# FIRST ANNUAL REPORT

## Year ended 9 October 2003

# EL 10409 Whirlwind Plains

# 1. INTRODUCTION

EL 10409 falls in the Auvergne area of the Northern Territory. The EL is subject to the "Top End- Memorandum of Understanding" with the Northern land Council.

The licencee is Tawana Resources NL (Tawana).

## 2. WORK PROGRAM

## 2.1 <u>Targets and Concepts</u>

2.1.1 Main Target

Exploration within EL 10409 is principally aimed at finding diamonds that may have eroded from the kimberlite discovered by De Beers in 1991 and designated TC-01 located in EL 10358, which is located to the south east of EL 10409 and is the subject of exploration by Tawana.

The Exploration Licence is situated within the Proterozoic Victoria River Basin (VRB) overlying the concealed North Australian Craton. The VRB consists of both marine and continental sediments, with a maximum thickness of 3500 meters that has undergone at least three periods of gentle warping.

Surrounding the known kimberlites are shallow dipping sediments of the Bullita Group. This is composed of thinly bedded reddish brown dolomitic siltstones and fine sandstone of the Timber Creek Formation. The Bullita Group has formed low rounded hills sometimes capped by overlying unconformable massive quartz sandstone. This sandstone is the Jasper Gorge Sandstone (Auvergne Group) which also caps the gently sloping plateau of the Newcastle Range to the northwest.

Covering a large portion of the Exploration Licence are perched river gravels, which are considered to be of Tertiary age.

# 2.1.2 Other Targets

Apart from diamonds that may have eroded from the kimberlite TC-01 there are other areas of geological interest within the EL that Tawana intends to investigate. These are related to a dominant structural trend, which is thought to be a part of the Halls Creek Mobile Zone, which in Western Australia hosts the Argyle Diamond Mine.

1

## Location.

## 2.1.3 Location Maps

See attached location map for the area covered by the EL.

# 2.2 <u>Techniques, infrastructure and improvements</u>

#### **Exploration Techniques**

## **Initial Investigations**

The initial investigations conducted during the year included the interpretation of Landsat images over the area and aerial photographs and the verification of features identified from this interpretation on the ground.

The results of the work conducted in the area by previous explorationists, namely De Beers and Normandy, was assessed and a field inspection of the areas in which these companies conducted their work was inspected.

This initial phase has not been completed but will be completed during the dry season of 2003. Maps showing the locations of alluvial material will be presented on completion of the mapping and verification by senior geologists in the next annual report. The preliminary interpretation of the distribution of the alluvial material is however shown on the attached map, which is based on the landsat image over the area.

No sampling was conducted to confirm the presence of diamonds in the EL.

## **Results of Initial Investigations**

The interpretation of the landsat images and the aerial photographs resulted in the selection of areas in which palaeo-alluvials were suspected to occur. These areas were inspected in the field and one large area in the eastern section of the EL (shown on the attached maps) was confirmed to be underlain by alluvial gravels. These gravels are interpreted to have been deposited by the proto-Victoria River, probably during the Tertiary period.

De Beers and Normandy conducted some drilling and mini-bulk sampling of these gravels and recovered diamonds as shown on the attached maps and in the appended spread sheets.

An additional area to the north-west of the main gravel deposit was also inspected but will need excavation or drilling to conform the presence of palaeo-alluvials.

The palaeo-channels of the proto-Victoria River can be clearly seen on the landsat image that was collected over the area during the wet season of 2001

3

(as shown on the attached image). These palaeo-channels are potential sites for diamonds accumulations and will be investigated during the next field season.

## <u>Access</u>

Access to the application area during the Initial Investigation phase was gained with the use of four-wheel drive vehicles using existing tracks. Accommodation was obtained outside the application area, in the town of Timber Creek

## Personnel

One field team was utilised for the initial investigation, consisting of one geologists and a field assistant.

# 3. Expenditure

The expenditure during the year on EL 10409 was as follows:

Salaries and Wages	\$ 10,000
Vehicle costs	\$ 2,000
Accommodation and Travel	\$ 4,000
Aerial Photos/landsat etc	\$ 3,000
Consultants	<u>\$ 2,000</u>
Total	<u>\$ 21,000</u>

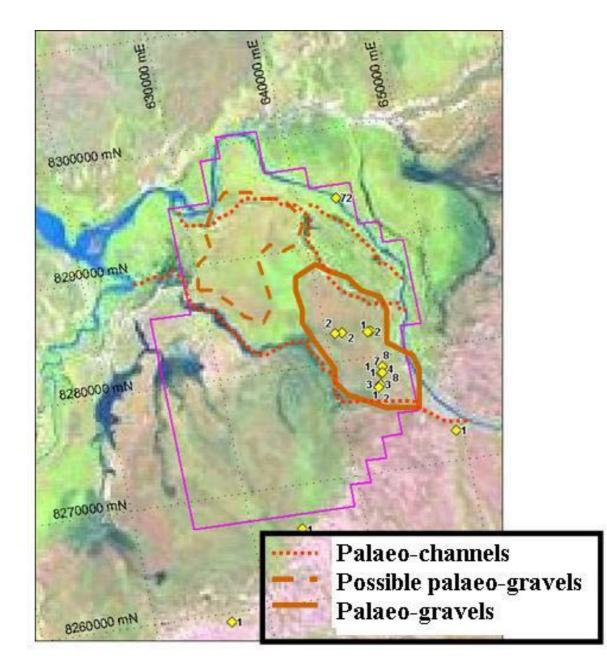
# 4. Forward Work Program

The proposed forward work program for the EL's during the year to 9 October 2004 is as follows:

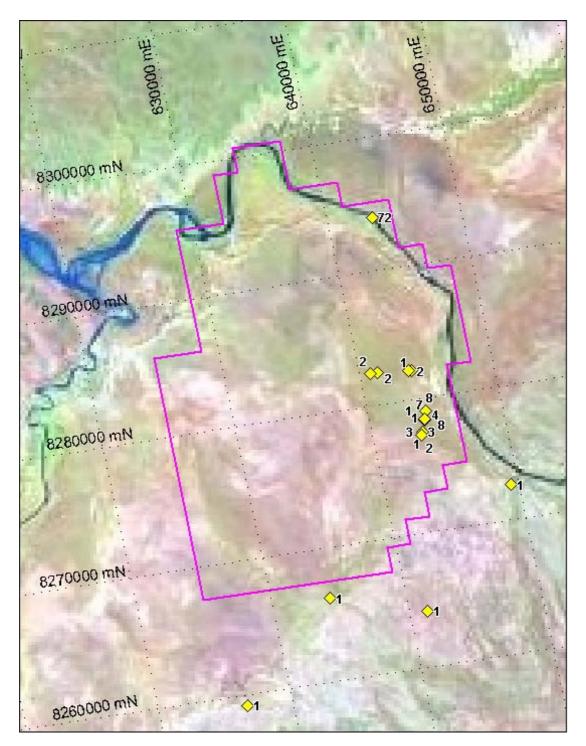
The mapping of the alluvial material will be completed. Attention will be paid to any indications of palaeo-alluvials or buried channels. Attempts will be made to map any buried channels by geophysical means (magnetic and gravity surveys) and to ascertain whether such channels warrant excavation for bulk sampling to test for the presence of diamonds. No bulk sampling is planned to be undertaken in the EL during the 2003 dry season.

The anticipated expenditure in EL 10409 on this proposed work program is as follows:

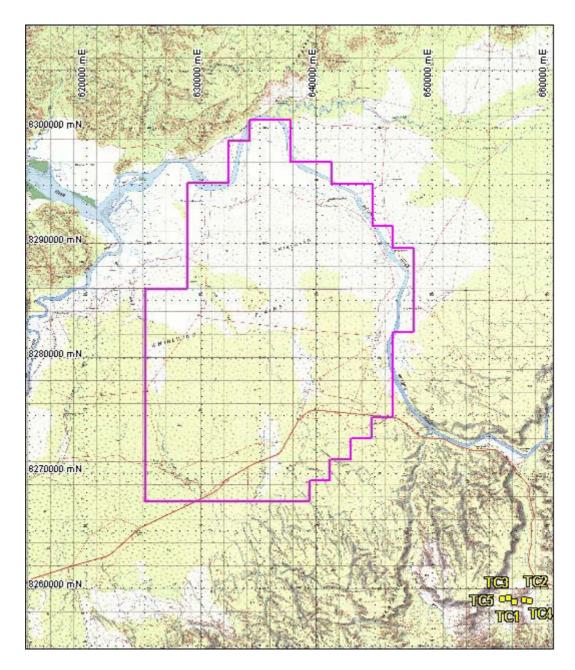
Salaries and Wages	\$ 25,000
Vehicle costs	\$ 10,000
Accommodation and Travel	\$ 5,000
Access maintenance	\$ 5,000
Consultants (Geophysical)	\$ 15,000
Total	\$ 60,000



Landsat Image over EL10409 showing tenement boundary, diamond recoveries (location and number of diamonds recovered) by previous explorationists and interpreted palaeo-channels and alluvials. The Landsat image was shows the area during the wet season.



Landsat Image over EL10409 showing tenement boundary, diamond recoveries (location and number of diamonds recovered) by previous explorationists. The Landsat image was shows the area during the dry season.



Location of EL10409. The map also shows the location of the Timber Creek Kimberlites (TC1-5).

SAMPLE	EASTING	NORTHING MAP	100K DMD_TotalSAMPLER	LOCATION COMMENTS
BB0445	649408.7	8272612.3 4966	1 Stockdale	Big Horse (One diamond (1-2mm), green tinge and green spotted, 200L barrage sample
BB0472	634381.9	8266219 4966	1 Stockdale	Barrage sa One diamond (0.5-1mm), green tinged, intense green spots, irregular fragment
BL9663	641361.3	8264189.2 4966	1 Stockdale	One diamond (0.002ct) recovered
Pit A 10.5-13.5m	643770	8277515 4966	3 Normandy	Along Grec Light grey yellowish gravel, sandy matrix, well packed, 3 diamonds (0.066ct)
Pit A 3.5-6.5m	643770	8277515 4966	3 Normandy	Along Grec Grey brownish gravel, clay sandy matrix, 3 diamonds (0.407ct)
Pit A 6.5-8.0m	643770	8277515 4966	2 Normandy	Along Grec Light grey gravel, clay sandy matrix, 2 diamonds (0.095ct)
Pit B 0.5-3.0m	644125	8278475 4966	8 Normandy	Along Grec Brown redish to grey brownish clay matrix gravel, 8 diamonds (0.268ct)
Pit B 3.0-6.0m	644125	8278475 4966	4 Normandy	Along Greç Grey light brown gravel, well packed, almost sorted rounded clasts, 4 diamonds (0.388ct)
Pit B 6.0-9.3m	644125	8278475 4966	1 Normandy	Along Grec Light brown greyish gravel, unsorted well rounded clasts., one diamond (0.090ct)
The Hook	643345	8294000 4967	72 Cambridge Culf	Victoria Riv72 diamonds, total 6.574ct, bulk alluvial samples
X9129	643611.1	8277287.7 4966	1 Stockdale	Pit E, St sic Bulk gravel sample, 140 tonnes, one diamond (0.02ct)
X9134	644265.7	8279009.7 4966	7 Stockdale	Pit A, Sth s Bulk gravel sample, 173 tonnes, seven diamonds (0.09ct total)
X9135	644265.7	8279009.7 4966	8 Stockdale	Pit A, north Bulk gravel sample, 155 tonnes, eight diamonds (0.26ct total)
X9137	644054.3	8278415.5 4966	1 Stockdale	Pit G, 3.5 t/Bulk gravel sample, 189 tonnes, one diamond (0.04ct)
X9141	641359.8	8282397.9 4966	2 Stockdale	Pit K, 1.0 t Bulk gravel sample, 171 tonnes, two diamonds
X9145	640819.9	8282458.5 4966	2 Stockdale	Pit M, 0.2 t Bulk gravel sample, 266 tonnnes, two diamonds (0.253ct total)
X9147	643844.7	8282181 4966	2 Stockdale	Pit H, west Bulk gravel sample, 170 tonnes, two diamonds (0.046ct total)
X9148	643638.2	8282196.5 4966	1 Stockdale	Pit N, 0 to (Bulk gravel sample, 257 tonnes, one diamond (0.014ct)