Appendix DA98-13

Diamond Exploration on the Deaf Adder Project
Report by Stockdale Prospecting Ltd.

1998 Diamond Indicator Sampling and Results

(Includes Location Map SP98-01)

Diamond Exploration

Introduction

Exploration licences 5061 and 5062 lie within the intracratonic McArthur Basin and are mostly confined to the intruded sedimentary sequence of the Palaeoproterozoic Katherine River Group. The McArthur Basin forms a platform cover sequence overlying the North Australian Craton, which is known to host a number of diamondiferous kimberlites/lamproites, notably the Argyle and Merlin diamond mines. Only limited diamond exploration work has been undertaken in Arnhem Land and as such the region is considered as highly prospective.

Reconnaissance Heavy Mineral Sampling

Reconnaissance heavy mineral samples were collected for diamond and indicator mineral recovery. The samples were collected at a two kilometre or less drainage interval yielding an overall density of 1:7 km^2. A total of 333 stream and loam samples were collected during 1998. The majority of the drainages sampled were still flowing at the time of collection, therefore the sample quality is considered to be generally poor.

Sample locations are shown on Map SP98-01 Each sample consisted of 100 litres of excavated material, screened to either -2.0 or -12.0mm in the field. Sample numbers are as follows:

Heavy Mineral Samples Collected

EL 5061	EL 5062
BT9056-9159 (4) BT9061-9073 (13) BT9075-9076 (2) BT9078-9098 (21) BT9100 (1) BT9153-9170 (18) BT9175-9235 (61) BT9259-9263 (5) BT9266-9268 (3) BT9270-9271 (1) BT9301-9330 (30) BT9352-9355 (4) BT9360-9363 (4) BT9365-9368 (4)	BT9001-9055 (55) BT9074 (1) BT9077 (1) BT9101-9105 (5) BT9107-9152 (46) BT9171 (1) BT9236-9258 (23) BT9269 (1) BT9331-9351 (21) BT9356-9359 (4) BT9364 (1)
TOTAL = 174	**TOTAL = 159**

Geochemical samples were collected at each heavy mineral site; results are awaited.

Aeromagnetic Investigations

In 1997 World Geoscience Corporation flew a regional airborne magnetic/radiometric survey for the NTGS which covered both exploration licences. The survey was flown in an east-west direction

at a 200m flight line spacing. The aeromagnetic data obtained from this survey was interpreted for diatreme-like structures, which magnetically would be distinguishable by dipole signatures. Nine discrete dipolar anomalies were selected from the magnetic data. All anomalies were either visited and sampled, or were adequately covered by reconnaissance sampling. Most anomalies contained some sandstone outcrop, which meant they were either very deep or were caused by surface noise. Magnetic anomaly follow up details are summarised in the table below.

MAGNETIC ANOMALY FOLLOW-UP

ANOMALY	EASTING	NORTHING	MAPSHEET	EL	SAMPLE
DAD002	299427	8488944	SNOWDROP	5062	BT9248
DAD014	326723	8502755	SNOWDROP	5061	BT9080
DAD015	312026	8503699	SNOWDROP	5061	BT9076
DAD034	303530	8515563	GILRUTH	5062	BT9242
DAD036	307979	8516582	GILRUTH	5062	BT9267
DAD050	325901	8528754	GILRUTH	5061	BT9368
DAD052	328144	8529132	GILRUTH	5061	BT9318
DAD059	343596	8561517	MANN RIVER	5061	BT9324
DAD060	312052	8516803	GILRUTH	5061	BT9365

All nine priority magnetic anomalies (DAD002, DAD014, DAD015, DAD034, DAD036, DAD050, DAD052, DAD059 & DAD060) will be flown with detailed aeromagnetic surveys using the UTS Fletcher surveyor during the 1999 field season. The surveys will be flown at a 50m flight line spacing in a north-south direction, on a one kilometre grid.

Sampling Results

Full sampling results are now available and only 46 of the 333 collected samples (14%) contained indicator minerals. The dominant indicator mineral recovered was chromite. No kimberlitic garnets, ilmenites or diamonds were recovered. No samples collected over the magnetic anomalies contained indicator minerals of interest. The samples containing chromite indicator minerals are detailed in the below table.

SAMPLE RESULTS

EL 5061		EL 5062	
SAMPLE	**CHROMITES**	**SAMPLE**	**CHROMITES**
BT9056	1	BT9025	1
BT9076	4	BT9027	1
BT9100	1	BT9028	1
BT9160	1	BT9030	1
BT9186	2	BT9035	1
BT9189	1	BT9037	1
BT9222	5	BT9043	3
BT9228	1	BT9048	2
BT9231	1	BT9050	1
BT9235	5	BT9051	4
BT9270	1	BT9077	51
BT9315	3	BT9102	1
BT9328	1	BT9105	3
BT9329	10	BT9123	1

BT9330	8	BT9124	1
		BT9133	1
		BT9136	1
		BT9141	2
		BT9146	1
		BT9148	2
		BT9149	3
		BT9151	1
		BT9152	5
		BT9241	1
		BT9245	7
		BT9247	3
		BT9254	3
		BT9255	2
		BT9345	2
		BT9357	2
TOTAL	**45**	**TOTAL**	**109**

Seven samples (BT9025, BT9035, BT9100, BT9146, BT9149, BT9245 & BT9329) contain anomalous singleton chromites which are worthy of further more detailed sampling. The locations of these proposed follow-up targets are displayed on Map ?

Particulate gold weighing 0.0009g was recovered in heavy mineral stream sample BT9231. This sample is located within EL5061 (339890mE/8559400mN) and near mapped outcrop of a fine-medium grained basalt contained within the Nungbalgarri Volcanic Member.

Proposed Exploration 1999

Exploration proposed for 1999 involves the collection of close interval follow-up samples upstream and around seven anomalous reconnaissance samples. Approximately 170 stream and loam samples are proposed to be collected, with sampling expected to take about one week to complete.

All nine priority magnetic anomalies will be flown with detailed aeromagnetic surveys using the UTS Fletcher surveyor during 1999. In addition, a DIGHEM anomaly (313340mE/8531090mN) is to be field inspected and sampled during the 1999 work programme.

Expenditure

Expenditure for diamond exploration in 1998 totalled $299 521, as allocated in the table below.

EXPENDITURE	EL 5061	EL 5062
Operational Staff Costs	32459	29661
General Operational Expenses	1337	1221
Transport and Travel	49932	45627

Aboriginal Liaison / Clearance	0	0
Other Tenement Costs	0	0
Central Treatment Plant	26154	23900
Lab Treatment	3381	3090
Lab Examination	6941	6342
Contractors Geophysical	0	0
Geophysical Services	2613	2387
Remote Sensing	0	0
Drafting / Data Processing	941	859
Regional Administration	12506	11428
Head Office Administration	15630	14282
Capital Expenses	4614	4216
TOTAL	**$156 506**	**$143 015**