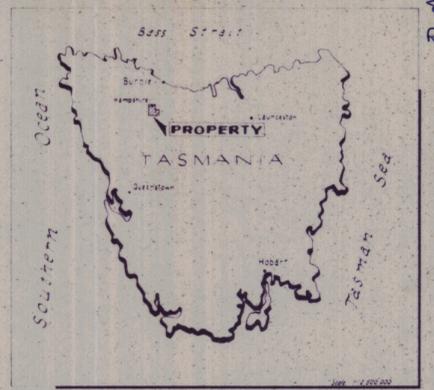
McIntyre Mines (Australia) Pty. Ltd. have incurred the following expenditures within E. L. 17/68 and associated mining tenements during the ten month period from November 1st 1983 to August 31st 1984.

	<u>E.L. 17/68</u>	<u>C.L. 105M/77</u>	<u>TOTAL</u>
	<u>A\$</u>	<u>A\$</u>	<u>A\$</u>
Office, rent, services	23,226	10,488	33,714
Camp construction, maintenance	-	461	461
Camp supplies, accommodation	1,176	953	2,129
Geology	26,627	14,920	41,547
Bulldozing	3,286	-	3,286
Ground Magnetometer	6,446	-	6,446
Geochemistry	4,259	74	4,333
Engineering - Company Costs	-	2,761	2,761
Engineering - Mine Design	-	577	577
Metallurgy	-	1,117	1,117
Assays	2,397	360	2,757
Transportation	10,933	(6,420)	4,513
Diamond Drilling	37,623	-	37,623
Geologic Consulting	-	738	738
Environmental	356	994	1,350
Assessment Work	3,927	4,163	8,090
Insurance	733	734	1,467
Lease Payments	4,658	-	4,658
Superior Oil - MML Costs	-	2,762	2,762
	<u>\$125,647</u>	<u>\$34,682</u>	<u>\$160,329</u>

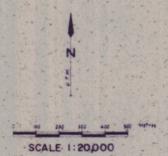


C. H. Whitehead,
McIntyre Mines (Australia) Pty. Ltd.

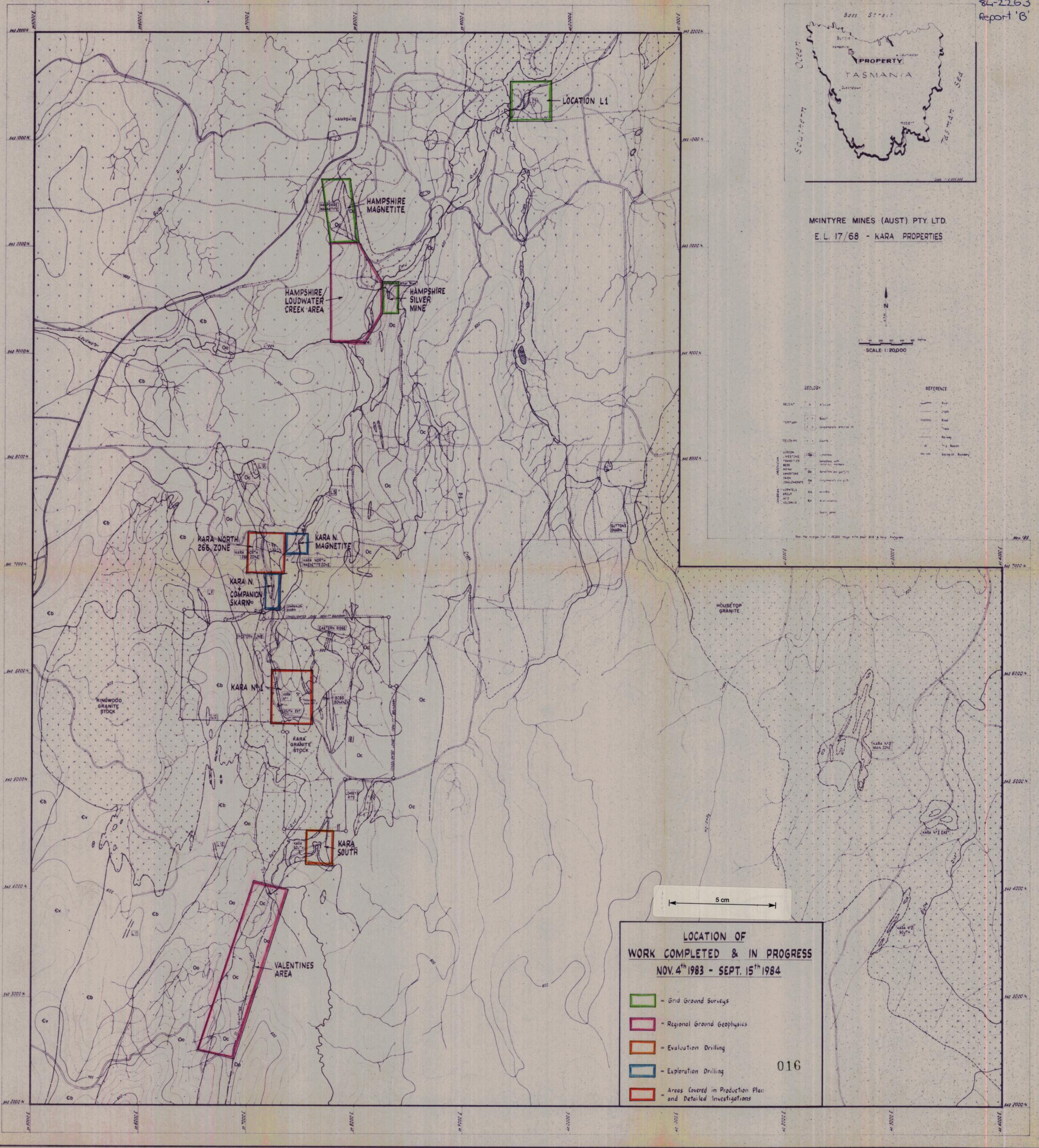
18th September 1984.



MCINTYRE MINES (AUST) PTY. LTD.
E. L. 17/68 - KARA PROPERTIES



GEOLOGY		REFERENCE	
RECENT	A	ALLUVIUM	—
TERTIARY	B	BASE	—
	C	CONGLOMERATE	—
DEVONIAN	D	SLATE	—
	E	SANDSTONE	—
	F	SANDSTONE WITH	—
	G	SHALE	—
	H	SANDSTONE AND GALENA	—
	I	CONGLOMERATE	—
	J	CONGLOMERATE AND GALENA	—
PERMIAN	K	SLATE	—
	L	SANDSTONE	—
	M	SLATE	—
	N	SLATE	—
	O	SLATE	—
	P	SLATE	—
	Q	SLATE	—
	R	SLATE	—
	S	SLATE	—
	T	SLATE	—
	U	SLATE	—
	V	SLATE	—
	W	SLATE	—
	X	SLATE	—
	Y	SLATE	—
	Z	SLATE	—



**LOCATION OF
WORK COMPLETED & IN PROGRESS
NOV. 4th 1983 - SEPT. 15th 1984**

- Grid Ground Surveys
- Regional Ground Geophysics
- Evaluation Drilling
- Exploration Drilling
- Areas Covered in Production Plan and Detailed Investigations

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