

ANNUAL REPORT OF EXPLORATION.
EXPLORATION LICENCE NO: 2435.
CULLEN RIVER REGION. PINE CREEK.NT.

OPEN FILE

CONTENT

1. INTRODUCTION
2. SUMMARY & CONCLUSIONS
3. PHYSICAL GEOLOGY
4. MINERALOGY
5. CONDUCT OF EXPLORATION

APPENDICES

1. REGIONAL LOCALITY PLAN
2. SURFACE GEOLOGY - SAMPLE LOCALITY PLAN (Base exBMR 1980)

Peter R Evans & Associates
Mining Exploration & Mining Engineering Consultants
DARWIN .NT.

SCANNED

28 NOV 1995

CR83/127

The Director
Department of Mines & Energy
GPO Box 2901
DARWIN NT.

1. INTRODUCTION

During the dry season of 1982, field exploration and sampling of stream sediments, dry drainage patterns, and base of slopes, was carried out mainly in the northern sector of the subject Licence area.

As the region was largely trafficable by four wheel drive vehicle, there were no difficulties experienced in moving through the general terrain. There was therefore no requirement to carry out any access clearing or construction works.

The ensuing material is a report of the exploration conducted, together with the results of sampling that has been carried out.

An expenditure summary, exploration programme proposals, and associated costing of same, has earlier been submitted along with the application for renewal.

2. SUMMARY AND CONCLUSIONS

- 2.1. The completion of the exploration and sampling programme embracing the drainage patterns, and associated alluvial regimes, has established that no potentially economic concentrations of heavy density minerals are in existence in the areas examined.
- 2.2. Low grade values of Cassiterite, and very minor gold, were found to be present in the lower reaches of Pine Creek, near its confluence with the Cullen River.
- 2.3. A radiometric anomaly was investigated in the region of Harriet Creek, with no encouraging results. (Minitome Report. 1982.)
- 2.4. The Cullen Granite Pluton was examined, both structurally as well as petrogenetically, to endeavour to isolate possible variations in character, and possible mineral content.
- 2.5. Much work was done on a microscale, of the units that comprise the general Cullen Granite Pluton, and the unit mineral grains were isolated, studied and measured, recorded for on-going checks and comparisons with earlier work done in the known tin granite province at Copperfield Creek, to the south west. This work is continuing.

3. PHYSICAL GEOLOGY

The northern sector of the subject Exploration Licence comprises a highly weathered and decayed horizon of porphyritic granite that has many similar features when compared with the general Umbrewarra granite, including a high degree of joint pattern development, with similar general trend line directions.

The granite is a coarse grained, pink and pale green porphyritic type, displaying an irregular weathering profile, boldly developed in zones where silica is the more dominant mineral.

The drainage patterns contain alluvial deposits made up mainly of coarse granitic sands and pebbly beds, well sorted and leached of both mica and clays. The alluvial beds are not generally very thick and are best developed along the channel of the Cullen River regime.

4. MINERALOGY

Gold occurs in the sediments of Harriet Creek in very fine flecks, very sparsely distributed, and there does not appear to be any appreciative volumes of alluvial deposition along the creek channel.

Minor amounts of cassiterite are present in the sediments of Nellie Creek and do not appear to warrant further investigation. Cassiterite is evident in small aggregate particles, very sparingly distributed throughout the sediments of the drainage channels emanating from within the main porphyry granite mass in the northern sector generally, and it may account to be the origin of the fine grained cassiterite found earlier in the general Cullen River regime.

A small number of outcrops of Barytes were found occasionally in the process of collecting "base of slope" samples. However, they are far too insignificant to warrant further work. The deposits will however be incorporated on surface mapping at a later time.

No other primary deposits of any other minerals have so far been encountered.

No results of primary granite analysis for cassiterite are yet available, as they so far form only a minor part of a much more regional study.

5. CONDUCT OF EXPLORATION

- 5.1. Samples were removed from all drainage patterns in the northern sector, (see sample locality plan annexed hereto.) and the samples were prepared for weighing, then reduced to final concentrates by dish panning, re-panning the reject material, and then drying and weighing the final concentrates. The tin-gold values, where applicable, were recorded. (see values and sample ident. sample locality plan herewith. Values expressed as ppm.)
- 5.2. Primary granitic rock samples were taken over all exposures, the locations of which were carefully plotted using air photo data. (see sample locations marked HG sample locality plan annexed hereto.)
- 5.3. During the stream sampling programme in the northern sector, a much more thorough investigation was conducted over the general Harriet Creek regime. The results however are evidence that there are no alluvial deposits present that are indicative of any further incentive for on-going exploration for heavy density minerals.
- 5.4. Much more emphasis is continuing to be placed upon research into the host granitic pluton and the petrology of the various units that are under study. Comparisons with other known tin granites of the same-similar age are continuing and would be projected on, regardless of renewal, or otherwise, as the work has progressed beyond any need for further field work.
- 5.5. Only very minor vegetation disturbance has been required for access purposes, and no major road-track construction has been required.
- 5.6. No sample holes have been left unfilled at any time and care has been taken to ensure that water holes and streams were not polluted in any way.

Respectfully submitted.



Peter R Evans & Associates.
23rd February 1983.

Memorandum to:

The Secretary
Department of Mines & Energy
Darwin, NT

Date: 1 - 2 - 8

File: CNS

Copies to: —

Subject: ANNUAL REPORTING.

From: P. R. EVANS

EXPLORATION & SURVEYS

E.L. 2435. PINE CREEK

Dear Sir,

During 1982, field exploration was concentrated in the northern section of the licence area. A series of slope, base of slopes, and stream sediment sampling, gridding and screenings, failed to disclose any zones that could be regarded as worthy of further assessment.

A small number of zones along Harriet Creek carry indications of possible radiometric anomalies, however, subsequent investigations conducted by Minitome Australia, did not give encouraging results. (Copy Minitome Report enclosed).

As may be seen, it has been decided to relinquish the northern zones as required, and henceforth to continue assessments of the southern areas of the licence. It is proposed to commence a series of pilot bulk tests of stream alluvium during 1983, and in pursuance to this, a pilot plant was designed and manufactured during 1982. The Plant is now available for removal and installation on site as soon as the ground conditions are suitable after the current wet season.

Geological surface mapping was suspended during the year when BMR 1:250,000 series

A series of assessments are being done embracing remote sensing techniques and Landsat satellite database, to assist in determining the locations of particular structural phenomena within the Cullen granite. However, it is difficult to justify the continuation of exploration activity for tin deposits during the current world state of the tin mining industry.

List of Expenditure

Wages & salaries	\$ 16,940.00
Motor vehicles - maintenance & Repairs	\$ 2,120.00
Hire of machinery & equipment	\$ 622.00
Camp Allowances, accommodation	\$ 1,340.00
Sampling & survey materials	\$ 962.00
Design & fabrication of Pilot Plant (50% of)	\$ 21,400.00
Mobile exploration equipment	\$ 3,720.00
Printing & stationery	80.00
Fuels & oils	\$ 1,460.00
Miscellaneous purchases	\$ 548.00

Total Expenditure: \$49,192.00

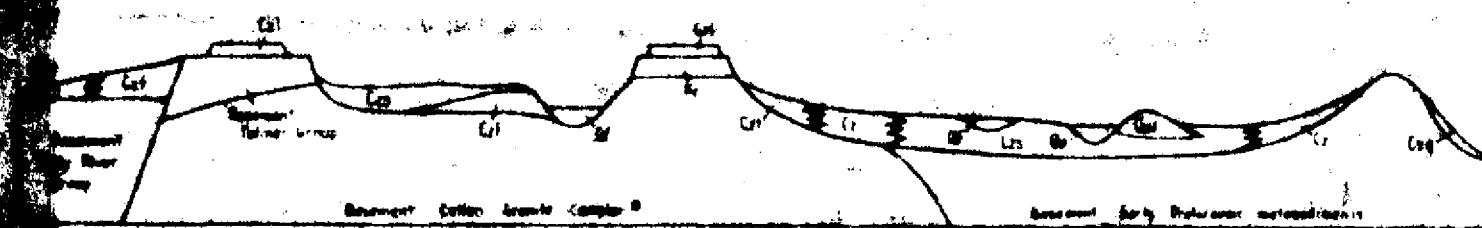
ENCL: Mantone Aust. Report.
Structural Lineament data

Yours sincerely,

P. Evans

PETER R. EVANS & ASSOCIATES

REFERENCE TO ACCOMPANY COMPILATION SHEETS FOR THE PINE CREEK 1:100,000 MAP AREA



Quaternary
Tertiary to Quaternary
Early to Late Cretaceous

Junduckin Formation
Tindell Limestone

Waggon Creek Formation
Bulimba
Sandstone

Adelaidean?

Carpentarian

Proterozoic

Early Proterozoic

Proterozoic

Burrill Creek Formation

Mount Bonino Formation
Goreau Tuff
Koolpin Formation

Widdowson
Siltstone
Mudstone

Mudstone

Proterozoic

Proterozoic

Proterozoic

Proterozoic

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Burrill Creek Formation

Mount Bonino Formation
Goreau Tuff
Koolpin Formation

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Mudstone

Proterozoic

Proterozoic

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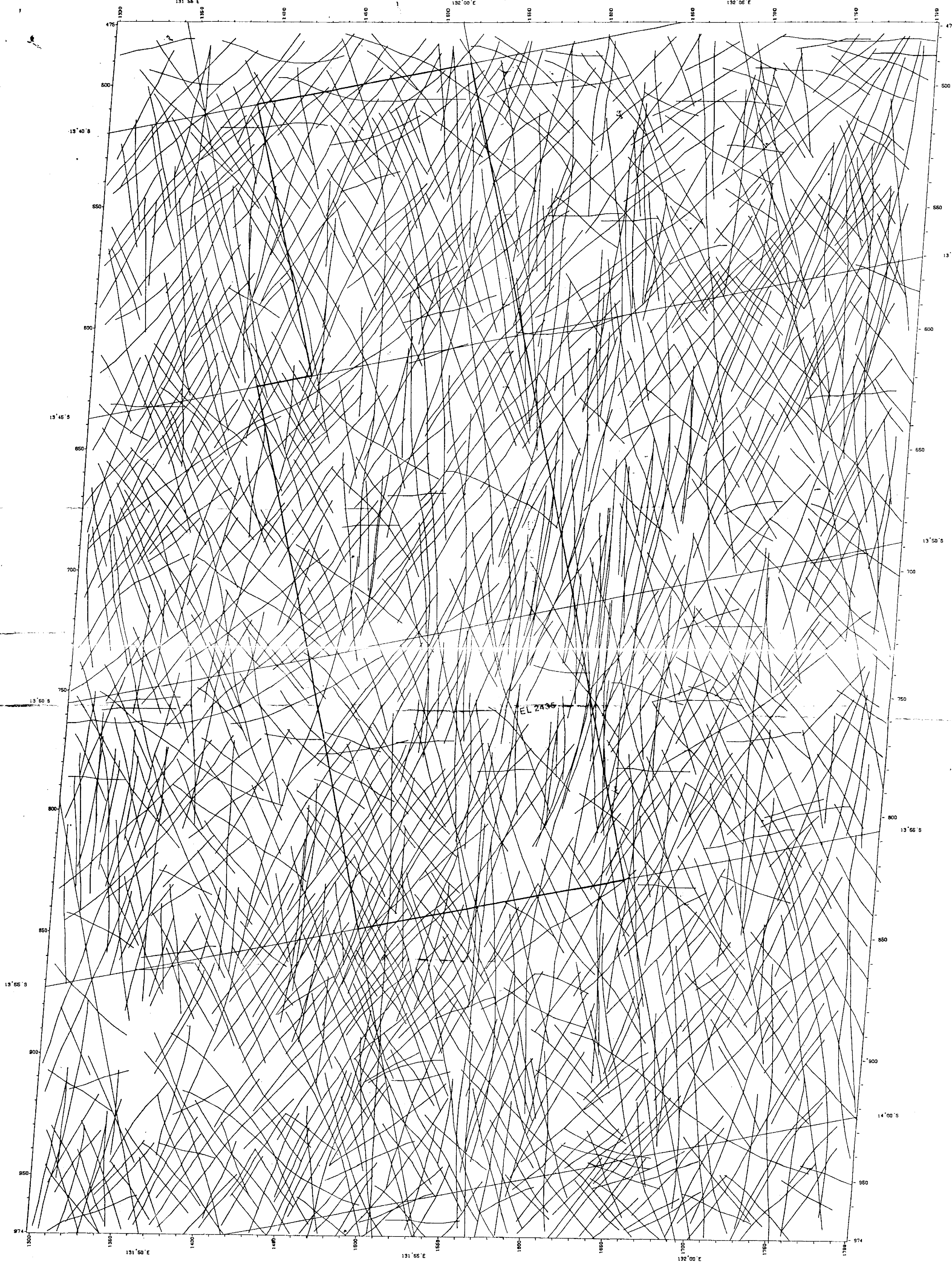
Proterozoic

Proterozoic

Proterozoic

- 1. Strike and dip of strata
- 2. Strike and dip of strata measured
- 3. Strike and dip of strata dip 5° to 15°
- 4. Strike and dip of strata dip greater than 15°
- 5. Trend line
- 6. Strike and dip of strata dip 5° to 15°
- 7. Unconformity
- 8. Fault
- 9. Strike and dip of strata
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- 100. Strike and dip of strata

NOTE: All symbols in reference are drawn to 1:100,000 specifications (4 times smaller than on compilation sheets)



LANDSAT-COMPUTER INTERPRETED LINEAMENTS

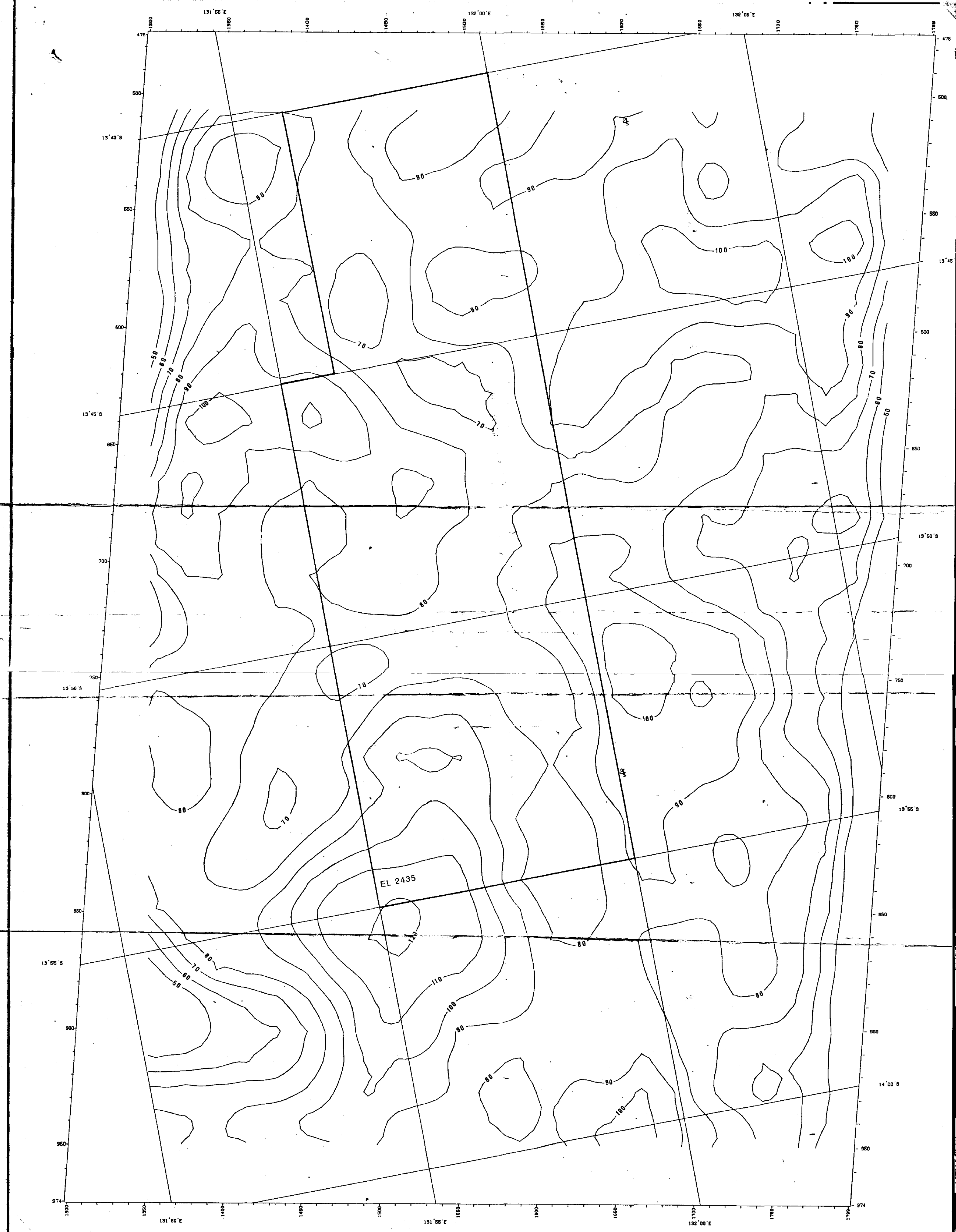
PINE CREEK AREA - NORTHERN TERRITORY

PETER R. EVANS & ASSOCIATES
MINING EXPLORATION & MINING
ENGINEERING CONSULTANTS
G.P.O. BOX 1596, DARWIN, N.T. 5194.

0 1.0 2.0 4.0 KM
SCALE 1: 80000



CR83/127



LANDSAT-COMPUTER INTERPRETED LINEAMENTS

PINE CREEK AREA - NORTHERN TERRITORY

PETER R. EVANS & ASSOCIATES
MINING EXPLORATION & MINING
ENGINEERING CONSULTANTS
G.P.O. BOX 1596, DARWIN, N.T. 5794

0 1.0 2.0 4.0 KM
SCALE 1: 80000
SEGMENTS PER 10 SQ. KILOMETRES
CONTOUR INTERVAL: 10.



CR83/127

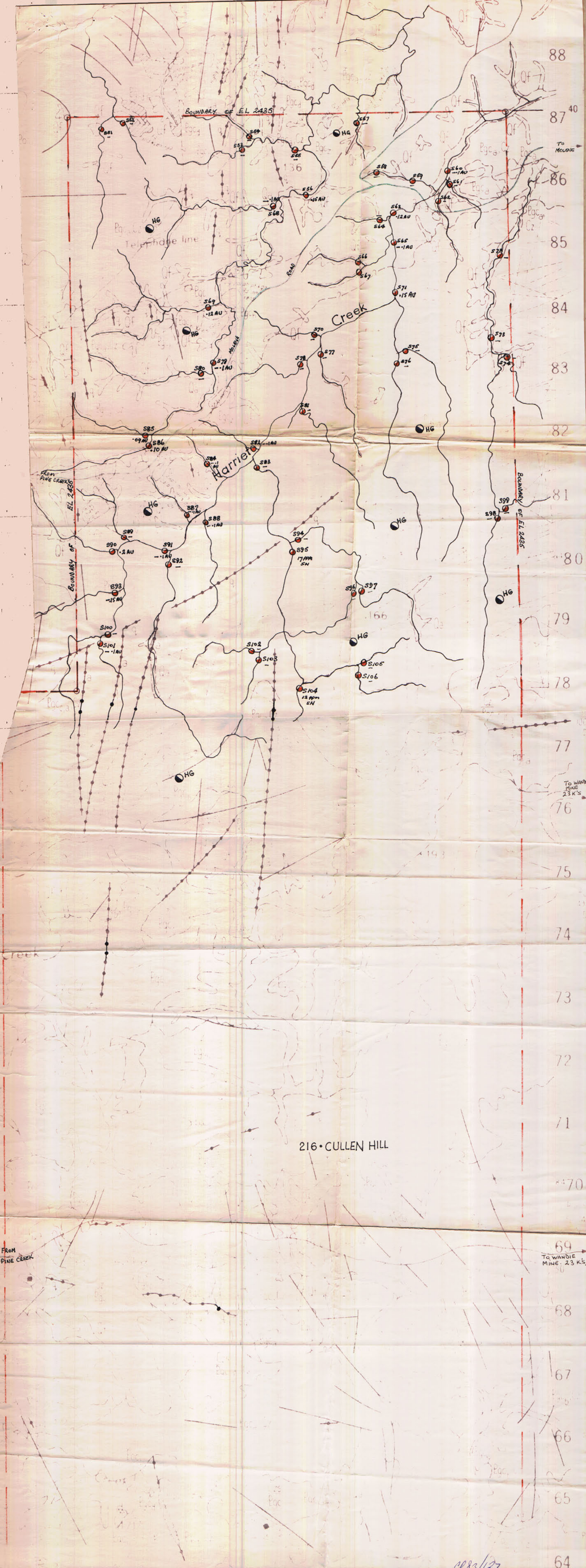


TABLE OF CONTENTS

page

1	INTRODUCTION	1
2	OFFICE WORK CARRIED OUT	1
	2.1 Landsat Imagery	
	2.2 Orthodox Colour Airphotography	
	2.3 BNR Line Compilations	
3	FIELD WORK CARRIED OUT	2
	3.1 Reconnaissance	
	3.2 Detailed Grid Exploration	
	3.3 Detailed Alluvial Anomaly Examination	
4	RESULTS AND CONCLUSIONS	3
5	PERSONNEL EQUIPMENT STAFF AND EXPENDITURE	3

	<u>LIST OF TABLES</u>	page
TABLE I	Harriet Grid Detail Rock Sample Assays	4
TABLE II	Harriet Creek Alluvial Anomaly Spectrometer Readings	5
TABLE III	Minatome Personnel and Equipment Used On EL 2435 In 1982	6
TABLE IV	Minatomes Expenditure On EL 2435 During 1982	7

	<u>LIST OF FIGURES</u>
Fig 1	Part EL 2435 Geology from BMR Line Compilations 1:25,000
Fig 2	Harriet Creek Alluvial Anomaly on Fig 1
Fig 3	Harriet Creek Alluvial Anomaly Schematic Plan and Section

	<u>LIST OF APPENDICES</u>
Appendix A	Harriet Creek Alluvial Anomaly Scintillometer reading upstream & downstream
Appendix B	Department of Mines & Energy Reports on Harriet Creek Alluvial Anomaly Samples

PLATE I	(in pocket) Detailed Grid Scintillometer readings
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REPORT ON EXPLORATION ACTIVITY
BY MINATOME AUSTRALIA PTY LIMITED
ON EL 2435 HELD BY
PETER EVANS AND ASSOCIATES

1 INTRODUCTION

As a part of Minatomes overall appraisal of the Carpentarian Granites of the Pine Creek Geosyncline, permission was obtained from P Evans and Associates for the company to explore on EL 2435 which in part is underlain by the Cullen Granite.

This report covers all mineral exploration activity carried out by Minatome personnel during the 1982 dry season.

The object of the programme was to investigate the distribution of uranium in rafts of Lower Proterozoic units within the Cullen Granite.

2 OFFICE WORK CARRIED OUT

2.1 Landsat Imagery

Unenhanced full frame Colour Images (channels 4, 5 and 7) at a scale of 1:250.000 and part frames at 1:100.000 were used to delineate contact aureoles and large rafts.

2.2 Orthodox Colour Airphotography

1:25.000 scale photography was used for more precise location of rafts and other outcrops.

2.3 BMR Line Compilations

In conjunction with 1:25.000 photography, these were used for locating the various contact metasomatic rock types and relating them to their unmetasomatised parent Lower Proterozoic units.

3 FIELD WORK CARRIED OUT

3.1 Reconnaissance

Having established the presence of several rafts within the Cullen Granite these were then located in the field. A series of them extends over a $3\frac{1}{2}$ km trend from $13^{\circ} 42' 30''$ / $131^{\circ} 57' 00''$ to $13^{\circ} 43' 00''$ / $131^{\circ} 56' 00''$. All were geologically traversed and checked by footborne scintillometer (SRAT SFP2).

One of the rafts contained carbonaceous material and chialstolite and locally appeared gossanous. Samples 49015 - 49022 were collected and one returned 140 ppm from a site running 850 cps. (Table I).

This raft was subjected to closer examination and is reported on in section 3.2.

A stream reconnaissance in the Harriet Creek system gave anomalous SFP2 readings in certain unconsolidated alluvium layers. This anomaly was examined in some detail and is reported on in section 3.3.

3.2 Detailed Grid Exploration

A detailed grid with lines at 25 m intervals was established over the outcrops of carbonaceous hornfels. SFP2 readings at waist high were taken at 5 m spacings. Results are plotted on Plate I. Meaningfull geological mapping of the raft of hornfels in an effort to recognise primary banding or bedding was unsuccessful. The only partially visible subdivision in the raft was on the basis of the presence or absence of chialstolite lathes. The contacts of the raft with the enclosing granite were always obscured by sand.

3.3 Detailed Alluvial Anomaly Examination

An SFP2 scintillometer anomaly was located in Harriet Creek at approximately $13^{\circ} 43' 30''$ / $131^{\circ} 57' 00''$. (Fig 2).

A reading of 7000 cps was obtained with an SPP2 instrument. Scintillometer readings were taken in the creek bed for 1 km up and down stream of the anomaly. No higher values were obtained.

On sinking a shallow pit (2m x 0.6m x 0.6m) it was found that radiation was coming from a thin layer at \pm 15cm below surface and varying from 2.5 - 70cm thick. Fig. 3 is a Schematic Plan and Section showing this. The composition of the layer was not visibly different from surrounding unconsolidated sands, cobbles and pebbles - which included some hornfelsic matter but was predominantly of granitic origin. A sample of the material was taken and subjected to metallurgical testing and mineral identification - the results are shown in Appendix III and IV. The gravity fractions will be assayed for U and Th. A spectrometer reading of a bucket load of the material on a nearby granite outcrop is shown in Table II.

4 RESULTS AND CONCLUSIONS

The field work carried out over the hornfelsic rafts showed that no uranium concentration has taken place by the contact metasomatic effect of the Carpentarian Cullen Granite. The thorogummite occurrence in the unconsolidated sediments of the Harriet Creek drainage system is an enigma as the granite itself shows no radiation level background increase and no uranium mineralization is reported or could be found to explain the alluvial gummite presence.

5 PERSONNEL EQUIPMENT EXPENDITURE AND STAFF

Tables III and IV list these data.

TABLE I

HARRIS CRID DETAILROCK SAMPLE ASSAYS

No	Description	U	Th	Cu	Pb	Zn	Co	Ni
49015	Hfl, cacl?, dk grey f g	4	24	8	10	65	10	20
16	Hfl, carbon	<4	28	16	400	<2	<5	10
17	Hfl, ferrug, alt'd	110	14	150	15	40	15	120
18	----- " -----	140	14	170	10	85	25	130
19	Hfls, carb, sericitic	6	20	16	10	<2	5	15
20	----- " ----- dk mass	4	<4	10	10	<2	<5	5
21	as 49019, schist	12	26	520	25	<2	5	50
49022	Hfl, graph, sericite	8	24	26	10	<2	<5	15

TABLE II
HARRIET CREEK ALLUVIAL ANOMALY
SPECTROMETER READING

	<u>BACKGROUND</u> (Granite Outcrop)	<u>SAMPLE</u> (Sample on Outcrop)
K	1483	1345
U	371	27
Th	556	13,795

Instrument: Sintrex GAD-6 coupled to GSP4 Sensor

Mode Δ S , 100 sec count

TABLE IIIMINATOME PERSONNEL AND EQUIPMENT
USED ON EL 2435 IN 1982PERSONNEL

Resident Geologist	3 days
Administrative Agent	2 days
Field Assistants	22 ³ / ₄ man/days

VEHICLES

Toyota 1	13 ³ / ₄ days
Toyota 2	2 days
Holden	2 days

EQUIPMENT

Scintillometer	24 days
Spectrometer	1 day
Codan Radio	15 ³ / ₄ days

TABLE IV

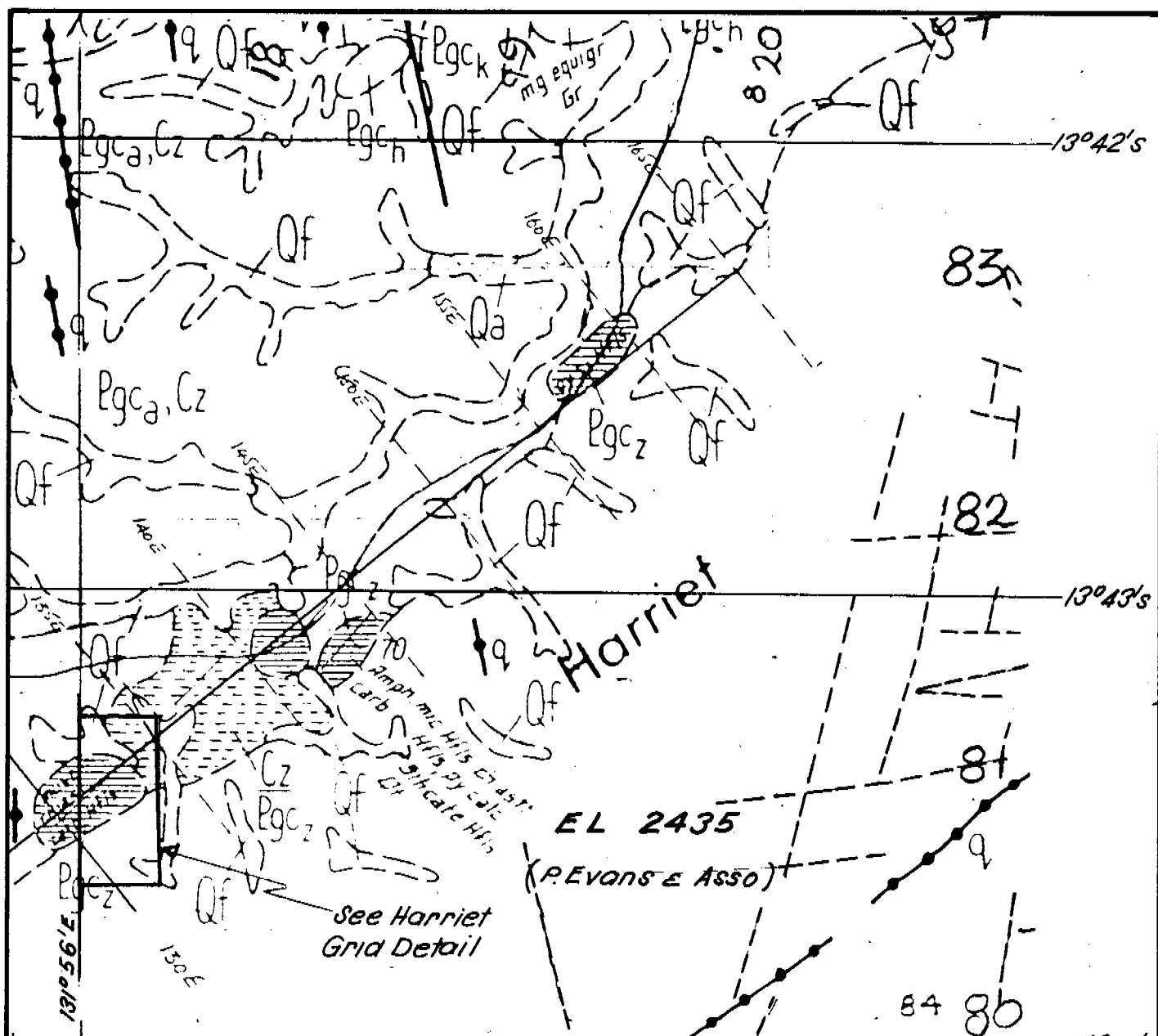
MINATOMES EXPENDITURE

ON EL 2435

DURING 1982

PURCHASES	189
PERSONNEL	2,426
SUPPLIES AND SERVICES	97
TRANSPORT AND ACCOMMODATION	649
DEPRECIATION	34
GENERAL ADMINISTRATION	3,130
CONTRACT SERVICES	189

\$ 6,714



LEGEND
(after BMR 1981)

- Qa Silt, sand, clay, locally consolidated grey sandy siltstone along some drainage courses: creek and river alluvium
- Qf Black and brown humic soil
- C2 Skeletal soils, gradational red soils and yellow earth type soils

Cullen Granite

- Pgc_a Adamellite, porphyritic, coarse pink and green
- Pgc_b Granite, porphyritic, coarse grey
- Pgc_c Granite, equigranular, pink
- Pgc_d Leucogranite, fine grained
- Pgc_e Porphyry, quartz feldspar
- Pgc_f Granodiorite, fine grained
- Pgc_g Adamellite, fine pink and green
- Pgc_h Adamellite, fine equigranular
- Pgc_k Granite, coarse porphyritic pink

outcrop



Pgc_z Hornfels, cordierite-andalusite-biotite-quartz

suboutcrop

Hornfels, chistolite-carbonaceous
Hornfels, pyritic-calc-silicate
Hornfels, quartz

minatome australia pty. limited.

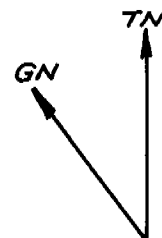
PI. EL 2435 (P. EVANS & ASSOC.)
GEOLOGY FROM B.M.R.
LINE COMPILATIONS

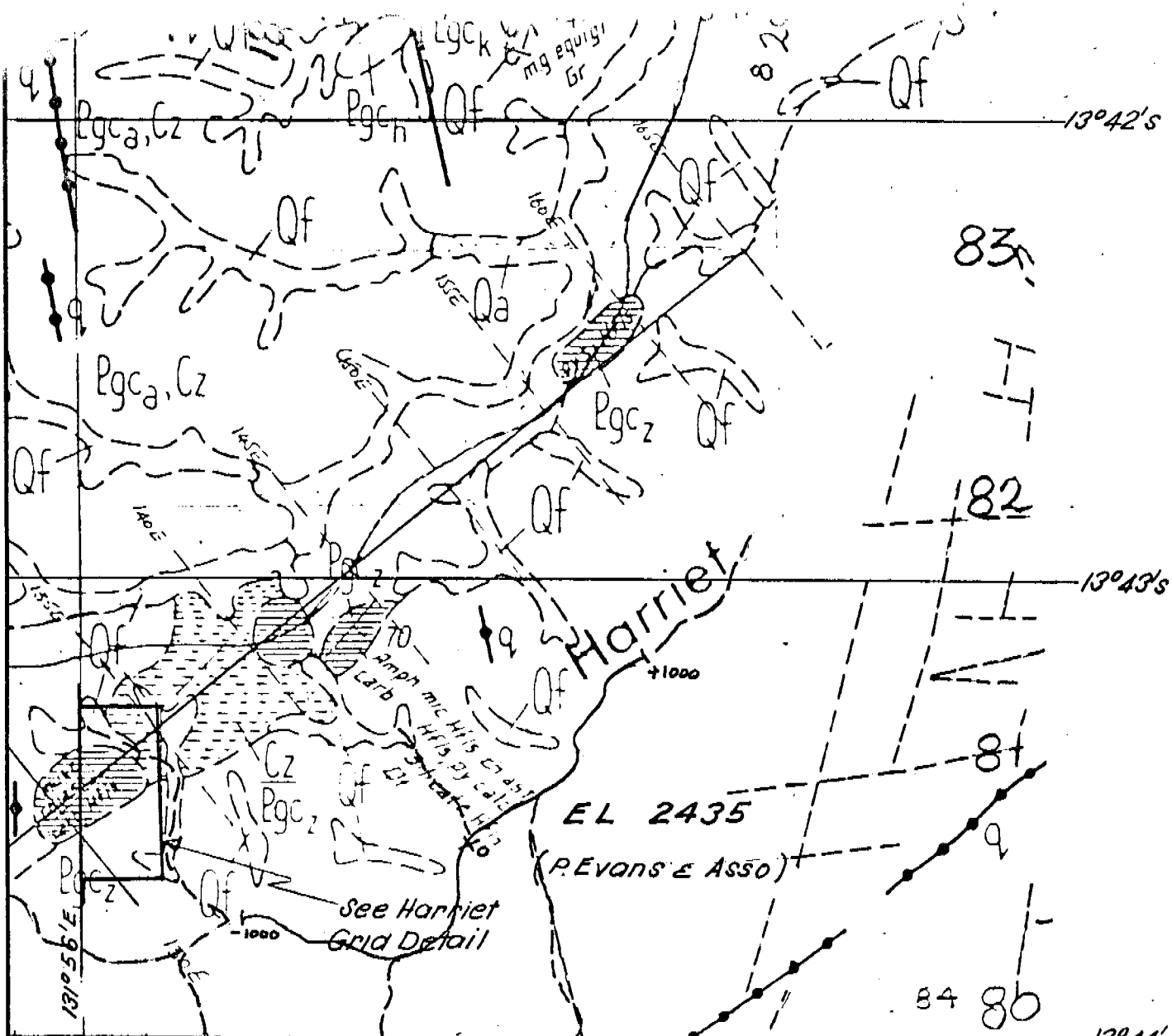
FIG 1

SCALE. 1:25 000

DATE. J.A.E.
27.9.82

DRG.No. 503-2





LEGEND
(after BMR 1981)

Qa Silt, sand, clay, locally consolidated grey sandy siltstone along some drainage courses: creek and river alluvium

Qf Black and brown humic soil

Cz Skeletal soils, gradational red soils and yellow earth type soils

Cullen Granite

Pgc_A Adamellite, porphyritic, coarse pink and green

Pgc_B Granite, porphyritic, coarse grey

Pgc_C Granite, equigranular, pink

Pgc_D Leucogranite, fine grained

Pgc_E Porphyry, quartz: feldspar

Pgc_F Granodiorite, fine grained

Pgc_G Adamellite, fine pink and green

Pgc_H Adamellite, fine equigranular

Pgc_I Granite, coarse porphyritic pink

outcrop



Pgc₂ Hornfels, cordierite-andalusite-biotite-quartz
Hornfels, chiastolite-carbonaceous
Hornfels, pyritic-calc-silicate
Hornfels, quartz

HARRIET CREEK

ALLUVIAL ANOMALY

X O Site of main anomaly and creek traverse Grid O.
+1000 Limit of upstream and down stream radiometric traverse. in metres.
-1000

minatome australia pty. limited.

Pt. EL2435 (P. Evans & Assoc.)

GEOLOGY FROM B.M.R.

LINE COMPILATIONS

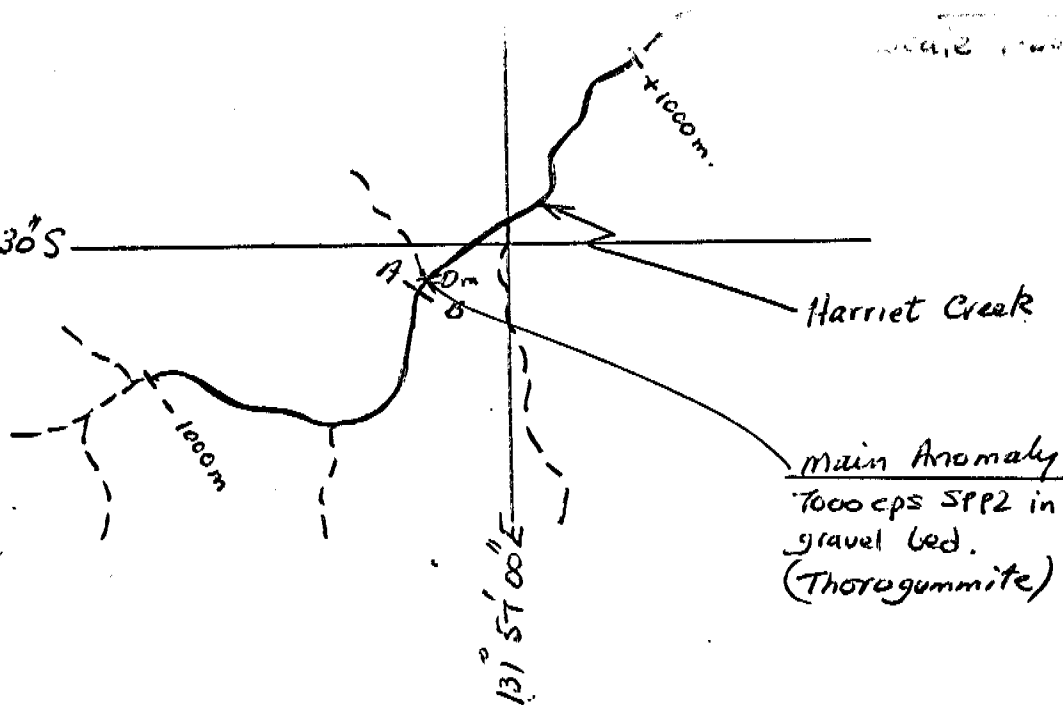
FIG 2.

SCALE. 1:25 000

DATE. J.A.E. 23.9.82

DRG.No. 503-2

13° 43' 30" S



SCHEMATIC SECTION

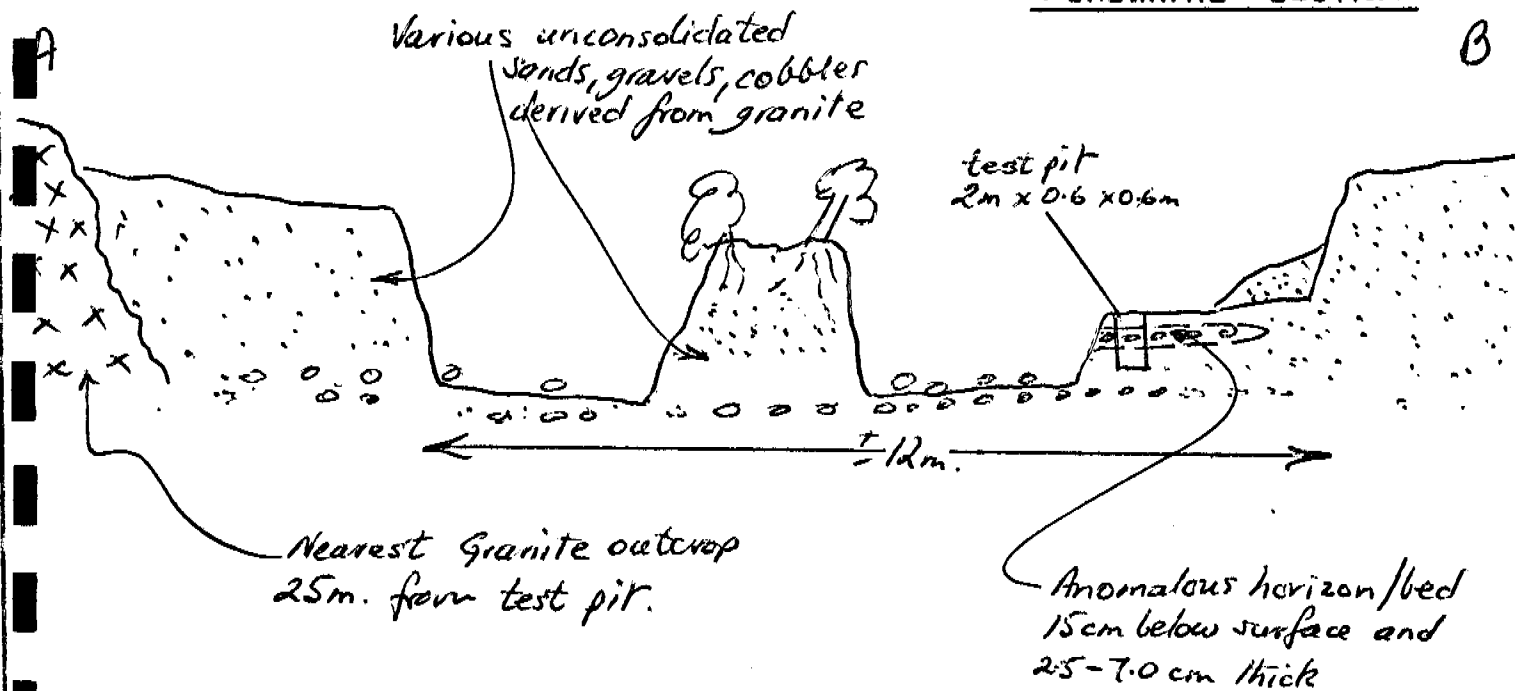


FIG 3.

minatome australia pty. limited

HARRIET CREEK ALLUVIAL ANOMALY

NORTHERN TERRITORY

Scale as shown

JA.E 22.10.82

APPENDIX A

RADIOMETRIC SURVEY DATA

Readings taken at 5meter intervals in a southwly direction from original
hol spot.

PROJECT 591 (EL 2435)

SPP2 NO. 3055

DATE 26-6-82

PROSPECT HARRIET ALLUVIAL

GMT3 NO.

.....NO.....

OPERATOR'S NAME *Cherry*

TEST SOURCE

SPP2 HEIGHT *Wrist*

GRID REFERENCES	C/S	OBSERVATIONS (All topographical features)	GRID REFERENCES	C/S	OBSERVATIONS (All topographical features)
-00	2000		-190	1050	
-05	1200		-195	1100	
-10	2000		-200	1100	
-15	1600		-205	750	
-20	1000		-210	350	
-25	300		-215	250	
-30	300		-220	300	
-35	300		-225	250	
-40	400		-230	450	
-45	300		-235	400	
-50	600		-240	500	800
-55	500		-245	250	
-60	350		-250	250	
-65	1200		-255	250	
-70	500		-260	400	
-75	1200		-265	850	
-80	600		-270	1100	
-85	250		-275	1500	
-90	250		-280	400	
-95	250		-285	400	
-100	800		-290	600	
-105	250		-295	300	
-110	250		-300	300	
-115	250		-305	250	
-120	250		-310	300	
-125	250		-315	450	
-130	250		-320	1000	
-135	450		-325	1500	
-140	350		-330	1250	
-145	400		-335	1500	
-150	550		-340	1400	
-155	950		-345	400	
-160	350		-350	500	
-165	250		-355	950	
-170	250		-360	600	
-175	250		-365	650	
-180	550		-370	850	
-185	1000		-375	250	

GRID REFERENCES		C/S	OBSERVATIONS (All topographical features)	GRID REFERENCES		C/S	OBSERVATIONS (All topographical features)
-320		300		-620		300	
-385		400		-625		1000	
-390		250		-630		350	
-395		200		-635		200	
-400		200		-640		200	
-405		200		-645		200	
-410		200		-650		200	
-415		200		-655		200	
-420		250		-660		300	
-425		650		-665		300	
-430		250		-670		300	
-435		250		-675		250	
-440		250		-680		200	
-445		250		-685		300	
-450		250		-690		600	
-455		250		-695		250	
-460		250		-700		900	
-465		250		-705		450	
-470		250		-710		250	
-475		250		-715		250	
-480		250		-720		250	
-485		250		-725		250	
-490		250		-730		200	
-495		550		-735		200	
-500		1000		-740		200	
-505		700		-745		200	
-510		550		-750		200	
-515		750		-755		200	
-520		400		-760		200	
-525		300		-765		250	
-530		500		-770		240	
-535		1100		-775		200	
-540		800		-780		250	
-545		400		-785		200	
-550		250		-790		200	
-555		250		-795		200	
-560		250		-800		250	
-565		300		-805		250	
-570		300		-810		250	
-575		250		-815		250	
-580		300		-820		200	
-585		300		-825		200	
-590		500		-830		200	
-595		300		-835		250	
-600		600		-840		250	
-605		300		-845		250	
-610		300		-850		250	
-615		250		-855		250	

[illegible]

RADIOMETRIC SURVEY DATA

Readings taken at 25 meter intervals in a northern direction from original hot spot.

PROJECT 591 (EL 2435)

SPP 2. NO. 3056

DATE 5.7.82

PROSPECT HARRIET ALLUVIAL

GMT.3. NO.

.....NQ.....

OPERATOR'S NAME R. Lovegrove

TEST SOURCE

SPP 2 HEIGHT Waist

GRID REFERENCES		C/S	OBSERVATIONS (All topographical features)	GRID REFERENCES		C/S	OBSERVATIONS (All topographical features)
	0	1300			950	190	
	25	650			975	200	
	50	250			1000	190	
	75	350			= 1 km downstream from original 2000 cps.		
	100	1250					
	125	650					
	150	700					
	175	350					
	200	500					
	225	350					
	250	220					
	275	200					
	300	190					
	325	220					
	350	550					
	375	220					
	400	250					
	425	600					
	450	220					
	475	220					
	500	200					
	525	200					
	550	220					
	575	220					
	600	220					
	625	230					
	650	200					
	675	200					
	700	200					
	725	180					
	750	180					
	775	250					
	800	400					
	825	300					
	850	650					
	875	600					
	900	400					
	925	200					

APPENDIX B

Department of Mines and Energy



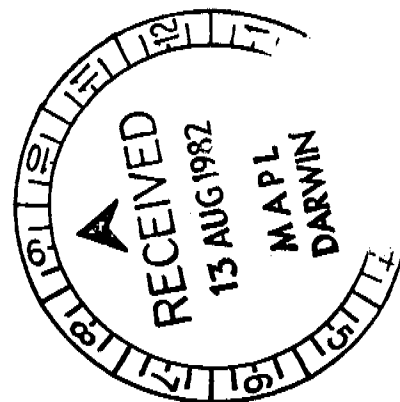
HEAD OFFICE: MINERALS HOUSE, ESPLANADE, DARWIN, N.T. 5790.
POST OFFICE BOX 2901, DARWIN, N.T. 5794.
TELEPHONE (089) 81 5844; TELEX AA85473; VOCADEX (089) 81 4806.

MINES DIVISION

IN REPLY 80/392
PLEASE QUOTE:

RS/AG:222
1.5 E

The Manager
Minatone Aust P/L
PO Box 3994
DARWIN NT 5794



SAMPLE 49171 FOR IDENTIFICATION OF THORIUM MINERAL

The sample as originally received was crushed and scanned by x-ray diffraction. The light minerals present, mainly quartz and sodium feldspar, masked the minerals of interest.

A separation was carried out with tetrabromoethane and the heavy fraction dried, crushed and scanned.

The thorium mineral is a major component of the heavy fraction and is Thorogummite $[\text{Th}, \text{U} (\text{SiO}_4)_{1-x} (\text{OH})_{4x}]$.

The other major component is ilmenite. The diffraction pattern of the thorogummite matches very closely with the reference pattern, but, as with thorite, it is possible for varying degrees of replacement between the thorium and uranium, ionic size being similar. The mineral could, then, have much more Th than U.

R V SCHULZ
Senior Chemist

cc Elliot Dwyer,
Project Geologist
John Erkins
Chief Occupational Hygienist

Department of Mines and Energy



HEAD OFFICE: MINERALS HOUSE, ESPLANADE, DARWIN, N.T. 5790.
POST OFFICE BOX 2901, DARWIN, N.T. 5794.
TELEPHONE (089) 81 5844; TELEX AA85473; VOCADEx (089) 81 4806.

MINES DIVISION

IN REPLY
PLEASE QUOTE: PH/SS:281
2.2 F

Minatome (Aust) Pty Ltd
P O BOX 2994
DARWIN N T 5794


Attention: Mr J Earthrowl

Dear Mr Earthrowl

JOB NO 29/82/83

Please find attached report on gravity upgrading of
your Harriet Creek sample.

Yours sincerely

 11.10.82
PHIL HEARSE
for Chief Metallurgist

METTALLURGICAL SERVICES BRANCH REPORT

Title: Gravity Separation of Harriet Creek sample.
(your reference no 49361)

Job No: 29/82/83

Client: Minatome (Aust) Pty Ltd

Lease No: E L 2435

Location: Harriet Creek

Date sample submitted: 17.9.82

Report:

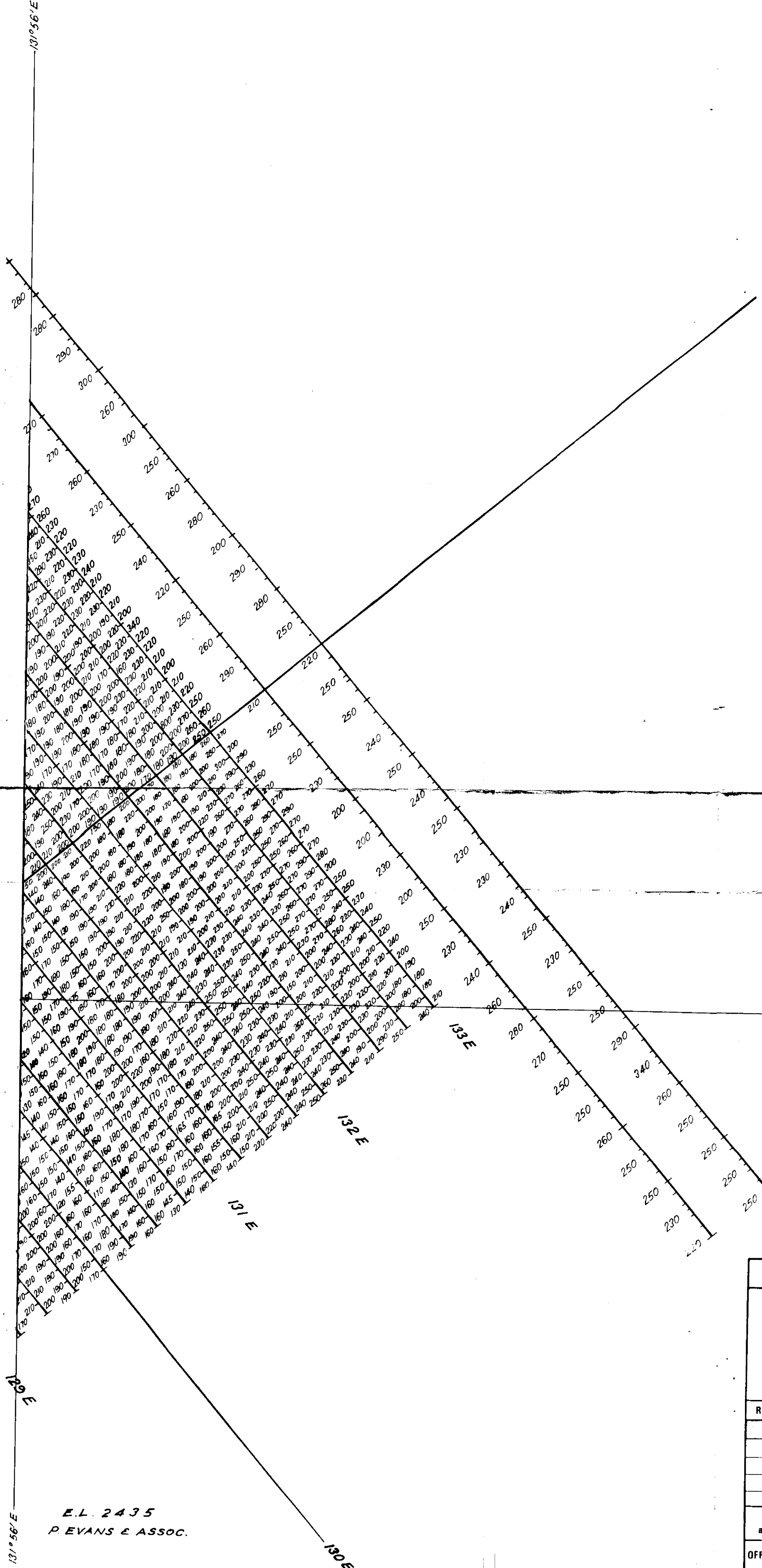
Sixteen kilograms of alluvial sample was submitted for gravity upgrading of heavy minerals.

Commencement of work was delayed while the Wilfley gravity table was refurbished with a new deck, feed launder and crankshaft.

The sample was screened over 2mm and 600 microns, using the mechanical Kason screen. Plus 2mm material was treated as reject. The two fractions -2mm + 600 microns, and -600 microns, were retained for gravity upgrading using the Wilfley table. The -600 micron fraction was more amenable to gravity upgrading than the coarser -2mm + 600 micron fraction.

The following fractions are retained with this report.

Size Fraction	Gravity Fraction	Wt(kg)	% of total
+2mm	-	10.55	66.3
-2mm + 600m	concentrate	0.255	1.6
	middlings	0.425	2.7
	tailings	2.680	16.9
-600m	concentrate	0.122	0.8
	middlings	0.530	3.3
	tailings	1.340	8.4
		15.902	100.0



CR83/127

minatome australia pty. limited					
NORTHERN TERRITORY					
E.L. 2435 - PETER R. EVANS & ASSOCIATES					
HARRIET GRID DETAIL					
SURFACE RADIOMETRICS (WAIST HELD SRAT SPP2)					
REV.	DESCRIPTION	PREP	DRAWN	CHECKED	DATE
		J.A.E.	J.V.S.	J.A.E.	6-82
This drawing is the property of minatome australia pty. limited and must not be partially or totally copied or reproduced without permission of minatome					
OFFICE SYD.	SCALE 1:2 000	SHEET	OF	ORG NO 503-004	