# ACACIA MINERALS PTY LIMITED

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# EXPLORATION LICENCE 25019 OORATIPPRA

# SECOND ANNUAL REPORT

26 July 2007 - 27 July 2008

LICENSEE:
Acacia Minerals Pty Limited

AUTHOR: *N. BYRNE* 

November 2008

SF53-11

ELKEDRA 1:250 000

SF53-07

HUCKITTA 1:250 000

6153

Lucy 1:100 000

6154

Ooratippra 1:100 000

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# **FIGURES**

SOU006 1:100.000 OORATIPPRA ELS CKA AND CF LOCATION PLAN

#### **SUMMARY**

Southwestern Mining Company Pty Limited (ACN 104 649 774) (Southwestern) was granted EL 25019 on the 26th July 2006. Principal reason for the acquisition was the Company's belief that the area is highly prospective for diamonds with some prospectivity for base metals. Subsequent work has reduced the prospectivity for base metals. In 2007, the Licence was transferred to Acacia Minerals Pty Limited, a wholly owned subsidiary of public company, Adelaide River Resources Limited, ACN 127 411 796.

Acacia also holds contiguous Exploration Licences EL 22488, EL 24822 and 24993.

The Licences are worked as one project known as the "Ooratippra Diamond Project".

This Report covers the exploration work carried out on EL 25019 during the second year of tenure from the 26th July 2007 to the 25th July 2008.

# Work done includes:

- Research
- Satellite imagery interpretation
- Geophysical Interpretation
- Surface sampling of magnetic anomalies
- Drainage and stream sampling
- Petrology
- Field reconnaissance
- Land-owner liaison

### 1. INTRODUCTION

Southwestern Mining Company Pty Limited (ACN 104 649 774) (Southwestern) was granted Exploration Licence 25019 on the 26th July 2006. Principal reason for the acquisition was the Company's belief that the area is highly prospective for diamonds.

Initial work indicated that the area is also prospective for base and noble metals, but this prospectivity has reduced with later work.

This Report summarises the exploration work carried out on EL 25019 during the second year of tenure from the 26th July 2007 to 25th July 2008.

### 2. LOCATION AND ACCESS

Exploration Licence 25019 is situated approximately 350kms southeast of Tennant Creek. The Licence area spans the boundaries of the Elkedra and Huckitta 1:250 000 scale map sheets and is located on the Lucy (6153) and Ooratippra(6154) 1:100 000 scale map sheets.

Access to the Licence area from Tennant Creek is south via the Stuart Highway and then east onto the Ali Curung Aboriginal Community road. This leads to the Sandover Highway which is then followed approximately 80kms east to the northwest portion of the Licence area. Most of the EL has little relief and vegetation, and is quite accessible via good station tracks servicing the water bores in the area.

Alternatively, the Licence area can be accessed via the Sandover Highway from Mount Isa or Alice Springs, and south using the Lucy Creek Station roads.

The Licence can also be accessed by air as Ooratippra Station has a good landing strip capable of being used by twin engined aircraft

Plan SOU006 shows the Exploration Licence and the landing strip in relation to the Sandover Highway.

# 3. TENURE

Exploration Licence 25019 was granted to Southwestern on the 26th of July 2006 for a period of 6 years.

In 2007 it was transferred to Acacia Minerals Pty Limited, a wholly owned subsidiary of public company Adelaide River Resources Limited.

The Licence is worked as part of the Ooratippra Diamond Project and adjoins EL 22488 which was granted on the 3rd December 2001 and ELs 24822, and 24993 were granted on the 4th April and 11th August 2006 respectively.

The Licence lies within NT Portion 2891, being Ooratippra Station, Perpetual Pastoral Lease 921.

Plan SOU006 shows the Licences within the current Project Area.

# 4. GEOLOGY

# 4.1 Regional Geology

The reader is referred to AusIMM Monograph 14 (Geology of the Mineral Deposits of Australia and Papua New Guinea), Volume 1, pp. 829-861, to gain a good introduction to the regional geology and styles of gold-copper mineralization of the area.

# 4.2 Local Geology

The Sandover River flows east through the Project Area, within which are extensive flood-out areas and tributaries. North of the Sandover River, there is little outcrop and much of the area is covered by alluvial outwash cover.

South of the Sandover River, areas of Cambrian outcrop have diverted southerly flowing drainage channels. The outcropping Cambrian Arrinthrunga Formation sediments of the Georgina Basin Sequence are generally flat-lying throughout the central to southern parts of the Licence Area. The Ooratippra fault strikes northwest–southeast throughout the central portion of the Project Area.

#### 5. WORK DONE DURING THE YEAR

#### Review

An extensive open file research programme was carried out, as well as a review of the results achieved by previous explorers. This work was then correlated with the geophysical and satellite image interpretation.

# Diamond consultants

Global Diamond Exploration Services Pty Ltd of Welshpool WA have been commissioned to assist the Company with its Ooratippra Diamond Project. They are currently reviewing the Company's work carried out to date and will advise on future exploration programmes.

# Geophysics

Lindeman Geophysics Pty Ltd carry out an on-going detailed interpretation of NTGS and open file magnetics to identify any magnetic anomalies considered to be possible kimberlites. Additional anomalies were identified by Acacia.

Within the Ooratippra Diamond Project, a large number of magnetic anomalies were identified from NTGS airborne magnetics and reviewed to identify those with the potential to be kimberlites. Within EL 25019 during year one, 6 anomalies considered to have the potential to be kimberlites were identified and sampled but the results for those anomalies were not available at the time of lodging the First Annual Report Each anomaly was given the identification of CKA, followed by sequential numbering.

The locations of these anomalies in GDA 94 are:

	MGA_E	MGA_N
CKA 47	606672	7557408
CKA 64	629100	7558300
CKA 65	629450	7557750
CKA 67	641650	7582750

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CKA 68	646850	7570650
CKA 79	620175	7577175

These locations are shown on the accompanying plan SOU006 and the Indicator Minerals and assay results accompany this report.

# Re sampling

Within the Ooratippra Diamond Project, 12 magnetic anomalies were re-sampled and given new sample numbers.

Within EL 25019, three anomalies, CKA 64, CKA 65 and CKA 67 were re-sampled. From each, a 20kg sample was sent to Diatech Heavy Mineral Services of Welshpool, WA for processing for diamonds and key indicator minerals, and a 2kg sample from each was sent to NTEL of Berrimah NT for trace element analysis. This repeat work was carried out for laboratory assessment and to check for analytical consistency. The results were consistent with previous sampling and analysis and accompany this report.

Arnhem Exploration Services of Tennant Creek carried out the sampling.

# Satellite imagery, reconnaissance and stream sampling

The Company has identified a number of circular features with kimberlite potential within the Ooratippra Diamond Project using Google Earth Pro. During field reconnaissance to inspect some of the features, three stream samples, 163043, 163047 and 163048 were taken from the Sandover River, down stream from two of the circular features.

The coordinates accompany this report in GDA 94, XLS

Again a 20kg sample was sent to Diatech Heavy Mineral Services of Welshpool, WA for processing for diamonds and key indicator minerals. The results accompany this report

#### Other minerals

Also from each location, a 2kg sample of surface loam sieved to 2mm, was collected and sent to Northern Territory Environmental Laboratories (NTEL) of Berrimah, to be analysed for:

#### **Majors**

SiO2, TiO2, Al2O3, Fe2O3, MnO, MgO, CaO, Na2O, K2O, P2O5, LOi, Be and Sc

#### Trace elements

V, Cr, Co, Ni, Cu, Zn, Sn, Sb, Cs, Ba, La, Ce, Pr, Nb, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Hf, Ta, W, Ti, Pb, Bi, Th and U.

Assay results have not yet been received and will be forwarded as soon as they are received.

### Petrology

Two rock samples, collected from the same locations as samples 163047 and 163048 were sent to Pontifex and Associates Pty Ltd of Kent Town, South Australia for thin section preparation, description and report with comments as specified. The report is attached.

Further sampling using an alternative laboratory

Three magnetic anomalies CKA83, CKA84 and CKA85A, identified from NTGS aerial magnetics, and one circular feature, CF 31, identified from Google Earth Pro satellite imagery, have been sampled. From each, a 20kg sample, sieved to -2mm have been sent to Diamond Recovery Services, Unit 2, 92 Ewing Street Welspool WA for diamond and indicator mineral assessment. A 2kg sample, also sieved to -2mm has been sent to NTEL at Berrimah for the following analysis:

## Majors

SiO2, TiO2, Al2O3, Fe2O3, MnO, MgO, CaO, Na2O, K2O, P2O5, LOi, Be and Sc

#### Trace elements

V, Cr, Co, Ni, Cu, Zn, Sn, Sb, Cs, Ba, La, Ce, Pr, Nb, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Hf, Ta, W, Ti, Pb, Bi, Th and U.

The co-ordinates for these samples in GDA 94 accompany this report.

Assay results have not yet been received and will be forwarded as soon as they are received.

### 6. LANDOWNER LIAISON

Prior to commencing field work, the co-ordinates and a 1:100,000 Rasta plan showing the proposed sample locations were given to the Central Land Council to enable them to show the landowners. The detailed topography on the plan enabled the landowners to clearly identify the work areas in relation to sites of significance.

Where sampling takes place at an already cleared site, CLC contact is not deemed necessary.

#### 7. REHABILITATION

The scraping up of surface loam samples did not create significant disturbance and consequently no field work carried out by Acacia on the Project Area during the year requires any rehabilitation measures.

#### 8. CONCLUSIONS

The Project Area appears to be in a significant structural position and geophysical and aerial photographic appraisal suggest that a number of magnetic responses and circular topographical features could represent kimberlites.

Results from the sampling carried out during the first year and those so far from the second year did not produce any encouraging results from EL 25019, but the Company considers that the position of the Project in the Georgina basin and the untested magnetic anomalies justify further exploration.

Also, the diamond expertise brought by the services of Global Diamond Exploration Services will enhance the Company's likelihood of success for year three.

9. YEAR 2 EXPENDITURE

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Proposed expenditure for the second year of tenure was \$45,900. Actual expenditure was as follows:

1.	Geological reconnaissance	\$3,500
2.	Geophysical interpretation	\$5,000
3.	Vehicle hire	\$2,000
4.	Circular feature locating and related stream sampling	\$4,500
5.	Diamond consultants	\$3,000
6.	Processing for diamond and key indicator minerals (estimated)	\$8,000
7.	Geochemical analysis (estimated)	\$3,500
8.	Land owner liaison	\$0,500
9.	Administration and overheads	\$3,600
	Total	\$33,600

# 10. PROPOSED PROGRAMME AND ESTIMATED EXPENDITURE FOR YEAR 3

1.	Processing for diamond and key indicator minerals	\$7,000
2.	Geochemical analysis	\$5,000
3.	Anomaly locating and sampling	\$4,500
4.	Administration and overheads	\$4,080
5.	Land owner liaison	\$3,500
6.	Ground magnetics	\$3,500
7.	Geological mapping	\$3,500
8.	Diamond Consultant	\$3,000
9.	Geophysical interpretation	\$3,000
	Total	\$37,080

While this is the proposed work programme and estimated expenditure for year two, all exploration is results driven and these could result in a variation of the proposed programme.

Nick Byrne *Managing Director*