STOCKDALE PROSPECTING LIMITED

ARNHEM LAND PROJECT
EXPLORATION LICENCES 327, 328, 329, 3340 & 9969

COMBINED ANNUAL REPORT FOR THE PERIOD ENDING 13 MAY 2000

M. I. MILLIKAN

OPEN FILE
PROJECT NAME: ARNHEM LAND EL PROJECT

TITLE: Arnhem Land Project
Exploration Licences 327, 328, 329, 3340 & 9969
Annual Report for the period ending 13 May 2000

AUTHOR: M I Millikan
EDITED: P D Wilson
APPROVED: S C Vercoe

DATE: May, 2000
PLACE: Perth

1:250,000 MAP SHEET NAME & NO: Milingimbi (SD53-02), Arnhem Bay (SD53-03) & Mount Marumba (SD53-06)

TEXT PAGES: 6 TABLES: 4 APPENDICES: 2 MAPS: 1

KEYWORDS: NT, Arnhem Land EL Project, Arnhem Land, Aboriginal Liaison, stream sediment sampling, spinel.

ABSTRACT: The Arnhem Land Project consists of five granted exploration licences (EL 327, 328, 329, 3340 & 9969) located within central Arnhem Land.

Exploration conducted over the Arnhem Land project area during the second year of tenure involved the flying and interpretation of a regional geophysical survey over the western, previously unsurveyed portion of the licensed area and the detailed magnetic follow-up of five anomalies selected from the 1998 survey. The geophysical survey was flown to give full radiometric and magnetic coverage over the project area.

Ceremonial activities throughout Arnhem Land in 1999 meant that the work area clearance meeting was not held until late in the year in October. A decision was made at this meeting that effective field operations would not be possible so close to the wet season therefore no fieldwork was conducted in 1999.

A deferral from reduction was applied for in early April 2000 and a full waiver from surrender granted by the Department Secretary late April 2000. Reductions are now not required until 13 May 2001.
SUMMARY

Exploration Licence: 327, 328, 329, 3340 9969
Date Granted: 14/05/98 1/06/98
Total Area: 824 Blocks (2360 km²)
Occupant: Stockdale Prospecting Limited
Operator: Stockdale Prospecting Limited
Commodities Sought: Diamonds, uranium, precious and base metals.

Exploration:

The Arnhem Land Project consists of five granted exploration licences (EL 327, 328, 329, 3340 & 9969) located within central Arnhem Land.

Exploration conducted over the Arnhem Land project area during the second year of tenure involved the flying and interpretation of a regional geophysical survey over the western, previously unsurveyed portion of the licensed area and the detailed magnetic follow-up of five anomalies selected from the 1998 survey. The geophysical survey was flown to give full radiometric and magnetic coverage over the project area.

Ceremonial activities throughout Arnhem Land in 1999 meant that the work area clearance meeting was not held until late in the year in October. A decision was made at this meeting that effective field operations would not be possible so close to the wet season therefore no fieldwork was conducted in 1999.

A deferral from reduction was applied for in early April 2000 and a full waiver from surrender granted by the Department Secretary late April 2000. Reductions are now not required until 13 May 2001.
CONTENTS

1. INTRODUCTION
2. TENURE
3. ABORIGINAL CLEARANCE AND LIAISON
4. GEOLOGY
5. EXPLORATION
   5.1 Reconnaissance Heavy Mineral Sampling and Results
   5.2 Geophysical Surveys
      5.2.1 Detailed Magnetic Surveys
      5.2.2 Cameco Regional Airborne Geophysical Survey
      5.2.3 Aeromagnetic Anomaly Investigations
6. EXPENDITURE
7. SUMMARY AND FORWARD WORK PROGRAMME
8. REFERENCES

TABLES

Table 1: Tenure Details
Table 2: Anomaly Investigations
Table 3: Expenditure
Table 4: Proposed Expenditure

APPENDICES

Appendix 1: Detailed TMI Contours for ALD021, ALD024, ALD025, ALD027 & ALD046
Appendix 2: TMI Contours for the Cameco Arnhem Land Aeromagnetic Survey

MAPS

Map 1: Arnhem Land Project Location.
STOCKDALE PROSPECTING LIMITED
EXPLORATION LICENCES 327, 328, 329, 3340 & 9969
ANNUAL REPORT FOR THE PERIOD ENDING 13 MAY 2000

1. INTRODUCTION

Exploration Licence's 327, 328, 329, 3340 and 9969 form part of the Arnhem Land Project. The exploration licences are located over the Milingimbi (SD53-02), Arnhem Bay (SD53-03) and Mount Marumba (SD53-06) 1:250,000 map sheets in central Arnhem Land. The licences cover an area of 2360 km², and are centered some 50 kilometres south south-west of Ramingining.

The five Arnhem Land exploration licences are subject to a “farm-in” reciprocating agreement between Stockdale Prospecting and Cameco Australia. The agreement allows Cameco to explore for uranium, precious and base metals over the granted Stockdale central Arnhem Land tenements and for Stockdale to explore for diamonds on Cameco's Deaf Adder tenements.

Exploration conducted over the project area during the second year of tenure involved the flying and interpretation of a regional geophysical survey over the western, previously unsurveyed portion of the licensed area and the detailed magnetic follow-up of five anomalies selected from the 1998 survey. No field work was undertaken in 1999. Exploration procedures and sample results are detailed in this report, as well as a proposed work programme to further explore the area.

2. TENURE

Tenure details for the Arnhem Land licences are outlined in Table 1 and the location of the licences are displayed as Map 1.

<table>
<thead>
<tr>
<th>LICENCE</th>
<th>APPL’N DATE</th>
<th>DATE GRANTED</th>
<th>AREA (BLOCKS)</th>
<th>AREA (km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 327</td>
<td>9/12/1971</td>
<td>14/05/1998</td>
<td>238</td>
<td>766</td>
</tr>
<tr>
<td>EL 328</td>
<td>9/12/1971</td>
<td>14/05/1998</td>
<td>259</td>
<td>831</td>
</tr>
<tr>
<td>EL 329</td>
<td>9/12/1971</td>
<td>14/05/1998</td>
<td>150</td>
<td>483</td>
</tr>
<tr>
<td>EL 3340</td>
<td>21/09/1981</td>
<td>14/05/1998</td>
<td>85</td>
<td>274</td>
</tr>
<tr>
<td>EL 9969</td>
<td>9/12/1971</td>
<td>1/06/1998</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

Stockdale Prospecting Limited is both the occupant and operator of the exploration licences. An application for Group Reporting was made on the 19th March 1999 and was granted on the 5th May 1999.
Ceremonial activities throughout Arnhem Land in 1999 meant that the work area clearance meeting was not held until late in the year in October. A decision was made at this meeting that effective field operations would not be possible so close to the wet season therefore no fieldwork was conducted in 1999.

Since Stockdale was not able to begin its fieldwork in 1999 and our joint venture partners Cameco Australia have not as yet started theirs, due to the delays in obtaining clearance, delineation of an area of 50% of the licence area for reduction, as required by Sections 26 and 27 of the Mining Act, was not possible. Pursuant to Section 28 of the Mining Act, the company applied for a partial deferral of the requirement to surrender 50% of the licence area. The Department Secretary granted a full waiver from surrender in April 2000. Reductions are now not required until 13 May 2001.

3. ABORIGINAL CLEARANCE AND LIAISON

A meeting of the Aboriginal Liaison Committee for EL327-329, 3340 & 9969 was held at Bulman on Monday 4 October 1999. At this meeting the Traditional Owner committee members considered Stockdale’s work programme for further exploration over the project area. The work programme cleared at the liaison committee meeting covered a programme of close interval follow-up sampling around four samples containing anomalous chromite grains. The proposed work areas were visited and cleared with traditional owners in the proceeding two days. Formal notification was received from the Northern Land Council (NLC) in the following few weeks and Traditional Owners did not specify any “NO GO” zones over the proposed work area, however, guides were to be employed when sampling.

The 1998 sample results were reviewed again in 2000. This more detailed assessment concluded that the grains originally flagged as possibly kimberlitic in 1999 were unlikely to be derived from a potentially diamondiferous rock. Consequently no further follow-up work on them could be justified. Subsequent to this decision the Cameco airborne radiometric and magnetic survey over the previously unsurveyed western portion of the granted Stockdale tenements was interpreted and a number of priority anomalies selected. Two of these anomalies are considered to be high priority targets that require further investigation. A revised work programme for diamond exploration was submitted to the NLC in early May. Cameco Australia’s proposed work programme was submitted to the NLC in March 2000.

4. GEOLOGY (after Carson et al., 1999)

The tenements lie within the Palaeoproterozoic McArthur Basin and cover part of the Neoproterozoic Arafura Basin.

McArthur Basin
The McArthur Basin is a succession of essentially unmetamorphosed sedimentary and lesser volcanic rocks, deposited largely in shallow marginal marine and lacustrine settings. The oldest unit contained within the tenements is the basement Mirarrmina Complex (Py), of which the McArthur Basin platform cover onlaps and overlies. The Katherine River Group (Ph) dominates the western portion of the tenements and consists of thick siliciclastic sandstone units of the Kombolgie Subgroup. The Kombolgie Subgroup forms some of the spectacular escarpment country seen over the Arnhem Land Plateau. The Donydj Group (P1) occurs in the eastern margin of the licence area and is moderately deformed due to
compressional and extensional events leading to the formation of the Walker Fault Zone. The Parson Range Group (Pp), mapped on the south-eastern area of the tenements is composed almost entirely of shallow marine to fluvial sandstone with minor lutite and carbonate. The youngest unit of the McArthur Basin is the widespread Roper Group (Pr), a cyclic deposit of fine and coarse grained siliciclastic rocks deposited mainly in shallow marine environment. The Roper Group sediments crop out in the south-central portions of the tenements. Mesoproterozoic dolerite dykes intrude the Katherine River Group and form east-northeast trending magnetic lineaments on magnetic maps for the region. The dolerite dykes do not intrude the Neoproterozoic Arafura Basin.

Arafura Basin
The Arafura Basin comprises of shallow marine sandstone, lutite and lesser carbonate. The Neoproterozoic Wessel Group (Ps) sporadically crop out in the northern tenements, containing sandstone, mudstone and minor carbonate to form the basal units of the Arafura Basin.

Cretaceous (K) sedimentary rocks are exposed intermittently in small mesa and plateaus throughout the tenement area. They form a flat-lying, largely undeformed siliciclastic coastal plain to shelf succession unconformably overlying Proterozoic rocks.

Cainozoic (C) deposits dominate the licence area. Inland deposits of sand, skeletal soils and ferruginous detritus typify the recent sedimentation, with coastal deposits actively forming over the northern most exploration licence applications.

5. EXPLORATION

5.1 Reconnaissance Heavy Mineral Sampling and Results

A total of 278 stream and loam samples were collected during the first year of tenure in 1998. Full sampling results became available prior to the first anniversary of the licences and only 33 of the 278 samples (12%) contained potentially kimberlitic indicator minerals. Only chrome spinel was identified. No kimberlitic garnets, ilmenites or diamonds were recovered. No samples collected over the magnetic anomalies contained indicator minerals of interest. The majority of the chrome spinel grains were considered to be of little interest. Four samples (BT9458, BT9459, BT9462 & BT9479) contain singleton anomalous chrome spinels, which were thought worthy of further more detailed work. A programme of close interval follow-up sampling was proposed for the second year of tenure.

Work clearance delays throughout 1999 meant that no fieldwork was undertaken. Further analysis and review of the reconnaissance sampling in 2000 downgraded the significance of the results that were obtained. Consequently, no further sampling to follow-up these results could be justified.

5.2 Geophysical Surveys

5.2.1 Detailed Magnetic Surveys

The Stockdale Arnhem Land airborne geophysical survey was flown over the poorly drained portions of the project area in 1998. The survey covered 1370 km² at 250m FLS (6200
line km) in a N-S direction using a gradiometer system. Radiometric data was also collected. TMI Contours of the Stockdale aeromagnetic survey is available from the previous annual report.

Eight magnetic anomalies were ground inspected and followed up with loam samples during the first year of tenure. Five of the priority magnetic anomalies (ALD021, ALD024, ALD025, ALD027 & ALD046) were flown with detailed aeromagnetic surveys using the UTS Fletcher surveyor during the second year of tenure in 1999. The surveys were flown at a 50m flight line spacing in a north-south direction, on a one kilometre grid over each anomaly. Total magnetic intensity plots generated from the detailed surveys is presented in Appendix 1. The location of the magnetic anomalies is presented in Appendix 2.

5.2.2 Cameco Regional Airborne Geophysical Survey

Cameco Australia commissioned UTS Geophysics to fly the previously unsurveyed western portion of the licensed area with airborne magnetics and radiometrics during the second year of tenure. The survey covered the sandstone units of the Kambolgie Subgroup, giving full airborne magnetic and radiometric coverage over the project area. The area covered by the Cameco survey was not originally surveyed by Stockdale, as part of the Arnhem Land survey, as this area was considered to represent better drained country in which stream sampling would be effective.

The survey was flown in August 1999 at a 200m flight line spacing (FLS) in a north south direction covering over 1195 km² (6505 line kilometres). Total Magnetic Intensity (TMI) Contours of the aeromagnetic survey are displayed in Appendix 2.

5.2.3 Aeromagnetic Anomaly Investigations

Interpretation of the Cameco aeromagnetic data revealed five (5) magnetic anomalies that potentially may represent a kimberlite intrusion. In addition, a magnetic anomaly previously selected from the NTGS Milingimbi survey was reselected and it’s high interest rating confirmed. The location of the selected anomalies is detailed in the below table.

**TABLE 2: ANOMALY INVESTIGATIONS**

<table>
<thead>
<tr>
<th>ANOMALY</th>
<th>EASTING</th>
<th>NORTHING</th>
<th>ZONE</th>
<th>EL</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMO001</td>
<td>435029</td>
<td>8572439</td>
<td>53</td>
<td>327</td>
<td>Requires further work.</td>
</tr>
<tr>
<td>CMO003</td>
<td>445382</td>
<td>8576330</td>
<td>53</td>
<td>327</td>
<td>Within sacred NOGO area can’t be investigated.</td>
</tr>
<tr>
<td>CMO005</td>
<td>447302</td>
<td>8575616</td>
<td>53</td>
<td>327</td>
<td>Negative stream sample (BT9491) only 1.3 km away.</td>
</tr>
<tr>
<td>CMO006</td>
<td>454014</td>
<td>8571236</td>
<td>53</td>
<td>327</td>
<td>Negative stream sample (BT9502) only 500m away.</td>
</tr>
<tr>
<td>CMO007</td>
<td>454613</td>
<td>8575776</td>
<td>53</td>
<td>327</td>
<td>Negative stream sample (BT9483) only 1.4 km away.</td>
</tr>
<tr>
<td>MGB002</td>
<td>445308</td>
<td>8564873</td>
<td>53</td>
<td>327</td>
<td>Requires further work.</td>
</tr>
</tbody>
</table>
Two magnetic priority magnetic anomalies (CMO001 & MGB002) require more detailed investigation. These two targets are proposed for detailed magnetic surveying during the third year of tenure. The detailed magnetic surveys will be flown with the UTS Fletcher system with the surveys flown at a 50m flight line spacing in a north-south direction; on a one kilometre grid over each anomaly. If the interpretation of the detailed magnetic data generates sufficient encouragement then the anomalies are proposed to be field inspected and sampled. Ground inspection and geochemical sampling is also proposed for a high priority magnetic anomaly (ALD021) selected from the 1998 Stockdale Arnhem Land Survey.

The other anomalies selected from the Cameco Arnhem Land survey have been well tested by reconnaissance sampling or are located within sites of significance therefore are NO GO areas.

6. **EXPENDITURE**

Expenditure for the second year of tenure totaled $158,828, as allocated in Table 3.

**TABLE 3: EXPENDITURE**

<table>
<thead>
<tr>
<th>Expenditure</th>
<th>EL 327</th>
<th>EL 328</th>
<th>EL 329</th>
<th>EL 3340</th>
<th>EL 9969</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Staff Costs</td>
<td>13848</td>
<td>12078</td>
<td>6243</td>
<td>3600</td>
<td>300</td>
</tr>
<tr>
<td>General Operational Expenses</td>
<td>576</td>
<td>630</td>
<td>360</td>
<td>216</td>
<td>18</td>
</tr>
<tr>
<td>Transport and Travel</td>
<td>1920</td>
<td>2100</td>
<td>1200</td>
<td>720</td>
<td>60</td>
</tr>
<tr>
<td>Aboriginal Liaison/Clearance</td>
<td>4781</td>
<td>5229</td>
<td>2988</td>
<td>1793</td>
<td>149</td>
</tr>
<tr>
<td>Other Tenement Costs</td>
<td>960</td>
<td>1050</td>
<td>600</td>
<td>360</td>
<td>30</td>
</tr>
<tr>
<td>Central Treatment Plant</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lab Treatment</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>194</td>
</tr>
<tr>
<td>Lab Examination</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>220</td>
</tr>
<tr>
<td>Geophysics Contractors</td>
<td>31500</td>
<td>14657</td>
<td>1800</td>
<td>4436</td>
<td>0</td>
</tr>
<tr>
<td>Geophysics Services</td>
<td>7381</td>
<td>3942</td>
<td>422</td>
<td>1800</td>
<td>0</td>
</tr>
<tr>
<td>Remote Sensing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Data Processing/Drafting</td>
<td>0</td>
<td>810</td>
<td>0</td>
<td>1215</td>
<td>0</td>
</tr>
<tr>
<td>Regional Office Expenses</td>
<td>4877</td>
<td>3240</td>
<td>1089</td>
<td>1131</td>
<td>78</td>
</tr>
<tr>
<td>Head Office Expenses</td>
<td>6706</td>
<td>4455</td>
<td>1497</td>
<td>1555</td>
<td>107</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>1829</td>
<td>1215</td>
<td>408</td>
<td>424</td>
<td>29</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$74,379</td>
<td>$49,405</td>
<td>$16,608</td>
<td>$17,251</td>
<td>$1,185</td>
</tr>
<tr>
<td><strong>COVENANT</strong></td>
<td>$30,000</td>
<td>$25,000</td>
<td>$15,000</td>
<td>$10,000</td>
<td>$5,000</td>
</tr>
</tbody>
</table>

All covenants were met for the last year of tenure with the exception of EL 9969. Exploration licence 9969 constitutes only two blocks and a variation of covenant under section 172 of the Mining Act has been applied for.
7. SUMMARY AND FORWARD WORK PROGRAMME

Exploration conducted over the Arnhem Land project area during the second year of tenure involved the flying and interpretation of a regional geophysical survey over the western, previously unsurveyed portion of the licensed area and the detailed magnetic follow-up of five anomalies selected from the 1998 survey. The geophysical survey was flown to give full radiometric and magnetic coverage over the project area.

Further analysis and review of the 1998 reconnaissance sample results has downgraded the significance of the recovered indicator minerals; no further work on these results can be justified. Subsequent to this decision the Cameco airborne geophysical survey over the previously unsurveyed western portion of the granted Stockdale tenements was interpreted and a number of priority anomalies selected. Two of these anomalies are considered to be high priority targets that require further investigation. It is proposed that these two anomalies be followed up with detailed airborne magnetics. Follow-up work would entail detailed airborne surveys over both targets followed by ground inspection and sampling if the geophysical results are encouraging. Ground inspection and geochemical sampling is also proposed for a high priority magnetic anomaly selected from the 1998 Stockdale Arnhem Land Survey.

The project area forms a joint venture agreement with Cameco Australia, who will explore the tenements for uranium, precious and base metals. Cameco has proposed a low impact data collection programme involving helicopter-assisted sampling and prospecting based on follow-up to an airborne radiometric survey flown during 1999. Their field investigation will constitute approximately five days work and estimated to cost around $60,000.

**TABLE 4: PROPOSED EXPENDITURE**

<table>
<thead>
<tr>
<th>EXPENDITURE</th>
<th>EL327</th>
<th>EL328</th>
<th>EL329</th>
<th>EL3340</th>
<th>EL9969</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Staff Costs</td>
<td>2650</td>
<td>3350</td>
<td>2250</td>
<td>1100</td>
<td>890</td>
</tr>
<tr>
<td>General Operational Expenses</td>
<td>200</td>
<td>450</td>
<td>250</td>
<td>120</td>
<td>80</td>
</tr>
<tr>
<td>Transport and Travel</td>
<td>2700</td>
<td>3380</td>
<td>2530</td>
<td>950</td>
<td>680</td>
</tr>
<tr>
<td>Central Treatment Plant</td>
<td>3200</td>
<td>3250</td>
<td>1320</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lab Treatment</td>
<td>450</td>
<td>470</td>
<td>270</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lab Examination</td>
<td>1400</td>
<td>1550</td>
<td>760</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Contractors Geophysical</td>
<td>13000</td>
<td>5600</td>
<td>3800</td>
<td>5000</td>
<td>1930</td>
</tr>
<tr>
<td>Geophysical Services</td>
<td>3000</td>
<td>2500</td>
<td>1000</td>
<td>1000</td>
<td>500</td>
</tr>
<tr>
<td>Remote Sensing</td>
<td>200</td>
<td>150</td>
<td>120</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Drafting/Data Processing</td>
<td>1000</td>
<td>1000</td>
<td>800</td>
<td>500</td>
<td>250</td>
</tr>
<tr>
<td>Regional Administration</td>
<td>1500</td>
<td>2200</td>
<td>1300</td>
<td>810</td>
<td>350</td>
</tr>
<tr>
<td>Head Office Administration</td>
<td>700</td>
<td>1100</td>
<td>600</td>
<td>420</td>
<td>220</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$30,000</td>
<td>$25,000</td>
<td>$15,000</td>
<td>$10,000</td>
<td>$5,000</td>
</tr>
</tbody>
</table>

M I MILLIKAN
Project Geologist
8. REFERENCES

Appendix 1:

Detailed TMI Contours for ALD021, ALD024, ALD025, ALD027 & ALD046
Survey Name: Arnhem Land
Contractor: UTS
Line Spacing = 50 metres
Survey Height = 20 metres

De Beers
Stockdale Prospecting Limited

Detailed Airborne Follow Up Survey
ALD021
Total Magnetic Intensity Contours

D5302 MILINGIMBI
D5302FF BLYTH RIVER
Map No: 5872-22

10 Aug 99
De Beers
Stockdale Prospecting Limited
Detailed Airborne Follow Up Survey
ALD027
Total Magnetic Intensity Contours
D5302 MILINGIMBI
D5302FF BLYTH RIVER
Map No: 5872-24
10 Aug 99

Survey Name : Arnhem Land
Contractor : UTS
Line Spacing = 50 metres
Survey Height = 20 metres
Appendix 2:

TMI Contours for the Cameco Arnhem Land Aeromagnetic Survey
Map:

Arnhem Land Project Location