REPORT ON AREA RELINQUISHED

E.L. 2081 - YARRAGAN

(21.08.81 to 20.08.82)

OPEN FILE
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<th>Scale</th>
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<td>1</td>
<td>E.L.2081 - Total Area Relinquished</td>
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<td>480/180</td>
<td>E.L. 2081 - Drill Hole and Gravity Line Locations</td>
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<td>235100/27&amp; 28</td>
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1. **SUMMARY**

A total of 3703.6 metres of drilling in 17 holes was carried out within the relinquished portion of E.L. 2081. The drilling programmes were designed to provide a broad stratigraphic coverage of the exploration licence and, in particular, to delineate the extent of, and facies types within, the Mt. Eclipse Sandstone.

All drill holes were geophysically logged where possible. No significant occurrence of uranium mineralisation was detected.

A series of gravity surveys were carried out over a three year period to assist in delineating the structural style of the southern portion of the Ngalia Basin. It has been found that the Mt. Eclipse Sandstone occurs within fault-bounded sub-basins.
2. **INTRODUCTION**

2.1 **Location and Access**

Yarragan E.L. 2081 is located approximately 200 km north-west of Alice Springs. It is reached by travelling 215 km along the Yuendumu Beef road to Cassidy Bore and then 10 km south-west along the Central Mt. Wedge road. Apart from a small area in the north-west corner, which lies within the Mt. Allan land claim, the E.L. occupies part of the Mt. Wedge Pastoral Lease. (Fig. 1)

Access to, and within, the E.L. is by means of station tracks and drilling access lines. Ten kilometres of new drill access road and 9 km of regrading were completed in 1981.

2.2 **Physiography, Climate and Hydrology**

The landscape is uniformly flat with open grassland and in places thick scrub. The climate in the E.L. 2081 is semi-arid, continental, with an average annual rainfall of about 300 mm. Rainfall is irregularly distributed throughout the year but tends mainly to fall in the period November - March.

Temperatures commonly exceed 40° C during the summer months and frosts can be expected from April - August.

Water in the area is obtained from shallow bores sunk on calcrete ridges. The water quality is generally good and originates from an aquifer of coarse-grained, unconsolidated sands underlying the calcrete to a depth of about 14 m.
2.3 Tenement Status

E.L. 2081 was granted to Agip on the 21.8.79 for a period of 12 months and subsequently renewed for a further 12 months. On the 31.7.81, approximately 50% of the area was duly relinquished and 50% of the remaining area was again relinquished on the 8.7.82 so the E.L. currently covers 69.59 km$^2$.

The total relinquished area is shown on Map No. 1, overleaf.
PART OF THE MT. DOREEN AND NAPPERBY 1:250,000 SHEETS

MAP NO. 1  E.L. 2081  -  TOTAL AREA RELINQUISHED
3. PREVIOUS WORK

The area was mapped at 1:250,000 scale by the B.M.R. during 1968 and 1969. Reconnaissance gravity and seismic surveys were done in the area by the B.M.R. in 1965, 1969 and 1970.

Magellan Petroleum carried out some gravity traverses in 1971 and 1972.
4. **GEOLOGY**

4.1 **Regional Geology**

E.L. 2081 occupies part of the south eastern Ngalia Basin which is an east-west elongated, intracratonic depression within the Lower-Middle Proterozoic Arunta Complex. Sedimentation began with the deposition of the Vaughan Springs Quartzite during the Upper Proterozoic.

Marine and continental sedimentation continued into the Middle Palaeozoic, with the Mt. Eclipse Sandstone having been deposited in Upper Devonian-Lower Carboniferous times.

The Mt. Eclipse Sandstone consists of a synorogenic sequence, up to 4,500 km. in thickness, of non-marine, arkosic sandstone, with some interbedded shales, deposited in piedmont and sub-aerial deltaic environments.

Two major orogenic events have affected basin sediments. The first occurred after the deposition of the Ordovician Djaigamara Formation, and uplifted the northern margin of the basin. This event resulted in a change from a restricted basin, marine-type environment to a continental environment of deposition for the Kerridy Sandstone and Mt. Eclipse Sandstone.

The second major orogenic event in the basin occurred during and after the deposition of the Mt. Eclipse Sandstone, and was responsible for major folding, thrusting and faulting of the sequence within the basin.

Uplifts of crystalline basement occurred to the north of the basin to become the main provenance for the Mt. Eclipse Sandstone.
4.2 E.L. Geology

4.2.1 Stratigraphy and Structure

The stratigraphic units distinguished within E.L. 2081 include a Cainozoic sequence up to 100 m. thick underlain by the Upper Devonian-Lower Carboniferous Mt. Eclipse Sandstone, which is unconformably underlain by Proterozoic Mt. Doreen Formation and Vaughan Springs Quartzite.

Cainozoic

This is divided into the following rock units.

- qr  Red-brown and limey sandy soils.
- Tc/Tg  Calcrete and massive gypsym.
- Tcss  Calcareous sandstone gradational to Tc.
- Tgsc  Plastic clay, green-grey, sandy, frequently gypsiferous with a trace of charcoal. Usually interbedded with Tch.
- Tch  Yellow to olive-grey and light brown coarse feldspathic sand, pebbly.
- Tbcs  Olive-grey and light brown to red sandy clay to clayey sand.
- Trfs  Red-brown sand.
- Tlss  Deep red-brown lateritic sandstone. Some laterite lenses (T1).
- Tcl  Grey clay
- Ta  Yellow limonitic clay.

Palaeozoic

The Mt. Eclipse Sandstone is classified on the basis of geochemical facies as follows:-

- Cs/Cr  Silcrete, with minor ferricrete.
- Pzp  Pallid zone Mt. Eclipse Sandstone, underlying Cs or Cf. Heavily kaolinised, with rare limonite.
Pmo  Mottled red facies (oxidised). Red facies with reduzate mottles; limonite, haematite, chlorite, kaolinite.

Pmf  Mottled red facies (fresh). Red facies with reduzate mottles; haematite, chlorite, and feldspar.

Pro  Red facies (oxidised). With limonite, haematite kaolinite.

Prf  Red facies (fresh). With haematite and feldspar.

Pto  Transitional red to white facies (oxidised). With haematite, limonite, chlorite, kaolinite. Intercalated red (or red mottled) and reduzate facies. The term is reserved for use when the scale of the interbanding is too fine for division into the respective facies to be practical.

Ptf  Fresh transitional facies. With chlorite, haematite, pyrite, carbonaceous matter and feldspar.

Pwo  White facies (oxidised). With kaolinite and limonite.

Pwf  White reduzate facies (fresh). With pyrite, carbon and minor chlorite, and fresh feldspar.

Proterozoic

Within the E.L., the following formations of probably Adelaidean age are believed to be present:-

Pug  Mt. Doreen Formation. Black, pyritic shale horizons in neighbouring E.L.'s have been assigned to this formation.

Puv  Treuer Member of the Vaughan Springs Quartzite. Cherty and siliceous shale horizons which are occasionally glauconitic.

Puv' Vaughan Springs Quartzite, a very hard, pink to grey quartzite.
4.2.2 Mineralisation

The only unit in the Ngalia Basin known to contain significant deposits of uranium is the Mt. Eclipse Sandstone. Very minor anomalous radioactivity was detected within the Mt. Eclipse Sandstone in three holes, YG28R, YG29RD and YG35RD (see drill hole location plans).

The Tertiary calcrete horizon is weakly radioactive in some areas.
5. **EXPLORATION ACTIVITIES**

5.1 **Drilling**

A total of 17 holes were drilled within the area of E.L. 2081 which has been relinquished.

3703.6 metres were drilled comprising 2226 m. of rotary mud and 1477.6 m. of diamond coring. Table 1 gives a summary per hole.

5.2 **Geophysical Logging**

Approximately 3330 metres of the drilling were logged for natural gamma and where possible resistivity and self potential. Some holes were also logged by neutron activation.

The majority of the logging was carried out under contract by Geoex Pty. Ltd. of Adelaide using a truck-mounted Gearhart-Owen instrument.

5.3 **Geological**

The drilling programmes were designed to provide a broad stratigraphic coverage of the Exploration Licence in order to delineate the extent of occurrence and facies types of the Mt. Eclipse Sandstone. The area of E.L. 2081 which has been relinquished is not considered to be of high potential for the development of economic uranium mineralisation as it consists essentially of oxidised Mt. Eclipse Sandstone.

All drill hole cuttings and core were logged by Agip staff geologists. Appendix 1 provides drill hole summaries.
# TABLE 1

DRILLING SUMMARY

<table>
<thead>
<tr>
<th>HOLE NO.</th>
<th>CO-ORDINATES</th>
<th>ROTARY PRECOL. DEPTH (m)</th>
<th>DIAMOND (m)</th>
<th>TOTAL DEPTH</th>
<th>PROBED DEPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>YG15RD</td>
<td>492640N 215420E</td>
<td>120</td>
<td>46.2</td>
<td>166.2</td>
<td>144</td>
</tr>
<tr>
<td>YG19RD</td>
<td>491300N 205080E</td>
<td>147</td>
<td>143.3</td>
<td>290.3</td>
<td>260</td>
</tr>
<tr>
<td>YG20R</td>
<td>489370N 195480E</td>
<td>132</td>
<td></td>
<td>132</td>
<td>103.2</td>
</tr>
<tr>
<td>YG28R</td>
<td>497120N 183850E</td>
<td>84</td>
<td></td>
<td>84</td>
<td>83.2</td>
</tr>
<tr>
<td>YG29RD</td>
<td>489940N 190210E</td>
<td>180</td>
<td>75</td>
<td>255</td>
<td>249</td>
</tr>
<tr>
<td>YG30RD</td>
<td>488780N 198850E</td>
<td>144</td>
<td>181</td>
<td>325</td>
<td>309</td>
</tr>
<tr>
<td>YG31RD</td>
<td>490850N 201600E</td>
<td>156</td>
<td>93</td>
<td>249</td>
<td>243.9</td>
</tr>
<tr>
<td>YG34RD</td>
<td>492490N 184480E</td>
<td>159</td>
<td>93</td>
<td>252</td>
<td>249.8</td>
</tr>
<tr>
<td>YG35RD</td>
<td>489950N 184180E</td>
<td>156</td>
<td>85.3</td>
<td>241.3</td>
<td>240</td>
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<td>YG37RD</td>
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<td>57</td>
<td>243</td>
<td>241</td>
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<tr>
<td>YG38RD</td>
<td>489800N 205110E</td>
<td>132</td>
<td>120</td>
<td>252</td>
<td>247</td>
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<tr>
<td>YG39RD</td>
<td>488280N 205130E</td>
<td>126</td>
<td>132</td>
<td>258</td>
<td>253</td>
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<tr>
<td>YG40RD</td>
<td>488120N 209990E</td>
<td>114</td>
<td>123</td>
<td>237</td>
<td>230</td>
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<td>YG41RD</td>
<td>489620N 209970E</td>
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<td>106.8</td>
<td>232.8</td>
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<td>YG42RD</td>
<td>488250N 213220E</td>
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<td>234</td>
<td>230</td>
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<td>YG43RD</td>
<td>495160N 186570E</td>
<td>150</td>
<td>102</td>
<td>252</td>
<td>246</td>
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</table>

17 HOLES TOTALS 2226 1477.6 3703.6 3329.1
5.4 Gravity Surveying

In 1979 a trial gravity survey was carried out with the Northern Territory Geological Survey. Readings were taken at 0.5 km. intervals along 11 km. of road traversing the licence area. The survey was extended another 13 km. in 1980.

A further 55.5 km. of gravity surveying was completed in 1981. The survey was carried out by Wongella Geophysics Pty. Ltd.

The aim of the surveys was to attempt to delineate the structure of the Mt. Eclipse Sandstone - filled sub-basin lying north of the Stuart Bluff Range.

Gravity profiles are shown on the accompanying List of Maps.

5.5 Orthophoto Mapping Survey

An aerial survey was flown in 1981 and detailed orthophoto maps at 1:20,000 scale were produced by Geo-Spectrum (Aust.) for Agip. These plans form the basis for location of drill holes and geophysical survey base lines.
6. CONCLUSIONS

Although it is not possible to map the detailed lithologies and geochemical facies within the Mt. Eclipse Sandstone due to the total, and generally thick, cover of Cainozoic sediments the drilling undertaken throughout the relinquished area of E.L. 2081 has indicated that the area is underlain for the most part by oxidised sandstone to depths exceeding 300 metres. It is therefore considered that sandstone-hosted uranium deposits are unlikely to exist at reasonable depths in this part of the licence.
APPENDIX 1

DRILL HOLE SUMMARIES
Hole No.: YG15RD
Co-ordinates: 492640N 215420E
Rotary Commenced: 10.7.80           Completed: 14.7.80
Drilled Depth: 120 m.               Probed Depth: 114.8 m.
Diamond Commenced: 5.3.81           Completed: 8.3.81
Drilled Depth: 166.2 m.             Probed Depth: 144 m.
Hole Abandoned.
Precollared in 1980.

Summary Log:

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<th>Depth</th>
<th>Description</th>
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<td>4</td>
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<td>84</td>
<td>Silcrete</td>
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<tr>
<td>94</td>
<td>Pmo</td>
</tr>
<tr>
<td>127.1</td>
<td>Pro</td>
</tr>
<tr>
<td>129.4</td>
<td>Pmf</td>
</tr>
<tr>
<td>146.2</td>
<td>Pmo</td>
</tr>
<tr>
<td>158.9</td>
<td>Pmf</td>
</tr>
</tbody>
</table>

Mineralisation:
No anomalous radioactivity detected.

Hole No.: YG19RD
Co-ordinates: 491300N 205080E
Rotary Commenced: 23.7.80           Completed: 24.7.80
Drilled Depth: 147 m.               Probed Depth: 144.7 m.
Diamond Commenced: 10.4.81           Completed: 14.4.81
Drilled Depth: 290.3 m.             Probed Depth: 260 m.

Summary Log:

<table>
<thead>
<tr>
<th>Depth</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Or</td>
</tr>
<tr>
<td>2</td>
<td>Tertiary</td>
</tr>
<tr>
<td>82</td>
<td>Pmo Sandstone and clay.</td>
</tr>
<tr>
<td>147</td>
<td>Pmf Interbedded red brown medium to coarse grained arkose and minor red brown shale.</td>
</tr>
</tbody>
</table>

Mineralisation:
No anomalous radioactivity detected.
Hole No.: YG20R
Co-ordinates: 489370N 195480E
Commenced: 27.7.80 Completed: 30.7.80
Drilled Depth: 132 m. Probed Depth: 103.2 m.

Summary Log:

0 - 2 Soil Or
2 - 78 Tertiary
78 - 86 Silcrete
86 - 94 Pallid zone, Pzo
94 - 114 Mt. Eclipse Sandstone, Pwo.
114 - 132 Mt. Eclipse Sandstone, Pmo

Mineralisation:

Non detected.

Hole No.: YG28R
Co-ordinates: 497120N 183850E
Rotary Commenced: 1.4.81 Completed: 2.4.81
Drilled Depth: 84 m. Probed Depth: 83.2 m.
Diamond Commenced: 
Drilled Depth: 

Not Extended by Diamond Drilling

Summary Log:

0 - 2 Or
2 - 40 Tertiary
40 - 42 Silcrete
42 - 66 Pzo Pallid zone Mt. Eclipse Sandstone, coarse grained pebbly arkose.
66 - 72 Pmo Weathered mottled facies. Pebble conglomerate.
72 - 84 Pmo Very coarse grained arkose.

Mineralisation:

Background 120 cps through PVC casing. 2 x BG at 62 m.
Hole No.: YG29RD
Co-ordinates: 489940N 190210E
Rotary Commenced: 2.4.81 Completed: 3.4.81
Drilled Depth: 180 m. Probed Depth: 173.5 m.
Diamond Commenced: 2.5.81 Completed: 3.5.81
Drilled Depth: 255 m. Probed Depth: 249 m.

Summary Log:
0 - 2 Qr
2 - 82 Tertiary
82 - 86 Silcrete
86 - 104 Pzp Pallid zone Mt. Eclipse Sandstone.
104 - 122 Pwo Weathered reduzate facies medium grained pebbly arkose.
122 - 124 Pmo Weathered mottled facies medium grained pebbly arkose.
124 - 126 Pwo Medium grained pebbly arkose.
126 - 255 Pmf Medium to coarse grained arkose with interbeds of Prf shale and siltstone.

Mineralisation:
2 x BG at 152 m. BG 100 cps.

Hole No.: YG30RD
Co-ordinates: 488780N 198850E
Rotary Commenced: 3.4.81 Completed: 4.4.81
Drilled Depth: 144 m. Probed Depth: 134.4 m.
Diamond Commenced: 25.4.81 Completed: 26.4.81
Drilled Depth: 325 m. Probed Depth: 309 m.

Summary Log:
0 - 2 Qr
2 - 102 Tertiary
102 - 138 Pwo Weathered reduzate facies Mt. Eclipse Sandstone medium grained arkose, abundant carbonaceous matter.
138 - 315 Pmf Mottled facies medium to coarse grained arkose with interbeds of Prf, calcareous shale and siltstone.

Mineralisation:
No anomalous radioactivity detected.
Hole No.: YG31RD
Co-ordinates: 490850N 201600E
Rotary Commenced: 5.4.81 Completed: 6.4.81
Drilled Depth: 156 m. Probed Depth: 142.5 m.
Diamond Commenced: 26.4.81 Completed: 29.4.81
Drilled Depth: 249 m. Probed Depth: 243.9 m.

Summary Log:

0 - 20 Qr
20 - 84 Tertiary
84 - 116 Pzp Pallid zone Mt. Eclipse Sandstone. Medium grained arkose with clay interbeds.
116 - 134 Pwo Weathered reduzute facies, medium to very coarse grained arkose, carbonaceous.
134 - 156 Pmo Mottled facies, weathered. Coarse grained pebbly arkose.
156 - 249 Pmf Mottled facies, medium to coarse grained arkose with interbeds of Prf calcaeous shale.

Mineralisation:

No anomalous radioactivity detected.

Hole No.: YG34RD
Co-ordinates: 492490N 184480E
Rotary Commenced: 5.5.81 Completed: 6.5.81
Drilled Depth: 159 m. Probed Depth: Not probed
Diamond Commenced: 8.5.81 Completed: 8.5.81
Drilled Depth: 252 m. Probed Depth: 249.8 m.

Summary Log:

0 - 2 Qr
2 - 88 Tertiary
88 - 92 Silcrete
92 - 115 Pzp Pallid zone Mt. Eclipse Sandstone medium grained arkose and clay.
115 - 159 Pmo Weathered mottled facies, medium grained arkose.
159 - 252 Pmf Mottled facies, medium to coarse grained arkose with minor interbeds of Prf calcaeous shale.

Mineralisation:

No anomalous radioactivity detected.
Hole No.: YG35RD
Co-ordinates: 489950N 184180E
Rotary Commenced: 6.5.81 Completed: 6.5.81
Drilled Depth: 156 m. Probed Depth:
Diamond Commenced: 13.5.81 Completed: 14.5.81
Drilled Depth: 241.3 m. Probed Depth: 240 m.

Summary Log:

0 - 2 Qr
2 - 104 Tertiary
104 - 120 Pwo Weathered reduzate facies Mt. Eclipse Sandstone. (Could possibly be Lower Tertiary).
120 - 156 Pwf Reduzate facies. Coarse grained arkose.
156 - 241.3 Pmf Mottled facies. Medium to coarse grained arkose with interbeds of Prf shale and siltstone.

Mineralisation:

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<th>From</th>
<th>To</th>
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</thead>
<tbody>
<tr>
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<td>60</td>
<td>0.1</td>
<td>197.6</td>
<td>197.7</td>
</tr>
</tbody>
</table>

Hole No.: YG37RD
Co-ordinates: 487440N 189050E
Rotary Commenced: 11.5.81 Completed: 12.5.81
Drilled Depth: 186 m. Probed Depth:
Diamond Commenced: 14.5.81 Completed: 15.8.81
Drilled Depth: 243 m. Probed Depth: 241 m.

Summary Log:

0 - 4 Qr
4 - 76 Tertiary
76 - 82 Silcrete
82 - 140 Pmo Weathered mottled facies Mt. Eclipse Sandstone. Fine to medium grained arkose.
140 - 204.9 Pmf Mottled facies. Fine to medium grained arkose with interbeds of shale and siltstone.
204.9 - 215.6 Prf Red facies. Calcareous shale and siltstone.
215.6 - 243 Pmf Mottled facies. Medium to coarse grained arkose with minor interbeds of Prf calcareous shale.

Mineralisation:
No anomalous radioactivity detected.
Hole No.: YG38RD
Co-ordinates: 489800N 205110E
Rotary Commenced: 13.5.81 Completed: 14.5.81
Drilled Depth: 132 m. Probed Depth: Not probed
Diamond Commenced: 16.5.81 Completed: 17.5.81
Drilled Depth: 252 m. Probed Depth: 247 m.

Summary Log:
0 - 2 Or
2 - 79 Tertiary
79 - 88 Pzp Pallid zone Mt. Eclipse Sandstone
88 - 98 Pwo Weathered redudate facies
98 - 104 Pmf Mottled facies
104 - 114 Pwf
114 - 252 Pmf Mottled facies, medium to coarse grained arkose with minor interbeds of shale and siltstone.

Mineralisation:
No anomalous radioactivity detected.

Hole No.: YG39RD
Co-ordinates: 488280N 205130E
Rotary Commenced: 14.5.81 Completed: 20.5.81
Drilled Depth: 126 m. Probed Depth: 120 m.
Diamond Commenced: 23.5.81 Completed: 24.5.81

Summary Log:
0 - 1 Or
1 - 80 Tertiary
80 - 84 Silcrete
84 - 125 Pzp Pallid zone. Mt. Eclipse Sandstone.
125 - 128 Pmf Mottled facies. Mt. Eclipse Sandstone. Medium to coarse grained arkose with very minor thin shale interbeds.

Mineralisation:
No anomalous radioactivity detected.
Hole No.: YG40RD

Co-ordinates: 488120N 209990E

Rotary Commenced: 20.5.81            Completed: 20.5.81
Drilled Depth: 114 m.         Probed Depth: 100 m.
Diamond Commenced:            Completed:        
Drilled Depth: 237 m.         Probed Depth: 230 m.

Summary Log:

0 - 1         Qr
1 - 59        Tertiary
59 - 0.61     Silcrete
61 - 72       Pzp Pallid zone Mt. Eclipse Sandstone
72 - 129      Pmo Weathered mottled facies, medium to very coarse grained arkose with minor calcareous shale interbeds.
129 - 237     Pmf Mottled facies, lithology as above.

Mineralisation:

No anomalous radioactivity detected.

Hole No.: YG41RD

Co-ordinates: 489620N 209970E

Rotary Commenced: 24.5.81            Completed: 25.5.81
Drilled Depth: 126 m.         Probed Depth:
Diamond Commenced: 26.5.81            Completed: 28.5.81
Drilled Depth: 232.8 m.         Probed Depth:

Summary Log:

0 - 4         Qr
4 - 52        Tertiary
52 - 64       Silcrete
64 - 72       Pzp Pallid zone Mt. Eclipse Sandstone medium to coarse grained arkose.
72 - 88       Pmo Weathered mottled facies, medium to coarse grained arkose.
88 - 232.8    Pmf Mottled facies. Medium to very coarse grained arkose with minor interbeds of shale and siltstone.

Mineralisation:

No anomalous radioactivity detected.
Hole No.: YG42RD
Co-ordinates: 488250N 213220E
Rotary Commenced: 25.5.81 Completed: 26.5.81
Drilled Depth: 114 m. Probed Depth:
Diamond Commenced: 28.5.81 Completed: 29.5.81
Drilled Depth: 234 m. Probed Depth: 230m.

Summary Log:

0 - 1 Qr
1 - 41 Tertiary
41 - 46 Silcrete
46 - 70 Pzp
70 - 114 Pmo
114 - 234 Pmf

Mineralisation:

No anomalous mineralisation detected.

Hole No.: YG43RD
Co-ordinates: 495160N 186570E
Rotary Commenced: 9.6.81 Completed: 10.6.81
Drilled Depth: 150 m. Probed Depth:
Diamond Commenced: 17.6.81 Completed: 18.6.81
Drilled Depth: 252 m. Probed Depth: 246 m.

Summary Log:

0 - 2 Qr
2 - 70 Tertiary
70 - 80 Silcrete
80 - 94 Pzp
94 - 173.1 Pmf
173.1 - 197.5 Prf
197.5 - 200 Pmf
200 - 213.8 Prf
213.8 - 226.1 Pmf
226.1 - 252 Prf

Mineralisation:

No anomalous mineralisation detected.
APPENDIX 2

DOWNHOLE GEOPHYSICAL LOGS
<table>
<thead>
<tr>
<th>DEPTH (ft)</th>
<th>SPEED (m/hr)</th>
<th>TC SEC'S</th>
<th>RANGE (PSI)</th>
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<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>20</td>
<td>30</td>
<td>6</td>
<td>80</td>
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<tr>
<td>30</td>
<td>40</td>
<td>8</td>
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**LOGGING DATA**

**EQUIPMENT DATA**

- **PROJECT**: ASIP NUCLEAR AUSTRALIA FLYER
- **HOLE**: 16/180
  - **DATE**: 1/5/88
  - **LOGGED DEPTH**: 144 ft
  - **BOREHOLE PROGRAM**: FLUID LEVELS
  - **LOGGED DEPTH**: 144 ft
  - **UNIT**: VERTICAL SCALE
  - **REMARKS**:

**EQUIPMENT DATA**

- **Probe No.**: 
- **Type**: 
- **Standard CPM**: 
- **Calibration CPM**: 
- **K-factor**: 
- **Read Time**: 

**DEPTH (ft)**: 

- 0
- 10
- 20
- 30
- 40
- 50
- 60
- 70
- 80
- 90
- 100
- 110
- 120
- 130
- 140
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data</th>
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<tbody>
<tr>
<td>Position</td>
<td>YG 128D</td>
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<tr>
<td>Solution</td>
<td>CD 228</td>
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<tr>
<td>Gamma</td>
<td>295</td>
</tr>
<tr>
<td>Scale</td>
<td>30</td>
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<tr>
<td>Top of V</td>
<td>148</td>
</tr>
<tr>
<td>Bottom V</td>
<td>150</td>
</tr>
<tr>
<td>Sphere</td>
<td>100</td>
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**Equipment Data**

<table>
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</tr>
<tr>
<td>Date</td>
<td>29/5/81</td>
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<tr>
<td>Depth</td>
<td>236</td>
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<tr>
<td>Type</td>
<td>0661</td>
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**Logging Data**

<table>
<thead>
<tr>
<th>Depth</th>
<th>NGF</th>
<th>Method</th>
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</thead>
<tbody>
<tr>
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<td>0</td>
</tr>
<tr>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Graph**

[Graph showing data points and a trend line]
GAMMA LOGGING

HOLE 920R

PROJECT Yarragadee

HOLE NO. 920R

CONTRACTOR Rockdrill

LOCATION 14 46 50S 148 50E

DRilled DEPTH 132m

ELEVATION Date Completed 30/11/80

DATE 30/11/80

CASING PVC

LOGGED DEPTH 103.2m

BOREHOLE MEDIUM Water

OPERATOR E. Shannon

FLUID LEVEL

UNIT S.I.E. THEO

VERTICAL SCALE 1:500

REMARKS Heavy mud at 103.2m

PROBE COULD NOT Sink Through

EQUIPMENT DATA

PROBE No. Type Gamma

STANDARD C.P.A. CALIBRATION C.P.A.

K FACTOR DEAD TIME

LOGGING DATA

DEPTH FROM TO SPEED M/MIN.

T.C. S.E.C. RANGE IN

10 32 10m Per min 2 10

70

M.C 55

90 percent Carbonate

80

B.O 103.2

90

120

140

Y. Garstang