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TASMANIA MINES LIMITED
EXPLORATION LICENCE 17/68
ANNUAL REPORT
NOVEMBER 4, 1986 - NOVEMBER 3, 1987

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TASMANIA MINES LIMITED

EXPLORATION LICENCE 17/68

ANNUAL REPORT

NOVEMBER 4, 1986 - NOVEMBER 3, 1987

Cliff H. Whitehead
for and on behalf of
TASMANIA MINES LIMITED

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EXPLORATION LICENCE 17/68 - TASMANIA MINES LIMITED

ANNUAL REPORT

PERIOD 4TH NOVEMBER, 1986 - 3RD NOVEMBER, 1987

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E.L. 17/68 - ANNUAL REPORT - 1986 - 1987

PERIOD 4TH NOVEMBER, 1986 - 3RD NOVEMBER, 1987

1. INTRODUCTION - NATURE OF WORK

The following report provides details of the nature and results of exploration work undertaken and completed within Exploration Licence 17/68 during the 12 months period ending November 3rd, 1987.

The current term of the licence was originally designated the final period of E.L. 17/68 (expiry date 03/11/87), and as such, the exploration work programme was designed to complete an overall evaluation of the licence area prior to its ultimate relinquishment.

Full scale exploration activities - as originally proposed - were initiated and underway during the first quarter of the current term. However, at the end of February, 1987, Tasmania Mines Limited had to enforce stringent economic constraints at the Kara tungsten mine operation, and simultaneously, exploration activities within E.L. 17/68 were severely curtailed and/or restricted from that date onwards.

Although ongoing (February 1987) drilling projects were completed, the Tasmines geological/exploration personnel were disbanded or transferred to the Kara mine operation, and consequently the evaluation of data acquired from exploration work completed during the first quarter of the current term has not been attempted. It is understood this work will be completed during the forthcoming 1987/88 term and reactivation of E.L. 17/68 exploration activities.

Exploration work completed during the year consisted essentially of diamond drilling projects, either exploratory or evaluation drilling. In addition to an evaluation of tungsten potential within the E.L., Tasmania Mines Limited also continued with an assessment of wollastonite deposits in the central sections of the licence area.

A total exploration expenditure of $137,430 was incurred by Tasmania Mines during the twelve months period ending October 22, 1987.

2. WOLLASTONITE INVESTIGATIONS

The ongoing evaluation of wollastonite deposits at Limestone Creek consisted of the following:

- completion of detailed topographical survey, refer to Plan No.4/87 Scale 1:1,000.

- initiation of reconnaissance geological mapping in the Limestone Creek region, and detailed mapping of identified wollastonite deposits.

- surface sampling of wollastonite outcrops and calc-silicate horizons. Sample Nos. LST/10 to LST/20 were submitted for chemical analysis. (refer Appendix No. 1A)

- completion of nine shallow (total depth drilled 187m, maximum hole depth 32m) percussion holes (Nos. WL1 to WL9). Appendix No.1B itemises assay results of these drill samples. During the course of this drilling, three of the four known wollastonite outcrop areas previously outlined by the Department of Mines (1958) were investigated (refer Plan No. 4/87).

- completion of two diamond drill holes, Nos. 519 and 520, each of 200 metres depth. Appendix No. 1C provides details of completed assay results on samples of core from these holes, namely DDH 519, 3.05m to 28.30, and DDH 520, 2.0m to 40.0m. Both holes were terminated within altered Ordovician Gordon Limestone Transition Beds sequences. Drill logs and sections have not as yet been prepared.

- a study of the market specifications and requirements for wollastonite was undertaken, and potential wollastonite buyers in Europe were approached.

- preliminary crushing, grinding and high intensity magnetic operation test work was completed from a bulk sample of wollastonite by Abermet, Burnie. Follow up chemical/mineralogical test work on the various magnetic products was made at the Department of Mines laboratories, Launceston. Please refer to Appendix 1D attached.

3. EVALUATION DRILLING - KARA NORTH 266 ZONE

In December 1986 and January 1987 it was decided to further evaluate the near surface tungstenferrous reserves of the Kara North 266 Zone, the objective being to assess the tonnages/WO3 grades of X and Y ore type material with open pit mine potential.

The specific area for examination was confined to that between coordinates 7050N and 7260N, ie. over 210 metre strike distance of the deposit (please refer to Plan No.2A/87 and 2B/87).

The deposit was primarily examined by shallow, closed spaced air track drilling, 139 holes being drilled with a total drilled meterage of 1803 metres. The holes were sampled and assayed at 3m intervals, the assay results and "other drill data" are presented as Appendices Nos. 2A and 2B.

In addition, diamond drill holes DDH 516 and DDH 516A of 71.70m and 103.10m depth respectively were completed along the most northerly drill section line (7260n) of Kara North. This was to investigate both the up-dip and down-dip extensions of known scheelite mineralisation. Assay results of this core drilling are shown in Appendix No.2C.

An overall evaluation of all the above drill results has yet to be completed.

4. EXPLORATORY DRILLING

Drilling of an exploratory nature had been proposed for eight areas/regions within the E.L. licence during the current year. This was required in areas where previous surface exploration work had been finalised and was successful in outlining potential zones of magnetite skarn buried beneath Teriary basalt/sediment cover. Drilling was proposed to confirm both the presence of these subsurface skarns and more significantly to investigate the possibility of associated tungsten mineralisation.

Three such areas were investigated during the first quarter. The in-house Tasmania Mines Limited diamond drill rig and crew were used in the drilling programmes.

4A Companion Magnetite Skarn

4 diamond drill holes, totalling 250.80 metres were completed, namely, DDH 512(41.50m), DDH 512A(57.50m), DDH 513(68.50m) and DDH 514(83.30m).

The holes confirmed near surface magnetite skarn. The magnetite content was high grade, but any intersected associated WO3 mineralisation was weathered, of the non-scheelite variety and of no economic extent. The highest grade WO3 intersections were DDH 512A between 9m - 22.20m (13.00m run) averaging 0.291% WO3 (including 1.20m at 0.924% WO3).

4B Kara North 266 Zone Extensions

3 diamond drill holes, totalling 198.40m were completed, namely DDH 515(64.40m), DDH 515A(77.00m) and DDH 517(57.00m).

The objective of this drilling was to investigate the possible northerly strike extension of the Kara North 266 Zone (ie. north of 7260N). Please refer to Plans 2A/87 and 2B/87.

The holes were collared 80 metres north of the most northerly 266 Zone section line. The drilling proved the presence of weathered magnetite skarn, but was shown to possess only low grade WO3 mineralisation. Any northerly extension of WO3 mineralisation appears to by restricted by a cupola of intersected granite (30m - 60m below surface).

4C Location L.5

One diamond drill hole, DDH 518 of 57.00m depth, was drilled to investigate the possible northerly strike extension of the Location L.5 tungsten ore zone. Unfortunately the hole had to be abandoned prematurely due to drill difficulties at 57.0m just after entering Ordovician sequences beneath weathered Tertiary sediments.

Appendix No.3A provides available assay data of all drill core analysed from the above three locations.

5. GOLD POTENTIAL OF E.L. 17/68 SKARNS

During the current term, the possible gold anomalism of the various magnetite skarns within the entire region of the E.L. licence area was to be investigated.

Within the geological environment of E.L. 17/68 (carbonate - magnetite host sequences), it is believed gold could occur in the following possible situations: -

- in chloritic/kaolinised alteration zones.
- in copper sulphides within skarns.
- in pyrrhotite skarn replacement.
- in carbonate host rock.

In assessing its basic gold potential, the following exploration/evaluation techniques were recommended for completion on the Kara properties:-

- collect and analyse representative samples (drill core or surface exposed samples) of the various know magnetite skarn zones within the E.L.

- geochemical sampling of the creeks (draining non-basalt covered areas) for active sand, and undertake both cyanide leach tests for gold on the 5kg samples.

- geochemical examination of the magnetics for both potential pyrrohotite zones and magnetite destroyed patches or skarns representing chlorite alteration.

During the first quarter, representative samples (drill core) of some of these skarns were collected for an Au analytical scan, but the programme is far from complete. Sampling and analysis to date has shown no Au anomalism.

Appendix No.4A tabulates the skarns examined to date and the respective assay results of the skarns are documented in Appendix No.4B. Please refer to Plan No.3/87 for drill location.

6. GENERAL

During the current 12 months term of E.L. 17/68, a number of tenency changes have been made to the licence area.

- On November 25th, 1986 a total area of 469 hectares previously evaluated to contain proven reserves/resources of tungsten mineralisation at Kara North, Kara South, Eastern Ridge and Location L.5, was pegged for mineral lease acquisition. Application has been made to the Department of Mines for six separate mineral leases - Nos. 71M/86, 72M/86, 1267P/M, 1268P/M, 1269P/M and 1270P/M. With Department of Mines approval, it is anticipated these mineral leases will eventually be consolidated with the existing lease CL-105M/77. (please refer to Plan No.1/EX/EL).

- On October 20th, 1987 a total area of 228 hectares covering the magnetite deposits of the Kara No.2 Skarn Areas was pegged for mineral lease acquistion (3 M.L.'s).

- On October 27th, 1987 application was made by Tasmania Mines Limited for an extension of part of the existing E.L. 17/68, which was originally due for final relinquishment on November 3rd, 1987. The area of E.L. 17/68 to be retained by Tasmania Mines Limited is shown on Figure No.1.

- The proposed exploration work programmed and estimated expenditures for the FIRST YEAR of the extension of part of E.L. 17/68 is documented as Appendix No.5.

7. EXPLORATION EXPENDITURES

Actual exploration expenditures incurred by Tasmania Mines Limited for the twelve month period ending 21st October, 1987 amounted to $137,430.

Table No. 1 below itemises details of these exploration expenditures.

TABLE NO.1 E.L. 17/68 - EXPLORATION EXPENDITURES (1986/87)

	$
Labour	58,227
Diamond Drilling	26,290
Percussion Drilling	7,725
General Exploration	5,409
Geology	2,300
Geophysics	NIL
Assaying	11,458
Drafting	NIL
Magnetite	500
Wollastonite	3,941
Transport	3,099
Surveying	10,770
Tenure	4,786
Reporting/Administration	2,925
TOTAL	$137,430

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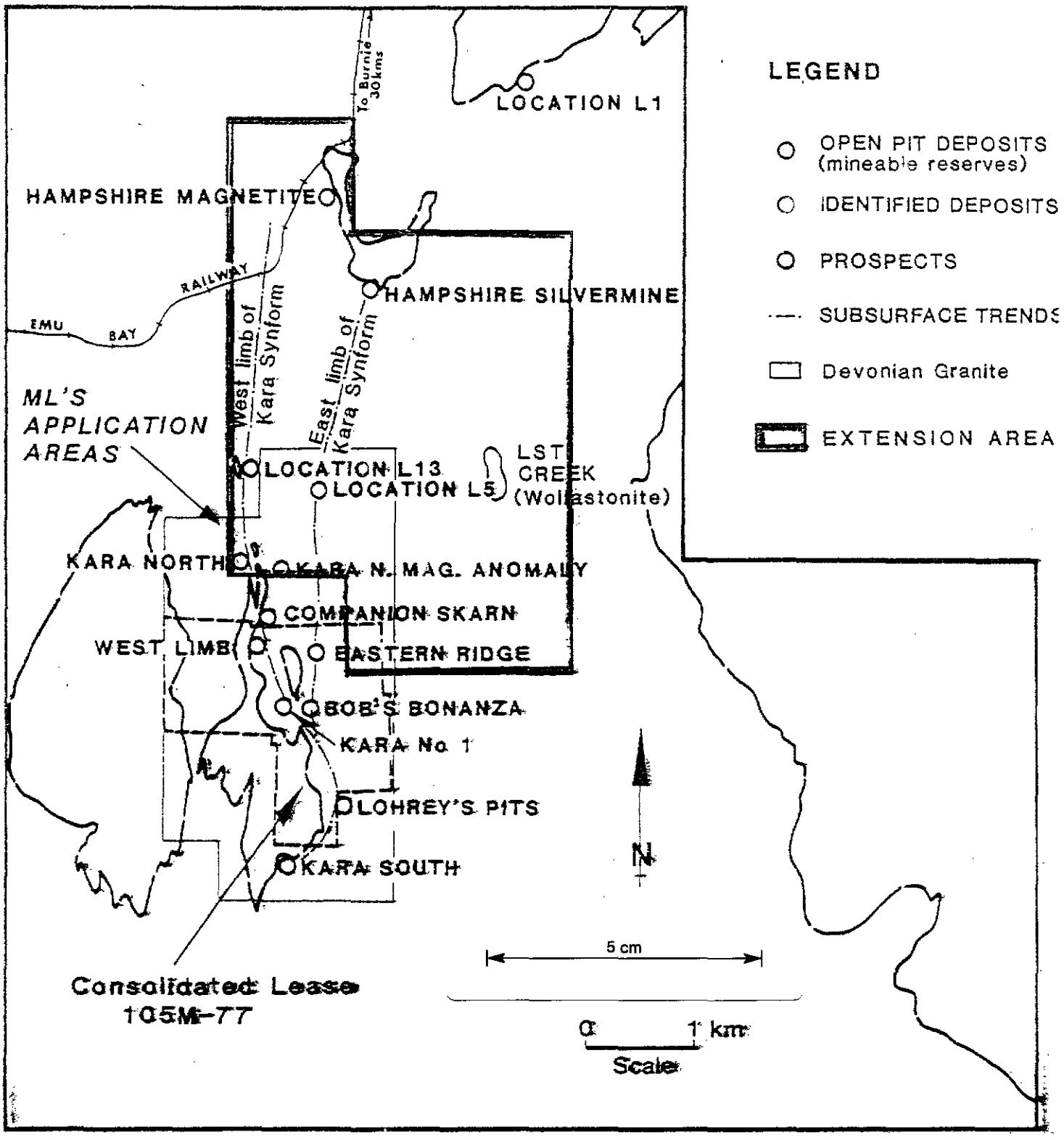
FIGURE No. 1

E. L. 17/68 LOCATION PLAN

E.L. EXTENSION APPLICATION AREA



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APPENDICES

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EXPLORATION LICENCE 17/68 - TASMANIA MINES LIMITED

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LIST OF APPENDICES

APPENDIX NO. 1

WOLLASTONITE INVESTIGATIONS

1A Surface Rock Samples - Assay Results
1B Airtrack Drill Samples - Assay Results
1C DDH's 519-520 - Sample Results
1D Abermet/Department of Mines Wollastonite Test Work

APPENDIX NO. 1A

SURFACE ROCK SAMPLES - LIMESTONE CREEK REGION

Assay Results - CaO, MgO, SiO2, CO2
- Calculated CaSiO3

APPENDIX. N° 1A.

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LIMESTONE CREEK - WOLLASTONITE INVESTIGATIONS

SURFACE ROCK SAMPLES - ASSAY RESULTS

SAMPLE N°		ASSAYS				CALCULATED
TAS MINES.	ANALABS.	CaO%	MgO%	SiO_2%	CO_2%	$CaSiO_3$.
LST/10	62438	15·00	2·75	61·0	0·60	29·52.
LST/11	62439	14·50	2·90	57·5	1·00	27·45
LST/12	62440	24·50	3·00	53·5	0·75	48·75
LST/13	62441	16·50	2·95	59·0	0·65	32·42.
LST/14.	62442	17·50	2·75	58·0	0·70	34·39.
LST/15	62443.	21·00	2·60	59·0	0·55	42·05.
LST/16.	62444.	20·50	3·00	62·5	0·65	40·70.
LST/17.	62445	15·50	3·00	60·0	0·55	30·66.
LST/18	62446.	17·50	2·70	62·5	0·55	34·80.
LST/19.	62447.	32·00	3·25	57·5	2·35	60·07.
LST/20	62448	19·50	3·15	57·0	0·36	39·46

REFERENCE PLAN N° 4187.

APPENDIX NO. 1B

LIMESTONE CREEK - WOLLASTONITE INVESTIGATIONS

Airtrack Drill Samples - W.L. 1 to W.L. 9
Assay Results - CaO, MgO, SiO2

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DRILL HOLE. N° - W.L.1

LOCATION - LIMESTONE CREEK - E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 9.0m

DATE DRILLED = JAN. 15. 1987.

GRID COORDINATES

NORTHING - PLAN. N° 11/87
EASTING - 1987m N.
R.L. - 546.5m E.

ASSAYED BY = AMDEL

ASSAY DATE =

ASSAY REPORT N° = AC 2651/87.

DRILL ASSAY RECORD

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
0	3	3	28.0	3.40	42.1			
3	6	3	38.1	3.10	36.5			
6	9	3	35.4	2.50	42.3			

PAGE N° W.L. 1

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DRILL HOLE N° – W.L.2.

LOCATION – LIMESTONE CREEK – E.L 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 9 Cm

DATE DRILLED = 3rd FEB. 1987

GRID COORDINATES

NORTHING – REF. PLAN N° 4/87.
EASTING – 1590m N.
R.L – 552m E.

ASSAYED BY = AMDEL

ASSAY DATE =

ASSAY REPORT N° = AC 2651/87.

DRILL ASSAY RECORD

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
0	1	1	40·5	3·85	45·9			
1	2	1	39·2	3·40	42·3			
2	3	1	31·6	2·70	41·5			
3	4	1	42·9	3·70	34·4			
4	5	1	44·3	3·35	34·1			
5	6	1	40·6	3·65	39·1			
6	7	1	36·4	2·30	41·0			
7	8	1	36·7	2·55	43·1			
8	9	1	34·4.	2·80	44·0.			

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DRILL HOLE N° - WL3

LOCATION - LIMESTONE CREEK - E.L 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 30·0m

DATE DRILLED = 2ND FEB. 1967.

GRID COORDINATES

NORTHING - REF. PLAN N° 4/87.

EASTING - 1592m N.

R.L - 557mE

ASSAYED BY = AMDEL

ASSAY DATE =

ASSAY REPORT N° = AC 2851/67

DRILL ASSAY RECORD

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
0	3	3	31·6	3·10	46·2			
3	6	3	41·2	3·50	37·2			
6	9	3	36·5	2·65	43·0			
9	12	3	39·6	2·30	41·8			
12	15	3	36·8	2·30	40·9			
15	18	3	32·5	2·65	46·4			
18	21	3	22·8	5·95	47·7			
21	24	3	31·2	2·90	46·1			
24	27	3	29·3	2·45	50·4			
27.	30	3	28·3	2·50	47·5			

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DRILL HOLE N° - WL 4

LOCATION - LIMESTONE CREEK - E.L 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 11·0 m

DATE DRILLED = 3rd FEB. 1987

GRID COORDINATES

NORTHING - REF. PLAN N° 4/87

EASTING - 1590m N.

R.L - 563m E.

ASSAYED BY = AMDEL

ASSAY DATE =

ASSAY REPORT N° = A°. 2851/87

DRILL ASSAY RECORD

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
0	1	1	37·5	3·60	44·4			
1	2	1	30·0	2·85	43·3			
2	3	1	34·4	3·60	35·7			
5	6	1	36·3	3·25	42·2			
6	7	1	40·6	2·25	38·1			
7	8	1	35·5	2·80	45·7			
8	9	1	38·6	2·20	41·1			
10	11	1	35·9	2·50	50·0			

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DRILL HOLE N° – W.L.5

LOCATION – LIMESTONE CREEK – E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 24.0m

DATE DRILLED = 14/15 FEB. 1967

GRID COORDINATES

NORTHING – REF. PLAN N° 44/67

EASTING – 1586m N.

RL – 533.5m E.

ASSAYED BY = AMDEL

ASSAY DATE =

ASSAY REPORT N° = Rc. 2694/67

DRILL ASSAY RECORD

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
0	1	1	40.1	4.10	45.1			
1	2	1	36.6	3.35	43.4			
2	3	1	27.6	3.35	44.8			
3	4	1	42.6	4.55	35.4			
5	6	1	39.0	3.70	41.0			
6	7	1	31.1	3.35	49.1			
7	8	1	38.8	2.70	42.0			
8	9	1	36.3	3.20	41.9			
9	10	1	39.1	2.60	40.9			
10	11	1	45.4	2.25	29.7			
11	12	1	34.2	3.10	47.2			
12	13	1	31.7	2.95	48.3			
13	14	1	36.5	2.60	43.3			
14	15	1	37.5	2.50	37.5			
15	16	1	36.0	2.60	41.4			

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DRILL HOLE N° – WL5

LOCATION – LIMESTONE CREEK – E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 24·0m

DATE DRILLED = 4/5th FEB. 1987

GRID COORDINATES

NORTHING – REF. PLAN N°. 4/87

EASTING – 1586m. N.

R.L – 533·5m E.

ASSAYED BY = AMDEL.

ASSAY DATE =

ASSAY REPORT N° = Ac 2894/87.

DRILL ASSAY RECORD.

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
16	17	1	31·9	2·85	47·2			
17	18	1	32·0	2·85	46·8			
18	19	1	27·6	5·00	47·4			
20	21	1.	30·5	3·25	49·0			
21	24	3.	26·9	5·45	48·8.			

WL 6.

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DRILL HOLE N° – W.L.6

LOCATION – LIMESTONE CREEK – E.L. 17/68 (WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 32.0m

DATE DRILLED = 7th FEB. 1987.

GRID COORDINATES

NORTHING – REF. PLAN ~~A~~67

EASTING – 1576m.N.

RL – 517m E.

ASSAYED BY = AMDEL.

ASSAY DATE =

ASSAY REPORT N° = AE 2694/87

DRILL ASSAY RECORD

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
0	3	3	4.50	2.65	50.7			
3	6	3	23.4	4.65	47.9			
6	9	3	38.3	2.65	44.4			
9	12	3	32.3	3.10	49.1			
12	15	3	29.4	2.65	46.2			
15	18	3	31.0	3.25	47.2			
18	21	3	30.8	2.90	47.6			
21	24	3	26.7	3.70	48.0			
24	27	3	27.5	3.10	51.2			
27	30	3	23.9	4.85	48.6			
30	32	2	21.9	6.60	46.6			

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027

DRILL HOLE. N° - WL 7

LOCATION - LIMESTONE CREEK - E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 6·0m

DATE DRILLED = 8th FEB. 1987.

GRID COORDINATES

NORTHING - REF PLAN. N° 4/87.

EASTING - 1662m N.

R.L - 483m E.

ASSAYED BY = AMDEL

ASSAY DATE =

ASSAY REPORT N° = AC 2894/87.

DRILL ASSAY RECORD.

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
0	3	3	1·42	0·40	51·5			
3	6	3	32·4	3·45	45·2.			

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DRILL HOLE N° - W.L.8

LOCATION - LIMESTONE CREEK. - E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 21·0m

DATE DRILLED = 8th FEB. 1987

GRID COORDINATES

NORTHING - REF. PLAN N° H/87.
EASTING - 1667m N.
R.L. - 470m E

ASSAYED BY = AMDEL.
ASSAY DATE =
ASSAY REPORT N° = AC. 2674/87.

DRILL ASSAY RECORD

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
0	3	3	23·5	3·65	52·3			
3	6	3	36·1	3·85	43·8			
9	12	3	35·2	3·70	45·9			
12	15	3	41·3	4·25	36·4			
15	18	3	35·9	2·75	44·8			
18	21	3	36·3	3·25	43·0			

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DRILL HOLE N° - WL 9

LOCATION 029 - LIMESTONE CREEK - E.L 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 21·0m

DATE DRILLED = 8th FEB. 1967

GRID COORDINATES

NORTHING - REE PLAN N° 4E7

EASTING - 1673mN.

R.L - 456mE.

ASSAYED BY = AMDEL.

ASSAY DATE =

ASSAY REPORT N° = AR 2894/67

DRILL ASSAY RECORD.

DEPTH(m)		INTERVAL	ASSAYS					
FROM	TO	(m)	CaO %	MgO %	SiO_2 %			
0	3		0·610	0·170	49·6			
3	6		0·430	0·160	51·2			
6	9		0·070	0·210	50·6			
9	12		0·770	0·380	52·0			
12	15		1·33	0·590	50·5			
15	18		12·0	3·50	47·8			
18	21		6·05	2·50	47·3			

APPENDIX NO. 1C

LIMESTONE CREEK - WOLLASTONITE INVESTIGATIONS

DDH 519 + DDH 520

Assay Logs - CaO, MgO, SiO2, CO2
Calculated CaSiO3

031

DRILL HOLE N° – DDH 519.

LOCATION – LIMESTONE CREEK – E.L 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 200.00m.

DATE DRILLED = FEB/MAY 1987.

GRID COORDINATES — REF PLAN 4/87

NORTHING – 1583m NORTH

EASTING – 517m EAST

R.L – –

ASSAYED BY = ANALABS

ASSAY DATE = 10th SEPT. 1987

ASSAY REPORT N° = 13668.

DRILL ASSAY RECORD

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DEPTH(m) FROM (m)	DEPTH(m) TO (m)	INTERVAL (m) SAMPLE N°	ASSAYS CaO %	MgO %	SiO_2 %	CO_2 %		CALCULATED $CaSiO_3$
3.05	4	62373	31.50	2.35	49.5	2.50		58.62
4	5	62374	40.00	1.60	40.0	10.80		54.48
5	6	375	35.50	2.05	42.5	9.20		49.30
6	7	376	31.50	2.10	49.5	1.85		60.38
7	8	377	42.50	1.40	31.5	20.00		35.21
8	9	378	35.50	2.30	45.0	9.80		47.64
9	10	379	34.50	2.00	48.5	4.80		56.83
10	11	380	32.50	2.10	52.0	2.10		61.83
11	11.61	381	31.50	2.00	51.5	4.00		58.21
11.61	12.21	382	13.30	1.90	60.0	0.34		26.66
12.21	12.81	383	41.00	2.05	40.5	13.20		50.13
12.81	13.35	384	35.00	1.85	46.0	7.80		51.89
13.35	14.12	385	33.00	2.15	51.5	5.00		55.20
14.12	15.17	386	32.50	2.05	52.0	5.60		52.61
15.17	16.	387	36.50	2.10	49.5	4.00		65.25
16	17.	388	34.00	2.00	47.5	4.40		58.83

D 519
PAGE N° 1/2

032

DRILL HOLE N° – DDH. 519

LOCATION – LIMESTONE CREEK – E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 200.00m.

DATE DRILLED = FEB/MAY. 1987

GRID COORDINATES

NORTHING – REF. PLAN. 4/87 1883m N

EASTING – 517m E.

R.L. –

ASSAYED BY = ANALABS.

ASSAY DATE = 10th SEPT 1987

ASSAY REPORT = 53668.

DRILL ASSAY RECORD

825032

DEPTH(m) FROM (m)	DEPTH(m) TO (m)	INTERVAL (m) SAMPLE N°	ASSAYS CaO%	MgO%	SiO_2%	CO_2%		CALCULATED $CaSiO_3$
17	18	623689	31.0	2.00	48.5	3.50		55.00
18	19	390	31.0	2.05	49.0	4.20		53.13
19	20	391	28.0	2.00	53.0	3.00		50.13
20	21	392.	32.0	2.55	47.5	6.40		49.40
21	22	393	33.0	1.95	46.5	6.60		50.96
22	23	394	27.5	1.95	53.0	4.80		44.33
23	24	395	27.5	1.95	52.5	5.60		42.15
24	25	396	30.0	2.05	49.5	2.05		56.76
25	26	397	28.5	1.95	47.0	5.00.		45.88
26	27.00	398	31.0	2.05	48.0	5.60		49.40
27	28.30	399.	28.5	2.15.	52.5	2.70		51.90.

D 519.

033

DRILL HOLE N° – DDH 520.

LOCATION – LIMESTONE CREEK – E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 200.00m

DATE DRILLED = MAY/AUG. 1987.

GRID COORDINATES — REF. PLAN N° 4467

NORTHING – 1896 m N.

EASTING – 439m E.

RL –

ASSAYED BY = ANALABS.

ASSAY DATE = 10th SEPT. 1987.

ASSAY REPORT N° = 53668.

DRILL ASSAY RECORD

825033

DEPTH(m)		INTERVAL	ASSAYS					
FROM (m)	TO (m)	(m) SAMPLE N°	CaO %	MgO %	SiO_2 %	CO_2 %		CALCULATED $CaSiO_3$
2	3	62400	29.50	2.65	49.0	4.20		50.01
3	4	401	43.50	3.25	39.5	14.00		53.24
4.35	5.0	402	44.00	2.95	39.0	15.20		51.16
5	6	403	47.00	3.55	35.0	18.50		48.68
6	7	404	46.00	3.75	33.5	19.50		43.91
7	8	405	46.00	3.25	31.5	16.60		51.58
8	9	406	38.50	2.70	38.0	13.20		44.95
9	10	407	31.50	2.55	44.0	7.60		45.26
10	11	408	44.00	2.60	34.0	17.00		46.61
11	12	409	47.00	2.80	35.0	18.20		49.30
12	13	410	36.00	3.80	56.0	0.60		73.02
13	14	411	26.00	2.55	56.0	4.40		42.26
14	15	412	21.50	2.30	55.5	3.80		34.49
15	16	413	42.50	2.75	36.5	15.80		46.40
16	17	414	43.00	3.00	38.0	14.20		51.58
17	18	415	35.50	2.15	50.5	3.65		63.90

034

DRILL HOLE N° – DDH 520.

LOCATION – LIMESTONE CREEK. – E.L. 17/68. (WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 200.00m

DATE DRILLED = MAY/AUG. 1967

GRID COORDINATES — REF. PLAN. N° 11/87

NORTHING – 1890m N.

EASTING – 439m E.

R.L. –

ASSAYED BY = ANALABS.

ASSAY DATE = 10th SEPT 1967

ASSAY REPORT N° = 53668.

DRILL ASSAY RECORD

825034

DEPTH(m) FROM (m)	DEPTH(m) TO (m)	INTERVAL (m) SAMPLE N°	ASSAYS CaO %	MgO %	SiO_2 %	CO_2 %		CALCULATED $CaSiO_3$
18	19	62416	41.00	1.90	40.0	12.60		51.16
19	20	417	23.50	2.75	49.0	3.45		60.28
20	21	418	38.00	1.60	37.5	13.40		43.29
21	22	419	44.50	2.25	34.0	15.40		51.58
22	23	420	38.00	2.80	43.5	8.60		56.03
23	24	421	35.50	2.35	47.0	6.60		56.14
24	25	422	38.50	1.95.	40.5.	11.00		50.75.
25	26	423	43.50	2.20	31.5	16.40		46.81
26	27	424	37.00	2.45	42.5	8.60		53.96
27	28	425	31.50	2.50	48.0	5.60		50.44
28	29	426	35.00	2.45	44.5	8.40		50.36
29	30	427	31.00	2.45	47.5	5.40		49.42
30	31	428	32.50	2.35	46.5	5.60		51.99
31	32	429	32.00	2.50	45.0	5.00		53.13
32	33	430	33.00	2.35	48.0	7.00		49.92
33	34	431.	30.50	3.15.	48.0	7.20		44.22

035

DRILL HOLE. N° – DDH 520

LOCATION – LIMESTONE CREEK. – E.L 17/68.
(WOLLASTONITE OCCURRENCES).

GRID COORDINATES — REF. PLAN. N° 4/87

NORTHING – 1898m N
EASTING – 439m E
R.L – –

DEPTH DRILLED (m) = DDH 520 (200.00m)

DATE DRILLED = MAY, AUG. 1987

ASSAYED BY = ANALABS

ASSAY DATE = 10th SEPT. 1987

ASSAY REPORT N° = 53666.

DRILL ASSAY RECORD

825035

DEPTH(m) FROM (m)	DEPTH(m) TO (m)	INTERVAL (m) SAMPLE N°	ASSAYS CaO %	MgO %	SiO_2 %	CO_2 %		CALCULATED $CaSiO_3$
34	35	432	29.00	3.35	50.50	4.60		47.95
35	36	62433	32.00	2.10	48.0	8.40		44.12
36	37	434	29.50	2.15	51.0	5.40		46.92
37	38	435	27.50	2.35	53.0	3.60		47.44
38	39	436	31.00	2.45	51.0	4.40		52.61
39	40	437	32.00	2.30	47.5	6.20		49.92

D.520
PAGE N°. 3/3.

APPENDIX NO. 1D

LIMESTONE CREEK - WOLLASTONITE INVESTIGATIONS

Bench Test Work - Wollastonite Samples
- Abermet
- Department of Mines, Launceston

037

825037

Aberfoyle Resources Limited

Incorporated in Victoria

TECHNICAL SERVICES DIVISION

39 River Road
Wivenhoe
Tasmania 7320
Australia
PO Box 952
Burnie
Tasmania 7320
Telephone: (004) 31 6333
Facsimile: (004) 31 6896
Telex: AA59061

FILE NO: 30.6.4

4th April, 1986

Mr. N. E-Moony,
Tasmanian Mines N.L.,
P.O. Box 815,
BURNIE. TAS. 7320

Dear Nick,

Tasmanian Mines O/N 5758 - Wollastonite Sample

Dry sample received 1/4/86

Total Weight - 11689 grams

Wet Screen at 38 microns

	Wt(g)	Wt(%)
+38	8073	69.1
-38	31616	30.9
Total	11689	

+ 38 fraction then passed through Rapid dry magnetic separator.

1.0 amp	Ferro	Mag 1(4mm)	Mag 2(3mm)	Non-Mags
Wt (g)	0.3	2.9	6.8	231.6
Wt (%)	0.1	1.2	2.8	95.9
1.5 amp				
Wt (g)	0.4	4.5	23.7	230.5
Wt (%)	0.1	1.7	9.2	89.0
2.4 amp				
Wt (g)	0.8	10.6	184.8	344.1
Wt (%)	0.2	2.0	34.2	63.6

-38 fraction still retained at Abermet in wet state. Unable to settle.

Your sincerely,

Kevin Gibbs,
Laboratory Supervisor.

038

825038

Aberfoyle Resources Limited

Incorporated in Victoria

TECHNICAL SERVICES DIVISION

39 River Road
Wivenhoe
Tasmania 7320
Australia
PO Box 952
Burnie
Tasmania 7320
Telephone: (004) 31 6333
Facsimile: (004) 31 6896
Telex: AA59061

FILE NO: 30.6.4

3rd June, 1986

Mr. N. E-Moony,
Tasmania Mines N.L.,
P.O. Box 815,
BURNIE. TAS. 7320

Dear Nick,

Re: Wollastonite Testwork - O/N 6109

Testwork on wollastonite to enable you to identify diopside has been finalised and the results are shown herewith.

As requested the material was sized and fractions submitted for magnesium analysis.

Results obtained were as follows :

Sieve Size (microns)	%Wt	%Mg	%Dist.
+300	11.3	2.90	13.9
+150	28.7	2.65	32.3
+ 75	14.0	2.60	15.5
+ 38	8.9	2.20	8.3
- 38	37.1	1.90	30.0
Head (Calc.)	100.0	2.35	100.0

Testwork was conducted on crushed material previously submitted on the 1/4/86.

This was supplied for magnetic separator testwork which was completed on O/N 5758.

Trust this is to your satisfaction and finds you well.

RECEIVED 5 JUN 1986 TASMANIA MINES Rael.

Yours sincerely,

G. C. Tapp,
Technical Officer.

ABERFOYLE LIMITED

CENTRAL METALLURGICAL SERVICES

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SIZING SHEET — 1

Project No. 039/6109 Lab. No. 86/62 Testwork by KG

Date 8/5/86 Checked by

Sieve Set No.

Sample Ref. and Description WOLLASTONITE Cyclosizer No.

Original wt. 144.12 g

Wet sieve o/s wt. 137.9 g ... %

Sieved wt. loss 0.02 g ... %

*–38 µm collected 6.66 g

*–2/–5 µm collected ... g

+38 µm SIZING BY:–

Hand wet sieving (Pretreatment)

Ro – Tap dry sieving ... min

SIEVE DATA:

BS410 standard

Round 200mm

Woven wire

Stainless steel

Square aperture

CYCLOSIZER DATA:

Run time 20 minutes

Water temperature ... °C

Rotameter 185mm

DECANT DATA:

Settling height ... mm

Settling time ... min.

Water temp. ... °C

Dispersant(s) ...

No. of decant ...

s.g. of dry solids ...

–38 µm SIZING BY:–

Decant/Cyclosizer

CMS No.	Sieve Size (Microns)	g	% Wt.	% Mg	Units	Dist
	+ 850					
	– 850 + 600					
	– 600 + 425					
3292	– 425 + 300	16.28	11.3	2.90	47.21	13.9
	– 300 + 212					
3293	– 212 + 150	41.36	28.7	2.65	109.60	32.3
	– 150 + 106					
3294	– 106 + 75	20.17	14.0	2.60	52.44	15.5
	– 75 + 53					
3295	– 53 + 38	12.82	8.9	2.20	28.20	8.3
3296	† (CS1) – 38	53.47	37.1	1.90	101.59	30.0
	(CS2)					
	(CS3)					
	(CS4)					
	(CS5)					
	(CS6)					
	(CS7)					
	Calculated Head	144.10	100.0	2.35	339.04	100.0
	Assay Head					

A16920

802

* Where Applicable † CS = Cyclosizer Spigot

N.B. Sub-sieve (–38 µm) sizes are based on cassiterite of s.g. = 7.1

Remarks 3296 – 38

825040

5th March 1986

Memo to: Director of Mines
From: Chief Chemist & Metallurgist

Attention Mr. R. Bottrill

B863

In an attempt to produce a high grade wollastonite product from the wollastonite sample from Tasmania Mines N.L. deposit at Kara, Reg. No 851468, a flotation test (N3) was carried out resulting in two flotation concentrates and a flotation tailing.

The products are described as follows:-

N3 F1C - Calcite concentrate.
N3 F2C - Diopside concentrate
N3 F2T - Wollastonite product

The products have been assayed by XRF with the following results:-

Product	Assay %											
	SiO_2	TiO_2	Al_2O_3	Fe_2O_3	MnO	MgO	CaO	Na_2O	K_2O	P_2O_5	SO_3	L.O.I
N3 F1C	16.4	0.16	1.15	1.30	0.01	1.39	43.1	0.6	0.19	2.7	13.5	20.3
N3 F2C	49.4	0.30	2.30	1.70	0.02	4.97	37.6	0.19	0.38	0.35	0.94	1.95
N3 F2T	47.0	0.25	1.36	1.04	0.02	3.86	41.8	0.24	0.12	0.20	0.25	4.21

Using these results and the formulae - calcite $CaO.CO_2$, diopside $CaO.MgO.2SiO_2$, wollastonite $CaO.SiO_2$, the compositions of the various products were calculated with the following result.

Product	% Calcite	Diopside	Wollastonite
N3 F1C	36.2	1.5	35.9 - 31.6
N3 F2C	3.5	5.2	72.8 - 95.1
N3 F2T	7.5	4.0	75.7 - 91.0

According to these figures, the diopside content seems to be lower than what was estimated in the feed sample, viz. about 20%. Most likely the diopside is an isomorph that contains the Al_2O_3 and Fe_2O_3 that is shown to be present, which would increase the calculated diopside content.

The CO_2 content of the product N3 F1C was determined and found to be 16.6%. Assuming that this was present only as calcite, then the calcite content is 37.8%. This is a little higher than the estimate above of 36.2%. This may indicate the presence of small amounts of other carbonates.

The SO_3 content of this product is high. Some of the sulphur may be present as sulphide, but would not account for the high figure. It suggests that gypsum may be present. Also the P_2O_5 content is comparativel high in this product.

Samples of these three products have been forwarded for an estimate of the mineral content of each produc

Senior Metallurgist .....

(H.K. Wellington)
Chief Chemist & Metallurgist

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NOTE—ALL CORRESPONDENCE TO BE ADDRESSED TO THE DIRECTOR OF MINES

DEPARTMENT OF MINES

TELEX No.: 58276
TELEPHONE: 30 8033
WHEN TELEPHONING OR
CALLING ASK FOR

R. Bottrill EXT No. 2553

GORDON'S HILL RD
P.O. BOX 56
ROSNY PARK
TASMANIA 7018

Chief Chemist & Metallurgist,
Department of Mines,
LAUNCESTON.

ATTENTION: L. Rhodes

R863: WOLLASTONITE FROM TASMANIAN MINES N.L., KARA.
- MINERALOGY OF PRODUCTS FROM FLOTATION TESTWORK.

These products, submitted for mineralogical examination to assist in the upgrading of wollastonite from this deposit, were identified as follows:

N3 F1C Calcite Concentrate
N3 F2C Diopside Concentrate
N3 F2T Wollastonite Concentrate

Assay details were provided with the memo of 5/3/86 (from Chief Chemist and Metallurgist to Director of Mines). A comparison with the analysis of wollastonite feed in the related memo of 31/10/85 indicates that F2C and F2T show little difference in composition from the feed, ie. no significant beneficiation has taken place.

The mineralogy of the products was determined with a combination of X-ray diffraction and high-power microscopic observation (hindered by the fine grainsize of the products). Approximate mineralogical constitutions are given below:

N3 F1C: 40-50% Calcite
20-30% Gypsum
20-30% Wollastonite
5-10% Diopside

N3 F2C: 70-80% Wollastonite
20-30% Diopside
<5% Calcite
trace opaques, ? haematite, ? plagioclase

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043

N3 F2T: 80-90% Wollastonite
10-20% Diopside
5-10% Calcite
trace sphene, opaques, amphibole, plagioclase, ? chlorite

These determinations agree reasonably well with the given assays.

The separation of wollastonite and diopside is difficult, as evidenced by the large number of composite particles. This is most important for F2T, which is relatively coarse-grained (Ave. about 40 µm). This sample has on average about 10% (but up to 50%) diopside locked in wollastonite grains, with somewhat less wollastonite attached to diopside grains. F2C, being considerably finer (Ave. about 20 µm) has less composites, while F1C, being very fine grained (Ave. about 10 µm) has far fewer composites. Most of the diopside locked with wollastonite is finer than 10 µm in size and is often completely enclosed. Only minor amounts of calcite and accessories are locked with other grains. These composite particles are unlikely, however, to be the primary reason for the poor mineral separation in these products. A great deal of free grains exist in all products (especially in the <10µm fractions).

The sources of the major impurities are probably a number of mineral phases, rather than just diopside/augite solid solution.

TiO_2 may be present up to about 1% in diopside, but most is likely to reside in sphene and opaques (? ilmenite).

Iron may be present up to 10% or more in diopside, which is supported by its faint greenish colouration. There is, however, a substantial concentration of opaques (iron oxides) in F2C, the sample with the highest Fe_2O_3 assay, and these opaques (? haematite and magnetites) would contribute a significant proportion of the iron. The moderate iron content of F1C may also indicate a significant amount of $FeCO_3$ solid solution in the calcite (perhaps a few percent).

Al_2O_3 is unlikely to be greater than about 2% in diopside in rocks of this type: ie. it is probably not augite. Plagioclase is present in these samples and a few percent would account for most of the Al_2O_3.

In summary, the product F1C upgraded calcite significantly, as expected, but was contaminated by gypsum (during treatment with sulphuric acid?). The product F2C only slightly upgraded diopside, significantly upgraded the iron oxides and probably upgraded plagioclase, but free wollastonite and wollastonite-diopside composites are unacceptably high. The product F2T is left with only slightly less calcite, diopside and undesirable accessory phases than the original product. Crushing to less than 10 µm would be necessary to liberate most diopside, but would probably not affect the flotation significantly.

(H. Murchie)
DIRECTOR OF MINES

APPENDIX NO. 2

EVALUATION DRILLING - KARA NORTH 266 ZONE

2A Evaluation Drilling - Assay Logs
2B DDH 516/516A - Assay Logs

KARA NORTH 266 ZONE - EVALUATION DRILLING.

A. PROGRAMME A.

HOLE N°s = 900 TO 944.

N° OF HOLES = 52

TOTAL METRES DRILLED = 918m.

AV DEPTH PER HOLE = 17.65m.

DATES DRILLED = DEC 15, 16, 17, 18, 19, 22 + 23 1987.

N° OF SAMPLES = 306 (ASSAYED WO_3)

SURVEYED = P.D.A.

B. PROGRAMME B.

HOLE N°s. = 1110 TO 1131., 1161 TO 1172

N° OF HOLES = 64

TOTAL METRES DRILLED = 886m

AV DEPTH PER HOLE = 13.83m

DATES DRILLED = 16, 17, 19, 24, 26, 27 JAN 1987.

N° OF SAMPLES = 295. (ASSAYED. WO_3)

SURVEYED = P.D.A.

DRILL SAMPLE LOG RECORD.

LOCATION = KARA NORTH 266 ZONE.

046

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
900	0	3	0·018	X				15
	3	6	0·017	x				
	6	9	0·013	x				
	9	12	0·009	x				
	12	15	0·015.	x				
901	0	3	0·094	x	7111·92	7191·90	446·94	18
	3	6	0·069	x				
	6	9	0·054	x				
	9	12	0·051	x				
	12	15	0·050	x				
	15	18	0·034	x				
902	0	3	0·210	x	7121·45	7188·60.	447·18	15
	3	6	0·140	x				
	6	9	0·200	x				
	9	12	0·134	x				
	12	13	0·144	x				
903	0	3	0·166	x				18
	3	6	0·040	x	7131·10	7183·99	448·34	
	6	9	0·030	x				
	9	12	0·052	x				
	12	15	0·120	x				
	15	18	0·074	x				
904	0	3	0·180	X	7138·18	7176·95	449·81	18
	3	6	0·024	x				

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047

DRILL SAMPLE LOG RECORD

LOCATION = KARA N. 266 ZONE

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
904	6	9	0·024	Y				
(CONTINUED)	9	12	NIL	Y				
	12	15	0·012	Y				
	15	18	0·021	Y				
905	0	3	0·142	X	7145·11	7170·25	451·50	18
	3	6	0·154	X				
	6	9	0·130	X				
	9	12	0·184	X				
	12	15	0·170	Y				
	15	18	0·230	Y				
906	0	3	0·272	X	7149·12	7166·53	452·75	18
	3	6	0·222	X				
	6	9	0·262	X				
	9	12	0·972	Y				
	12	15	1·39%	Y				
	15	18	1·28%	Y				
907	0	3	0·615	X	7154·08	7169·11	453·68	18
	3	6	0·296	Y				
	6	9	0·272	Y				
	9	12	0·076	Y				
	12	15	0·138	Y				
	15	18	0·214	Y				
907A	0	3	0·630	X	7154·08	7169.11	453·68	15
(65° N)	3	6	0·184	Y				

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048

DRILL SAMPLE LOG RECORD.

LOCATION = KARA. N. 266 ZONE.

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
907A	6	9	0·124	Y				
(CONTINUED)	9	12	0·114	Y				
	12	15	0·256	Y				
908	0	3	0·202	X	7163·64	7172·58	455·64	18
	3	6	0·244	Y				
	6	9	0·076	Y				
	9	12	0·091	Y				
	12	15	0·074	Y				
	15	18	0·154	Y				
908A	0	3	0·246	X	7163·64	7172·58	455·64	18
(INC 70°N)	3	6	0·254	Y				
	6	9	0·268	Y				
	9	12	0·110	Y				
	12	15	0·083	Y				
	15	18	0·051	Y				
910	0	3	0·880	X	7168·19	7180·64	456·4	15
	3	6	0·620	X				
	6	9	0·180	X				
	9	12	0·178	X+Y				
	12	15	0·360	X+Y				
910A	0	3	0·665	X	7168·19	7180·64		15
(INC 70°N)	3	6	0·248	X				
	6	9	0·340	X+Y				
	9	12	0·352	X+Y				

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049

DRILL SAMPLE LOG RECORD.

LOCATION = KARA N. 266 ZONE.

HOLE N°.	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
910 A	12	15	0·346	X + Y				
(CONTINUED)								
911	0	3	0·216		7160·64	7182·39	4555·86	24
	3	6	0·104					
	6	9	0·077					
	9	12	0·069					
	12	15	0·046					
	15	18	0·046					
	18	21	0·044					
	21	24	0·031					
912	0	3	0·077		—	—	—	24
	3	6	0·020					
	6	9	0·015					
	9	12	0·007					
	12	15	0·007					
	15	18	0·010					
	18	21	0·015					
	21	24	0·006					
913	0	3	0·306		7161·59	7201·94	4555·65	18
	3	6	0·072					
	6	9	0·018					
	9	12	0·038					
	12	15	0·005					
	16	18	0·008					

825049

DRILL SAMPLE LOG RECORD:- LOCATION = KARA N. 266 ZONE

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
914	0	3	0·007		7171·23	7187·44	456·84	24
	3	6	0·011					
	6	9	0·017					
	9	12	0·009					
	12	15	0·008					
	15	18	0·010					
	18	21	0·025					
	21	24	0·016.					
915	0	3	1·55%		7173·45	7179·71.	457·88	24
	3	6	0·515					
	6	9	0·176					
	9	12	0·092					
	12	15	0·152	May 20				
	15	18	0·063					
	18	21	0·228	May 15				
	21	24	0·210.	May 15.				
914A	0	3	0·059		7171·23	7187·44	456·84	24
	3	6	0·011					
	6	9	0·006					
	9	12	0·008					
	12	15	0·005					
	15	18	0·007					
	18	21	0·009					
	21	24	0·012					

DRILL SAMPLE LOG RECORD.

LOCATION = KARA N. 266 ZONE.

051

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
916	0	3	1·66		7177·62	7168·80	46131	12
	3	6	2·42					
	6	9	1·85					
	9	12	1·93.					
917	0	3	0·420		7184·36	7170·87	46240	18
	3	6	0·162					
	6	9	0·090					
	9	12	0·092					
	12	15	0·560					
	15	18	0·560.					
918.	0	3	0·630		-	-	-	24
	3	6	2·01					
	6	9	0·278					
	9	12	0·650					
	12	15	0·182					
	15	18	0·260					
	18	21	0·20					
	21	24	0·124.					
918A	0	3	0·420		-	-	-	24.
	3	6	1·44					
	6	9	1·14					
	9	12	0·920					
	12	15	0·396					
	15	18	0·458.					

825051

052 DRILL SAMPLE LOG RECORD.

LOCATION. =

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
918A	18	21	0.575					
(CONTINUED)	21	24	0.282					
919	0	3	0.202		7168.03	7162.40	458.46	18
	3	6	0.152					
	6	9	0.336					
	9	12	0.116					
	12	15	0.100					
	15	18	0.106					
920	0	3	0.084		7164.03	7164.45	457.38	18
	3	6	0.128					
	6	9	0.086					
	9	12	0.038					
	12	15	0.091					
	15	18	0.120					
921	0	3	0.444		7166.29	7154.84	457.38	30
	3	6	0.510					
	6	9	0.438					
	9	12	0.560					
	12	15	0.226					
	15	18	0.059					
	18	21	0.580					
	21	24	0.795					
	24	27	0.144					
	27	30	0.454					

825052

DRILL SAMPLE LOG RECORD.

LOCATION. = KARA. N. 266 ZONE.

053

HOLE N°.	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
922	0	3	0·228		7163 44	7156·48	457·12	21
	3	6	0·360					
	6	9	0·895					
	9	12	1·05					
	12	15	0·332					
	15	18	0·560					
	18	21	0·535.					
924	0	3	0·158		7165·14	7148·59	455·78	15
	3	6	0·332					
	6	9	0·510					
	9	12	0·915					
	12	15	0·535.					
924 A.	0	3	0·152		7165·14	7148·59	455·78.	12
	3	6	0·865					
	6	9	1·55					
	9	12	1·26					
925	0	3	0·154		7159·07	7150·97	455·12	12
	3	6	0·244					
	6	9	0·414.					
	9	12	0·320					
926	0	3	0·218		7155·62	7153·80.	454·49	24
	3	6	0·555					
	6	9	0·488					
	9	12	1·47.					

825053

DRILL SAMPLE LOG RECORD. 034

LOCATION = KARA N. 266 ZONE.

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
926	12	15	0·280					
(CONTINUED	15	18	0·140					
	18	21	0·128					
	21	24	0·126.					
927	0	3	0 092		7151·56	7158·24.	453·29	24.
	3	6	0·140					
	6	9	0·198					
	9	12	0·112					
	12	15	0·158					
	15	18	0·855					
	18	21	0·456					
	21	24	0·362.					
928.	0	3	0·124		7146. 74	7158·93.	452·34	15
	3	6	0·071					
	6	9	0·214					
	9	12	0·206					
	12	15	0·140.					
929	0	3	0·100		7141·59	7158·30	451·60	18
	2	6	0·306					
	6	9	0·362					
	9	12	0·328					
	12	15	0·228					
	15	18	0·302					

825054

05 DRILL SAMPLE LOG RECORD

LOCATION = KARA N. 266 ZONE

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
930	0	3	0·084		7157·44	7143·96	455·73	
	3	6	0·368					
	6	9	0·196					
	9	12	0·194					
	12	15	0·182					
931	0	3	0·226		7151·38	7146·33	455·05	9
	3	6	0·164					
	6	9	0·166					
932	0	3	0·013		7144·28	7178·56	450·28	24
	3	6	0·015					
	6	9	0·015					
	9	12	0·020					
	12	15	0·018					
	15	18	0·019					
	18	21	0·049					
	21	24	0·043					
933	0	3	0·073		715101	7174·99	452·62	24
	3	6	0·069					
	6	9	0·096					
	9	12	0·130					
	12	15	0·055					
	15	18	0·042					
	18	21	0·014					
	21	24	0·053					

056 DRILL SAMPLE LOG RECORD. LOCATION = HARA NORTH 266 ZONE

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
933A	0	3	0·254		7151·01	7174·99	455262	18
	3	6	0·244					
	6	9	0·058					
	9	12	0·072					
	12	15	0·138					
	15	18	0·152.					
934	0	3	0·272		7156·32	7174·39	454·28	24
	3	6	0·198					
	6	9	0·110					
	9	12	0·106					
	12	15	0·048					
	15	18	0·011					
	18	24	0·013					
	21	24	0·063					
934A.	0	3	0·442		7156·32	7174·39	454·28	18
	3	6	0·448					
	6	9	0·254					
	9	12	0·124					
	12	15	0·250					
	15	18	0·216.					
935	0	3	0·152		7193·38	7171·38	465·24	18
	3	6	0·120					
	6	9	0·204					
	9	12	0·182					

825056

DRILL SAMPLE LOG RECORD. LOCATION = KARA N. 266 ZONE.

057

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
935	12	15	0·164					
(CONTINUED)	15	18	0·136.					
936			N.D.					0
937			N/D					0
938	0	3	0 018		7222·01	7162·88	472·91	9
	3	6	0·014					
	6	9	0·047					
939	0	3	0·049		7221·06	7170·11.	472·76	9
	3	6	0·066					
	6	9	0·065					
939A.	0	3	0·055		7221·06	7170·11	472·76	9
	3	6	0·057					
	6	9	0·054.					
940	0	3	0·019		7220·62	7175·92	472·87	9
	3	6	0·037					
	6	9	0·100					
941.	0	3	0·025		7220·29	7181·69	473·21	15
	3	6	0·013					
	6	9	0·013					
	9	12	0·013					
	12	15	0 008					
942	0	3	0·065		7220·14	7157·66	472·81	6
	3	6	0·065					

825057

058

DRILL SAMPLE LOG RECORD.

LOCATION = KARA N. 266 ZONE

HOLE N°	DEPTH FROM (m)	DEPTH TO (m)	ASSAY VALUE (XRF) % WO_3	ORE TYPE.	NORTH COORDINATE	EAST COORDINATE	R.L.	DEPTH DRILLED (m)
943.	0	3	0·031		7218·27	7151·83	47.35	12
	3	6	0·047					
	6	9	0·042					
	9	12	0·058					
944	0	3	0·040		7216·67	7147·06	47.57	15
	3	6	0·038					
	6	9	0·038					
	9	12	0·046					
	12	15	0·054					

825058

054

DRILL SAMPLE LOG RECORD.

KARA NORTH - EVALUATION.

SAMPLE NUMBER.	DEPTH. (m)	XRF ASSAY WO3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/ 1110	0 - 3	0·021	NIL	MED BROWN		
	3 - 6	0·015	"	BROWN		
	6 - 9	0·010	"	BROWN		
	9 - 12	0·015	"	BROWN		
	12 - 15	0·042	"	BROWN		
	15 - 18	0·027	"	BROWN.		
KN/1111	0 - 3	0·007	NIL	MED BROWN		
	3 - 6	0·006.	"	MED BROWN		
	6 - 9	0·011	"	MED BROWN		
	9 - 12	0·005	"	LIGHT BROWN		
	12 - 15	0·010	"	PINKISH BROWN		
	15 - 18	0·007	"	PINKISH BROWN		
KN/1112.	0 - 3	0·043	NIL	MED BROWN		
	3 - 6	0·022	"	MED BROWN		
	6 - 9	0·009	"	MED BROWN		
	9 - 12	0·003	"	CREAM		
	12 - 15	0·004	"	LIGHT BROWN		
	15 - 18.	0·007.	"	LIGHT BROWN		
KN/1113	0 - 3	0·016.	NIL	BROWN		
	3 - 6	0·018	"	BROWN		
	6 - 9	0·036	"	BROWN		
	9 - 12	0·011	"	LIGHT BROWN		
	12 - 15	0·006.	"	LIGHT BROWN		
	15 - 18.	0·009.	"	LIGHT BROWN		

825059

SAMPLE NUMBER.	DEPTH (m)	XRF ASSAY WO_3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/1114	0-3	0.028	NIL	MED BROWN		
	3-6	0.032	"	MED BROWN		
	6-9	0.027	"	MED BROWN		
	9-12.	0.038	"	MED BROWN.		
KN/1115	0-3	0.079	NIL	MED BROWN		
	3-6	0.089	"	LIGHT BROWN		
	6-9	0.070	"	LIGHT BROWN		
	9-12	0.086.	"	LIGHT BROWN		
	12-15	0.097	"	LIGHT BROWN.		
KN/1116.	0-3	0.174	NIL	LIGHT BROWN		
	3-6	0.865	✓✓	LIGHT BROWN		
	6-9	0.585	✓✓	LIGHT BROWN		
	9-12.	0.640.	✓✓	LIGHT BROWN		
KN/1117	0-3	0.056.	NIL	LIGHT BROWN		
	3-6	0.625	"	LIGHT BROWN		
	6-9	0.408	"	MED BROWN		
	9-12	0.258	"	MED BROWN.		
KN/1118	0-3	0.070	NIL	BROWN		
	3-6	0.063	"	BROWN		
	6-9	0.083	"	BROWN		
	9-12	0.126.	"	BROWN		
KN/1119	0-3	0.050	NIL	LIGHT GREY		
	3-6	0.172	"	BROWN		
	6-9.	0.172	"	LIGHT BROWN.		

3
061

SAMPLE NUMBER.	DEPTH (m)	XRF ASSAY WO_3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/1120	0-3	0.055	NIL	LIGHT GREY		
	3-6	0.186	"	DARK BROWN		
	6-9	0.140	"	DARK BROWN		
	9-12	0.154	"	LIGHT BROWN		
KN/1121	0-3	0.326		MED BROWN		
	3-6	1.02		MED BROWN		
	6-9	0.690		MED BROWN		
	9-12	0.274		MED BROWN		
KN/1122	0-3	0.216		MED BROWN		
	3-6	0.476		BROWN		
	6-9	0.294		LIGHT BROWN		
	9-12	0.127		MED BROWN		
	12-15	0.194		MED BROWN		
KN/1123	0-3	0.392		BROWN		
	3-6	0.136		BROWN		
	6-9	0.142		BROWN		
	9-12	0.124		BROWN		
KN/1124	0-3	0.043		BROWN		
	3-6	0.040		BROWN		
	6-9	0.050		BROWN		
KN/1125	0-3	0.052		BROWN		
	3-6	0.056		BROWN		
	6-9	0.029		BROWN		
KN/1126	0-3	0.009		DARK BROWN		
	3-6	0.026		DARK BROWN		
	6-9	0.013		DARK BROWN		

825061

4/062

SAMPLE NUMBER.	DEPTH (m)	XRF ASSAY WO₃	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/1126 (CONT)	9-12	0.014.		DARK BROWN.		
KN/1127	0-3	0.044		LIGHT BROWN		
	3-6	0.023		LIGHT BROWN		
	6-9	0.029		LIGHT BROWN		
	9-12	0.046.		LIGHT BROWN		
KN/1128	0-3	0.042		LIGHT BROWN		
	3-6	0.012		LIGHT BROWN		
	6-9	0.027		LIGHT BROWN		
	9-12	0.029		LIGHT BROWN		
KN/1129	0-3	0.025		CREAM		
	3-6	0.050		LIGHT GREY		
	6-9	0.079		LIGHT GREY.		
KN/1130	0-3	0.106.		DARK. BROWN		
	3-6	0.055		MED BROWN		
	6-9	0.382	✓✓	MED BROWN		
	9-12	0.890	✓✓✓	MED BROWN		
KN/1131	0-3	0.238		DARK BROWN	NIL	W
	3-6	0.130		BROWN-	"	W
	6-9	0.176.		BROWN	"	W
	9-12	0.190.	-	BROWN.	"	X
KN/1132	0-3	0.062		DARK BROWN	NIL	W
	3-6	0.386.		"	"	W
	6-9	0.162		"	"	W
	9-12.	0.146.		"	"	W

825062

DRILL SAMPLE LOG RECORD.

KARA N. EXPLORATION

6/

063

SAMPLE NUMBER.	DEPTH (m)	XRF ASSAY WO₃	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/1132A.	0-3	0.040.		LIGHT BROWN	NIL	W
	3-6	0.041		LIGHT BROWN.	"	W
	6-9	0.274.		DARK BROWN	"	W
	9-12.	0.296.		DARK BROWN.	"	W
KN./1134	0-3	0.037		BROWN	NIL	W
	3-6	0.084		BROWN	"	W
	6-9	0.093		BROWN	"	W
	9-12	—		—		
KN/1135	0-3	0.680		BROWN		
	3-6	0.590		BROWN		
	6-9	0.590		BROWN		
KN/1136	0-3	1.21		LIGHT BROWN		
	3-6	0.525		LIGHT BROWN		
	6-9	0.468		LIGHT BROWN		
	9-12	0.230		LIGHT BROWN		
KN./1137	0-3	0.172		LIGHT BROWN		
	3-6	0.220		MED BROWN		
	6-9.	0.278.		MED BROWN.		
KN/1140	0-3	0.037		LIGHT BROWN		
	3-6	0.032		LIGHT BROWN		
	6-9	0.036.		LIGHT BROWN		
KN/1141	0-3	0.043		MED BROWN		
	3-6	0.045		MED BROWN		
	6-9	0.028		DARK BROWN		

825063

DRILL SAMPLE LOG RECORD. KARA NORTH - EVALUATION.

064

SAMPLE NUMBER:	DEPTH (m)	XRF ASSAY WO3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN. 1142	0 - 3	0.048	NIL	DARK BROWN		
	3 - 6	0.046.	"	DARK BROWN		
	6 - 9	0.044	"	DARK BROWN		
	9 - 12	0.050	"	DARK BROWN		
	12 - 15	0.007.	"	LIGHT GREY.		
KN. 1144	0 - 3	0.085	NIL	REDDISH BROWN		
	3 - 6	0.016.	"	LIGHT BROWN		
	6 - 9	0.007	"	LIGHT GREY		
	9 - 12	0.003	"	LIGHT GREY		
	12 - 15.	0.002	"	LIGHT GREY.		
KN. 1145	0 - 3	0.110	NIL	REDDISH BROWN.		
	3 - 6	0.108	"	MED. BROWN		
	6 - 9	0.038	"	MED BROWN		
	9 - 12	0.068	"	MED BROWN.		
KN. 1146	0 - 3	0.052	NIL	REDDISH BROWN		
	3 - 6	0.065	"	REDDISH BROWN		
	6 - 9	0.050	"	REDDISH BROWN		
	9 - 12.	0.038	"	REDDISH BROWN		

8250064

DRILL SAMPLE LOG RECORD.

KHAH. NORTH - EVALUATION

SAMPLE NUMBER.	DEPTH. (m)	XRF ASSAY WO_3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/1152	0-3	0.078		BROWN	NIL	W
	3-6	0.078		"	"	W
	6-9	0.108		"	"	W
	9-12	0.102		"	"	W
KN/1153	0-3	0.112		GREY	30-60	Y
	3-6	0.222		BROWN	0-30	X
	6-9	0.156		BROWN	0-30	X
	9-12	0.052		GREY	30-60	Y
	12-15	0.047		GREY	60-90	F
	15-18	0.097.		GREY	60-90	F
KN/1154	0-3	0.037		BROWN	0	W
	3-6	0.042		BROWN	0	W
	6-9	0.140.		DARK BROWN	0	W
	9-12	0.266.		DARK BROWN	0	W
	12-15	0.210.		DARK BROWN.	0	W
KN/1155	0-3	0.097		BROWN	NIL	W
	3-6	0.130		"	"	W
	6-9	0.067		"	"	W
	9-12	0.066.		"	"	W
	12-15	0.074.		"	"	W
KN/1156	0-3	0.083	-	BROWN		W
	3-6	0.065		"		W
	6-9	0.066.		"		W
	9-12	0.070		"		W
	12-15	MISSING ~~0.045~~		— "		X
	15-18.	0.045				

825065

8

066

SAMPLE NUMBER.	DEPTH (m)	XRF ASSAY WO_3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN / 1157.	0 - 3	0.010		BROWN	NIL	W
	3 - 6	0.021		"	"	W
	6 - 9	0.018		"	"	W
	9 - 12	0.045		"	"	W
	12 - 15	0.094.		"	"	W
KN./1158	0 - 3	0.017		BROWN	NIL	W
	3 - 6	0.010		"	"	W
	6 - 9	0.007		"	"	X
	9 - 12	0.008		"	"	X
KN/1158A	0 - 3	0.019		BROWN	NIL	W
	3 - 6	0.018		"	"	"
	6 - 9	0.017		"	"	"
	9 - 12	0.022		"	"	"
KN/1159	0 - 3	0.006		BROWN	NIL	W
	3 - 6	0.005		"	"	X
	6 - 9	0.005		LIGHT BROWN	"	Y
	9 - 12	0.002		LIGHT GREY	"	Y
	12 - 15	0.003		LIGHT GREY.	"	F
	15 - 18	0.002.		LIGHT GREY.	"	F
KN/1159A.	0 - 3	0.003		BROWN	NIL	W
	3 - 6	0.005		"	"	W
	6 - 9	0.010	-	"	"	W
	9 - 12	0.017		"	"	W
	12 - 15.	0.020		"	"	X.

825066

~~KHKN NORTH EXTENSION~~

SAMPLE NUMBER.	DEPTH (m)	XRF ASSAY WO_3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE
KN/916A	0-3	1.68		BROWN	NIL	W
	3-6	0.985		"	NIL	W
	6-9	0.645		"	NIL	X
	9-12	0.226		DARK GREY	60-90%	Y
	12-15	0.244		" "	60-90	F
	15-18	0.192		" "	60-90	F
KN/924B	0-3	0.685		BROWN	NIL	W
	3-6	0.367		"	"	W
	6-9	0.214		"	"	W
	9-12	0.075		LIGHT BROWN	"	X
	12-15	0.535		GREY. BROWN ~~MISSING~~	0-30	Y
	15-18.	0.298.		MISSING	-	-

DRILL SAMPLE LOG RECORD. KARA NORTH

10/068

SAMPLE NUMBER.	DEPTH (m)	XRF ASSAY WO_3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/1160	0-3	0.022		LIGHT BROWN	NIL	X
	3-6	0.016		LIGHT BROWN	"	Y
	6-9	0.002		CREAM	"	F
	9-12	0.004		"	"	F
	12-15	0.002		"	"	F
	15-18	<0.001		"	"	F
	18-21.	—		"	"	F
KN/1160A	0-3	0.009		LIGHT BROWN.	NIL	X
	3-6	0.010		LIGHT BROWN	"	Y
	6-9	0.004		CREAM	"	Y
	9-12	0.002		CREAM	"	Y
	12-15	0.004		LIGHT BROWN	"	Y
	15-18	0.003		"	"	F
	18-21	0.004		"	"	F
KN/1161.	0-3	0.001		GREY	NIL	Y
	3-6	<0.001		CREAM	"	F
	6-9	<0.001		"	"	F
	9-12	<0.001		"	"	F
	12-15	<0.001		"	"	F
	15-18	<0.001		"	"	F
KN/1161A.	0-3	0.002		BROWN GREY	NIL	N
	3-6	0.003.		CREAM	"	Y
	6-9	0.002		"	"	Y
	9-12	<0.001		"	"	F
	12-15	0.001		"	"	F
	15-18	0.002		"	"	F

825068

DRILL SAMPLE LOG RECORD.

11/069

SAMPLE NUMBER.	DEPTH (m)	XRF ASSAY WO3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/1162.	0 - 3	0.057		BROWN	NIL	W
	3 - 6	0.166		"	NIL	W
	6 - 9	0.102		"	NIL	W
	9 - 12	0.102		"	NIL	W
	12 - 15	0.102		"	NIL	W
KN/1163	0 - 3	0.035		BROWN	NIL	W
	3 - 6	0.034		"	"	W
	6 - 9	0.028		"	"	W
	9 - 12	0.059		"	"	W
KN/1164.	0 - 3	0.046		DARK BROWN	NIL	W
	3 - 6	0.053		" "	"	W
	6 - 9	0.114.		" "	"	W
	9 - 12	0.705		BROWN	"	W
	12 - 15	1.55.		"	"	X
KN/1165	0 - 3	0.064		BROWN	NIL	W
	3 - 6	0.044		"	"	W
	6 - 9	0.067		"	"	W
	9 - 12.	0.060.		"	"	X.

825069

DRILL SAMPLE LOG RECORD. KARA NORTH - EXPLORATION

SAMPLE NUMBER.	DEPTH. (m)	XRF ASSAY WO_3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/1165A	0 - 3	0·015		—	—	—
70° INC	3 - 6	0·051		—	—	—
	6 - 9	0·050		BROWN	NIL	W
	9 - 12	0·060		BROWN	NIL	W
KN/1167	0 - 3	0·060		BROWN	NIL	W
	3 - 6	0·168		"	"	W
	6 - 9	0·625		MISSING		W
	9 - 12	0·520		BROWN	"	W
	12 - 15	0·525		"	"	W
KN/1167A	0 - 3	0·045		BROWN	NIL	W
70° INC.	3 - 6	0·061		MISSING		W
	6 - 9	0·202		MISSING		W
	9 - 12	0·340		LIGHT BROWN	NIL	X
	12 - 15	0·354		LIGHT BROWN	"	X
KN/1168	0 - 3	0·324.		BROWN	NIL	W
	3 - 6	0·160		"	"	W
	6 - 9	0·182		LIGHT BROWN	"	X
	9 - 12	0·070		CREAM		Y
	12 - 15	0·039		CREAM		Y
KN/1169	0 - 3	0·055		BROWN		W
	3 - 6	3·013		"		W
	6 - 9	0·021		LIGHT BROWN		X
	9 - 12	0·018		—		—
	12 - 15	0·012		—		—

825070

DRILL SAMPLE LOG RECORD. KARA NORTH EXPLORATION.

SAMPLE NUMBER.	DEPTH. (m)	XRF ASSAY WO_3	U.V. SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/1170	0-3	0.035				
	3-6	0.018				
	6-9	0.022				
	9-12	0.017				
KN/1171	0-3	0.025		MISSING		X
	3-6	0.029		BROWN		Y
	6-9	0.019		LIGHT BROWN		Y
	9-12	0.005		GREY CREAM		Y
	12-15	0.007		"		F
	15-18	0.006		"		F
	18-21	0.003		"		F
KN/1172	0-3	0.025		BROWN		X
	3-6	0.021		LIGHT BROWN		Y
	6-9	0.008		CREAM GREY		Y
	9-12	0.005		"		Y
	12-15	0.003		"		F
	15-18	0.002		"		F
	18-21	0.003		"		F
KN/1169A	0-3	0.061				
INC 70°	3-6	0.086				
	6-9	0.048				
	9-12	0.025				
	12-15	0.030				

825071

DRILL SAMPLE LOG RECORD.

KARA NORTH EVALUATION

072

SAMPLE NUMBER.	DEPTH. (m)	XRF ASSAY WO$_3$	U.V SCHEELITE ESTIMATE	COLOUR	MAGNETITE CONTENT	ORE TYPE.
KN/11 TIP	0-3	0·046		DARK BROWN	NIL	X
INC 70°	3-6	0·045		"	"	X
	6-9	0·030		"	"	X
	9-12	0·030		"	"	X
	12-15	0·025		"	"	X

825072

SURVEY DATA. INFILL DRILLING. RARA. NORTH

073

HOLE NO'S	RL		NORTH COORD	EAST COORD		DEPTH DRILLE
KN. 1110	442.25		7096.16.	7225.61		18
1111	443.48		7099 03	7215.66		18
1112	443.56.		7098.89	7215 60		18
1113	444 66		7100.64	7207 08.		18
1114						12
1115	457 30		7056.71	7190.93		15
1116.	458.08		7062.66.	7168.25.		12
1117	458.48		7066.26.	7185.72.		12.
1118	458.37.		7069 89	7183 26.		12
1119	458.69.		7073 56.	7180 26.		9
1120	459.02		7078.42	7176.99		12.
1121	459 37.		7082.95	7175.79.		12.
1122	458.37		7081 57	7180 43.		15
1123	457 29		7079 91	7183 70		12
1124	456.31.		7077.82	7186.43		9
1125	455.52		7077.77	7190.75.		9
1126.	455.41.		7074.30	7190.02		12
1127	454.37		7072 76	7199.01		12
1128	454.83		7072 79	7194.02.		12.
1129	454 74.		7077.12	7195 95		9
1130	459 11		7088.99	7173 14.		12.
1131	457.31		7097 46	7170.09		12
1132						12
1132A						12

825073

074

SURVEY DATA. INFILL DRILLING. ~~KARA NORTH~~

HOLE NO'S	RL		NORTH COORD	EAST COORD		DEPTH DRILLED
916A						18
924B.						18
1158						12
1158A						12
1159						18
1159A.						15
1160						18
1160A.						21
1161	465.44.		7170.88.	7166.11		18
1161A.	465.44.		7170.88	7166.11		18
1162.	466.63		7177.13	7110.12.		15
1163.	455.72		7116.55	7159.38		12.
1164.	455.42.		7121.66.	7156.84.		15
1165	455.32		7126.21	7152.57		12.
1166.	455.27		7130.55	7148.63.		—
1165A.	458.21.		7127.56.	7152.22		12
1169A.	455.86.		7143.32.	7139.35		15
1170	456.27.		7146.47.	7136.75.		12
1171	456.57		7151.15.	7132.73		21.
1171A	456.57		7151.15	7132.73.		15
1172	456.16.		7155.52	7131.02.		21.
1167	455.25		7135.16	7145.74.		15
1167A	455.14		7136.77	7145.69		15.
1168	455.59		7138.85.	7142.81		15
1169	455.86		7143.32.	7139.35		15

TOTAL 885

825074

075

SURVEY DATA. INFILL DRILLING - KARA NORTH.

HOLE NO'S	RL		NORTH COORD	EAST COORD		DEPTH DRILLE
900.						15
901	446.94.		7111.92	7191.90		18
902.	447.18		7121 45	7188.50.		15
903.	446.34.		7131 10	7183.99		18
904.	449 81		7138.18	7196.95		18
905	451 60		7145. 11	7170.25.		18
906.	452.75		7149 12.	7166.53		18
907/907A.	453.68		7154.08.	7169 11		18/18
908/908A.	455.64		7163.64.	7172 58.		18/18
910/910A.	456.4.		7168.19	7180.64.		15/15
911.	455.86.		7160.64.	7182.39		24
912.						24
913	455.65.		7161 59	7201 94		18
914/914A.	456.84.		7171.23	7187.44		24/24
915/915A.	457.88		7173.45	7179.71.		24/24
916.	461.51.		7177.62.	7168.80.		12
917	462.40.		7184.36.	7170.87		18
918/918A						24/24
919	458.48.		7168.03	7162.20.		18
920	457 38		7164.03	7164.45		18
921.	457.39		7166.29	7154.84.		30
922	457.12		7163.44	7156.48		21
923	455.49		7158.19.	7158.88		N/D
924/924A	455.78		7165.14.	7148.59		15/12
925	455.12		7159.07	7150.97		12

8250775

KARA N. 266 ZONE. D.D.H. 516

076

From	To	Width	Recovery ft/lbs.	Recovery %	Sample	Assays	NO_3	Sn	Mo	Au
52.15	52.80				516/1		2160	1080	46	<0.0
52.80	53.80				516/2		390	940	22	0.0
53.80	54.80				516/3		160	810	26	0.0
54.80	55.80				516/4		60	455	6	0.0
55.80	56.80				516/5		6900	550	165	0.0
56.80	57.80				516/6		130	690	26	<0.0
57.80	58.80				516/7		70	710	10	<0.0
58.80	59.80				516/8		90	710	18	<0.0
59.80	60.80				516/9		180	970	26	<0.0
60.80	61.80				516/10		410	900	32	<0.0
61.80	62.80				516/11		55	940	<4	<0.0
63.00	64.00				516/12		1000			
64.00	65.00				516/13		400			
65.00	66.00				516/14		170			
66.00	67.00				516/15		1260			
67.00	68.00				516/16		2120			
68.00	69.00				516/17		350			
69.00	70.00				516/18		580			
70.00	71.00				516/19		210			
71.00	71.70				516/20		–			

825076

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Grid _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. DDH. 516

Project KARA

Claim KARA NORTH.

Page ____ of ____

397175.429 E 6427257.213 N. 485.570 R.L

077

KARA NORTH D.516A

From	To	Width	Recovery ft/lbs.	Recovery %	Sample	Assays WO_3
58.20	59.20	1.00			516A/40	0.007
59.20	60.20	1.00			39	0.002
60.20	61.20	1.00			38	0.007
61.20	62.20	1.00			37	0.004
62.20	63.20	1.00			36	0.003
63.20	64.20	1.00			35	0.004
64.20	65.20	1.00			34	0.081
65.20	66.20	1.00			33	0.025
66.20	67.20	1.00			32	0.014
67.20	68.20	1.00			31	0.011
68.20	69.20	1.00			30	0.015
69.20	70.20	1.00			29	0.310
70.20	71.20	1.00			28	1.39
71.20	72.20	1.00			27	0.022
72.20	73.20	1.00			26	0.016
73.20	74.20	1.00			25	0.026
74.20	75.20	1.00			24	0.056
75.20	76.20	1.00			23	0.026
76.20	77.20	1.00			22	0.066
77.20	78.20	1.00			21	0.027
78.20	79.20	1.00			20	0.011
79.20	80.20	1.00			19	0.050
80.20	81.20	1.00			18	0.044
81.20	82.20	1.00			17	0.018
82.20	83.20	1.00			16	0.122
83.20	84.20	1.00			15	0.008
84.20	85.20	1.00			14	0.004
85.20	86.20	1.00			13	0.003
86.20	87.20	1.00			12	0.002
87.20	88.20	1.00			11	0.012
88.20	89.20	1.00			10	0.018
89.20	90.20	1.00			9	0.222

8250 N

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Cor. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. D.516A.

Project KARA.

Claim KARA NORTH

Page 1 of 3.

397176.05E 5427259.29N 485-544.

078 KARA NORTH. D. 516A.

From	To	Width	Recovery ft./lbs.	Recovery %	Sample	Assays WO_3
90.20	91.20	1.00			516A/E	0.140
91.20	92.20	1.00			7	0.025
92.20	93.20	1.00			6	0.004
93.20	94.20	1.00			5	0.034
94.20	95.20	1.00			4	0.013
95.20	96.20	1.00			3	0.032
96.20	97.20	1.00			2	0.021
97.20	98.20	1.00			1	0.004
21.20	22.20	1.00			516A/77	0.051
22.20	23.20	1.00			76	0.037
23.20	24.20	1.00			75	0.005
24.20	25.20	1.00			74	0.013
25.20	26.20	1.00			73	0.008
26.20	27.20	1.00			72	0.010
27.20	28.20	1.00			71	0.022
28.20	29.20	1.00			70	0.006
29.20	30.20	1.00			69	0.005
30.20	31.20	1.00			66	0.004
31.20	32.20	1.00			67	0.012
32.20	33.20	1.00			66	0.008
33.20	34.20	1.00			65	0.005
34.20	35.20	1.00			64	0.007
35.20	36.20	1.00			63	0.012
36.20	37.20	1.00			62	0.008
37.20	38.20	1.00			61	0.008
38.20	39.20	1.00			60	0.026
39.20	40.20	1.00			59	0.021
40.20	41.20	1.00			58	0.006
41.20	42.20	1.00			57	0.011
42.20	43.20	1.00			56	0.020
43.20	44.20	1.00			55	0.007

82508

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. D.516A.

Project KARA.

Claim KARA. NORTH.

Page 2 of 2.

397176.05E 6427259.21N 485.5RL

KARA NORTH D516A.

From	To	Width	Recovery ft./lbs.	Recovery %	Sample	Assays NO_3
44.20	45.20	1.00			D516A/54	0.007
45.20	46.20	1.00			53	0.005
46.20	47.20	1.00			52	0.007
47.20	48.20	1.00			51	0.025
48.20	49.20	1.00			50	0.053
49.20	50.20	1.00			49	0.002
50.20	51.20	1.00			48	0.004
51.20	52.20	1.00			47	0.002
52.20	53.20	1.00			46	0.002
53.20	54.20	1.00			45	0.003
54.20	55.20	1.00			44	0.012
55.20	56.20	1.00			43	0.012
56.20	57.20	1.00			42	0.005
57.20	58.20	1.00			41	0.004

82079

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dia _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. DDH 516A.

Project KARA.

Claim KARA NORTH

Page 3 of 3

397176.057E 5427269.219N

825080

080

397213E 5427209.5N 397250E 397300E 5427209.5N 397347E

5427200N 5427200N

5427150N 5427150N

442.3 1110 441.7 1146 437.4 1145 435.2 1144 433.4 1142 431.5 1141 429.1 1140 425.9 1114 ?

5427100N 5427100N

5427050N 5427050N

397213E 5427023.5N 397250E 397300E 5427023.5N 397347E

5 cm

File c:033503.PLT Scale 1:500 Point of Interest 397280.000E 5427115.000N

Peacock Darcey & Anderson Pty Ltd 91 Mount Street BURNIE 7320 Ph (004) 314410

825081

5427233N

397041.5E 397050E 397100E 397150E 397200E 397230.5E

5427200N

1161 456.4
1162 456.6
1172 456.2
1171 456.6
1170 456.3
1169 455.9
1168 455.6
11671 455.1
1167 455.3
1166 455.3
11654 455.2
1165 455.3
1164 455.4
1163 455.7

5427150N

5427102N

180

397041.5E 397050E 397100E 397150E 397200E 397230.5E

File c:033620.PLT Scale 1:500 Point of Interest 397136.000E 5427166.000N

5 cm

Peacock Darcey & Anderson Pty Ltd 91 Mount Street BURNIE 7320 Ph (004) 314410

825082

082

5427261.462N

397105.947E

397200E

397288.947E

5427200N

5427100N

5427075.462N

938 939A 940A 941 942 943 944 937 936 935 917 916 915A 914A 919 910 921A 924A 922 920 908A 913 911 925 923 930 926 934A 907A 933A 931 927 906 928 905 932 929 904 903 902 901

5 cm

File g:\032105.PLT Scale 1:500 Point of Interest 397172.947E 5427166.962N

Peacock Darcey & Anderson Pty Ltd 91 Mount Street BURNIE 7320 Ph (004) 314410

825083

083

5427209.5N
5427200N
5427150N
5427100N
5427050N
5427023.5N
397113E
397150E
397200E
397240E

464.9 11
465.5 1160
465.3 1159
455.4 1152
456.9 9248
456.1 1153
458.5 9164
455.2 1
455.9 134
456.4 1133
447.5 1160
463.1 1158
462.3 1157
461.1 1156
460.0 1155
459.1 1130
459.4 1121
459.0 1120
458.4 1122
457.3 1123
456.3 1124
455.5 1125
455.4 1126
454.7 1129
454.8 1128
454.4 1127
458.7 1119
458.4 1118
458.5 1117
458.1 1116
457.3 1115
456.7 1154
456.1 3
455.6 2
446.3 900
444.7 1113
443.5 1131
442.3 1110
441.7 1145 ?

5 cm

File c:033502.PLT Scale 1:500 Point of Interest 397180.000E 5427115.000N

Peacock Darcey & Anderson Pty Ltd 91 Mount Street BURNIE 7320 Ph (004) 314416

084

825084

APPENDIX NO. 3

EXPLORATORY DRILLING

3A Assay Logs

APPENDIX NO. 3A

E.L. 17/68 DIAMOND DRILL DATA
PERIOD 1986/87

Hole No.	Location	Depth Drilled (m)	Sampled	Assay Sheet
512	Companion Skarn	41.50	x	x
512A	Companion Skarn	57.70	x	x
513	Companion Skarn	68.50	x	x
514	Companion Skarn	83.30	x	x
515	Kara N. Ext.	64.40	-	-
515A	Kara N. Ext.	77.00	-	-
516	Kara N.266 Zone	71.70	x	x
516A	Kara N.266 Zone	103.10	x	x
517	Kara N. Ext.	57.00	-	-
518	Location L.5	57.00	-	-
519	Limestone Creek	200.00	x	x
520	Limestone Creek	200.00	x	x
12	TOTAL DEPTH	1075.20m		

086

COMPANION SKARN. DDH. 512A.

From	To	Width	Recovery ft/lbs.	Recovery %	Sample	Assays WO3	
23.00	23.50	0.50			DS12A/1	0.176	
23.50	24.00	0.50			2	0.128	
24.00	24.50	0.50			3	0.348	
24.50	25.20	0.70			4	1.45	
9.00	12.00	3.00			DS12A 9-12 Sludge	0.254	
12.00	15.00	3.00			DS12A 12-15 "	0.320	
15.00	18.00	3.00			DS12A 15-18 "	0.266	
18.00	21.00	3.00			DS12A 18-21 "	0.099	
21.00	24.00	3.00			DS12A 21-24 "	0.108	
COMPOSITES							
9.00	18.00	9.00				0.280	} 15.0m @ 0.219 WO3
18.00	24.00	6.00				0.128	
24.00	25.20	1.20				0.924	

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. DDH. 512A.

Project EL 17/66

Claim COMPANION SKARN.

Page 1 of 1

AMDEL AC. 1656/87.

825086

087

COMPANION SKARN

DDH 512

From	To	Width	Recovery ft/lbs.	Recovery %	Sample	Assays WO_3 (ppm)
13.30	14.00	0.70			D512/1	
14.00	15.00	1.00			2	
15.00	16.00	1.00			3	
16.00	17.00	1.00			4	
17.00	18.00	1.00			5	
18.00	19.00	1.00			6	640
19.00	20.00	1.00			7	340
20.00	21.00	1.00			8	500
21.00	22.00	1.00			9	350
22.00	23.00	1.00			10	110
23.00	24.00				11	55

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R Thickness _____ Started _____ Finished _____

Hole No. DDH 512

Project EL 17/68

Claim COMPANION SKARN

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AMDEL Ac. 205487.

825087

038

COMPANION SKARN

DDH 513

From (m)	To (m)	Width	Recovery ft/lbs.	Recovery %	Sample	Assays	ppm WO_3	ppm Sn	ppm Pb
6.00	7.00	1.00			513/1		180	130	70

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. DDH 513

Project EL 1718

Claim COMPANION SKARN

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AE 1656/87

825088

089

COMPANION SKARN DDH 514

From	To	Width	Recovery ft/lbs.	Recovery %	Sample	Assays WO3	Sn	Bi	Pb	Ag	Au
50.20	51.20	1.00			DDH514/E	70	420	90	32	2	<0.02
51.20	52.20	1.00			19	30	250	110	32	2	<0.02
52.20	53.20	1.00			20	55	425	200	44	2	<0.02
53.20	54.20	1.00			21	25	185	180	34	2	<0.02
54.20	55.20	1.00			22	40	270	95	32	2	<0.02
55.20	56.20	1.00			23	70	145	60	30	1	<0.02
56.20	57.20	1.00			24	50	92	70	28	2	<0.02
57.20	58.20	1.00			25	25	120	5950	350	2	<0.02
58.20	59.20	1.00			26	15	105	55	26	1	<0.02
59.20	60.20	1.00			27	35	140	190	48	2	<0.02
60.20	61.20	1.00			28	<10	170	240	34	2	<0.02
61.20	62.20	1.00			29	25	220	170	34	2	<0.02
62.20	63.20	1.00			30	10	165	520	34	2	0.06
63.20	64.20	1.00			31	45	310	220	38	2	<0.02
64.20	65.20	1.00			32	20	270	130	32	2	<0.02
65.20	66.20	1.00			33	15	310	110	32	2	<0.02
66.20	67.20	1.00			34	1020	310	95	30	2	0.18
67.20	68.20	1.00			35	40	310	110	30	2	<0.02
68.20	69.20	1.00			36			120	34	2	<0.02
69.20	70.20	1.00			37			150	36	2	<0.02
70.20	71.20	1.00			38			150	36	3	0.06
71.20	72.20	1.00			39			160	38	2	<0.02
72.20	73.20	1.00			40			140	40	2	<0.02
73.20	74.20	1.00			41			90	34	2	<0.02
74.20	75.20	1.00			42			60	30	3	<0.02
75.20	76.20	1.00			43			110	42	3	<0.02
76.20	77.20	1.00			44			120	48	2	<0.02
77.20	78.20	1.00			45			60	46	3	<0.02
78.20	79.20	1.00			46			65	46	2	<0.02
79.20	80.20	1.00			47			70	42	2	<0.02
80.20	81.20	1.00			48			95	52	2	<0.02
81.20	82.20	1.00			49			85	54	2	<0.02
82.20	83.10	c.90			50			90	38	2	<0.02

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. DDH 514

Project E.L. 17/68

Claim COMPANION SKARN

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825089

KARA N. 266 ZONE. D.D.H 516.

090

From	To	Width	Recovery ft./lbs.	Recovery %	Sample	Assays WO_3	Assays Sn	Assays Mo	Assays Au.
52.15	52.80				516/1	2160	1080	46	<0.005
52.80	53.80				516/2	390	940	22	<0.005
53.80	54.80				516/3	180	810	86	0.005
54.80	55.80				516/4	60	455	8	0.005
56.80	56.80				516/5	6900	350	165	0.015
56.80	57.80				516/6	130	690	26	<0.005
57.80	58.80				516/7	70	710	10	<0.005
58.80	59.80				516/8	90	710	18	<0.005
59.80	60.80				516/9	180	970	26	<0.005
60.80	61.80				516/10	410	900	32	<0.005
61.80	62.80				516/11	65	990	<4	<0.005
63.00	64.00				516/12	1600			
64.00	65.00				516/13	400			
65.00	66.00				516/14	170			
66.00	67.00				516/15	1260			
67.00	68.00				516/16	2120			
68.00	69.00				516/17	350			
69.00	70.00				516/18	580			
70.00	71.00				516/19	210			
71.00	71.70				516/20	–			

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. DDH. 516

Project KARA

Claim KARA. NORTH.

Page ____ of ____

397175.429 E 6427259.213 N. 485.570 R.L

825090

KARA NORTH D.516A

031

From	To	Width	Recovery ft/lbs.	Recovery %	Sample	Assays	WO_3
58.20	59.20	1.00			516A/40		0 005
59.20	60.20	1.00			39		0 002
60 20	61 20	1.00			38		0 00 7
61.20	62.20	1.00			37		0 004
62.20	63 20	1 00			36		0 003
63.20	64 20	1.00			35		0 009
64 20	65.20	1 00			34		0 081
65 20	66.20	1.00			33		0 025
66.20	67.20	1.00			32		0 014
67.20	68.20	1 00			31		0 011
68.20	69 20	1 00			30		0 015
69.20	70.20	1.00			29		0 310
70.20	71 20	1 00			28		1 39
71.20	72.20	1 00			27		0 022
72.20	73.20	1 00			26		0 016
73.20	74.20	1 00			25		0 026
74.20	75.20	1.00			24		0 036
75.20	76.20	1.00			23		0 026
76.20	77.20	1.00			22		0 066
77.20	78.20	1 00			21		0 027
78.20	79.20	1 00			20		0 011
79.20	80.20	1.00			19		0 050
80.20	81.20	1.00			18		0 044
81.20	82.20	1 00			17		0 018
82.20	83.20	1 00			16		0 122
83.20	84.20	1 00			15		0 008
84.20	85.20	1 00			14		0 004
85.20	86.20	1 00			13		0 003
86.20	87.20	1 00			12		0 002
87.20	88.20	1 00			11		0 012
88.20	89.20	1 00			10		0 018
89.20	90.20	1.00			9		0 222

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. D. 516 A.

Project KARA.

Claim KARA NORTH

Page 1 of 2.

397176.05 7E 5427259.219 N 485-544.

825091

09C

KARA NORTH

D. 516A.

From	To	Width	Recovery ft/lbs.	Recovery %	Sample	Assays	WO_3
90.20	91.20	1.00			516A/8		0.140
91.20	92.20	1.00			7		0.025
92.20	93.20	1.00			6		0.004
93.20	94.20	1.00			5		0.034
94.20	95.20	1.00			4		0.013
95.20	96.20	1.00			3		0.032
96.20	97.20	1.00			2		0.021
97.20	98.20	1.00			1		0.004
21.20	22.20	1.00			516A/77		0.051
22.20	23.20	1.00			76		0.037
23.20	24.20	1.00			75		0.005
24.20	25.20	1.00			74		0.013
25.20	26.20	1.00			73		0.008
26.20	27.20	1.00			72		0.010
27.20	28.20	1.00			71		0.022
28.20	29.20	1.00			70		0.006
29.20	30.20	1.00			69		0.005
30.20	31.20	1.00			68		0.004
31.20	32.20	1.00			67		0.012
32.20	33.20	1.00			66		0.008
33.20	34.20	1.00			65		0.005
34.20	35.20	1.00			64		0.007
35.20	36.20	1.00			63		0.012
36.20	37.20	1.00			62		0.008
37.20	38.20	1.00			61		0.008
38.20	39.20	1.00			60		0.026
39.20	40.20	1.00			59		0.021
40.20	41.20	1.00			58		0.006
41.20	42.20	1.00			57		0.011
42.20	43.20	1.00			56		0.020
43.20	44.20	1.00			55		0.007

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R. Thickness _____ Started _____ Finished _____

Hole No. D.516A.

Project KARA.

Claim KARA. NORTH.

397176.057E 6427259.214N 485.674RL

825092

093

KARA NORTH D.516 A.

From	To	Width	Recovery ft./lbs.	Recovery %	Sample	Assays WO_3
44.20	45.20	1.00			D516A/54	0.007
45.20	46.20	1.00			53	0.005
46.20	47.20	1.00			52	0.007
47.20	48.20	1.00			51	0.025
48.20	49.20	1.00			50	0.053
49.20	50.20	1.00			49	0.002
50.20	51.20	1.00			48	0.004
51.20	52.20	1.00			47	0.002
52.20	53.20	1.00			46	0.002
53.20	54.20	1.00			45	0.003
54.20	55.20	1.00			44	0.012
56.20	56.20	1.00			43	0.012
56.20	57.20	1.00			42	0.005
57.20	58.20	1.00			41	0.004

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R Thickness _____ Started _____ Finished _____

Hole No. DDH 516A.

Project KARA.

Claim KARA NORTH

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397176.057E 5427269.219N

825093

094

DRILL HOLE N° – DDH 519

LOCATION – LIMESTONE CREEK – E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 200.00m

DATE DRILLED = FEB/MAY 198

GRID COORDINATES — REF PLAN 4/87

NORTHING – 1583m NORTH

EASTING – 517.1m EAST

R.L. – –

ASSAYED BY = ANALABS

ASSAY DATE = 10th SEPT 198

ASSAY REPORT N° = J366E

DRILL ASSAY RECORD

DEPTH(m) FROM (m)	DEPTH(m) TO (m)	INTERVAL (m) SAMPLE N°	ASSAYS CaO %	MgO %	SiO_2 %	CO_2 %		CALCULATED $CaSiO_3$
3.05	4	62373	31.50	2.35	44.5	2.50		58.62
4	5	62374	40.00	1.60	40.0	10.20		52.48
5	6	375	35.50	2.05	42.5	9.20		49.30
6	7	376	31.50	2.10	49.5	1.85		60.38
7	8	377	42.50	1.40	31.5	20.00		35.21
8	9	378	35.50	2.30	45.0	9.80		47.64
9	10	379	34.50	2.00	48.5	4.80		58.8
10	11	380	32.50	2.10	52.0	2.10		61.83
11	11.61	381	31.50	2.00	51.5	4.00		58.21
11.61	12.21	382	13.30	1.90	60.0	6.34		26.66
12.21	12.81	383	41.00	2.05	40.5	10.20		50.1
12.81	13.35	384	35.00	1.85	46.0	7.80		51.8
13.35	14.12	385	33.00	2.15	51.5	5.00		55.20
14.12	15.17	386	32.50	2.05	52.0	5.60		52.61
15.17	16	387	36.50	2.10	49.5	4.00		65.25
16	17	388	34.00	2.00	47.5	4.40		58.8

825094

095

DRILL HOLE N° - DDH 519

LOCATION - LIMESTONE CREEK - E.L 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 200.00m.

DATE DRILLED = FEB/MAY. 19

GRID COORDINATES

NORTHING - REF. PLAN. 4/67 1683m N

EASTING - 517m E.

R.L. -

ASSAYED BY = ANALABS

ASSAY DATE = 10th SEPT. 1967

ASSAY REPORT = 53668.

DRILL ASSAY RECORD

DEPTH(m) FROM (m)	DEPTH(m) TO (m)	INTERVAL (m) SAMPLE N°	ASSAYS CaO%	MgO %	SiO_2 %	CO_2 %	CALCULATED $CaSiO_3$
17	18	62389	31.0	2.00	48.5	3.50	55.00
18	19	390	31.0	2.05	49.0	4.20	53.13
19	20	391	28.0	2.00	53.0	3.00	50.13
20	21	392.	32.0	2.55	47.5	6.40	49.40
21	22	393	33.0	1.95	46.5	6.60	50.96
22	23	394	27.5	1.95	53.0	4.80	44.33
23	24	395	27.5	1.95	52.5	5.60	42.15
24	25	396	30.0	2.05	49.5	2.05	56.76
25	26	397	25.5	1.95	47.0	5.00	45.88
26	27.00	398	31.0	2.05	48.0	5.60	49.40
27	28.30	399.	28.5	2.15.	52.5	2.70	51.90

825095

DDH
PAGE 2

DRILL HOLE N° – DDH 520.

LOCATION – LIMESTONE CREEK – E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 200.00m

DATE DRILLED = MAY/AUG. 1987

GRID COORDINATES

NORTHING – REF. PLAN N° 4467 1898 m N

EASTING – 439m E.

R.L – —

ASSAYED BY = ANALABS.

ASSAY DATE = 10th SEPT. 1987.

ASSAY REPORT N° = 53666.

DRILL ASSAY RECORD

DEPTH(m) FROM (m)	DEPTH(m) TO (m)	INTERVAL (m) SAMPLE N°	ASSAYS CaO %	MgO %	SiO_2 %	CO_2 %		CALCULATED $CaSiO_3$
2	3	62400	29.50	2.65	49.0	4.20		50.01
3	4	401	43.50	3.25	39.5	14.00		53.24
4.35	5.0	402	44.00	2.95	39.0	15.20		57.16
5	6	403	47.00	3.55	25.0	18.50		48.68
6	7	404	46.00	3.75	23.5	19.50		43.91
7	8	405	46.00	3.25	31.5	16.60		51.58
8	9	406	38.50	2.70	38.0	13.20		44.95
9	10	407	31.50	2.55	44.0	7.60		45.26
10	11	408	44.00	2.60	34.0	17.00		46.61
11	12	409	47.00	2.80	25.0	18.20		49.30
12	13	410	36.00	3.80	56.0	0.60		73.02
13	14	411	26.00	2.55	55.0	4.40		42.26
14	15	412	21.50	2.30	55.5	3.80		34.49
15	16	413	42.50	2.75	36.5	15.80		46.40
16	17	414	43.00	3.00	38.0	14.20		51.58
17	18	415	35.50	2.15	50.6	3.65		63.76

8250096

097

DRILL HOLE N° – DDH 520

LOCATION – LIMESTONE CREEK. – E.L. 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = 200.00m

DATE DRILLED = MAY/AUG. 19

GRID COORDINATES — REF. PLAN N° 4/87

NORTHING – 1896m N.

EASTING – 439m E.

R.L. –

ASSAYED BY = AMDLABS.

ASSAY DATE = 10th SEPT 68

ASSAY REPORT N° = 53668.

DRILL ASSAY RECORD

DEPTH(m) FROM (m)	DEPTH(m) TO (m)	INTERVAL (m) SAMPLE N°	ASSAYS CaO %	MgO %	SiO_2 %	CO_2 %		CALC. WOLL. $CaSiO_3$
18	19	62416	41.00	1.90	40.0	12.20		57.16
19	20	417	23.50	2.75	49.0	3.45		66.28
20	21	418	38.00	1.80	37.5	13.40		43.29
21	22	419	44.50	2.25	34.0	15.40		57.58
22	23	420	38.00	2.80	43.5	8.60		56.03
23	24	421	35.50	2.35	47.0	6.60		56.14
24	25	422	38.50	1.95	40.5	11.00		50.75
25	26	423	43.50	2.20	31.5	16.40		46.81
26	27	424	37.00	2.45	42.5	8.60		53.96
27	28	425	31.50	2.50	48.0	5.60		58.44
28	29	426	35.00	2.45	44.5	8.40		58.36
29	30	427	31.00	2.45	47.5	5.40		49.42
30	31	428	32.50	2.35	46.5	5.80		57.99
31	32	429	32.00	2.50	45.0	5.00		53.13
32	33	430	33.00	2.35	46.0	7.00		49.9
33	34	431	30.50	3.15	48.0	7.20		46.2

825097

DRILL HOLE N° – DDH 5

LOCATION – LIMESTONE CREEK – E.L 17/68.
(WOLLASTONITE OCCURRENCES).

DEPTH DRILLED (m) = DDH 5 200
(200.00m)

DATE DRILLED = MAY, AUG. 1968

GRID COORDINATES REF. PLAN. N° 4/87

NORTHING – 1898m N

EASTING – 439m E

R.L – –

ASSAYED BY = ANALABS

ASSAY DATE = 10th SEPT. 1967.

ASSAY REPORT N° = 53668.

DRILL ASSAY RECORD

DEPTH(m) FROM (m)	DEPTH(m) TO (m)	INTERVAL (m) SAMPLE N°	ASSAYS CaO %	MgO %	SiO_2 %	CO_2 %		CALCULATED $CaSiO_3$
34	35	432	29.00	3.35	50.50	4.60		47.95
35	36	62433	32.00	2.10	48.0	8.40		44.12
36	37	434	29.50	2.15	51.0	5.40		46.92
37	38	435	27.50	2.35	53.0	3.60		47.44
38	39	436	31.00	2.45	51.0	4.40		52.61
39	40	437.	32.00	2.30	47.5	6.20		49.42

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APPENDIX NO. 4

GOLD POTENTIAL - E.L. 17/68

4A Skarns Examined for Au Potential
4B Skarn Samples, Au Gold Assays

APPENDIX NO. 4A

E.L. 17/68 MAGNETITE SAMPLES ZONES

SAMPLES ASSAYED FOR GOLD

Skarn Zone	Hole No.	Samples Nos.	No. Samples
Kara No.1	D316	D316/1 - 82	82
Kara No.1 S.Ext.	D313	D313/1 - 54	54
Kara No.1 S.Ext.	D314	D314/1 - 39	39
Kara N. 266 Zone	D303	D303/1 - 43	43
Kara N. Mag. Anomaly	D343	D343/83 - 127	45
Eastern Ridge	D273	D273/276 - 318	42
Companion Skarn	D514	D514/18 - 50	33
Loc. L.5 to E. Ridge	D510	D510/29 - 34	5
Bobs Bonanza	D500	D500/1 - 7	7
Kara N. Zone 266	D516	D516/1 - 11	11
Location L.1	L1/23 - 28		
Hampshire Silver Mine		SM1 - SM5	5
Kara No. 1		HM1 - HM7	7

101

EASTERN RIDGE

DDH 273

From	To	Width	Recovery ft/lbs.	Recovery %	Sample	Assays ppm Au.	DET/LIM 0.005
92.0	93.0	1.0			273/276	<0.005	
93.0	94.0	1.0			277	<0.005	
94.0	95.0	1.0			278	0.005	
95.0	96.0	1.0			279	<0.005	
96.0	97.0	1.0			280	0.005	
97.0	99.0	2.0			281	0.015	
99.0	100.0	1.0			282	0.125	
100.0	101.0	1.0			283	0.310	
101.0	102.0	1.0			284	0.005	
102.0	103.0	1.0			285	0.005	
103.0	104.0	1.0			286	0.030	
104.0	105.0	1.0			287	0.015	
105.0	106.0	1.0			288	<0.005	
106.0	107.0	1.0			289	0.005	
107.0	108.0	1.0			290	0.010	
108.0	109.0	1.0			291	0.055	
109.0	110.0	1.0			292	0.085	
110.0	111.0	1.0			293	0.025	
111.0	112.0	1.0			294	0.005	
112.0	113.0	1.0			295	0.015	
113.0	114.0	1.0			296	0.005	
114.0	115.0	1.0			297	0.010	
115.0	116.0	1.0			298	0.015	
116.0	117.0	1.0			299	<0.005	
117.0	118.0	1.0			300	0.050	
118.0	119.0	1.0			301	0.005	
119.0	120.0	1.0			302	<0.005	
120.0	121.0	1.0			303	<0.005	
121.0	122.0	1.0			304	0.030	
122.0	123.0	1.0			305	0.065	
123.0	124.0	1.0			306	0.235	
124.0	125.0	1.0			307	<0.005	

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev _____

O.B. Thickness _____ Started _____ Finished _____

B.R Thickness _____ Started _____ Finished _____

Hole No. DDH. 273

Project E.L. 17/68

Claim EASTERN RIDGE

Page 1 of 2

AMEX. AC. 20080.

825101

102

EASTERN RIDGE. DDH. 273.

From	To	Width	Recovery ft/lbs.	Recovery %	Sample	Assays ppm DET/LIM 0.005 Au
125.0	126.0	1.0			278/308	<0.005
126.0	127.0	1.0			309	<0.005
127.0	128.0	1.0			310	0.050
128.0	129.0	1.0			311	0.105
129.0	130.0	1.0			312	N/S
130.0	131.0	1.0			313	0.135
131.0	132.0	1.0			314	0.040
132.0	133.0	1.0			315	0.075
133.0	134.0	1.0			316	0.005
134.0	135.0	1.0			317	0.075
135.0	136.0	1.0			318	0.050

Length _____ Contractor _____

Bearing _____ Core _____ Stored _____

Dip _____ Casing _____

Lat. _____ Logged by _____ Date _____

Dep. _____ Location _____

Elev. _____

O.B. Thickness _____ Started _____ Finished _____

B.R Thickness _____ Started _____ Finished _____

Hole No. DDH. 273

Project EL. 17/68

Claim EASTERN RIDGE

Page 2 of 2

AMEL. A/C. 20080.

825102

ANALYSIS

g/tonne

SAMPLE MARK	GOLD Au	SAMPLE MARK	GOLD Au
0514/18	<0.02	0514/35	<0.02
19	<0.02	36	<0.02
20	<0.02	37	<0.02
21	<0.02	38	0.06
22	<0.02	39	<0.02
23	<0.02	40	<0.02
24	<0.02	41	<0.02
25	<0.02	42	<0.02
26	<0.02	43	<0.02
27	<0.02	44	<0.02
28	<0.02	45	0.06
29	<0.02	46	<0.02
30	0.06	47	<0.02
31	<0.02	48	<0.02
32	<0.02	49	<0.02
33	<0.02	50	<0.02
34	0.18		

Method: A7/2

ANALYSIS

ppm

SAMPLE MARK	SILVER Ag
RJ - 1	3

Method: A1/2

ANALYSIS

g/tonne

SAMPLE MARK	GOLD Au
D510/29	<0.005
/30	<0.005
/31	<0.005
/32	<0.005
/33	<0.005
/34	<0.005
RJ /1	<0.005

Method: A7/2

825105

SAMPLE ASSAY DATA

DATE SUBMITTED 7/FEB/86 4/86 SPT 83/86

DATE ASSAYED 14/FEB/86 AC 5TH 86

D.D.H. No. 500

LOC'N Bob's Bonanza

105

SAMPLE No.	FROM (m)	TO (m)	L (m)	LITH'Y	Sn ~~S.G.~~	% WO3 ~~Cu~~	% Mo ~~Pb~~	% Bi ~~Zn~~	ppm Ag	ppm Cu ~~Au~~	% Pb ~~Ba~~	Zn Au	REMARKS	LENS
D500/1	12.55	12.85	0.30		100	50	10	< 4	< 1	115	65	250 <0.005		
D500/2	12.85	13.50	0.65		90	15	8	10	<1	210	20	290 <0.005		
D500/3	13.50	14.30	0.80		100	40	8	25	<1	350	15	240 <0.005		
D500/4	14.30	15.30	1.00		90	<10	8	<4	<1	180	10	290 <0.005		
D500/5	15.30	16.30	1.00		110	<10	4	10	<1	460	10	370 <0.005		
D500/6	16.30	17.70	1.40		90	45	6	10	<1	850	5	250 <0.005		
D500/7	17.70	18.50	0.80		110	30	4	<4	<1	15	<5	340 <0.005		

825106

Analysis code A7

Report AC 20043

Order No. SPT 260/87

Results in ppm

Sample	Au
D 516/ 1	<0.005
D 516/ 2	<0.005
D 516/ 3	0.005
D 516/ 4	0.005
D 516/ 5	0.015
D 516/ 6	<0.005
D 516/ 7	<0.005
D 516/ 8	<0.005
D 516/ 9	<0.005
D 516/10	<0.005
D 516/11	<0.005
Detn limit	(0.005)

825107

REPORT AC: 16/8/8

ANALYSIS g/To

SAMPLE MARK	Au
HM 1	0.045
" 2	0.270
" 3	0.180
" 4	0.120
" 5	0.035
" 6	0.095
HM 7	0.010

CODE A7/2

CLIENT: Tas Mines BELOW INFORMATION NOT FOR TYPING CHECKED:

QUALITY CONTROL STANDARDS AT REAR-FOUND VALUE UNDERLINED ie"___"ACCEPTED in brackets ie"

GROUP	GC
ANALYST	GT
VOLUME	
PAGE	

THE BELOW TO BE SIGNED BY ANALYST: HAS A QUALITY CONTROL BEEN:

INCLUDED	
POSTED	

108

*
AMDLTS AA59129
CLASAB AA95452

TLX NO: 2477

ATT DANNY CARMODY
2/2/87
ANALYSIS CODE A7
REPORT AC 20401
ORDER NO. SPT 297/87
RESULTS IN PPM

SAMPLE	AU
D313 1	0.005
D313 2	0.005
D313 5	0.010
D313 6	0.010
D313 7	X
D313 8	0.005
D313 9	0.005
D313 10	0.015
D313 11	0.010
D313 12	0.010
D313 13	0.045
D313 14	0.010
D313 15	0.035
D313 16	0.005
D313 17	0.085
D313 18	0.005
D313 20	0.005
D313 22	X
D313 23	0.005
D313 24	X
D313 25	X
D313 28	X
D313 30	X
D313 32	0.005
D313 33	X
D313 34	X
D313 35	X
D313 36	X
D313 38	X
D313 40	

0313 +1	0.005
0313 +2	X
0313 +3	X
0313 +4	X
0313 +5	0.005
0313 +6	0.005
0313 +7	X
0313 48	X
0313 49	0.005
0313 50	X
0313 51	0.005
0313 52	0.020
0313 53	0.005
0313 54	X
0314 1	0.040
0314 2	0.055
0314 3	0.005
0314 4	0.080
0314 5	0.110
0314 6	0.010
0314 12	0.010
0314 13	0.020
0314 14	0.020
0314 15	0.010
0314 16	0.005
0314 17	0.005
0314 18	0.005
0314 19	0.005
0314 20	0.005
0314 21	0.005
0314 22	0.010
0314 23	0.010
0314 24	X
0314 25	0.010
0314 26	0.015
0314 27	0.005
0314 28	X
0314 29	X
0314 30	0.020
0314 31	0.010
0314 32	X
0314 33	0.005
0314 34	0.005
0314 35	X
0314 36	X
0314 37	0.025
0314 38	X
0314 39	0.010
0316 1	0.015
0316 2	0.020
0316 3	0.010
0316 4	0.025
0316 5	0.020

0316 6	0.010
0316 7	0.005
0316 8	0.005
0316 9	0.005
0316 10	0.005
0316 11	0.005
0316 12	X
0316 13	X
0316 14	0.010
0316 15	X
0316 16	X
0316 17	X
0316 18	X
0316 19	X
0316 20	X
0316 21	X
0316 22	X
0316 23	0.005
0316 24	0.015
0316 25	X
0316 26	0.010
0316 27	X
0316 28	X
0316 29	X
0316 30	0.005
0316 31	0.005
0316 32	0.005
0316 33	0.005
0316 34	0.005
0316 37	0.015
0316 40	0.110
0316 42	0.080
0316 43	0.025
0316 46	0.015
0316 48	0.025
0316 49	0.010
0316 50	0.005
0316 51	0.010
0316 52	0.005
0316 53	0.005
0316 54	0.005
0316 55	0.005
0316 56	0.005
0316 57	0.005
0316 58	0.015
0316 59	0.005
0316 60	0.010
0316 61	0.015
0316 62	0.010
0316 63	0.025
0316 64	0.015
0316 65	0.025
0316 66	0.010
0316 67	0.030
0316 68	0.025
0316 69	0.005
0316 70	0.015
0316 71	0.030
0316 72	0.030
0316 73	0.020
0316 74	X
0316 75	X
0316 76	X

Page G1

Analysis code A7 | Report AC 20111 | Order No. SPT267/87 | Results in ppm

Sample	Au
D343/ 83	0.005
D343/ 84	0.005
D343/ 85	<0.005
D343/ 86	<0.005
D343/ 87	<0.005
D343/ 88	<0.005
D343/ 89	<0.005
D343/ 90	<0.005
D343/ 91	<0.005
D343/ 92	<0.005
D343/ 93	<0.005
D343/ 94	<0.005
D343/ 95	<0.005
D343/ 96	<0.005
D343/ 97	<0.005
D343/ 98	<0.005
D343/ 99	<0.005
D343/100	0.005
D343/101	<0.005
D343/102	<0.005
D343/103	<0.005
D343/104	<0.005
D343/105	0.005
D343/106	0.005
D343/107	<0.005
D343/108	<0.005
D343/109	<0.005
D343/110	<0.005
D343/111	<0.005
D343/112	<0.005
D343/113	<0.005
D343/114	<0.005
D343/115	<0.005
D343/116	<0.005
D343/117	<0.005
D343/118	<0.005
D343/119	<0.005
D343/120	<0.005
D343/121	0.005
D343/122	
Detn limit	(0.005)

Analysis code A7 Report AC 20111 Page G2

Order No. SPT267/87 Results in ppm

Sample	Au
D343/123	<0.005
D343/124	<0.005
D343/125	<0.005
D343/126	<0.005
D343/127	<0.005
Detn limit	(0.005)

APPENDIX NO. 5

PROPOSED WORK PROGRAMME - ESTIMATED EXPENDITURES

EXTENSION OF E.L. 17/68 - YEAR 1 (1987-88)

SECTION 8 PROPOSED EXPLORATION/REQUESTED INFORMATION

As requested by the Department of Mines letter date 19th October, 1987 the following notes provide details of proposed exploration work and estimated expenditures for the FIRST YEAR of an EXTENSION OF PART OF EXISTING E.L. 17/68.

This information is supplementary to data provided with a Tasmania Mines Limited application for a Retention Licence date 30th September, 1987.

A - AREA FOR EXTENSION

The area requested for extension within the existing E.L. 17/68 is outlined on the accompanying Figure No. 1.

The area is similar to that requested in the R.L. application, but to conform to the 1000m metric grid coordinate system, the southern portion of the "extension area" incorporates an area already under M.L. application (Nos. 1267P/M and 1269P/M) by Tasmania Mines Limited, and consequently now measures sq. km. in size (please refer to attached Plans 1 and 2/EX/EL.

It is believed the area applied for extension is the minimum area necessary to examine known anomalous area and provides security of title to any potential development.

The existing C.L. 105M/77 and six M.L.'s under application do not of course conform to the 1000m grid coordinate system. If the Department of Mines requires, the above E.L. extension area could be altered to extend to the nearest 1000m grid around these tenements, thereby conforming to an area as outlined in Figure No. 2.

B. - EXPLORATION OBJECTIVES AND AIMS

The exploration objectives were documented in the Tasmania Mines Limited R.L. application dated 30th September, 1987 but are divisible into two specific categories:

- -tungsten and magnetite investigations (refer R.L. application, pages 12 to 14)
- -wollastonite investigations (refer R.L. application, pages 15 to 17)

Exploration philosphies of the area in question are documented on pages 21 to 25 of the above application.

C. EXPLORATION PROGRAMME

The proposed programme of work outlined below is for the initial FIRST YEAR of a maximum three year programme within the area under application.

Please refer to Plan No. 2/EX/EL for specific locations.

1. Tungsten Investigations

a) Location L.5. to Loudwater Creek.
Work would consist of exploratory diamond drilling to investigate interpretated subsurface magnetite skarn zones extending along the eastern limb of the Kara Synform structure immediately north of Location L.5. Detailed geological mapping and ground magnetic survey work has been completed and drill targets delineated.

The proposed investigations would be essentially diamond drilling (in-house drill crew and rig), with supplementary detailed ground magnetics at drill target areas to optimise drill geometry.

Seven drill holes each of approximately 150m drill depth would be proposed. Subsequent infill drilling would be dependent upon results.

b) Hampshire Silver Mine.
Three diamond drill holes (total drilling 250m) would be drilled to investigate the Hampshire Silver Mine anomaly interpretated as a metamorphosed skarn zone bordering altered granite.

c) Kara Synform - W. Limb
The initial examination of the W. limb of the Kara synform structure north of the Kara North ore zone would include completing detailed grid ground magnetic surveys in the area between Location L.13 and Loudwater Creek. This work will to some extent be supplemented by geologic mapping and possible geochemical soil sampling.

2. Magnetite (and WO3) Investigations

a) The magnetite potential of the Hampshire Magnetite Skarn zone, accurately demarcated by detailed ground magnetite surveys, completed 1984-1985, will initially be investigaged by reconnaissance diamond drilling (200m) in order to optimise interpretation of magnetic signatures, followed by wide spaced (250m interval) grid line percussion drilling (700m).

b) The above work would include assessing the possible associated WO3 and Au anomalism/mineralisation of this skarn zone.

This would be a continuation of work currently underway, namely:

a) complete evaluation of results of completed work during 1987,

b) detailed examination of the known surface exposed area of wollastonite (900m strike depth) by systematic grid line percussion drilling (estimated 700m), and metallurgical test work of a bulk sample of wollastonite,

c) the possibility of southern strike extensions of known wollastonite mineralisation would be investigated by regional geological mapping, sampling and reconnaissance exploratory diamond drilling (200m).

D. EXPLORATION EXPENDITURES

Estimates of exploration expenditures to complete the above proposed programme of work during the initial 12 months period are believed to total $317,000. This figure is of course subject to modification, according to progressive results of exploration work.

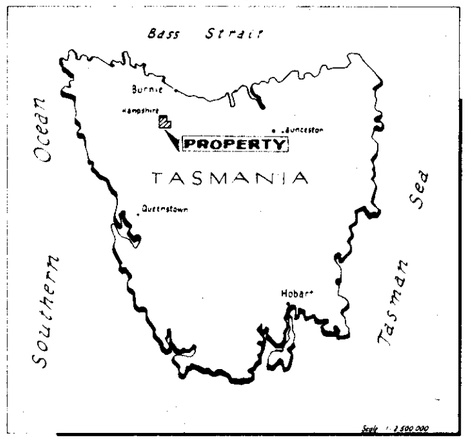
Expenditure breakdowns are as follows:

	$
- Diamond drilling	118,000
- Percussion drilling	56,000
- Assays	20,000
- Geology/Geophysics	42,000
- Field crew support	30,000
- Transport	18,000
- Metallurgy	15,000
- Administration/Tenure	18,000
TOTAL	$317,000

Per project:	$
- Tungsten investigations	134,000
- Magnetite investigations	81,500
- Wollastonite	101,500
	$317,000

88-2764

PLAN No. 1/87



TASMANIA MINES N.L.

E.L. 17/68 - KARA PROPERTIES

825117

5 cm

N

SCALE 1:20,000

GEOLOGY

REFERENCE

- River
- Creek
- Road
- Track
- Railway
- Trig Beacon
- Geological Boundary

Base Map enlarged from 1:50,000 Hedges MTM Sheet 8015 & Aerial Photographs

E.L. 17/68

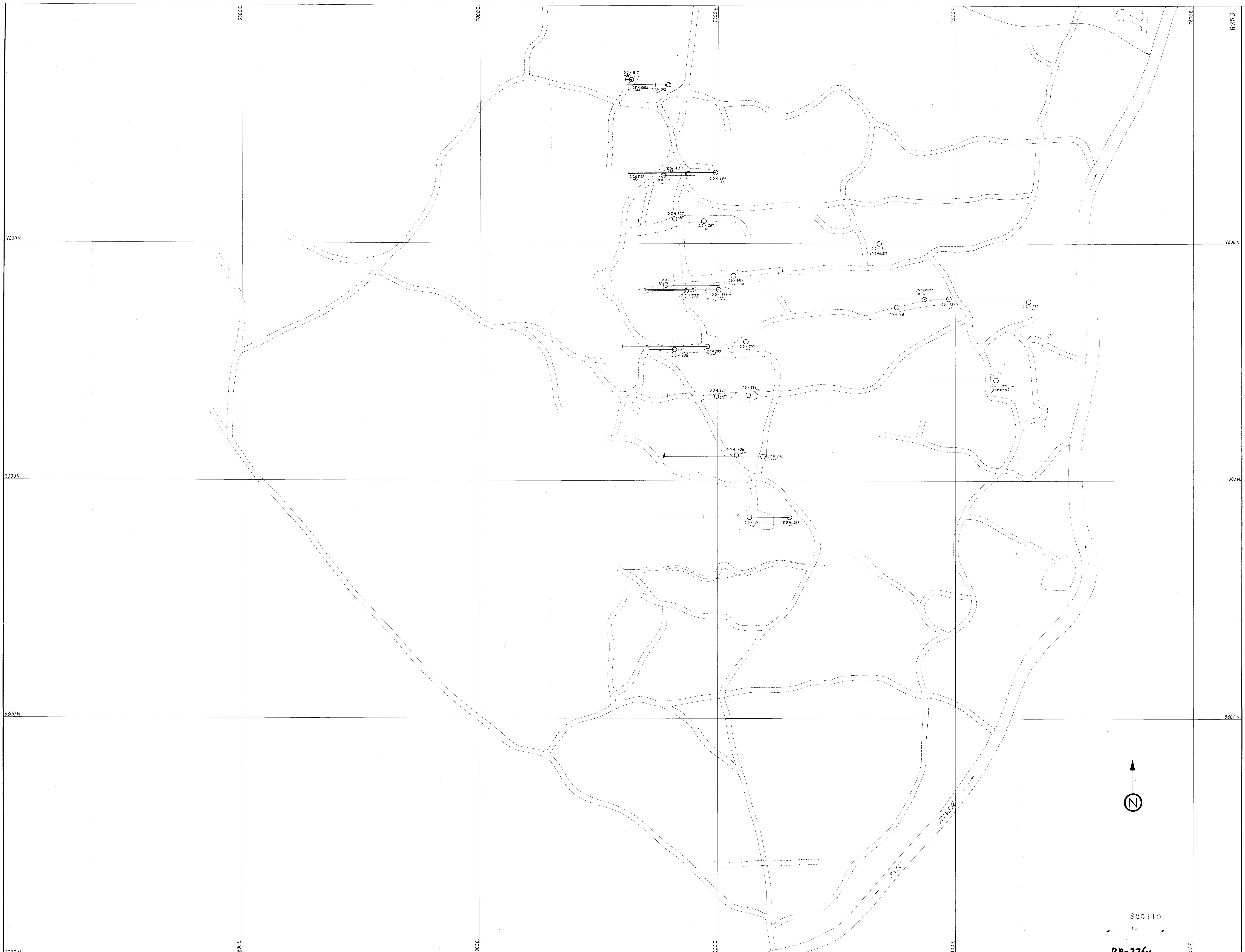
COMPLETED WORK PROGRAMME
NOV. 1986 - OCT. 1987

- = Exploration - Localised investigations
- = Exploration - Regional
- = Evaluation Drilling
- = Exploration Drilling

6251


6252
L 13 LOCATION
LOCATION L5
COMPANION RIVER
KARA NORTH "266 ZONE"
KARA NORTH "MAGNETITE ANOMALY"
D.D.H. 326
327
D.D.H.132
D.D.H.517
D.D.H.515A
D.D.H.515
D.D.H.516
D.D.H.131
D.D.H.516 A
D.D.H.294
D.D.H.307
D.D.H.267
D.D.H.293
D.D.H.130
D.D.H.266
D.D.H.303
D.D.H.290
D.D.H.270
D.D.H.305
D.D.H.304
D.D.H.268
D.D.H.306
D.D.H.292
D.D.H.291
D.D.H.269
D.D.H.6
D.D.H.5
D.D.H.321
D.D.H.287
D.D.H.146
D.D.H.320
D.D.H.289
D.D.H.317
D.D.H.288
D.D.H.318
To APPM Gate
To Western Limb Kara No 1
See 74-1013 for auger results
basalt ≃ 4m
basalt ≃ 12m
basalt ~4m
basalt, etc ≃ 22m
24m basalt
basalt ≥ 32m
6m basalt
Alluv. >2m
Alluv. ≥2m
Alluv. ≃13m
Alluvium >4m
mt + skarn
limestone
see 80-1425 for geology
also 74-1008 for X-section
also 73-1379 for logs + sections
F
LEGEND
○ = McINTYRE MINES DIAMOND DRILL HOLE
○ = ANZECO DIAMOND DRILL HOLE
○ = TASMINEX N.L. DIAMOND DRILL HOLE
• = ANZECO POWER AUGER HOLE
1162 • TAS. MINES AIRTRACK DRILLING 1986
= ALLUVIUM
= TERTIARY BASALT
= DEVONIAN GRANITE
= SANDSTONE / QUARTZITE / CONGLOMERATE unit
= SKARN
N
5 cm
20 10 0 20 Metres
SCALE 1:1000
6252
88-2764
TASMANIA MINES LIMITED
KARA TUNGSTEN PROJECT TASMANIA
KARA NORTH
"266 ZONE" & "MAGNETITE ANOMALY"
GEOLOGY AND DRILLING PLAN
825118
DRAWN: C.H.W. TRACED: T.G.D.S. SCALE: 1:1000 DATE: Sept. '87 PLAN 2A/'87

6253



825119

5 cm

88-2764

TASMANIA MINES LIMITED

KARA TUNGSTEN PROJECT, TASMANIA

KARA NORTH

DIAMOND DRILLING

REVISIONS	NO.	BY	DATE	DESCRIPTION	DESIGNED:		PLAN No. 2B/87
					DRAWN: T.G.D.S.	SCALE 1:1000 Metres 20 10 0 20	REVISION △
					CHECKED:		
					DATE: Sept '87	PROJECT No.	

6253


825120 88-2764
TASMANIA MINES LIMITED
KARA PROPERTY
MAIN ORE ZONES
6254
SCALE: 1:2500
E.L. 17/68
(75 sq.km)
SHEET COVERAGE
PLAN No. 3/87
KARA NORTH "266 ZONE"
KARA NORTH "MAGNETITE ANOMALY"
EASTERN RIDGE
WESTERN LIMB
MAIN PIT
KARA Nº1 MAIN ZONE
KARA Nº1 SOUTHERN EXT.
BOB'S BONANZA
Companion River
Old Park River
East Kara Creek
Kara Creek
Horizontal Creek
Tailings Dam
CORE SHED
WORKSHOP
OFFICE
MILL
PUMP HOUSE
LEASE BOUNDARY CL105M/77
KARA No.1 R.L.539·86
To L13 Location
To Kara South
MINE ROAD TO HAMPSHIRE
Sections
7000 E.
7400 E.
7800 E.
8200 E.
6600 N.
6200 N.
5800 N.
5400 N.
N
Scale: 1:2500
50 25 0 50 100 Metres
100 0 100 200 300 Feet
5 cm
REFERENCE:
McIntyre Diamond Drill Hole
Anzeco Diamond Drill Hole
Tasminex Diamond Drill Hole
Auger Hole
Trench

88-2764

825121

TASMANIA MINES LTD.

EXPLORATION LICENCE 17/68

WOLLASTONITE DEPOSITS - LIMESTONE CREEK

LOCATION PLAN

5 cm

SCALE: 1:1000 PLAN No. 4/87 DATE: Nov. 1987

6255

400m E. 600m E. 800m E. 1000m E.

2000m N. 1800m N. 1600m N. 1400m N. 1200m N. 1000m N.

LIMESTONE CREEK

TO UPPER NATONE / HAMPSHIRE ROAD

TO ROGETTA ROAD

D.D.H. 520 WL.10 WL 11

D.D.H. 519 WL 5 WL 6

WL 1 WL 2 WL 3 WL 4

WL 7 WL 8 WL 9

Lst/33 Lst/32 Lst/31 Lst/20 Lst/19 Lst/18 Lst/17 Lst/16 Lst/15 Lst/14 Lst 13 Lst/12 Lst/11 Lst/11A Lst/10

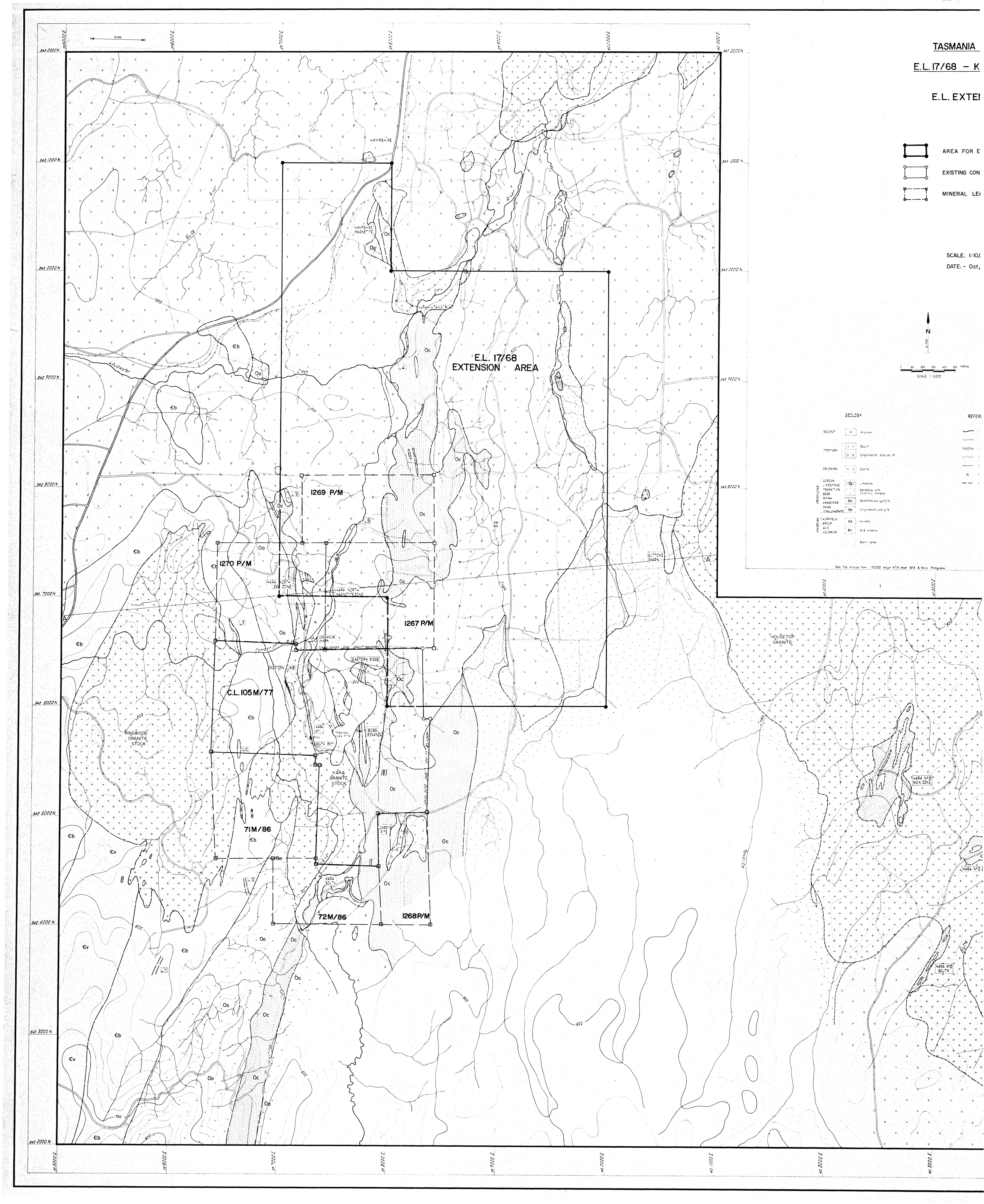
LIMESTONE CREEK

TO SUTTON'S FARM

KARA DIRT ROAD

LEGEND

- Creek
- Track (4 W.D. Access)
- Survey track & Survey station
- Diamond drill hole
- WL 2 ○ Airtrack drill hole
- Lst 4 Rock Sample location


TASMANIA
E.L. 17/68 – K
E.L. EXTE
AREA FOR E
EXISTING CON
MINERAL LE
SCALE: 1:10,
DATE:- Oct,
N
SCALE 1:10000
GEOLOGY
RECENT
Alluvium
TERTIARY
Basalt
Conglomerate breccias etc
DEVONIAN
Granite
ORDOVICIAN
GORDON LIMESTONE
Limestone
TRANSITION BEDS
Sandstone with calcareous members
MOINA SANDSTONE
Oc
Sandstone and quartzite
OWEN CONGLOMERATE
Oo
Conglomerate and grits
CAMBRIAN
HORNFELS GROUP
Єb
Hornfels
ACID VOLCANICS
Єv
Acid volcanics
Skarn zones
Base Map enlarged from 1:100,000 Hellyer N.T.M Sheet 8015 & Aerial Photographs
E.L. 17/68
EXTENSION AREA
1269 P/M
1270 P/M
1267 P/M
1268P/M
C.L.105M/77
71M/86
72M/86
HAMPSHIRE
HAMPSHIRE MAGNETITE
KARA NORTH 260 ZONE
KARA NORTH MAGNETITE ZONE
COMPANION SKARN
CONSOLIDATED LEASE 105M-77 BOUNDARY
EASTERN RIDGE
WESTERN LIMB
KARA Nº1
BOBS BONANZA
SOUTH EXT
KARA GRANITE STOCK
RINGWOOD GRANITE STOCK
LOHREYS PITS
KARA SOUTH
SUTTONS SKARN
HOUSETOP GRANITE
KARA Nº2 MAIN ZONE
KARA Nº2 SOUTH
Loudwater
Creek
Guide River
Big Creek
Holloway
Blythe
5 cm
543 2000N.
543 1000N.
543 0000N.
542 9000N.
542 8000N.
542 7000N.
542 6000N.
542 5000N.
542 4000N.
542 3000N.
542 2000N.
39 5000 E.
39 6000 E.
39 7000 E.
39 8000 E.
39 9000 E.
40 0000 E.
40 1000 E.
40 2000 E.
40 3000 E.
500
600
700
800

88-2764

825122

TASMANIA MINES LTD.

E.L. 17/68 – KARA PROPERTIES

E.L. EXTENSION AREA

6256

AREA FOR EXTENSION

EXISTING CONSOLIDATED LEASE CL 105M/77

MINERAL LEASES UNDER APPLICATION

SCALE: 1:10,000

DATE:- Oct, 1987

PLAN 1/EX/EL

N

SCALE 1:10000

5 cm

E.L. 17/68
EXTENSION AREA

1269 P/M

1270 P/M

1267 P/M

1268P/M

C.L. 105M/77

71M/86

72M/86

HAVERSHIRE

HAVERSHIRE MAGNETITE

KARA NORTH ZONE

KARA NORTH MAGNETITE ZONE

COMPANION SKARN

CONSOLIDATED LEASE 105M/77 BOUNDARY

EASTERN RIDGE

WESTERN LIMB

KARA No 1 MINE

KARA No 1 SOUTH EXT

BOBS BONANZA

KARA GRANITE STOCK

RINGWOOD GRANITE STOCK

SUTTONS SKARN

HOUSETOP GRANITE

KARA No 2 MAIN ZONE

KARA No 2 EAST

KARA No 2 SOUTH

Creek

River

Gully

Road

Track

Railway

Trig. Beacon

Geological Boundary

543 2000N

543 1000 N

543 0000 N

542 9000 N

542 8000 N

542 7000 N

542 6000 N

542 5000 N

542 4000 N

542 3000 N

542 2000 N

E 3000 E

E 4000 E

GEOLOGY

RECENT — Alluvium

TERTIARY — Basalt; Conglomerate breccias etc

DEVONIAN — Granite

SILURIAN — GORDON LIMESTONE: Limestone; TRANSITION BEDS: Sandstone with calcareous members; MOINA SANDSTONE: Sandstone and quartzite; OWEN CONGLOMERATE: Conglomerate and grits

CAMBRIAN — HORNFELS GROUP: Hornfels; ACID VOLCANICS: Acid volcanics; Skarn zones

REFERENCE

River; Creek; Road; Track; Railway; Trig. Beacon; Geological Boundary

Base Map enlarged from 1:50,000 Helger N.T.M. Sheet 80S & Aerial Photographs

6256