

CR 79/19

ANNUAL REPORT

Exploration Licences: 1625, 1626, 1627, 1629, 1630 } Expired.

2nd December, 1977 - 1st December, 1978

Exploration Licences: 1649, 1651, 1704, 1705 } Expired.

22nd December, 1977 - 21st December, 1978

**OPEN FILE**

Ian MacDonald  
Neil Petty

A.O. (Australia) Pty. Ltd.

February, 1979.

C O N T E N T S

|      |                            |     |     | <u>page</u> |
|------|----------------------------|-----|-----|-------------|
| 1.00 | INTRODUCTION               | ... | ... | 1           |
| 2.00 | LOCATION AND ACCESS        | ... | ... | 1           |
| 3.00 | PHYSIOGRAPHY               | ... | ... | 2           |
| 4.00 | GEOLOGY                    | ... | ... | 2           |
| 5.00 | EXPLORATION PROCEDURE      | ... | ... | 4           |
| 6.00 | EXPLORATION DURING YEAR .. | ... | ... | 5           |
| 7.00 | CONCLUSION                 | ... | ... | 5           |

---

LIST OF TEXT FIGURES

1. 1:100,000 topographic sheet areas

LIST OF APPENDICES

1. Size and sample density of E.L's
2. Gravel sample locations
3. Aerial photography features

LIST OF MAPS

1. Keyling
  2. Fitzmaurice
  3. Legune
  4. Victoria River
  5. Millik Monmir
  6. Keep
  7. Pinkerton
-

# YAMBARRA PROJECT

1:100 000 TOPOGRAPHIC SHEET AREAS

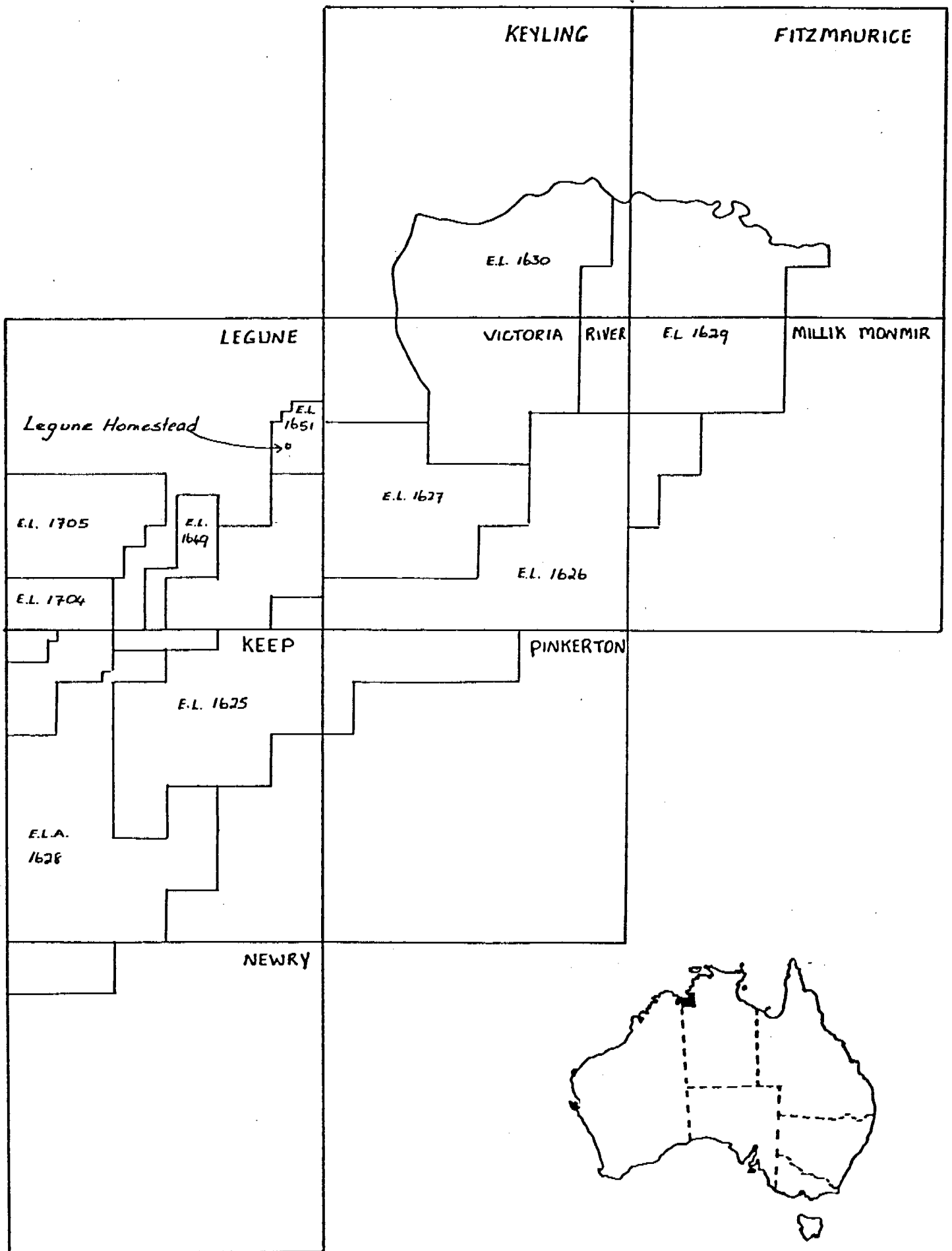


FIGURE 1

## 1.00 INTRODUCTION

Exploration licences 1625, 1626, 1627, 1629 and 1630 covering 497, 500, 497, 491 and 433 sq. miles respectively were granted to A.O. (Australia) Pty. Ltd. on 2nd December, 1977. In addition, exploration licences 1649, 1651, 1704 and 1705 covering 48, 41, 71 and 161 sq. miles respectively were granted to the company on 22nd December, 1977. The exploration licences cover an area between the Keep and Fitzmaurice Rivers. Their positions relative to the 1:100,000 topographic sheet areas may be seen in figure 1.

The aim of exploration within the areas is to investigate the possible presence of kimberlitic intrusive activity as the area covers part of the north-east extension of the Halls Creek Fault zone. If kimberlite intrusives are found, these will be evaluated for their possible diamond content. To facilitate exploration, the exploration licence areas were considered as one coherent area and this approach has also been adopted for this report.

## 2.00 LOCATION AND ACCESS

The nine exploration licences have been granted in areas which include portions of the following 1:100,000 topographic sheet areas: Keyling, Fitzmaurice, Legune, Victoria River, Millik Monmir, Keep and Pinkerton. The boundaries of exploration licence areas relevant to each sheet and shown on Maps 1 to 7 respectively, together with the locations of sample points and air-photograph anomalies.

Road access is from Kununurra, approximately 100 km. to the west of the general area, proceeding via either Legune Station to the north or Bullo River Station in the south. Within the exploration area, tracks capable of being

negotiated by 4-wheel drive vehicles are generally restricted to the vicinity of stations and cross-country driving is usually impossible because of the rugged nature of the terrain. On 13th October, 1978, the Department of Mines & Energy, Mines Section, granted permission for the establishment of a base camp near the Bullo River gorge within Exploration Licence 1629.

### 3.00 PHYSIOGRAPHY

There are three major physiographic divisions within the area; the coastal plains of the Cambridge Gulf Lowlands to the north, the ridged central section, and the tablelands of the Victoria River Plateau to the south. The coastal plains form a strip up to 55 km wide and is composed of alluvium and black soil. The larger streams traverse these plains but many of the smaller streams from the higher lands to the south-east terminate upon reaching the plains. The central zone forms a north-east trending belt up to 60 km. wide. It consists of rugged ridges and plateaux; predominantly of faulted and jointed sandstones and siltstones. A few narrow valleys are present where soft rocks have been weathered to form deep alluvial soils. To the south, the tablelands are partly dissected and give rugged scarps and mesas which are developed on gently dipping sandstones, siltstones and carbonates. Both the central and southern divisions are deeply incised by usually dendritic drainage patterns.

### 4.00 GEOLOGY

The three physiographic areas are closely related to the three major tectonic components of the area: respectively, these are the Bonaparte Gulf Basin, the Fitzmaurice Mobile Zone and the Sturt Block.

The Bonaparte Gulf Basin is a deep (4,400m.+) structural basin containing Mesozoic and (predominantly) palaeozoic sediments. The palaeozoic sediments thin out rapidly once the Moyle River Fault is crossed but may still be found overlapping the Fitzmaurice Mobile Zone up to 48 km to the east.

The Fitzmaurice Mobile Zone is a belt of folded and intensely faulted rocks which are a northern extension of the Halls Creek Mobile Zone. The outcropping sediments are faulted and steeply dipping sandstones of the Fitzmaurice Group with occasional outcrops of Bow River and Koolendong Granite. Windows of Lower Proterozoic and Archean basement rocks occur more frequently to the north of the area. The Fitzmaurice Group is exposed in a large synclorium with a north-northeast axis. The gently dipping western limb is much thicker than the steeply dipping eastern limb. The metamorphic grade of the sediment may reach Greenschist Facies with minor higher areas associated with intrusives. Within the exploration area, the Fitzmaurice group generally occurs beneath Cainozoic cover except for occasional outcrops of Carboniferous and Devonian sediments to the north-west.

The Sturt Block is a stable platform or epicontinental shelf which has suffered only very gentle deformation. The gently dipping sandstones (dips  $<10^{\circ}$ ), siltstones and dolomites of the Auvergne Group in the area are of Adelaidean and Carpentarian age. Minor fold structures have generally northwest-trending axes. Faulting is rare within the block and the minor faults which are present are probably a reflection of basement fault movement upon the veneer of sedimentary rocks.

5.00 EXPLORATION PROCEDURE

Gravel sampling techniques were considered to be the most effective exploration tool as there is a well-developed drainage pattern over most of the area. The degree of relief, together with the abundance of outcrop, provide ideal potential for heavy mineral traps.

After kimberlite indicator minerals enter a drainage system, they will decrease in size and number as the distance from source increases. Hence, the further a sample is from the source, the smaller is the chance of finding these indicators. An optimum distance of 5 km. was selected. Approximate sample sites were plotted on 1:100,000 topographical maps at a sampling density of between 1/15 and 1/20 sq. kilometres. These were then transferred to 1:50,000 scale black and white aerial photographs to facilitate field location. These sample sites could be varied in the field by up to 1 km up- or down-stream in order to sample the most favourable sediment trap site. The amended sample locations could then be replotted on fresh 1:100,000 topographic maps (see maps 1-7).

In addition, it was decided to supplement the stream sampling program with a photogeological study, using experience gained in other areas. A number of circular and elliptical air-photo features were located on the 1:50,000 photoenlargements. It was considered that some of these anomalous features may be related to kimberlitic intrusive activity. Where possible these features were to be examined in the field and loam samples taken from those sites which were still considered to be of interest after examination on the ground.

6.00 EXPLORATION DURING YEAR

Following completion of a study of the aerial photographs of the exploration licence areas, a four-man party took part in a gravel and loam collecting program from 25th September to 1st November, 1978. Utilizing a Hiller 12EG helicopter, two two-man geological crews collected a total of 368 gravel samples. The number of samples and sampling density for each exploration licence are given in Appendix 1.

Each sample weighed approximately 40 kg and, on completion of the program, in excess of 20 tons of sample were shipped from Wyndham to Perth to be treated and observed in the laboratory for the presence of kimberlite indicator minerals. A list of sample localities and grades is given as Appendix 2.

92 anomalous photogeological features were examined and a large proportion of these were found to be circular remnants of flat-lying sandstone outcrops, or depressions in black soil plains which are periodically filled with water. Loam samples were collected from nine of the photo features and the locations and description of these as well as the others are given in Appendix 3.

7.00 CONCLUSION

Until the results of the gravel sampling program are known, possibly by the end of May, 1979, it is not possible to draw conclusions concerning the possible presence of kimberlitic intrusive activity in the area covered by the exploration licences. If kimberlitic indicator minerals are found the follow-up field work would consist of more closely spaced gravel sampling programs and airborne geophysical surveys in selected anomalous areas.



APPENDIX 1

SIZE AND SAMPLE DENSITY OF E.L's

| E.L. No. | Size<br>sq.miles | Size<br>sq. km. | No. of gravel<br>samples | Density<br>1/x sq. km. |
|----------|------------------|-----------------|--------------------------|------------------------|
| 1625     | 497              | 1,285.8         | 87                       | 14.8                   |
| 1626     | 500              | 1,293.4         | 58                       | 22.3                   |
| 1627     | 497              | 1,286.3         | 69                       | 18.6                   |
| 1629     | 491              | 1,271.6         | 103                      | 12.3                   |
| 1630     | 483              | 1,250.9         | 43                       | 29.1                   |
| 1649     | 48               | 123.8           | 7                        | 17.7                   |
| 1651     | 41               | 105.7           | 1                        | 105.7                  |
| 1704     | 71               | 183.4           | 0                        | -                      |
| 1705     | 161              | 416.9           | 0                        | -                      |
| TOTALS   | 2,789            | 7,218           | 368                      | 19.6                   |

APPENDIX 2

GRAVEL SAMPLE LOCATIONS

CODES

LOCATION:- The first letter refers to the 1:100,000 topographical sheet area on which the sample occurred -

L = LEGUNE  
C = KEEP  
P = PINKERTON  
V = VICTORIA RIVER  
K = KEYLING  
F = FITZMAURICE  
M = MILLIK MONMIR

The second letter refers to the photo areas -

A = AUVERGNE  
PK = PORT KEATS

The remaining numbers refer to the photo run number and photo number respectively -

GRADE

The trap sites are graded as follows -

G = GOOD  
M-G = MEDIUM TO GOOD  
M = MEDIUM  
M-P = MEDIUM TO POOR  
P = POOR

---

| No.     | Location  | E.L. No. | Grade |
|---------|-----------|----------|-------|
| AUV 001 | P, A5, 84 | 1625     | M-G   |
| 002     | P, A5, 82 | "        | G     |
| 003     | " " "     | "        | G     |
| 004     | " " "     | "        | M     |
| 005     | " " "     | "        | G     |
| 006     | " " "     | "        | G     |
| 007     | V, A4, 39 | 1626     | G-M   |
| 008     | " " "     | "        | P-M   |
| 009     | V, A4, 43 | "        | G     |
| 010     | V, A4, 39 | "        | P     |
| 011     | " " "     | "        | P     |
| 012     | " " "     | "        | M-P   |
| 013     | V, A8, 84 | "        | M     |
| 014     | P, A5, 86 | 1625     | M-G   |
| 015     | " " "     | "        | M     |
| 016     | " " "     | "        | M-P   |
| 017     | " " "     | "        | M     |
| 018     | " " "     | "        | M     |
| 019     | V, A4, 35 | 1626     | M     |
| 020     | " " "     | "        | P     |
| 021     | P, A5, 82 | 1625     | G     |
| 022     | " " "     | "        | M-G   |
| 023     | " " "     | "        | M-G   |
| 024     | V, A4, 35 | 1626     | P     |
| 025     | " " "     | "        | G     |
| 026     | " " "     | "        | G     |
| 027     | V, A4, 31 | "        | G     |
| 028     | P, A5, 88 | 1625     | M     |
| 029     | " " "     | "        | M     |
| 030     | " " "     | "        | G     |
| 031     | " " "     | "        | G     |
| 032     | " " "     | "        | M     |
| 033     | " " "     | "        | M-G   |
| 034     | P, A5, 90 | "        | G     |
| 035     | C, A5, 90 | "        | G     |
| 036     | C, A5, 90 | "        | G     |
| 037     | C, A5, 90 | "        | G     |
| 038     | P, A5, 90 | "        | M-G   |
| 039     | C, A5, 92 | "        | G     |
| 040     | " " "     | "        | M-G   |
| 041     | " " "     | "        | M     |
| 042     | " " "     | "        | M-G   |

| No.     | Location   | E.L. No. | Grade |
|---------|------------|----------|-------|
| AUV 043 | C, A5, 92  | 1625     | G     |
| 044     | C, A6, 193 | "        | G     |
| 045     | " " "      | "        | G     |
| 046     | " " "      | "        | G     |
| 047     | " " "      | "        | G     |
| 048     | " " "      | "        | G     |
| 049     | " " "      | "        | G     |
| 050     | " " "      | "        | G     |
| 051     | C, A6, 197 | "        | P     |
| 052     | C, A6, 193 | "        | G     |
| 053     | P, A6, 197 | "        | G     |
| 054     | " " "      | "        | G     |
| 056     | " " "      | "        | M     |
| 057     | C, A5, 92  | "        | M-G   |
| 058     | " " "      | "        | G     |
| 059     | " " "      | "        | G     |
| 060     | " " "      | "        | M-G   |
| 061     | " " "      | "        | M-G   |
| 062     | C, A5, 96  | 1627     | P-M   |
| 063     | " " "      | "        | P     |
| 064     | C, A5, 92  | "        | M     |
| 065     | " " "      | "        | P     |
| 066     | " " "      | 1625     | M-G   |
| 067     | " " "      | "        | M     |
| 068     | " " "      | "        | M-G   |
| 069     | " " "      | "        | M-G   |
| 070     | " " "      | "        | M-G   |
| 071     | L, A4, 29  | "        | M-G   |
| 072     | " " "      | "        | M     |
| 073     | V, A4, 31  | 1626     | M-G   |
| 074     | " " "      | "        | G     |
| 075     | " " "      | "        | P     |
| 076     | " " "      | "        | M-G   |
| 077     | V, A4, 35  | 1627     | M     |
| 078     | " " "      | 1626     | M-G   |
| 079     | " " "      | 1627     | M     |
| 080     | V, A4, 39  | 1626     | P     |
| 081     | " " "      | "        | P     |
| 083     | C, A6, 193 | 1625     | G     |
| 098     | C, A6, 189 | "        | M-G   |
| 099     | " " "      | "        | G     |
| 100     | " " "      | "        | G     |
| 101     | " " "      | "        | G     |

| No.     | Location   | E.L. No. | Grade |
|---------|------------|----------|-------|
| AUV 102 | C, A5, 96  | 1625     | G     |
| 103     | " " "      | "        | G     |
| 104     | C, A6, 187 | "        | G     |
| 105     | " " "      | "        | M     |
| 106     | C, A6, 187 | "        | G     |
| 110     | C, A7, 129 | "        | M-G   |
| 111     | " " "      | "        | M-G   |
| 115     | " " "      | "        | G     |
| 116     | C, A6, 187 | "        | G     |
| 117     | " " "      | "        | G     |
| 118     | " " "      | "        | G     |
| 119     | " " "      | "        | G     |
| 120     | " " "      | "        | G     |
| 121     | " " "      | "        | G     |
| 122     | C, A5, 96  | "        | G     |
| 123     | " " "      | "        | M-G   |
| 124     | " " "      | "        | M-G   |
| 125     | " " "      | "        | G     |
| 126     | " " "      | "        | G     |
| 127     | " " "      | "        | M     |
| 128     | " " "      | "        | G     |
| 129     | C, A6, 187 | "        | M     |
| 130     | " " "      | "        | G     |
| 131     | " " "      | "        | M-G   |
| 132     | " " "      | "        | G     |
| 133     | " " "      | "        | M-G   |
| 135     | " " "      | "        | M-G   |
| 141     | C, A6, 187 | "        | P     |
| 142     | " " "      | "        | G     |
| 182     | L, A4, 25  | 1627     | P     |
| 202     | L, A4, 25  | "        | G     |
| 204     | " " "      | "        | P     |
| 205     | " " "      | "        | G     |
| 206     | " " "      | "        | M     |
| 207     | " " "      | 1649     | P-M   |
| 208     | " " "      | "        | M     |
| 209     | " " "      | "        | G     |
| 210     | " " "      | "        | P     |
| 211     | " " "      | "        | M     |
| 212     | L, A3, 269 | "        | M     |
| 213     | " " "      | 1627     | P     |
| 214     | L, A3, 267 | "        | P     |
| 215     | " " "      | "        | P     |

| No.     | Location   | E.L. No. | Grade |
|---------|------------|----------|-------|
| AUV 216 | L, A3, 267 | 1627     | P     |
| 217     | " " "      | "        | G     |
| 218     | " " "      | "        | P     |
| 219     | " " "      | "        | M-P   |
| 220     | " " "      | "        | G     |
| 221     | L, A4, 25  | "        | G     |
| 222     | L, A3, 269 | "        | P     |
| 223     | L, A4, 29  | "        | G     |
| 224     | " " "      | "        | G     |
| 225     | " " "      | "        | G     |
| 226     | " " "      | "        | P     |
| 227     | " " "      | "        | P     |
| 228     | L, A3, 267 | "        | M     |
| 229     | " " "      | "        | G     |
| 230     | " " "      | "        | P     |
| 231     | L, A2, 114 | 1651     | P     |
| 232     | " " "      | 1652     | G     |
| 233     | " " "      | 1627     | G     |
| 234     | V, A3, 263 | "        | M     |
| 235     | " " "      | "        | P     |
| 236     | " " "      | "        | P     |
| 237     | " " "      | "        | P     |
| 238     | " " "      | "        | P     |
| 239     | " " "      | "        | G     |
| 240     | " " "      | "        | P     |
| 241     | " " "      | "        | G     |
| 242     | " " "      | "        | P     |
| 243     | " " "      | "        | M     |
| 244     | V, A3, 261 | "        | G     |
| 245     | " " "      | "        | G     |
| 246     | " " "      | "        | G     |
| 247     | V, A3, 257 | "        | G     |
| 248     | " " "      | "        | G     |
| 249     | " " "      | "        | M-G   |
| 250     | " " "      | "        | M     |
| 251     | " " "      | "        | G     |
| 252     | V, A2, 118 | "        | P     |
| 253     | " " "      | 1630     | M-G   |
| 254     | " " "      | 1627     | M     |
| 255     | V, A3, 261 | "        | P     |
| 256     | V, A3, 263 | "        | P     |
| 257     | " " "      | "        | M     |
| 258     | V, A3, 261 | "        | G     |

| No.     | Location   | E.L. No. | Grade |
|---------|------------|----------|-------|
| AUV 259 | V, A3, 261 | 1627     | M-G   |
| 260     | " " "      | "        | M     |
| 261     | " " "      | "        | G     |
| 262     | " " "      | "        | P     |
| 263     | V, A3, 257 | "        | M-G   |
| 264     | " " "      | "        | G     |
| 265     | " " "      | "        | M-G   |
| 266     | " " "      | "        | G     |
| 267     | " " "      | "        | M     |
| 268     | " " "      | "        | M     |
| 269     | V, A2, 122 | 1630     | P     |
| 270     | " " "      | "        | M     |
| 271     | " " "      | "        | M     |
| 272     | V, A1, 164 | "        | P     |
| 273     | " " "      | "        | G     |
| 274     | " " "      | "        | M     |
| 275     | " " "      | "        | M     |
| 276     | " " "      | "        | M     |
| 277     | V, A2, 122 | "        | G     |
| 278     | " " "      | "        | P     |
| 279     | V, A3, 257 | 1627     | P     |
| 280     | " " "      | 1626     | M     |
| 281     | " " "      | "        | P-M   |
| 282     | " " "      | 1627     | P     |
| 283     | " " "      | 1626     | P     |
| 284     | " " "      | 1627     | M     |
| 285     | V, A2, 124 | 1626     | P     |
| 286     | " " "      | "        | P     |
| 287     | " " "      | "        | P     |
| 288     | " " "      | 1630     | P     |
| 289     | " " "      | 1626     | P     |
| 290     | " " "      | "        | P     |
| 291     | V, A1, 168 | 1629     | G     |
| 292     | " " "      | "        | G     |
| 293     | " " "      | "        | G     |
| 294     | " " "      | 1630     | G     |
| 295     | " " "      | "        | G     |
| 296     | " " "      | "        | M     |
| 297     | " " "      | "        | G     |
| 298     | " " "      | "        | G     |
| 299     | V, A1, 164 | "        | M     |
| 300     | " " "      | "        | M     |
| 301     | " " "      | "        | G     |

| No.     | Location   | E.L. No. | Grade |
|---------|------------|----------|-------|
| AUV 302 | V, A1, 164 | 1630     | M-G   |
| 303     | " " "      | "        | M     |
| 304     | " " "      | "        | G     |
| 305     | V, A3, 253 | 1626     | P     |
| 306     | " " "      | "        | M     |
| 307     | " " "      | "        | G     |
| 308     | " " "      | "        | G     |
| 309     | " " "      | "        | M     |
| 310     | " " "      | "        | G     |
| 311     | V, A2, 124 | "        | P     |
| 312     | V, A2, 128 | 1629     | P     |
| 313     | " " "      | "        | P-M   |
| 314     | V, A2, 124 | 1626     | M-G   |
| 315     | " " "      | "        | P     |
| 316     | " " "      | "        | G     |
| 317     | V, A3, 253 | "        | G     |
| 318     | " " "      | "        | M     |
| 319     | " " "      | "        | P     |
| 320     | " " "      | "        | G     |
| 321     | " " "      | "        | G     |
| 322     | " " "      | "        | M     |
| 323     | " " "      | "        | P     |
| 324     | M, A1, 172 | 1629     | M-G   |
| 325     | " " "      | "        | P     |
| 326     | V, A2, 126 | "        | M     |
| 327     | " " "      | "        | M     |
| 328     | " " "      | "        | M     |
| 329     | " " "      | "        | M     |
| 330     | M, A1, 172 | "        | M-G   |
| 331     | " " "      | "        | P     |
| 332     | " " "      | "        | M-P   |
| 333     | " " "      | "        | P     |
| 334     | " " "      | "        | M-G   |
| 335     | M, A1, 174 | "        | G     |
| 336     | " " "      | "        | M-G   |
| 337     | " " "      | "        | P-M   |
| 338     | " " "      | "        | G     |
| 339     | " " "      | "        | P     |
| 340     | " " "      | "        | G     |
| 341     | " " "      | "        | P     |
| 342     | " " "      | "        | G     |
| 343     | M, A1, 172 | "        | P     |



| No.     | Location   | E.L. No. | Grade |
|---------|------------|----------|-------|
| AUV 344 | M, A1, 172 | 1629     | M-G   |
| 345     | M, A2, 130 | "        | M-G   |
| 346     | " " "      | "        | P     |
| 347     | " " "      | "        | M     |
| 348     | " " "      | "        | M     |
| 349     | " " "      | "        | M-G   |
| 350     | M, A1, 176 | "        | M     |
| 351     | " " "      | "        | M     |
| 352     | " " "      | "        | M-G   |
| 353     | " " "      | "        | P-M   |
| 354     | " " "      | "        | M     |
| 355     | " " "      | "        | P     |
| 356     | " " "      | "        | G     |
| 357     | " " "      | "        | M     |
| 358     | " " "      | "        | M     |
| 359     | " " "      | "        | M     |
| 360     | " " "      | "        | M     |
| 361     | " " "      | "        | M     |
| 362     | " " "      | "        | M     |
| 363     | " " "      | "        | M     |
| 364     | " " "      | "        | G     |
| 365     | F, PK8, 56 | "        | M     |
| 366     | " " "      | "        | M-G   |
| 367     | " " "      | "        | M-G   |
| 368     | " " "      | "        | G     |
| 369     | " " "      | "        | P     |
| 370     | " " "      | "        | P     |
| 371     | " " "      | "        | P     |
| 372     | " " "      | "        | M-G   |
| 373     | " " "      | "        | P     |
| 374     | " " "      | "        | M-G   |
| 375     | " " "      | "        | M-P   |
| 376     | F, PK8, 52 | "        | M-P   |
| 377     | F, PK8, 56 | "        | M-G   |
| 378     | " " "      | "        | M     |
| 379     | F, PK8, 52 | "        | M     |
| 380     | " " "      | "        | P     |
| 381     | F, PK8, 56 | "        | M-P   |
| 382     | " " "      | "        | P     |
| 383     | F, PK8, 52 | "        | P     |
| 384     | " " "      | "        | P     |
| 385     | " " "      | "        | P     |
| 386     | " " "      | "        | P     |

| No.     | Location    | E.L. No. | Grade |
|---------|-------------|----------|-------|
| AUV 387 | F, PK8, 52  | 1629     | P     |
| 388     | F, PK7, 122 | "        | P     |
| 389     | " " "       | "        | M-G   |
| 390     | " " "       | "        | M-P   |
| 391     | " " "       | "        | M-G   |
| 392     | " " "       | "        | P     |
| 393     | " " "       | "        | M-G   |
| 394     | F, PK7, 124 | "        | M     |
| 395     | " " "       | "        | G     |
| 396     | " " "       | "        | M     |
| 397     | " " "       | "        | M-G   |
| 398     | " " "       | "        | P     |
| 399     | F, PK7, 122 | "        | P     |
| 400     | F, PK8, 50  | "        | P     |
| 401     | F, PK8, 52  | "        | M-G   |
| 402     | F, PK8, 50  | "        | P     |
| 403     | " " "       | "        | M     |
| 404     | " " "       | "        | M-P   |
| 405     | V, A1, 168  | "        | M-P   |
| 406     | V, PK8, 46  | "        | M     |
| 407     | " " "       | "        | M     |
| 408     | " " "       | "        | M-P   |
| 409     | " " "       | "        | G     |
| 410     | " " "       | "        | M-G   |
| 411     | " " "       | "        | G     |
| 412     | " " "       | "        | M-G   |
| 413     | " " "       | "        | M     |
| 414     | " " "       | "        | M-P   |
| 415     | " " "       | 1630     | M-P   |
| 416     | " " "       | "        | M-P   |
| 417     | K, PK7, 126 | 1629     | G     |
| 418     | K, PK8, 46  | 1630     | P     |
| 419     | " " "       | "        | M-G   |
| 420     | " " "       | "        | G     |
| 421     | " " "       | 1629     | M-G   |
| 422     | V, A1, 168  | "        | P     |
| 423     | " " "       | "        | G     |
| 424     | " " "       | "        | M-P   |
| 425     | " " "       | "        | M     |
| 426     | " " "       | "        | M     |
| 427     | K, PK8, 44  | 1630     | G     |
| 428     | " " "       | "        | M     |
| 429     | " " "       | "        | M     |

| No.     | Location   | E.L. No. | Grade |
|---------|------------|----------|-------|
| AUV 430 | K. PK8, 44 | 1630     | M     |
| 431     | K, PK8, 40 | "        | M-G   |
| 432     | " " "      | "        | P     |
| 433     | " " "      | "        | G     |
| 434     | " " "      | "        | G     |
| 435     | " " "      | "        | M-P   |
| 436     | " " "      | "        | M-G   |
| 437     | " " "      | "        | M-P   |
| 438     | V, A1, 164 | "        | M     |
| 439     | " " "      | "        | M-G   |
| 440     | " " "      | "        | M     |
| 441     | M, A2, 128 | 1626     | M     |
| 442     | " " "      | "        | M     |
| 443     | " " "      | "        | M     |
| 444     | " " "      | "        | M-P   |
| 445     | " " "      | "        | M-P   |
| 446     | M, A3, 249 | "        | M     |
| 447     | V, A3, 249 | "        | M-P   |
| 448     | V, A4, 43  | "        | P     |
| 449     | V, A4, 45  | "        | M     |
| 450     | " " "      | "        | G     |
| 451     | V, A2, 122 | 1630     | G     |
| 452     | V, A3, 257 | 1627     | M-P   |
| 453     | L, A4, 25  | 1649     | P     |
| 454     | " " "      | 1627     | P     |

APPENDIX 3

AERIAL PHOTOGRAPH FEATURES

| Number | E.L. Number | Loam Sample No. | Outcrop Geology   |
|--------|-------------|-----------------|---|
| 1      | 1625        |                 | sst outcrop and suboutcrop.                                   |
| 2      | 1625        |                 | fine-med sand bet. patches gently dipping sst.                |
| 3      | 1625        | AUV 501         | mainly sst.   |
| 4      | 1625        |                 | round calc. sst. hill.  |
| 5      | 1625        |                 | sst outcrop throughout.                                       |
| 6      | 1627        | AUV 502         | sandy soil surrounded by prominent sst.                       |
| 7      | 1626        |                 |   |
| 8      | 1629        |                 | prominent sst, gently dipping.                                |
| 9      | 1629        |                 | flat sst. shale, 20% outcrop.                                 |
| 10     | 1629        | AUV 503         | small circular elevation, no outcrop, larger trees, red soil. |
| 11     | 1629        |                 | shale sst, flat, outcrop follows contours.                    |
| 12     | 1629        |                 | as above.   |
| 13     | 1629        |                 | circular drainage pattern, abundant sst outcrop.              |
| 14     | 1629        |                 | abundant sst. outcrop.  |
| 15     | 1629        |                 | no outcrop, seepage area from scarp, powdery soil.            |
| 16     | 1629        |                 | prominent sst and shale hill, steeply dipping, ?faulted.      |
| 17     | 1629        |                 | mag. anomaly semi-coincided with lake, black org. mud.        |
| 20     | 1629        |                 | syncline in sst plunging north.                               |
| 21     | 1629        |                 | topographic effect on 100% O.C. sst, thin shale.              |
| 22     | 1630        |                 | hill, shale with sst cap.                                     |
| 23     | 1629        |                 | green, vegetated area at base of scarp.                       |
| 24     | 1629        | AUV 505         | slightly elevated, high clay soil, not vegetated.             |
| 25     | 1629        |                 | deformed qtz-epidote rock surrounded by swamp.                |
| 26     | 1629        |                 | flat-topped outlier of sst and shale.                         |
| 27     | 1629        | AUV 506         | flat area of very high coloured clayey soil.                  |
| 28     | 1626        | AUV 507         | area of no outcrop surr. by sst, sand, deep depression.       |
| 29     | 1629        |                 | sst on line of fault ridges to west.                          |
| 30     | 1629        |                 | rounded dome of red weathered shale above sst.                |
| 31     | 1630        |                 | as above.   |
| 32     | 1630        |                 | as above  |
| 33     | 1630        |                 | as above  |
| 34     | 1630        |                 | as above  |

## APPENDIX 3 (Contd.)

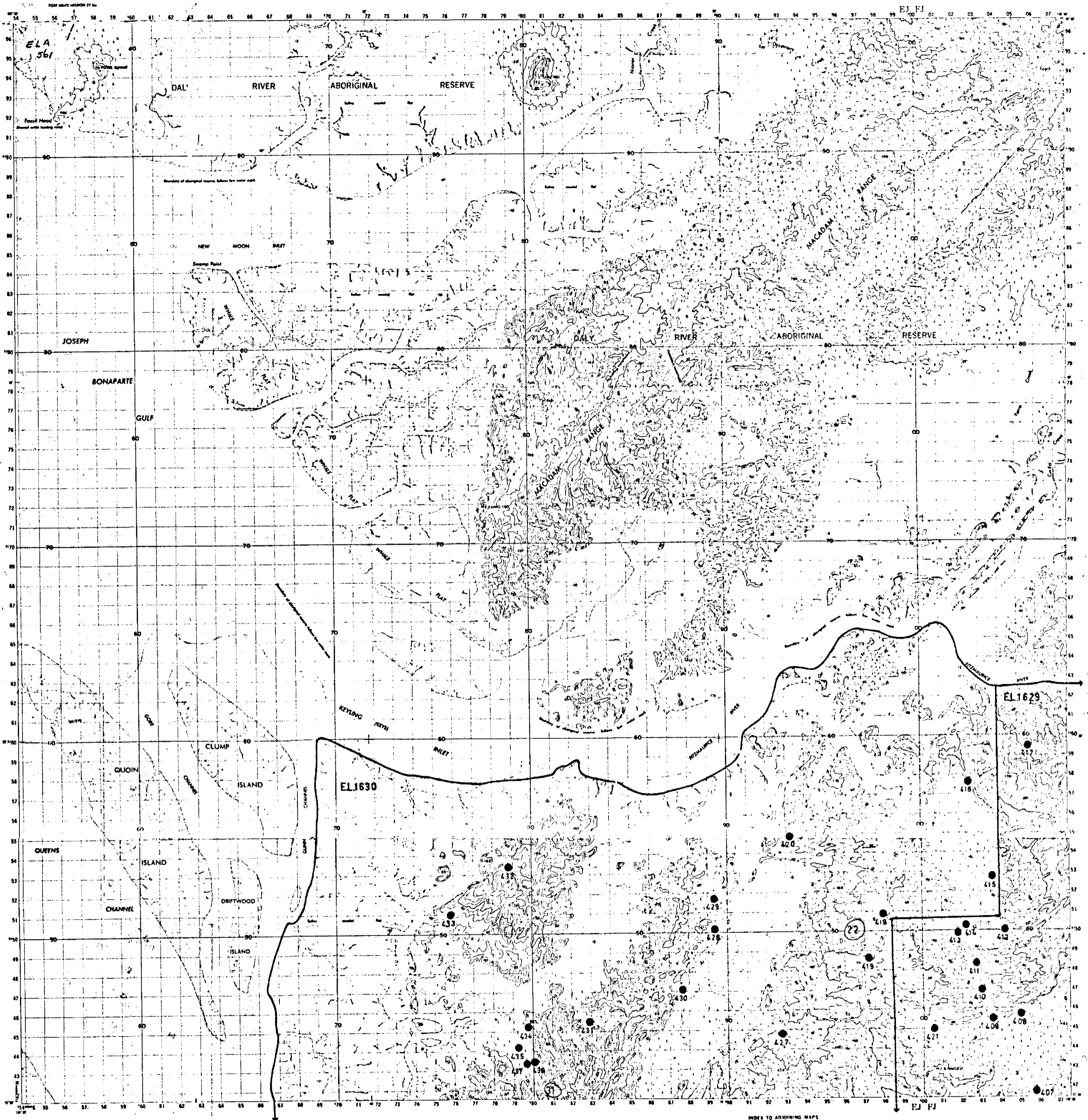
| Number | E.L. Number | Loam Sample No. | Outcrop Geology   |
|--------|-------------|-----------------|---|
| 35     | 1630        | AUV 507         | rounded dome of red weathered shale above sst.          |
| 36     | 1630        |                 | prominent sst pillars, abundant vegetation.             |
| 37     | 1630        |                 | gently dipping sst and shale.                           |
| 38     | 1630        |                 | as above.   |
| 39     | 1627        |                 | flat swampy area, heavily vegetated.                    |
| 40     | 1630        |                 | gently dipping sst and weathered silty residue on top.  |
| 41     | 1627        |                 | dissected prominent sst.                                |
| 42     | 1627        |                 | sst. platform with dark soil.                           |
| 43     | 1627        |                 | as above.   |
| 44     | 1627        |                 |   |
| 45     | 1627        |                 | eroded area of dark grey ferr. sst.                     |
| 46     | 1627        |                 | as above.   |
| 47     | 1627        |                 | rounded hills of flat sst.                              |
| 48     | 1627        |                 | as above.   |
| 49     | 1627        |                 | shallow syncline in sst.                                |
| 50     | 1627        |                 | flat sst. at top of hill.                               |
| 53     | 1649        |                 | no circular feature visible from air.                   |
| 54     | 1649        | AUV 508         | swampy area, anom. vegetation, grey soil coarser below. |
| 55     | 1649        |                 | slightly elevated area with red soil.                   |
| 56     | 1649        |                 | veg. anomaly in slight depression with red soil.        |
| 57     | 1649        |                 | similar vegetation and soil to 54.                      |
| 58     | 1705        |                 | black soil cover similar to 54.                         |
| 59     | 1705        |                 | as above.   |
| 60     | 1705        |                 | poorly vegetated black soil                             |
| 61     | 1705        |                 | area of slight elevation, no anomalous features.        |
| 62     | 1705        |                 | as above.   |
| 63     | 1705        |                 | as above.   |
| 64     | 1705        |                 | as above.   |
| 65     | 1704        |                 | flat siltstn. outlier, 30% outcrop.                     |
| 66     | 1704        |                 | slightly elevated area at edge of black soil plain.     |
| 69     | 1649        |                 | swampy area in old ck. meander.                         |
| 72     | 1705        |                 | slight depression, swampy with less vegetation.         |
| 73     | 1705        |                 | oval, part fence line, part margin of swamp             |
| 74     | 1649        |                 | depression in sst mesa, mostly sst., vegetation.        |
| 75     | 1627        |                 | heavily vegetated, some sst.                            |

## APPENDIX 3 (Contd.)

| Number | E.L. Number | Loam Sample No. | Outcrop Geology   |
|--------|-------------|-----------------|---|
| 76     | 1627        |                 | prominent outcrop of sst pillars on hill top.           |
| 77     | 1627        |                 | scree slope from sst bluffs.                            |
| 78     | 1627        |                 | white material in alluvial fan.                         |
| 79     | 1625        |                 | red weathered ?shale and sst in gullys.                 |
| 82     | 1625        |                 | flat sst in red soil many in area.                      |
| 83     | 1625        |                 | no outcrop, abundant grass, light soil, sst on margins. |
| 84     | 1625        | AUV 510         | as above.   |
| 85     | 1625        |                 | flat sst in ck., sandy.                                 |
| 87     | 1625        |                 | swampy area, thick veg., 60% o.c.                       |
| 88     | 1625        |                 | shale overlying flat sst.                               |
| 89     | 1625        |                 | round hill of flat sst.                                 |
| 90     | 1625        |                 | round sst. hills.                                       |
| 91     | 1625        |                 | as above.   |
| 92     | 1625        |                 | as above.   |
| 99     | 1704        | AUV 512         | no o.c., red soil, numerous lateritic pebbles.          |
| 100    | 1704        |                 | area of sandy soil bet. outcrops, no anomaly.           |
| 101    | 1704        |                 | swampy clearing.  |
| 102    | 1704        |                 | scree slope and scattered o.c. of carb. seds.           |
| 103    | 1704        |                 | no visible anomalous features.                          |
| 104    | 1704        |                 | flat sst.   |
| 105    | 1704        |                 | small hill, red soil scree.                             |
| 107    | 1704        |                 | slightly elevated red soil hill like rest of area.      |
| 108    | 1704        |                 | scattered carb.seds.                                    |
| 109    | 1704        |                 | part of large swampy area.                              |
| 134    | 1625        |                 | rounded sst. and siltstone hill.                        |

# KEYLING

REFER TO THIS MAP AS SHEET 4868 (EDITION 2)  
SERIES R621



A.O. (AUSTRALIA) Pty. Ltd.

**YAMBARRA PROJECT**

NORTHERN TERRITORY

SAMPLE LOCALITY

**MAP No. 1**

Drafted by: N. Petty      Date: February, 1979.

INDEX TO ADJOINING MAPS

|      |      |      |
|------|------|------|
| 4868 | 4869 | 4870 |
| 4867 | 4868 | 4869 |
| 4866 | 4867 | 4868 |

VERTICAL DATUM AUSTRALIAN HEIGHT DATUM  
TRANSVERSE MERCATOR PROJECTION  
CONTOUR INTERVAL 10 METRES  
ELEVATIONS IN METRES

|   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>Black numbers (100m intervals)</li> <li>Blue numbers (50m intervals)</li> <li>Red numbers (25m intervals)</li> <li>Green numbers (10m intervals)</li> <li>Yellow numbers (5m intervals)</li> <li>White numbers (1m intervals)</li> </ul> | <ul style="list-style-type: none"> <li>Black lines (10m intervals)</li> <li>Blue lines (5m intervals)</li> <li>Red lines (2.5m intervals)</li> <li>Green lines (1m intervals)</li> <li>Yellow lines (0.5m intervals)</li> <li>White lines (0.2m intervals)</li> </ul> | <ul style="list-style-type: none"> <li>Black lines (10m intervals)</li> <li>Blue lines (5m intervals)</li> <li>Red lines (2.5m intervals)</li> <li>Green lines (1m intervals)</li> <li>Yellow lines (0.5m intervals)</li> <li>White lines (0.2m intervals)</li> </ul> |
|---|---|---|

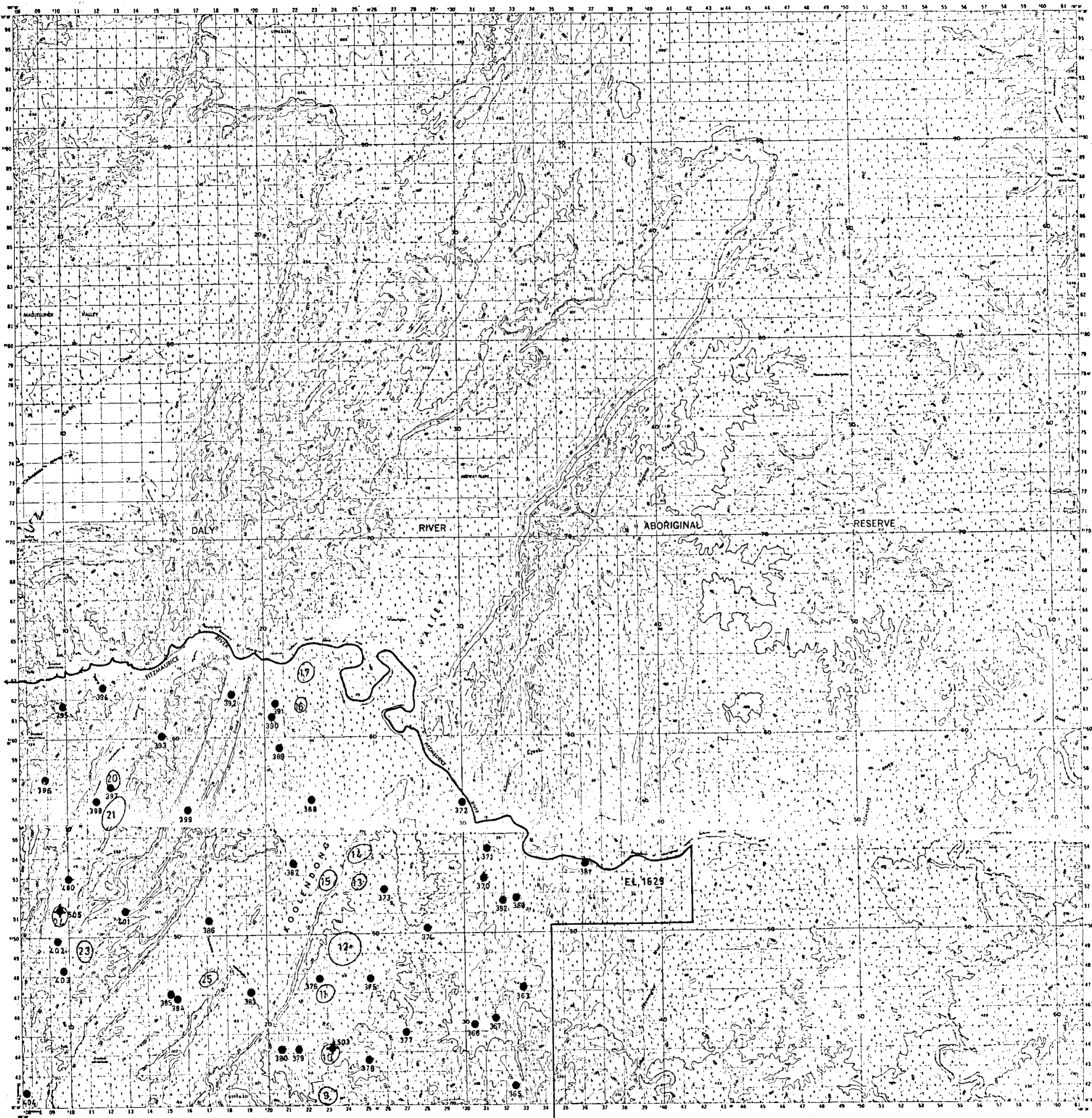
**LEGEND**

- 234 Loam Sample Point
- 450 Gravel Sample Point
- 56 Aerial Photograph Feature
- EL1234 Exploration Licence Boundary

TRUE NORTH UP AND MAGNETIC NORTH ARE SHOWN GRAPHICALLY FOR THE CENTRE OF THE MAP. MAGNETIC NORTH IS CORRECT FOR 1979. AN ANGLE WEST OF 8.4° IS SHOWN AS ABOVE.

# FITZMAURICE

REFER TO THIS MAP AS SHEET 4968 (EDITION 2)  
SERIES R621



A.O. (AUSTRALIA) Pty. Ltd.

## YAMBARRA PROJECT

NORTHERN TERRITORY

SAMPLE LOCALITY

### MAP No 2

Drafted by: N. Petty

Date: February, 1979.

BLACK NUMBERED CONTOUR LINES ARE 1000 METRE INTERVALS OF THE AUSTRALIAN MAP GRID JOHN 57 GRID VALUES ARE SHOWN ON THIS MAP ONLY AT THE SOUTH WEST CORNER OF THE MAP

HORIZONTAL DATUM AUSTRALIAN GEODESIC DATUM 1966  
VERTICAL DATUM AUSTRALIAN HEIGHT DATUM  
TRANSVERSE MERCATOR PROJECTION  
CONTOUR INTERVAL 20 METRES  
ELEVATIONS IN METRES

|  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>Bound to sea, National roads, water</li> <li>Road marked surface, red or more lanes</li> <li>Road marked surface, one lane, tarmac</li> <li>Road marked surface, one lane, cutting</li> <li>Unimproved track, Road bridge</li> <li>Rail cutting, level</li> <li>Railway, single track, Station</li> <li>Railway, single track, Railway bridge</li> <li>Light railway or tramway, Railway bridge</li> <li>Power transmission line, Towers, cross-arms</li> </ul> | <ul style="list-style-type: none"> <li>Fence, Lines or bank</li> <li>Windmill, Quarry</li> <li>Building, Church, Yard, Dams in the open</li> <li>Trig Station, Bench Mark, Spot elevation</li> <li>Contour with 1000, 2000</li> <li>Deposited, coarse, Sand</li> <li>Sand dunes, Sand ridge</li> <li>Ferrous deposit, medium, scattered</li> <li>Scrub forest, medium, scattered</li> <li>Tropical rain forest, Pine plantation</li> <li>Wetland</li> </ul> | <ul style="list-style-type: none"> <li>Outcrop or escarpment, Mangrove</li> <li>Sloping ground, intermittent</li> <li>Lead subject to inundation, Rockland</li> <li>Lake permanent, Stream permanent</li> <li>Lake seasonal, Stream seasonal</li> <li>Line marked dry, Stream nearly dry</li> <li>Dam or wall, Spring, Tank or small dam</li> <li>Saline coastal flat, Freshwater flat</li> <li>Lighthouse, Rock hole or wreck</li> <li>Dredge, Pier, Wharf, Wood wharf</li> <li>Casuarina plantation, Reef or ledge</li> </ul> |
|--|---|---|

#### INDEX TO ADJOINING MAPS

|      |      |      |
|------|------|------|
| 4967 | 4968 | 4969 |
| 4968 | 4968 | 4968 |
| 4969 | 4968 | 4969 |

#### LEGEND

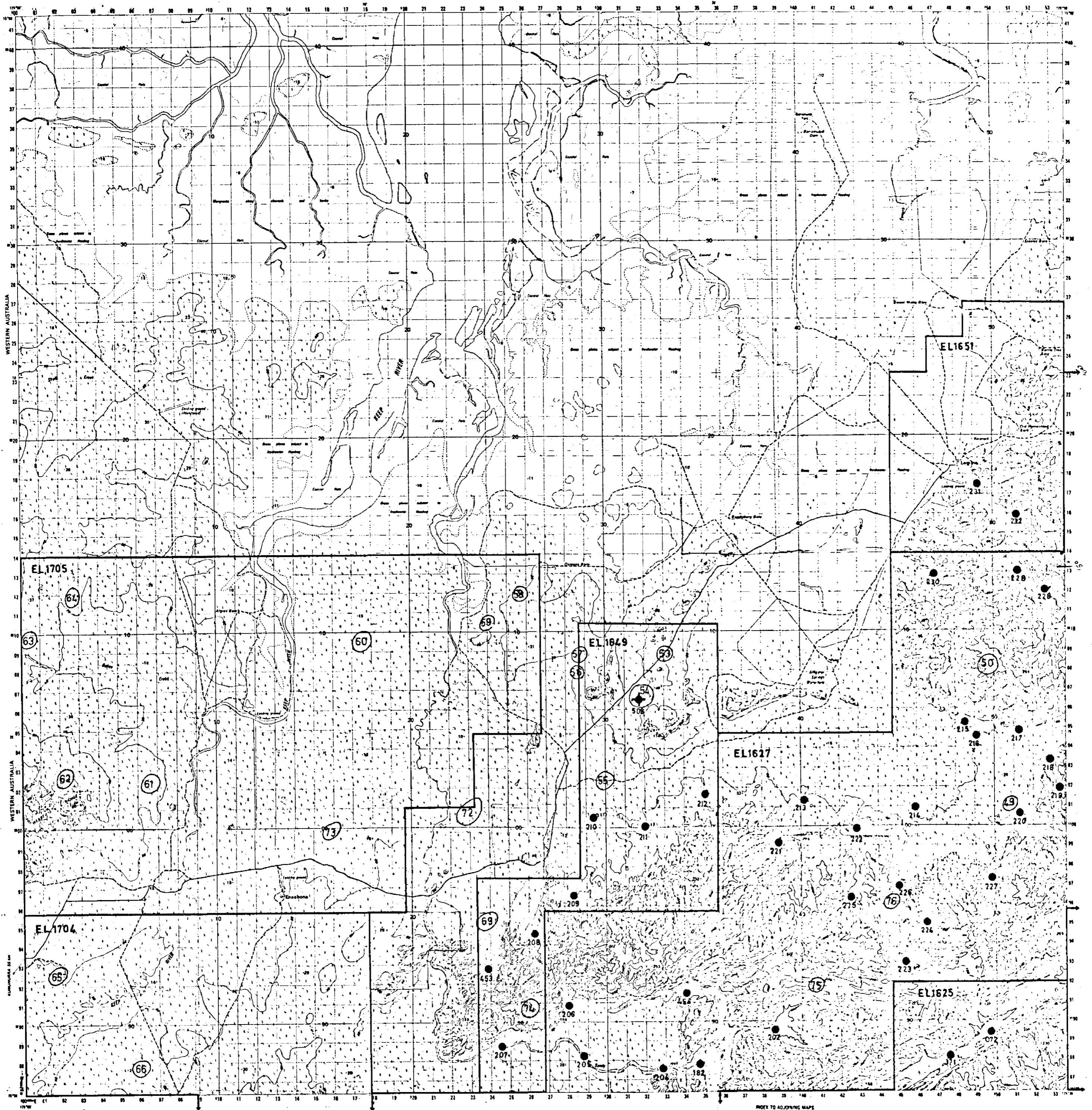
- Load Sample Point
- Gravel Sample Point
- Aerial Photograph Feature
- Exploration Licence Boundary

TRUE NORTH GRID NORTH AND MAGNETIC NORTH  
SEE SOUTH WEST CORNER OF THIS MAP FOR THE CENTRE  
OF THE MAP. MAGNETIC NORTH IS CORRECTED TO  
1975 AND MOVES WESTWARD BY 01° 17' 30" IN  
APPROX 10 YEARS



# LEGUNE

REFER TO THIS MAP AS SHEET 4767 (EDITION 1)  
NATIONAL MAP SERIES



A.O. (AUSTRALIA) Pty. Ltd.

## YAMBARRA PROJECT

NORTHERN TERRITORY

SAMPLE LOCALITY

### MAP No 3

Drafted by: N. Petty

Date: February, 1979.

Black dotted lines are 1 km intervals of the Australian map grid. The map is based on the Australian datum. Vertical datum: AUSTRALIAN HEIGHT DATUM. Transverse Mercator projection. Contour interval: 20 metres. Elevations in metres.

- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>Black dotted line: 1 km interval</li> <li>Thick solid line: Principal road</li> <li>Thin solid line: Secondary road</li> <li>Dashed line: Whar road</li> <li>Thin solid line: Road bridge</li> <li>Thin solid line: Vehicle track</li> <li>Thin solid line: Gas</li> <li>Thin solid line: Cable</li> <li>Thin solid line: Railway</li> <li>Thin solid line: Light railway</li> <li>Thin solid line: Power transmission line</li> </ul> | <ul style="list-style-type: none"> <li>Thin solid line: Fence</li> <li>Thin solid line: Mine</li> <li>Thin solid line: Church</li> <li>Thin solid line: Well</li> <li>Thin solid line: Dam</li> <li>Thin solid line: Tank</li> <li>Thin solid line: Quarry</li> <li>Thin solid line: Bench mark</li> <li>Thin solid line: Spot elevation</li> <li>Thin solid line: Contour with value</li> <li>Thin solid line: Depression contour</li> <li>Thin solid line: Forest</li> <li>Thin solid line: Scrub</li> <li>Thin solid line: Tropical rainforest</li> <li>Thin solid line: Orchard</li> <li>Thin solid line: Mangrove</li> <li>Thin solid line: Wetland</li> </ul> | <ul style="list-style-type: none"> <li>Thin solid line: Lake</li> <li>Thin solid line: Swamp</li> <li>Thin solid line: Stream</li> <li>Thin solid line: Marsh</li> <li>Thin solid line: Sand dune</li> <li>Thin solid line: Beach</li> <li>Thin solid line: Reef</li> <li>Thin solid line: Shoals</li> <li>Thin solid line: Rocks</li> <li>Thin solid line: Islands</li> <li>Thin solid line: Headlands</li> <li>Thin solid line: Points</li> <li>Thin solid line: Peninsulas</li> <li>Thin solid line: Bays</li> <li>Thin solid line: Harbours</li> <li>Thin solid line: Fjords</li> <li>Thin solid line: Straits</li> <li>Thin solid line: Channels</li> <li>Thin solid line: Tides</li> <li>Thin solid line: Currents</li> <li>Thin solid line: Winds</li> <li>Thin solid line: Waves</li> <li>Thin solid line: Swells</li> <li>Thin solid line: Storms</li> <li>Thin solid line: Hurricanes</li> <li>Thin solid line: Cyclones</li> <li>Thin solid line: Tornadoes</li> <li>Thin solid line: Earthquakes</li> <li>Thin solid line: Volcanoes</li> <li>Thin solid line: Seismicity</li> <li>Thin solid line: Tsunamis</li> <li>Thin solid line: Ice</li> <li>Thin solid line: Snow</li> <li>Thin solid line: Permafrost</li> <li>Thin solid line: Glaciers</li> <li>Thin solid line: Moraines</li> <li>Thin solid line: Dunes</li> <li>Thin solid line: Hills</li> <li>Thin solid line: Mountains</li> <li>Thin solid line: Plateaus</li> <li>Thin solid line: Basins</li> <li>Thin solid line: Valleys</li> <li>Thin solid line: Canyons</li> <li>Thin solid line: Gorges</li> <li>Thin solid line: Ravines</li> <li>Thin solid line: Gullies</li> <li>Thin solid line: Rills</li> <li>Thin solid line: Erosion</li> <li>Thin solid line: Deposition</li> <li>Thin solid line: Sedimentation</li> <li>Thin solid line: Alluvium</li> <li>Thin solid line: Sand</li> <li>Thin solid line: Silt</li> <li>Thin solid line: Clay</li> <li>Thin solid line: Shale</li> <li>Thin solid line: Limestone</li> <li>Thin solid line: Granite</li> <li>Thin solid line: Basalt</li> <li>Thin solid line: Andesite</li> <li>Thin solid line: Gneiss</li> <li>Thin solid line: Schist</li> <li>Thin solid line: Quartzite</li> <li>Thin solid line: Slate</li> <li>Thin solid line: Marble</li> <li>Thin solid line: Soapstone</li> <li>Thin solid line: Slate</li> <li>Thin solid line: Sandstone</li> <li>Thin solid line: Limestone</li> <li>Thin solid line: Chert</li> <li>Thin solid line: Coal</li> <li>Thin solid line: Oil</li> <li>Thin solid line: Gas</li> <li>Thin solid line: Uranium</li> <li>Thin solid line: Gold</li> <li>Thin solid line: Silver</li> <li>Thin solid line: Copper</li> <li>Thin solid line: Lead</li> <li>Thin solid line: Zinc</li> <li>Thin solid line: Nickel</li> <li>Thin solid line: Iron</li> <li>Thin solid line: Manganese</li> <li>Thin solid line: Potash</li> <li>Thin solid line: Phosphate</li> <li>Thin solid line: Sulfur</li> <li>Thin solid line: Boron</li> <li>Thin solid line: Magnesium</li> <li>Thin solid line: Sodium</li> <li>Thin solid line: Potassium</li> <li>Thin solid line: Calcium</li> <li>Thin solid line: Barium</li> <li>Thin solid line: Strontium</li> <li>Thin solid line: Rubidium</li> <li>Thin solid line: Cesium</li> <li>Thin solid line: Francium</li> <li>Thin solid line: Radium</li> <li>Thin solid line: Actinium</li> <li>Thin solid line: Thorium</li> <li>Thin solid line: Protactinium</li> <li>Thin solid line: Uranium</li> <li>Thin solid line: Neptunium</li> <li>Thin solid line: Plutonium</li> <li>Thin solid line: Americium</li> <li>Thin solid line: Curium</li> <li>Thin solid line: Berkelium</li> <li>Thin solid line: Californium</li> <li>Thin solid line: Einsteinium</li> <li>Thin solid line: Fermium</li> <li>Thin solid line: Mendelevium</li> <li>Thin solid line: Nobelium</li> <li>Thin solid line: Lawrencium</li> <li>Thin solid line: Rutherfordium</li> <li>Thin solid line: Dubnium</li> <li>Thin solid line: Seaborgium</li> <li>Thin solid line: Bohrium</li> <li>Thin solid line: Hassium</li> <li>Thin solid line: Meitnerium</li> <li>Thin solid line: Darmstadtium</li> <li>Thin solid line: Roentgenium</li> <li>Thin solid line: Copernicium</li> <li>Thin solid line: Nihonium</li> <li>Thin solid line: Flerovium</li> <li>Thin solid line: Livermorium</li> <li>Thin solid line: Tennessine</li> <li>Thin solid line: Oganesson</li> </ul> |
|---|---|--|

| Sheet No. | Sheet No. | Sheet No. | Sheet No. |
|-----------|-----------|-----------|-----------|
| 4766      | 4767      | 4768      | 4769      |
| 4765      | 4766      | 4767      | 4768      |
| 4764      | 4765      | 4766      | 4767      |
| 4763      | 4764      | 4765      | 4766      |

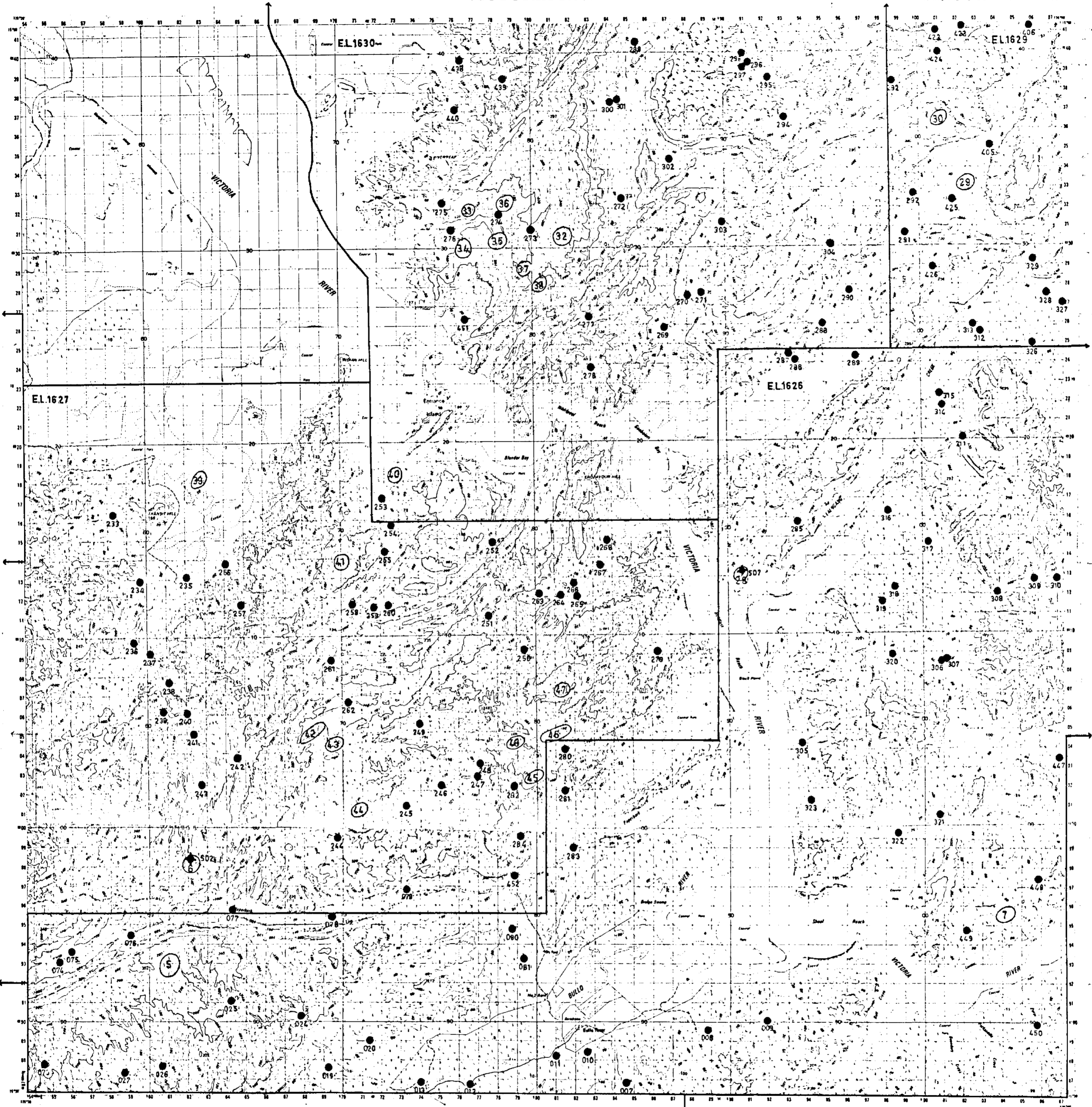
### LEGEND

- ◆ 734 Loam Sample Point
- 450 Gravel Sample Point
- 56 Aerial Photograph Feature
- EL 1234 Exploration Licence Boundary

THE NORTH AND SOUTH AND MAGNETIC NORTH AND SOUTH DECLINATION VALUES ARE GIVEN IN THE SOUTH WEST CORNER OF THE MAP SHEET. THE CLINOMETER IS IN THE SOUTH WEST CORNER OF THE MAP SHEET. THE CLINOMETER IS IN THE SOUTH WEST CORNER OF THE MAP SHEET.

# VICTORIA RIVER

REFER TO THIS MAP AS SHEET 4867 (EDITION 1)  
NATIONAL TOPOGRAPHIC MAP SERIES



**A.O. (AUSTRALIA) Pty. Ltd.**

**YAMBARRA PROJECT**

NORTHERN TERRITORY

SAMPLE LOCALITY

**MAP No 4**

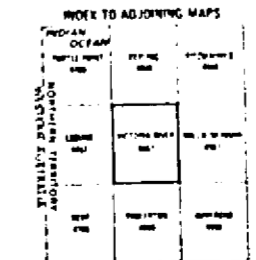
Drafted by: N. Petty      Date: February, 1979.

BLACK NUMBERS AND LINES ARE 1 MM WITH THE METRES OF THE AUSTRALIAN MAP GRID (ZONE 51)  
GRID SQUARES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP

HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1984  
VERTICAL DATUM: AUSTRALIAN MEAN SEA LEVEL  
FLASHEFFECTIVE MEAN SEA LEVEL PROJECTION

CONTOUR INTERVAL 20 METRES  
ELEVATIONS IN METRES

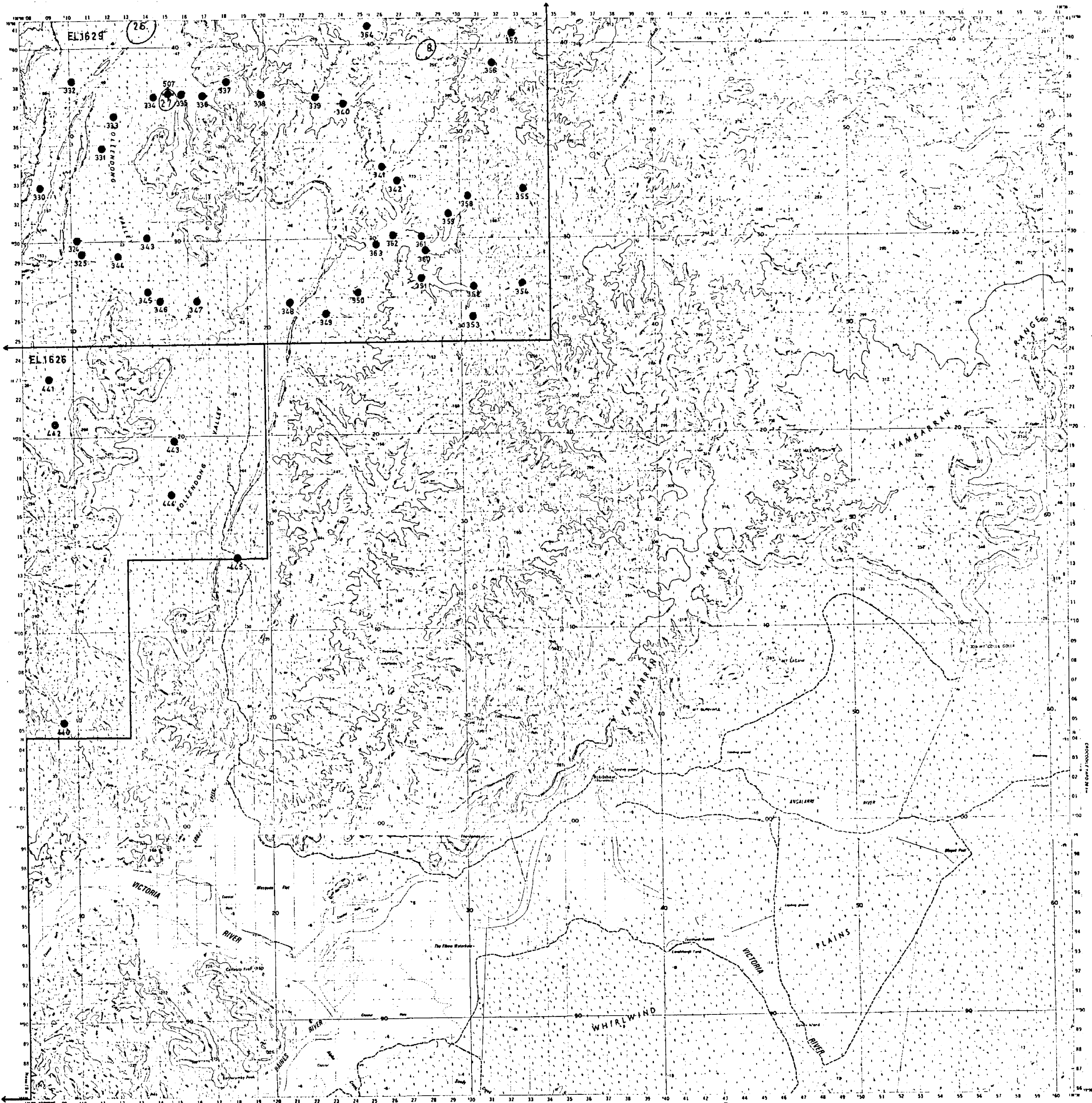
|  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>Black up line: National route marker</li> <li>Principal road and highway: Centre</li> <li>Secondary road: Two-lane</li> <li>Minor road: Road bridge</li> <li>Waterway track</li> <li>Rail: Centre line</li> <li>Railway multiple track: Station</li> <li>Railway bridge</li> <li>Light railway or tramway</li> <li>Power transmission line</li> </ul> | <ul style="list-style-type: none"> <li>Fence: Level or bank</li> <li>Mine: Windmill, Vent, Quarry</li> <li>Benlone, Check Dam, Dam or Weir</li> <li>Trig station: Bench mark, Spot structure</li> <li>Chf. Contour with value: Depression contour</li> <li>Forest: dense, medium, scattered</li> <li>Scrub: dense, medium, scattered</li> <li>Tropical rainforest: Palm plantation</li> <li>Orchard: plantation or vineyard</li> <li>Mangrove</li> <li>Woodstock</li> </ul> | <ul style="list-style-type: none"> <li>Lake permanent: Stream perennial</li> <li>Lake intermittent: Stream intermittent</li> <li>Lake mostly dry: Stream mostly dry</li> <li>Stream: perennial, intermittent</li> <li>Land subject to inundation: Area flood</li> <li>Bar or weir: Spring, Lock or small dam</li> <li>Breakwater: Pier, Wharf</li> <li>Wharf: exposed</li> <li>Lighthouse</li> <li>Reef: bar or patch</li> <li>Fauna: Reef Flat, Sand</li> <li>Reef: Rock ledge</li> </ul> |
|--|---|--|



## LEGEND

- ◆ 234 100m Sample Point
- 450 Gravel Sample Point
- 56 Aerial Photograph Feature
- EL1234 Exploration Licence Boundary

THIS MAP SHEET AND MAGNETIC VARIATION DATA ARE CORRECT AS AT THE DATE OF THE MAP. THE DATA ARE SUBJECT TO THE 1975 ICAO WORLD MAGNETIC DATA UPDATE.



A.O. (AUSTRALIA) Pty. Ltd.

**YAMBARRA PROJECT**

NORTHERN TERRITORY

SAMPLE LOCALITY

**MAP No 5**

Drafted by: N. Petty

Date: February, 1979.

- BLACK NUMBERS AND LINES ARE 1:500 ON THE ORIGINAL MAP AND 1:2500 ON THIS MAP. BENCH MARKS ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP. HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM. VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM. TRANSVERSE MERCATOR PROJECTION. CONTOUR INTERVAL 20 METRES. ELEVATIONS IN METRES.
- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>— Built-up area: National road marker</li> <li>— Provincial road and byways, Carting</li> <li>— Secondary road, Cartwheel</li> <li>— Minor road, Road to edge</li> <li>— Vehicle track</li> <li>— Sand, Carle pit</li> <li>— Railway multiple track, Station, Railway bridge</li> <li>— Railway single track, Railway tunnel</li> <li>— Light railway or tramway</li> <li>— Power transmission line</li> </ul> | <ul style="list-style-type: none"> <li>— Fence, Lines or bank</li> <li>— Moss, Windmill, Yard, Quarry</li> <li>— Buildings, Church, Post, Store or Sheds</li> <li>— Trig station, Bench mark, Spot elevation</li> <li>— Cliff, Contour with relief, Depression contour</li> <li>— Forest, dense, medium, scattered</li> <li>— Scrub, dense, medium, scattered</li> <li>— Tropical rainforest, Pine plantation</li> <li>— Orchard, plantation or mixed, Mangrove</li> <li>— Wetland</li> </ul> | <ul style="list-style-type: none"> <li>— Lake, permanent, Stream, perennial</li> <li>— Lake, intermittent, Stream, intermittent</li> <li>— Lake, mainly dry, Stream, mainly dry</li> <li>— Swamp, permanent, intermittent</li> <li>— Land subject to inundation, Rice field</li> <li>— Store or shed, Spring, Tank or small dam</li> <li>— Reservoir, Pan, Wharf</li> <li>— Wharf, covered, Light house</li> <li>— Rock, bare or pebbly, Jarrah or Red Sand</li> <li>— Reef, Rock ledge</li> </ul> |
|---|---|--|

INDEX TO ADJOINING MAPS

|      |      |      |
|------|------|------|
| 4966 | 4967 | 4968 |
| 4965 | 4966 | 4967 |
| 4964 | 4965 | 4966 |

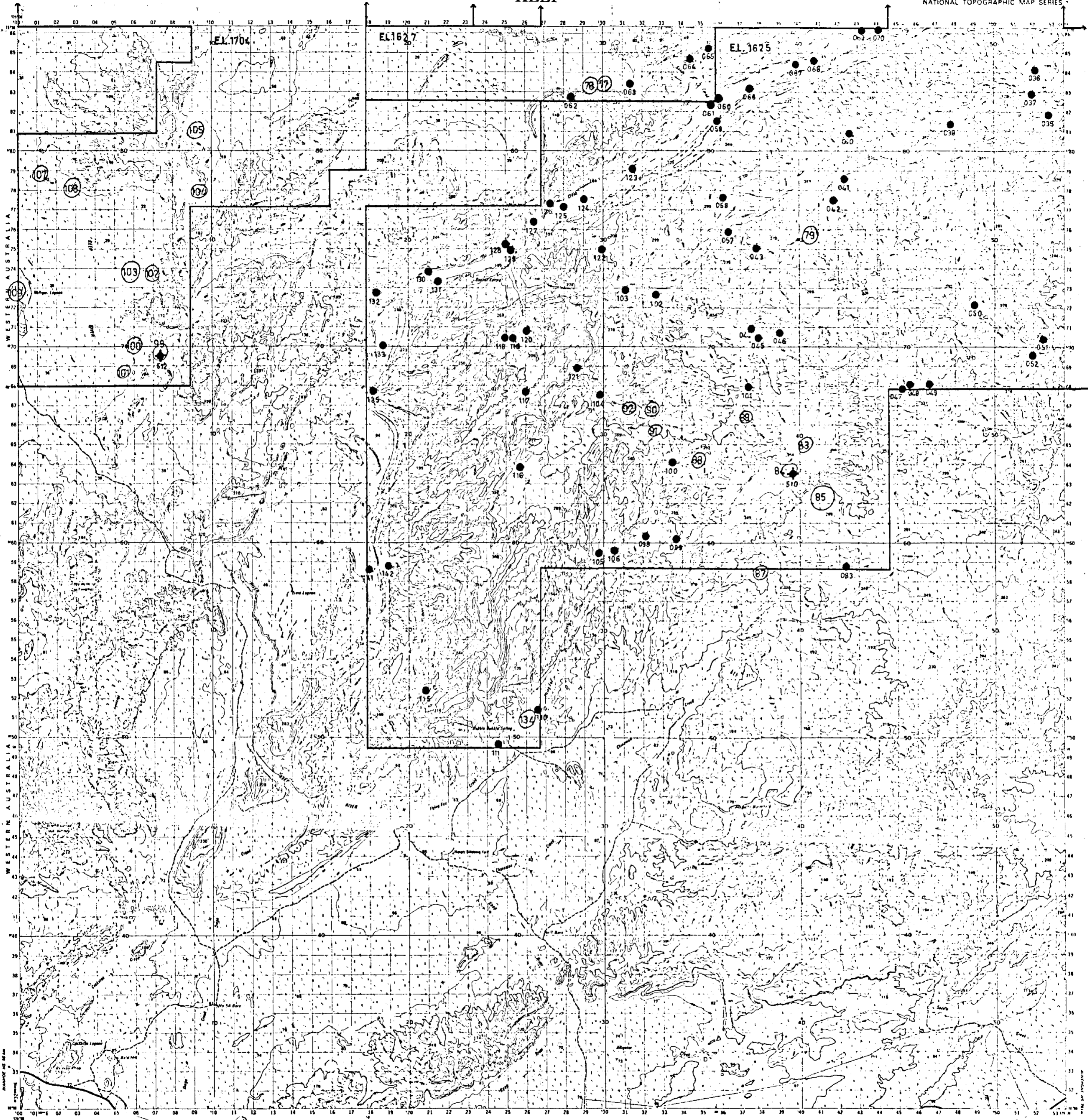
**LEGEND**

- ◆ 234 Loam Sample Point
- 450 Gravel Sample Point
- 56 Aerial Photograph Feature
- EL1234 Exploration Licence Boundary

THIS MAP IS A COPY OF THE ORIGINAL MAP SHEET 4967 (EDITION 1) OF THE NATIONAL TOPOGRAPHIC MAP SERIES. THE ORIGINAL MAP SHEET IS AVAILABLE FROM THE NATIONAL TOPOGRAPHIC MAP SERIES, 1100 CANBERRA DRIVE, CANBERRA, ACT 2601.

KEEP

REFERS TO THE MAP OF SHEET 4766 (EDITION 1)  
NATIONAL TOPOGRAPHIC MAP SERIES



A.O. (AUSTRALIA) Pty. Ltd.

# YAMBARRA PROJECT

NORTHERN TERRITORY

SAMPLE LOCALITY

## MAP No 6

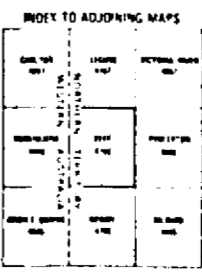
Drafted by: N. Petty

Date: February, 1979.

1:50,000

BLACK NUMBERS ONE LINE AND TWO LINE INTERVALS OF THE AUSTRALIAN MAP SHEET 4766  
AND VALUES ARE SHOWN IN FEET ONLY AT THE SOUTH WEST CORNER OF THE MAP  
HORIZONTAL DATUM: AUSTRALIAN GEODESIC DATUM 1984  
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM  
TRANSVERSE MERCATOR PROJECTION  
CONTOUR INTERVAL: 20 METRES  
ELEVATIONS IN METRES

- |  |  |  |
|--|--|--|
| Bank up area. National main marker               | Fence. Lines or bank                           | Lake, perennial. Stream, perennial         |
| Principal road and highway. Carting              | Mine. Windmill. Yard. Quarry                   | Lake, intermittent. Stream, intermittent   |
| Secondary road. Embankment                       | Building. Church. Rest. Drive in theatre       | Lake, mainly dry. Stream, mainly dry       |
| Moor road. Road bridge                           | Ting station. Bench mark. Spot elevation       | Swamp, perennial, intermittent             |
| Traveller track                                  | C.I.F. Contour with values. Depression contour | Land subject to inundation. Rice field     |
| Gate. Centre gate                                | Forest. Dense, medium, scattered               | Field or well. Spring. Tidal or salt flat  |
| Railway. Multiple track. Station. Railway bridge | Swamp. Dense, medium, scattered                | Breakwater. Pier. Wharf                    |
| Railway. Single track. Railway tunnel            | Typical rainforest. Pine plantation            | Wharf, covered. Lighthouse                 |
| Light railway to tramway                         | Ditched plantation or orchard. Mangrove        | Rock, bare or grass. Foreshore. Pier. Sand |
| Power transmission line                          | Windmill                                       | Road. Rock ledge                           |



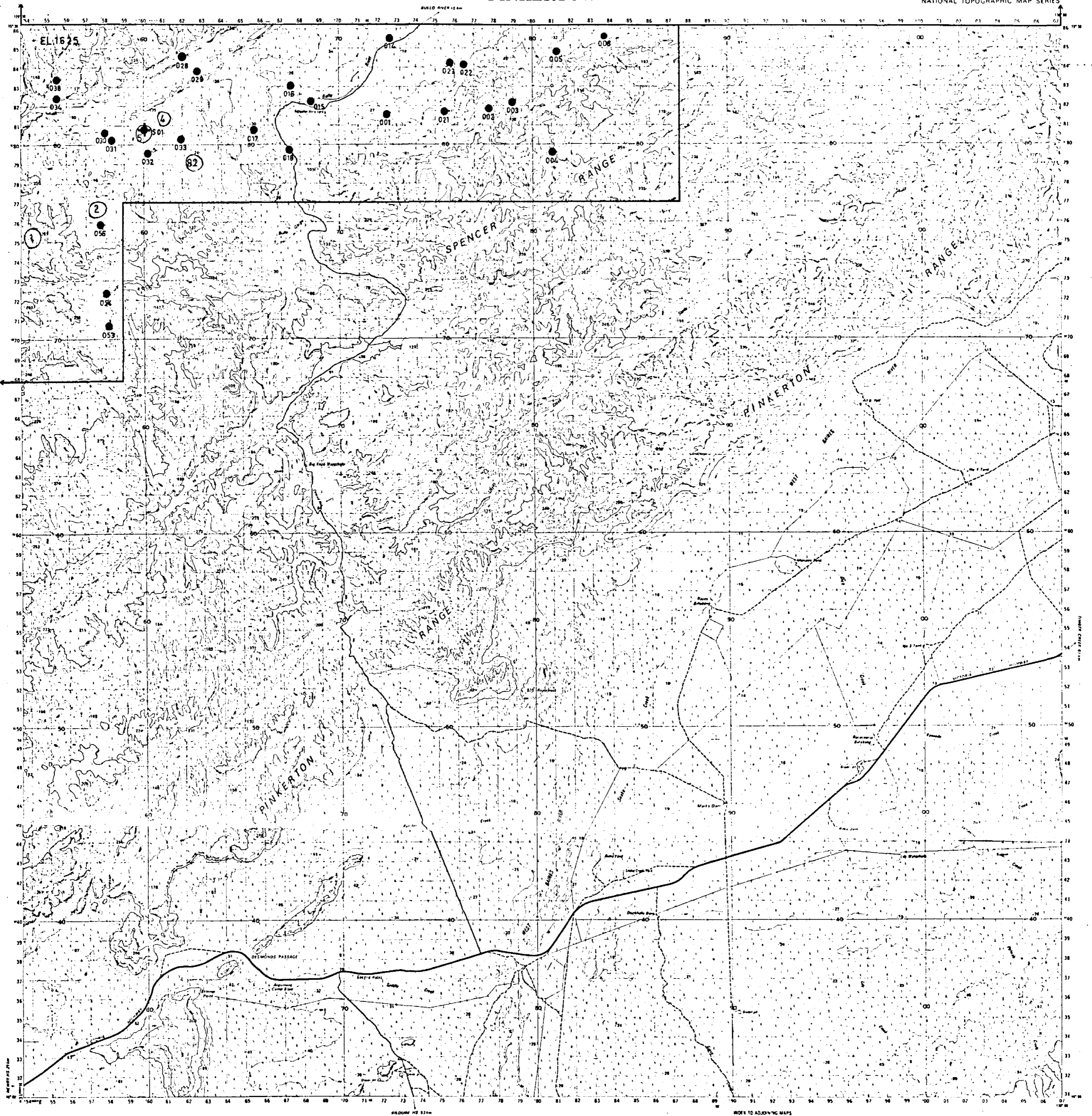
### LEGEND

- ◆ 784 - Loam Sample Point
- 450 - Gravel Sample Point
- 56 - Aerial Photograph Feature
- EL.1234 - Exploration Licence Boundary

THE NORTH LINE NORTH AND MAGNETIC  
DIP AND OTHER DATA ARE GIVEN  
AT THE CORNER OF THE MAP SHEET  
WITHIN THE CORNER OF THE MAP SHEET  
INDICATED BY A LINE AND A NUMBER

# PINKERTON

REFER TO THIS MAP AS SHEET 4866 (EDITION 1)  
NATIONAL TOPOGRAPHIC MAP SERIES



A.O. (AUSTRALIA) Pty. Ltd.

## YAMBARRA PROJECT

NORTHERN TERRITORY

SAMPLE LOCALITY

MAP No 7

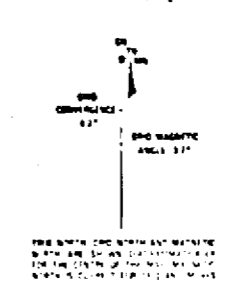
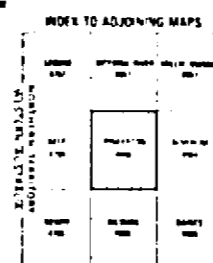
Drafted by: N. Petty

Date: February, 1979.

Build up area. National route marker.  
Principal road and highway. Contour.  
Secondary road. Footpath.  
Shoap road. Road in dip.  
Volcanic track.  
Gate. Cattle grid.  
Railway. Multiple track. Station. Railway bridge.  
Railway. Single track. Railway tunnel.  
Light railway or tramway.  
Power line. 110 kV. 220 kV.

Forest. Low or bush.  
Moss. Woodland. Field. Openy.  
Building. Church. Room. Drive in the street.  
Tilly station. Bench mark. Spot elevation.  
D.M. Contour with spot. Depression contour.  
Forest. Dense. Medium. Scattered.  
Scrub. Dense. Medium. Scattered.  
Tropical rainforest. Pine plantation.  
Orchard. Plantation in coconut. Mangrove.  
Wetland.

Lake. Permanent. Stream. Permanent.  
Lake. Intermittent. Stream. Intermittent.  
Lake. Shallow. Dry. Stream. Shallow. Dry.  
Swamp. Permanent. Intermittent.  
Land subject to inundation. Rice field.  
Bore in well. Spring. Tank in small dam.  
Breakwater. Pier. Wharf.  
Wharf. Exposed. Lighthouse.  
Rock. Low or beach. Sparker. Red. Steel.  
Reef. Rock ledge.



### LEGEND

- ◆ 234 Loam Sample Point
- 450 Gravel Sample Point
- 56 Aerial Photograph Feature
- EL 7234 Exploration Licence Boundary