ACACIA RESOURCES LTD

EXPLORATION LICENCE 8037
HENSON
FINAL REPORT

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Copy No: 1

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

Distribution:

1 NT Department of Mines & Energy
2 Acacia Resources (Darwin)
3 Acacia Resources (Melbourne)
4 Acacia Resources (Field)
5 Acacia Resources (URGM)
6 Stuart Henson
SUMMARY

Exploration Licence (EL) 8037 has recently been relinquished by Acacia Resources. The lease is located approximately 14km north of the Union Reefs Gold Mine operations plant. Exploration completed within during the life of the tenure was by Stuart Henson and Acacia Resources, and included gridding soil and stream sediment sampling. A summary of the work conducted is given below:

- 16.5 line km of gridding of crosslines on the regional Pine Creek grid.
- 7 BLEG stream samples.
- 17 rockchip samples.
- 489 hand and auger soil samples.
- 60m of vacuum drilling in 11 holes, in an area of alluvial cover.
- 41 stream sediment samples.
- A detailed aeromagnetic and radiometric survey was flown over part of the tenement group.
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1. **INTRODUCTION**

Exploration Licence 8037, expired on 12th May, 1999. The centre of the lease is located approximately 14km north of the Union Reefs Gold Mine operations plant (Figure 1). This report details work conducted on EL 8037 between 13th May 1993 and 12th May 1999.

2. **TENEMENT STATUS**

EL 8037 was initially granted to Stuart Henson on 13th May 1993 and Acacia Resources assumed management under an option agreement made in March 1995. A waiver of reduction was granted on 9th August 1995, enabling the lease to remain at 3 blocks. A second waiver of reduction was granted in 20th May 1996. A renewal for a further two years was granted on 7th July 1997.

3. **LOCATION AND ACCESS**

The lease is located 20km NNW of the Pine Creek township and 14km NNW of the Union Reefs Gold Mine operations plant (Figure 1). Access to EL 8037 is possible via the Stuart Highway, turning east onto the Spring Hill Rd, and along the Mt Wells Rd.

4. **REGIONAL GEOLOGY**

The tenement area is located within the central portion of the Pine Creek Shear Zone within Lower Proterozoic Finniss River Group which hosts the Enterprise, Union Reefs and Spring Hill gold deposits (Figure 2).

Turbiditic greywacke and shale exposed in the tenement areas have been assigned to Burrell Creek Formation. These rocks have been folded to produce upright NNW trending folds and sub-vertical to steeply dipping bedding throughout the area.Greenschist facies metamorphism appears to be broadly synchronous with this deformation.

The sedimentary sequence has been intruded by the Cullen Batholith and the McKinlay Granite lies directly to the east of EL 8047. Contact metamorphism has resulted in an approximately 100m wide amphibolitic hornfels zone within the metasediments around the margins of the granite.

Burrell Creek Formation is host to numerous quartz vein hosted Au occurrences including the Union Reefs Gold Mine. The western margin of the Henson tenement encompasses MCN’s and MLN’s covering the Spring Hill gold workings which have been worked intermittently since the late 19th century, and have published resources of 4.3Mt @ 1.57g/t Au.
5. PREVIOUS EXPLORATION

Previously documented exploration is by Billiton Australia, between 1988 and 1990. Work consisted of surface geochemical sampling including stream sediment, rock chip and soil sampling, which located palaeo-alluvial sediments associated with the McKinlay River, and identified anomalous gold and base metals in rock-chips from the eastern margin of the tenement. Follow up work failed to outline any economic gold or base metal mineralisation. Sample locations and results of this work are included in Figures 3 and 4, along with the samples collected within the life of EL 8037.

6. WORK COMPLETED

6.1. Stuart Henson

- A research program was conducted to establish what structures, lithologies and environments within the licence were likely to host gold and base metal mineralisation.
- 7 BLEG geochemical samples of watercourses not sampled by previous explorers were collected.
- 34 (>10kg) stream sediment samples were collected from trap sites. The samples were concentrated by hydraulic sluice and examined for visible gold. Gold in these samples was attributed to sources outside the lease area, including the Elizabeth and Spring Hill workings. No sample locations or results were recorded for these samples.
- 17 Rock chip samples were collected from two prospective zones located during geological reconnaissance. The areas sampled hosted quartz-hematite veins and iron-stone outcrops. One sample on the central eastern boundary of the lease returned an anomalous result of 0.55ppm Au. The remaining samples were below detection.

6.2. Acacia Resources

1994/95 Report No. 08.7525

Structural interpretation of 1:25,000 scale air photos was carried out, in addition to processing and interpretation of multiclient aeromagnetic data. A northwest striking anticline was identified in the southern portion of the tenement. Flight lines and contours for the multiclient aeromagnetic data are included in Appendix 2.

Re-processing and re-interpretation of multiclient aeromagnetic data and all geochemical data from previous explorers over the EL was compiled into Acacia’s digital database. Field reconnaissance and geological traversing was also carried out.
1995/96 Report No. 08.7975
A six km baseline extension was established by Microsurvey and 8.5km of cross line gridding was completed on a 50 x 200m grid, in preparation for soil sampling.

A total of 279 soil samples were collected by sampling every 25m along grid lines from the B/C horizon. Samples of 1.5-2kg and sieved to-5mm were analysed by Assaycorp, Pine Creek. The samples were analysed for low level Au by 50g fire assay and for Cu, Pb, Zn and As, by AAS.

Results from this program returned maximum values of 170ppb and 81ppb Au. Sampling over an old Billiton grid, established in 1990, failed to repeat anomalous Au values returned in the earlier programme.

Seven rock chip samples were collected from prominent quartz veining within the Burrell Creek Formation, with a maximum value of 15ppb Au returned.

Soil and rockchip sample ledgers and assay results are included in Appendix 1. Sample locations and results are shown in Figures 3 and 4.

1996/97 Report No. 08.8791
A further 8.5km of crossline gridding was completed and 115 soil samples were collected. Samples were collected at 25m spacing from the B/C horizon. Samples of 1.5-2kg and sieved to-5mm were analysed by Assaycorp, Pine Creek. The samples were analysed for low level Au by 50g fire assay and for Cu, Pb, Zn and As, by AAS. The best results returned were 16 and 9ppb Au.

Soil and rockchip sample ledgers and assay results are included in Appendix 1. Sample locations and results are shown in Figures 3 and 4.

Geological and structural mapping, completed by contract geologist Simon Hewson, was used to define models of mineralising structures and controls within the Pine Creek area. No target areas within EL 8037 were defined from this work.

Airesearch Mapping was contracted to fly 1:25, 000 scale colour aerial photography. Digital Elevation Models were created from 1:50, 000 scale topographic maps by ABAKOS (Figure 6).

Processing of multiclent aeromagnetic data was also completed.
1997/98 Report No. 08.9628
Two phases of gridding and soil sampling and some limited vacuum drilling were conducted over two field seasons.

At the end of the 1997 field season a soil sampling program was completed to screen the eastern half and northern areas of the Henson tenement. Gridding, on 400m spaced lines, for a total of 11.2 line km was completed on Acacia’s Pine Creek regional grid, with crosslines on a 61.4°MN orientation. A total of 345 samples were collected by hand (hoepick) and mechanical auger from the B2/C horizon. If the soil profile was stripped, samples were collected using a hoepick, from bedrock. Sample weights of 1.5 to 2kg were collected every 25m along 400m spaced grid lines and sieved to -5mm.

This program defined a narrow (25-75m) linear weakly anomalous Au trend over 1.6km in strike length, in the southern half of the grid, with results including 267, 95, 73 and 59ppb Au.

Follow-up of these results was conducted in the 1998 field season and included infill gridding of the linear trend on 400m spaced lines to close grid line spacing to 200m. A total of 2.8 line km gridding, 79 hand and auger samples and 11 vacuum holes were completed. Vacuum drilling for a total of 60m (HNPH0001-HNPH0011) was completed in a drainage area, where the auger was considered ineffective in reaching residual soils beneath alluvial cover.

Hand and auger samples were collected as mentioned previously. Vacuum holes were on average 5m deep and drilled to about 3m below the transported/residual contact. For each hole, 2 samples (2-3m composites) were typically collected. One sample was collected from the transported horizon just above the transported/residual contact, and one from the residual horizon just below the contact.

Results from the 1998 infill soils and vacuum drilling seem to confirm the presence of the anomaly defined by the previous samples with results >10ppb Au along the trend including, 90, 70, 41 and 39ppb Au. These results appear to correspond to a 0.5m wide unit of sediments with weathered pyrite(?) boxworks.

The soil and vacuum samples in both 1997 and 1998 were dispatched to Assaycorp Laboratories in Pine Creek, where the samples are dried, crushed and pulverised in a keeorg mill to 90% passing 100um. Samples collected in 1997 were analysed for low level Au by 50g fire assay and Cu, Pb, Zn and As by AAS. Samples collected in 1998 were analysed for Au only.

Soil sample ledgers and assay results are included in Appendix 1. Soil sample locations and results are shown in Figures 3 and 4.

A regional gravity survey completed in the Pine Creek area, as part of an Honours project supported by Acacia Resources. Two (2) stations with an average spacing of 500m lie within EL 8037. The project produced 3-D
models of the granites of the Cullen Batholith, which is currently covered by a confidentiality agreement. Gravity station locations are provided in Appendix 3 and shown in Figure 5.

1998/99
Merging and re-levelling of multicomponent and detailed aeromagnetic data was completed by Hungerford Geophysical Consultants. A revised regional geological interpretation was produced using the aeromagnetic, gravity and radiometric images.

No targets worthy of further follow-up were identified and Acacia Resources opted to withdraw from the option deal.

7. ENVIRONMENT

All exploration was conducted so as to minimise environmental disturbance. Existing tracks were used for access, when possible. Vacuum and auger holes were backfilled on completion of sampling. Grid pegs will be removed once access is possible after the current wet season. An environmental ledger is provided in Appendix 4.
8. EXPENDITURE

The total expenditure on the lease between 13th May 1995 and 12th May 1999 is $100,914.

Expenditure by Stuart Henson, is detailed below:

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<td>Access/Survey/Mapping</td>
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<tr>
<td>Soil/Stream/Rockchips</td>
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<td>Analyses</td>
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<td>Overheads</td>
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**Total** $7,080

Total expenditure by Acacia Resources to date is $93,834. The expenditure is detailed below:

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**Total** $93,834
9. REFERENCES


International Atomic Energy Agency, Vienna, 91-100.


Pine Creek Project
Regional Geology

Scale 1:200 000

Figure 2
APPENDIX 1

Geochemical Data
Surface Sample Ledger
Surface Sample Results

(Disk for copies 1, 3, 4, 5 & 6)
APPENDIX 2

Multiclient Aeromagnetic Survey:
Flight Line and Contour Plans
APPENDIX 3

Gravity Station Locations
and Reference Locations
**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

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**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
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 10m from the Fountain 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
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APPENDIX 4

Environmental Ledger
TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
LAND STATUS RECORD

Project: Pine Creek

Tenement Name: Henson

Loc. Code: UR13

Tenement No’s: EL 8037

Registered Holder(s): Acacia Resources Ltd

Date Granted: See report

Term: See report

Area:

Bond/Security: NA

JV Partners (if any): NA

Land Classification: (Crown, Private, Lease) Lease

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

Address: 9 Pall Mall, Currumbin, QLD

Phone: (075) 534 7408

Contacted By: E Wakefield

Date: 1995

Pastoral Notes: (Stock, Cultivation, Access, Rainfall)
Open grazing land, little evidence of domestic livestock.
Access via the Mt Wells Rd, the North Australia Railway Easement or any number of unmarked bush tracks

Environmental Notes: (Flora/Fauna, Erosion, Bushfires, Flooding)
Open tropical savannah. Prone to flooding during the wet, access difficult during the wet.

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

Aboriginal Notes: (Sacred Sites, Cultural)
There is one sacred site within Henson EL 8037. AAPA site No. 5270-44 is located in the northern portion of the tenement (see Figure 7).

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

Previous Activity: (Mining, Exploration, Forestry, etc.)
The area was previously explored by Billiton Australia, and Stuart Henson. All exploration was restricted to surface exploration only.
TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
PRE-EXISTING ENVIRONMENTAL DISTURBANCE RECORD

Tenement Name: Henson,
No(s): EL 8037

Exploration Activity Area:

Shafts/Pits/Dumps: NA

Track/Access: Stuart Highway, Spring Hill Road, and Mt Wells Rd. Numerous bush tracks.

Line Clearing: NA

Costeaming: NA

Drill Sites: NA

Other: NA

Location Data: Acacia database

Other Ref:

Compiled by: Niki Vela  Date: July 1997
TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
ACACIA ENVIRONMENTAL IMPACT RECORD

Tenement Name:  Henson
No(s):         EL 8037
Report Ref No’s:  08.7979, 08.7975, 08.7525, 08.7765, 08.8545, 08.8791,
                  08.9628, 08.10034

Exploration Activities:  Gridding, hand and auger sampling, stream sediment
                         sampling.
Grids & Traverses:  37 line km of gridding using galvanised steel grid pegs.

Soil Sampling:  745 soil samples collected.
                Mechanical auger soil sampling.
                Holes filled in after completion.

Costeans / Pits:  NA

Drilling:  60m vacuum drilling. Minimal disturbance - no line
           clearing required.

Drill Traverses:  NA

Drill Pads:  NA

Ground Geophysics:  NA

Access Tracks:  Current tracks used for access.

Camps:  NA

Other:  NA

Compiled by:  Jane Ham         Date:  March 1999
TENEMENT ENVIRONMENTAL MANAGEMENT REGISTER
ACACIA REHABILITATION RECORD

Tenement Name: Henson
No(s): EL 8037

Disturbance: Grid pegs, vacuum drilling, auger soils
Rehabilitation: Ongoing Date: March 1999

Grids & Traverses: Fence droppers at 200 x 50m still in the field.
Will be when access possible after current wet season.

Soil Sampling: Sample sites repaired immediately after sampling.

Costeans/Pits: NA

Drilling: Vacuum sample sites backfilled immediately after sampling.

Drill Traverses: NA

Drill Pads: NA

Ground Geophysics: NA

Access Tracks: NA

Camps: NA

Other: NA

Inspected / Clearance: NA Bond/Security released:

Compiled by: Jane Ham Date: March 1999

Follow-up Inspection Report: