ACACIA RESOURCES LTD

EXPLORATION LICENCE 8457
ESMERALDA WEST

FOURTH ANNUAL REPORT
FOR THE YEAR ENDED 30th NOVEMBER 1998

Author: Jane Ham **Report No:** 08.10005

Date: November 1998 **Copy No:** 1

1: 250 000 Pine Creek SD52-8
1: 100 000 Pine Creek 5270

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SUMMARY

Exploration Licence (EL) 8457, in the Pine Creek area, NT, is currently being explored by Acacia Resources Limited. The centre of the tenement is located approximately 3km north of the Pine Creek township and 6km south-east of the Union Reefs Gold Mine and treatment facilities. Exploration completed this year has included angled vacuum drilling to investigate the nature of the regolith profile and geology, and the source of scattered Au soil anomalies. The work completed is summarised below:

- 1 RC hole for a total of 126m
- 20 vacuum holes for a total of 321m
- regional geophysical data compilation
- regional gravity survey

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1. INTRODUCTION

Exploration Licence (EL) 8457, in the Pine Creek area, NT, is currently being explored by Acacia Resources Limited. The centre of the tenement is located approximately 3km north of the Pine Creek township and 6km south-east of the Union Reefs Gold Mine and treatment facilities. This report details all work carried out in EL 8457 for the year ending 30th November, 1998, the fourth year of the licence tenure.

2. TENEMENT STATUS

EL 8457 comprises 1 graticular block, covering 3.4 square kilometres, and was granted to Astron Resources NL and Solomon Pacific Resources NL on the 1 December 1994 for a period of 2 years. Astron Resources having 75% interest in the tenement and Solomon Pacific Resources a 25% interest. Under a joint venture agreement signed between these parties and Acacia Resources, Acacia could earn up to 70% of the tenement by funding exploration activities.

Acacia Resources purchased Astron Resources share of the joint venture in 1995. The joint venture remained in force between Acacia Resources (75%) and Solomon Pacific (25%), with Acacia Resources earning up to 70% of Solomon Pacific's interest through exploration expenditure.

Acacia Resources completed a successful takeover of Solomon Pacific Resources on 24th June 1996, assuming Solomon Pacific's interest in EL 8457. Acacia Resources currently holds 100% of the Esmeralda West licence.

A renewal was granted in 1996, extending the lease for a further two years. A second renewal application for a further two years was lodged with the NTDME on the 26th August 1998 and granted on 17th November 1998.

A covenant of $40,000 was set by the NTDME for the fourth year of exploration.

3. LOCATION AND ACCESS

The centre of EL 8457 is located approximately 3km north of the township of Pine Creek in the Northern Territory, (Figure 1). The licence area can be accessed via a service track along the old Darwin to Katherine Railroad. The service track is located approximately 50m from the T -intersection of the Stuart Highway and the Kakadu Highway. The licence can be reached after travelling about 3 kilometres along the service track.

4. REGIONAL GEOLOGY

EL 8457 is located in the Pine Creek area in the central Pine Creek Geosyncline (Figure 2). The geosyncline contains Early Proterozoic metasedimentary rocks resting on a gneissic and granitic Archaean basement. The metasediments represent a preserved basinal sequence up to 14km thick (Needham et al., 1980). These rocks were tightly folded and metamorphosed to greenschist and amphibolite facies at about 1890 to 1870 Ma (Ferguson, 1980).

The geosynclinal sequence is intruded by transitional igneous rocks including predeformational dolerite lopoliths and dykes and post deformational granites. Largely undeformed platform cover of Middle and Late Proterozoic, Cambro-Ordovician and Mesozoic strata rest on these with marked unconformity.

EL 8457 lies in the southern part of a neck of metasediments, assigned to the Burrell Creek and Mt Bonnie Formations (Stuart-Smith, 1987), which separates two lobes of the Cullen Batholith. This metasedimentary neck contains both the Union Reefs (Au) and Pine Creek (Au) ore bodies as well as numerous areas of historic workings.

5. LOCAL GEOLOGY

Esmeralda West is dominated by Burrell Creek Formation (Pfb) in the eastern portion of the licence and underlying Mt Bonnie Formation (Pso) in the west. The licence area is largely obscured by shallow alluvium and black soils, with only occasional outcrop of shales and greywackes of the Burrell Ck Formation. Mt Bonnie Formation does outcrop in the north-eastern part of the tenement.

Quartz veining is apparent throughout the lease, in particular, the western margin of the lease, where veins <2-3m may be found in outcropping shale beds. There are extensive areas of quartz cobbles over the alluvial soils.

A series of tightly folded anticlines striking and plunging shallowly north-west occur within the lease. These anticlinal structures can be recognised in the occasional outcrop.

There are no known gold workings in the tenement.

6. PREVIOUS WORK

6.1. 1994/95 - Report 08.7754

During the first year of tenure Acacia conducted first pass exploration within the licence aimed at defining drill target areas. Work completed included:

- compilation of data
- construction of 11.6 line kilometres of 200m X 50m grid lines
- collection of 486 residual soil samples
- collection of 8 rock chip samples

Results from this phase of exploration delineated a number of Au in soil anomalies.

6.2. 1995/96 - Report 08.8483

During the second year of tenure Acacia commenced follow-up on the results of the earlier programme. Work completed included:

- 1.2 line km of gridding
- infill soil sampling for 33 samples
- aerial photography at 1:25,000 scale
- reprocessing of multi-client aeromagnetic data

Further work was curtailed by early rains toward the end of the field season.

6.3. 1996/97 - Report 08.8967

During the third year of tenure further work was undertaken to assist in the resolution of suitable gold targets prior to drilling. Work completed included :

- aeromagnetic and radiometric coverage by UTS on 50m line spacing
- processing and first pass interpretation of aeromagnetic data
- structural interpretation of the Esmeralda area by a consultant geologist incorporating data from the adjacent mineralised zones on ERL130

7. WORK COMPLETED FOR PERIOD ENDING 30TH NOVEMBER 1998

7.1. RC Drilling

One RC drill hole (CRLR016, 126m) was drilled on the western margin of the Esmeralda lease, as part of program completed on the Caroline leases (MLN's 51-57). This program was designed to test a zone of anomalous soil, costean and rockchip results in sediments on the margin of a dolerite dyke that cuts through the central portion of the Pine Creek Shear Zone.

Century Drilling was contracted to complete the program, and CRLR016 was drilled at 60° towards grid east (Cyprus grid, N-S baseline 306.5° magnetic). Samples weighing 3-4kg were collected at 1 metre intervals via a cyclone and attached riffle splitter. The remaining sample was bagged and stored on site.

The samples were despatched to Assaycorp Laboratories in Pine Creek. Samples were dried and pulverised in a mixermill to 90% passing 75μm and assayed for Au by fire assay, 50g charge with a AAS determination (method FA50, detection limit 0.01 ppm). Control standards were inserted every 30 samples.

Geology logs and collar details were captured and validated in the field on HP palm-top computers using Field Marshal software.

The collar position was surveyed with an EDM by Microsurvey Ltd using known local grid control points. Elevations were calculated using existing bench levels for the area. Downhole surveying using an Eastman single-shot camera was completed on all of the drill holes.

RC drill hole locations and surveys, assay results, geology logs and sections are included in Appendices 1, 2, 3 and 4 respectively. RC drill hole locations are also shown in Figure 3.

7.2. Vacuum Drilling

Vacuum drilling for a total of 321m in 20 holes was completed on three lines to determine the source of spot Au anomalism identified in auger soil sampling. The program was designed to also investigate the nature of the transported and weathered residual profile, so the holes were drilled on three lines spread across the lease. Most of the holes were drilled at either 60° to grid east or west (Pine Creek Regional grid, N-S baseline 331.5° magnetic), to increase the coverage of testing in the regolith profile.

Drilling was conducted by Down to Earth Drilling contractors using a 4WD mounted vacuum rig. Two metre composite samples were collected and sent to Assaycorp Laboratories in Pine Creek., where they were dried, crushed and pulverised to a nominal 90% passing 100μ. The samples where then analysed for low level Au by Fire Assay (FALL method). Standards were submitted every 30 samples.

The drilling determined that the southern two-thirds of the lease has a transported cover of clay and quartz dominated gravels, that is between 1 and 4m deep. The cover is underlain by leached upper saprolite clays or lower saprolite. The depth of cover decreases to the north, but the depth to weathered bedrock increases.

No anomalous Au results were returned from the residual samples. The best results occurred in transported clay and quartz gravels on the northern most line and ranged from 10-57 ppb Au. The source of anomalism seen in the previous auger soil samples was therefore within the transported cover.

Vacuum drill hole locations and surveys, assay results, geology logs and sections are included in Appendices 1, 2, 3 and 4 respectively. Vacuum drill hole locations are also shown in Figure 3.

7.3. Regional Geophysical Data Compilation

Hungerford Geophysical Consultants merged and levelled the multiple aeromagnetic data sets that Acacia has acquired to allow easier comparison of the images across the boundaries of the different surveys. The following processing was applied to merge the detailed aeromagnetic and multiclient datasets:

- Regrid all surveys to 15m grid cell size.
- Add 47210nT to the UTS grid (if required)
- Boolean join of the multiclient and UTS grids
- Smooth the merged grid with a 3 x Hanning filter

Revised reduced to pole and first vertical derivative plots were produced and a revised regional geophysical interpretation utilising recently acquired regional gravity data, multiple detailed and multiclient aeromagnetic data sets and IP surveys acquired between 1992 and 1997.

7.4. Gravity Survey

A gravity survey was conducted during 1997 incorporating Acacia's Pine Creek tenements, including the mining lease. The survey provided more detailed data than the regional AGSO gravity surveys and was conducted as part of two Honours theses (University of Tasmania) aimed at modelling the depth to granite intrusions in the Pine Creek area (Figure 4).

Station spacing for the survey was about 500m and a Worden gravity meter was used with a differential GPS providing accurate locations and heights for the subsequent data reductions. One station falls within the Esmeralda West lease. Station data is provided in Appendix 6.

Hungerford Geophysical Consultants reviewed the results of the theses and the survey with the following conclusions:

- The sediments to the west of the centre of the Pine Creek Geosyncline have a higher mass than those on the eastern side. This can be attributed to either a thicker metasedimentary sequence on the western side or higher density rocks, possibly Mt Bonnie Formation (and not Burrell Creek Formation).
- A correlation between a shallower depth to granite basement and mineralisation was suggested.

7.5. Detailed Aeromagnetic Survey Plans

A detailed aeromagnetic and radiometric survey, was flown in 1997. As was reported in the previous annual report (Acacia Reference 08.8967), the flight line diagrams, profiles and contour plans were not available for inclusion in that report. Consequently, they have been included in this report in Appendix 5.

8. ENVIRONMENT

All field activities were conducted so as to minimise environmental disturbance. Existing tracks were used for access for the vacuum drilling program, and all vacuum holes were backfilled on completion. The RC hole was capped and the drill pad rehabilitated. An enviromental ledger is included in Appendix 7.

9. EXPENDITURE FOR PERIOD ENDING 30TH NOVEMBER 1998

The total expenditure for the period ending 30th November is $14 975. The breakdown of the expenditure is given below:

Staffing	3 348
Support	2 584
Geochemistry	23
Geophysics	65
Geology	386
Assays	1 625
Drilling	4 048
Gridding/Access/Surveys	943
Administration	1 953
Total	**$14 975**

10. PROPOSED WORK AND EXPENDITURE FOR PERIOD ENDING 30TH NOVEMBER 1999

Proposed exploration for the next field season will involve RC drill testing of the interpreted projection of mineralised structures occurring on adjacent tenements. A breakdown of the proposed expenditure is given below:

	$
Staffing	7,000
Drilling	24,000
Assays	7,000
Surveying	1,000
Rehabilitation	1,000
Total	**$40,000**

11. REFERENCES

FERGUSON J, 1980. Metamorphism in the Pine Creek Geosyncline and its bearing on stratigraphic correlations. In FERGUSON J, & GOLBY AB, (Editors) - URANIUM IN THE PINE CREEK GEOSYNCLINE. International Atomic Energy Agency, Vienna, 91-100.

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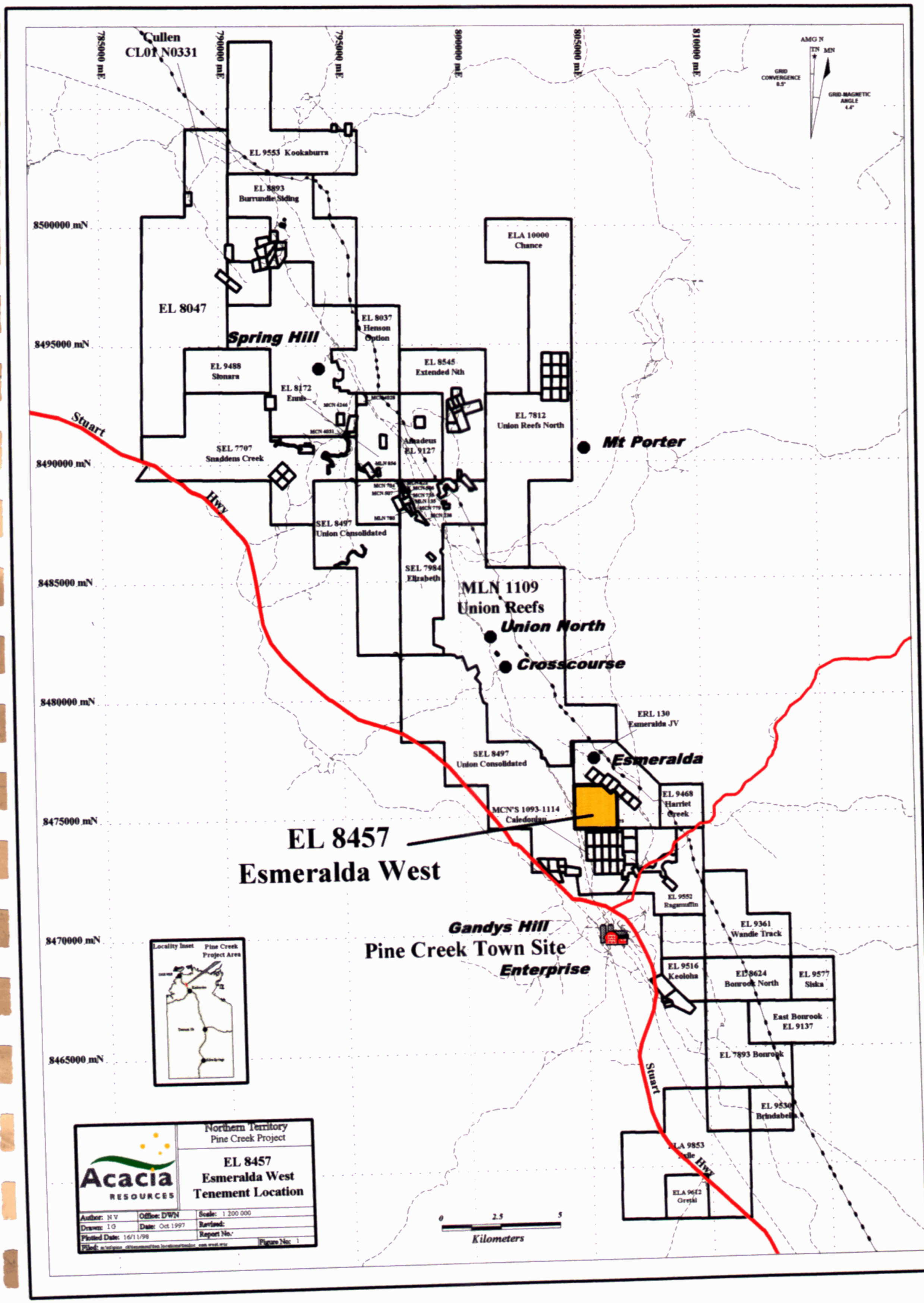
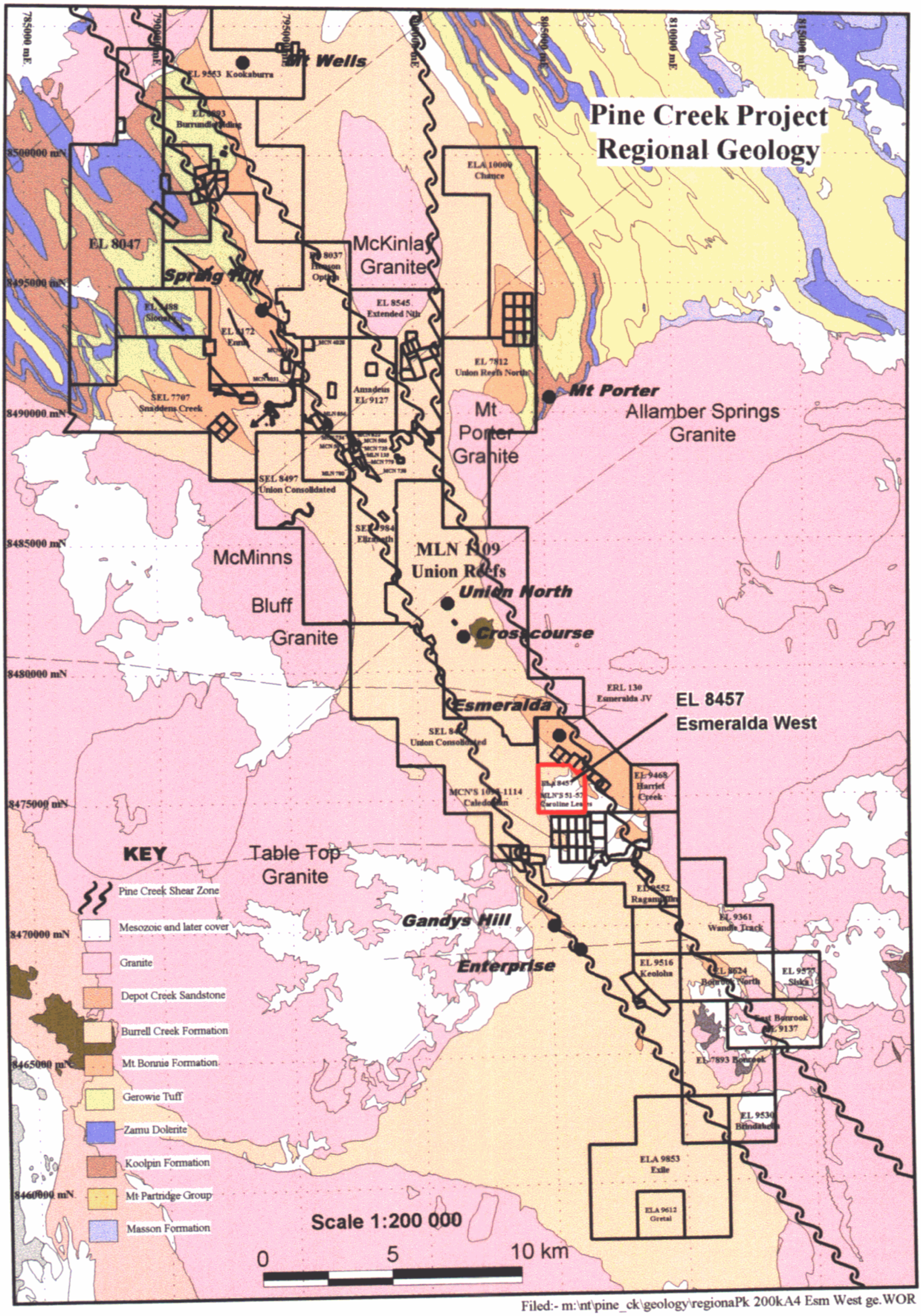

785000 mE
790000 mE
795000 mE
800000 mE
805000 mE
810000 mE
Cullen
CL01 N0331
AMG N
TN
MN
GRID CONVERGENCE 0.5°
GRID-MAGNETIC ANGLE 4.4°
8500000 mN
8495000 mN
8490000 mN
8485000 mN
8480000 mN
8475000 mN
8470000 mN
8465000 mN
EL 9553 Kookaburra
EL 8893 Burrundie Siding
EL 8047
Spring Hill
EL 8037 Henson Option
EL 9488 Stonarn
EL 8172 Ennis
EL 8545 Extended Nth
ELA 10000 Chance
EL 7812 Union Reefs North
Mt Porter
Amadeus EL 9127
SEL 7707 Snaddens Creek
Stuart Hwy
SEL 8497 Union Consolidated
SEL 7984 Elizabeth
MLN 1109 Union Reefs
Union North
Crosscourse
ERL 130 Esmeralda JV
Esmeralda
EL 9468 Harriet Creek
MCN'S 1093-1114 Caledonian
EL 8457
Esmeralda West
EL 9552 Ragamuffin
Gandys Hill
Pine Creek Town Site
Enterprise
EL 9361 Wandie Track
EL 9516 Keoloha
EL 8624 Bonrook North
EL 9577 Siska
East Bonrook EL 9137
EL 7893 Bonrook
EL 9530 Brindabella
ELA 9853 Jalile
ELA 9612 Gretal
Locality Inset
Pine Creek Project Area
0
2.5
5
Kilometers
Acacia RESOURCES
Northern Territory
Pine Creek Project
EL 8457
Esmeralda West
Tenement Location
Author: N V
Office: DWN
Scale: 1 200 000
Drawn: I G
Date: Oct 1997
Revised:
Plotted Date: 16/11/98
Report No.:
Figure No: 1



Filed:- m:\nt\pine_ck\geology\regionaPk 200kA4 Esm West ge.WOR

Figure 2

8477000 mN

8476000 mN

8475000 mN

8474000 mN

803000 mE

804000 mE

805000 mE

806000 mE

807000 mE

808000 mE

25000E

5000E

11000N

10000N

9600N

6600N

6200N

5200N

EL 8457
Esmeralda West

CRLR0016

EWPH0015
EWPH0016
EWPH0018
EWPH0019
EWPH0020
EWPH0021

EWPH0010
EWPH0011
EWPH0012
EWPH0013

EWPH0006
EWPH0007
EWPH0008
EWPH0009
EWPH0002
EWPH0003
EWPH0004
EWPH0005
EWPH0001

Regional Grid

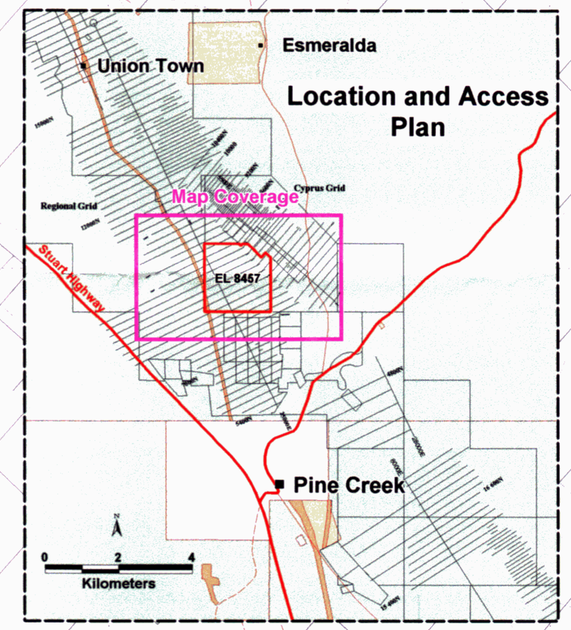
Drilling Type

- ▲ *PHVAC*
- ▲ *RC*

Geochemical Samples
Au Results in ppb

★	*>1000*
●	*250 to 1000*
●	*100 to 250*
●	*50 to 100*
●	*10 to 50*
●	*5 to 10*
●	*2 to 5*
·	*<2*

***Sample Number denotes this reporting period**



AMG N
TN MN
GRID CONVERGENCE 0.5°
GRID-MAGNETIC ANGLE 4.4°

250 0 250 500 750 metres
Scale 1 : 10 000

CR98/816

Acacia RESOURCES

Northern Territory
Pine Creek Project

EL 8457 - Esmeralda West
Drill Hole Locations
with Previous Soil Samples
Au ppb

Author: J.H.	Office: DWN	Scale: 1:10 000
Drawn: A.L.H.	Date: 18/11/98	Revised:
Plotted Date: 18/11/98		Report No.:
Projection/Grid: AMG Zone 52 (AGD84)		
Filed: m:\nt\~\geochem\soils\esmeralda\EsmWest10K A2 gchem98 WOR		Figure No: 3

25000E

804500 mE

805000 mE

805500 mE

806000 mE

806500 mE

8476500 mN

8476000 mN

8475500 mN

8475000 mN

8474500 mN

8474000 mN

8473500 mN

AMG N

TN MN

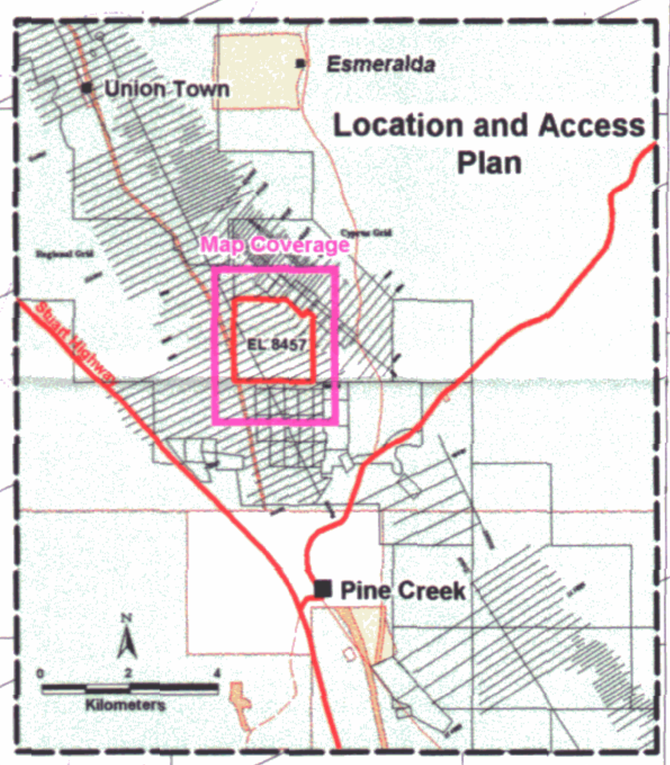
GRID CONVERGENCE 0.5°

GRID-MAGNETIC ANGLE 4.4°

EL 8457
Esmeralda West

+ Gravity Station

Regional Gr



250 0 250 500 750 metres

Scale 1 : 10 000

Acacia RESOURCES

Northern Territory
Pine Creek Project

EL 8457 - Esmeralda West
Gravity Station
Location

Author: J.H.	Office: DWN	Scale: 1:10 000
Drawn: A.L.H.	Date: 18/11/98	Revised:
Plotted Date: 18/11/98		Report No.:
Projection/Grid: AMG Zone 52 (AGD84)		
Filed: m:\nt\~\geophysi\gravity\EsmWest10K A3 gravity98.WOR		Figure No: 4

APPENDIX 1

RC and Vacuum Drill Hole Locations and Survey Data

Collar Report

Hole	Depth	Grid n	Grid e	AMG n	AMG e	RL	Date	Comments
CRLR0016	126	7404.660	4756.950	7404.660	4756.950	981.44	8/21/1998	
EWPH0001	10	8400.000	24550.000	8474453.572	804793.663		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0002	21	8400.000	24575.000	8474464.158	804816.334		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0003	24	8400.000	24600.000	8474474.743	804839.006		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0004	19	8400.000	24625.000	8474485.329	804861.677		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0005	9	8400.000	24650.000	8474495.914	804884.349		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0006	17	8400.000	24675.000	8474506.500	804907.020		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0007	18	8400.000	24700.000	8474517.085	804929.692		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0008	15	8400.000	24725.000	8474527.671	804952.363		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0009	18	8400.000	24750.000	8474538.256	804975.035		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0010	18	8800.000	25350.000	8475155.050	805349.782		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0011	18	8800.000	25325.000	8475144.465	805327.110		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0012	18	8800.000	25300.000	8475133.879	805304.439		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0013	20	8800.000	25275.000	8475123.294	805281.767		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0014	18	8800.000	25250.000	8475112.708	805259.096		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0015	13	9000.000	26100.000	8475653.985	805945.241		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0016	13	9000.000	26075.000	8475643.400	805922.570		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0017	13	9000.000	26050.000	8475632.814	805899.898		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0018	13	9000.000	26025.000	8475622.229	805877.227		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0019	13	9000.000	26000.000	8475611.644	805854.555		9/29/1998	VACUUM HOLES AT ESMERAL
EWPH0020	13	9000.000	25975.000	8475601.058	805831.884		9/29/1998	VACUUM HOLES AT ESMERAL

Hole	Depth	Grid_n	Grid_e	AMG_n	AMG_e	RL	Date	Comments
			[illegible]	[illegible]	13		9/[illegible]	

Downhole Survey Report

Hole	Depth	Grid	Dip	Grid Azim	Mag Azim	Date	Comments
CRLR0016	0	DPCCYPRUS	-60	90.5	36.5	8/21/1998	
CRLR0016	30	DPCCYPRUS	-57.5	90.5	36.5	8/21/1998	
CRLR0016	60	DPCCYPRUS	-54	94	40	8/21/1998	
CRLR0016	90	DPCCYPRUS	-52.5	97	43	8/21/1998	
CRLR0016	120	DPCCYPRUS	-49	103	49	8/21/1998	
EWPH0001	0	DPCREG	-60	241.5	213	9/29/1998	
EWPH0001	10	DPCREG	-60	241.5	213	9/29/1998	
EWPH0002	0	DPCREG	-60	241.5	213	9/29/1998	
EWPH0002	21	DPCREG	-60	241.5	213	9/29/1998	
EWPH0003	0	DPCREG	-60	241.5	213	9/29/1998	
EWPH0003	24	DPCREG	-60	241.5	213	9/29/1998	
EWPH0004	0	DPCREG	-60	241.5	213	9/29/1998	
EWPH0004	19	DPCREG	-60	241.5	213	9/29/1998	
EWPH0005	0	DPCREG	-60	241.5	213	9/29/1998	
EWPH0005	9	DPCREG	-60	241.5	213	9/29/1998	
EWPH0006	0	DPCREG	-60	241.5	213	9/29/1998	
EWPH0006	7	DPCREG	-60	241.5	213	9/29/1998	
EWPH0007	0	DPCREG	-60	241.5	213	9/29/1998	
EWPH0007	18	DPCREG	-60	241.5	213	9/29/1998	
EWPH0008	0	DPCREG	-60	241.5	213	9/29/1998	
EWPH0008	15	DPCREG	-60	241.5	213	9/29/1998	
EWPH0009	0	DPCREG	-60	241.5	213	9/29/1998	
EWPH0009	18	DPCREG	-60	241.5	213	9/29/1998	
EWPH0010	0	DPCREG	-60	61.5	33	9/29/1998	
EWPH0010	18	DPCREG	-60	61.5	33	9/29/1998	
EWPH0011	0	DPCREG	-60	61.5	33	9/29/1998	
EWPH0011	18	DPCREG	-60	61.5	33	9/29/1998	
EWPH0012	0	DPCREG	-60	61.5	33	9/29/1998	
EWPH0012	18	DPCREG	-60	61.5	33	9/29/1998	
EWPH0013	0	DPCREG	-90	61.5	33	9/29/1998	
EWPH0013	20	DPCREG	-90	61.5	33	9/29/1998	

Hole	Depth	Grid	Dip	Grid Azim	Mag Azim	Date	Comments
EWPH0014	0	DPCREG	-90	61.5	33	9/29/1998	
EWPH0014	18	DPCREG	-90	61.5	33	9/29/1998	
EWPH0015	0	DPCREG	-60	61.5	33	9/29/1998	
EWPH0015	13	DPCREG	-60	61.5	33	9/29/1998	
EWPH0016	0	DPCREG	-60	61.5	33	9/29/1998	
EWPH0016	13	DPCREG	-60	61.5	33	9/29/1998	
EWPH0017	0	DPCREG	-60	61.5	33	9/29/1998	
EWPH0017	13	DPCREG	-60	61.5	33	9/29/1998	
EWPH0018	0	DPCREG	-60	61.5	33	9/29/1998	
EWPH0018	13	DPCREG	-60	61.5	33	9/29/1998	
EWPH0019	0	DPCREG	-60	61.5	33	9/29/1998	
EWPH0019	13	DPCREG	-60	61.5	33	9/29/1998	
EWPH0020	0	DPCREG	-60	61.5	33	9/29/1998	
EWPH0020	13	DPCREG	-60	61.5	33	9/29/1998	

APPENDIX 2

RC and Vacuum Drill Hole Assay Results

ASSAYCORP

ep[redacted]t Code: ..... AC 43428
mp[redacted]s Received: 30/09/98
mber of Samples: 137

:ca[redacted]a Resources Limited
7-66 Coonawarra Rd
Winnellie NT 0821

fe[redacted]nce: Q05358
oject: N0102
st[redacted]ode: 1274432-1274568

Assaycorp Pty Ltd
A.C.N. 052 982 911
174 Ward St
PINE CREEK NT 0847
Ph (08) 8976 1262
Fax (08) 8976 1310

Report Distribution
L.Stirland-Mitchell

mp[redacted] Preparation:

ia[redacted] Data:

nalysis	Analytical Method	Digest	Technique	Precision & Accuracy	Detection Limit	Data Units
[redacted]u	FALL	FA	AAS	Acc. ± 15 %	1	ppb
Au[redacted]R)	FALL	FA	AAS	Acc. ± 15 %	1	ppb

or[redacted] Comment: This cover sheet is an integral part of the report. This report can only be reproduced in full.

Authorisation: Ray Wooldridge
Report Dated: 15/10/98

ASSAYCORP

ep[redacted]t Code: ..... AC 43432
.mp[redacted]s Received: 30/09/98
:mber of Samples: 44

:ac[redacted]a Resources Limited
7-66 Coonawarra Rd
W[redacted]nnellie NT 0821

ference: 005360
oject: N0102
st [redacted]de: 1274559-1274602

Assaycorp Pty Ltd
A.C.N. 052 982 911
174 Ward St
PINE CREEK NT 0847
Ph (08) 8976 1262
Fax (08) 8976 1310

Report Distribution
L.Stirland-Mitchell

mp[redacted] Preparation:

say[redacted]ata:

[redacted]nalysis	Analytical Method	Digest	Technique	Precision & Accuracy	Detection Limit	Data Units
[redacted]	FALL	FA	AAS	Acc. ± 15 %	1	ppb
Au[redacted])	FALL	FA	AAS	Acc. ± 15 %	1	ppb

or [redacted]Comment: This cover sheet is an integral part of the report. This report can only be reproduced in full.

Authorisation: Ray Wooldridge
Report Dated: 15/10/98

ASSAYCORP

Report Code: ..... AC 42895
Samples Received: 22/08/98
Number of Samples: 235

Cassia Resources Limited
66 Coonawarra Rd
Winnellie NT 0821

Reference: 003178
Project: UR23
Post Code: 1270521-1270755

Assaycorp Pty Ltd
A.C.N. 052 982 911
174 Ward St
Pine Creek NT 0847
Ph (08) 8976 1262
Fax (08) 8976 1310

Report Distribution
L.Stirland-Mitchell

Sample Preparation:

Assay Data:

Analysis	Analytical Method	Digest	Technique	Precision & Accuracy	Detection Limit	Data Units
Au	FA50	FA	AAS	Acc. ± 15 %	0.01	ppm
Au(R)	FA50	FA	AAS	Acc. ± 15 %	0.01	ppm

Comment: This cover sheet is an integral part of the report. This report can only be reproduced in full.

Authorisation: Ray Wooldridge
Report Dated: 01/09/98

DrillHole Assay Report

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
RLR0016	1270521	0	1	0.09	90			AC 42895
CRLR0016	1270522	1	2	0.005	5			
RLR0016	1270523	2	3	0.005	5			
CRLR0016	1270524	3	4	0.005	5			
RLR0016	1270525	4	5	0.005	5			
CRLR0016	1270526	5	6	0.005	5			
RLR0016	1270527	6	7	0.005	5			
CRLR0016	1270528	7	8	0.01	10			
RLR0016	1270529	8	9	0.02	20			
CRLR0016	1270530	9	10	0.02	20			
RLR0016	1270532	10	11	0.005	5			
CRLR0016	1270533	11	12	0.005	5			
RLR0016	1270534	12	13	0.005	5			
CRLR0016	1270535	13	14	0.005	5			
RLR0016	1270536	14	15	0.005	5			
CRLR0016	1270537	15	16	0.005	5			
RLR0016	1270538	16	17	0.005	5			
CRLR0016	1270539	17	18	0.005	5			
RLR0016	1270540	18	19	0.005	5			
CRLR0016	1270541	19	20	0.005	5			
RLR0016	1270542	20	21	0.005	5			
CRLR0016	1270543	21	22	0.005	5			
RLR0016	1270544	22	23	0.005	5			
CRLR0016	1270545	23	24	0.01	10			
RLR0016	1270546	24	25	0.005	5			
CRLR0016	1270547	25	26	0.005	5			
RLR0016	1270548	26	27	0.005	5			
CRLR0016	1270549	27	28	0.005	5			
RLR0016	1270550	28	29	0.005	5			
CRLR0016	1270551	29	30	0.005	5			

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
RLR0016	1270552	30	31	0.005	5			
CRLR0016	1270553	31	32	0.005	5			
RLR0016	1270554	32	33	0.005	5			
CRLR0016	1270555	33	34	0.005	5			
RLR0016	1270556	34	35	0.005	5			
CRLR0016	1270557	35	36	0.005	5			
RLR0016	1270558	36	37	0.005	5			
CRLR0016	1270559	37	38	0.005	5			
RLR0016	1270560	38	39	0.005	5			
CRLR0016	1270562	39	40	0.01	10			
RLR0016	1270563	40	41	0.005	5			
CRLR0016	1270564	41	42	0.005	5			
RLR0016	1270565	42	43	0.005	5			
CRLR0016	1270566	43	44	0.005	5			
RLR0016	1270567	44	45	0.005	5			
CRLR0016	1270568	45	46	0.005	5			
RLR0016	1270569	46	47	0.005	5			
CRLR0016	1270570	47	48	0.005	5			
RLR0016	1270571	48	49	0.005	5			
CRLR0016	1270572	49	50	0.005	5			
RLR0016	1270573	50	51	0.005	5			
CRLR0016	1270574	51	52	0.005	5			
RLR0016	1270575	52	53	0.005	5			
CRLR0016	1270576	53	54	0.005	5			
RLR0016	1270577	54	55	0.005	5			
CRLR0016	1270578	55	56	0.005	5			
RLR0016	1270579	56	57	0.005	5			
CRLR0016	1270580	57	58	0.005	5			
RLR0016	1270581	58	59	0.005	5			
CRLR0016	1270582	59	60	0.005	5			
RLR0016	1270583	60	61	0.005	5			
CRLR0016	1270584	61	62	0.005	5			

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
RLR0016	1270585	62	63	0.005	5			
CRLR0016	1270586	63	64	0.005	5			
RLR0016	1270587	64	65	0.005	5			
CRLR0016	1270588	65	66	0.005	5			
RLR0016	1270589	66	67	0.13	130			
CRLR0016	1270590	67	68	0.005	5			
RLR0016	1270592	68	69	0.04	40			
CRLR0016	1270593	69	70	0.005	5			
RLR0016	1270594	70	71	0.005	5			
CRLR0016	1270595	71	72	0.005	5			
RLR0016	1270596	72	73	0.005	5			
CRLR0016	1270597	73	74	0.005	5			
RLR0016	1270598	74	75	0.005	5			
CRLR0016	1270599	75	76	0.005	5			
RLR0016	1270600	76	77	0.005	5			
CRLR0016	1270601	77	78	0.07	70			
RLR0016	1270602	78	79	0.005	5			
CRLR0016	1270603	79	80	0.005	5			
RLR0016	1270604	80	81	0.02	20			
CRLR0016	1270605	81	82	0.08	80			
RLR0016	1270606	82	83	0.005	5			
CRLR0016	1270607	83	84	0.005	5			
RLR0016	1270608	84	85	0.005	5			
CRLR0016	1270609	85	86	0.01	10			
RLR0016	1270610	86	87	0.005	5			
CRLR0016	1270611	87	88	0.005	5			
RLR0016	1270612	88	89	0.005	5			
CRLR0016	1270613	89	90	0.005	5			
RLR0016	1270614	90	91	0.005	5			
CRLR0016	1270615	91	92	0.005	5			
RLR0016	1270616	92	93	0.005	5			
CRLR0016	1270617	93	94	0.005	5			

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
CRLR0016	1270618	94	95	0.005	5			
CRLR0016	1270619	95	96	0.095	95			
CRLR0016	1270620	96	97	0.005	5			
CRLR0016	1270621	97	98	0.005	5			
CRLR0016	1270622	98	99	0.005	5			
CRLR0016	1270623	99	100	0.005	5			
CRLR0016	1270624	100	101	0.005	5			
CRLR0016	1270625	101	102	0.005	5			
CRLR0016	1270626	102	103	0.005	5			
CRLR0016	1270627	103	104	0.005	5			
CRLR0016	1270628	104	105	0.005	5			
CRLR0016	1270629	105	106	0.005	5			
CRLR0016	1270630	106	107	0.005	5			
CRLR0016	1270632	107	108	0.05	50			
CRLR0016	1270633	108	109	0.09	90			
CRLR0016	1270634	109	110	0.04	40			
CRLR0016	1270635	110	111	0.02	20			
CRLR0016	1270636	111	112	0.005	5			
CRLR0016	1270637	112	113	0.005	5			
CRLR0016	1270638	113	114	0.005	5			
CRLR0016	1270639	114	115	0.005	5			
CRLR0016	1270640	115	116	0.005	5			
CRLR0016	1270641	116	117	0.005	5			
CRLR0016	1270642	117	118	0.155	155			
CRLR0016	1270643	118	119	0.005	5			
CRLR0016	1270644	119	120	0.005	5			
CRLR0016	1270645	120	121	0.04	40			
CRLR0016	1270646	121	122	0.005	5			
CRLR0016	1270647	122	123	0.005	5			
CRLR0016	1270648	123	124	0.005	5			
CRLR0016	1270649	124	125	0.005	5			
CRLR0016	1270650	125	126	0.005	5			

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
WPH0001	1274432	0	2	0.002	2			AC 43428
EWPH0001	1274433	2	4	0.001	1			AC 43428
WPH0001	1274434	4	6	0.003	3			AC 43428
EWPH0001	1274435	6	8	0.003	3			AC 43428
WPH0001	1274436	8	10	0.001	1			AC 43428
EWPH0002	1274437	0	2	0.002	2			AC 43428
WPH0002	1274438	2	4	0.001	1			AC 43428
EWPH0002	1274439	4	6	0.003	3			AC 43428
WPH0002	1274440	6	8	0.002	2			AC 43428
EWPH0002	1274441	8	10	0.002	2			AC 43428
WPH0002	1274442	10	12	0.003	3			AC 43428
EWPH0002	1274443	12	14	0.002	2			AC 43428
WPH0002	1274444	14	16	0.001	1			AC 43428
EWPH0002	1274445	16	18	0.0025	2.5			AC 43428
WPH0002	1274446	18	20	0.002	2			AC 43428
EWPH0002	1274447	20	21	0.001	1			AC 43428
WPH0003	1274448	0	2	0.002	2			AC 43428
EWPH0003	1274449	2	4	0.0025	2.5			AC 43428
WPH0003	1274450	4	6	0.002	2			AC 43428
EWPH0003	1274451	6	8	0.002	2			AC 43428
WPH0003	1274452	8	10	0.001	1			AC 43428
EWPH0003	1274453	10	12	0.002	2			AC 43428
WPH0003	1274454	12	14	0.001	1			AC 43428
EWPH0003	1274455	14	16	0.0005	0.5			AC 43428
WPH0003	1274456	16	18	0.002	2			AC 43428
EWPH0003	1274457	18	20	0.002	2			AC 43428
WPH0003	1274458	20	22	0.001	1			AC 43428
EWPH0003	1274459	22	24	0.002	2			AC 43428
WPH0004	1274460	0	2	0.003	3			AC 43428
EWPH0004	1274462	2	4	0.003	3			AC 43428
WPH0004	1274463	4	6	0.002	2			AC 43428
EWPH0004	1274464	6	8	0.004	4			AC 43428

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
WPH0004	1274465	8	10	0.004	4			AC 43428
EWPH0004	1274466	10	12	0.003	3			AC 43428
WPH0004	1274467	12	14	0.001	1			AC 43428
EWPH0004	1274468	14	16	0.002	2			AC 43428
WPH0004	1274469	16	18	0.003	3			AC 43428
EWPH0004	1274470	18	19	0.004	4			AC 43428
WPH0005	1274471	0	2	0.002	2			AC 43428
EWPH0005	1274472	2	4	0.002	2			AC 43428
WPH0005	1274473	4	6	0.001	1			AC 43428
EWPH0005	1274474	6	8	0.002	2			AC 43428
WPH0005	1274475	8	9	0.0025	2.5			AC 43428
EWPH0006	1274476	0	2	0.003	3			AC 43428
WPH0006	1274477	2	4	0.002	2			AC 43428
EWPH0006	1274478	4	6	0.002	2			AC 43428
WPH0006	1274479	6	8	0.0025	2.5			AC 43428
EWPH0006	1274480	8	10	0.003	3			AC 43428
WPH0006	1274481	10	12	0.006	6			AC 43428
EWPH0006	1274482	12	14	0.002	2			AC 43428
WPH0006	1274483	14	16	0.003	3			AC 43428
EWPH0006	1274484	16	17	0.003	3			AC 43428
WPH0007	1274485	0	2	0.005	5			AC 43428
EWPH0007	1274486	2	4	0.002	2			AC 43428
WPH0007	1274487	4	6	0.002	2			AC 43428
EWPH0007	1274488	6	8	0.001	1			AC 43428
WPH0007	1274489	8	10	0.004	4			AC 43428
EWPH0007	1274490	10	12	0.003	3			AC 43428
WPH0007	1274492	12	14	0.0015	1.5			AC 43428
EWPH0007	1274493	14	16	0.001	1			AC 43428
WPH0007	1274494	16	18	0.002	2			AC 43428
EWPH0008	1274495	0	2	0.002	2			AC 43428
WPH0008	1274496	2	4	0.004	4			AC 43428
WPH0008	1274497	4	6	0.003	3			AC 43428

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
WPH0008	1274498	6	8	0.002	2			AC 43428
EWPH0008	1274499	8	10	0.003	3			AC 43428
WPH0008	1274500	10	12	0.002	2			AC 43428
EWPH0008	1274501	12	14	0.005	5			AC 43428
WPH0008	1274502	14	15	0.002	2			AC 43428
EWPH0009	1274503	0	2	0.001	1			AC 43428
WPH0009	1274504	2	4	0.0035	3.5			AC 43428
EWPH0009	1274505	4	6	0.002	2			AC 43428
WPH0009	1274506	6	8	0.001	1			AC 43428
EWPH0009	1274507	8	10	0.002	2			AC 43428
WPH0009	1274508	10	12	0.001	1			AC 43428
EWPH0009	1274509	12	14	0.001	1			AC 43428
WPH0009	1274510	14	16	0.0008	0.8			AC 43428
EWPH0009	1274511	16	18	0.001	1			AC 43428
WPH0010	1274512	0	2	0.007	7			AC 43428
EWPH0010	1274513	2	4	0.002	2			AC 43428
WPH0010	1274514	4	6	0.001	1			AC 43428
EWPH0010	1274515	6	8	0.0005	0.5			AC 43428
WPH0010	1274516	8	10	0.002	2			AC 43428
EWPH0010	1274517	10	12	0.002	2			AC 43428
WPH0010	1274518	12	14	0.004	4			AC 43428
EWPH0010	1274519	14	16	0.002	2			AC 43428
WPH0010	1274520	16	18	0.004	4			AC 43428
EWPH0011	1274521	0	2	0.007	7			AC 43428
WPH0011	1274522	2	4	0.004	4			AC 43428
EWPH0011	1274523	4	6	0.002	2			AC 43428
WPH0011	1274524	6	8	0.001	1			AC 43428
EWPH0011	1274525	8	10	0.001	1			AC 43428
WPH0011	1274526	10	12	0.003	3			AC 43428
EWPH0011	1274527	12	14	0.001	1			AC 43428
WPH0011	1274528	14	16	0.0015	1.5			AC 43428
EWPH0011	1274529	16	18	0.001	1			AC 43428

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
WPH0012	1274530	0	2	0.015	15			AC 43428
EWPH0012	1274532	2	4	0.005	5			AC 43428
WPH0012	1274533	4	6	0.002	2			AC 43428
EWPH0012	1274534	6	8	0.0215	21.5			AC 43428
WPH0012	1274535	8	10	0.415	415			AC 43428
EWPH0012	1274536	10	12	0.004	4			AC 43428
WPH0012	1274537	12	14	0.003	3			AC 43428
EWPH0012	1274538	14	16	0.003	3			AC 43428
WPH0012	1274539	16	18	0.009	9			AC 43428
EWPH0013	1274540	0	2	0.012	12			AC 43428
WPH0013	1274541	2	4	0.004	4			AC 43428
EWPH0013	1274542	4	6	0.002	2			AC 43428
WPH0013	1274543	6	8	0.001	1			AC 43428
EWPH0013	1274544	8	10	0.003	3			AC 43428
WPH0013	1274545	10	12	0.004	4			AC 43428
EWPH0013	1274546	12	14	0.003	3			AC 43428
WPH0013	1274547	14	16	0.006	6			AC 43428
EWPH0013	1274548	16	18	0.003	3			AC 43428
WPH0013	1274549	18	20	0.005	5			AC 43428
EWPH0014	1274550	0	2	0.017	17			AC 43428
WPH0014	1274551	2	4	0.002	2			AC 43428
EWPH0014	1274552	4	6	0.002	2			AC 43428
WPH0014	1274553	6	8	0.001	1			AC 43428
EWPH0014	1274554	8	10	0.001	1			AC 43428
WPH0014	1274555	10	12	0.003	3			AC 43428
EWPH0014	1274556	12	14	0.0105	10.5			AC 43428
WPH0014	1274557	14	16	0.003	3			AC 43428
EWPH0014	1274558	16	18	0.001	1			AC 43428
WPH0015	1274559	0	2	0.008	8			AC 43432
EWPH0015	1274560	2	4	0.005	5			AC 43432
WPH0015	1274562	4	6	0.005	5			AC 43432
EWPH0015	1274563	6	8	0.007	7			AC 43432

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
WPH0015	1274564	8	10	0.005	5			AC 43432
EWPH0015	1274565	10	12	0.004	4			AC 43432
WPH0015	1274566	12	13	0.003	3			AC 43432
EWPH0016	1274567	0	2	0.0105	10.5			AC 43432
WPH0016	1274568	2	4	0.009	9			AC 43432
EWPH0016	1274569	4	6	0.011	11			AC 43432
WPH0016	1274570	6	8	0.004	4			AC 43432
EWPH0016	1274571	8	10	0.003	3			AC 43432
WPH0016	1274572	10	12	0.003	3			AC 43432
EWPH0016	1274573	12	13	0.003	3			AC 43432
WPH0017	1274574	0	2	0.014	14			AC 43432
EWPH0017	1274575	2	4	0.007	7			AC 43432
WPH0017	1274576	4	6	0.004	4			AC 43432
EWPH0017	1274577	6	8	0.006	6			AC 43432
WPH0017	1274578	8	10	0.005	5			AC 43432
EWPH0017	1274579	10	12	0.004	4			AC 43432
WPH0017	1274580	12	13	0.002	2			AC 43432
EWPH0018	1274581	0	2	0.01	10			AC 43432
WPH0018	1274582	2	4	0.0125	12.5			AC 43432
EWPH0018	1274583	4	6	0.006	6			AC 43432
WPH0018	1274584	6	8	0.005	5			AC 43432
EWPH0018	1274585	8	10	0.006	6			AC 43432
WPH0018	1274586	10	12	0.003	3			AC 43432
EWPH0018	1274587	12	13	0.006	6			AC 43432
WPH0019	1274588	0	2	0.01	10			AC 43432
EWPH0019	1274589	2	4	0.0325	32.5			AC 43432
WPH0019	1274590	4	6	0.003	3			AC 43432
EWPH0019	1274592	6	8	0.004	4			AC 43432
WPH0019	1274593	8	10	0.004	4			AC 43432
EWPH0019	1274594	10	12	0.004	4			AC 43432
WPH0019	1274595	12	13	0.005	5			AC 43432
WPH0020	1274596	0	2	0.015	15			AC 43432

Hole	Samp	Fm	To	Au_ppm	Au_ppb	As	Bi	Batch
WPH0020	1274597	2	4	0.0565	56.5			AC 43432
EWPH0020	1274598	4	6	0.002	2			AC 43432
WPH0020	1274599	6	8	0.0035	3.5			AC 43432
EWPH0020	1274600	8	10	0.003	3			AC 43432
WPH0020	1274601	10	12	0.004	4			AC 43432
EWPH0020	1274602	12	13	0.005	5			AC 43432

APPENDIX 3

RC and Vacuum Drill Hole Geology Logs

Acacia Exploration
Geological Logging Codes

RETURN
(RTN)

%	Of Return

WATER
(H2O)

B	Blowndry
D	Dry
I	Injected
M	Moist
W	Wet

HARDNESS

VH	Very Hard
H	Hard
M	Medium
S	Soft
VS	Very Soft

COLOUR
(COLOUR)

Qualifier

DK	Dark
LT	Light

BE	Beige
BG	Blue/green
BK	Black
BL	Blue
BN	Brown
CM	Cream
GN	Green
GY	Grey
KK	Khaki
MS	Mustard
OG	Orange
PI	Pink
PP	Purple
RD	Red
TN	Tan
WH	White
YE	Yellow

e.g BNGN, LTBN

TEXTURE
(Text)

Qualifier

ST	Strong
MD	Moderate
WK	Weak

Sedimentary

IB	Interbedded
LM	Laminated
LY	Layered

TEXTURE Ctd.
(TEXT)

Metamorphic

CR	Crenulated
MY	Mylonitic
PB	Porphroblastic
SC	Schistose
SP	Spotted

Igneous

AC	Acicular
AM	Amygdaloidal
AN	Aphanitic
EQ	Equigranular
PO	Porphyritic
PW	Pillows

Structural

BO	Boxwork
BX	Brecciated
FD	Folded
FO	Foliated
FR	Fractured
LI	Lineated
RO	Rodded
SH	Sheared
SL	Slickenslides

Others

CX	Crystalline
CO	Competant
FB	Fibrous
GO	Gossanous
MS	Massive
PT	Platy
PS	Porous
SA	Saccaroidal
SB	Solution Bands

GRAINSIZE
(GN_SZ)

VF	Very Fine
FN	Fine - not visible to naked eye
MD	Medium - visible to naked eye
CS	Coarse - >2mm
VC	Very Coarse (pebble)

WEATH (Weathering)
(WTH)

EW	Extremely weathered with poor textural preservation
HW	Highly weathered with moderate textural preservation
MW	Moderately weathered with good textural preservation
SW	Slightly weathered with < 20% oxides
FR	Fresh Bedrock

REGOLITH
(REGO)

BR	Bedrock (fresh)
LS	Lower Saprolite
RX	Redox Front
SA	Saprolite (undifferentiated)
TL	Laterite
TR	Transported
US	Upper Saprolite
WB	Weathered Bedrock

Overprints

MT	Mottling
CT	Calcrete
ST	Silcrete
FT	Ferricrete
GT	Goethite
HM	Haematite

e.g. USMT, USGT

ROCKTYPE
(MAJ, MIN1, MIN2)

Sedimentary

AG	Agglomerate
BX	Breccia
BIF	Banded Iron Form
CB	Carbonate
CG	Conglomerate
CGW	Carbonaceous Greywacke
CH	Chert
CSH	Carbonaceous Shale
CSI	Carbonaceous Siltstone
CSS	Carbonaceous Sandstone
DO	Dolomite
EE	Epiclastic
GS	Graphitic Shale
GW	Greywacke (>15%matrix)
HS	Haematitic Shale
LM	Limestone
SH	Shale
SI	Siltstone
SS	Sandstone
TF	Tuff

Igneous

AP	Aplite
DL	Dolerite
EB	Basalt
EBA	Antrim Plateau Volcanics
FI	Felsic Intrusive (undiff)
GB	Gabbro
GR	Granite (undiff)
GRA	Alkali Granite
GRD	Granodiorite
MI	Mafic Intrusive (undiff)
PG	Pegmatite
PO	Porphyry
VA	Acid Volcanic
VB	Basic Volcanic
VI	Intermediate Volcanic

Metamorphic

AM	Amphibolite
BMS	Biotite Mica Schist
GN	Gneiss
HF	Hornfels

ROCKTYPE Ctd.
(MAJ, MIN1, MIN2)

Metamorphic Ctd

PH	Phyllite
QC	Quartz Carbonate
QMS	Quartz Mica Schist
QT	Quartzite
SC	Schist
SL	Slate
SSM	Metasediment
TM	Tourmalinite

Other

CL	Clay
CT	Calcrete
FT	Ferricrete
GV	Gravel
GO	Gossan
IS	Ironstone
MK	Mullock
NS	No Sample
PI	Pisolitic Gravel
QV	Massive Quartz Vein
SD	Sand
ST	Silcrete
TL	Laterite

ALT TYPE
(ALTER)

AB	Albite
AD	Andalusite
AM	Amphibole
AT	Altered (undiff)
AU	Gold
BI	Biotite
BL	Bleaching (cb-si)
CB	Carbonate
CH	Chlorite
CL	Clay
CW	Clay Weathering
EP	Epidote
FE	Iron
FL	Fluorine
GA	Garnet
GN	Green Alteration
GP	Graphite
GT	Goethite
HM	Haematite
KA	Kaolinite
KS	K-Feldspar
KY	Kyanite
LI	Limonite
LX	Leucoxene
MI	Mica
MN	Manganese
MT	Magnetite
MU	Muscovite
PH	Phlogopite
PL	Plagioclase
PY	Pyrite
SE	Sericite
SI	Silica
SR	Siderite
TC	Talc
TE	Tremolite
TM	Tourmaline
ZE	Zeolite

Acacia Exploration
Geological Logging Codes Ctd.

ALT QUAL (QUAL)	
Qualifier	
TR	Trace
WK	Weak
MD	Moderate
ST	Strong
IN	Intense
DM	Disseminated
PV	Pervasive
PT	Patchy
SV	Selvedge
VN	Vein
e.g.	STDM, MRSV

VEIN TYPE (VN_TYPE)	
CB	Carbonate
CH	Chlorite
HM	Haematite
PY	Pyrite
QZ	Quartz
SE	Sericite

VEIN STYLE (VN_STYLE)	
BK	Buck
BX	Breccia
CB	Comb
CH	Chalcedonic
FB	Fibrous
LM	Laminated
MI	Milky
RB	Ribbon
SA	Saccharoidal
SM	Smoky
ST	Stringer
SW	Stock Work
TR	Translucent

MINERALISATION (OTHERSULPH, OTHER MIN)	
AS	Arsenopyrite
AZ	Azurite
AU	Gold
BI	Biotite
BO	Bornite
CB	Carbonate (undiff)
CC	Chalcocite
CN	Native Copper
CP	Chalcopyrite
CU	Cuprite
CV	Covellite
GA	Galena
GR	Garnet
GT	Goethite
HM	Haematite
MA	Malachite
MF	Fine Black Mineral
MN	Manganese
PO	Pyrrhotite
PY	Pyrite
SP	Sphalerite

NB: Mineral content must be expressed as a numeric e.g. 0.5, 1, 5 etc.

STRUCTURAL DEFECTS (Geotech)	
BE	Bedding
BK	Broken Zone
CG	Cleavage
DK	Dyke
FA	Fold Axis
FG	Fragmented Zone
FH	Fold Hinge
FR	Fractured Zone
FT	Fault
FV	Fractured Vein
LI	Lineation
JO	Joint
SC	Schistosity
SH	Shear Zone
VS	Vein Stockwork
VN	Vein
VB	Brecciated Vein

ROCK STRENGTH (Geotech)	
VW	Very Weak
W	Weak
M	Medium Strong
S	Strong
VS	Very Strong

ROUGHNESS (Geotech)	
K	Slickenslided
P	Polished
R	Rough
S	Smooth

BROKEN ZONE (Geotech)	
D	Drill Induced
H	Heated
N	Natural

FRACTURING (Geotech)	
WF	Weak, core pieces 1m-200m
MF	Mod. core pieces 10-20cm
SF	Strong, core pieces 5-10cm
BK	Broken core, 25 cm pieces

SHAPE (Geotech)	
P	Planar
S	Stepped
U	Undulating

Logging Notes:

(1) Only **one** logging code to be entered per field (excluding qualifiers and two colours where necessary).

(2) **No new codes** to be entered without notification and approval.

(3) **No backslashes, commas, hyphens** etc. to be used in any field except Comments.

(4) Quartz Veining and Mineral content must be expressed as a **numeral** (**not** Trace, Tr etc.)

(5) Hole Numbers must be entered correctly using the appropriate prefix and **four** digit number.

(6) All geological logs **must** be validated prior to entry onto Access Dbase.

Geology Report

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
CRLR0016	0	1	CL				RD	EW	D	40																RED TR CLAYS
CRLR0016	1	2	CL				RD	EW	D	40																RED TR CLAYS
CRLR0016	2	3	CL	SH			PP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	3	4	SH	CL		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	4	5	SH	CL		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	5	6	SH	CL		HM	RDPP	HW	D	80	FO	2														PU CLAYEY SHALE
CRLR0016	6	7	SH	CL		HM	RDPP	HW	D	80	FO	2														PU CLAYEY SHALE
CRLR0016	7	8	SH	CL		HM	RDPP	HW	D	80	FO	2														PU CLAYEY SHALE
CRLR0016	8	9	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	9	10	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	10	11	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	11	12	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	12	13	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	13	14	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	14	15	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	15	16	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	16	17	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	17	18	CL	SH		HM	RDPP	HW	D	80	FO															PU CLAYEY SHALE
CRLR0016	18	19	SH	CL		HM	RDPP	HW	D	80	FO															WETH CLAYEY SHALE
CRLR0016	19	20	SH	CL		HM	RDPP	HW	D	80	FO															WETH CLAYEY SHALE

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
CRLR0016	20	21	SH	CL		HM	RD	HW	D	80	FO															WETH CLAYEY SHALE
CRLR0016	21	22	SH	CL		HM	RD	HW	D	80	FO															WETH CLAYEY SHALE
CRLR0016	22	23	SH	CL		HM	RD	HW	D	80	FO															WETH CLAYEY SHALE
CRLR0016	23	24	SH	CL		HM	RD	HW	D	80	FO															WETH CLAYEY SHALE
CRLR0016	24	25	SH	CL		HM	RDPP	HW	D	80	FO															WETH CLAYEY SHALE
CRLR0016	25	26	SH	CL		HM	RDPP	HW	D	80	FO															WETH CLAYEY SHALE
CRLR0016	26	27	SH	CL		HM	RDPP	HW	D	80	FO															WETH CLAYEY SHALE
CRLR0016	27	28	SH			HM	RDBN	MW	D	80	FO															WETH SHALE
CRLR0016	28	29	SH			HM	RDBN	MW	D	80	FO															WETH SHALE
CRLR0016	29	30	SH			HM	RDBN	MW	D	80	FO															WETH SHALE
CRLR0016	30	31	SH				BN	MW	D	80	FO	3														WETH SHALE
CRLR0016	31	32	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	32	33	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	33	34	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	34	35	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	35	36	SH			HM	RD	MW	D	80	FO															WETH SHALE
CRLR0016	36	37	SH			HM	RD	MW	D	80	FO															WETH SHALE
CRLR0016	37	38	SH			HM	RDBN	MW	D	80	FO															WETH SHALE
CRLR0016	38	39	SH			HM	RDBN	MW	D	80	FO															WETH SHALE
CRLR0016	39	40	SH			HM	RDBN	MW	D	80	FO															WETH SHALE
CRLR0016	40	41	SH			HM	RDBN	MW	D	80	FO															WETH SHALE
CRLR0016	41	42	SH			HM	BN	MW	D	80	FO															WETH SHALE
CRLR0016	42	43	SH			HM	BN	MW	D	80	FO															WETH SHALE

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
CRLR0016	43	44	SH			HM	BN	MW	D	80	FO															WETH SHALE
CRLR0016	44	45	SH			HM	BN	MW	D	80	FO															WETH SHALE
CRLR0016	45	46	SH			HM	BN	MW	D	80	FO															WETH SHALE
CRLR0016	46	47	SH			HM	BN	MW	D	80	FO															WETH SHALE
CRLR0016	47	48	SH			HM	BN	MW	D	80	FO															WETH SHALE
CRLR0016	48	49	SH			HM	BN	MW	D	80	FO															WETH SHALE
CRLR0016	49	50	SH	CL		HM	BN	MW	D	80	FO															WETH SHALE
CRLR0016	50	51	SH	CL			BNGY	MW	D	80	FO															WETH SHALE
CRLR0016	51	52	SH	CL			BNGY	MW	D	80	FO															WETH SHALE
CRLR0016	52	53	SH	CL			BNGY	MW	D	80	FO															WETH SHALE
CRLR0016	53	54	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	54	55	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	55	56	SH	CL			LTBN	MW	D	80	FO															WETH SHALE
CRLR0016	56	57	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	57	58	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	58	59	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	59	60	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	60	61	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	61	62	SH				BN	MW	D	80	FO															WETH SHALE
CRLR0016	62	63	SH			HM	BNBK	SW	D	80	FO															WETH SHALE
CRLR0016	63	64	SH			HM	BNBK	SW	D	80	FO															WETH SHALE
CRLR0016	64	65	SH			HM	BNBK	SW	D	80	FO															WETH SHALE
CRLR0016	65	66	SH			HM	BNBK	SW	D	80	FO															WETH SHALE

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
CRLR0016	66	67	SH				BNBK	SW	D	80	FO															WETH SHALE
CRLR0016	67	68	SH				BNBK	SW	D	80	FO															WETH SHALE
CRLR0016	68	69	SH				BNBK	SW	D	80	FO															WETH SHALE
CRLR0016	69	70	SH				BK	SW	D	80	FO															BK SHALE
CRLR0016	70	71	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	71	72	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	72	73	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	73	74	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	74	75	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	75	76	SH			SI	BK	FR	D	80	FO															BK SHALE
CRLR0016	76	77	SH			SI	BK	FR	D	80	FO															BK SHALE
CRLR0016	77	78	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	78	79	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	79	80	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	80	81	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	81	82	SH			SI	BK	FR	D	80	FO															BK SHALE
CRLR0016	82	83	SH			SI	BK	FR	D	80	FO	1														BK SHALE
CRLR0016	83	84	SH			SI	BK	FR	D	80	FO	1														BK SHALE
CRLR0016	84	85	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	85	86	SH				BK	FR	D	80	FO															BK SHALE
CRLR0016	86	87	SH				BK	FR	D	80	FO	3								1						BK SHALE
CRLR0016	87	88	SH				BK	FR	D	80	FO	3								1						BK SHALE
CRLR0016	88	89	SH			SI	BK	FR	D	80	FO	3								1						BK SHALE

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
CRLR0016	89	90	SH			SI	BK	FR	D	80	FO	3								1						BK SHALE
CRLR0016	90	91	SH				BK	FR	D	80	FO									1						BK SHALE
CRLR0016	91	92	SH				BK	FR	D	80	FO									1						BK SHALE
CRLR0016	92	93	SH			SI	BK	FR	D	80	FO									1						BK SHALE
CRLR0016	93	94	SH			SI	BK	FR	D	80	FO									1						BK SHALE
CRLR0016	94	95	SH			SI	BK	FR	D	80	FO	2								1						BK SHALE
CRLR0016	95	96	SH	QV			BK	FR	D	80	FO	15								3						BK SHALE WITH QZ PY VEINING
CRLR0016	96	97	SH				BK	FR	D	80	FO	1								1						BK SHALE
CRLR0016	97	98	SH				BK	FR	D	80	FO	1								1						BK SHALE
CRLR0016	98	99	SH				BK	FR	D	80	FO	1								1						BK SHALE
CRLR0016	99	100	SH				BK	FR	D	80	FO	1								1						BK SHALE
CRLR0016	100	101	SH				BK	FR	D	80	FO	1								1						BK SHALE
CRLR0016	101	102	SH			GNSI	BK	FR	D	80	FO	2			2					1						BK SHALE WITH CHERT AND QZ PY VEINS
CRLR0016	102	103	SH			GNSI	BK	FR	D	80	FO	2								0.5						ALT BK SHALE
CRLR0016	103	104	SH			GNSI	BK	FR	D	80	FO	2								0.5						ALT BK SHALE
CRLR0016	104	105	SH			GNSI	BK	FR	D	80	FO	2								0.5						ALT BK SHALE
CRLR0016	105	106	SH			GNSI	BK	FR	D	80	FO	2								0.5						ALT BK SHALE
CRLR0016	106	107	SH			GNSI	BK	FR	D	80	FO	5								3						ALT BK SHALE
CRLR0016	107	108	SH			GNSI	BKGN	FR	D	80	FO	5								10						ALT BK SHALE
CRLR0016	108	109	SH			GNSI	BKGN	FR	D	80	FO	5								15						ALT BK SHALE
CRLR0016	109	110	SH			GNSI	BKGN	FR	D	80	FO	5								15						ALT BK SHALE
CRLR0016	110	111	SH			GNSI	BK	FR	D	80	BX	10								3						POSS BX SHALE
CRLR0016	111	112	SH			GNSI	BK	FR	D	80	BX	10								3						POSS BX SHALE

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
CRLR0016	112	113	SH			GNSI	BK	FR	D	80	BX	10								3						POSS BX SHALE
CRLR0016	113	114	SH			GNSI	BK	FR	D	80	BX	10								5						POSS BX SHALE
CRLR0016	114	115	SH				BK	FR	D	80	BX	10								5						POSS BX SHALE
CRLR0016	115	116	SH				BK	FR	D	80	BX	10								2						POSS BX SHALE
CRLR0016	116	117	SH			GNSI	BK	FR	D	80	FO	4								2						GN ALT SHALE
CRLR0016	117	118	SH			GNSI	BK	FR	D	80	FO	4								2						GN ALT SHALE
CRLR0016	118	119	SH			GNSI	BN	FR	D	80	FO	4								2						BN ALT SHALE POSS SI WITH MINOR QZ VEINING
CRLR0016	119	120	SH			GNSI	BN	FR	D	80	FO	2								2						BK SHALE
CRLR0016	120	121	SH			GNSI	BN	FR	D	80	FO	2								2						BK SHALE
CRLR0016	121	122	SH			GNSI	BK	FR	D	80	FO	2								2						BK SHALE
CRLR0016	122	123	SH			GNSI	BK	FR	D	80	FO	2								2						BK SHALE
CRLR0016	123	124	SH			GNSI	BK	FR	D	80	FO	2								2						BK SHALE
CRLR0016	124	125	DL	SH			BK	FR	D	80		2												PLBIHB		DOLERITE WITH QZ VEINING
CRLR0016	125	126	DL				BK	FR	D	80		2												PLBIHB		DOLERITE
EWPH0001	0	2	CL	GV			RDBN																			
EWPH0001	2	4	SH				LTPP																			
EWPH0001	4	6	SH				LTPP																			
EWPH0001	6	8	SH				LTPP																			
EWPH0001	8	10	SH				LTGY																			
EWPH0002	0	2	CL	GV			RDBN																			
EWPH0002	2	4	CL	GW			GNBN																			
EWPH0002	4	6	CL	SH			GNBN																			
EWPH0002	6	8	CL	SH			LTPP																			

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
EWPH0002	8	10	SH				GNGY																			
EWPH0002	10	12	SH				GNGY																			
EWPH0002	12	14	SH				BNGY																			
EWPH0002	14	16	SH				GY																			
EWPH0002	16	18	SH				GY																			
EWPH0002	18	20	SH				GY																			
EWPH0002	20	21	SH				DKGY																			
EWPH0003	0	2	CL	GV			RDBK																			
EWPH0003	2	4	CL	SH			LTGY																			
EWPH0003	4	6	CL	SH			LTGY																			
EWPH0003	6	8	CL	SH			BE																			
EWPH0003	8	10	CL	SH			LTPP																			
EWPH0003	10	12	SH	CL			LTGY																			
EWPH0003	12	14	SH				GY																			
EWPH0003	14	16	SH				GY																			
EWPH0003	16	18	SH				GY																			
EWPH0003	18	20	SH				GY																			
EWPH0003	20	22	SH				GY																			
EWPH0003	22	24	SH				GY																			
EWPH0004	0	2	CL				BKRD																			
EWPH0004	2	4	CL				LTPP																			
EWPH0004	4	6	CL				BE																			
EWPH0004	6	8	CL				BE																			

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
EWPH0004	8	10	CL	SH			BE																			
EWPH0004	10	12	CL	SH			LTPP																			
EWPH0004	12	14	SH	CL			LTPP																			
EWPH0004	14	16	SH	CL			GYPP																			
EWPH0004	16	18	SH	CL			LTPP																			
EWPH0004	18	19	CL	SH			LTPP																			
EWPH0005	0	2	CL	QV			RDBK																			
EWPH0005	2	4	CL				LTPP																			
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EWPH0006	0	2	CL	GV			RDGY																			
EWPH0006	2	4	CL	SH			BE																			
EWPH0006	4	6	SH	CL			LTBN																			
EWPH0006	6	8	SH	CL			LTBN																			
EWPH0006	8	10	SH	CL			BN																			
EWPH0006	10	12	CL	SH			BN																			
EWPH0006	12	14	CL	SH			BN																			
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EWPH0007	0	2	CL	GV			RDBK																			
EWPH0007	2	4	CL	SH			LTBN																			
EWPH0007	4	6	SH	CL			BN																			

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
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EWPH0007	8	10	CL	SH			GYBN																			
EWPH0007	10	12	CL	SH			RDBN																			
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EWPH0007	14	16	SH				GN																			
EWPH0007	16	18	SH				GN																			
EWPH0008	0	2	CL	GV			RDBN																			
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EWPH0008	10	12	SH	CL			GYPP																			
EWPH0008	12	14	SH				GYBN																			
EWPH0008	14	15	SH				GY																			
EWPH0009	0	2	CL	GV			RD																			
EWPH0009	2	4	SH	CL			PPBN																			
EWPH0009	4	6	SH	CL			BNPP																			
EWPH0009	6	8	SH	CL			BN																			
EWPH0009	8	10	SH				BN																			
EWPH0009	10	12	SH				BNGY																			
EWPH0009	12	14	SH				BNGY																			
EWPH0009	14	16	SH				BNGY																			
EWPH0009	16	18	SH				GY																			

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
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EWPH0011	14	16	CL	SH			LTPPBN																			
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EWPH0012	4	6	CL	SH			PP																			
EWPH0012	6	8	CL	SH			LTPP																			
EWPH0012	8	10	CL	SH			LTPP																			

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
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EWPH0012	14	16	CL	SH			LTPP																			
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EWPH0014	12	14	CL	SH			PPGY																			
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EWPH0014	16	18	CL	SH			PPGY																			

Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
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EWPH0015	2	4	CL				LTRD																			
EWPH0015	4	6	CL	SH			LTRDGY																			
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EWPH0016	4	6	GV	CL			LTRD																			
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EWPH0016	8	10	CL	QV			LTGYRD																			
EWPH0016	10	12	CL				LTGYRD																			
EWPH0016	12	14	CL				LTGYRD																			
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EWPH0017	12	13	CL				GYPP																			
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Hole	Fm	To	Maj	Min1	Min2	Alter	Col	Wth	H2O	Ret	Texture	Qtz	BMS	QMS	CHT	SI	GW	SH	Lim	Py	AsPy	Oth Sulph	Per	Oth Min	Per	Comments
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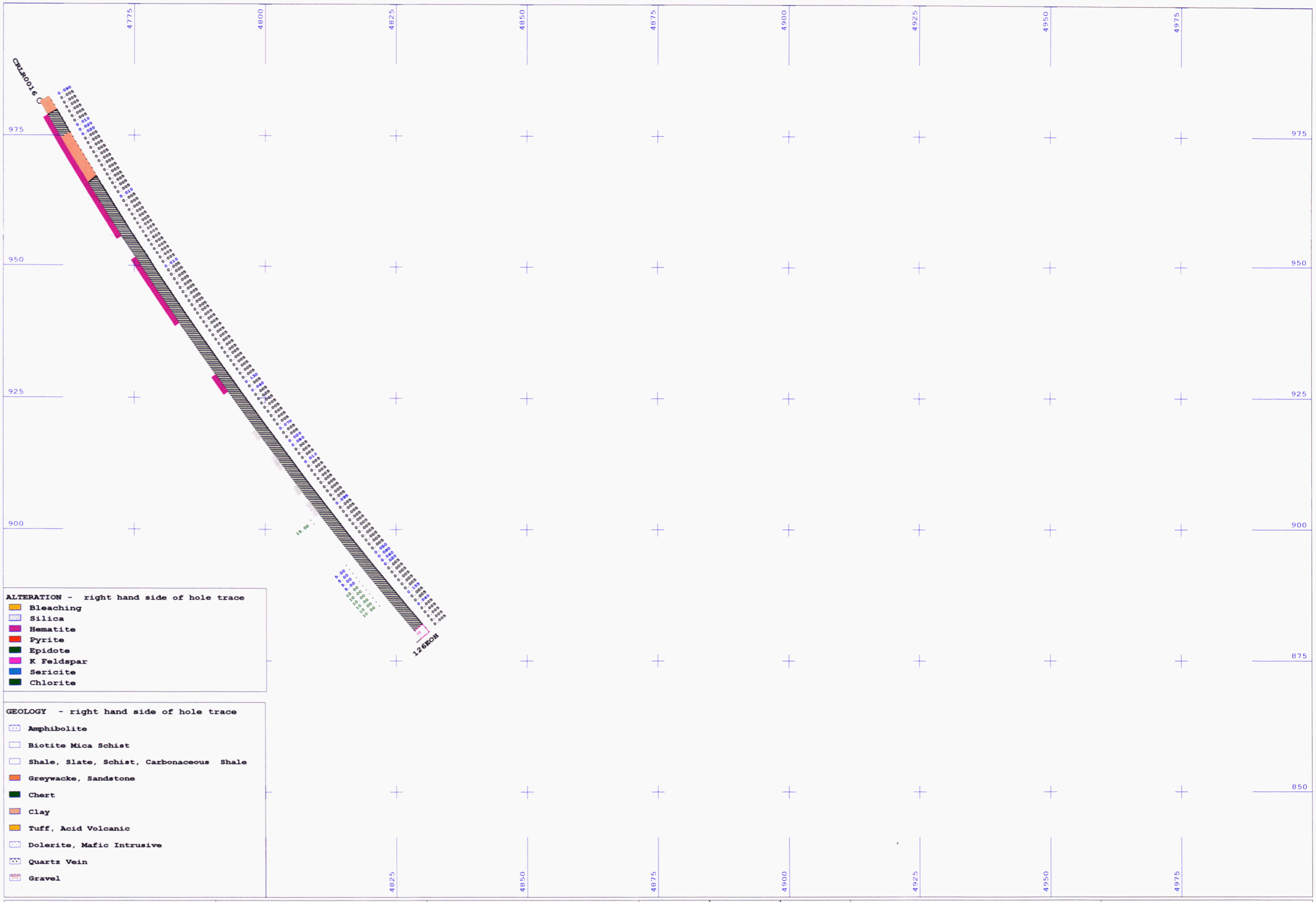

Plotted with

MICROMINE
Resources Software
Perth, Australia
Tel +61 8 9389 8722
Fax +61 8 9386 7462

ASSAYS
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>0.01-0.25g/t
>0.25-0.50g/t
>0.50-0.70g/t
>0.70-1.0g/t
>1g/t

Scale	DATE	SHEET
1:500	16/12/97	1 of 1
	REF No.	FILE CL7400

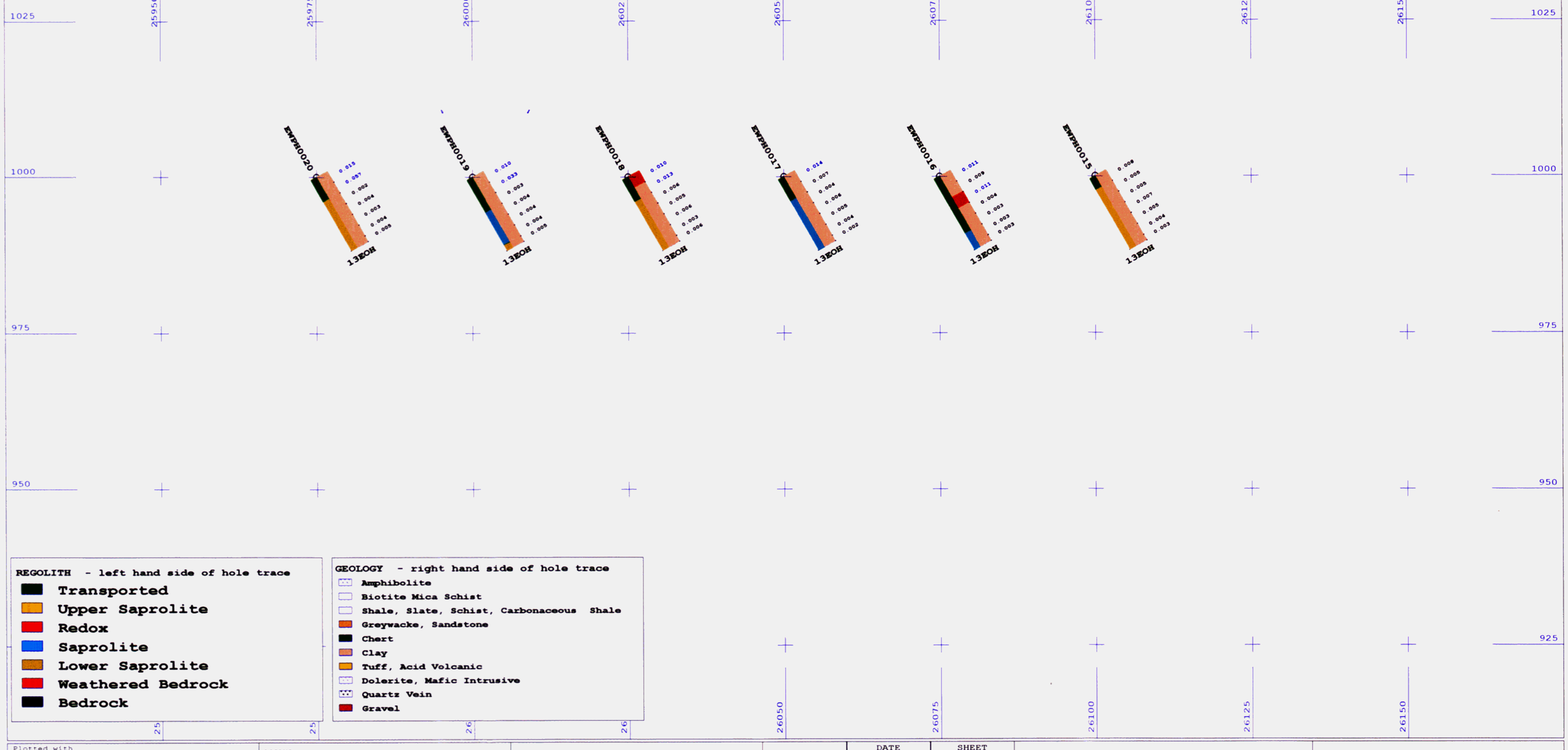
CAROLINE LEASES SECTIONS

7400N

ACACIA RESOURCES

PINE CREEK PROJECT

CR98/816



REGOLITH - left hand side of hole trace

- Transported
- Upper Saprolite
- Redox
- Saprolite
- Lower Saprolite
- Weathered Bedrock
- Bedrock

GEOLOGY - right hand side of hole trace

- Amphibolite
- Biotite Mica Schist
- Shale, Slate, Schist, Carbonaceous Shale
- Greywacke, Sandstone
- Chert
- Clay
- Tuff, Acid Volcanic
- Dolerite, Mafic Intrusive
- Quartz Vein
- Gravel

Plotted with MICROMINE
Resources Software
Perth, Australia
Tel +61 8 9389 8722
Fax +61 8 9386 7462

ASSAYS
-0.01-0.01g/t
>0.01-0.25g/t
>0.25-0.50g/t
>0.70-1.0g/t
>1g/t

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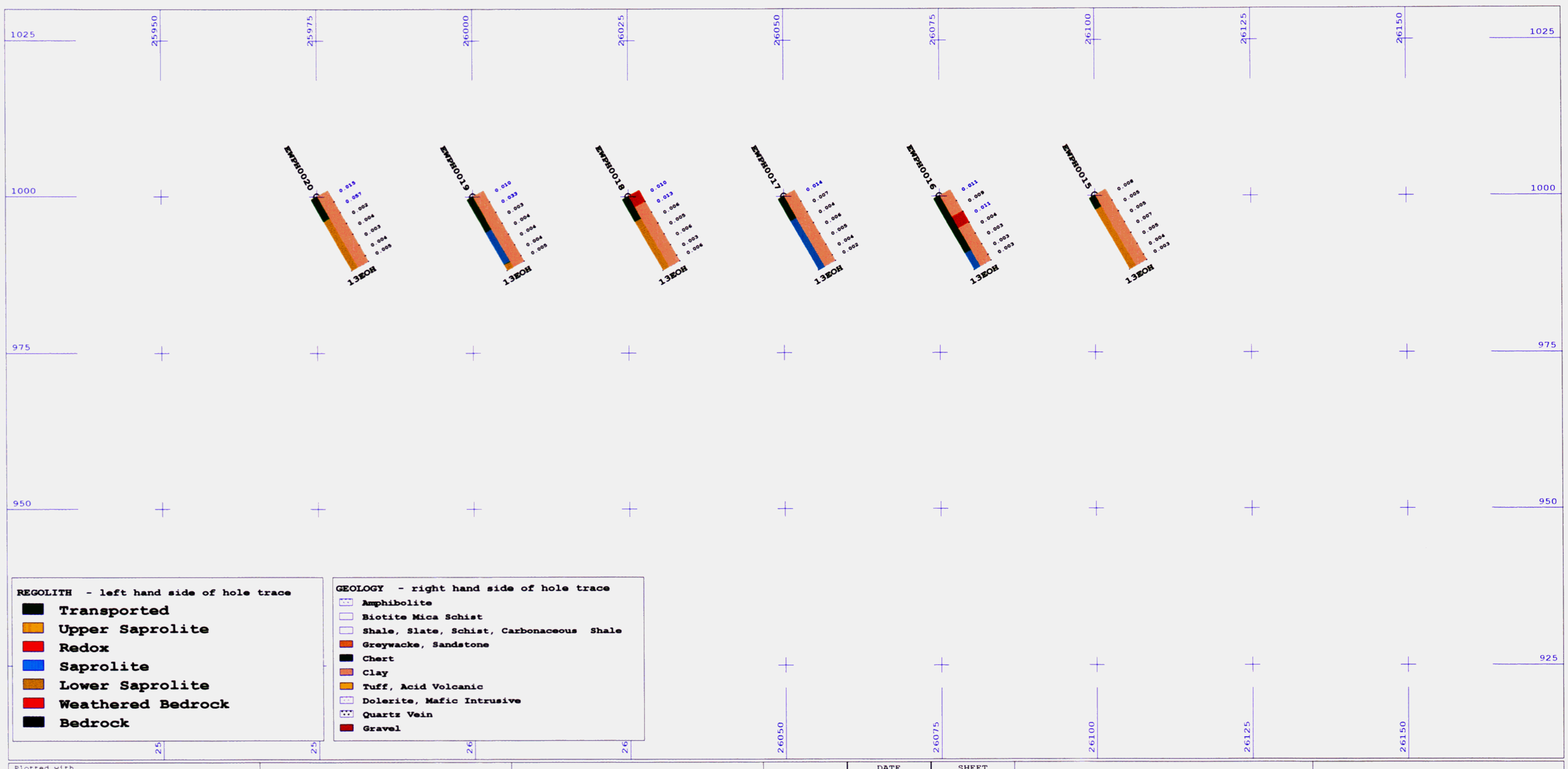
EL 8457 ESMERALDA WEST
VACUUM DRILL HOLES
SECTION 9000N

ACACIA RESOURCES
PINE CREEK PROJECT



REGOLITH - left hand side of hole trace

- Transported
- Upper Saprolite
- Redox
- Saprolite
- Lower Saprolite
- Weathered Bedrock
- Bedrock

GEOLOGY - right hand side of hole trace

- Amphibolite
- Biotite Mica Schist
- Shale, Slate, Schist, Carbonaceous Shale
- Greywacke, Sandstone
- Chert
- Clay
- Tuff, Acid Volcanic
- Dolerite, Mafic Intrusive
- Quartz Vein
- Gravel

Plotted with MICROMINE
Resources Software
Perth, Australia
Tel +61 8 9389 8722
Fax +61 8 9386 7462

ASSAYS
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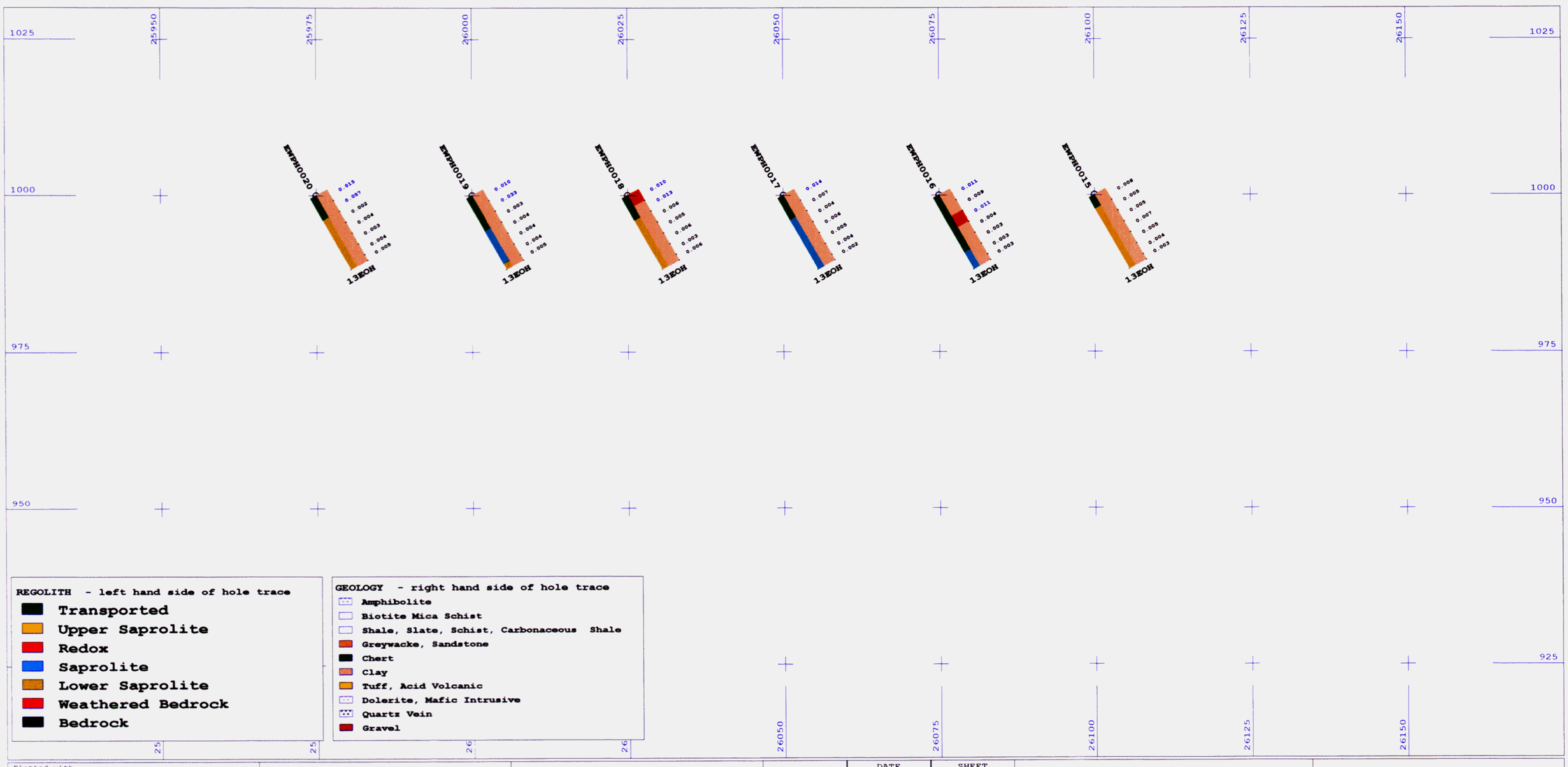
>0.01-0.25g/t
>0.25-0.50g/t
>0.70-1.0g/t
>1g/t

Scale	DATE	SHEET
1:500	16/12/97	1 of 1
	REF No.	FILE EW9000

EL 8457 ESMERALDA WEST
VACUUM DRILL HOLES
SECTION 9000N

ACACIA RESOURCES
PINE CREEK PROJECT



REGOLITH - left hand side of hole trace

- Transported
- Upper Saprolite
- Redox
- Saprolite
- Lower Saprolite
- Weathered Bedrock
- Bedrock

GEOLOGY - right hand side of hole trace

- Amphibolite
- Biotite Mica Schist
- Shale, Slate, Schist, Carbonaceous Shale
- Greywacke, Sandstone
- Chert
- Clay
- Tuff, Acid Volcanic
- Dolerite, Mafic Intrusive
- Quartz Vein
- Gravel

Plotted with MICROMINE
Resources Software
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Tel +61 8 9389 8722
Fax +61 8 9386 7462

ASSAYS
-0.01-0.01g/t
>0.01-0.25g/t
>0.25-0.50g/t
>0.70-1.0g/t
>1g/t

Scale	DATE	SHEET
1:500	16/12/97	1 of 1
	REF No.	FILE EW9000

EL 8457 ESMERALDA WEST
VACUUM DRILL HOLES
SECTION 9000N

ACACIA RESOURCES
PINE CREEK PROJECT

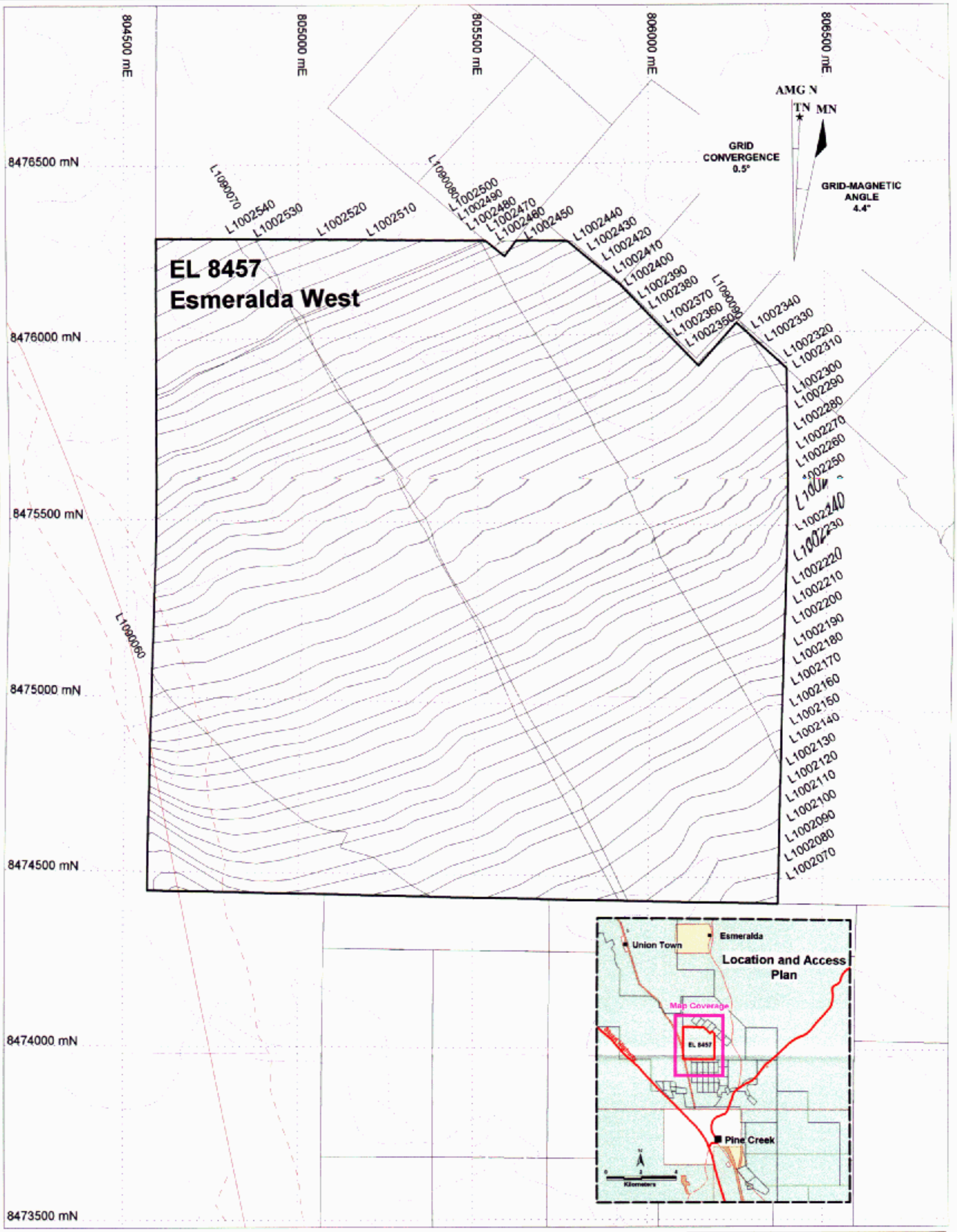
CR98/816

APPENDIX 4

RC and Vacuum Drill Hole Sections

APPENDIX 5

Detailed Aeromagnetic Survey Plans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806000 mE
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8476000 mN
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8475000 mN
8474500 mN
8474000 mN
8473500 mN
AMG N
TN
MN
GRID CONVERGENCE 0.5°
GRID-MAGNETIC ANGLE 4.4°
EL 8457
Esmeralda West
L1080070
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L1002090
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L1080060
Union Town
Esmeralda
Location and Access Plan
Map Coverage
EL 8457
Pine Creek
Kilometers
Locality Inset
Pine Creek Project Area
250
0
250
500
750 metres
Scale 1 : 10 000
Acacia RESOURCES
Northern Territory
Pine Creek Project
EL 8457 - Esmeralda West
Detailed Aeromagnetic Survey Profiles
Author: J.H.
Office: DWN
Scale: 1:10 000
Drawn: A.L.H.
Date: 18/11/98
Revised:
Plotted Date: 18/11/98
Report No.:
Projection/Grid: AMG Zone 52 (AGD84)
Figure No: A3

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805000 mE
805500 mE
806000 mE
806500 mE

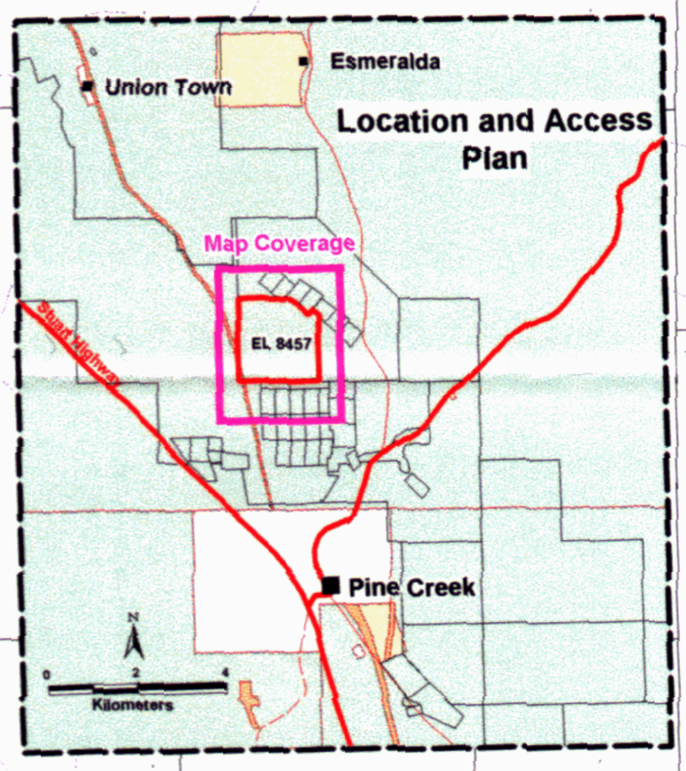
8476500 mN
8476000 mN
8475500 mN
8475000 mN
8474500 mN
8474000 mN
8473500 mN

EL 8457
Esmeralda West

L1090070 L1002540 L1002530 L1002520 L1090080 L1002510 L1002500 L1002490 L1002480 L1002470 L1002460 L1002450 L1090090 L1002440 L1002430 L1002420 L1002410 L1002400 L1002390 L1002380 L1002370 L1002360 L1002350 L1002340 L1002330 L1002320 L1002310 L1002300 L1002290 L1002280 L1002270 L1002260 L1002250 L1002240 L1002230 L1002220 L1002210 L1002200 L1002190 L1002180 L1002170 L1002160 L1002150 L1002140 L1002130 L1002120 L1002110 L1002100 L1002090 L1002080 L1002070

L1090060

AMG N
TN MN
GRID CONVERGENCE 0.5°
GRID-MAGNETIC ANGLE 4.4°



250 0 250 500 750 metres

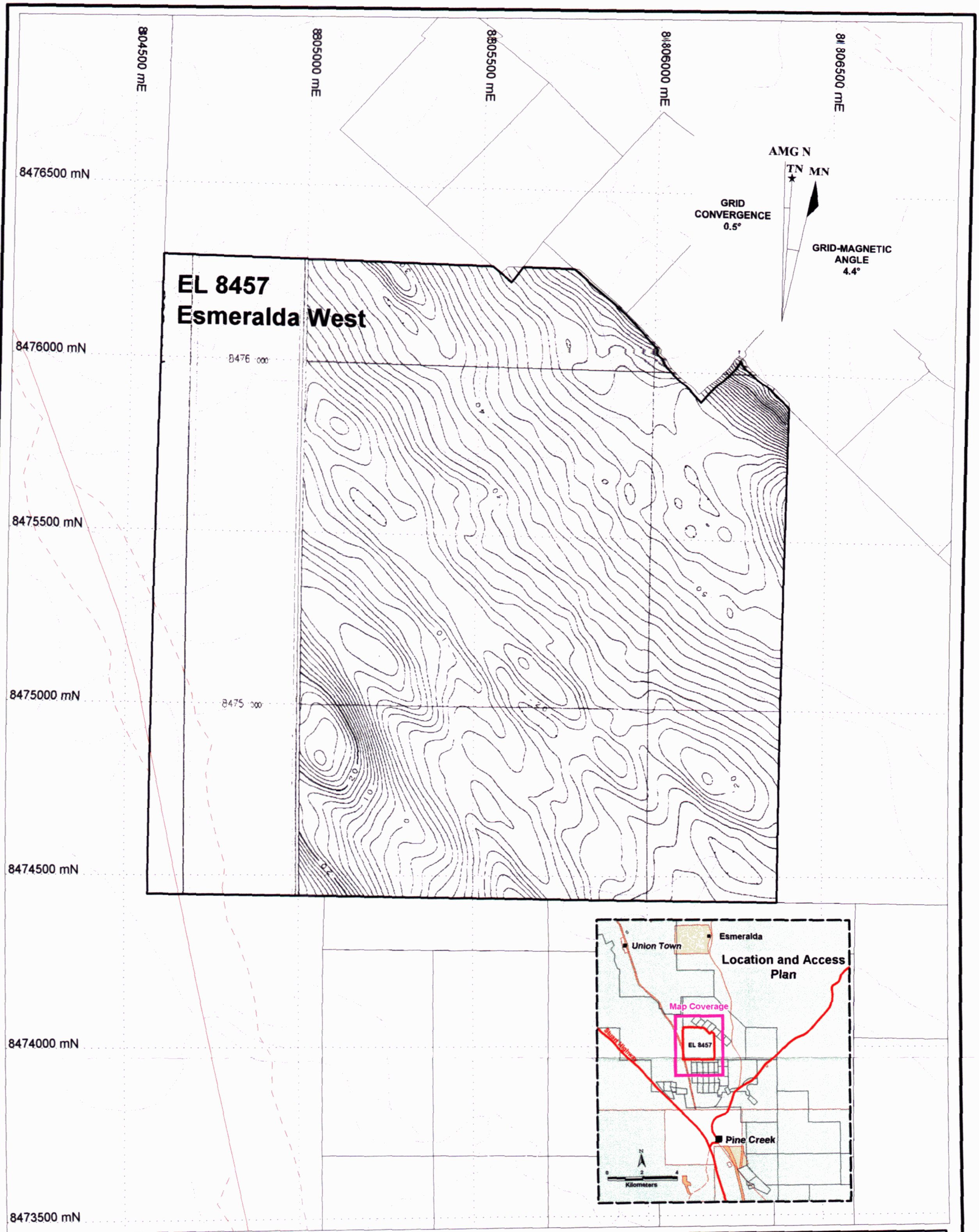
Scale 1 : 10 000

Acacia RESOURCES

Northern Territory
Pine Creek Project

EL 8457 - Esmeralda West
Detailed Aeromagnetic
Survey Flight Lines

Author: J.H.	Office: DWN	Scale: 1:10 000
Drawn: A.L.H.	Date: 18/11/98	Revised:
Plotted Date: 18/11/98		Report No.:
Projection/Grid: AMG Zone 52 (AGD84)		
Filed: m:\nt\--\geophys\amag\esmW\EsmWest10K A3 amag FLines98.WOR		Figure No: A3


804500 mE
805000 mE
805500 mE
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8476500 mN
8476000 mN
8475500 mN
8475000 mN
8474500 mN
8474000 mN
8473500 mN
EL 8457
Esmeralda West
AMG N
TN
MN
GRID CONVERGENCE 0.5°
GRID-MAGNETIC ANGLE 4.4°
Union Town
Esmeralda
Location and Access Plan
Map Coverage
EL 8457
Stuart Highway
Pine Creek
Kilometers
Locality Inset
Pine Creek Project Area
250
0
250
500
750 metres
Scale 1 : 10 000
Acacia RESOURCES
Northern Territory
Pine Creek Project
EL 8457 - Esmeralda West Detailed Aeromagnetic Survey Contours
Author: J.H.
Office: DWN
Scale: 1:10 000
Drawn: A.L.H.
Date: 18/11/98
Revised:
Plotted Date: 18/11/98
Report No.:
Projection/Grid: AMG Zone 52 (AGD84)
Filed: m:\nt\~\geophysi\amag\esmW\EsmWest10K A3 amag cont98.WOR
Figure No: A3

APPENDIX 6

Gravity Data and Reference Stations

Esmeralda West Gravity Station

year	Tas Uni station no	AMG E	AMG N + 8,000,000	elev	obs.grav	theor.grav	terrain correction	2.67 B.A	location	amg E	amg N
97	49.2448	804865.9	474818.4	197.84	978.3129	978.3248	0	27.05	Pine Creek	804865.9	474818.4

Appendix 1 Base Station Locations

9749-1037

Description : Star picket close to base of tree, near the northern turn-off to the Pine Creek township off the Stuart Highway.

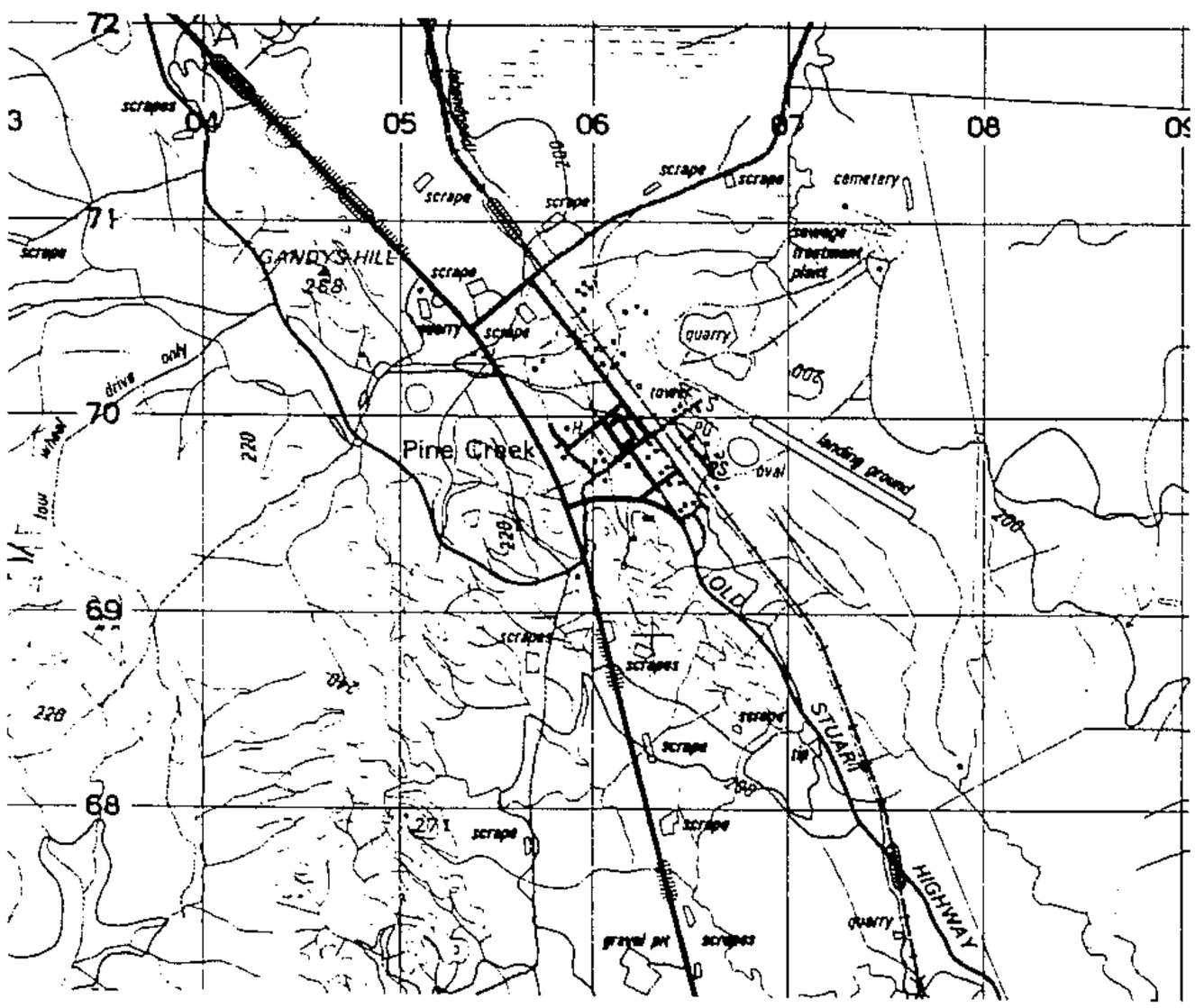
AMG Coordinates: 805800.00 mE 8471000.00 mN

Elevation : 200 m above sea level

Observed Gravity : 978310.71 mGal

Established : M.Roach 17/10/96

Map Series - Pine Creek 1 : 50,000



9749-1036

Description : Orange strip painted around the base of a light pole in the car park of the Emerald Springs Road House, Stuart Highway.

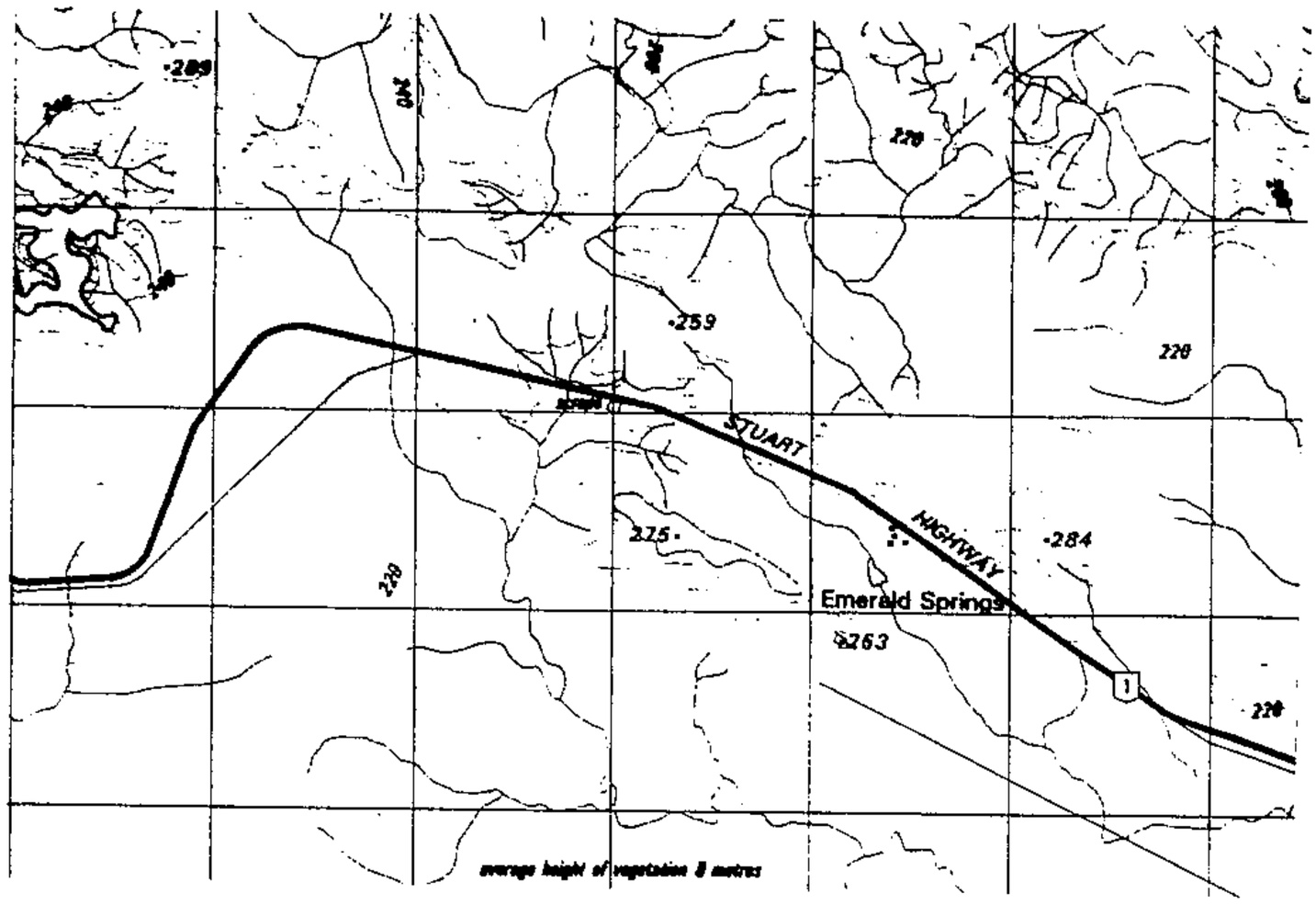
AMG Coordinates : 784500.00 mE 84913500.00 mN

Elevation : 220 m above sea level

Observed Gravity : 978300.96 mGal

Established : M. Roach 17/10/96

Map Series- Burrundie 1 : 50,000



9749-1009

Description : Star picket near large road sign on Fountain Head road at the intersection of the Stuart Highway and Fountain Head Road.

AMG Coordinates : 759996.30 mE 8503120.15 mN

Elevation : 115.66 m above sea level

Observed Gravity : 978314.33 mGal

Established : M.Roach 16/10/96

Map Series - Fenton 1 : 50,000

9749.1001

Description: Star picket 10mfrom the Foutain Head road adjacent to the power station

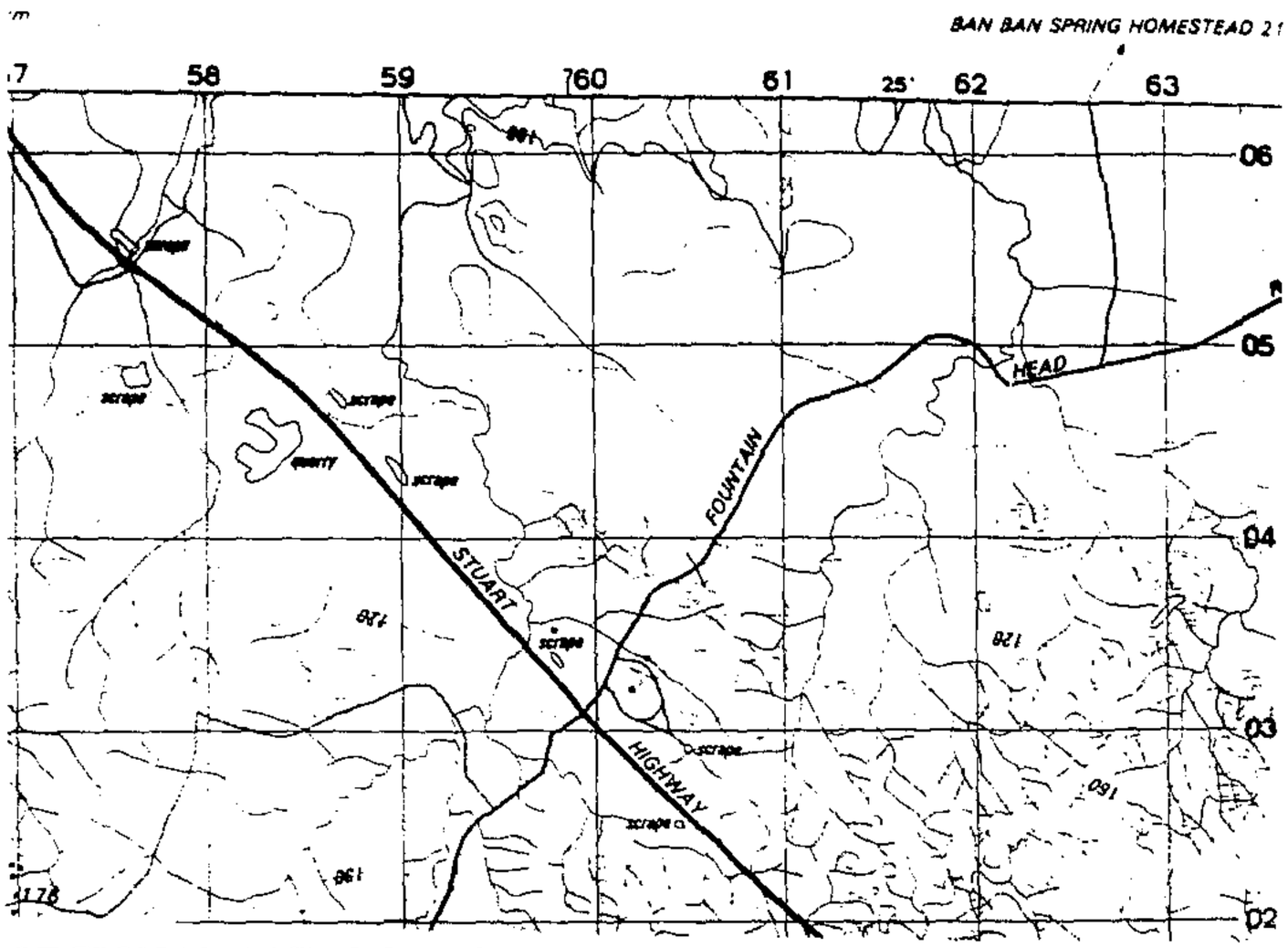
AMG Coordinates: 762600mE 85049000mN

Elevation 120.23m above sea level

Observed Gravity: 978311.148

Established: M.Roach 16/10/96

Map series: Fenton 1:50000



REGIONAL BASE STATION

ADELAIDE RIVER

9289 - 5171

Description : Circular plate, 1.5m west of the Adelaide River township fire station.

AMG Coordinates : 727802 mE 8535522 mN

Elevation : 52.78 m ASL

Observed Gravity : 978314.26 mGal

Established : M.Roach 16/10/96

APPENDIX 7

Environmental Ledger

TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
LAND STATUS RECORD

Project: Esmeralda West

Tenement Name: Esmeralda West **Loc. Code:** UR22

Tenement No's: EL8457

Registered Holder(s): Acacia Resources

Date Granted: 1 December 1994 **Term:** 2 years
Area: 1 Block

Bond/Security: $1,000

JV Partners (if any): Nil

Land Classification: (Crown, Private, Lease) Lease

Land Holder/Occupier: Gary Hamilton (Equest Pty Ltd) **Station:** Mary River West

Address: 9 Mall Mall CURRUMBIN QLD **Phone:** (075) 534 7408

Contacted By: Elaine Wakefield **Date:** Early 1995

Pastoral Notes: **(Stock, Cultivation, Access, Rainfall)**

Environmental Notes: **(Flora/Fauna, Erosion, Bushfires, Flooding)**

Groundwater: **(Bores/Wells/Dams, streams, drainage, test data)**

Aboriginal Notes: **(Sacred Sites, Cultural)**

Historic Relics: **(Mine Workings, Equipment, Homesteads etc.)**

Previous Activity: **(Mining, Exploration, Forestry, etc.)**

TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
PRE-EXISTING ENVIRONMENTAL DISTURBANCE RECORD

Tenement Name: Esmeralda West **No(s):** EL 8457

Exploration Activity Area: Soil sampling carried out by Cyprus Gold

Shafts/Pits/Dumps: Nil

Track/Access: Access track along old Darwin - Katherine railway cuts south-west corner of lease.

Line Clearing:

Costeaning:

Drill Sites:

Other:

Location Data:

Other Ref:

Compiled by: Niki Vela **Date:** 9/12/97

TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
ACACIA ENVIRONMENTAL IMPACT RECORD

Tenement Name: Esmeralda West **No (s):** EL 8457

Report Ref No's: 08.7754, 08.8483, 08.

Exploration Activities: Gridding, soil sampling, vacuum drilling

Grids & Traverses: 11.6 line km of gridding marked at 200m x 50m spacing with iron fence droppers (1995).
1.2 line kilometres of infill gridding marked at 50m X 100m spacings with iron fence droppers (1996)

Soil Sampling: 486 soil samples collected (1995).
32 soil samples collected (1996)

Costeans / Pits: Nil

Drilling: 1 RC hole (126m) and 20 vacuum holes (321m) (1998).

Drill Traverses: Nil

Drill Pads: Nil

Ground Geophysics: Nil

Access Tracks: Nil

Camps: Nil

Other:

Compiled by: Jane Ham **Date:** 17/11/98

TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
ACACIA REHABILITATION RECORD

Tenement Name: Esmeralda West **No(s):** EL 8457

Disturbance: **Rehabilitation:** **Date:** ongoing

Grids & Traverses: 200m x 50m fence droppers still in field.

Soil Sampling: Sample sites repair immediately after sampling.

Costeans/Pits:

Drilling: Vacuum holes backfilled after sampling
RC hole pad ripped, residue sample bags removed to sample farm and collar capped and buried.

Drill Traverses:

Drill Pads:

Ground Geophysics:

Access Tracks:

Camps:

Other:

Inspected / Clearance: **Bond/Security released:**

Compiled by: Jane Ham **Date:** 17/11/98

Follow-up Inspection Report: