# ACACIA MINERALS PTY LIMITED

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# EXPLORATION LICENCE 24993 OORATIPPRA

# THIRD ANNUAL REPORT

11 August 2008 - 10 August 2009

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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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### SUMMARY

Southwestern Mining Company Pty Limited (ACN 104 649 774) (Southwestern) was granted EL 24993 on the 11th August 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 diamonds but enhanced the area for base metals and phosphate. 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.

In November 2009, the Company changed its name from Adelaide River Resources Limited, to NT Resources Limited and in December 2009, lodged an application to list on the Australian Stock Exchange (ASX) to raise funds from public investors for future exploration. Tenements will continue to be held and operated under the Company's wholly owned subsidiary Acacia Minerals Pty Limited.

EL 24993 adjoins Exploration Licence 25019 and EL 22488 which together with EL 24822, are explored simultaneously as the Ooratippra Diamond Project.

In July 2009 the Licence was halved with the surrender of one hundred and six (106) blocks.

On the 4th of August 2009 Substitute Exploration Licence 27526 was applied for covering all of the Company's Ooratippra Exploration Licences including EL 24993.

On August 7th 2009, the remaining 50% of the licence was surrendered, thereby becoming part of SELA 27526.

Exploration during the first 3 years of tenure indicates that, while the area is still prospective for diamonds, it is more prospective for base and noble metals. Future exploration will concentrate on the search for Olympic Dam style mineralisation.

This Report covers the exploration work carried out on EL 24993 for year three and during the tenure of the Licence to the 7th August 2009.

Work done in year three includes:

- Satellite Image interpretation
- Identification, reconnaissance and sampling of Circular features
- Geophysical Interpretation
- Identification of topographic features being possible kimberlites
- Ground radiometric reconnaissance and sampling of magnetic anomalies
- Land-owner liaison

# 1. INTRODUCTION

Southwestern Mining Company Pty Limited (ACN 104 649 774) (Southwestern) was granted Exploration Licence 24993 on the 11th August 2006. Principal reason for the acquisition was the Company's belief that the area is highly prospective for diamonds. In 2007, the Licence was transferred to Acacia Minerals Pty Limited, a wholly owned subsidiary of public company Adelaide River Resources Limited.

In November 2009, the Company changed it's name from Adelaide River Resources Limited, to NT Resources Limited and in December 2009, lodged an application to list on the Australian Stock Exchange (ASX) to raise funds from public investors for future exploration. Tenements will continue to be held and operated under the Company's wholly owned subsidiary Acacia Minerals Pty Limited.

Work during the first 3 years of tenure indicates that, while the area is still prospective for diamonds the area is more prospective for base and noble metals. Future exploration will concentrate on the search for Olympic Dam style mineralisation.

In July 2009 the Licence was halved with the surrender of one hundred and six (106) blocks.

On the 4th of August 2009 Substitute Exploration Licence 27526 was applied for covering all of the Company's Ooratippra Exploration Licences including EL 24993.

On August 7th 2009, the remaining 50% of the licence was surrendered, thereby becoming part of SEL 27526.

This Report summarises the exploration work carried out on EL 24993 during the third year of tenure from the 11th August 2008 to 10th August 2009 and during the tenure of the Licence.

It also contains details of work carried out and expenditure since grant.

# 2. LOCATION AND ACCESS

Exploration Licence 24993 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

Figure 8 shows the Exploration Licences in relation to the Sandover Highway.

### 3. TENURE

Exploration Licence 24993 was granted to Southwestern on the 11th of August 2006 for a period of 6 years.

In 2007 it was transferred to Acacia Minerals Pty 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 25019 were granted on the 4th April and 26th July 2006 respectively.

In July 2009 the Licence was halved with the surrender of one hundred and six (106) blocks.

On the 4th of August 2009 Substitute Exploration Licence 27526 was applied for covering all of the Company's Ooratippra Exploration Licences including EL 24993.

On August 7th 2009, the remaining 50% of the licence was surrendered, thereby becoming part of SELA 27526.

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

Figure 7 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

All Exploration Licences within the Ooratippra Diamond Project are worked as one identity.

### Review

Open file research programme, and follow-up field reconnaissance continued. This work has been correlated with the geophysical and satellite image interpretation of the Licence.

### Geophysics

Lindeman Geophysics Pty Ltd, initially commissioned to carry out a detailed interpretation of NTGS and open file magnetics to identify any magnetic anomalies considered to be possible kimberlites, continued to carry out geophysical interpretation for the Company.

Each anomaly within the Ooratippra Diamond Project, considered by Lindeman Geophysics or the Company to have kimberlitic potential is given the identification of CKA, followed by sequential numbering, irrespective of the Exploration Licence number.

This work was carried out in the knowledge that there existed within the Company's tenements a large untested gravity. The Company will concentrate its future efforts to better define and test this anomaly.

### Magnetics

Within the Ooratippra Diamond Project, a large number of magnetic anomalies have been identified from NTGS airborne magnetics and from work carried out by previous explorers, particularly Plenty River Mining, and reviewed for those with the potential to be kimberlites. A detailed interpretation located the centre of approximately 80 anomalies considered to be worth following up to look for kimberlite characteristics.

During year 3 of the EL 24993, a review of previous work revealed the fact that the Company had incorrectly plotted the location of CKA71. This magnetic anomaly has now been sampled in its correct location and numbered CKA71a.

The locations of these anomalies in GDA 94 are:

	MGA_E	MGA_N
CKA 71	616550	7576000
CKA 71a	661300	7574700

These locations are also shown on the attached satellite image.

### Sampling

Three 1,000m, north-south lines 500m apart were sampled across the CKA71a east-west magnetic anomaly by taking a small scoop of surface material every 10m resulting in the collection of three 20kg samples.

The line co ordinates in GDA 94 are; Line 1) 615800E 7575200N to 7574200N; Line 2) 616300E 7575200N to 7574200N; Line 3) 616800E 7575200N to 7574200N.

These lines are shown on the accompanying satellite image.

This method of sampling was successfully used for diamond exploration in the 1960s by Stockdale in the Kalahari desert in Botswana, a terrain not dissimilar to that at Ooratippra.

Although CKA71 and the nearby CKA6 had slightly elevated base metal values, Cu 24, Pb 47, Ni 13 and Cr 20ppm and Cu 16, Pb 47, Zn 50 and CR 20 ppm respectively, they are both down elevation. CKA71a elevation is 351m, CKA71 342m and CKA6 is 329m creating the possibility of weathered material migrating from CKA71a.

Stream sampling

Consequently, a 20kg and 2 kg stream sample were collected at GDA94 616552E 7578565N from a major north south creek which drains into the Sandover River.

This is shown on the attached satellite image.

Analysis

The samples were brought to Alice Springs from where they were sent to Diatech Heavy Mineral Services of Welshpool, WA, for processing for diamonds and key indicator minerals.

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.

Satellite imagery:

Interpretation of satellite imagery of the project area continued. Circular features considered to have the potential to be kimberlites are given the prefix of CF. Four more circular features were identified. These are:

The locations of these anomalies in GDA 94 are:

	MGA_E	MGA_N
CF 50	615560	7585260
CF 51	615271	7585787
CF 52	615206	7585211
CF 53	615979	7585400

These circular features were not visited in the field. In appearance they are very similar to CF 21 and CF 23 which had very broken ground which differed from the surrounding topography. There was no outcrop nor any indication of what might be the cause of the subsidence and assay results were negative.

Satellite images of these features accompany this report.

# 6. LANDOWNER LIAISON

Prior to commencing field work, the over a new area, 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 enables the landowners to clearly identify the work areas in relation to sites of significance.

# 7. REHABILITATION

The small scoops or sweeping 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 Satellite image appraisal suggest that a number of magnetic responses and circular topographical features could represent kimberlites.

Results from the sampling as part of the Company's Ooratippra Diamond Programme have been disappointing.

However, the tenements in the Ooratippra Project cover a large magnetic anomaly with an off-set gravity anomaly. This we consider has the potential to host Olympic Dam style mineralization. To this end, the Company plans to carry out an extensive gravity survey over the entire area at 1km station spacings. At the same time, to provide a sound geochemical background of the area,

particularly considering the number of historical base metal occurrences at surface, a soil sample will be taken at each gravity station.

# 9. YEAR 3 EXPENDITURE

Proposed expenditure for the Third year of tenure was \$40,300.

Actual expenditure was as follows:

1.	Geological reconnaissance	\$1
2.	Geophysical interpretation	\$3
3.	Vehicle hire	\$2
4.	Satellite imagery interpretation	\$3
5.	Sampling	\$4
6.	Processing for diamond and key indicator minerals	\$.
7.	Geochemical analysis	\$.
8.	Land owner liaison	
9.	Administration and overheads	\$2
	Total	<b>\$2</b> :

The principal reason for the difference in expenditure is that RAB drilling and Helicopter work were not carried out.

# 10. PROPOSED PROGRAMME AND FUTURE WORK

El 24993 has been surrendered and is now part of SELA 27526 over which, following grant, it is proposed to carry out gravity and soil sampling programmes using Atlas Geophysics of Perth. The quote for this work excluding the soil sampling is \$213,000.

# **11. Pervious years' exploration and expenditure:**

# Year 1

# 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 photographic interpretation carried out by Southwestern.

# Geophysics

Lindeman Geophysics Pty Ltd were commissioned to carry out a detailed interpretation of NTGS and open file magnetics to identify any magnetic anomalies considered to be possible kimberlites. Additional anomalies were identified by Southwestern.

Each anomaly was given the identification of CKA, followed by sequential numbering.

In EL 24993, a large number of magnetic anomalies were identified from NTGS airborne magnetics and reviewed for those with the potential to be kimberlites. A detailed interpretation located the centre of 16 anomalies considered to have the potential to be kimberlites.

The locations of these anomalies in GDA 94 are:

	MGA_E	MGA_N
CKA 05	615493	7580180
CKA 06	616242	7578800
CKA 50	603950	7502150
CKA 51	603650	7595200
CKA 52	601950	7592100
CKA 53	602750	7591325
CKA 54	601075	7589475
CKA 55	601360	7588550
CKA 56	601600	7582150
CKA 57	602225	7581475
CKA 58	601500	7581450
CKA 59	624550	7593700
CKA 60	625100	7592000
CKA 61	624750	7591000
CKA 72	602500	7584750
CKA 73	602900	7585650

These locations are also shown on the accompanying plan SOU005.

# Sampling

A fuel dump was established at number 14 bore, north of the Sandover River, in preparation for the sampling programme. Fuel was delivered by Russell Dehne Enterprises of Alice Springs.

# Diamonds

A JetRanger helicopter from Alice Springs Helicopters was used to transport the personnel sampling the anomalies and to drop samples off at pre-determined collection points. A three-man crew from Arnhem Exploration Services carried out the sampling.

From each location, a 20kg sample of surface loam was collected through a 1mm mesh sieve. At the end of the programme, Russell Dehne Enterprises brought the samples to Alice Springs from where they were sent to Diatech Heavy Mineral Services of Welshpool, WA, for processing for diamonds and key indicator minerals.

Northline Freight Management Pty Ltd of Alice Springs were used to transport the samples from Alice Springs to Welshpool.

### Other minerals

Also from each location, a 2kg sample of surface loam sieved to 1mm, was collected and sent to North Australian Laboratories, Pine Creek, to be analysed for: copper, lead, zinc, cadmium, nickel, cobalt, chromium, vanadium, molybdenum, arsenic, bismuth, barium, iron, manganese, titanium, thorium, silver, gold (both to one ppb) and uranium. Also, cerium, lanthanum and yttrium to check for rare earths.

ABC Transport Pty Ltd of Alice Springs were used to transport the samples to Katherine, and from there, Nighthawk Couriers took the samples to Pine Creek.

### Geological reconnaissance

The following reconnaissance work was carried out by geologist Peter Simpson

### Helicopter reconnaissance of selected targets.

### General

These notes were made following a visit to two sites of interest in Exploration Licence 24993, as part of an exploration program aimed primarily at finding diamonds but including search for base metals.

Co-ordinates are in GDA94 unless otherwise specified.

7588600N 603200E

### Site description

This photo anomaly is a very shallow, roughly circular, depression about 500m across, showing different vegetation colours from the surrounding flat country, and with no obvious drainage inlet or outlet. The vegetation is mostly grass cover with low scrub and sparse small trees. During rainy periods the depression probably becomes swampy. There is no coincident magnetic anomaly.

### Work carried out

The helicopter landing was made in the approximate centre of the feature. No suggestion of outcrops was seen when coming in to land and the 1:250,000 geological map indicates sand cover over an extensive surrounding area, so no foot reconnaissance was made.

Two sieved minus-1mm samples weighing 20kg and 2kg, both numbered 163019, were collected from (WSG84 co-ords) 7588427N 603104E. The sample material was slightly clayey red sandy soil.

# Comments

The cause of the shallow topographic depression was not determined but may be from weathering of an ultramafic intrusion or subsidence due to the dissolution of underlying carbonate rock.

### 7590350N 604300E

# Site description

The photo anomaly is generally similar in nature to the previous feature about 2km to the south, and is another shallow depression about 500m across, showing differently coloured vegetation from the surrounding flats. There is no obvious drainage inlet or outlet, so the depression is probably a perennial swamp. Vegetation is mainly grass cover with patches of low scrub, bare red sand and thinly spread trees.

# Work carried out

Two sieved minus-1mm samples weighing 20kg and 2kg, both numbered 163020, were collected at (WSG84 co-ords) 7590184N 601132E. The sample material was mostly red sandy to clayey soil but included a good proportion of mound material from termite mounds beside the sample site.

### Comments

The cause of the shallow topographic depression was not determined but may be from weathering of an ultramafic intrusion or subsidence due to the dissolution of underlying carbonate rock.

The vegetation anomalies at both photographic features are probably of similar origin. Several other smaller features of the same kind were noted while flying around this area.

# YEAR 1 EXPENDITURE

Proposed expenditure for the first year of tenure was \$41,680. Actual expenditure was as follows:

1.	Geophysical interpretation	\$8,0
2.	Aerial Photo interpretation	\$5,0
3.	Sampling	\$1,2
4.	Processing for diamonds and key indicator minerals "estimated"	\$4,8
5.	Micro Probing for diamonds and key indicator minerals "estimated"	\$7,8
6.	Helicopter hire	\$9,6
7.	Geochemical analysis "estimated"	\$3,6
8.	Freight	\$2,8
9.	Drafting	\$1,4
10.	Landowner liaison	\$1,2
11.	Administration and overheads	\$5,4
	Total	\$50,8

# Year 2

# 5. WORK DONE DURING THE YEAR

All Exploration Licences within the Ooratippra Diamond Project are worked as one identity.

### Review

Open file research programme, and follow-up field reconnaissance commenced in the first year of tenure continued. This work has been correlated with the geophysical and satellite image interpretation during year 2 of the Licence.

### Geophysics

Lindeman Geophysics Pty Ltd were commissioned to carry out a detailed interpretation of NTGS and open file magnetics to identify any magnetic anomalies considered to be possible kimberlites. Acacia have also identified magnetic anomalies with kimberlitic potential which are also interpreted by Lindemans.

Each anomaly within the Ooratippra Diamond Project is given the identification of CKA, followed by sequential numbering, irrespective of the Exploration Licence number.

### Magnetics

Within the Ooratippra Diamond Project, a large number of magnetic anomalies have been identified from NTGS airborne magnetics and from work carried out by previous explorers, particularly Plenty River Mining, and reviewed for those with the potential to be kimberlites. A detailed interpretation located the centre of approximately 80 anomalies considered to be worth following up to look for kimberlite characteristics. During year 2 of the EL 24993, two more magnetic anomalies were identified as possible kimberlites.

The locations of these anomalies in GDA 94 are:

	MGA_E	MGA_N
CKA 82	603150	7592200
CKA 86	603900	7592800

These locations are also shown on plan SOU005.

Sampling Key indicator minerals

Arnhem Exploration and Rural Services of Tennant Creek are used for sampling programmes. From each location, a 20kg sample is collected by sweeping the surface and sieving to 2mm. The samples were brought to Alice Springs from where they were sent to Diatech Heavy Mineral Services of Welshpool, WA, for processing for diamonds and key indicator minerals.

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.

Satellite imagery:

Interpretation of satellite imagery of the project area continued. Circular features are considered to have the potential to be kimberlites and are given the prefix of CF. Within EL 24993, four circular features were identified. These are:

The locations of these anomalies in GDA 94 are:

	MGA_E	MGA_N
CF 21	613391	7583516
CF 23	614380	7582444
CF 30	597202	7587481

These three circular features were visited in the field. CF 21 and CF 23 had very broken ground and some tall vegetation, which differed from the surrounding topography. There was no outcrop or any indication of what might be the cause of the subsidence.

CF 30 is a large elongated depression, quite different from CF 21 and 23 in size and shape.

Satellite images of these features accompany this report.

Sampling

Key indicator minerals

From each location, a 20kg loam sample is collected and sieved to 2mm. The samples were brought to Alice Springs from where they were sent to Diatech Heavy Mineral Services of Welshpool, WA, for processing for diamonds and key indicator minerals.

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.

A fourth feature was identified centred on 601204E 7587592N. A field inspection revealed that it was a borrow pit for material used on the nearby Sandover Highway.

# YEAR 2 EXPENDITURE

Proposed expenditure for the second year of tenure was \$50,900.

Actual expenditure was as follows:

1.	Geological reconnaissance	\$4,000
2.	Geophysical interpretation	\$3,500
3.	Vehicle hire	
4.	Satellite imagery interpretation	\$6,000
5.	Sampling	\$3,500
6.	Processing for diamond and key indicator minerals	\$5,000
7.	Geochemical analysis	
8.	Land owner liaison	
9.	Administration and overheads	\$3,500
	Total	\$33,300

Nick Byrne Director