THE NORTHERN TERRITORY OF AUSTRALIA

*Control of Waters Act*

# FINAL STATEMENT OF BORE

RECEIVED
16 JUN 1999
GROUNDWATER DA

NAME OF OWNER : N.T.G

NAME OF BORE :

INTENDED USE : OBSERVATION

LOCATION : ROCKY HILL HORSEPADDOCK

REGISTRATION No : 17393

INDEX/MAP No : 16/2562

ADVICE No :

PERMIT No :

| From | To | Particulars of strata |
|---|---|---|
| 0M | 0.40M | RED/BROWN SANDY CLAY |
| 0.40M | 8.00M | BROWN CLAY WITH LIMESTONE, SANDY CLAY, CONGLOMERATE. |
| 8.00M | 54.27M | SOFT WHITE S/STONE. |
| 54.27M | 54.80M | WHITE CLAY. |
| 54.80M | 173.64M | SOFT WHITE/GREY S/STONE. |

Name of Contractor : L.P.R. NATURAL RESOURCES

Name of Driller : MASTERS/RAMSAY

Date Commenced : 19/5/99

Date Completed : 24/5/99

Depth Drilled : 173.64 (m)

Completion Depth : 66.77M (

METHOD OF DRILLING

☑ Rot. ☐ Rev. Circ. ☐ Cable ☐ Others

| HOLE DIAMETER | | | DRILLING FLUID |
|---|---|---|---|
| From | To | Diameter | Type |
| 0M | 5.84M | 254MM | AIR-MIST |
| 5.84M | 173.64M | 200 MM | AIR-FOAM-QUIK MUD |

PARTICULARS OF CASING

| From | To | Diam (ID) | Type |
|---|---|---|---|
| 0M | 5.84M | 203.2MM | STEEL |
| 0M | 0.24M | 50MM | G.W.P |
| 0.24M | 58.77M | 50MM | CLASS 12 P.V.C |

PARTICULARS OF PERFORATIONS OR SCREEN STRINGS

| From | To | Diam (ID) | Aperture | Type |
|---|---|---|---|---|
| 58.77M | 66.77M | 50MM | 2.0 MM SLOTS | CLASS 12 P.V.C |

Casing Suspended ☐ Yes ☑ No

Method : 0.76M x 50MM G.W.P 0.20M x 219MM STEEL

Height of Casing above G.L : (m)

TOP OF PACKER SET AT : (m)

LENGTH OF PACKER : (m)

METHOD OF PACKER CONNECTION :

CEMENTING/GRAVEL PACKING

| From | To | Type |
|---|---|---|
| 0M | 5.84M | CEMENT |

SHEET (1)

WATER BEARING BEDS

| Depth (m) From | Depth (m) To | Yield (L/s) | SWL (m) | Duration (hr) | Quality | EC | pH | Bottle No. |
|---|---|---|---|---|---|---|---|---|
| | 45.60M | SLIGHT SEEPAGE | | | | | | |
| | 48.60M | 0.5 | | | | 896 | 8.15 | |
| | 54.20M | 1.5 | | | | 929 | 8.43 | QP09 |
| | 72.60M | 2.0 | | | | 636 | 8.42 | RB07 |
| | 78.60M | RST 4.0 TO 5.0 | | | | 918 | 8.49 | RD72 |

STRATA AND WATER SAMPLES

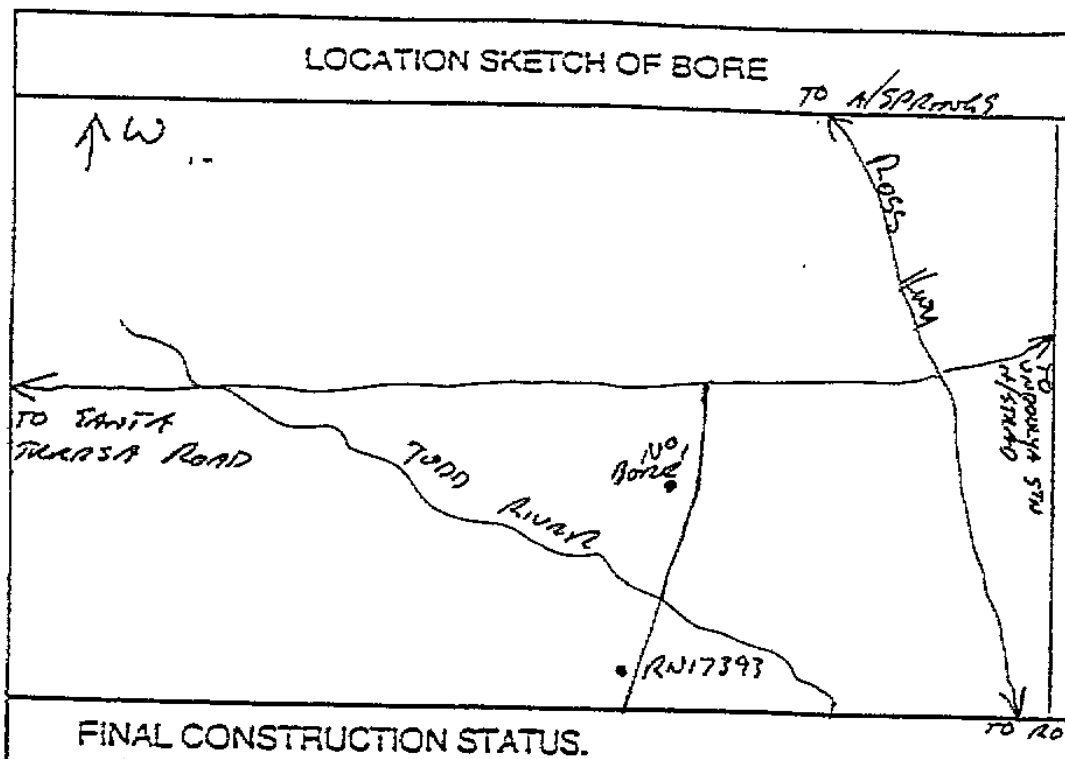
☑ Have been ☐ Will be

Left at : NATURAL RESOURCES ALICE SPRINGS

Completion Yield : RST 30.00 (L/s) Method : AIR Duration : 15 MINS (hr)

Completion SWL (G.L) : 36.69M Depth of Lift : 173.00 (m)

LOCATION SKETCH OF BORE




LOCATION DESCRIPTION OF BORE

2.4 km

☐ E ☐ S ☐ SE ☐ NE

☑ W ☐ N ☐ SW ☐ NW

OF :

No1 BORE.

FINAL CONSTRUCTION STATUS.

☑ Capped ☐ Casing pulled ☑ Left for Observation ☐ Abandoned

☐ Equipped ☐ Backfilled ☐ Others ( )

ADDITIONAL INFORMATION OF INTEREST ABOUT BORE

Signature of Licenced Driller [signature] Date 4/6/99

FOR OFFICIAL USE ONLY

HOW LOCATED : ☐ GPS ☐ TST ☑ SURVEY ☐ HAND PLOTTED ☐ OTHER ( )

ELEVATION OF BORE AHD : (m) From ☐ G.L ☐ TOC

DESCRIPTION OF PROPERTY

☐ Rural ☐ VCL ☐ Min ☐ Pastoral
☐ Reserve ☐ SPL ☐ E.L ☐ Other

Lease No : Lot No : Hundred of :
Portion No : Sect. No : Town of :

CLASS OF BORE ☐ TOWN ☐ DOM ☐ INV. ☐ AGR. ☐ MIN. ☐ PAS. ☐ OTHER

USE OF BORE ☐ PROD. ☐ INV. ☐ IRR. ☐ OBS. ☐ MON. ☐ ROAD

GRID REFERENCE ☑ AMG ☐ CLARKE Zone : 53 Scale : 100K

EASTING 412653·61 LATITUDE : 53K0412599 MAP NAME : Ondoolya

NORTHING : 7363713·33 LONGITUDE : 7363720 MAP NUMBER : 5750

AWRC STREAM BASIN No : Major Geological Units ( Name ) :

GEOPHYSICAL LOG RUN YES / NO Date : / / Depth : ( m )

☐ Gamma ☐ SP ☐ Camera ☐ Density

☐ Point Res. ☐ Caliper ☐ Other ( ) TEST PUMP : YES / NO

Date Registered : 16/6/99 Plotted on the map : (YES) / NO

Officer : P. Turner Signature :

Remarks : T393

THE NORTHERN TERRITORY OF AUSTRALIA

*Control of Waters Act*

# FINAL STATEMENT OF BORE

NAME OF OWNER : N.T.G

NAME OF BORE :

INTENDED USE : OBSERVATION

LOCATION : ROCKY HILL BOREFIELD

REGISTRATION No : 17893

INDEX/MAP No :

ADVICE No :

PERMIT No :

| From | To | Particulars of strata |
|---|---|---|
| | | FOR WATER SAMPLES ONLY |

Name of Contractor :

Name of Driller :

Date Commenced :

Date Completed :

Depth Drilled : (m)

Completion Depth : (m)

METHOD OF DRILLING

☐ Rot. ☐ Rev. Circ. ☐ Cable ☐ Others

| HOLE DIAMETER | | | DRILLING FLUID |
|---|---|---|---|
| From | To | Diameter | Type |
| | | | |
| | | | |
| | | | |
| | | | |

PARTICULARS OF CASING

| From | To | Diam (ID) | Type |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

PARTICULARS OF PERFORATIONS OR SCREEN STRINGS

| From | To | Diam (ID) | Aperture | Type |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Casing Suspended ☐ Yes ☐ No

Method :

Height of Casing above G.L : (m)

TOP OF PACKER SET AT : (m)

LENGTH OF PACKER : (m)

METHOD OF PACKER CONNECTION :

CEMENTING/GRAVEL PACKING

| From | To | Type |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

STRATA AND WATER SAMPLES

☐ Have been ☐ Will be

Left at :

SHEET (2)

WATER BEARING BEDS

| Depth (m) From | Depth (m) To | Yield (L/s) | SWL (m) | Duration (hr) | Quality | EC | pH | Bottle No. |
|---|---|---|---|---|---|---|---|---|
| | 90.60 | RST 4.0 TO 6.0 | | | | 923 | 8.29 | QT44 |
| | 95.60 | 45 4HOUR | | | | 950 | 8.45 | QL47 |
| | 113.60 | RST 3.0 | | | | 960 | 8.36 | |
| | 161.60 | RST 7.0 TO 10.0 | | | | 949 | 8.24 | RC07 |
| | 173.60 | 45 4HOUR | | | | 952 | 8.23 | RB91 |

Completion Yield : (L/s) Method : Duration : (hr)

Completion SWL (G.L) : Depth of Lift : (m)

# ROCKY HILL INVESTIGATION

**Porosity / Permeability samples**

| RN (Registration Number) | Sample No. | From | To | Plug Depth | Porosity (%) | Permeability (mD) |
|---|---|---|---|---|---|---|
| RN 17392 | 2 | 214.87 | 215 | 214.92 | 22.47 | 277.45 |
| RN 17338 | 3 | 51.45 | 51.56 | 51.51 | 23.67 | 281.35 |
| RN 17337 | 4 | 50.50 | 50.61 | 50.54 | 24.75 | 723.27 |
| RN 17337 | 5 | 52.85 | 52.95 | 52.89 | 25.37 | 715.84 |
| RN 17336 | 6 | 51.30 | 51.42 | 51.37 | 26.19 | 1001.67 |
| RN 17336 | 7 | 51.42 | 51.58 | 51.46 | 25.64 | 508.76 |
| RN 17335 | 8 | 70.00 | 70.15 | 70.07 | 25.37 | 17.16 |
| RN 17335 | 9 | 71.83 | 71.99 | 71.86 | 26.35 | >3500* |
| RN 17334 | 10 | 70.90 | 71.07 | 70.93 | 28.53 | 175.69 |
| RN 17393 | 11 | 90.85 | 90.98 | 90.91 | 25.46 | 132.85 |

* Accuracy limited by high permeability of this sample

LANDS | PLANNING
ENVIRONMENT

# NATURAL RESOURCES
## COMPOSITE LOG OF BORE

| DEPTH (m) | BORE CONSTRUCTION | GRAPHIC LOG | STRATA DESCRIPTION | GAMMA LOG | GROUNDWATER INFLOWS | DEPTH (m) |
|---|---|---|---|---|---|---|
| 0 | 254 mm dia. hole. 203 mm ID steel casing, cemented. 200 mm dia. hole. | | SANDSTONE, fine to very fine, calcrete cemented, stained yellow and red brown. | 0 50 | | 0 |
| 10 | | | SANDSTONE, similar to above, medium to very fine grained. | | | 10 |
| 20 | | | SANDSTONE, very pale brown, fine to very fine grained sandstone, some calcrete. | | | 20 |
| 30 | | | SANDSTONE, white, well sorted, medium to fine grained, mostly rounded to well-rounded, trace of chlorite. | | ▼ SWL 36.69m 24/05/1999 | 30 |
| 40 | | | SANDSTONE, white, silty, moderately sorted, fine grained, mostly rounded to well-rounded, trace of chlorite. | | seepage | 40 |
| 50 | 50 mm Class 12 PVC casing. | | SANDSTONE, white, well sorted, medium to fine grained, mostly rounded to well-rounded, trace of chlorite. | | 2 L/s EC = 932 µS/cm | 50 |
| 60 | Slotted 50 mm Class 12 PVC casing. | | SANDSTONE, white, well indurated, well sorted, fine to very fine grained,s mostly rounded to well-rounded, trace of chlorite. | | | 60 |
| 70 | | | SANDSTONE, white, well sorted, medium grained, mostly rounded to well-rounded, trace of chlorite. | | | 70 |
| 80 | | | SANDSTONE, white, silty, well sorted, fine grained, mostly rounded to well-rounded, trace of chlorite. | | 7 L/s EC = 920 µS/cm | 80 |
| 90 | | | SANDSTONE, white, well sorted, medium to fine grained, mostly rounded to well-rounded, trace of chlorite. | | | 90 |
| 100 | | | SANDSTONE, white, well sorted, fine to very fine grained, mostly rounded to well-rounded, trace of chlorite. | | 15 L/s EC = 945 µS/cm | 100 |
| 110 | | | SANDSTONE, white, well sorted, medium to fine grained, mostly rounded to well-rounded, trace of chlorite. | | | 110 |
| 120 | Fallback. | | SANDSTONE, white, well sorted, fine to very fine grained, mostly rounded to well-rounded, trace of chlorite. | | 19 L/s EC = 960 µS/cm | 120 |
| 130 | | | SANDSTONE, white, well sorted, medium to fine grained, mostly rounded to well-rounded, trace of chlorite. | | | 130 |
| 140 | | | SANDSTONE, white, silty, moderately sorted, fine to very fine grained, mostly rounded to well-rounded, trace of chlorite. | | | 140 |
| 150 | | | SANDSTONE, white, well sorted,medium to fine grained, mostly rounded to well-rounded, trace of chlorite. | | | 150 |
| 160 | | | SANDSTONE, white, well sorted, fine to very fine grained, mostly rounded to well-rounded, trace of chlorite. | | 30 L/s EC = 950 µS/cm | 160 |
| 170 | | | | | 30 L/s EC = 960 µS/cm | 170 |
| 180 | TD 173.64m | | | | | 180 |
| 190 | | | | | | 190 |
| 200 | | | | | | 200 |
| 210 | | | | | | 210 |
| 220 | | | | | | 220 |
| 230 | | | | | | 230 |
| 240 | | | | | | 240 |
| 250 | | | | | | 250 |
| 260 | | | | | | 260 |
| 270 | | | | | | 270 |
| 280 | | | | | | 280 |
| 290 | | | | | | 290 |
| 300 | | | | | | 300 |
| 310 | | | | | | 310 |
| 320 | | | | | | 320 |
| 330 | | | | | | 330 |
| 340 | | | | | | 340 |

DATE DRILLED 19 - 24/05/1999

COMP_LOG_GAMMA_ROCKY99A.GPJ NTWTRES.GDT 06/05/00

**Rocky Hill 1999 Investigation Drilling** **RN17393**

## GEOLOGICAL LOG
## RN 17393

| Depth | | Description |
|---|---|---|
| 0 | 3 | SANDSTONE. Fine to very fine,calcrete cemented stained yellow and red brown. |
| 3 | 6 | SANDSTONE. Similar to above, medium to very fine. |
| 6 | 12 | SANDSTONE. Very pale brown (10YR8/2) fine to very fine sandstone, some calcrete |
| 12 | 174 | SANDSTONE. White, mostly disaggregated quartz sandstone, mostly well-sorted, ranging from medium to very fine grained, with some silty layers. Grains mostly rounded to well-rounded, trace of chlorite. |
| 12 | 36 | Medium to fine grained. |
| 36 | 42 | Fine and silty. |
| 42 | 69 | Medium to fine grained |
| 69 | 72 | Well indurated fine to very fine sandstone. |
| 78 | 90 | Medium grained |
| 90 | 102 | Fine and silty |
| 102 | 111 | Medium to fine grained |
| 111 | 114 | Fine to very fine |
| 114 | 117 | Medium to fine grained |
| 117 | 120 | Fine to very fine and silty |
| 120 | 132 | Medium to fine grained |
| 132 | 174 | Fine to very fine |

.

SUMMARY

0-0.4 Quaternary*
0.4-6 Weathered Mereenie Sandstone
6-174 Mereenie Sandstone

* From driller's log

Robert Read
23 August, 1999

Colours refer to the Munsell Chart
Grain sizes according to the Wentworth Scale

## GEOLOGICAL LOG
## RN 17393

| Depth (m) | | Description |
|---|---|---|
| 0 | 3 | SANDSTONE. Fine to very fine grained, calcrete cemented, stained yellow and red brown. |
| 3 | 6 | SANDSTONE. Similar to above, medium to very fine grained. |
| 6 | 12 | SANDSTONE. Very pale brown (10YR8/2), fine to very fine grained, some calcrete. |
| 12 | 36 | SANDSTONE. White, medium to fine grained, well sorted, rounded to well-rounded, trace of chlorite. |
| 36 | 42 | SANDSTONE. White, silty, fine grained, moderately sorted, rounded to well-rounded, trace of chlorite. |
| 42 | 69 | SANDSTONE. White, medium to fine grained, moderately sorted, rounded to well-rounded, trace of chlorite. |
| 69 | 78 | SANDSTONE. White, well indurated, fine to very fine grained, well sorted, trace of chlorite. |
| 78 | 90 | SANDSTONE. White, medium grained, well sorted, trace of chlorite. |
| 90 | 102 | SANDSTONE. White, silty, fine grained, moderately sorted, trace of chlorite. |
| 102 | 111 | SANDSTONE. White, medium to fine grained, moderately sorted, trace of chlorite. |
| 111 | 114 | SANDSTONE. White, fine to very fine grained, well sorted, trace of chlorite. |
| 114 | 117 | SANDSTONE. White, medium to fine grained, moderately sorted, trace of chlorite. |
| 117 | 120 | SANDSTONE. White, silty, fine to very fine grained, moderately sorted, trace of chlorite. |
| 120 | 132 | SANDSTONE. White, medium to fine grained, moderately sorted, trace of chlorite. |
| 132 | 173.6 | SANDSTONE. White, fine to very fine grained, well sorted, rounded to well-rounded, trace of chlorite. |

Colours refer to the Munsell Chart.

SUMMARY

| | |
|---|---|
| 0 – 0.4 metres | Quaternary* |
| 0.4 – 100 metres | Ooraminna Sandstone |
| 100 – 173.6 metres | Mereenie Sandstone |

* From driller's log

Robert Read
23 August, 1999

Colours refer to the Munsell Chart
Grain sizes according to the Wentworth Scale

| RN | Cored Depth (m) | Interval (m) | Recovery (m) | % Recovered |
|---|---|---|---|---|
| RN17393 | 90.67 - 93.67 | 3.0 | 2.40 | 80.0% |
| RN17393 | 173.46 - 174.33 | 0.87 | 0.87 | 100.0% |

| Depth (m) | | Description |
|---|---|---|
| 90.67 | 92.67 | SANDSTONE: kaolinitic, light grey (N7.5), fine grained, sub-rounded to rounded, well sorted quartz with minor (~ 1%) accessory minerals. Rare iron stained quartz. Bedding at 15 - 20°. Porosity 2 - 5 %. |
| 92.67 | 93.07 | SANDSTONE: slightly kaolinitic, light grey (N7.5), fine grained, sub-rounded to rounded, well sorted quartz with minor (~ 2%) accessory minerals. Bedding at 15°. Porosity 10 - 15%. Secondary porosity formation also. |

| Depth (m) | | Description |
|---|---|---|
| 173.46 | 174.33 | SANDSTONE: kaolinitic, light grey (N7.5), fine grained with occasional medium sized grains, sub-rounded to rounded, well sorted quartz with minor (~ 1%) accessory minerals. Bedding indistinct. Porosity ~ 0 - 5%. Core returns are very broken with ~ 5 cm of hard core and then 5 cm of broken core and sand. At bottom of core there is a 5 cm diameter quartzite pebble which is possibly part of the conglomerate between the Mereenie Sandstone and the Pacoota Sandstone. |

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survey99

RN17393

| Coordinates are in AGD84. | | | | |
|---|---|---|---|---|
| Heights are in AHD. | | | | |
| Unit: m | | | | |
| Coordinate type: Grid | | | | |
| Reference ellipsoid: Australian National | | | | |
| Projection set: zone53 | | | | |
| | | | | |
| Station, | Easting | Northing | Height to MP | NS |
| | | | | |
| BM301 | 398554.28 | 7357539.64 | 512.67 | BM |
| NTLST531 | 404389.40 | 7349391.76 | 529.14 | BM |
| RN10324 | 406708.14 | 7362938.83 | 498.53 | MP is NS |
| RN10325 | 406117.13 | 7363574.87 | 500.39 | 500.31(Picket) |
| RN10669 | 406750.83 | 7362851.12 | 498.61 | 498.21 |
| RN11462 | 398948.61 | 7356931.03 | 511.75 | 511.09 |
| RN17235 | 408651.92 | 7359940.20 | 508.33 | 507.73 |
| RN17244 | 402571.86 | 7352828.86 | 505.02 | 504.44 |
| RN17245 | 402543.61 | 7352869.87 | 505.22 | 504.23 |
| RN17246 | 404436.00 | 7349741.47 | 524.2 | 524.05 |
| RN17333 | 397961.61 | 7358743.23 | 515.09 | 514.49 |
| RN17334 | 398028.74 | 7358586.85 | 515.55 | 514.98 |
| RN17335 | 398390.76 | 7357889.31 | 513.15 | 512.95 |
| RN17336 | 406931.09 | 7362375.87 | 498.64 | 498.19 |
| RN17337 | 406930.85 | 7362265.95 | 499.59 | 499.07 |
| RN17338 | 407026.72 | 7361509.80 | 502.28 | 501.93 |
| RN17339 | 403028.57 | 7363032.36 | 505.82 | 505.28 |
| RN17391 | 405484.93 | 7356570.18 | 503.92 | 503.04 |
| RN17392 | 402842.98 | 7356476.39 | 505.54 | 504.89 |
| RN17393 | 412653.61 | 7363713.33 | 489.65 | 488.82 |
| RN17394 | 429075.91 | 7365789.79 | 459.39 | 458.44 |
| RN17436 | 408696.30 | 7361610.14 | 509.86 | 509.29 |
| RN17437 | 410191.47 | 7358656.85 | 518.52 | 517.96 |
| RN17438 | 406913.55 | 7362404.65 | 498.08 | 497.83 |
| RN3410 | 410876.90 | 7365277.90 | 491.25 | 491.15 |
| RN5652 | 429911.92 | 7367126.37 | 453.81 | 453.35 |
| RN6989 | 406760.18 | 7362641.56 | 498.59 | MP is NS |
| | | | | |
| RN10324 No casing | | | | |
| RN10669 MP height taken to steel plate. | | | | |
| RN17334 MP height taken to base of cap. | | | | |
| RN17336 Steel casing 0.137 below MP. | | | | |
| RN17337 Steel casing 0.164 below MP. | | | | |
| RN3410 Coordinates are offset 1.0 metres west. | | | | |

RESOURCE PROTECTION DIVISION
WATER CHEMISTRY LABORATORY

G.P.O BOX 990 DARWIN N.T. 0801
HUDSON FYSH AVENUE DARWIN NT 0820
Telephone: (08) 8924 6413
Fax: (08) 8924 6410

| | | | | |
|---|---|---|---|---|
| Bottle No.: RB 91 | Lab Register No.: 494 | | | |
| Date Received in Lab: 1/6/99 | Time Sampled: 1445 | Date Sampled: 21/5/99 | | |
| R/N No.: 17393 | Depth (m): 173.64 | Q: EST 30 | Map: | Sampler: McMASTERS |
| G.S. No.: | G.H. (m): | Q: | G.R.: | |
| Location: UNDOOLYA ROCKY HILL PROJECT | | Field Temp °C: 27.5 | Field pH: 8.23 | Field Cond µScm⁻¹: 952 |
| | | RSP: | Project No.: RSA 1006 | |

## ANALYSIS - PHYSICAL

| | | | | | |
|---|---|---|---|---|---|
| ☐ pH | [4500-H⁺B] | 7.9 | ☐ Colour (Hazen units) | [2120B] | |
| ☐ Electrical conductivity (microsiemens/cm at 25°C) | [2510B] | 960 | ☐ Turbidity (NTU's) | [2130B] | |
| ☐ Total dissolved solids (mg L⁻¹ - dried at 180° C) | [2540C] | 559 | ☐ Suspended solids (mg L⁻¹) | [2540D] | |

## ANALYSIS - CHEMICAL (mg L⁻¹)

| | | | | | |
|---|---|---|---|---|---|
| ☐ Sodium, Na | [3111B] | 90 | ☐ Chloride, Cl | [4500-Cl⁻ B] | 87 |
| ☐ Potassium, K | [3111B] | 6 | ☐ Sulphate, $SO_4$ | [G] | 130 |
| ☐ Calcium, Ca | [3111D] | 65 | ☐ Nitrate, $NO_3$ | [4500-$NO_3^-$ B] | 9 |
| ☐ Magnesium, Mg | [3111B] | 31 | ☐ Bicarbonate, $HCO_3$ | [2320B] | 326 |
| ☐ Iron, (total) Fe | [3111B] | 0.3 | ☐ Carbonate, $CO_3$ | [2320B] | 0 |
| ☐ Total Hardness (as $CaCO_3$) Calculation | [2340B] | 290 | ☐ Hydroxide, OH | [2320B] | 0 |
| ☐ Total Hardness (as $CaCO_3$) Titration | [2340C] | | ☐ Fluoride, F | [4500-F⁻ C] | 0.4 |
| ☐ Total Alkalinity (as $CaCO_3$) | [2320B] | 267 | ☐ NaCl (calc. from chloride) | | 143 |
| ☐ Silica, $SiO_2$ | [4500-Si D] | 18 | ☐ Dissolved Oxygen | [4500-O-C] | |

## ANALYSIS - ADDITIONAL (mg L⁻¹)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ☐ Copper, Cu | [3111B] | | ☐ Manganese, Mn | [3111B] | | ☐ Zinc, Zn | [3111B] | |
| ☐ | | | ☐ | | | ☐ | | |

✣ U/S DENOTES UNSUITABLE FOR ANALYSIS

✣ I/S DENOTES INSUFFICIENT SAMPLE

✣ F DENOTES FILTRATE ANALYSIS

✣ T DENOTES TOTAL ANALYSIS

C1 49328 990601j # 17

This report relates specifically to the "sample tested as received".

The test methods used (denoted within brackets) refer to the 1992 18th edition of "Standard Methods for the examination of Water and Wastewater", A.P.H.A. Except [G] which refers to the method of R. Goguel, Anal. Chem. 1969, 41. 1034.

DATE: - 4 JUN 1999

CHECKED: J. M. Hume

SIGNATORY: E. C.

Boxes marked thus indicate:

☐ Levels are within the limits as quoted in the "Guidelines for Drinking Water Quality in Australia", 1987 N.H. & M.R.C. and the A.W.R.C.

☒ Levels exceed non-health related limits.

☒ Levels exceed health related limits

RESOURCE PROTECTION DIVISION
WATER CHEMISTRY LABORATORY

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Telephone: (08) 8924 6413
Fax: (08) 8924 6410

| | | | |
|---|---|---|---|
| Bottle No.: QL47 | Lab Register No.: 493 | | |
| Date Received in Lab: 1/6/99 | Time Sampled: 0915 | Date Sampled: 21/5/99 | |
| R/N No.: 17393 | Depth (m): 95.64 | Q: EST 15 | Map: |
| G.S. No.: | G.H. (m): | Q: | G.R.: |
| Sampler: MCMASTERS | | | |
| Location: UNDOOLYA - ROCKY HILL PROJECT | Field Temp °C: 25.7 | Field pH: 8.45 | Field Cond µScm⁻¹: 950 |
| | RSP: | Project No.: RSA 1006 | |

## ANALYSIS - PHYSICAL

| | | | | | |
|---|---|---|---|---|---|
| ☐ pH | [4500-H⁺B] | 7.8 | ☐ Colour (Hazen units) | [2120B] | |
| ☐ Electrical conductivity (microsiemens/cm at 25°C) | [2510B] | 945 | ☐ Turbidity (NTU's) | [2130B] | |
| ☐ Total dissolved solids (mg L⁻¹ - dried at 180° C) | [2540C] | 563 | ☐ Suspended solids (mg L⁻¹) | [2540D] | |

## ANALYSIS - CHEMICAL (mg L⁻¹)

| | | | | | |
|---|---|---|---|---|---|
| ☐ Sodium, Na | [3111B] | 88 | ☐ Chloride, Cl | [4500-Cl⁻ B] | 87 |
| ☐ Potassium, K | [3111B] | 6 | ☐ Sulphate, $SO_4$ | [G] | 120 |
| ☐ Calcium, Ca | [3111D] | 66 | ☐ Nitrate, $NO_3$ | [4500-$NO_3^-$ B] | 9 |
| ☐ Magnesium, Mg | [3111B] | 30 | ☐ Bicarbonate, $HCO_3$ | [2320B] | 324 |
| ☒ Iron, (total) Fe | [3111B] | u/s | ☐ Carbonate, $CO_3$ | [2320B] | 0 |
| ☐ Total Hardness (as $CaCO_3$) Calculation | [2340B] | 288 | ☐ Hydroxide, OH | [2320B] | 0 |
| ☐ Total Hardness (as $CaCO_3$) Titration | [2340C] | | ☐ Fluoride, F | [4500-$F^-$ C] | 0.5 |
| ☐ Total Alkalinity (as $CaCO_3$) | [2320B] | 266 | ☐ NaCl (calc. from chloride) | | 143 |
| ☐ Silica, $SiO_2$ | [4500-Si D] | 17 | ☐ Dissolved Oxygen | [4500-O-C] | |

## ANALYSIS - ADDITIONAL (mg L⁻¹)

| | | | | | |
|---|---|---|---|---|---|
| ☐ Copper, Cu | [3111B] | | ☐ Manganese, Mn | [3111B] | | ☐ Zinc, Zn | [3111B] | |
| ☐ | | | ☐ | | | ☐ | | |

❖ U/S DENOTES UNSUITABLE FOR ANALYSIS

❖ I/S DENOTES INSUFFICIENT SAMPLE

❖ F DENOTES FILTRATE ANALYSIS

❖ T DENOTES TOTAL ANALYSIS

C1 70588 990601j # 16

This report relates specifically to the "sample tested as received".

The test methods used (denoted within brackets) refer to the 1992 18th edition of "Standard Methods for the examination of Water and Wastewater", A.P.H.A. Except [G] which refers to the method of R. Goguel, Anal. Chem. 1969, 41, 1034.

DATE: - 4 JUN 1999

CHECKED: J. M. Hume

SIGNATORY: E. C.

Boxes marked thus indicate:

☐ Levels are within the limits as quoted in the "Guidelines for Drinking Water Quality in Australia", 1987 N.H. & M.R.C. and the A.W.R.C.

☒ Levels exceed non-health related limits.

☒ Levels exceed health related limits

RESOURCE PROTECTION DIVISION
WATER CHEMISTRY LABORATORY

G.P.O BOX 990 DARWIN N.T. 0801
HUDSON FYSH AVENUE DARWIN NT 0820
Telephone: (08) 8924 6413
Fax: (08) 8924 6410

| Bottle No.: | Lab Register No.: |
|---|---|
| QP09 | 492 |

| Date Received in Lab: | Time Sampled: | Date Sampled: |
|---|---|---|
| 1/6/99 | 1040 | 20/5/99 |

| R/N No.: | Depth (m) : | Q: | Map: | Sampler: |
|---|---|---|---|---|
| 17393 | 54.67 | 2.0LPS | | McMASTERS |
| G.S. No.: | G.H. (m): | Q: | G.R.: | |

| Location: | Field Temp °C: | Field pH: | Field Cond µScm⁻¹: |
|---|---|---|---|
| UNDOOLYA ROCKY HILL PROJECT | 26.9 | 8.43 | 929 |
| | RSP: | Project No.: | |
| | | RSA 1006 | |

## ANALYSIS - PHYSICAL

| | | | | | |
|---|---|---|---|---|---|
| ☐ pH | [4500-H⁺B] | 8.0 | ☐ Colour (Hazen units) | [2120B] | |
| ☐ Electrical conductivity (microsiemens/cm at 25°C) | [2510B] | 932 | ☐ Turbidity (NTU's) | [2130B] | |
| ☐ Total dissolved solids (mg L⁻¹ - dried at 180° C) | [2540C] | 544 | ☐ Suspended solids (mg L⁻¹) | [2540D] | |

## ANALYSIS - CHEMICAL (mg L⁻¹)

| | | | | | |
|---|---|---|---|---|---|
| ☐ Sodium, Na | [3111B] | 91 | ☐ Chloride, Cl | [4500-Cl⁻ B] | 87 |
| ☐ Potassium, K | [3111B] | 6 | ☐ Sulphate, $SO_4$ | [G] | 120 |
| ☐ Calcium, Ca | [3111D] | 61 | ☐ Nitrate, $NO_3$ | [4500-$NO_3^-$ B] | 9 |
| ☐ Magnesium, Mg | [3111B] | 30 | ☐ Bicarbonate, $HCO_3$ | [2320B] | 310 |
| ☒ Iron, (total) Fe | [3111B] | u/s | ☐ Carbonate, $CO_3$ | [2320B] | 0 |
| ☐ Total Hardness (as $CaCO_3$ ) Calculation | [2340B] | 276 | ☐ Hydroxide, OH | [2320B] | 0 |
| ☐ Total Hardness (as $CaCO_3$ ) Titration | [2340C] | | ☐ Fluoride, F | [4500-$F^-$ C] | 0.6 |
| ☐ Total Alkalinity (as $CaCO_3$) | [2320B] | 254 | ☐ NaCl (calc. from chloride) | | 143 |
| ☐ Silica, $SiO_2$ | [4500-Si D] | 17 | ☐ Dissolved Oxygen | [4500-O-C] | |

## ANALYSIS - ADDITIONAL (mg L⁻¹)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ☐ Copper, Cu | [3111B] | | ☐ Manganese, Mn | [3111B] | | ☐ Zinc, Zn | [3111B] | |
| ☐ | | | ☐ | | | ☐ | | |

✣ U/S DENOTES UNSUITABLE FOR ANALYSIS

✣ I/S DENOTES INSUFFICIENT SAMPLE

✣ F DENOTES FILTRATE ANALYSIS

✣ T DENOTES TOTAL ANALYSIS

C1 42330 990601j # 15

This report relates specifically to the "sample tested as received".

The test methods used (denoted within brackets) refer to the 1992 18th edition of "Standard Methods for the examination of Water and Wastewater", A.P.H.A. Except [G] which refers to the method of R. Goguel, Anal. Chem. 1969, 41, 1034.

DATE: -4 JUN 1999

CHECKED: J. M. Hume

SIGNATORY: E. C.

Boxes marked thus indicate:
- ☐ Levels are within the limits as quoted in the "Guidelines for Drinking Water Quality in Australia", 1987 N.H. & M.R.C. and the A.W.R.C.
- ☒ Levels exceed non-health related limits.
- ☒ Levels exceed health related limits