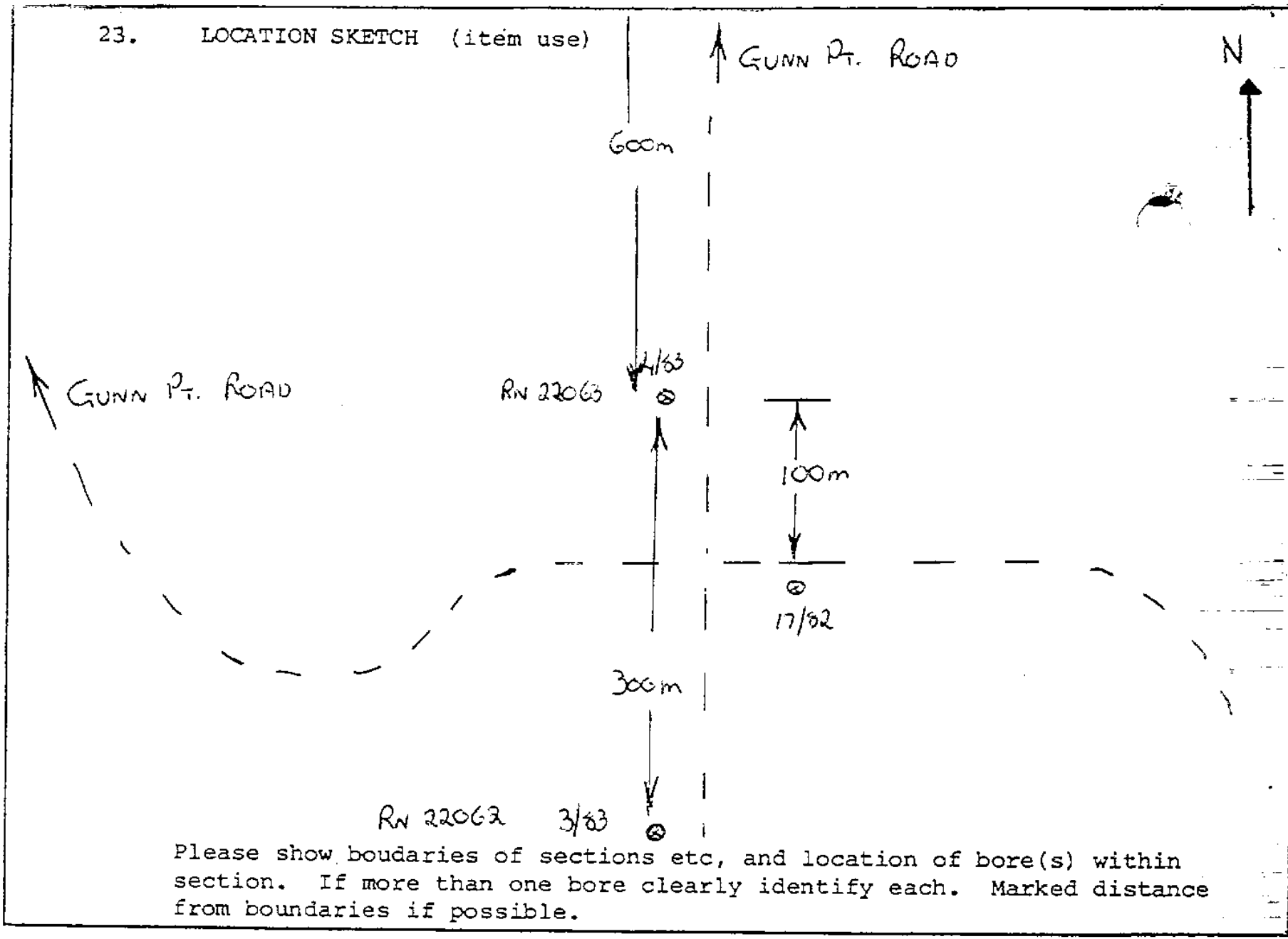


PARTICULARS OF COMPLETED  \*RN022063\*

registration NO. 22063  
 Index No 80/2214  
 Advice No

|   |   |  |
|---|---|--|
| 20. Describe rock type, colour etc. any changes must be recorded.<br><br>From - To<br>0 - 0.1m TOPSOIL<br>0.1 - 5.9m RED, WHITE & YELLOW CLAY & LATERITE<br>5.9 - 11.8m RED, WHITE & YELLOW CLAY<br>11.8m - 24.1m RED, WHITE & YELLOW CLAY & LATERITE<br>24.1 - 30.2m WHITE, YELLOW & RED CLAY<br>30.2 - 36.3m WHITE, YELLOW & RED CLAY & QUARTZ<br>36.3 - 39m WHITE CLAY & QUARTZ SAND<br>39 - 41.1m NO CIRCULATION<br>41.1 - 67.2m DOLOMITE<br><br>42.9 - 43.6m FRACTURED<br>43.8 - 44.3m FRACTURED<br>47.6 - 48.1m CAVITY<br>55.2 - 58.3m CAVITY | 1. Name of Bore<br>M <sup>c</sup> MINNS 4/83  | 2. Name of Property<br>KICOLPINYAH STN |
|   | 3. Owner of Property  | 4. Type of Lease<br>PASTORAL           |
|   | 5. Lease/Block No.  | 6. Bore or Well<br>BORE                |
|   | 7. Name of Contractor<br>WATER DIV.   | 8. Name of Driller<br>I. BROUGHTON     |
|   | 9. Depth Recorded<br>56m  | 10. Depth Drilled.<br>67.2m            |
|   | 11. Date Commenced<br>29-6-83   | 12. Date Completed.<br>1-7-83          |
|   | 13. Proposed use of Bore <input type="checkbox"/> Domestic<br><input type="checkbox"/> Pastoral <input type="checkbox"/> Stock Route <input type="checkbox"/> Irrigation<br><input type="checkbox"/> Town Supply <input type="checkbox"/> Observation <input type="checkbox"/> Investigation  |  |
|   | 14. Bore has been drilled by <input type="checkbox"/> Rotary<br><input type="checkbox"/> Cable Tool <input type="checkbox"/> Jetting <input type="checkbox"/> Other   |  |
|   | 15. Bore Drilled Using <input checked="" type="checkbox"/> Air <input type="checkbox"/> Mud<br><input checked="" type="checkbox"/> Foam <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Degradable Polymer<br>Size of drilling Bit... 9 1/2" from 0... to 41.1m...<br>... 7 3/8" from 41.4m to 41.7m...<br>... 5 1/2" from 41.7m to 67.2m |  |
|   | 16. Casing Installed <input type="checkbox"/> Steel <input type="checkbox"/> ABS <input checked="" type="checkbox"/> PVC<br><input type="checkbox"/> Fibreglass <input type="checkbox"/> Other.....<br>... 2" Dia from 0... to 56m...<br>..... Dia from ..... to .....<br>Threaded Welded   |  |
|   | 17. Screens <input checked="" type="checkbox"/> None installed<br><input type="checkbox"/> Stainless Steel <input type="checkbox"/> Bronze <input type="checkbox"/> PVC<br>Dia..... Slot Size..... From.... to.....<br>Dia..... Slot Size..... From.... to.....<br>Screens are Screwed connected by Pack  |  |
|   | 18. Perforation in casing <input type="checkbox"/> Percussion Slotted<br><input type="checkbox"/> Oxycut <input checked="" type="checkbox"/> Drilled Other.....<br>Slot/hole size... 1/4" From 50... to 56m...<br>Slot.hole size..... From..... to.....   |  |
|   | 19. Is any strata cemented off <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>If so, give depth .. 40m. to 41m....  |  |

|   |   |
|---|---|
| 21. Sample of strata and water have been <del>will be left at Darwin Katherine Alice Springs</del> Other..... | 18. Perforation in casing <input type="checkbox"/> Percussion Slotted<br><input type="checkbox"/> Oxycut <input checked="" type="checkbox"/> Drilled Other.....<br>Slot/hole size... 1/4" From 50... to 56m...<br>Slot.hole size..... From..... to..... |
| 22. WATER   | 19. Is any strata cemented off <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>If so, give depth .. 40m. to 41m....  |
| Struck at   | 22. WATER   |
| Standing Water Level  | 1st Supply  |
| Discharge   | 2nd Supply  |
| Duration of Test  | 3rd Supply  |
|   | 4th Supply  |
|   | 5th Supply  |
|   | Remarks   |
|   | 39-41.1m WATER COMING FROM HOST CIRCULATION AREA  |
|   | 13.5m   |
|   | 0-7.1m FORMATION SLUMPING - CASING NOT SEATED   |
|   | WHILE DRINKING  |



24. This bore has been constructed under by supervision and this report is true to the best of my knowledge.

Signature... *R. Satchell* .....Driller Date... *1-7-83* .....

PLEASE NOTE THE FOLLOWING:-

1. UNITS If possible please use metric units (metres, Millimetres, litres per second). Old units are acceptable (feet, inches, gallons per hour) but make sure you make it clear which you are using.
2. WATER SAMPLES A sample of not less than one litre of each water supply encountered during the drilling is required. Suitable plastic bottles can be obtained from the Water Resources Branch. Please rinse out all bottle properly before sampling. Completely fill the bottle leaving no entrapped air. Please label the bottle with the bore name and depth of supply.
3. STRATA SAMPLES A sample of not less than 0.2 kilograms of each 3m of stratum encountered during drilling is required. Please label all samples with the hole name and interval drilled. Plastic bags and tags can be obtained from Water Division.
4. LOCATION Please describe the location as accurately as possible giving distances from one or more features (such as other bores, dams, etc.) within a close distance. Preferably give a sketch of the area.

26. OFFICE USE ONLY: KOOPIINYAH SHEET S173 ED. 1 SERIES R621 1:100,000  
 Map No:..... Plotted on Map Date:..... *26/7/83* .....

AMG Co-ordinates: *290224* ..... Traced to Master Map Date:..... *26/7/83* .....

Datum (A.H.D.):..... Checked by:..... *[Signature]* ..... Date.....

Geological Basin:..... Signature (Bore Inspector) Date.....

WATER ANALYSIS

Department of Transport & Works  
Water Division, Darwin N.T.



|                             |            |
|-----------------------------|------------|
| Laboratory Register No.     | 83-84/0171 |
| Date received in Laboratory | 20/7/83    |
| Bottle No.                  | DJ37       |
| Time of sampling            | 0800       |
| Date of sampling            | 1/7/83     |

WR 4/1A

LOCATION AND DETAILS

KOOLPINYAH SHEET 5173 EDT1 McMINNS 4/83 RN22063 DEPTH 44m DISC .7LPS MAP

SERIES RG21 GRID 290224 WRD8876

BSP1010

LN 20/2214

Proposed water use:- Domestic, Stock, Irrigation, other (specify)

ANALYSIS - PHYSICAL

|   |     |  |       |
|---|-----|--|-------|
| <input type="checkbox"/> pH   | 7.3 | <input type="checkbox"/> Colour (Hazen units)    |       |
| <input type="checkbox"/> Specific conductance (microsiemens/cm at 25° C)          | 330 | <input type="checkbox"/> Turbidity (NTU's)       | > 100 |
| <input type="checkbox"/> Total dissolved solids (mg/l - by evaporation at 180° C) | 180 | <input type="checkbox"/> Suspended solids (mg/l) |       |

ANALYSIS - CHEMICAL (mg/l)

|   |                         |  |     |
|---|-------------------------|--|-----|
| <input type="checkbox"/> Sodium, Na                               | 2                       | <input type="checkbox"/> Chloride, Cl                    | 6   |
| <input type="checkbox"/> Potassium, K                             | < 1                     | <input type="checkbox"/> Sulphate, SO <sup>4</sup>       | 15  |
| <input type="checkbox"/> Calcium, Ca                              | 33                      | <input type="checkbox"/> Nitrate, NO <sup>3</sup>        | < 1 |
| <input type="checkbox"/> Magnesium, Mg                            | 21                      | <input type="checkbox"/> Bicarbonate, HCO <sup>3</sup>   | 189 |
| <input type="checkbox"/> Total Hardness (as CaCO <sup>3</sup> )   | 170                     | <input type="checkbox"/> Carbonate, CO <sup>3</sup>      |     |
| <input type="checkbox"/> Total Alkalinity (as CaCO <sup>3</sup> ) | 155                     | <input type="checkbox"/> Fluoride, F                     | 0.8 |
| <input type="checkbox"/> Iron, (total) Fe                         | UNSUITABLE FOR ANALYSIS | <input type="checkbox"/> Orthophosphate, PO <sup>4</sup> |     |
| <input type="checkbox"/> Silica, SiO <sup>2</sup>                 | 3                       | <input type="checkbox"/> NaCl (calc. from chloride)      | 8   |

ANALYSIS - ADDITIONAL (mg/l)

|  |                                   |                                      |
|--|-----------------------------------|--------------------------------------|
| <input type="checkbox"/> Copper, Cu    | <input type="checkbox"/> Lead, Pb | <input type="checkbox"/> Arsenic, As |
| <input type="checkbox"/> Manganese, Mn | <input type="checkbox"/> Zinc, Zn | <input type="checkbox"/> Cadmium, Cd |
| <input type="checkbox"/> $\mu$         | <input type="checkbox"/>          | <input type="checkbox"/>             |

The sample as analysed is considered suitable for:-

Drinking water —  Yes/No

Stock watering —  Yes/No

Irrigation —  Yes/No

Others (specify)  Yes/No



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Analysed By: G. JOHNSTON Date 5 / 9 / 83

Boxes marked thus  indicate levels considered undesirable for drinking water by the Northern Territory Department of Health.

# GEOPHYSICAL DOWN HOLE LOGGING

60.

|             |          |
|-------------|----------|
| OPERATOR    | ASM.     |
| DATE        | 12/10/83 |
| GAMMA RAY   | 40/2     |
| RESISTIVITY |          |
| S. P.       |          |
| CALIPER     |          |
| TEMP.       |          |
| GAMMA GAMMA |          |

80/2214  
RN22063.

WR 9/1

## DRILLERS LOG

DATE Wed 29-6-83BORE No. M<sup>c</sup>Minno 4/83

Supervisor: .....

Driller: I. Broughton

RN 22063

| Time | Depth | Metres drilled | Mins lapsed | Drillers remark, casing details                  | BIT DATA |        |      |             | STRING DATA |        |        | MUD DATA | WATER SAMPLES |     |          |
|------|-------|----------------|-------------|--|----------|--------|------|-------------|-------------|--------|--------|----------|---------------|-----|----------|
|      |       |                |             |  | No.      | Size   | Type | Worn cond'n | Item        | O.D.   | Length |          | Prog. tally   | No. | Depth    |
| 0830 |       |                |             | Service rig                                      |          | 9 1/2" | Drag |             | Bit         | 9 1/2" | 0.95   | 0.95     |               |     |          |
| 0800 |       |                |             | Commence drilling                                |          |        |      |             | D.P.        | 4 1/2" | 6.10   | 7.05     |               |     |          |
| 0810 | 5.9   | 5.9            | 10          | 0.1 Topsoil, Red, white & yellow clay & laterite |          |        |      |             |             |        |        |          |               |     |          |
| 0824 |       |                |             | Add D.C. & cont                                  |          |        |      |             | D.C.        | 5 1/2" | 5.90   | 12.95    |               |     |          |
| 0837 | 11.8  | 5.9            | 13          | White, red & yellow clay                         |          |        |      |             |             |        |        |          |               |     |          |
| 0841 |       |                |             | Add D.C. & cont                                  |          |        |      |             | D.C.        | 5 1/2" | 6.20   | 19.15    |               |     |          |
| 0853 | 14    |                |             | Change to mud                                    |          |        |      |             |             |        |        |          | 1/2 Biogel    |     |          |
| 0905 |       |                |             | Continue   |          |        |      |             |             |        |        |          |               |     |          |
| 0926 | 16.0  | 6.2            | 33          | White, red & yellow clay & laterite              |          |        |      |             |             |        |        |          |               |     |          |
| 0928 |       |                |             | Add rod & cont                                   |          |        |      |             | D.P.        | 4 1/2" | 6.10   | 25.25    |               |     |          |
| 0958 | 24.1  | 6.1            | 30          | As above   |          |        |      |             |             |        |        |          |               |     |          |
| 1000 |       |                |             | Add rod & cont.                                  |          |        |      |             | D.P.        | 4 1/2" | 6.10   | 31.35    |               |     |          |
| 1028 | 30.2  | 6.1            | 28          | Red, white & yellow clay                         |          |        |      |             |             |        |        |          |               |     |          |
| 1031 |       |                |             | Add rod & cont.                                  |          |        |      |             | D.P.        | 4 1/2" | 6.10   | 37.45    |               |     |          |
| 1046 | 36.3  | 6.1            | 15          | Red, white & yellow clay & quartz                |          |        |      |             |             |        |        |          |               |     |          |
|      |       |                |             | Mix more mud                                     |          |        |      |             |             |        |        |          |               |     |          |
| 1119 |       |                |             | Add rod & cont                                   |          |        |      |             | D.P.        | 4 1/2" | 6.10   | 43.55    |               |     | 1 Biogel |
| 1130 | 41.1  | 4.8            | 11          | Quartz sand & white clay - lost core at 39m      |          |        |      |             |             |        |        |          |               |     |          |
| 1135 |       |                |             | Trip out   |          |        |      |             |             |        |        |          |               |     |          |
| 1200 |       |                |             | Change to R.R.                                   |          | 7 3/8" | R.R. |             | Bit         | 7 3/8" | 0.50   | 13.10    |               |     |          |
| 1210 |       |                |             | Trip in  |          |        |      |             |             |        |        |          |               |     |          |
| 1237 |       |                |             | On bottom - no circulation                       |          |        |      |             |             |        |        |          |               |     |          |
| 1256 | 41.7  | 0.6            | 19          | No circulation                                   |          |        |      |             |             |        |        |          |               |     |          |
| 1257 |       |                |             | Trip out & prepare to run 6" steel casing        |          |        |      |             |             |        |        |          |               |     |          |

WR 9/1

# DRILLERS LOG

DATE Wed 29-6-83

BORE No. M<sup>c</sup> Minno 4/83

Supervisor: .....

RN 22063

Driller: I. Broughton

| Time | Depth | Metres drilled | Mins lapsed | Drillers remark, casing details  | BIT DATA |        |        |             | STRING DATA |       |        | MUD DATA | WATER SAMPLES |     |
|------|-------|----------------|-------------|--|----------|--------|--------|-------------|-------------|-------|--------|----------|---------------|-----|
|      |       |                |             |  | No.      | Size   | Type   | Worn cond'n | Item        | O.D.  | Length |          | Prog. tally   | No. |
| 1315 | 41.7  |                |             | Run casing   |          |        |        |             |             |       |        |          |               |     |
|      |       |                | 1           | 6.43 m   |          |        |        |             |             |       |        |          |               |     |
|      |       |                | 2           | 6.16 m   |          |        |        |             |             |       |        |          |               |     |
|      |       |                | 3           | 6.35 m   |          |        |        |             |             |       |        |          |               |     |
|      |       |                | 4           | 6.34 m   |          |        |        |             |             |       |        |          |               |     |
|      |       |                | 5           | 6.35 m   |          |        |        |             |             |       |        |          |               |     |
|      |       |                | 6           | 6.16 m   |          |        |        |             |             |       |        |          |               |     |
|      |       |                | 7           | 6.35 m   |          |        |        |             |             |       |        |          |               |     |
|      |       |                |             | 44.14 m - cut casing   |          |        |        |             |             |       |        |          |               |     |
| 1455 |       |                |             | Trip in with 43-15   |          | 5 1/2" | Button | Bit         | 5 1/2"      | 1.26  | 1.20   |          |               |     |
| 1527 |       |                |             | Commence hammering   |          |        |        | 70.P.       | 4 1/2"      | 42.70 | 43.90  |          |               |     |
| 1535 | 42.8  | 1.1            | 8           | Quartz & dolomite  |          |        |        |             |             |       |        |          |               |     |
| 1538 |       |                |             | Add rod & cont   |          |        |        | D.P.        | 4 1/2"      | 6.16  | 50.00  |          |               |     |
| 1600 | 44.8  |                |             | Blowing up outside of casing<br>Fractured 42.9 - 43.6 m<br>43.8 - 44.3 m |          |        |        |             |             |       |        |          |               |     |
|      |       |                |             | Clear out drain - Full of sandy clay                                     |          |        |        |             |             |       |        |          |               |     |
|      |       |                |             | Bogged water truck   |          |        |        |             |             |       |        |          |               |     |
| 1640 |       |                |             | Clean up & knock off   |          |        |        |             |             |       |        |          |               |     |

WR 9/1

# DRILLERS LOG

DATE Thurs 30-6-53

BORE No. M<sup>c</sup> Minns 4/83

Supervisor: .....

Driller: I. Broughton

RN 22063

| Time | Depth | Metres drilled | Mins lapsed | Drillers remark, casing details   | BIT DATA |        |        |             | STRING DATA |       |        | MUD DATA | WATER SAMPLES |     |
|------|-------|----------------|-------------|---|----------|--------|--------|-------------|-------------|-------|--------|----------|---------------|-----|
|      |       |                |             |   | No.      | Size   | Type   | Worn cond'n | Item        | O.D.  | Length |          | Prog. tally   | No. |
| 0730 | 44.8  |                |             | Service rig   |          | 5 1/2" | Button | Bit         | 5 1/2"      | 1.20  | 1.20   |          |               |     |
| 0800 |       |                |             | Clean out hole  |          |        |        | 7 D.P.      | 4 1/2"      | 42.70 | 43.90  |          |               |     |
| 0807 |       |                |             | Add rod & cont  |          |        |        | D.P.        | 4 1/2"      | 6.16  | 50.00  |          |               |     |
| 0843 | 48.9  | 4.1            | 36          | Dolomite - cavity 47.6 - 48.1m  |          |        |        |             |             |       |        |          |               |     |
| 0847 |       |                |             | Add rod & cont  |          |        |        | D.P.        | 4 1/2"      | 6.10  | 56.10  |          |               |     |
| 1007 | 55.0  | 6.1            | 80          | Dolomite - sand, clay & water washing up  |          |        |        |             |             |       |        |          |               |     |
| 1013 |       |                |             | Add rod & cont  |          |        |        | D.P.        | 4 1/2"      | 6.10  | 62.20  |          |               |     |
| 1128 | 61.1  | 6.1            | 75          | Dolomite - cavity 55.2 - 58.3m  |          |        |        |             |             |       |        |          |               |     |
| 1133 |       |                |             | Add rod & cont  |          |        |        | D.P.        | 4 1/2"      | 6.10  | 68.30  |          |               |     |
| 1402 | 67.2  | 6.1            | 149         | Dolomite - sand & clay washing up   |          |        |        |             |             |       |        |          |               |     |
| 1403 |       |                |             | Trip out & pull down 43-45 - clean & oil it   |          |        |        |             |             |       |        |          |               |     |
| 1520 |       |                |             | Glue 2" P.V.C. together   |          |        |        |             |             |       |        |          |               |     |
| 1530 |       |                |             | Run 2" P.V.C. to 56m  |          |        |        |             |             |       |        |          |               |     |
|      |       |                |             | Perforated 50-56m   |          |        |        |             |             |       |        |          |               |     |
|      |       |                |             | Flow varied from 0 - 7 l/sec  |          |        |        |             |             |       |        |          |               |     |
|      |       |                |             | Water coming from above dolomite in lost circulation zone                               |          |        |        |             |             |       |        |          |               |     |
|      |       |                |             | Cavities appeared to be dry but with water washing up outside casing it is hard to tell |          |        |        |             |             |       |        |          |               |     |
| 1630 |       |                |             | Clean up & knock off  |          |        |        |             |             |       |        |          |               |     |

WR 9/1

# DRILLERS LOG

DATE *Fri 1-7-83*

BORE No. *M. Minno 4/83*

Supervisor: .....

Driller: *J. Broughton*

| Time | Depth | Metres drilled | Mins lapsed | Drillers remark, casing details   | BIT DATA |      |      |             | STRING DATA |      |        | MUD DATA | WATER SAMPLES |     |       |
|------|-------|----------------|-------------|---|----------|------|------|-------------|-------------|------|--------|----------|---------------|-----|-------|
|      |       |                |             |   | No.      | Size | Type | Worn cond'n | Item        | O.D. | Length |          | Prog. tally   | No. | Depth |
| 0730 |       |                |             | Service rig & shovel mud away from rig<br>Depth of hole = 4m<br>S.W.L = 13.5m         |          |      |      |             |             |      |        |          |               |     |       |
| 0835 |       |                |             | Run 1" galv. pipe<br>Mix 2 bags of cement   |          |      |      |             |             |      |        |          |               |     |       |
| 0926 |       |                |             | Pour cement down pipe & displace cement with water                                    |          |      |      |             |             |      |        |          |               |     |       |
| 0943 |       |                |             | Pull out 1" pipe  |          |      |      |             |             |      |        |          |               |     |       |
| 0956 |       |                |             | Start to pull 6" casing   |          |      |      |             |             |      |        |          |               |     |       |
| 1047 |       |                |             | 6" casing out   |          |      |      |             |             |      |        |          |               |     |       |
| 1053 |       |                |             | Run 3m of 8 1/8" surface casing<br>Cement casing                                      |          |      |      |             |             |      |        |          |               |     |       |
|      |       |                |             | Clean up site - bogged backhoe  |          |      |      |             |             |      |        |          |               |     |       |
| 1400 |       |                |             | Move off<br>Cut access to S/83 & set up rig<br>Dig mud pit & drains; make fire breaks |          |      |      |             |             |      |        |          |               |     |       |
| 1645 |       |                |             | Knock off   |          |      |      |             |             |      |        |          |               |     |       |
|      |       |                |             |   |          |      |      |             |             |      |        |          |               |     |       |
|      |       |                |             |   |          |      |      |             |             |      |        |          |               |     |       |
|      |       |                |             |   |          |      |      |             |             |      |        |          |               |     |       |
|      |       |                |             |   |          |      |      |             |             |      |        |          |               |     |       |
|      |       |                |             |   |          |      |      |             |             |      |        |          |               |     |       |
|      |       |                |             |   |          |      |      |             |             |      |        |          |               |     |       |