W.J. & E.E. FISHER PTY LTD

EL 5468

YEAR 1: ANNUAL REPORT ON THE EXPLORATION PROGRAM

PERIOD: 13-8-87 to 12-8-88

by

W.J. FISHER. M.Aus.I.M.M. MICA. F.IMM AM

Including Report by G.W. Patterson,
Patterson Geological Services Pty. Ltd.

EL 5468
RUNNING CREEK LOCALITY

C O N T E N T S

APPENDICIES

.../2

CONTENTS ..... (Continued)

PLANS IN ADDITON TO THOSE LISTED

in

G.W. PATTERSON'S REPORT

EXPLORATION LICENCE EL 5468

W. J. FISHER

EXPLORATION PROGRAM FOR YEAR 2

from 13th August, 1988, to 12th August, 1989

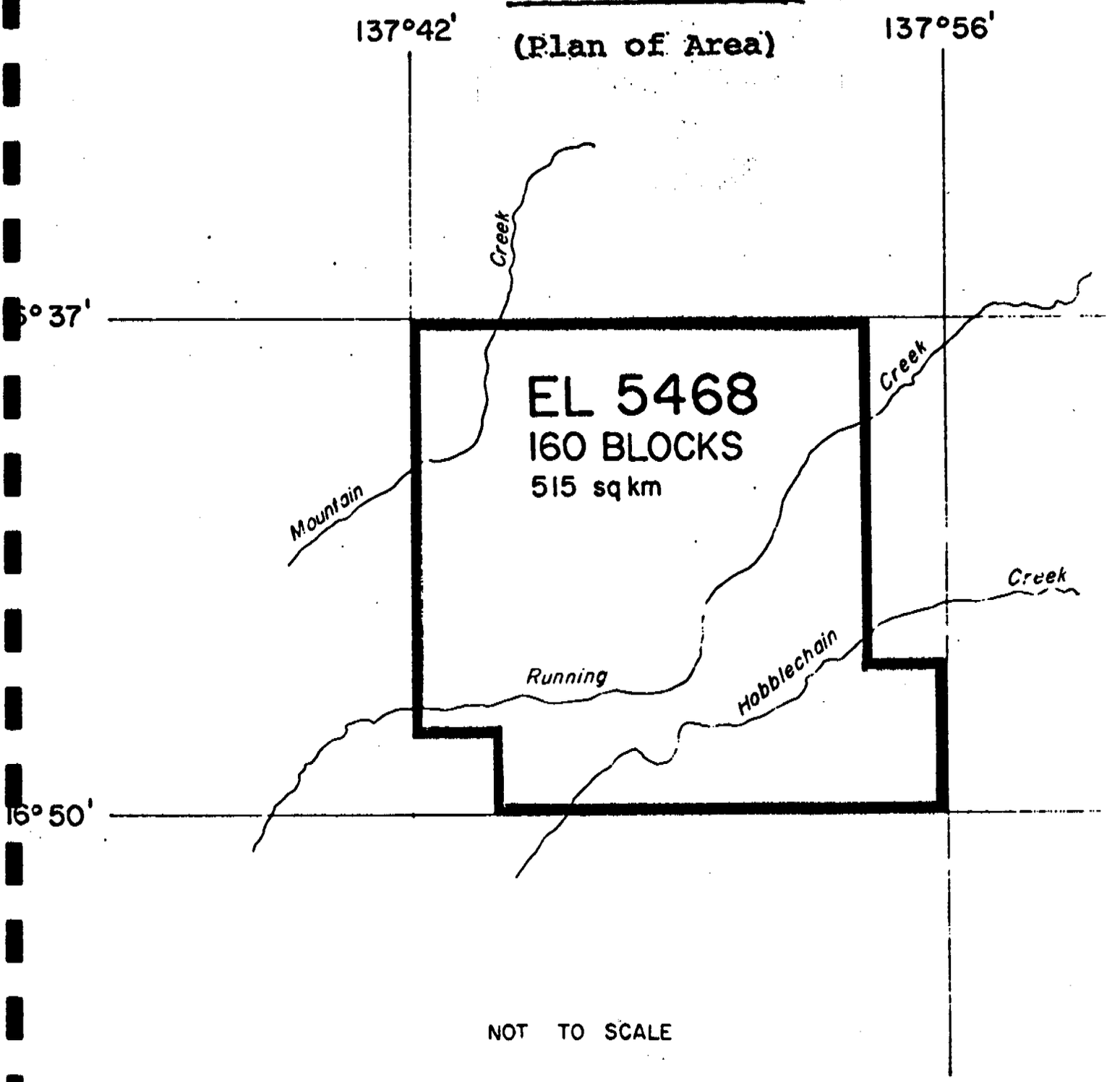
	$
Geology	6,000
Geochemistry	1,000
Rock chip sampling (including large diamond samples)	3,200
Costeaning	5,000
Ground Magnetics	1,000
Drafting	1,600
Assays	3,000
Vehicle Expenses	3,100
Helicopter - optional	
Field Supplies	1,200
Clerical, Secretarial	900
Reports	2,100
Total:	$28,100

Depending on final results from the 1988 program, this program may be increased with emphasis on consteaning, sampling and assays, or alternatively, shallow percussion drilling.

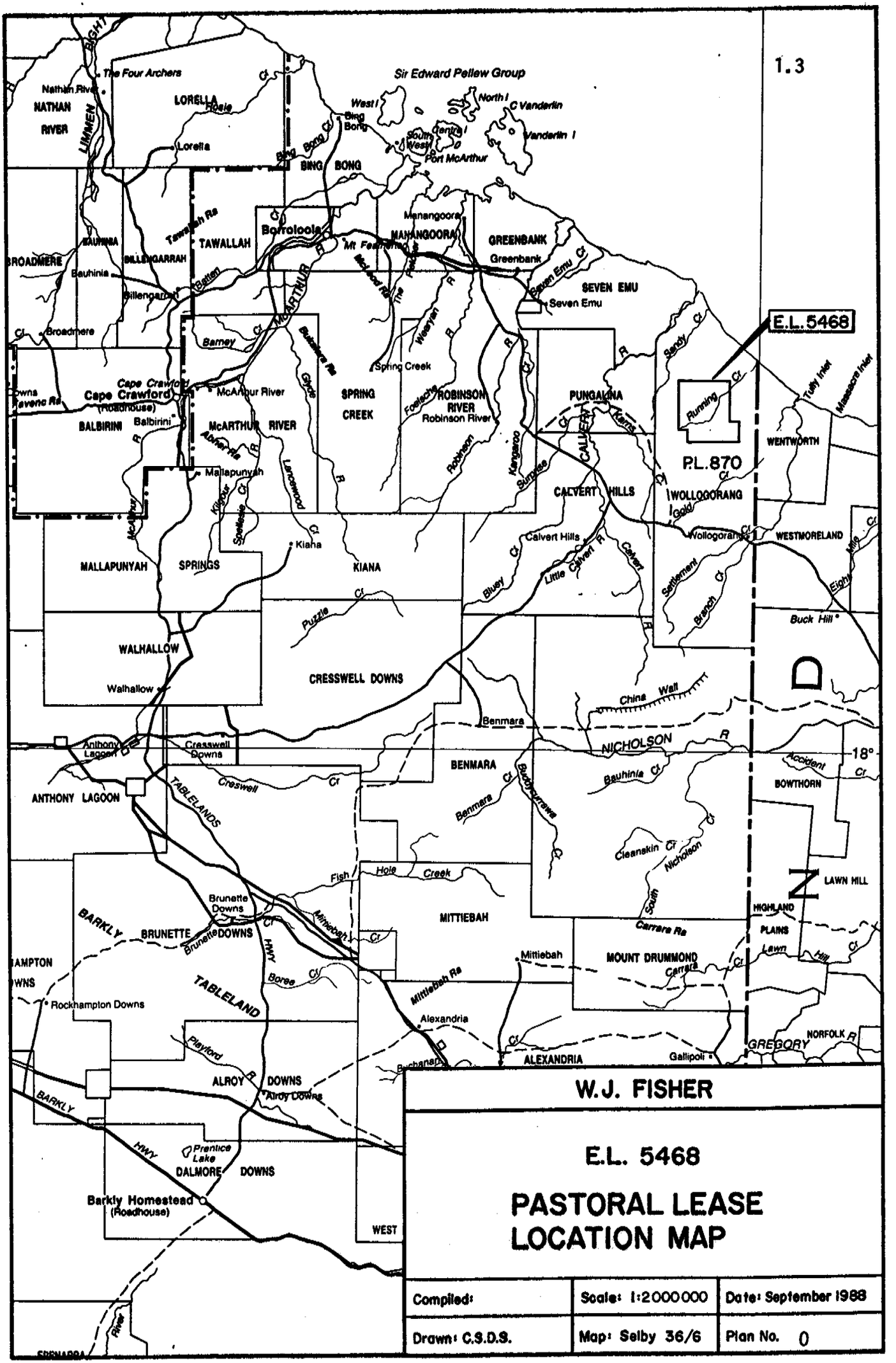
1.2

SECOND SCHEDULE

(Plan of Area)



NOT TO SCALE



W.J. FISHER

E.L. 5468

PASTORAL LEASE LOCATION MAP

Compiled:	Scale: 1:2000000	Date: September 1988
Drawn: C.S.D.S.	Map: Selby 36/6	Plan No. 0

2.1 SUMMARY

Exploration results to date are encouraging and provide incentive for additional field exploration in Year 2.

Results of Year 1 Stage 2 diamond sample results are not yet to hand. Samples from Year 1, Stage 1, were negative and tend to downgrade the diamond potential. A greater density of samples for diamond indicator minerals will be taken in Year 2.

Geological mapping of the identified clusters of copper bearing breccia pipes indicate a greater density of pipes in comparitively localised areas providing incentive for early percussion drilling and/or costeaning.

As many breccia pipes have minimal surface outcrop the presence of grass cover restricted detailed ground work. A greater effort will be made in Stage 2 to identify all breccia pipes within the favourable area so as to indicate maximum potential quantities of copper ore.

Detailed work on the gridded areas may result in identification of breccia pipes much greater in diameter than can be inferred from surface mapping and sampling.

W.J. Fisher, AM
M.Aus.IMM., M.MICA., Fellow.IMM

3.1 LOCATION AND ACCESS

The exploration licence is located on the northern part of Wollogorang Pastoral Lease 870 that lies next to the Queensland border. The access road from Burketown in Queensland past Wollogorang Homestead to Borroloola is the route of No. 1 Highway. Access from the Northern Territory is via the Stuart Highway, the sealed beef road Carpentaria Highway to Borroloola and thence by gravelled road with stream bed crossings to Wollogorang. A station track from Wollorogang traverses the area which is approximately 67 kms northerly from the Homestead. Refer Map 1.

4.1 TOPOGRAPHY, WATER AND CLIMATE

The topography to the west consists of the upland Masterton sandstones and underlying rhyolites and volcanics forming rugged escarpments cut by the tributaries of Running and Mountain Creeks. Most of the Licence area is flat lying with very little outcrop on the eastern sections.

The climate is tropical, cool in mid year, and extremely hot and dry in the summer. The "wet season" rainfall dictates exploration periods as much of the access road area remains soft up to July after a heavy wet season. The only permanent flowing stream is Running Creek, all others being reduced to a series of water holes in the dry season.

Though relatively flat, sandstone and volcanic outcrops retard ground vehicles when the grass is not burnt which was the case in 1987 and 1988.

In the Licence area, open eucalypt type forests with paperbarks and wattles thick in places. Tree growth if often stunted. Refer Photo 3.

Soils are invariably sandy or lateritic and are of poor quality. This is probably the reason why pastoral activity is very limited in the Exploration Licence area.

5.1 REGIONAL GEOLOGY

In the lowlands, the predominant formations are the weathered remnants of the Masterton Formation, sandstone and conglomerate, and its members the Pungalina Member, red-brown flaggy fine grained sandstone and siltstone, the Hobblechain Rhyolite Member of porphyritic rhyolite and the Gold Creek Volcanic Member of basalt, dolomitic lithic sandstone, tuffaceous siltstone, volcanic agglomerate and breccia.

Widespread laterite and soil covered areas conceal most of the basement.

To the west, the same formations form rugged escarpments cut by the tributaries of Running Creek and Mountain Creek.

Further information on geology is contained in G.W. Patterson's Report.

6.1

W.J. & E.E. FISHER PTY. LTD.

MINING & EXPLORATION CONSULTANTS

19 KIRKLAND CRESCENT, KAHLIN
DARWIN, N.T. 5790.
AUSTRALIA

PRINCIPAL: W.J. FISHER, M.A.I.M.M.

IN REPLY PLEASE QUOTE

TELEPHONES:— HOME OFFICE (089) 81 9381
BUSINESS
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BUFFALO COURT, DARWIN
G.P.O. BOX 3167,
DARWIN, N.T. 5794
(089) 81 1990
TELEX: AA 85594

WJF:YNC

12th April, 1987.

The Director of Mines,
Department of Mines & Energy,
P.O. Box 2901,
DARWIN. N.T. 5794

No 5468

Attention: Titles Registrar

Dear Sir,

APPLICATION FOR AN EXPLORATION LICENCE
160 BLOCKS
IN THE RUNNING CREK LOCALITY

This application is for an Exploration Licence for a period of six years over an area of 160 blocks in the Running Creek locality of the Northern Territory.

The writer was responsible for mineral exploration programs over part of this area in the 1970's. With current advances in geological knowledge of mineral structures, a further program is desirable to extend the available knowledge on the area.

The initial program for Year One would incur a minimum cost of $25,000. It would be upgraded depending on results. The program could be increased depending on early results being available. The principal targets are copper and gold. The program will embrace all other minerals.

(1) Research reports on Exploration Licences previously held and relinquished.

(2) Obtain colour air photos and prepare enlargements over selected localities and prepare base geological maps on a scale suitable for the size of the Licence.

(3) Sample and geolgoically map a number of specific targets and assay for other minerals as well as copper.

...../2

Explore for other specific targets. Exploration will be supported by 4 x 4 vehicles and depending on terrain problems, helicopter support may be required to expedite progress.

Program for Year 1	$
Geology	6700
Geochemistry	2000
Gridding	2000
Drafting	2000
Assays	5000
Vehicle Expenses	3000
Helicopter/optional (will increase cost)	
Field Supplies	1500
Clerical Secretarial	800
Reports	2000
	$25000

The writer has the financial resources and exploration experience to carry out this program. Contract geologists and other contract technical services will be obtained as and when required.

A cheque for $885.00 is enclosed for Year 1 rent and advertising.

Yours faithfully,

W.J. Fisher, M.Aus.I.M.M.,
M.MICA, Fellow I.M.M.

EXPLORATION LICENCE EL 5468

WILLIAM JOSEPH FISHER

INTERIM REPORT

PERIOD OCTOBER, 1987

A field party of two 4 x 4 vehicles and four personnel carried out field exploration on EL 5468 in October, 1987.

The following work was carried out:

Evaluation of previous exploration.

Location and examination of the areas in which micro, macro, diamonds and indicator minerals were plotted by CRAE Pty. Ltd.

Location of a number of copper bearing breccia pipes in three discrete areas, and a number of other pipes or indications of pipes in the general area.

Rock chip sampling for gold and copper.

Stream trap sampling for diamonds - large samples.

Rock chip sampling for diamonds from one breccia pipe (containing a small open cut for previous copper production) where an indicator mineral for diamonds was found by C.R.A.

Survey of the principal copper bearing groups of breccia pipes.

Additonal exploration in 1988 to follow up results obtained from the last exploration program. This will be carried out within Year One.

W.J. Fisher, AM
M.Aus.IMM., M.MICA., Fellow.IMM

Principal Consultant
W.J. & E.E. Fisher Pty. Ltd.

06/07/1988

EL 5468

YEAR 1 STAGE 1 EXPLORATION PROGRAM

OCTOBER, 1987

8.1

The several clusters of Cu bearing breccia pipes in the Running Creek locality have long been a source of interest.

Secondary copper, malachite in the exposed kaolinised trachyte, was noted by early cattlemen.

In the 1930's, a lease was obtained by Mt. Isa prospectors No. 33C over a copper bearing outcrop in the midst of a pipe cluster north of Running Creek. Over a period of many years, a small open pit was developed and high grade secondary copper ore was trucked to Mt. Isa. Tonnage is not known, but would have been small.

Before this period, Masterton, with Aboriginal tribesmen, produced high grade secondary copper ore in the 1950's from a series of widely dispersed Cu bearing pipes of a similar nature to Running Creek in the Red Bank area, approximately 50 kms south of the Running Creek clusters. Various companies explored some of these by diamond drilling and later developed a small open pit in the Red Bank pipe.

It is logical to assume that there are more pipes within this area of interest that do not have visible evidence of Cu mineralisation.

Though reasonable grades of Cu mineralisation were obtained by diamond drilling in the Red Bank cluster, the originating depth is unknown. The distance separation of the various known mineralised pipes preclude a central mine development system.

The Running Creek locality in the past was explored for diamonds and for radiometric anomalies by a major company, i.e. C.R.A., and for copper by Euralba Mining Ltd. in the late 1960's and early 1970's.

The CRA report on EL 4077 confirms the existence of several micro diamonds in the Running Creek drainage in the Running Creek yard locality.

8.1 Continued .....

A sample of the pipe formation from ML33A in the Running Creek area contained a diamond indicator mineral, a pyrope garnet, though there was no reported followup.

The mineralised kaolinised trachyte comprising the pipe filling is a very light coloured material bearing no appearance or physical relationship with kimberlite, the sought for target for diamonds.

The trachyte and overlying sandstone may be an infilling of a collapsed crater and the original ejection may be a different material.

The objective of this first phase of exploration was to locate the various pipe groups in the Running Creek area, and obtain stream trap and in situ samples for kimberlite trace elements, and for micro diamonds.

Rock chip samples were collected for determining a multi mineral suite that may exist in the pipe system including gold and silver, and soil samples -80# for the same purpose.

During field work, the various groups were locked in with surveys and additional possible pipes located within the prospective area 8 km x 8 km.

Providing the samples taken return positive results, followup work will consist of setting up a large grid and tying together the various pipes and pipe groups.

Supplementary work will consist of costeaning a number of positive and suspected pipes to provide subsurface information, and more precisely determine diameters.

Sometimes, the only indicators are circular, in dipping S/S relics or S/S domal clusters within the pipe circumference.

Secondary copper in the circumference sandstones or the internal S/S is a good indicator of a Cu bearing pipe.

8.1 Continued .....

Trachyte may outcrop with very little evidence of circumference or internal S/Ss. When the trachyte is kaolinised and carrying secondary Cu, then it may be assumed to be a pipe filling.

Some domal clusters of S/S on a circular pattern may also indicate the existence of pipes below the soil cover.

As mentioned earlier, the first stage of exploration in October, 1987, was orientated to relocating copper bearing pipes known to the writer and tying them in to each other.

Though the grass was not burnt slowing down the program, four discrete areas containing one or more breccia copper bearing pipes were located, grid boundaries established for a follow up grid controlled geological mapping program as the second stage of the first year's exploration program.

Several other breccia pipes previously known were also re-located. As there was no surface evidence of copper content, further work will be deferred to Year 2.

Several other pipes are known to exist within the most prospective area and they await relocation.

A number of rock chip samples were taken for copper and gold assays, and for multi mineral scans.

20 Kg to 40 Kg -4mm sieved samples were taken from several trap sites in the prospective area for assay for diamond indicators, including one 40 Kg sample from the old mine dump at relinquished ML33C.

The weather conditions were formidable with very high temperatures. Storm buildup dictated an end to this stage as even one severe storm would create difficulties on many of the soft clayey flats.

Four personnel supported by two 4x4 vehicles with trailers carried out this program. Kilometres travelled exceeded 3,000 for each vehicle.

8.1 Continued .....

Diamond samples were despatched to the Ashton Mining laboratory in Perth, W.A., and rock chip and soil samples were processed by Analabs, Darwin.

The results obtained from the diamond samples were negative and additional samples further upstream on Running Creek will be taken in Stage 2.

EL 5468

YEAR 1 STAGE 2 EXPLORATION PROGRAM

EARLY AUGUST, 1988

8.2

Three personnel, W.J. Fisher, S.L. Fisher and geologist, Bill Patterson, supported by two 4 x 4 vehicles completed the second stage under better climatic conditions than the first stage.

Operating from a base camp on Running Creek, the four areas identified in Stage 1 Area 1 were carefully gridded on a northing and easting pattern at 50 metre intervals, using 117mm steel fence droppers. The base line and central subsidiary baselines were marked with joined fence droppers for better visibility.

Bill Patterson carried out geological mapping with 50 metre control. The high grass throughout the grid will require some followup geological mapping in areas of poor or no outcrop.

Additional grids were established over two other systems and party completed. Geological mapping was continued over these areas but ground conditions, very rough in places, precluded complete mapping.

Sufficient data is now available to determine the importance of the three localities. As the next stage requires costeaning and/or drilling or both, a decision was taken to mark out mineral claims to protect the more substantive work proposed in Year 2.

Five 40 Kg -4mm diamond samples were taken from traps in Running Creek and its upstream tributaries. Two rock chip samples in an area of minor copper showings on a Running Creek tributary were taken for copper assays and multiscan assays. Extensive outcrops of what appears to be magnesite occur in the creek banks near the sample locations.

A report on the geological mapping by G.W. Patterson is included.

On return to Darwin, the diamond samples were despatched to Ashton Mining's Perth laboratory for examination.

EL 5468

EXPLORATION COSTS

YEAR 1 - STAGES 1 & 2

	$
Assay	2045
Geological Expenses	15300
Vehicle Hire	6112
Administration/Secretarial	4160
Field Assistant	1380
Field Supplies, Fuel, Accommodation	2996
Total Expenditure	$31,993

Note: Additional costs including further assaying expenses still to come - approximately $2000

PATTERSON GEOLOGICAL SERVICES PTY. LTD.

REPORT ON

INVESTIGATION OF COPPER PROSPECTS WITHIN EL5468, RUNNING CREEK, N.T.

Author: G. W. Patterson

Date: 27th August, 1988

on behalf of W.J. & E.E. Fisher Pty. Ltd.

EL 5468

CONTENTS

Plans Attached

1. EL5468 W.J. Fisher Mineral Claims Locality Plan Scale 1 : 22000 (approx)
2. EL5468 Running Creek Mine Area, Geology Scale 1 : 1000
3. EL5468 Salt Lick Area, Geology Scale 1 : 1000
4. EL5468 Running Creek Mine Area: Distribution of possible trachyte plugs. Scale 1 : 5000

EL 5468

EXPLORATION PROGRAM REPORT

27.08.1988

1. SUMMARY AND CONCLUSIONS

Mapping of the Running Creek mine and Salt Lick areas is sufficiently detailed to select some drill targets for copper mineralisation. The Felix area needs to be remapped before drill targets can be selected.

There appears to be considerable potential for copper mineralisation in the areas selected for mineral claim applications.

Further exploration over the remainder of the EL for both copper and diamonds appears to be warranted.

2. RECOMMENDATIONS

2.1 Remapping of the Felix area should be carried out, preferably after the grass has been burnt. Suitable drill targets could then be selected.

2.2 Drill targets, using a drilling rig with R.C. down-hole hammer capability, should be selected on Running Creek mine area copper bearing pipes, commencing with the pipe enclosing the open cut.

2.3 If encouraging, the R.C. drilling should be followed up by deeper diamond drilling to test sulphide grade at depth.

2.4 Gemco type auger drilling could be employed to test sub outcrop in concealed areas at Running Creek mine and areas such as the Salt Lick vegetation anomaly.

2.5 Reconnaissance should be continued for further copper bearing pipes throughout the E.L. and continued surveillance should be dept for diamonds and kimberlitic indicator minerals.

3. INTRODUCTION

Reconnaissance and sampling of EL 5468 was undertaken by W.J. Fisher during 1987. In August, 1988, I was engaged to carry out detailed geological mapping and assess the potential of three areas currently being gridded, and over which mineral claim applications could possibly be made at a later date. 12 days were spent in the area from 4th to 15th August, 1988.

4. LOCATION AND ACCESS

Exploration Licence 5468 of 160 graticules centred on Running Crek yard, covers most of the catchment of Running Creek and part of the catchments of Mountain Creek and Hobblechain Creek. The EL is in the central part of the Selby 1 : 100,000 Sheet, adjacent to the Queensland border in the southern Carpentaria Gulf. Access is by the Calvert River road through Wollogorang.

5. PREVIOUS EXPLORATION

Exploration in the Running Creek region was undertaken by Euralba Mining N.L. in 1971. This involved investigation and mapping by H. Shannon of copper occurrances associated with trachyte plugs within AP3230. Two areas referred to by Shannon as Running Creek west and Felix Prospect were mapped mostly by compass and pace survey. A number of intrusive trachyte and breccia plugs were recorded and the occurrence of a number of possible plugs was postulated.

Investigation for diamond occurrence was carried out by CRA Exploration Pty. Ltd. from 1983 to 1986 within ELs 4077 and 4166. The work involved drainage sampling for kimberlitic indicator minerals, detailed airborne magnetic and radiometric surveys, and follow up ground investigation of airborne anomalies. One macro-diamond and three micro-diamonds were recorded from drainage samples in the vicinity of Running Crek yard and a pyrope garnet was recorded from the dump of the copper bearing breccia pipe at the abandoned Running Creek mine.

6. GEOLOGY AND MINERALISATION

Rocks of the area are predominantly sandstones, regarded as belonging to the Masterton Formation of the Lower Proterozoic Tawallah Group. Within the area examined, B.M.R. mapping shows the outcropping rocks as the Gold Creek member of the Masterton Formation. This is described as including basalt, dolomitic lithic sandstone, tuffaceous siltstone, volcanic agglomerate and breccia. Euralba mapping by H. Shannon has shown breccia to be present as intrusive plugs or pipes generally of a trachytic nature. Copper occurrence appears to be directly related to these intrusive trachytes.

The Pungalina member of the Masterton Formation, distinguished by halite casts in fine grained flaggy sandstone, is present at the Salt Lick prospect in the southern part of the area. The Hobblechain Rhyolite member, widespread some distance south of Running Creek, may also be present at Salt Lick underlying the flaggy sandstone.

Copper occurs as secondary minerals in intrusive trachytes, usually accompanied by brecciation. Only one economic occurrence of copper is known, a small production of carbonate ore having been achieved by open cut at the Running Creek mine. The prospect is similar to, though smaller, than the copper bearing intrusive pipe at the Redbank mine west of Wollogorang.

7. WORK DONE

The primary objective was to map in detail a 40 ha gridded area regarded as possible mineral claim applications, Running Creek 1 and 2. This area is centred on the abandoned Running Creek copper mine. Two areas, Felix and Salt Lick, selected also for possible mineral claim applications, south of the Running Creek claims, were also to be examined. Running Creek and Felix had been previously mapped by Euralba in 1971, but no mapping had been done on Salt Lick. Running Creek and Salt Lick were both geologically mapped at 1 : 1000 scale on 50m x 50m grids laid off from Topofil and compass surveyed baselines. A similar grid was laid out on Felix, but the ground was not remapped.

In each case, an initial designated 10,000E, 10,000N was used. Thus coordinates in any one area are unrelated to coordinates in other areas.

7.1 Running Creek

Shannons mapping of the Running Creek mine area was essentially correct, except for topographic detail, which was considerably in error due to the rough survey method (mostly compass and pace).

Eleven separate trachyte occurrences were mapped, six of which are obviously copper bearing. One, in the vicinity of 9600E, 9850N, is probably a flow, but the remainder appear more likely to be intrusive.

Copper mineralisation, mostly malachite, but in some cases azurite, crysocolla and possibly turquoise, was observed in trachyte, and to a lesser degree as malachite in sandstone.

There are various indications of the presence of concealed intrusive plugs. These include brecciation, occasionally secondary copper mineralisation in sandstone, and the circular disposition of some sandstone outcrops. In all, a total of 21 pipes with diameters ranging from 40m to 120m are believed to occur within the area mapped. The potential of these plugs for copper occurrence is discussed in Section 8 below.

W.J. & E.E. FISHER PTY. LTD.
EXPLORATION & MINING CONSULTANTS

19 KIRKLAND CRESCENT, KAHLIN
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Geoscience Resources
Please replace page in report as indicated
L.4.11.

WJF:YNC

2nd November, 1988

The Mining Registrar,
Department of Mines & Energy,
GPO Box 2901,
DARWIN. NT 0801

Dear Sir,

SR 9/11/88 0905L

EL 5468
RUNNING CREEK AREA

In the Year 1 Annual Report, a minor error occurred in the geological report submitted by Patterson Geological Services. Note attached letter from Mr. Patterson.

A copy of the amended Page No. 4 is attached for inclusion in the Report in place of Page No. 4

A copy of Mr. Patterson's referral letter on this error is attached.

Yours faithfully,

RECEIVED
9 NOV 1988
DEPARTMENT OF MINES & ENERGY

W.J. Fisher, AM
M.Aus.IMM., M.MICA., Fellow.IMM

Encls

PATTERSON GEOLOGICAL SERVICES Pty. Ltd.

G.W.(Bill) Patterson M.A.I.M.M.,
4 Glyndon Rd.,
Camberwell VIC 3124
TEL: (03) 836-7748

16th October, 1988

Mr W.J. Fisher
W.J. & E.E. Fisher Pty. Ltd.,
P.O. Box 3167
DARWIN
NT 0801

Dear Joe,

Re EL5468, Annual Report

Apart from several minor type errors, there appears to be only one error in my report on the Running Creek area included in the above. This is on page 4, third paragraph in section 7.2. "The nature of the copper occurrence in the south eastern quadrant". should read "north western quadrant". The error was mine in the original draft.

Kind Regards,

Sincerely

Bill

.....

(G.W. Patterson)

7.2 Felix

A 50m x 50m grid was laid out over most of the Felix mineral claim area, and it was intended that Shannon's mapping would be adjusted to fit the grid. However, it was found that the scale variation due to the compass and pace method used in the original mapping was too great. The area needs to be remapped, but the current field conditions due to unburnt grass, would make this difficult.

In the meantime, Shannon's map clearly indicates the existence of at least one intrusive trachyte, and the presence of other plugs is indicated by several circular sandstone breccia occurrences.

The nature of the copper occurrence in the north western quadrant of the mineral claim is unclear, but it appears to be in a poorly outcropping zone between two tuffaceous sandstone layers. To the west of the main copper locality, some copper was observed in a small sandstone breccia outcrop near the 9550E, 9850N grid peg. This suggests the presence of copper bearing pipes similar to those in the Running Creek mine area.

7.3 Salt Lick

Although hindered by unburnt grass, outcrop mapping was completed over most of the 50m x 50m grid on the Salt Lick mineral claim area.

Secondary copper minerals, mostly malachite, occur in abundance in fractured layered trachyte in the centre of a 16 ha gridded area. Trachyte outcrops extend with an apparent south westerly trend into the south western corner. Extensive outcrops of a brown coloured fine grained, sometimes amygdaloidal volcanic, appear to surround the trachyte, but the relationship of the two is unclear.

Copper occurrences at Redbank west of Wollogorang and at Running Creek is invariably associated with intrusive plugs. Except for absence of breccia, the layered trachyte at Salt Lick appears identical to that exposed in the Redbank and Running Creek open cuts. If the Salt Lick trachyte is indeed intrusive, then it must form extensive bodies which, if copper bearing throughout, could constitute a large resource. The existence of two small circular quartzitic sandstone breccia outcrops, one at 9950E, 9550N, and the other at 9750E, 9650N, support the possibility of underlying intrusive plugs.

A flaggy, ripple marked fine grained sandstone with occasional halite casts probably overlies the volcanics. This answers to the description of the Pungalina Member of the Masterton Formation, and the volcanics could belong to the Hobblechain Ryholite member.

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A flaggy, ripple marked fine grained sandstone with occasional halite casts probably overlies the volcanics. This answers to the description of the Pungalina Member of the Masterton Formation, and the volcanics could belong to the Hobblechain Ryholite member.

7.4 Running Creek Reconnaissance

A visit was made to a reported copper occurrence in a tributary of Running Creek about 7 kms upstream from Running Creek yard. The locality had been relocated by W.J. Fisher, but only minor copper was found in a spheroidally weathered volanic. The rock, probably basalt of the Gold Creek Volcanic member of the Masterton Formation, contains an appreciable amount of what appears to be magnesite in more or less conformable lenses and seams.

Several -4mm drainage gravel samples for kimberlitic indicator minerals were collected by W.J. Fisher from trap sites in the Running Creek catchment.

8. POTENTIAL FOR MINERAL OCCURRENCE

There appears to be considerable potential for copper occurrence and some potential for diamond occurrence.

8.1 Copper Potential

The only copper exploited in the area has been the carbonate ore mined from the small open cut in the centre of the Running Creek mine area. This occurrence is similar to, although smaller, than the Redbank deposit, where a significant resource is believed to have been indicated by drilling. No drilling has been undertaken at Running Creek.

Mapping at Running Creek has defined a number of copper bearing trachyte pipes, four of which appear to have a mean diameter of 40m or greater. An additional 17 possible pipes have been inferred from structural features, brecciation and the presence of copper in sandstones. All 21 are shown diagrammatically on a 1 : 5000 scale plan of the mineral claims area. The plan depicts only pipes with a minimum mean diameter of 40m.

At an average density of 2.6, tonnages of trachyte pipes to 40m depth have been estimated: -

Diameter (m)	Tonnes/m of depth	Tonnes to 40m depth
40	3300	132000
50	5100	204000
60	7300	292000
70	10000	400000
80	13000	520000
100	20000	800000
120	29000	1160000

Using the above figures, the potential total tonnage to 40m depth for the 21 pipes would be approximately 6.3 million tonnes.

It should be emphasised that these figures are hypothetical, based on an assumption that the pipes, if present, all contain significant copper mineralisation.

Nothing is known at this stage regarding surface leaching, depth to sulphides or whether secondary enrichment occurs. These are all important factors, and some drilling should be undertaken on selected targets as soon as possible.

No attempt can be made to assess the potential of Felix and Salt Lick prospects until further work is undertaken. Some drilling could be useful in determining the extent of the copper mineralisation around the central discovery point, and also to test the concealed ground beneath the nearby "Salt Lick".

G.W. Patterson

ANALABS

A division of Macdonald Hamilton & Co. Pty. Ltd.
Phone(09) 458 7999
52 Murray Road, Welshpool, W.A. 6101
Telex AA92560

ANALYTICAL REPORT No. 999.4.14.02143

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

W.J. Fisher
W.J. Fisher
1 Buffalo CRT

DARWIN NT

ORDER No. —

PROJECT

DATE RECEIVED: 02/11/87

RESULTS REQUIRED: ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
10	30/11/87	1	26

STATE OF SAMPLES	PRE-TREATMENT							ANALYSIS		
REFER BELOW	SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
	Various				Prep: 02[illegible],012,013,017				Li,Be,Na,Mg,Al,P,K,Ca,Sc,Ti,V,Cr,Mn,Fe,Co,Ni,Cu		
	Various				Prep: 02[illegible],012,013,017				Cu,Ag/101		
	Various				Prep: 02[illegible],012,013,017				Cu,Ag/101		
	Various				Prep: 01[illegible],017				Au/329		

RESULTS TO

W.J. Fisher
W.J. Fisher
1 Buffalo CRT

DARWIN NT

RESULTS TO

REMARKS

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
whole core	WC	perchloric acid	A1	cold acid	CA	atomic absorption	AAS
split core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
cutting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
rock	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
soil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
pulp	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemical means	CHEM
tissue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
stream sediment	SS					fluorescence	FLUOR
heavy mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	999.4.14.02143	30/11/87		1 OF 10

TUBE No.	SAMPLE No.	Cl	Ti	Na	Mg	Al	P	K	Ca	Sr
1	19151	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
2	19152	12	2	551	5500	49700	430	42700	503	11
3	19153	17	5	551	5900	44500	650	35800	427	9
4	19154	–	–	–	–	–	–	–	–	–
5	19155	8	1	489	1330	56500	948	61300	1140	22
6	19156	–	–	–	–	–	–	–	–	–
7	19158	–	–	–	–	–	–	–	–	–
8	19159	51	2	371	9090	78100	2860	94400	4040	10
9	19160	4	1	124	514	23600	708	17800	326	2
10	19161	2	1	511	762	99300	3880	127000	5670	13
11	19162	–	–	–	–	–	–	–	–	–
12	19163	4	1	455	309	63200	465	69100	366	17
13	19164	5	3	298	784	36800	13500	33000	11700	3
14	19165	–	–	–	–	–	–	–	–	–
15	19166	7	<1	253	920	19800	167	7620.0	292	2
16	19167	–	–	–	–	–	–	–	–	–
17	19168	3	1	410	309	92400	2720	103000	661	8
18	19169	–	–	–	–	–	–	–	–	–
19	19170	3	1	551	854	85200	3470	107000	1390	7
20	19171	7	2	646	2960	87000	3560	59900	1020	10
21	19172	5	1	652	2540	103000	842	122000	514	7
22	19173	–	–	–	–	–	–	–	–	–
23	19174	5	1	439	762	101000	488	124000	933	14
24	19175	–	–	–	–	–	–	–	–	–
25	19179	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	999.4.14.02143	30/11/87		2 OF 10

TUBE No.	SAMPLE No.	Ag	Bi	Mo	Pb	Sb	Zn	Cu	Sn
1	19185	3	1	388	1410	90800	3960	111000	3920	14
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	2	1	50	15	0.01	100	0.001	50	1
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	201	201	201	221	201	201	201	201	201

Results in ppm unless otherwise specified.
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X = element concentration is below detection limit
- = element not determined

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	999.4.14.02143	30/11/87		OF 3 10

TUBE No.	SAMPLE No.									
1	19151	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
2	19152	2220	125	147	982	39100	27	23	21000	290
3	19153	1900	221	130	517	43500	82	38	23000	196
4	19154	–	–	–	–	–	–	–	–	–
5	19155	10000	187	232	377	58200	139	40	600	43
6	19156	–	–	–	–	–	–	–	–	–
7	19158	–	–	–	–	–	–	–	–	–
8	19159	16800	152	102	274	54200	13	13	50000	15
9	19160	1300	21	215	37	6280.0	<5	13	210	7
10	19161	18200	105	63	126	11200	<5	<10	70	9
11	19162	–	–	–	–	–	–	–	–	–
12	19163	11600	81	139	177	22600	15	12	130	7
13	19164	2450	36	221	86	21800	40	54	24000	<5
14	19165	–	–	–	–	–	–	–	–	–
15	19166	1510	17	113	278	8210.0	23	14	530	<5
16	19167	–	–	–	–	–	–	–	–	–
17	19168	18800	34	56	308	57100	24	13	11000	<5
18	19169	–	–	–	–	–	–	–	–	–
19	19170	16500	55	66	133	28200	14	<10	6200	4
20	19171	10700	98	95	158	22700	33	11	130000	<5
21	19172	17700	58	49	187	15500	19	<10	4300	<5
22	19173	–	–	–	–	–	–	–	–	–
23	19174	19700	45	51	275	14000	<5	<10	340	7
24	19175	–	–	–	–	–	–	–	–	–
25	19179	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	999.4.14.02143	30/11/87		OF 4 10

TUBE No.	SAMPLE No.									
1	19185	17800	115	54	55	17800	<5	<10	50	14
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	10	2	10	15	0.001	5	10	5	5
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
25	METHOD	2A1	2A1	2A1	2A1	2A1	2A1	2A1	2A1	2A1

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	999.4.14.02143	30/11/87		5 OF 10

TUBE No.	SAMPLE No.	[illegible]	[illegible]	Zr	Nb	[illegible]	Ag	Ba	La	Pb
1	19151	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
2	19152	21	27	99	<10	<20	0.5	340	39	60
3	19153	20	21	115	<10	<20	<0.5	349	13	29
4	19154	–	–	–	–	–	–	–	–	–
5	19155	107	39	154	<10	<20	<0.5	1230	22	44
6	19156	–	–	–	–	–	–	–	–	–
7	19158	–	–	–	–	–	–	–	–	–
8	19159	19	33	183	14	<20	<0.5	903	40	84
9	19160	48	18	25	<10	<20	0.5	549	64	98
10	19161	60	42	167	<10	<20	<0.5	1120	33	70
11	19162	–	–	–	–	–	–	–	–	–
12	19163	28	22	136	<10	<20	<0.5	1020	30	61
13	19164	234	48	30	<10	<20	0.5	544	41	86
14	19165	–	–	–	–	–	–	–	–	–
15	19166	27	11	42	<10	<20	<0.5	154	19	33
16	19167	–	–	–	–	–	–	–	–	–
17	19168	116	52	249	14	<20	<0.5	1780	22	51
18	19169	–	–	–	–	–	–	–	–	–
19	19170	85	43	248	14	<20	0.5	1310	30	64
20	19171	163	34	345	24	<20	<0.5	1010	51	111
21	19172	76	48	312	<10	<20	<0.5	935	36	77
22	19173	–	–	–	–	–	–	–	–	–
23	19174	39	44	203	<10	<20	<0.5	1240	26	52
24	19175	–	–	–	–	–	–	–	–	–
25	19179	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	999.4.14.02143	30/11/87		6 OF 10

TUBE No.	SAMPLE No.	Sr	Y	Zr	Nb	[illegible]	[illegible]	Ba	La	Ce
1	19185	83	38	177	<10	<20	<0.5	979	51	105
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	1	1	5	10	20	0.5	5	5	15
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	201	201	201	201	201	201	201	201	201

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

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A Division of Macdonald Hamilton & Co. (Pty) Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	999.4.14.02143	30/11/87		OF 7 10

TUBE No.	SAMPLE No.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	19151	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
2	19152	<20	33	<5	1	<10	<5	<5	<20	2
3	19153	<20	<20	<5	1	<10	<5	<5	<20	2
4	19154	–	–	–	–	–	–	–	–	–
5	19155	<20	24	6	2	<10	<5	6	<20	4
6	19156	–	–	–	–	–	–	–	–	–
7	19158	–	–	–	–	–	–	–	–	–
8	19159	<20	42	7	2	<10	<5	6	<20	3
9	19160	<20	47	6	1	<10	<5	<5	<20	<2
10	19161	<20	30	9	2	<10	<5	7	<20	4
11	19162	–	–	–	–	–	–	–	–	–
12	19163	<20	28	6	1	<10	<5	<5	<20	2
13	19164	<20	56	14	3	17	<5	9	<20	4
14	19165	–	–	–	–	–	–	–	–	–
15	19166	<20	<20	<5	<1	<10	<5	<5	<20	<2
16	19167	–	–	–	–	–	–	–	–	–
17	19168	<20	29	8	2	11	<5	9	<20	5
18	19169	–	–	–	–	–	–	–	–	–
19	19170	<20	33	7	1	<10	<5	7	<20	4
20	19171	<20	50	9	2	<10	<5	6	<20	4
21	19172	<20	40	9	2	<10	<5	9	<20	4
22	19173	–	–	–	–	–	–	–	–	–
23	19174	<20	26	<5	1	<10	<5	7	<20	4
24	19175	–	–	–	–	–	–	–	–	–
25	19179	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR

Results in ppm unless otherwise specified
T = element present, but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

AUTHORISED OFFICER

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A Division of Macdonald Hamilton & Co. Pty Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	999.4.14.02143	30/11/87		OF 8 10

TUBE No.	SAMPLE No.	Ag	As	Bi	Cd	Co	Cu	Hg	Mo	Pb
1	19185	<20	49	10	2	12	<5	7	<20	4
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	20	20	5	1	10	5	5	20	2
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	201	201	201	201	201	201	201	201	201

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
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A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	999.4.14.02143	30/11/87		OF 9 10

TUBE No.	SAMPLE No.									
1	19151	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
2	19152	<2	<2	<10	<10	<10	<0.02	<200	11	<200
3	19153	<2	<2	<10	<10	<10	<0.02	<200	<10	<200
4	19154	–	–	–	–	–	–	–	–	–
5	19155	<2	3	<10	<10	<10	<0.02	<200	<10	<200
6	19156	–	–	–	–	–	–	–	–	–
7	19158	–	–	–	–	–	–	–	–	–
8	19159	<2	3	<10	<10	<10	<0.02	<200	<10	<200
9	19160	<2	<2	<10	<10	<10	<0.02	<200	12	<200
10	19161	<2	3	<10	<10	<10	<0.02	<200	11	<200
11	19162	–	–	–	–	–	–	–	–	–
12	19163	<2	<2	<10	<10	<10	<0.02	<200	<10	<200
13	19164	<2	4	<10	<10	<10	<0.02	<200	22	<200
14	19165	–	–	–	–	–	–	–	–	–
15	19166	<2	<2	<10	<10	<10	<0.02	<200	<10	<200
16	19167	–	–	–	–	–	–	–	–	–
17	19168	<2	5	<10	<10	<10	<0.02	<200	12	<200
18	19169	–	–	–	–	–	–	–	–	–
19	19170	<2	4	<10	<10	<10	<0.02	<200	12	<200
20	19171	<2	4	<10	<10	<10	<0.02	<200	21	<200
21	19172	<2	5	<10	<10	<10	<0.02	<200	16	<200
22	19173	–	–	–	–	–	–	–	–	–
23	19174	<2	5	<10	<10	<10	<0.02	<200	14	<200
24	19175	–	–	–	–	–	–	–	–	–
25	19179	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
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A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	992.4.14.02143	30/11/87		OF 10 10

TUBE No.	SAMPLE No.									
1	19185	<2	3	<10	<10	<10	<0.02	<200	12	<200
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	2	2	10	10	10	0.02	200	10	200
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	201	201	201	201	201	329	201	201	201

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
_ = element not determined

AUTHORISED OFFICER

ANALABS
Darwin

Chr. Coonawarra & Mataram Roads,
Winnellie, N.T., 5789
Telephone (089) 84 3849
(P.O. Box 39344, Winnellie, N.T., 5789)

TO: ANALABS - PERTH DATE: 31.8.88 NO.OF PAGES: 1

FROM: CHAS FAX NO: (089) 84 3984

SUBJECT: Analysis Requested over the phone.

Re: 999.4.14.02143

Sample	Cu	Ag.	Au
19154	150	x	x
19156	25	0.5	x
19158	45	x	x
19162	900	x	x
19165	1150	x	x
19167	190	x	x
19169	550	x	x
19173	900	x	x
19175	265	x	x
Method Detection Limits:	101 5	101 0.5	329 0.02

ASHTON MINING LTD - LABORATORY REPORT

BRISBANE

LEGEND

G - Drainage	P - Prevalent +50%
L - Loam	A - Abundant +20%
R - Rock	C - Common 10%-20%
JE - Jig Eye	S - Some 1%-10%
HMC - Panned Concentrate	O - Often .1%-1%
AU - Auger	F - Few +5 grains
RT - Rotary	R - Rare 2-5 grains
D - Diamond	T - Trace 1 grain
DR - Dredge	GL - Grain lost before test completion
O - Other	PE - Poor expression of kimberlitic features
	BM - Background mineral of interest

Appendix 2

11 DEC 1987
MICRO

ASHTON MINING LIMITED
INDICAT[illegible] MINERALS — LABORATORY DATA [illegible]EET

State:		D.P.O.		Project		E. L. Number			
Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond	
Work Required		Kimberlitic Indicators: K:1.		Diamond Recovery: D		Gold: G		Other: O	
Total Weight:				Weight after TBE.					
Observer:	PMC			Mineralogist:	D. L				

Date 7.12.87
SAMPLE 19157
Signature:—

COMMENTS *(Please Print Clearly)*

Positive
Negative
Possible Positive

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		-0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

11 DEC 1987

ASHTON MINING LIMITED
INDICATOR MINERALS — LABORATORY DATA SHEET

Date 7/12/87
SAMPLE 19157.
Signature:—

Positive
Negative
Possible Positive

State: N.T	O.P.O.	Project	E. L. Number

Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond

Work Required	Kimberlitic Indicators: K; I. ✓	Diamond Recovery: D ✓	Gold: G	Other: O

Total Weight: | Weight after TBE. 375.0g

Observer: gp. | Mineralogist: D.C

COMMENTS *(Please Print Clearly)*

A few dark green grains of chlorite.

INDICATORS

SCREEN SIZE	+0.8 ✓		+0.5 ✓		+0.4 ✓		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE ✓F	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE ✓P	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE F✓	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

11 DEC 1987

ASHTON MINING LIMITED
INDICAT[OR] MINERALS — LABORATORY DATA [SH]EET

micro

Date 7.12.87

SAMPLE 19176

Signature:

Date:		D.P.O.		Project		E. L. Number	
Sample Type	G Drainage	L Loam	R Rock	B Bulk	RMC Panned Conc	AU Auger	RT Rotary	O Diamond
Work Required		Kimberlitic Indicators: K; I.		Diamond Recovery: D ✓		Gold: G		Other: O
Total Weight:				Weight after TBE.			
Observer: RM				Mineralogist: D. L.			

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		~~-0.4~~		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

COMMENTS *(Please Print Clearly)*

Positive
Negative
Possible Positive

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

11 DEC 1987

ASHTON MINING LIMITED
INDICAT[OR] MINERALS — LABORATORY DATA [SH]EET

Date 8.12.87
SAMPLE 19176
Signature:—

Positive
Negative
Possible Positive

State: NT	D.P.O.		Project		E. L. Number		
Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond
Work Required	Kimberlitic Indicators: K: t	Diamond Recovery: D		Gold: G		Other: O	
Total Weight:		Weight after TBE. 460g					
Observer: [illegible]		Mineralogist: D. L					

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

COMMENTS *(Please Print Clearly)*

Green chlorite grains, earthy and dark greens.

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE F	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE P	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE F	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

11 DEC 1987
MICRO

ASHTON MINING LIMITED

INDICAT[OR] MINERALS — LABORATORY DATA [SH]EET

Date 7·12·87

SAMPLE 19177

Signature:—

Positive
Negative
Possible Positive

tate:	D.P.O.	Project	E. L. Number

ample ype	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond

/ork equired	Kimberlitic Indicators: K: I.	Diamond Recovery: D	Gold: G	Other: O

otal Weight:	Weight after TBE.
bserver: [illegible]	Mineralogist: D. L.

COMMENTS *(Please Print Clearly)*

INDICATORS

CREEN SIZE	+0.6		+0.5		+0.4		-0.4		TOTAL
EPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

11 DEC 1987

ASHTON MINING LIMITED

INDICAT · ? MINERALS — LABORATORY DATA (EET

Joe Fisher, sample

ate: N.T.	D.P.O.		Project		E. L. Number			
ample ype	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond
ork equired	Kimberlitic Indicators: K: I. ✓		Diamond Recovery: D		Gold: G		Other: O	
otal Weight:			Weight after TBE. 760g					
bserver: Tom			Mineralogist: D. L.					

Date 8·12·87
SAMPLE 19177
Signature:—
Positive
Negative
Possible Positive

COMMENTS *(Please Print Clearly)*

Several dark green chlorite grains.
A few grains of malachite.

malachite

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE F	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS F	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE ✓	25. KYANITE
26. LIMONITE P	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE E	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

11 DEC 1987

MICRO

ASHTON MINING LIMITED
INDICAT 1 MINERALS — LABORATORY DATA ! EET

Date 7·12·87

SAMPLE 19178

Signature:—

tate:	D.P.O.	Project	E. L. Number

ample ype	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond

Work required	Kimberlitic Indicators: K: I.	Diamond Recovery: D	Gold: G	Other: O

Total Weight:	Weight after TBE.
Observer: HMC	Mineralogist: D. L

COMMENTS *(Please Print Clearly)*

Positive
Negative
Possible Positive

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

11 DEC 1987

ASHTON MINING LIMITED

INDICAT[OR] MINERALS — LABORATORY DATA [SH]EET

Joe Fisher sample.

State: NT	D.P.O.		Project		E. L. Number		
Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond
Work Required	Kimberlitic Indicators: K: I. ✓		Diamond Recovery: D		Gold: G		Other: O
Total Weight:			Weight after TBE. 4.19g				
Observer: RML			Mineralogist: D. L. J.				

Date 8.12.87

SAMPLE 19178

Signature:

Positive / Negative / Possible Positive

COMMENTS *(Please Print Clearly)*

A few Green grains of chlorite.

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE F	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS RH	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE P	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE F	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

22 JAN 1988 ✓
MICRO

ASHTON MINING LIMITED
INDICATOR MINERALS — LABORATORY DATA SHEET

Date 19/1/88
SAMPLE 19179
Signature:—

Data: NT	D.P.O.	Project ASHTON.	E. L. Number				
Sample Type	G Drainage	L Loam	R Rock ✓	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond
Work required	Kimberlitic Indicators: K: I.	Diamond Recovery: D ✓	Gold: G	Other: O			

Positive
Negative ✓
Possible Positive

Total Weight:	Weight after TBE.
Observer: GP.	Mineralogist: BM

COMMENTS *(Please Print Clearly)*

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

ASHTON MINING LIMITED
INDICATOR MINERALS — LABORATORY DATA SHEET

22 JAN 1988

Joe Fisher

Date 22/1/88

SAMPLE 19179

Signature:

State: N.T.	D.P.O.	Project	E. L. Number

Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond

Work Required	Kimberlitic Indicators: K: I. ✓	Diamond Recovery: D	Gold: G	Other: O

Total Weight:	Weight after TBE. 0.5g
Observer: D. L.	Mineralogist: D. L.

COMMENTS *(Please Print Clearly)*

+0.4 residue of digested Rock sample

Positive
Negative
Possible Positive

Very small residue. No minerals

INDICATORS

SCREEN SIZE	+0.8 ✓		+0.5 ✓		+0.4 ✓		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE F	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE F	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

11 DEC 1987
MICRO

ASHTON MINING LIMITED
INDICAT MINERALS — LABORATORY DATA SHEET

Date 7-12-87
SAMPLE 19180
Signature:

State:	D.P.O.	Project	E. L. Number

Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond

Work Required	Kimberlitic Indicators: K: I.	Diamond Recovery: D	Gold: G	Other: O

Total Weight:	Weight after TBE.
Observer: MC	Mineralogist: D. L.

COMMENTS *(Please Print Clearly)*

Positive	
Negative	✓
Possible Positive	

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		-0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

11 DEC 1987

ASHTON MINING LIMITED

INDICAT[OR] MINERALS — LABORATORY DATA [SH]EET

Date 8.12.87

SAMPLE 19180

Signature:—

State: NT	D.P.O.	Project	E. L. Number

Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond

Work Required	Kimberlitic Indicators: K: I. ✓	Diamond Recovery: D	Gold: G	Other: O

Total Weight:	Weight after TBE. 463g
Observer: RMC	Mineralogist: D. L.

COMMENTS *(Please Print Clearly)*

Positive	
Negative	
Possible Positive	✓

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE F	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE P	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE T	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE F	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

ASHTON MINING LIMITED
INDICATOR MINERALS — LABORATORY DATA SHEET

MICRO

Date 18/3/88

SAMPLE 19181

JOE FISHER

Signature:

Positive / Negative / Possible Positive

D.P.O. | Project | E. L. Number

L Loam | R Rock ✓ | B Bulk | HMC Panned Conc | AU Auger | RT Rotary | D Diamond

Kimberlitic Indicators: K: L | Diamond Recovery: D ✓ | Gold: G | Other: O

Weight after TBE.

Mineralogist:

COMMENTS *(Please Print Clearly)*

FUSED ROCK RESIDUE.

INDICATORS

	+0.8		+0.5		+0.2		−0.4 ✓		TOTAL
	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
E									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZTE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

ASHTON MINING LIMITED
INDICATOR MINERALS — LABORATORY DATA SHEET

Date 18-3-89
SAMPLE 19181
Signature:

JOE FISHER.

State: NT	D.P.O.	Project	E. L. Number

Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond

Work Required	Kimberlitic Indicators: K: I.	Diamond Recovery: D	Gold: G	Other: O

Total Weight: 7kg
Weight after TBE. 1.0g.
Observer: BM
Mineralogist: BM

COMMENTS *(Please Print Clearly)*

ACID DIGESTED RESIDUE.

VERY FEW GRAINS REMAIN IN SAMPLE

ROCK FRAGS OF HIGHLY ALTERED, FERRUGINOUS MATERIAL

Positive / Negative / Possible Positive: ✓ (Possible Positive)

INDICATORS

SCREEN SIZE	+0.8		+0.6		+0.4		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE TR	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE F.	37. PYROCLORE	38. ROCK FRAGMENTS P.	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDFADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

22 JAN 1988
MICRO

ASHTON MINING LIMITED
INDICATOR MINERALS — LABORATORY DATA SHEET

Date 18-1-88
SAMPLE 19182
Signature:

State: NT	D.P.O.		Project Ashton		E. L. Number		
Sample Type: G Drainage	L Loam	R Rock ✓	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond
Work Required:	Kimberlitic Indicators: K: L	Diamond Recovery: D ✓		Gold: G		Other: O	
Total Weight:		Weight after TBE.					
Observer: B.V.G.		Mineralogist: D. L.					

COMMENTS *(Please Print Clearly)*

Positive
Negative
Possible Positive

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

ASHTON MINING LIMITED
INDICATOR MINERALS — LABORATORY DATA SHEET

22 JAN 1988

Joe Fisher

Date 22/1/88

SAMPLE 19182

Signature:—

State: NT.	D.P.O.	Project	E. L. Number

Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond

Work Required	Kimberlitic Indicators: K: I. ✓	Diamond Recovery: D	Gold: G	Other: O

Total Weight:	Weight after TBE. 1 g.
Observer: D. L.	Mineralogist: D. L

COMMENTS *(Please Print Clearly)*

1 pale pink almandine grt.

Positive
Negative ✓
Possible Positive

INDICATORS

SCREEN SIZE	+0.8 ✓		+0.5 ✓		+0.4 ✓		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE T	2. AMPHIBOLE	3. ANATASE T	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE P	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE F	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE F	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE R	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE F	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

22 JAN 1988
MICRO

ASHTON MINING LIMITED
INDICATOR MINERALS — LABORATORY DATA SHEET

N.T.

State: QLAND	D.P.O. –	Project Ashton	E. L. Number					
Sample Type	G Drainage	L Loam	R Rock ✓	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond
Work Required	Kimberlitic Indicators: K: I.	Diamond Recovery: D ✓	Gold: G	Other: O				
Total Weight:		Weight after TBE.						
Observer: B.V.G.		Mineralogist: D. L.						

Date 8-1-88
SAMPLE 19183
Signature:–

Positive
Negative
Possible Positive ✓

COMMENTS *(Please Print Clearly)*

Pale high lustre mineral frequent in fused residue. Possibly anatase but to be analysed by S.E.M.

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		~~-0.4~~		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

ASHTON MINING LIMITED
INDICATOR MINERALS — LABORATORY DATA SHEET

26/2/88

Date 22/1/88

Joe Fisher

SAMPLE 19183

Signature:

State: NT	D.P.O.	Project	E. L. Number

Sample Type	G Drainage	L Loam	R Rock	B Bulk	HMC Panned Conc	AU Auger	RT Rotary	D Diamond

Work Required	Kimberlitic Indicators: K: I. ✓	Diamond Recovery: D	Gold: G	Other: O

Total Weight: 7 kg	Weight after TBE. 1 g
Observer: D. L.	Mineralogist: J.D. L.

INDICATORS

SCREEN SIZE	+0.8		+0.5		+0.4		−0.4		TOTAL
SEPARATION	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	
1. DIAMOND									
2. PYROPE									
3. CHROME DIOPSIDE									
4. CHROMITE									
5. PICROILMENITE									
6. ZIRCON KIMB									
7. PHLOGOPITE									
8. OLIVINE KIMB.									
9. BRONZITE KIMB.									
10.									
11.									
12.									
13.									
14.									
15.									

COMMENTS *(Please Print Clearly)*

Small reside from acid digested rock.
A few rough octahedrous pale brown mineral similar to grains in micro fraction.
To be analysed by S.E.M

Mineral is calcium titanate. from probe result.

Positive
Negative
Possible Positive ✓

1. ALMANDINE	2. AMPHIBOLE	3. ANATASE	4. ANDALUSITE	5. APATITE
6. AXINITE	7. BARITE P	8. BIOTITE	9. BRONZITE	10. CASSITERITE
11. CLINOPYROXENE	12. CORUNDUM	13. CR-SPINEL	14. CU-MINERALS T	15. DIASPORE
16. DIOPSIDE	17. ENSTATITE	18. EPIDOTE	19. FLORENZITE	20. FLUORITE
21. GARNET	22. GOLD	23. HEMATITE	24. ILMENITE	25. KYANITE
26. LIMONITE	27. MAGNOPHORITE	28. MICA	29. MONAZITE	30. MUSCOVITE
31. OLIVINE	32. ORTHOPYROXENE	33. PLATINUM	34. PREHNITE	35. PRIDERITE
36. PYRITE	37. PYROCLORE	38. ROCK FRAGMENTS	39. RUTILE	40. SCHEELITE
41. SILLIMANITE	42. SPHENE F	43. SPINEL	44. STAUROLITE	45. SULPHIDES
46. TANTALITE	47. TOPAZ	48. TOURMALINE	49. WOLFRAMITE	50. ZIOSSITE
51. ZIRCON	52. ANDRADITE	53. GALENA	54. CHRYSOBERYL	55. XENOTIME
56. PHOSPHATE	57.	58.	59.	60.
61.	62.	63.	64.	65.

Appendix 4

CLASSIC COMLABS LTD

FORM 3F

REPORT AC 8DN0361

ANALYSIS ppm

Sample N°			aqua-regia Au	Fire Assay Au	Cu	Ag	As	
19189				0·10	23	<1	28	
19191				0·17	11	<1	28	

AAS8, FA1, AAS1/2, XRF1

Appendix 5

SOIL SAMPLES EL 5468

Year 1

19154	Soil sample from Felix Cu area.
19156	Soil sample from a possible pipe (s/s/circle) in SW corner of Felix area.
19158 A&B	Soil sample from Saltlick area where a 50 kg sample was taken for diamonds +1.5mm and -3mm.
19162 A&B	Soil sample from possible pipe (bleached trachyte) SW corner of Saltlick area.
19165 A&B	Soil sample from Cu bearing breccia/trachyte) south of Running Creek Mine. 32 C.P.S. (hot spot).
19167 A&B	Soil sample from possible pipe s/s/ east of and next to 19165.
19169 A&B	Soil sample from middle of large pipe west of 19165. small pit in cu.ore on eastern edge.
19173 A&B	Soil sample from Cu. bearing pipe adjacent to and northerly from Running Creek Mine.
19175 A&B	Soil sample from most northerly pipe from Running Creek Mine. Trace Cu. in trachyte.

ROCK CHIP SAMPLES EL 5468

Oct. 1987 Field Exploration
Year 1

19151 Rock chip kaolinised trachyte pipe on east boundary of Felix - could be large pipe. No visible Cu.

19152 Cu. bearing brecciated sediments Felix West exposure.

19153 Cu. bearing brecciated sediments Felix East exposure. 50 M. east of 19152.

19155 Volcanics showing through sandstone rim about 25-30 M north of 19152.

19159 Rock chip sample of Cu. bearing trachyte "Saltlick" prospect. Note pipe possible 150 M dia.

19160 Rockchip sample of domal s/s east of 19159 about 50M. Trace of trachyte.

19161 Rockchip sample of kaolinised trachyte in a pipe formation SW corner "Saltlick" area.

19163 Rock chip sample of kaolinised trachyte and s/s on domal centre of plug in NE corner of Felix.

19164 Rockchip sample of radioactive kaolinised, brecciated trachyte on edge of large pipe south of Running Creek mine.

19166 Rockchip sample of s/s on a possible pipe next to 19164 (west).

19168 Rock chip sample of Cu. bearing pipe (small) to west of 19164.

19170 Rockchip sample of Cu. bearing trachyte in situ to NW of Runing Creek Mine - open cut.

19171 Rock chip sample of Running Creek mine dump (for trace elements).

19172 Rock chip sample from first pipe (costean) northerly and next to Running Creek mine pipe. Cu. bearing.

19174 Rock chip sample on possible large pipe on 105° from open cut.

19179 Rock chip sample bleached trachyte exposure next to road peg north of Felix. Could be in large pipe.

19185 Rock chip sample from kaolinised trachyte in large pipe 0.4 km. west of track to Mountain Creek at 6.6 km. from big creek 1 km. from Running Creek.

EL 5468

ROCK CHIP STREAM AND SOIL SAMPLES FOR DIAMOND EXAMINATION

EXPLORATION SURVEY - OCTOBER, 1987

Stage 1 of Year 1

19157	Sieved sample from beginning of stream system at "Saltlick" about 50 kg - 1½mm & + 1½mm - 3mm
19176	Sieved - 3mm stream sample from trap (poor) in laterite ck. 0.3 Km upstream from rd xing (turn off to Run.Ck. Mine)
19177	Laterite Ck good trap 50m downstream from Felix track over 1st laterite ck,
19178	Sieved - 3mm stream sample from poorly defined trap upstream 100m from Felix track over 2nd laterite Ck.
19180	Sieved - 3mm stream sample from small trap 50m downstream from junction of the two laterite creeks crossed by the Felix track.
19181	8 Kg rock chip sample from trachyte (cu bearing) pipe west of breccia pipe
19182	Rock chip channel (rough) sample from side of decline to open pit. next to water. 50 Kg.
19183	Rock chip sample about 8 Kg from most northerly Cu bearing (faint) trachyte pipe from open pit.

STAGE 2 1ST YEAR AUGUST, 1988

SAMPLES FOR DIAMOND INDICATOR MINERALS

W. J. FISHER

19186	41 Kg	Detrital material from breccia pipe - 40mm
19187	40 Kg	-40mm material from a trap in a tributary of Running Creek
19188	39 Kg	-40mm material of a trap in a dry channel of Running Creek
19190	40 Kg	-40mm material from a trap in an upstream tributary of Running Creek.
19192	40 Kg	-40 mm material from a trap in another upstream tributary of Running Creek.

SAMPLES - OTHER

19189	2 Kg	Rock Chip Sample for Cu, Au and multielement scan.
19191	2 Kg	Volcanics with quartz seams in a creek north of but close to 19189.

amdel
technology and enterprise

Amdel Limited
(Incorporated in S.A.)
31 Flemington Street,
Frewville, S.A. 5063

Telephone: (08) 372 2700

P.O. Box 114,
Eastwood, S.A. 5063

Telex: AA82520
Facsimile: (08) 79 6623

23 September 1988

Classic Comlabs Ltd.,
Marjorie St.,
BERRIMAH, N.T. 5788

ATT: A. SANDERS

REPORT G 7731/89

YOUR REFERENCE:	Sample Despatch Advice Sheet 0723
IDENTIFICATION:	19193
MATERIAL:	Rock sample
DATE RECEIVED:	13 September 1988
WORK REQUIRED:	Petrography (1 Code MA1.3)

Investigation and Report by: Frank Radke

Manager - Geological Services: Dr Keith J Henley

for Dr William G Spencer
General Manager
Applied Sciences Group

bp

[redacted]

amdel

PETROGRAPHY OF A TRACHYTE

SAMPLE: 19193: TSC50956

Rock Name:
Trachyte

Hand Specimen:
This is a massive rock with a dark reddish-brown colour and an aphanitic character. Staining with sodium cobaltinitrite after a hydrofluoric acid etch shows that the rock contains abundant finely intergrown potash feldspar.

Thin Section:
An optical estimate of the constituents gives the following :

	%
Groundmass feldspar	65
Sericite/clay	25
Chlorite	1
Feldspar phenocrysts	Tr-1
Opaques and semi-opaques	9

This sample consists mainly of small feldspar laths ranging up to 0.5 mm long. The feldspar laths generally have elongate, prismatic shapes and exhibit a very vague preferred orientation defining a weakly developed subtrachytic texture. Staining of the hand specimen shows that the feldspar laths consist mainly if not exclusively of potash feldspar although minor plagioclase could also be present. A small number of larger prismatic feldspar phenocrysts up to 1 mm in size are also disseminated through the rock.

The groundmass feldspar generally has a translucent, reddish-brown colour produced by very finely divided iron oxide inclusions. This feldspar also shows moderate alteration to finely divided sericite/clay. The larger feldspar phenocrysts also show moderate to pervasive alteration to sericite/clay but generally lack a translucent, reddish-brown colour. These finely divided iron oxide inclusions in the groundmass feldspar would account for the reddish-brown colour of the rock in hand specimen.

Significant amounts of opaque to translucent iron oxides form irregular patches up to 0.3 mm wide which are located interstitial to the feldspar laths. A small number of somewhat prismatic disseminated opaque grains are also disseminated through the rock. Opaques also occur locally as narrow fracture and vein fillings below 0.1 mm wide. Some of the opaque patches contain intergrowths of a green phyllosilicate believed to be chlorite. This chlorite has a bright green pleochroic colour and low to moderate birefringence.

amdel

This is thought to be a fine-grained volcanic rock which has been termed a trachyte due to the high proportion of potash feldspar. It is considered possible that the potash feldspar could be largely of metasomatic origin replacing original plagioclase in a rock such as an andesite or trachyandesite. The rock also shows moderate alteration to opaque to translucent iron oxides and finely divided sericite/clay. Minor amounts of a green phyllosilicate believed to be chlorite are also present as a later stage alteration product.

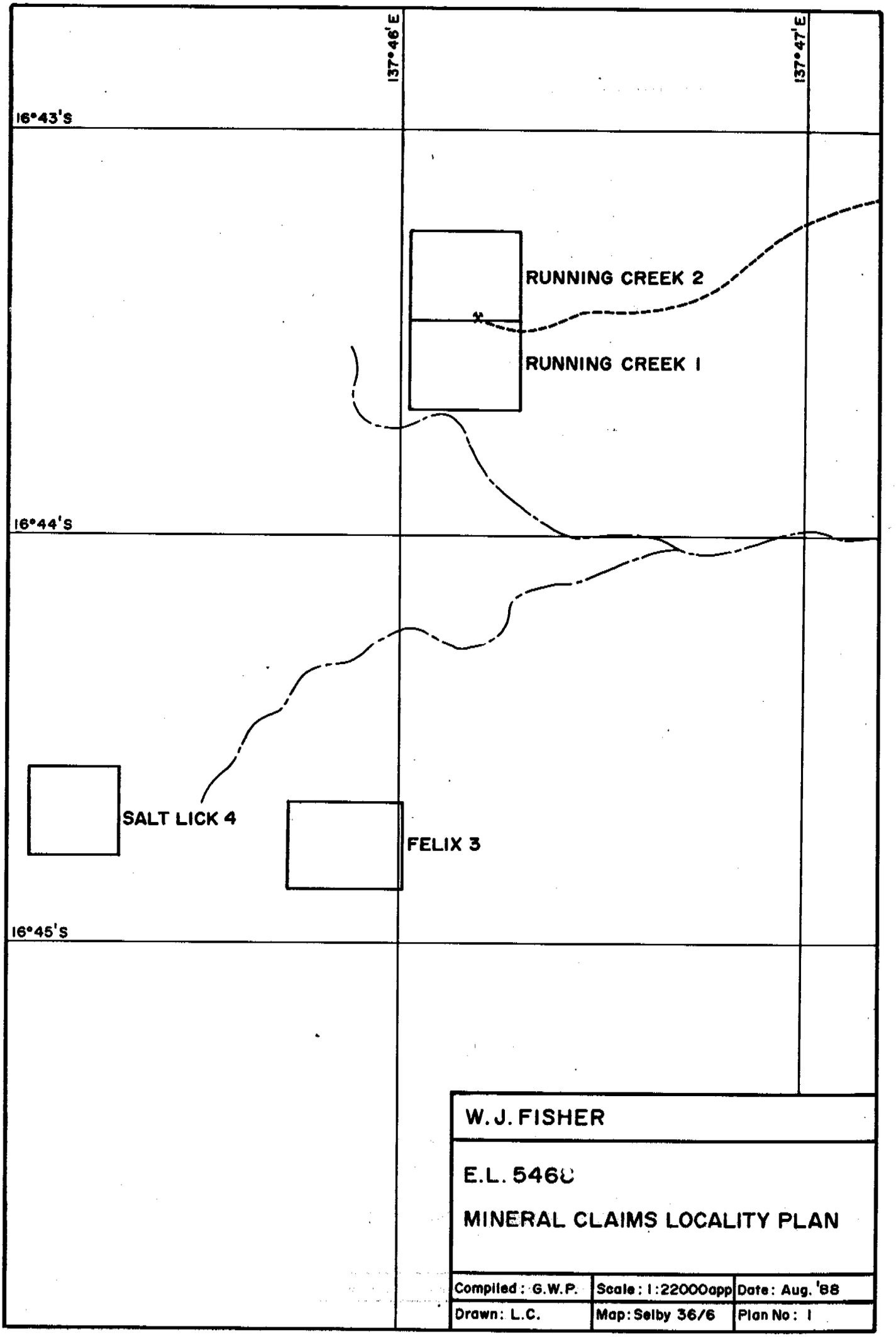
PHOTO 1. PANORAMA RUNNING CREEK MINE. BRECCIA COPPER BEARING PIPE. OUTER SANDSTONE RIM IN BACKGROUND OCTOBER 1987.

PHOTO 2. 40KG SIEVED — 4MM DIAMOND SAMPLE. FELIX PROSPECT AUGUST 1988.

PHOTO 3. GENERAL VIEW OF OPEN FOREST RUNNING CREEK LOCALITY AUGUST 1988.

PHOTO 4. MALACHITE IN KAOLINISED TRACHYTE "SALT LICK" LOCALITY.

PHOTO 5. COLLECTING SAMPLE FROM STREAM TRAP 40 KG — 4MM.



W.J. FISHER

E.L. 5460

MINERAL CLAIMS LOCALITY PLAN

Compiled: G.W.P.	Scale: 1:22000app	Date: Aug. '88
Drawn: L.C.	Map: Selby 36/6	Plan No: 1

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E.L. 5468

RUNNING CREEK MINE AREA

GRID AND GEOLOGY

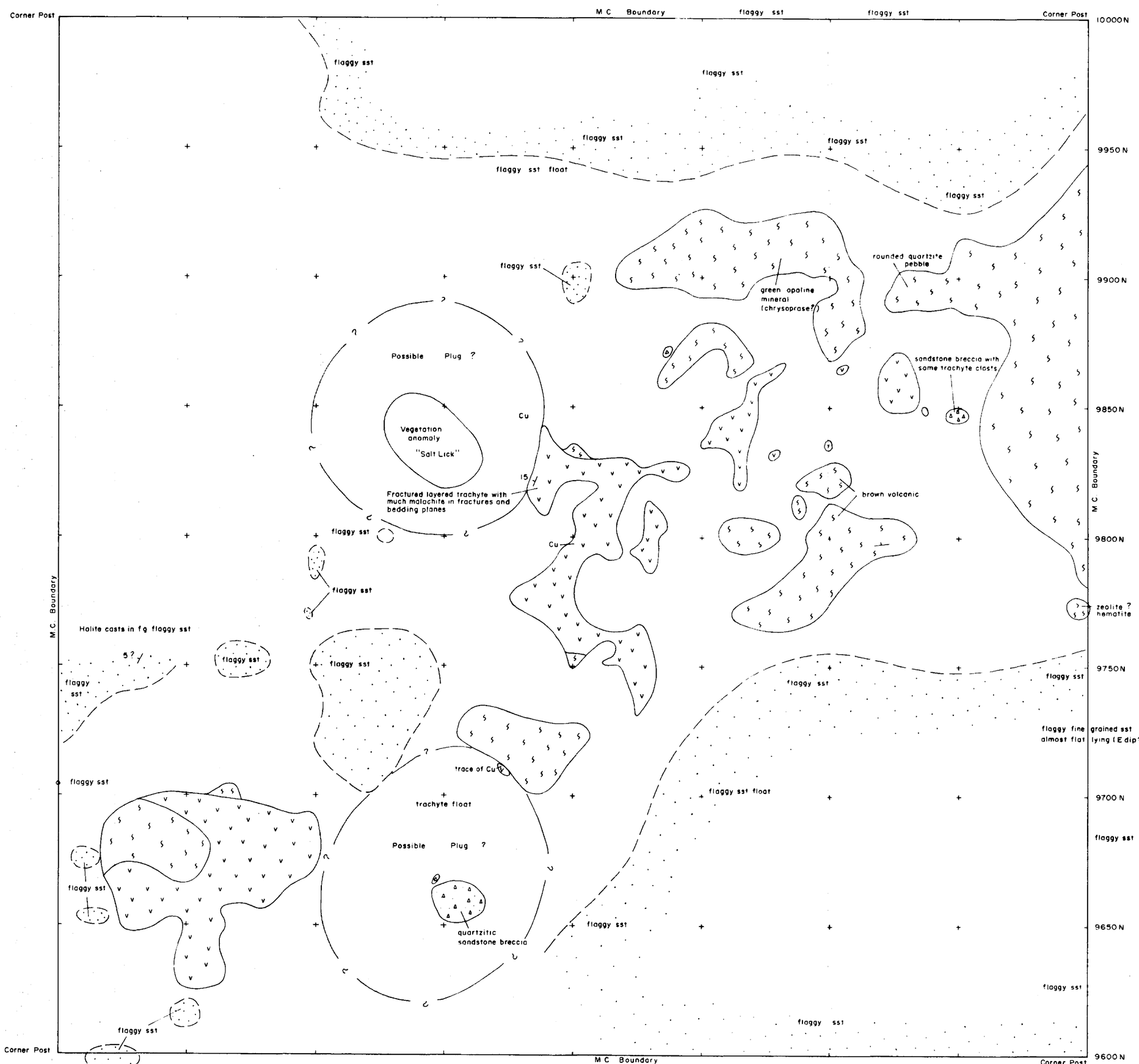
CR88/362A

Compiled G.W.P.	Scale: 1:1000	Date: Aug. '88
Drawn L.C.	Map: Selby 36/6	Plan No: 2

LEGEND

- Trachyte
- Trachyte breccia
- Sandstone
- Sandstone breccia
- Inferred trachyte intrusive body
- Cu — Occurrence of secondary copper mineralisation, usually malachite, minor azurite and crysocolla, possibly turquoise
- 20 — Strike and dip of strata
- \+ — 50m x 50m grid peg

20 0 20 40 60 80 METRES



LEGEND

- Orange-pink trachyte, mostly well layered; oxidised copper minerals present in places
- Quartzitic sandstone breccia
- Fine to medium grained, occasionally amygdaloidal, brown volcanic; contains hematite and zeolites(?) in places; possibly some interbedded tuffs and sediments
- Flaggy fine grained, ripple marked sandstone; halite casts in places.
- \+ 50m x 50m grid peg

20 0 20 40 60 80
METRES

W. J. FISHER

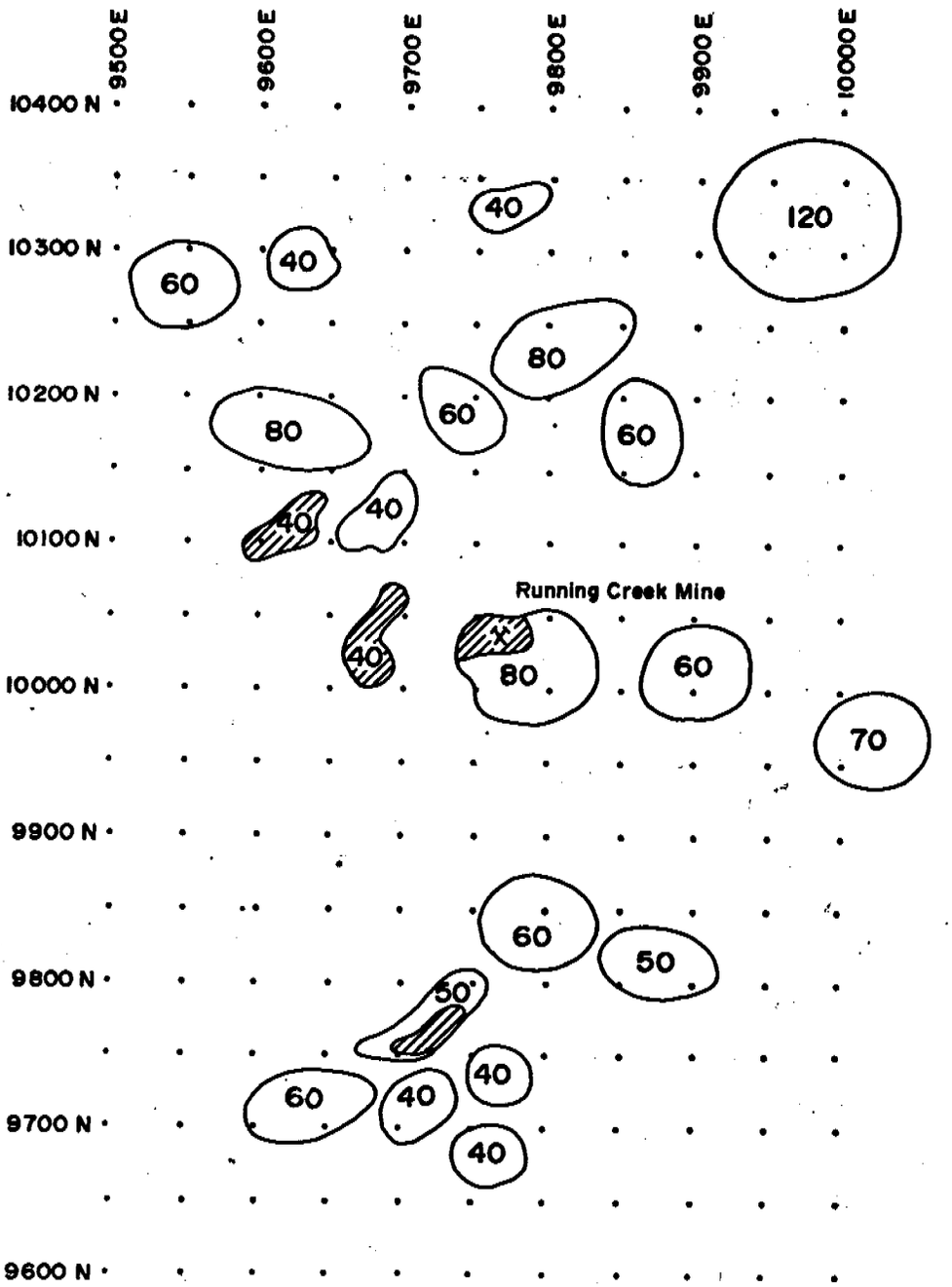
E.L. 5468

SALT LICK AREA

GRID AND GEOLOGY

CR88/362A

Compiled: G.W.P.	Scale: 1:1000	Date: Aug '88
Drawn: L.C.	Map: Selby 36/6	Plan No: 3



Outcropping trachyte with copper

60 Possible plug with mean diameter (m)

W.J.FISHER

E.L. 5468 - GRID I

RUNNING CREEK MINE AREA
SHOWING DISTRIBUTION OF POSSIBLE
TRACHYTE PLUGS 40-120m DIAM.

Compiled: G.W.P.	Scale: 1:5000	Date: Aug. '88
Drawn: L.C.	Map: Selby 36/6	Plan No: 4

N

trachyte breccia

dark brown sst

flaggy sandstone shale and siltstone float

shale float

quartzite breccia with trachyte clasts and quartzite pebbles

scattered outcrop white sugary sst

purple sst with shale clasts, malachite

Cu

Cu

FELIX PROSPECT

white quartzite

brown sandstone

red brown sst

knoll

red brown sst

brown sandstone

scattered outcrop

purple shale

shale float

white sugary sandstone

orange pink intrusive trachyte

pink trachyte

sandstone breccia with trachyte clasts

scattered outcrop white sugary sandstone

mainly trachyte float

flaggy sandstone float

quartzite

quartzite with brown spherules

quartzite breccia with trachyte clasts

purple sst

brown sst

big tors brown sst

white sugary sandstone

scattered outcrop sugary sandstone

red trachyte float, gilgai

altered trachyte tuff

quartzite breccia with trachyte clasts

0 20 40 60 80 100

metres

W.J. FISHER

EL 5468

FELIX PROSPECT & ENVIRONS

Surface outcrop by compass and pacing survey —

Euralba Mining N.L. 15-10-71

Compiled: C.H.C. Shannon	Scale: 1:1000	Date: September 1988
Drawn: C.S.D.S.	Map: Selby 36/6	Plan No. 5

CR 88/362A

16° 35'
8 160 000 mN
16° 40'
8 155 000 mN
8 150 000 mN
16° 45'
8 145 000 mN
16° 50'
8 135 000 mN
137° 45'
795 000 mE
800 000 mN
137° 50'
805 000 mE
810 000 mE
137° 55'

Qa
Czs
Ptn
Ptu
Ptg
Ptr
"Sink hole swamp"
Ptg(sandstone)
Mountain Creek
Running Creek
Hobblechain Creek
Camel Creek
Running Creek Yard
Camp
Camel Creek Yard
19151
19154
19156
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19160
19161
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19192

Quaternary
- Qa — Alluvium
- Czs — Soil, sand, ferricrete, detrital ferricrete

Carpentarian
- Masterton Sandstone — Ptn — Pink medium grained sandstone locally feldspathic, white sandstone, pebble beds
- Pungalina member — Ptu — Orange-pink, flaggy, fine grained
- Gold Creek Volcanics — Ptg — Purplish brown to pink trachyte breccia, trachyte and ? basic differentiates, lithic and quartzose sandstone
- Packsaddle Microgranite — Ptr — Trachyte, trachyte braccia

Geological boundary
Fault
Strike and dip
19180 Sample location with Sample Number

E.L. boundary
Vehicle track
Watercourse

0 1 2 3 4 5km

W.J. FISHER

E.L. 5468

GEOLOGICAL AND SAMPLE LOCATION PLAN

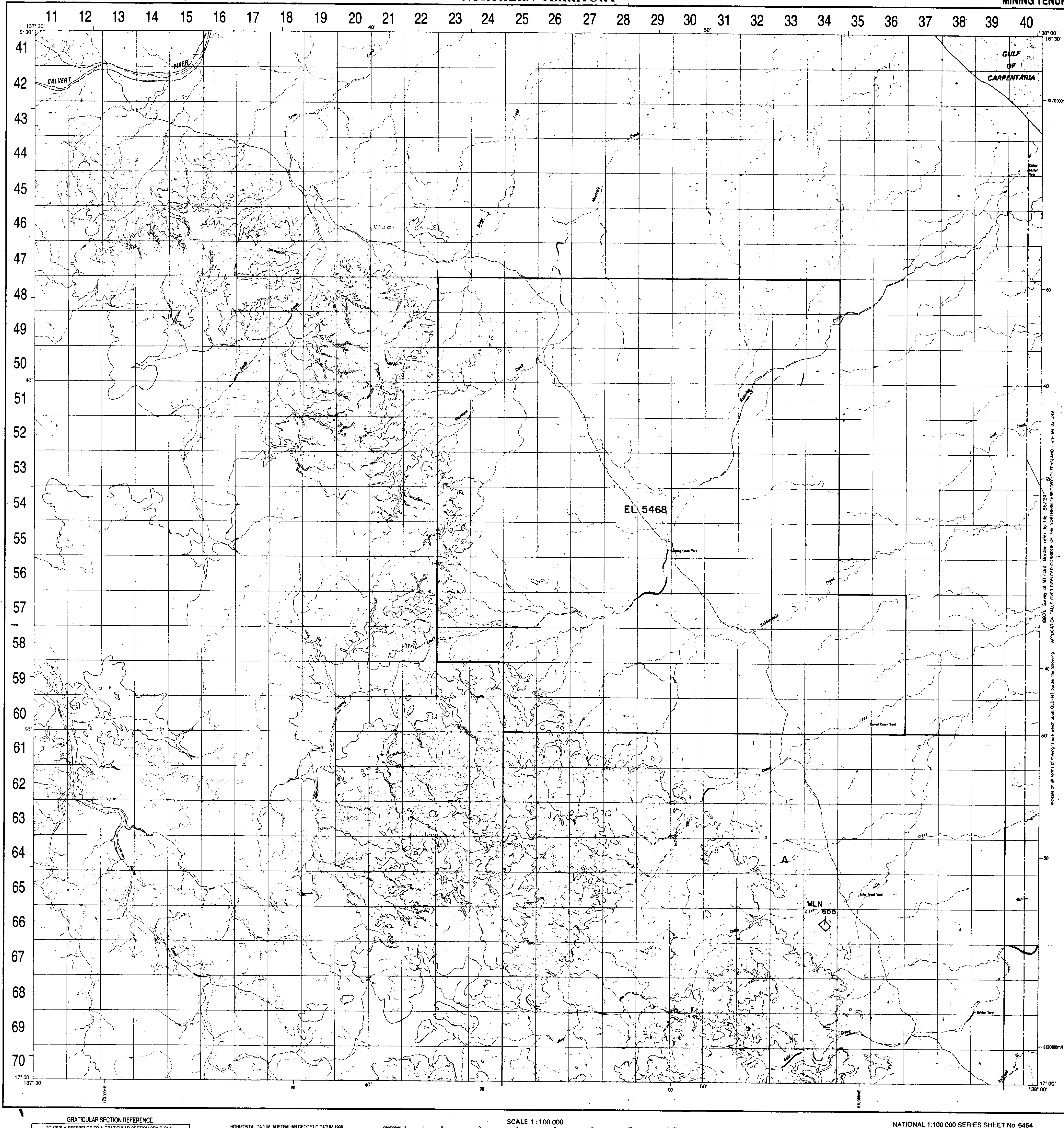
Compiled: W.J.F.	Scale: 1:50000	Date: September 1988
Drawn: C.S.D.S.	Map: Selby 36/6	Plan No. 6.

CR 88/362A

Refer to this map as:—
36/6

SELBY
NORTHERN TERRITORY

R. F. 1:100 000
MINING TENURE



GRATICULAR SECTION REFERENCE

TO GIVE A REFERENCE TO A GRATICULAR SECTION BEING ONE MINUTE OF LONGITUDE BY ONE MINUTE OF LATITUDE			
SAMPLE SECTION: SE CORNER BLOCK			
1. Quote this 1:100 000 sheet number:	36/6		
2. Quote the number above and in the centre of the one minute column:		40	
3. Quote the number to the left and in the centre of the one minute row:			70
SAMPLE REFERENCE:	36/6	4070	

PRODUCED by the Department of Mines and Energy, Darwin, using base mapping provided by the Division of National Mapping.

NOTE TO MAP USERS: Mining Tenements on this map are plotted from descriptions supplied by the holders and the Northern Territory takes no responsibility as to their accuracy.

HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
TRANSVERSE MERCATOR PROJECTION

TN MN 5°12′

MAGNETIC DECLINATION
Correct 1974
Annual Change 36″ Westerly

SCALE 1 : 100 000

Kilometres 2 1 0 2 4 6 8 10 12 Kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH EVERY 10′ VALUE BEING LABELLED AROUND THE NEATLINE.
10 000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID ZONE 53 (AUSTRALIAN MAP GRID) ARE ALSO SHOWN EXTERNALLY.

- Built-up area; National route marker
- Principal road and highway; Cutting
- Secondary road; Embankment
- Minor road; Road bridge
- Vehicular track
- Gate; Cattle grid
- Railway; Station; Railway bridge
- Power transmission line; Fence
- Mine; Windmill; Yard; Quarry
- Building; Church; Ruins
- Trig station; Bench mark; Contour with value — BM 306

- Aboriginal Land Claim Boundary
- Exploration Licence (application) — A
- Exploration Licence (granted) — EL
- Mining Reserve — RO or MR
- Business Area — BA
- Dredging Claim — DC
- Exploration Retention Lease — ERL
- Extractive Mineral Lease — EML
- Extractive Mineral Permit — EMP
- Garden Area — GA
- Gold Mining Lease — GML

- Licence to treat tailings — LTT
- Machinery Area — MA
- Machinery Lease — Mach. L
- Mineral Claim — MC
- Mineral Lease (Northern) — MLN
- Tenement number — ML94
- Prospecting Area — PA
- Quarry Area — QA
- Residence Area — RA
- Residence Lease — RL
- Water Right — WR

INDEX TO ADJOINING MAPS

Robinson 36/2	Calvert River 36/3	
Pungalina 36/5	Selby 36/6	QUEENSLAND
Calvert Hills 42/2	Wollogorang 42/3	

NORTHERN TERRITORY

NATIONAL 1:100 000 SERIES SHEET No. 6464
PART OF 1:250 000 SHEET
ROBINSON RIVER SE 53-4

1:100 000 MINING TENURE
NORTHERN MINERAL FIELD

CR88/362A

SELBY

Refer to this map as:—
36/6