TITLE: THIRD ANNUAL REPORT ON THE KURUNDI PROSPECT, BONNEY WELL, N.T.

TENEMENT NO: EXPLORATION LICENCE 4815

PERIOD: 23RD OCTOBER 1987 TO 22ND OCTOBER 1988

TENEMENT HOLDERS:
MINERAL HORIZONS NL
11TH FLOOR
28 THE ESPLANADE
PERTH WA 6000

AUTHOR: D.D. BOYER

DATE: 15TH NOVEMBER 1988

1:250,000 Sheet SF53-2, SF53-3 Bonney Well, Frew River
1:100,000 Sheet 5856 Davenport Range

COPY NO: 1

060102db.331

C O N T E N T S

LIST OF DRAWINGS

DRAWING NO.	TITLE	SCALE
NT1/010	Locality Map - Exploration Licences, Davenport Range Area	1:1,000,000
MH13-3	Kurundi - Stream Sediment Sample Locations	1:100,000
MH13-4	Kurundi - Stream Sediment Samples - Gold (g/t)	1:100,000

S U M M A R Y

Exploration carried out on E4815 during the third year of tenure included a helicopter supported stream sediment sampling programme, geological mapping, rock-chip sampling, and an intensive trenching programme aimed at bulk testing auriferous alluvials in the Kurinelli locality.

No new targets were generated by the stream sediment sampling but rock-chip sampling in the vicinity of Kurinelli has confirmed the presence of widespread gold mineralization. Subsequent exploration will concentrate on further evaluation of the alluvials and bedrock gold targets in the eastern portion of the licence.

1. INTRODUCTION

This report covers exploration carried out on the Kurundi prospect, EL4815, during the twelve months ending October 22, 1988.

Exploration completed during the year included geological mapping rock-chip sampling, helicopter supported geochemical sampling, trenching, and geochemical analysis.

2. LOCATION AND ACCESS

Access is via the sealed Stuart Highway to the Kurundi/Epennara turnoff 87km south of Tennant Creek, then by graded unsealed road 53km to Kurundi Station Homestead (see Drawing No. NT 1/010).

3. TENEMENTS

The exploration licence is shown on Drawing No. NT 1/010) and is located on the Bonney Well and Frew River 1:250,000 sheets.

Tenement No.	Blocks	Granted	To	Rent
EL4815	215	23/10/85	22/10/91	$2160

4. HISTORICAL NOTES AND PREVIOUS EXPLORATION

For historical notes on the area see Cullen, 1987.

5. GEOLOGY

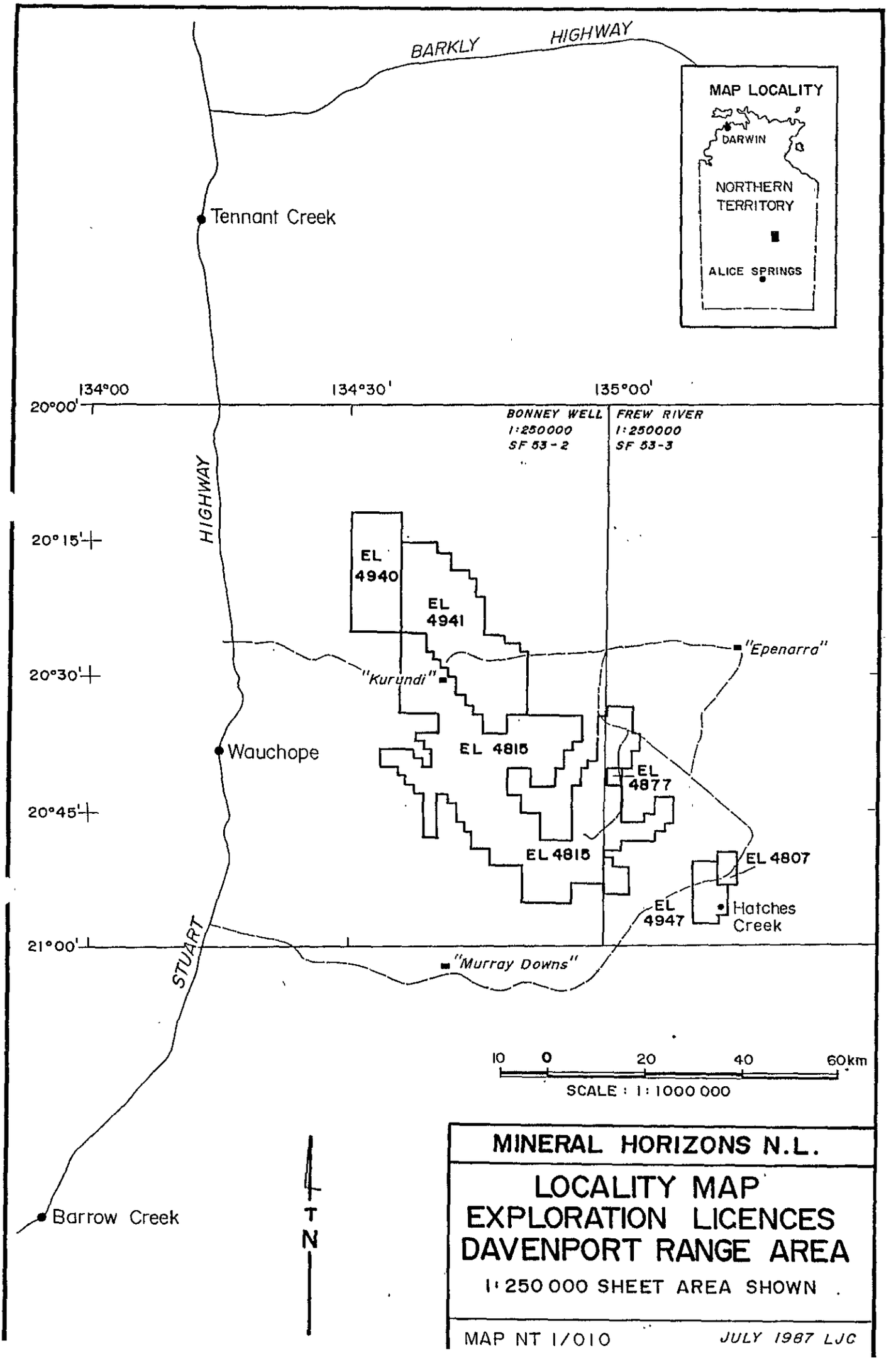
For a geological description of the area see Cullen, 1987 and also Appendix 1.

6. RECENT EXPLORATION

6.1 Stream Sediment Sampling

A helicopter assisted stream sediment survey was conducted over the major portion of EL4815 in late 1987.

In all, 115 samples were collected, split into approximately 1kg and 10kg lots and despatched for analysis. These samples are located on Drawing No. MH13-3.


BARKLY HIGHWAY
MAP LOCALITY
DARWIN
NORTHERN TERRITORY
ALICE SPRINGS
Tennant Creek
134°00
134°30'
135°00'
20°00'
BONNEY WELL 1:250000 SF 53-2
FREW RIVER 1:250000 SF 53-3
HIGHWAY
20°15'
20°30'
20°45'
21°00'
EL 4940
EL 4941
"Epenarra"
"Kurundi"
Wauchope
EL 4815
EL 4877
EL 4815
EL 4807
EL 4947
Hatches Creek
"Murray Downs"
STUART
Barrow Creek
10 0 20 40 60km
SCALE : 1:1000 000
T N
MINERAL HORIZONS N.L.
LOCALITY MAP
EXPLORATION LICENCES
DAVENPORT RANGE AREA
1:250 000 SHEET AREA SHOWN
MAP NT 1/010
JULY 1987 LJC

The 1kg samples were sent to AAL Pine Creek for gold fire assay in order to get an indication of any gold mineralisation in areas of the EL which had previously been unsampled.

The larger (10kg) samples were despatched to Classic Laboratories Perth for sizing and analysis of each portion for gold (20g Aqua Regia digest) and base metals. However, a mistake by the laboratory in preparation of the samples apparently led to them all being pulverised and analysis has since been deferred.

Results from the initial (Pine Creek) assays revealed very low gold values in most of the samples - 81 out of 105 had values of 0.01g/t gold or greater and 5 samples yielded values of 0.02g/t. The lower limit of detection of the analysis method is 0.01g/t.

The five samples containing 0.02g/t gold were sieved and that material which was able to be sized and recovered was used to determine gold content. Details of these five samples are given in Table 1.

EL4815 Stream Sampling Programme.

TABLE 1

Sample No/ Map ref No.	Size of catchment area	Stream order	Lithology (s) drained	Structure drained	Fractions containing gold	Type channel
D062/94	5km^2	3^0	Kudinga Basalt Alinjabon Sst	Eastern nose area Bonney syncline	+75 -75	2m wide gravel channel cut 4m in cobble/pebble
D112/99	4km^2	3^0	Alinjabon Sst Errolois Sst	" "	+75 -75	20 m wide major cut 4 m in cobble/ pebble alluvium
D105/101	4km^2	2^0	Lennee Ck fmn Kurinelli Sst	gently folded and Quartz intruded N side of fold belt	+75 -75	deeply cut channel of gravel, cobbles, sand Qtz intr adjacent
D124/105	2 km^2	2^0	Kurinelli Sst	shedding from fold belt in ranges	Nil	shallow channel cobble boulder sand cut in alluvium
D113/1	7km^2	2^0	Alinjabon Sst Lennee Creek Fmn	fold belt in Ranges	+75	drains area outside (EL4941)

6.2 Geological Mapping and Rock-chip sampling

A comprehensive programme of geological mapping and rock-chip sampling was carried out over the eastern portion of the licence. Details of this work are included in a report entitled "Interim Report - E4815, NT Third Year of Tenure" and dated December 1987 (Cullen 1987a) - a copy of which has already been lodged with the Northern Territory Department of Mines and Energy.

6.3 Trenching and Bulk Sampling Programme

An extensive bulk testing programme was carried out over the auriferous alluvials in the vicinity of Kurinelli Bore, in the eastern portion of the licence, in September 1988. A total of 27 trenches were excavated on E4815 during this programme and a total of 12.4 tonnes of bulk alluvial material was placed in sealed 44 gallon drums for future testing.

Full details as to the methodology employed and the location of the trenches are given in Appendix 1.

7. RESULTS

7.1 Stream Sediment Sampling

As can be seen from Table 2, of the five sets of sieved samples analysed only ·2 returned gold values and these did not appear to be consistent with the initial results. The remainder of the pulps from these analyses were then despatched to AAL for gold analysis by fire assay. A 50g charge was utilized for each assay and thus not all size fractions were capable of being assayed. Results from this technique yielded four out of five samples with positive gold values, but not particularly consistent with the original data.

TABLE 2

Comparison Assay Results, AAL and Classic Labs.

Sample	Assay Result from 1kg sample sample AAL Au g/t	Assay Result from Classic Labs size	Au g/t	Re-assay by AAL of Classic Labs pulp * Au g/t (R)
D062	0.02	1.18	(blank)	
		+600	<0.01	
		+250	<0.01	
		+150	<0.01	0.01 (<0.01)
		+75	<0.01	0.02
		-75	<0.01	0.02
D112	0.02	1.18	<0.01	
		+600	<0.01	
		+250	0.01	
		+150	<0.01	0.04
		+75	<0.01	
		-75	<0.01	0.02 (<0.01)
D105	0.02	1.18	<0 01	
		+600	<0.01	
		+250	<0.01	<0.01
		+150	<0.01	<0.01
		+75	0.01	0.02 (<0.01)
		-75	0.03	0.04
D124	0.02	1.18	<0.01	
		+600	<0.01	<0.01 (<0.01)
		+250	<0.01	<0.01
		+150	<0.01	<0.01
		+75	<0.01	
		-75	<0.01	
D118	0.02	1.18	<0.01	
		+600	<0.01	<0.01
		+250	<0.01	<0.01
		+150	<0.01	<0.01
		+75	<0.01	0.02
		-75	<0.01	

*Results obtained only where enough sample.

The results of the analyses by AAL (See Drawing No. MH13-4) indicate fairly widespread gold mineralization in the exploration licence, but do not allow for interpretation as to the type or size of minerlization to be expected.

7.2 Geological Mapping and Rock-chip sampling

The results of this programme are discussed in the report by Cullen (1987a). Briefly, the work confirms the widespread nature of gold mineralization in the Kurinelli Bore area, and additional detailed groundwork to define specific gold targets is recommended.

7.3 Trenching/Bulk Sampling

The gold content and gold recoverability of the bulk samples collected will be determined in a subsequent programme.

REFERENCES

CULLEN, L. 1987 - ANNUAL REPORT FOR E4815 - KURUNDI DISTRICT, NT (UNPUBLISHED).

CULLEN, L. 1987a - INTERIM REPORT E4815 - KURUNDI NT, THIRD YEAR OF TENURE (UNPUBLISHED).

EL4815

EL 4941

EL 4815

EL 4815

EL4877

EL4815

EL4815

EL4807

EL4947

20° 30'S

20° 50'S

135° 00'E

SCALE 1:100000

1 2 3 4 5km

MINERAL HORIZONS NL

E 4815 KURUNDI

Stream Sediments

sample locations

Dwg MH13-3

EL4815

EL 4941

EL 4815

EL 4815

EL4877

EL4815

EL4815

EL4807

EL4947

20° 30' S

20° 50' S

135° 00' E

SCALE 1:100000

1 2 3 4 5 km

MINERAL HORIZONS NL

E4815 KURUNDI

Stream Sediment Sampling

GOLD (g/t)

Dwg MH13-4

APPENDIX 1

KURINELLI BORE PROSPECT

ALLUVIAL GOLD EXPLORATION PROGRAMME

SEPTEMBER 1988

MARTIN SPENCE

GOLDFIELDS RESOURCE DEVELOPMENT PTY LTD

CONTENTS

DIAGRAMS

1. SUMMARY

The Kurinelli Bore Prospect (EL 4815 and EL 4877) was tested for its alluvial gold potential by bulk sampling during September 1988.

Topographically the area consists of a hilly terrain with broad alluvial filled valleys. Limited conglomeratic beds are evidenced at surface as rounded to sub-angular polymictic lag.

The majority of the drainage consists of a fine to very fine grained sandy silt produced by sheet-wash effect.

Sampling was undertaken to asses the volume and grade of alluvium by utilizing a back-hoe to excavate costeans.

The spoil was placed in 220 litre drums and forwarded to Tennant Creek for shipment to Darwin for analysis by an undetermined method. Gold panned from various costeans was extremely fine and "hid" under associated heavy minerals. It is proposed that the costean spoil should be initially tested by the cost-effective 10kg bottle roll cyanide leach method.

2. LOCATION AND ACCESS (Drawing No. MH13-5)

The Kurinelli Bore prospect is located on the eastern side of Exploration Licence 4815 and the northern portion of Exploration Licence 4877.

The prospect is centred some 450 kms north of Alice Springs, access is via the sealed Stuart Highway to the Kurundi - Epennara turn-off and then 50kms by graded road to the Kurundi homestead and a further 60kms by graded road and tracks to Kurinelli Bore.

3. GEOLOGICAL AND GEOMORPHOLOGICAL OBSERVATIONS

The area was not mapped by the author, the following comments are made from rapid visual inspection.

The dominant geology consists of sediments and mafic intrusives striking roughly north-south and occasionally standing proud as hills.

Gold mineralization is hosted by white (buck) quartz, weakly altered and showing minor copper carbonate and galena.

The following was noted at Ray Hall's prospect (MC59, within EL 4815):

1. A flat lying 1.5m thick quartz vein, dipping at 25^{o} west with a 15^{o} north plunge that lies within a dextral thrust as evidenced by tensional off-shoots.

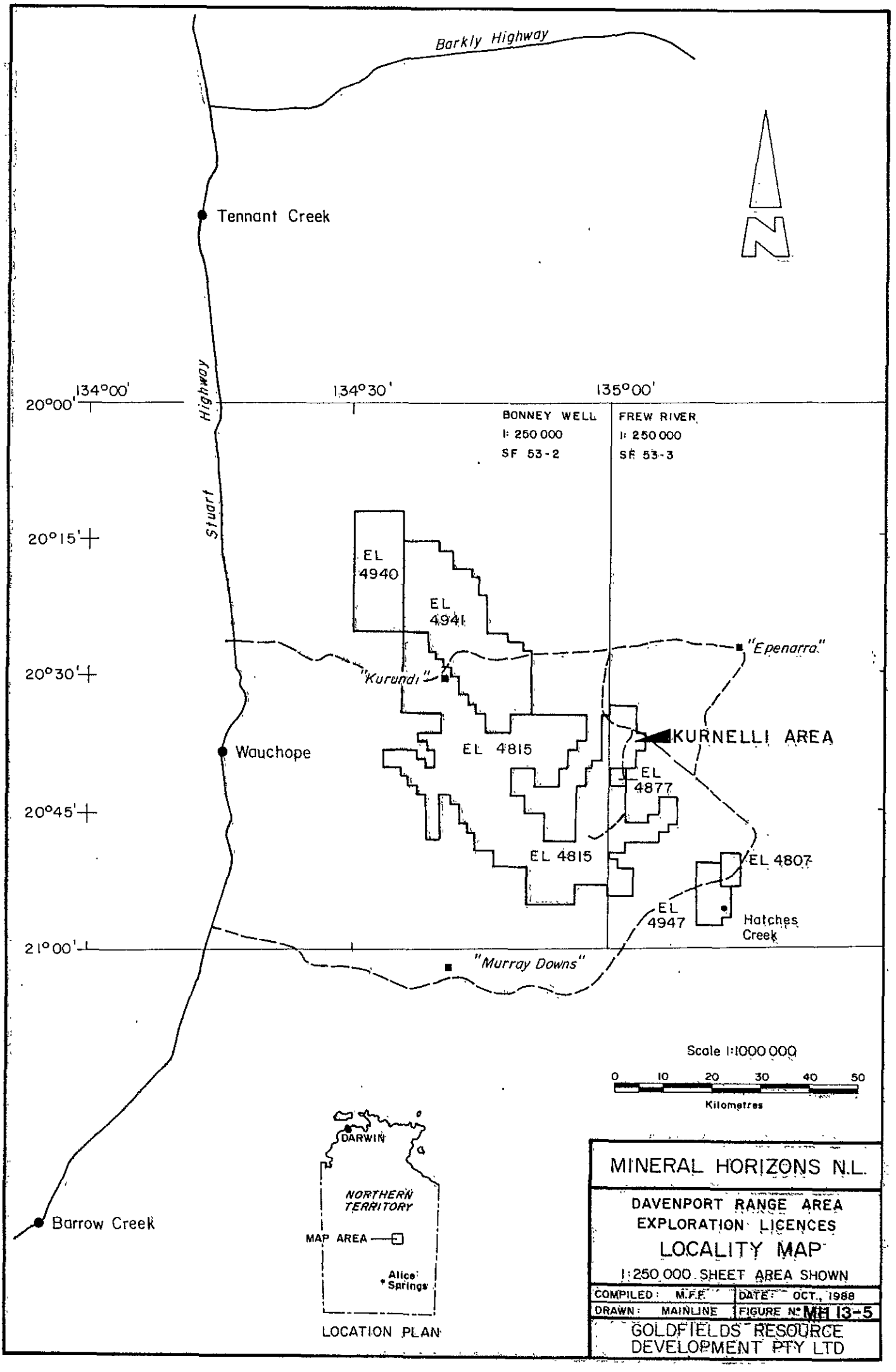
2. A later sinistral fault has reactivated along the primary line of weakness and drag folded the quartz vein.

3. Nugget and vein form gold is only located on the upper portion of the quartz vein decreasing to less than 0.1g/t in the lower part. There is no wall rock mineralization.

   It is believed that the latter is indicative of supergene mobilisation of the gold along the fault zone.

4. At present, the prospect is being mined by a Kato excavator in preparation for treatment at a Tennant Creek Mill.

   No geological exploration such as mapping or drilling has been undertaken. The assumption being that the joint venture partners are going to "rip the top" off the the high grade ore with minimal expenditure.


Barkly Highway
Tennant Creek
Stuart Highway
134°00'
134°30'
135°00'
20°00'
20°15'
20°30'
20°45'
21°00'
BONNEY WELL
1: 250 000
SF 53-2
FREW RIVER
1: 250 000
SF 53-3
EL 4940
EL 4941
"Kurundi"
"Epenarra"
KURNELLI AREA
EL 4815
EL 4877
EL 4815
EL 4807
EL 4947
Hatches Creek
Wauchope
"Murray Downs"
Barrow Creek
Scale 1:1000 000
0 10 20 30 40 50
Kilometres
DARWIN
NORTHERN TERRITORY
MAP AREA
Alice Springs
LOCATION PLAN
MINERAL HORIZONS N.L.
DAVENPORT RANGE AREA
EXPLORATION LICENCES
LOCALITY MAP
1:250 000 SHEET AREA SHOWN
COMPILED: M.F.E.
DATE: OCT., 1988
DRAWN: MAINLINE
FIGURE No: MH 13-5
GOLDFIELDS RESOURCE DEVELOPMENT PTY LTD

Geomorphologically the area consists of short weakly incised drainages that empty into alluvial filled valleys.

The alluvial fill deepens rapidly away from the hills and contain meandering intermittent creeks. Areas where higher energy drainage has occured are shown at surface by rounded polymictic lag.

The following will dramatically affect the alluvial potential:-

1. Gold discovered in the area is nugget form, immediately about the parent quartz vein.

2. Gold tenor decreases rapidly away from the primary source.

3. The recent drainage is of such low energy deposition that any gold occurence will be the very fine fraction.

4. EXPLORATION UNDERTAKEN DURING SEPTEMBER 1988

Costean locations and a broad geomorphological interpretation are presented in MH13-6. Costean mapping is presented as Drawing No. MH13-7

Photographs with brief text are included as Appendix 1.

Costeans were sited using the following parameters:-

1. located within alluvium downslope from known historical and recent gold workings.

2. Staggered costeans were dug down drainage to gauge the decrease in grade away from these primary sources.

3. Costean bearings were determined by the present drainage flow directions as limited paleo drainage indicators occur. It is proposed that the present drainage loosely reflects the ancient systems. A total of 29 costeans were dug and sampled using a back hoe excavator to dig to refusal. Costeans were generally 18 metres long and reached an average of 1.0 metres depth.

If more than one sedimentary horizon was observed, each was sampled independantly, the upper horizon given the suffix A to its costean number, the lower suffixed B.

The costean spoil was packed in 220 litre drums, the lids welded on and transported to Tennant Creek for shipment to Darwin.

Costeans were back filled and the area smoothed over immediately after sampling.

4.1 PROBLEMS ASSOCIATED WITH THIS METHOD OF EXPLORATION

1. The vast area to be tested effectively would necessitate a major exploration programme.

2. The deep alluvium was not fully tested as it becomes compacted at depth and impenetrable by back-hoe. A more efficient method may be the use of an excavator or auger drill.

5. RECOMMENDATIONS

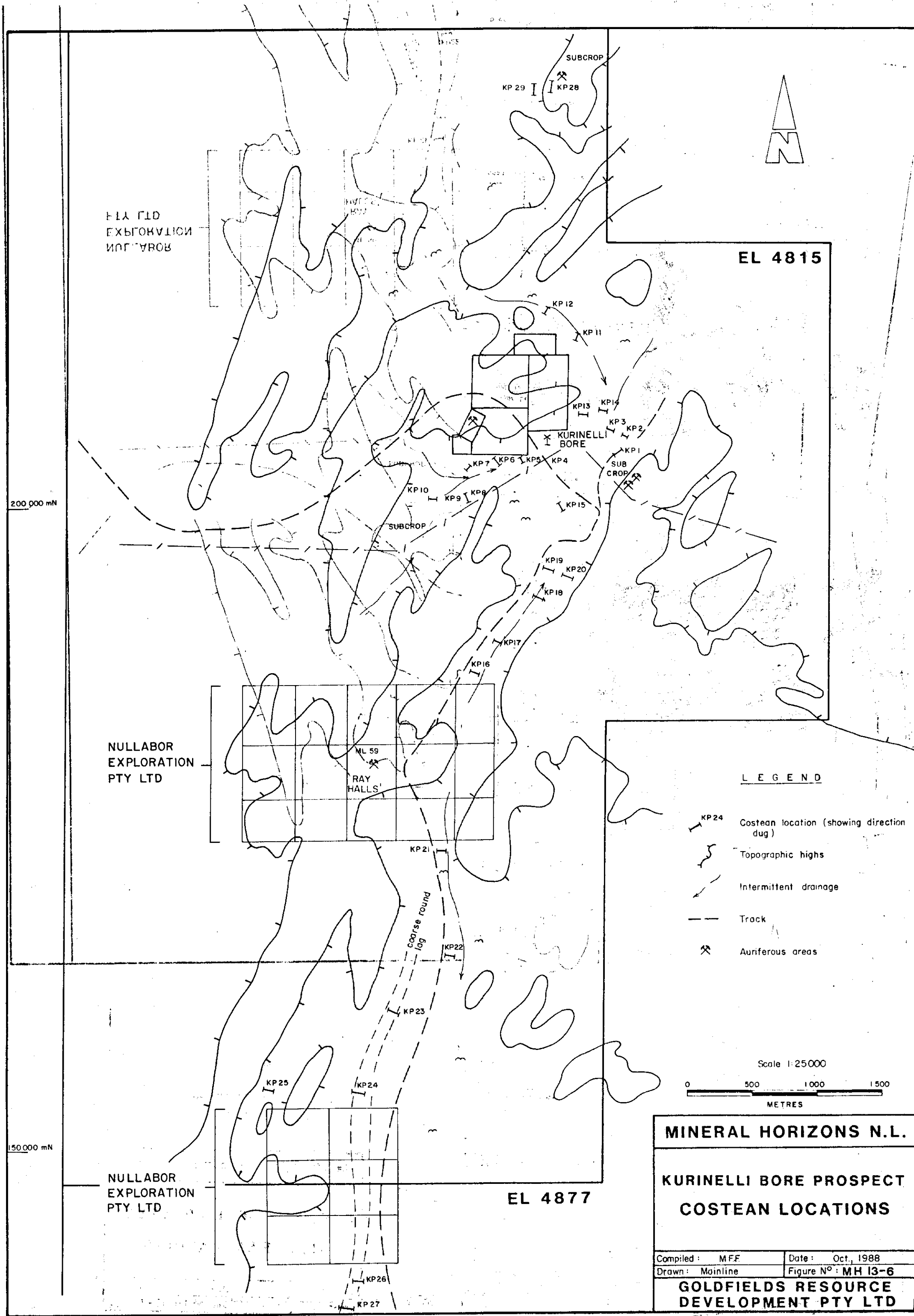
Very fine gold was panned from the costeans located near to historical gold workings. The fine nature of the gold may affect the efficiency of mechanical separation.

It is recommended that the 10kg bottle roll cyanide leach assay method be initially used to test the samples.

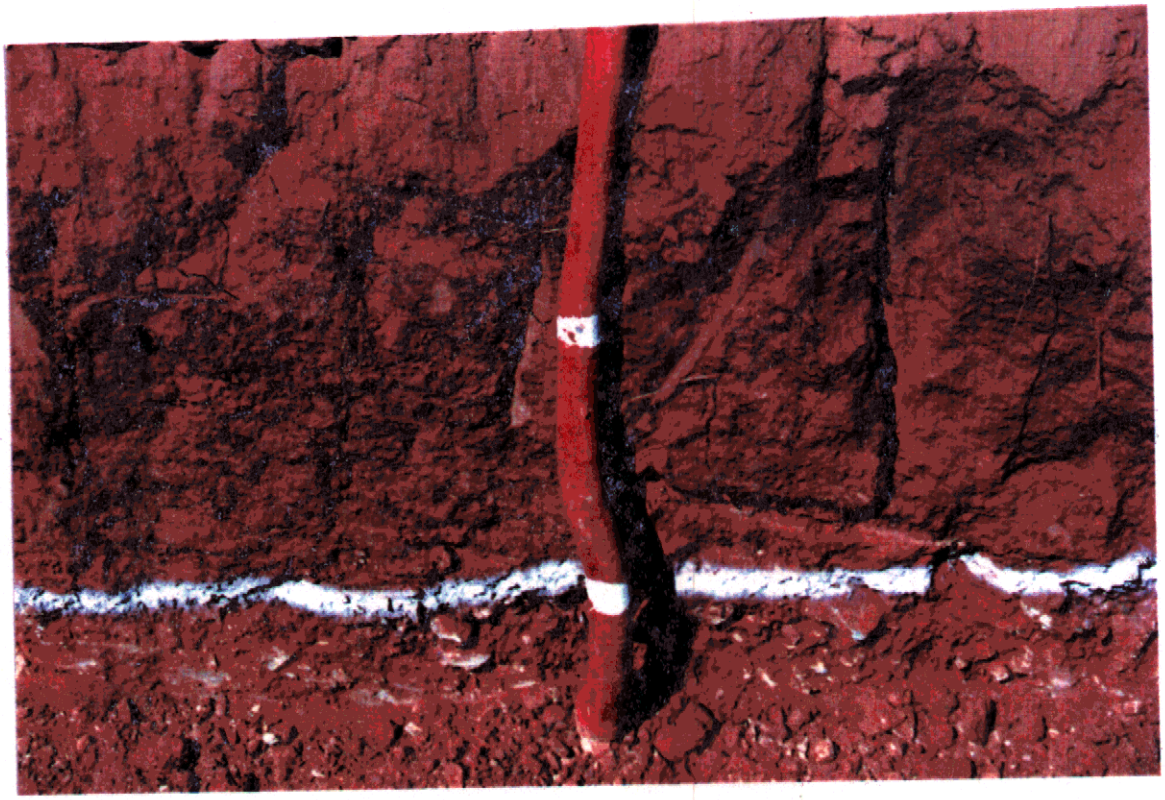
M. SPENCE,

GOLDFIELDS RESOURCE DEVELOPMENT PTY LTD

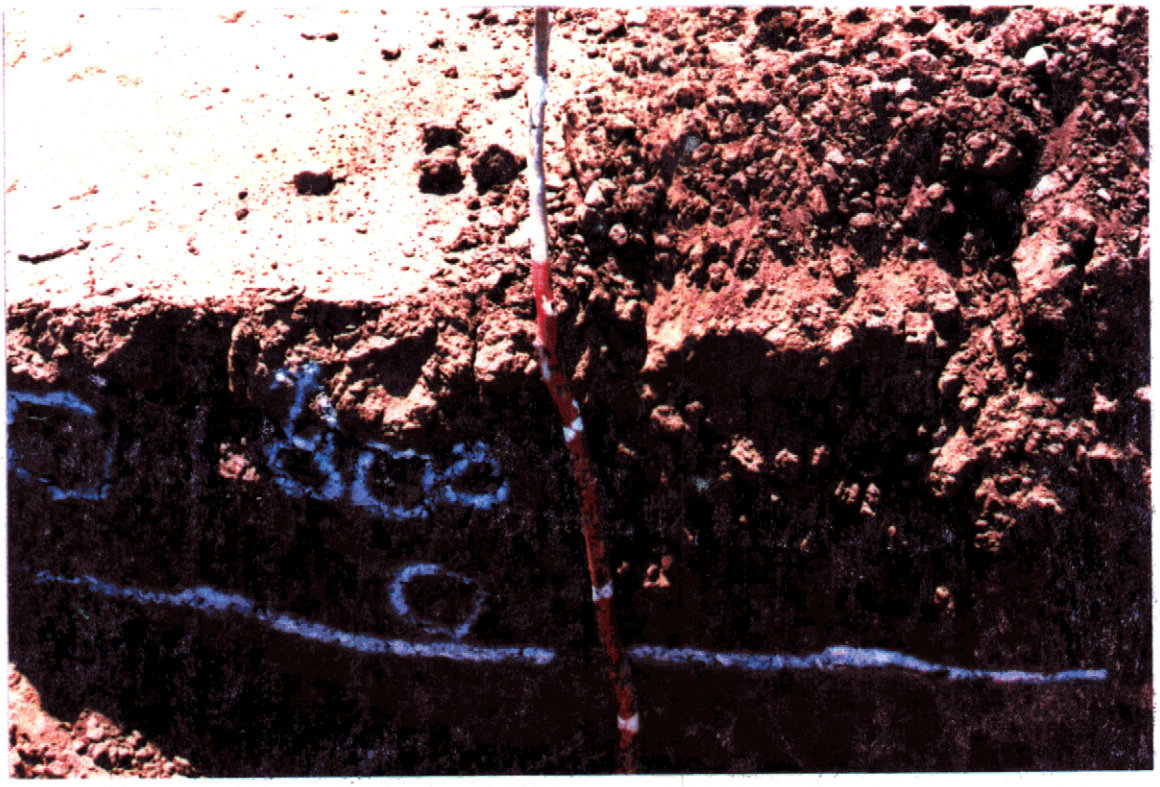
SEPTEMBER, 1988.


SUBCROP
KP 29
KP28
EL 4815
KP 12
KP 11
KP13
KP14
KP 3
KP 2
KURINELLI BORE
KP 1
KP 7
KP6
KP5
KP4
SUB CROP
KP10
KP9
KP8
KP15
SUBCROP
KP19
KP20
KP18
KP17
KP16
200 000 mN
NULLABOR EXPLORATION PTY LTD
ML 59
RAY HALLS'
KP21
coarse round log
KP22
KP23
KP25
KP24
KP26
KP27
150 000 mN
NULLABOR EXPLORATION PTY LTD
EL 4877
LEGEND
KP24
Costean location (showing direction dug)
Topographic highs
Intermittent drainage
Track
Auriferous areas
Scale 1:25000
0
500
1000
1500
METRES
MINERAL HORIZONS N.L.
KURINELLI BORE PROSPECT
COSTEAN LOCATIONS
Compiled : M.F.F
Date : Oct., 1988
Drawn : Mainline
Figure N° : MH 13-6
GOLDFIELDS RESOURCE DEVELOPMENT PTY LTD

APPENDIX 1



ALLUVIUM ON A BASAL SUB ANGULAR CONGLOMERATE



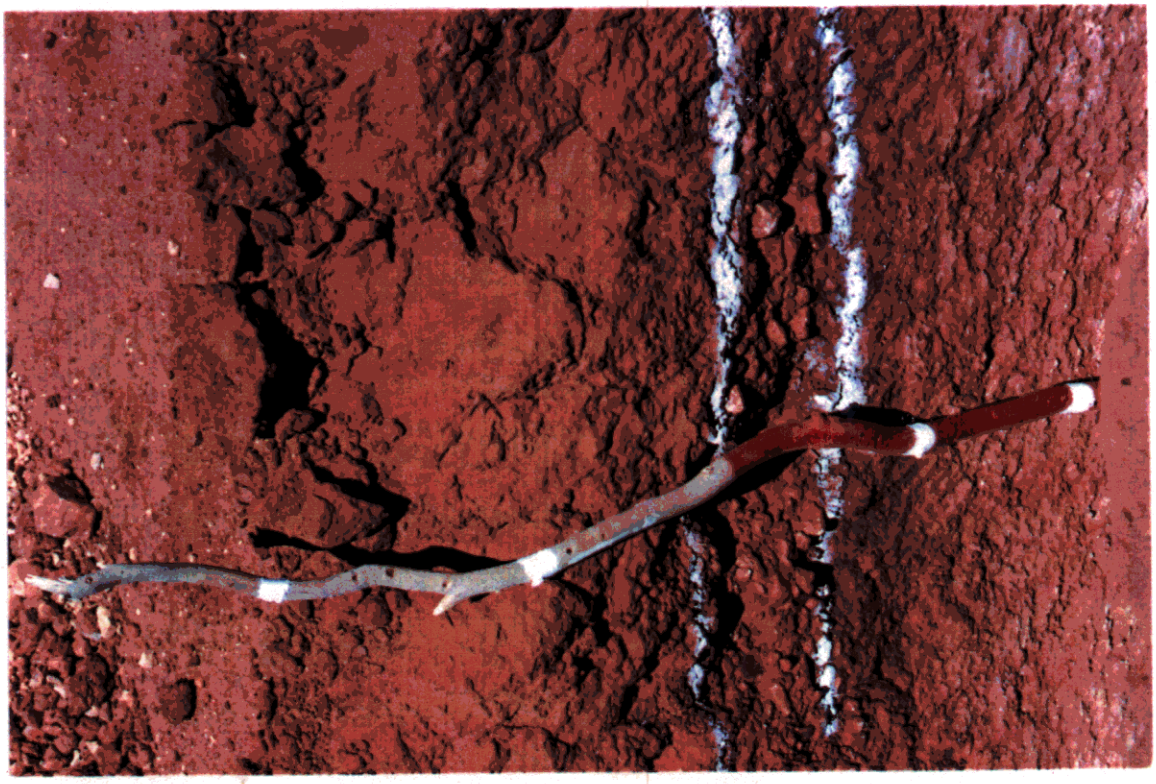
ROUND QUARTZ AND BASALT OVERLYING FINE ALLUVIUM

COSTEANING ACROSS THE HEADWATERS OF A RECENT DRAINAGE

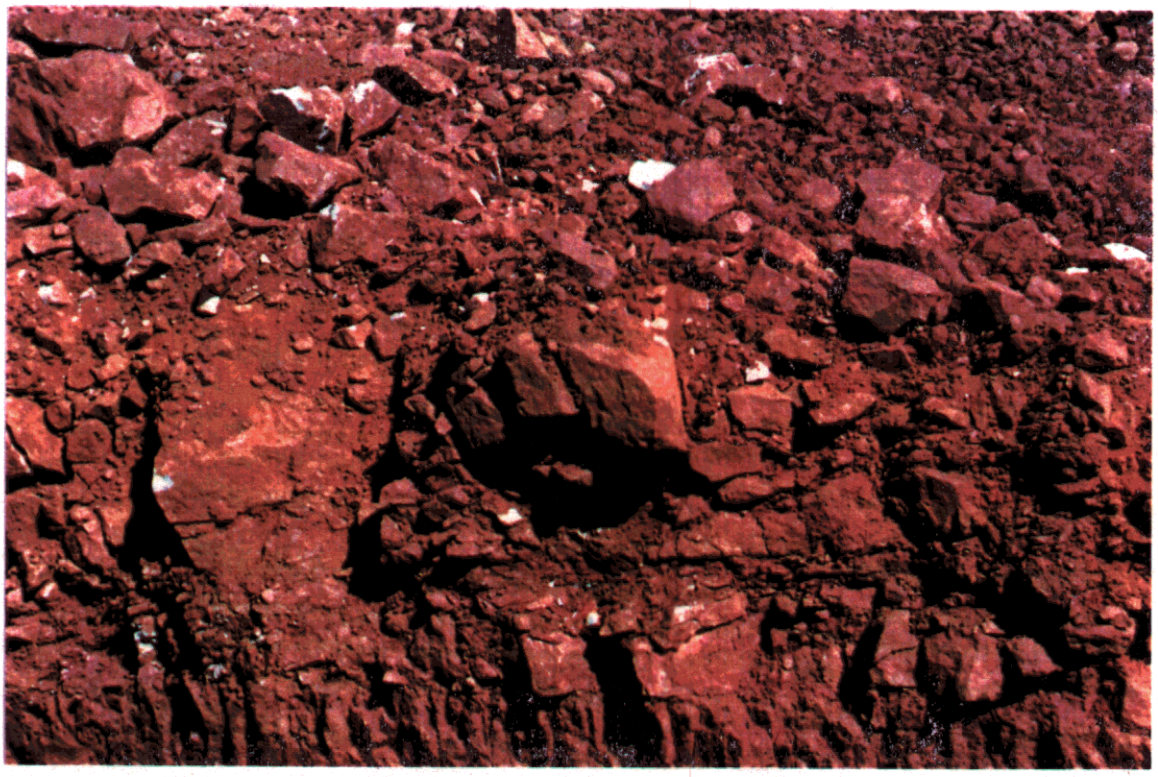
SAMPLE A ON RIGHT:- OVERLYING ALLUVIUM (J)

SAMPLE B ON LEFT:- PALLID ZONE OF DOLERITE (KPl)

SAMPLING COSTEAN 12. NOTE: 2 HORIZONS SAMPLED

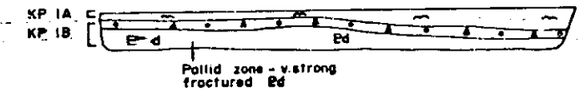


COSTEAN KP13 BAND OF SUB-ROUND QUARTZ IN ALLUVIUM



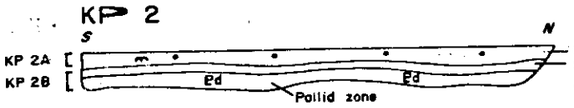
KP28 FLAT LYING QUARTZ VEIN IN GABBRO

KP 1



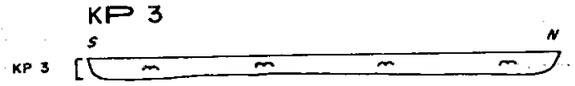
V.course Ed + qtz. Oxidised
Trace Au colours

KP 2



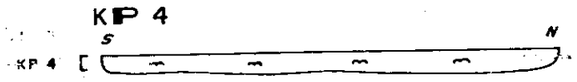
Coarse s.ang. Ed + qtz + tr. pisolites
Saprolitic Ed
4 Au colours

KP 3



Basement not reached

KP 4

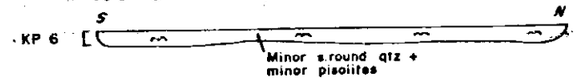


Basement not reached

KP 5

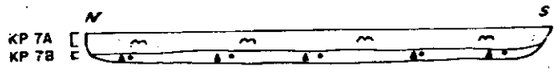
Basement not reached

KP 6



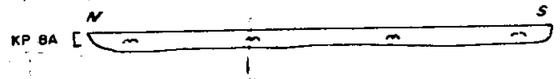
Basement not reached

KP 7



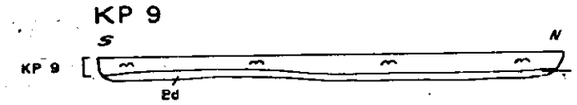
Ang - s.ang qtz + Ed
2 Au colours

KP 8



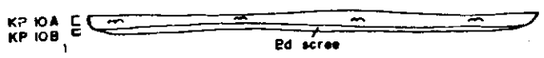
Basement not reached

KP 9



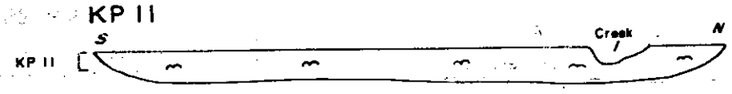
Pd + qtz v.weakly worn

KP 10



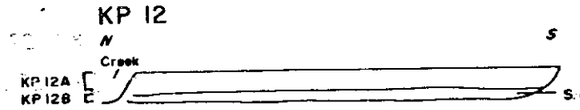
1 Au colour

KP 11



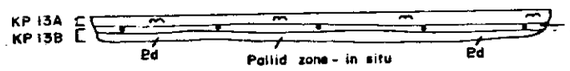
Basement not reached

KP 12



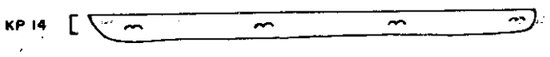
S.angular Ed + Es

KP 13



Qtz rich s.round

KP 14

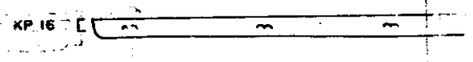


Basement not reached

KP 15

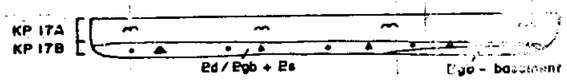
Ed + Es + qtz (buck)
coarse poor sorting

KP 16

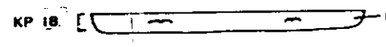


Basement not reached

KP 17



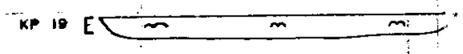
KP 18



Minor Ed run-on

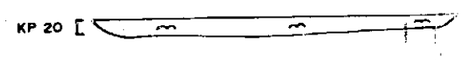
Basement not reached

KP 19



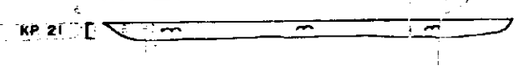
Basement not reached

KP 20



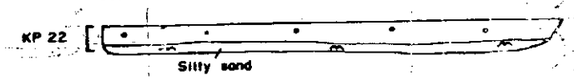
Basement not reached

KP 21



Random angular Ed
Basement not reached

KP 22

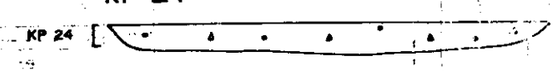


Random well rounded alluvium supported qtzite, Ed ± qtz (lag)
? Au colour

KP 23

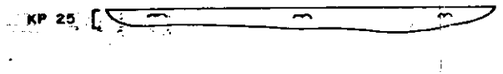
Random round qtzite, Ed ± qtz + pisolites

KP 24



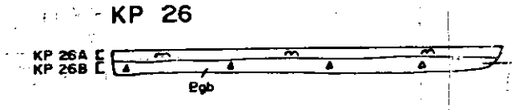
Random qtzite Ed gravel

KP 25



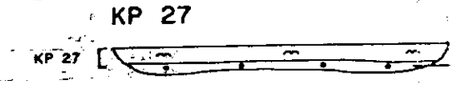
Basement not reached

KP 26



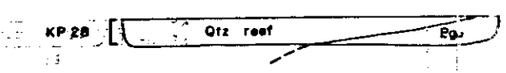
Angular buck qtz

KP 27



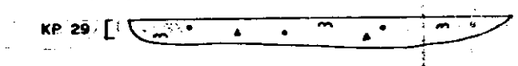
Qtz rich float

KP 28



Vein south
6 Au colours

KP 29



Random Egb, pisolites

LEGEND

- Ed — Proterozoic dolerite
- Egb — Proterozoic gabbro
- Es — Proterozoic sediments
- Alluvium
- Clasts; rounded, angular
- KP 2A [— Sample number showing horizon sampled

SCALE 1:250

0 50 100 150

METRES

MINERAL HORIZONS N.L.

NORTHAMPTON

KURINELLI BORE PROSPECT

COSTEAN MAPPING

Compiled:	Date: Oct., 1988
Drawn: Abelinline	Dwg N° MH 13-7

GOLDFIELDS RESOURCE DEVELOPMENT PTY LTD

APPENDIX 2

ANALYSIS REPORT

Australian Assay Laboratories Group

PINE CREEK: Ward Street, PINE CREEK 5782
PO Box 41, PINE CREEK 5782
Ph (089) 76 1262 or 76 1261
Fax (089) 76 1310 Tlx 85928

MINERAL HORIZON

Report: PC 07794 DATE: 14/09/1987

Client reference: D051A

Copies to:

SAMPLES: received 10/09/1987 TYPE PREPARATION CODE

ANALYSIS	Code	Quality Parameter	Detection Limit	Units
Au	FA50/D610	Acc. ± 15%	0.01	ppm
Au(R)	: : :	: : :	0.01	ppm

SENIOR ASSAYER: Ian McKay

ANALYSIS REPORT

Australian Assay Laboratories Group

REPORT: PC 07794

	Sample	Au	Au(R)
D	051	0.01	0.01
D	052	0.01	
D	053	0.01	0.01
D	054	0.01	
D	055	0.01	
D	056	0.01	
D	057	0.01	
D	058	0.01	
D	059	0.01	
D	060	0.01	
D	061	0.01	
D	062	0.02	
D	063	0.01	
D	064	0.01	
D	065	0.01	
D	066	0.01	0.01
D	067	0.01	
D	068	0.01	
D	069	0.01	0.01
D	070	0.01	
D	071	<0.01	
D	072	0.01	
D	073	0.01	
D	074	0.01	0.01
D	075	0.01	

Data in ppm unless otherwise stated.

ANALYSIS REPORT

Australian Assay Laboratories Group

REPORT: PC 07794

	Sample	Au	Au(R)
D	076	<0.01	
D	077	0.01	
D	078	0.01	
D	079	0.01	
D	080	0.01	
D	081	0.01	
D	082	0.01	
D	083	0.01	
D	084	0.01	
D	085	0.01	0.01
D	086	<0.01	
D	087	0.01	
D	088	0.01	
D	089	<0.01	<0.01
D	090	<0.01	
D	091	0.01	
D	092	<0.01	
D	093	0.01	0.01
D	094	0.01	
D	095	0.01	
D	096	0.01	
D	097	0.01	
D	098	0.01	0.01
D	099	0.01	
D	100	0.01	

Data in ppm unless otherwise stated.

ANALYSIS REPORT

Australian Assay Laboratories Group

REPORT: PC 07794

	Sample	Au	Au(R)
D	101	0.01	
D	102	0.01	0.01
D	103	0.01	
D	104	0.01	
D	105	0.02	
D	106	0.01	
D	107	0.01	
D	108	0.01	
D	109	0.01	
D	110	0.01	
D	111	0.01	
D	112	0.02	0.01
D	113	0.01	
D	114	0.01	
D	115	0.01	
D	116	0.01	
D	117	0.01	
D	118	0.02	0.01
D	119	0.01	
D	120	0.01	
D	121	0.01	
D	122	0.01	
D	123	0.01	
D	124	0.02	
D	125	0.01	

Data in ppm unless otherwise stated.

ANALYSIS REPORT

Australian Assay Laboratories Group

REPORT: PC 07794

	Sample	Au	Au(R)
D	126	0.01	
D	127	0.01	0.01
D	128	0.01	
D	129	0.01	0.01
D	130	0.01	
D	131	0.01	
D	132	0.01	
D	133	0.01	
D	134	0.01	
D	135	0.01	
D	136	0.01	0.01
D	137	0.01	
D	138	<0.01	
D	139	<0.01	
D	140	<0.01	
D	141	<0.01	
D	142	<0.01	
D	143	<0.01	
D	144	<0.01	
D	145	<0.01	
D	146	<0.01	<0.01
D	147	<0.01	<0.01
D	148	<0.01	
D	149	<0.01	
D	150	<0.01	

Data in ppm unless otherwise stated.

ANALYSIS REPORT

Australian Assay Laboratories Group

REPORT: PC 07794

	Sample	Au	Au(R)
D	151	<0.01	
D	152	<0.01	
D	153	<0.01	
D	154	<0.01	
D	155	<0.01	
D	156	<0.01	<0.01
D	157	<0.01	
D	158	<0.01	
D	159	<0.01	
D	160	<0.01	<0.01
D	161	<0.01	
D	162	<0.01	<0.01
D	163	<0.01	
D	164	<0.01	
D	165	<0.01	<0.01
D	166	<0.01	

Data in ppm unless otherwise stated.

APPENDIX 3

Mackay & Schnellmann Pty. Ltd.

SITE No.	SAMPLE No.	AIR PHOTO DATA			AUSTRALIAN MAP GRID REFERENCE	SAMPLER	REMARKS, SITE DESCRIPTION	ASSAY RESULT (Au 1)	ASSAY RESULT (Au 2)
		FILM	RUN	PHOTO					
1	D118	CAC 2691	4	670, 671	590 420	LJC	Very coarse gravel	0·02 (0·01)	
2	D 069	✓	✓	✓	500 417	JW	V. crse. gravel. Stream 8m wide. Sample from tail of bar	0·01 (0·01)	
3	D119	✓	✓	✓	600347	LJC	Steep gradient stream cutting bedrock. Numerous traps	0·01	
4	D070	✓	✓	✓	608 347	JW	Epigranular sediment in stream 2m wide. Channel sample through tail of sand bar	0·01	
5	D075	✓	5	600, 601	644316	JW	Stream 4m wide. Sampled tail of gravel bar. Small amount of seived fraction.	0·01	
6	D120	✓	✓	✓	583 307	LJC	Stream 3m wide. Sand in bottom of cobbly stream bed sampled.	0·01	
7	D071	✓	✓	✓	593 306	JW	Stream 3m wide. 1m channel sample through gravel bar tail	<0·01	
8	D073	✓	✓	✓	618 296	JW	Stream 3 m wide. Sample from inside of meander, downstream of apex.	0·01	
9	D072	✓	✓	✓	621 295	JW	Stream 8m wide, Very cobbly. Tail of gravel bar sampled	0·01	
10	D121	✓	✓	✓	629 292	LJC	Sampled eastern channel of two. Sandy section, no distinct traps, cobbles / pebbles predominate.	0·01	
11	D074	✓	✓	✓	659 298	JW	Stream 3m wide. Sampled tail of gravel bar. Mainly small sediment size in sample.	0·01 (0·01)	
12	D122	✓	✓	✓	670 293	LJC	Channel 20m wide of boulders. Minimal sand component, poor trap.	0·01	
13	D068	✓	✓	✓	580 272	JW	Stream 4m wide. Many angular blocks upto 40cm.	0·01	
14	D117	✓	✓	✓	580 266	LJC	Channel 2-3m wide, mainly cobble / boulder - filled.	0·01	
15	D151	✓	6	576, 577	710 202	LJC/JW	Channel 8m wide, Sandy main channel, cutting 1m into alluvium. Schistose, highly faulted outcrop in bar.	<0·01	
16	D164	✓	✓	✓	745 155	JW	Stream channel 15m wide. V. cobbly, bouldery. Sample on downstream side of lg. boulder.	<0·01	
17	D156	✓	✓	✓	742 147	LJC	Channel 8m wide, V. sandy occ. cobbly / pebbly.	<0·01 (<0·01)	
18	D165	✓	✓	✓	753 154	JW	Stream 10m wide. V. cobbly s/ang. Sampled tail of gravel bar	<0·01 (<0·01)	

Mackay & Schnellmann Pty. Ltd.

SITE No.	SAMPLE No.	AIR PHOTO DATA			AUSTRALIAN MAP GRID REFERENCE	SAMPLER	REMARKS, SITE DESCRIPTION	ASSAY RESULT (Au 1)	ASSAY RESULT (Au 2)
		FILM	RUN	PHOTO					
19	D158	CAC 2691	6	576-580	767 181	LJC	Major channel 15m wide, 4m deep. V. gravelly, sandy.	<0.01	
20	D081	✓	✓	577, 579	817 187	JW	Stream 10m wide. Sample from downstream end of bar.	0.01	
21	D080	✓	✓	580, 577, 579	826 180	JW	20m wide braided channel edge of sand bar sampled.	0.01	
22	D079	✓	✓	579, 580	862 182	JW	Stream 8m wide. Sample from bedrock trap.	0.01	
23	D125	✓	✓	✓	890 165	LJC	Sandy channel 15m wide, no trap.	0.01	
24	D126	✓	✓	✓	890 161	LJC	15-20m wide channel. Gen. cobbly, occ. sand bars.	0.01	
25	D127	✓	✓	✓	821 150	LJC	60m wide major drainage. Sandy, cobbly, boulders	0.01	(0.01)
26	D128	✓	✓	✓	800 150	LJC	20-25m wide. Cobbly, sandy. No trap, cobble bar.	0.01	
27	D157	✓	✓	576 577	742 147	LJC	10m wide channel, boulders cobbles	<0.01	
28	D066	✓	✓	574 576	622 187	JW	Stream 10m wide. 2m channel sample across tail of gravel bar	0.01	(0.01)
29	D067	✓	✓	574	590 125	JW	Stream 10m wide. Sample upstream from rock bar	0.01	
30	D116	✓	✓	574 576	615 097	LJC	Subsidiary to main channel in alluvial plain. Cobbly, sandy 2m wide.	0.01	
31	D163	✓	✓	✓	653 133	LJC/JW	10-20m wide channel, v. cobbly, minor sand. Sample of sand/ clay	<0.01	
32	D150	✓	✓	576 577	704 125	LJC	2m wide channel, cobble/ boulders	<0.01	
33	D100	✓	✓	✓	708 115	JW	At distrib. into main valley channel. Tail of sand bar. V. cobbly creek.	0.01	
34	D149	✓	✓	✓	758 098	LJC	Main channel, boulder cobbles, minor sand.	<0.01	
35	D155	✓	✓	✓	703 088	LJC	40m wide sandy, cobbly channel. Overgrown.	<0.01	
36	D148	✓	✓	✓	738 078	LJC	20m wide braided channel, occ sand traps.	<0.01	
37	D162	✓	✓	✓	705 080	JW	Stream 2m wide. Sampled v. small gravel bar tail v. cobbly s/ang.	<0.01	(<0.01)
38	D094	✓	✓	✓	732 012	JW	Main drainage channel through gorge. Sampled inside of poorly-sorted meander. High proportion of vegetable mat.	0.01	

Mackay & Schnellmann Pty. Ltd.

SITE No.	SAMPLE No.	AIR PHOTO DATA			AUSTRALIAN MAP GRID REFERENCE	SAMPLER	REMARKS, SITE DESCRIPTION	ASSAY RESULT (Au 1)	ASSAY RESULT (Au 2)
		FILM	RUN	PHOTO					
39	D154	CAG 2691	6	576, 577	706 072	LJC	10m wide channel, cobbly, sandy bed.	<0.01	
40	D161	″	″	″	715 067	JW	Stream 4m wide. Sample from downstream end of gravel bar, V. poorly sorted, ang. cobbles to sand.	<0.01	
41	D153	″	″	″	714 059	LJC	5-10m wide channel, cobbly – pebbly/sandy. Sub. ang. fragments of qtz and sandstone.	<0.01	
42	D152	″	″	″	722 053	LJC	10-15m Sandy, V. ang. cobbles, frag of qtz and sandstone. Sampled.	<0.01	
43.	D160	″	″	″	715 050	JW.	Stream 5m wide. Sample from downstream end of sandbar. Sediment generally cobbly, Sub ang, poorly sorted	<0.01	
44	D147	″	7	509, 507	737 018	LJC	Channel 10-20m wide, V. sandy, occ. cobbles, pebbly.	<0.01 (<0.01)	
45	D114	″	7	509 510	623 004	LJC	Channel 5m wide, 1-2m cut into alluvium. V. Cobbly.	0.01	
46	D115	″	″	″	644 022	LJC	15m wide channel in cobbly floodplain. Main channel cobbly	0.01	
47	D065	″	″	″	647 003	JW.	Stream 2m wide. Channel sample at an angle to the channel. Minor large fraction.	0.01	
48	D145	″	″	507 508	784 033	LJC	50m wide flood channel. 10m wide channel of V. quartzose Sand and Cobbles	<0.01	
49	D146	″	″	″	768 027	LJC	10m wide channel of boulders w/occ. Cobbly Sand bags	<0.01 (<0.01)	
50	D098	″	″	″	762 020	JW.	Stream 15m wide. Base of fall into waterhole Sampled – Cobbles and V. fine grained Sediment	0.01 (0.01)	
51	D144	″	″	″	783 015	LJC	Minor stream floodout <1m wide cut ½m into cobbles and alluvium.	<0.01	
52	D142	″	″	″	793 006	LJC	Minor stream with dry lobes, Cobbles, occ. Sandbag. 2-3m cut into sediment.	<0.01	
53	D143	″	″	″	801 007	LJC	Minor floodout of coarse qtz (ang) and red sand.	<0.01	
54	D090	″	″	″	809 990	JW	Stream, very poorly defined, V. silty, loamy. (Sample Similar to soil Sample)	<0.01	

54 – 67

Mackay & Schnellmann Pty. Ltd.

SITE No.	SAMPLE No.	AIR PHOTO DATA			AUSTRALIAN MAP GRID REFERENCE	SAMPLER	REMARKS, SITE DESCRIPTION	ASSAY RESULT (Au 1)	ASSAY RESULT (Au 2)
		FILM	RUN	PHOTO					
55	D138	CAG 2691	7	507, 505	819 992	LJC	2m wide channel pebbly coarse sand. Bed cut ½m into qtz alluvium	<0.01	
56							Sample Not Collected. Channel too small.		
57	D137	–	–	–	817 968 &	LJC	5m wide channel cut 2m into qtz alluvium. Pebbly, Coarsely sandy trap	0.01	
58	D089	/	/	/	823 965	JW	Stream 2m wide. Downstream end of gravel bar sampled, med-grained sediment.	<0.01 (<0.01)	
59	D097	/	/	/	765 000	JW	Stream 2m wide. Med. grain sample taken downstream from fine grained basic rock bar.	0.01	
60	D096	/	/	/	776 995	JW	Stream 5m wide Sampled at downstream end of v. cobbly Small gravel bar.	0.01	
61	D159	/	/	/	778 993	LJC/JW	Small floodout, red sand/ ang qtz Scree, overgrown with spinifex.	<0.01	
62	D095	/	/	/	780 984	JW	Stream 3m wide. V. cobbly Sub-ang. frags. Sample taken on upstream side of stream junction	0.01	
63	D094	/	/	/	787 977	JW	Stream 3m wide, downstream from gravel bar, poorly sorted	0.01	
64	D093	/	/	/	808 058	JW	Stream 1-2m wide, angular cobbles. Sampled tail of small gravel bar.	0.01 (0.01)	
65	D141	/	/	/	808 053	LJC	4m wide channel, rounded Cobble-pebbles, minor Sand.	<0.01	
66	D092	/	/	/	825 048	JW	Broad streambed upstream of 3 distributaries. Sample of tail of small gravel bar.	<0.01	
67	D140	/	/	/	838 043	LJC	5m wide channel, Cobble-boulder-pebble. Sample taken of Sand/gravel lags.	<0.01	

67- 81

Mackay & Schnellmann Pty. Ltd.

Site No.	Sample No.	Air Photo Data: Film	Air Photo Data: Run	Air Photo Data: Photo	Australian Map Grid Reference	Sampler	Remarks, Site Description	Assay Result (Au1)	Assay Result (Au2)
68	D139	CAG 2691	7	507-505	857 036	LJC	5m wide channel, boulders, cobbles in bed. Channel cuts through sub ang. scree. Sand lag sampled.	<0.01	
69	D091	-	-	-	857 030	JW.	Stream 3m wide with sub.ang cobbles, clay. Streambed centre Sampled.	0.01	
70	D136	/	8	489 490	853 992	LJC	3m wide channel with cobbles, Pebbles Sand. Very q/z-rich. Trap site on inside of bend.	0.01 (0.01)	
71	D086	-	-	-	852 942	JW	Stream 2m wide, 10m upstream from junction. Sub. ang. cobbles	<0.01	
72	D087	/	/	/	852 938	JW	Stream 4 m wide, Sampled downstream from rock bars	0.01	
73	D133	/	/	/	828 921	LJC	Channel 1-2m wide. Cobbly. Sampled at junction with main stream	0.01	
74	D134	/	/	/	827 918	LJC	Main channel of above junction. Cobbly-pebbly, occ. sandy	0.01	
75	D132	/	/	/	848 888	LJC	25m wide Channel, cobble-filled, cut 1m into cobbly-sandy alluvium.	0.01	
76	D085	/	/	/	861 892	JW	Stream 3m wide. Downstream end of gravel bar Sampled, Seds. poorly sorted, sub-ang. to ang.	0.01 (0.01)	
77	D131	/	/	/	847 890	LJC	5-8m wide channel, predominantly cobble-filled. Occ. channel sand in bottom.	0.01	
78	D084	/	/	/	870 910	JW	Stream 10m wide, sampled downstream from rock bars.	0.01	
79	D135	/	7	503 505		LJC	V. cobbly bed, v. little Sand. Sampled At stream junction, no defined trap.	0.01	
80	D088	/	/	/	880 961	JW	Shallow cobbly stream, sub-ang. boulders. Sampled downstream of v. large boulder	0.01	
81	D113	/	/	/	892 992	LJC	Slaty cobbly bed, sample taken on bend.	0.01	

81 – 94

Mackay & Schnellmann Pty. Ltd.

SITE No.	SAMPLE No.	AIR PHOTO DATA			AUSTRALIAN MAP GRID REFERENCE	SAMPLER	REMARKS, SITE DESCRIPTION	ASSAY RESULT (Au 1)	ASSAY RESULT (Au 2)	
		FILM	RUN	PHOTO						
82	D064	CAG 2691	7	503 505	898 986	JW.	Stream 10m wide. Sampled from tail of gravel bar, containing occ. cobbles	0.01		
83	D129	/	/	502 503	937 956	LJC	Channel 10m wide, cut 1m deep. Cobbly-bouldery, occ. Sand in hollows. No significant trap.	0.01 (0.01)		
84	D083	/	/	/	934 917	JW	Stream 8m wide. Downstream tail of small island sampled.	0.01		
85	D130	/	/	/	948 923	LJC	10-15m wide Channel V. cobbly, bouldery. minor sand in low areas	0.01		
86	D082	/	/	/	949 932	JW	Stream 2m wide. Channel sample across bed, downstream of small meander.	0.01		
87	D063	/	/	/	960 960	JW	Stream 8m wide, low banks. Poorly sorted bed. Sample from downstream end of gravel bar.	0.01		
88	D112	/	/	/	987 943	LJC	20m wide channel. Cobbly. Some cementation of cobbly alluvium	0.02 (0.01)		
89	D111	/	/	/	012 916 Hatches Ck.	LJC	3.4m wide channel cut into sand-pebble-cobble alluvial plain. Sampled mid-stream.	0.01		
90	D110	/	/	502	014 915	LJC	Major channel draining from north. Very cobbly. Sampled 8m wide trap.	0.01		
91	D109	/	8	494 493	051 892	LJC	Braided channel 50m wide cut 1m into alluvium. Sampled northernmost channel – sand/cobble trap	0.01		
92	D061	/	/	501 502	051 915	JW	Stream 3m wide, fine sand bed. Sample at tail of gravel bar, under a bank scour.	0.01		
93	D060	/	/	/	048 919	JW	Stream 20m wide. Sample of poorly sorted material on downstream tail of gravel bar.	0.01		
94	D062	/	/	/	036 925	JW	Stream 2m wide. Sampled by channel sampling tail of gravel bar downstream from NE flowing tributary.	0.02		

Mackay & Schnellmann Pty. Ltd.

SITE No.	SAMPLE No.	AIR PHOTO DATA			AUSTRALIAN MAP GRID REFERENCE	SAMPLER	REMARKS, SITE DESCRIPTION	ASSAY RESULT (Au1)	ASSAY RESULT (Au2)
		FILM	RUN	PHOTO					
95	D108	CAG 2691	8	501/502	Kurrundi 955 990	LJC	10m wide channel cut in alluvial plain. Major channel trap site, cobbles, sand.	0·01	
96	D107	/	/	- -	960 005	LJC	10m wide channel, small east-draining tributary. Predominantly cobbles, minor sand. Alluvium in bank	0·01	
97	D059	/	/	/	970 980	JW	Stream in 30m wide gorge. Sample of sediment on downstream side of large boulde.	0·01	
98	D058	/	/	/	976 010	JW	Stream channel 15m wide. Sample from downstream tail of small island. Sediment poorly sorted.	0·01	
99	D106	/	6/7	582, 584 503	941 027	LJC	20m wide channel adjacent to escarpment. Sand - Cobble bed	0·01	
100	D057	/	/	/	945030	JW	Stream 3m wide. Sample from trap on northern side, downstream from tributary.	0·01	
101	D105	/	/	/	961 030	LJC	Cobbly pebbly trap site. Mainly quartz	0·02	
102	D076	/	/	/	970 079	JW	Stream 3m wide. Sample from downstream end of gravel bar. Very fine grain size, equigranular.	<0·01	
103	D123	/	/	/	970 092	LJC	Minor channel 2-3m wide cut 1m into cobbly alluvial plain.	0·01	
104	D077	/	/	/	968 093	JW	Stream 7m wide, ill-defined. Sample from tail of gravel bar. Poorly sorted	0·01	
105	D124	/	6	582 584	972 118	LJC	4m wide channel, cobble-boulder filled, cut 1-2m into alluvial plain.	0·02	
106	D078	/	/	/	973 125	JW	Stream 6m wide. Rock outcrop bed. Sample downstream from small island.	0·01	
107	D056	/	7	500 501	Natchos Ck 006 015	JW.	7m up N.E. flowing tributary from main stream. Channel Sample length - 1m. Predominantly cobbles.	0·01	

107 - 116

Mackay & Schnellmann Pty. Ltd.

Site No.	Sample No.	Air Photo Data			Australian Map Grid Reference	Sampler	Remarks, Site Description	Assay Result (Au 1)	Assay Result (Au 2)
		Film	Run	Photo					
108	D055	CAG 2691	7	500 501	010 014	JW	Channel sample across 1m wide West-flowing tributary.	0·01	
109	D103	/	/	/	012 035	LJC	Sample taken upstream from airphoto point, in Kuringa Sandstone	0·01	
110	D104	/	/	/	020 041	LJC		0·01	
111	D053	/	/	/	032 025	JW	Channel sample across stream 5m wide. Included gutter on upstream side of small hill.	0·01 (0·01)	
112	D054	/	/	/	033 022	JW	Stream 15m wide. Sample of fine grained sediment from S.E. bank to include small tributary from south.	0·01	
113	D102	/	7	501 500	062 021	LJC	At crossing of stream by old E-W. track. Cobbly pebbly gravel.	0·01 (0·01)	
114	D052	/	7/6	500 586	079 042	JW	Sediment trap in gorge. Very fine grained, carbonaceous material included	0·01	
115	D051	/	/	/	120 083	JW	Stream 10m wide. Very coarse gravel.	0·01 (0·01)	
116	D101	/	/	/	134 058	LJC	Mostly fine grained material, rare cobbles, pebbles	0·01	

E4815 TO 22/10/88

Major activity	Staff salaries	Staff wages	Consultants/ contractors' fees	Vehicles	Travel Other	Accom.	Field Accom.	Field Equip.	Office Equip.	Other	Sub-Totals
Geology		1170	47396	19322		2384		1794		2638	74704
Geochemistry			1943								1943
Geophysics											
Access											
Gridding											
Drilling:											
- diamond											
- other											
Drafting			107								107
Metallurgy											
Engineering											
Environmental											
Other											
SUBTOTALS		1170	49446	19322		2384		1794		2638	76754

TOTAL	76754
LOCAL OFFICE OVERHEADS	9066
HEAD OFFICE OVERHEADS	10122
G R A N D T O T A L	$95942

AJH/MM:208

NORTHERN TERRITORY GEOLOGICAL SURVEY - GEOSYSTEM DATA SHEET

REPORT NO _____ SECURITY _____

REPORT TITLE Third Annual Report on the Kurundi Prospect

AUTHOR(S) D.D. Boyer

PUBLISHER _____

PLACE OF PUB'N _____ DATE OF PUB'N _____

DATA TYPE Unpublished PAGES OF TEXT 5

ACCOMPANIMENTS _____

DRILL CORE ? /

LICENCE NO. EL 4815

PROJECT YEAR(S) 3

LICENSEE(S) Mineral Horizons NL

JOINT VENTURE(S) /

OPERATOR(S) Mineral Horizons N.

1:1 000 000 _____

1: 250 000 Bonney Well (SF53-2) and Frew River (SF53-3)

1: 100 000 Davenport Range (5856)

1: 50 000 _____

PROSPECT NAME(S) Kurundi

SITE LOCATION LAT: 20°30' LONG: 136°00'

TECTONIC UNIT _____

MAJOR TERM
- ○ PETROLEUM GEOLOGY
- ✓ METALLIFEROUS MINERALS
- ○ NONMETALLIFEROUS MINERALS

MINOR TERMS

DRILLING
- ○ DIAMOND
- ○ PERCUSSION
- ○ AUGER
- ○ ROTARY

○ GEOPHYSICS

AERIAL SURVEYS
- ○ MAGNETIC
- ○ RADIOACTIVITY
- ○ EM SURVEYS

GROUND
- ○ EM SURVEY METHOD
- ○ IP SURVEY METHOD
- ○ SEISMIC SURVEYS
- ○ RESISTIVITY SVYS
- ○ GEOPHYSICAL ANOM
- ○ GRAVITY SURVEYS

○ GEOCHEMISTRY

SAMPLING
- ✓ STREAM SEDIMENT
- ○ SOIL
- ✓ ROCK CHIP
- ○ WATER

OTHER
- ○ DRAINAGE TESTING
- ○ DRILL CORE ANALYSIS
- ○ ASSAYING
- ○ GEOCHEMICAL ANOM

GENERAL
- ✓ GEOL MAPPING
- ○ PHOTOGEOLOGY
- ○ GRIDDING
- ○ METHODS
- ○ REGIONAL GEOLOGY
- ✓ LOCAL GEOLOGY
- ○ STRATIGRAPHY
- ○ RECONNAISSANCE
- ○ LOGGING

NOTES _____

ABSTRACT _____

INDEXED BY/DATE _____ CHECKED BY/DATE _____