Registration No. RN. 21768

Index No. 1N. 80/2115

Advice No.

PARTICULARS OF COMPLETED BORE/WELL

21. Describe rock type, colour etc. Any changes must be recorded.

From - TO

0 - 0.3m Topsoil
0.3 - 4m Red Clay
4 - 22.9m Brown, Yellow & White Clay
22.9 - 24.1m White & Yellow Clay
24.1 - 28m Pink & White Clay
28 - 30.2m Yellow & White Clay
30.2 - 54.6m Pink, White & Yellow Clay
54.6 - 69.9m White Clay & Quartz
69.9 - 72.6m Brown Sandstone & Quartz
Sandy White & Yellow Clay
72.6 - 77.2m Quartz, Weathered Dolomite
Sandy Brown & Yellow Clay
77.2 - 91.6m Dolomite

1. Name of Bore: McMinns 23/82

2. Name of Property: Koolpinyah Stn.

3. Owner of Property:

4. Type of Lease: Pastoral

5. Lease/Block No.:

6. Bore or Well: Bore

7. Name of Contractor: Water Div.

8. Name of Driller: P. Espie

9. Depth Recommended:

10. Depth Drill: 91.6m

11. Date Commenced: 30-11-82

12. Date Completed: 2-12-82

13. Proposed Use of Bore ☐ Domestic
☐ Pastoral ☐ Stock Route ☐ Irrigation
☐ Town Supply ☐ Observation ☑ Investigation

14. Bore has been drilled by ☑ Rotary
☐ Cable Tool ☐ Jetting Other .....

15. Bore Drilled Using ☑ Air ☐ Mud
☑ Foam ☐ Water ☑ Degradable Polymer
Size of drilling Bit 9" from 0 to 70m
7⅞" 70 – 78.7m
5½" from 78.7 to 91.6m

16. Casing Installed ☐ Steel ☐ ABS ☑ PVC
☐ Fibreglass Other .....
2" Dia from 0 to 86m
..... Dia from ..... to .....
☐ Threaded ☐ Welded

18. Screens ☑ None Installed
☐ Stainless Steel ☐ Bronze ☐ PVC
Dia ..... Slot Size ..... From ... to ...
Dia ..... Slot Size ..... From .... to ....
Screens are ☐ Screwed ☐ connected by Packer

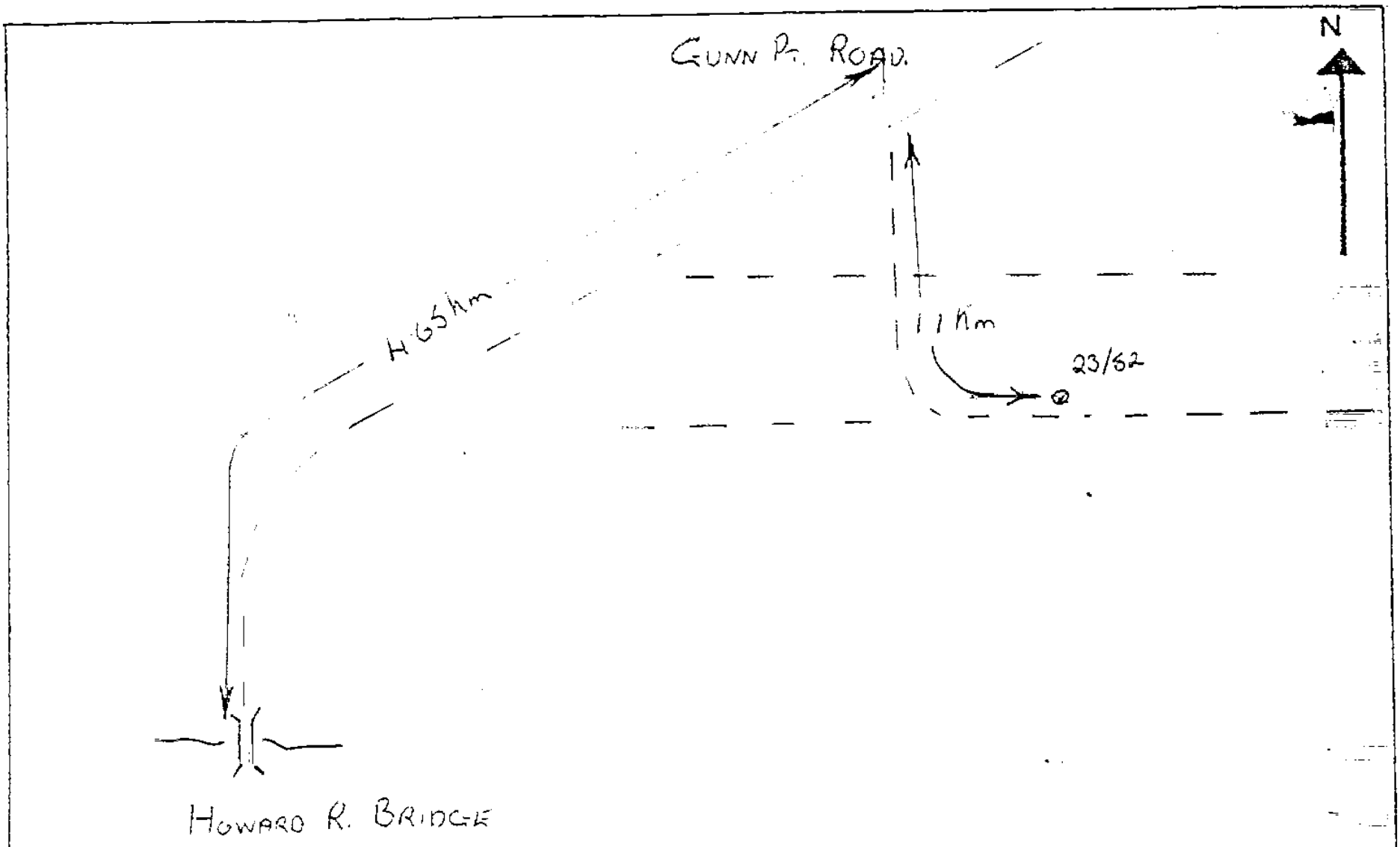
19. Perforation in casing ☐ Percussion Slotted
☐ Oxycut ☑ Drilled other
Slot/Hole size ½" From 84.m to 86m.
Slot/Hole size ..... From ..... to .....

20. Is any strata cemented off ☐ Yes ☑ No
If so, give depth ..... to .....

22. Sample of strata and water
☐ have been ☐ will be left at
☐ Darwin ☐ Katherine
☐ Alice Springs .... other .....

23. WATER	1st Supply	2nd Supply	3rd Supply	4th Supply	5th Supply	Remarks
Struck at	69.6m	– This area was drilled with mud & cased				
Standing water level	15.8m	casing was pulled back & airlifted from 69.6m				
Discharge	1.5 l/sec					
Duration of Test	30 mins					
Test Method	Airlift					
Quality · Good, Fair, Bad	Bad - full of sand & clay					

4. LOCATION SKETCH (field use)



Please show boundaries of sections etc, and location of bore(s) within section. If more than one bore clearly identify each. Marked distance from boundaries if poss.

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

Signature R. Setchell..... Driller Date 23.12.82.....

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 bottles 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 the Water Resources Branch.

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.

6. OFFICE USE ONLY : KOOLPINYAH SHEET SI73 EDT1 SERIES R621 1:100,000

Map No: .....309-228.
AMG Co-ordinates ~~309-310.400mE.~~
Datum (A.H.D.) .....
Geological Basin .....

Plotted on Map Date: ....9.1.83.....
Traced to Master Map Date: .9.1.83.....
Checked by ..... Date: .....
Signature (Bore Inspector) Date: .....

WATER ANALYSIS

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

Laboratory Register No.	82/2111
Date received in Laboratory	10/12/82

WR 4/1A

Bottle No.	Time of sampling	Date of sampling
A30C	1110	2/12/82

LOCATION AND DETAILS
KOOLPINYAH STATION SHEET 5173 BORE 23/82 RN21768 DEPTH 69.2m DISCH 1.5LPS

WRD 8876 RSP1010

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

ANALYSIS — PHYSICAL

☐ pH	7.2	☐ Colour (Hazen units)	
☐ Specific conductance (microsiemens/cm at 25° C)	350	☐ Turbidity (NTU's)	
☐ Total dissolved solids (mg/l - by evaporation at 180° C)	200	☐ Suspended solids (mg/l)	

ANALYSIS — CHEMICAL (mg/l)

☐ Sodium, Na	2	☐ Chloride, Cl	2
☐ Potassium, K	< 1	☐ Sulphate, SO^4	7
☐ Calcium, Ca	33	☐ Nitrate, NO^3	< 1
☐ Magnesium, Mg	21	☐ Bicarbonate, HCO^3	208
☐ Total Hardness (as $CaCO^3$)	169	☐ Carbonate, CO^3	
☐ Total Alkalinity (as $CaCO^3$)	171	☐ Fluoride, F	< 0.1
☒ Iron, (total) Fe	UNSUITABLE FOR ANALYSIS	☐ Orthosphosphate, PO^4	
☐ Silica, SiO^2	32	☐ NaCl (calc. from chloride)	4

ANALYSIS — ADDITIONAL (mg/l)

☐ Copper, Cu	☐ Lead, Pb	☐ Arsenic, As
☐ Manganese, Mn	☐ Zinc, Zn	☐ Cadmium, Cd
☐	☐	☐

The sample as analysed is considered suitable for:-

Drinking water —	Yes/~~No~~ XXX	Stock watering —	Yes/No
Irrigation —	Yes/No	Others (specify)	Yes/No

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With suitable treatment the iron concentration may be lowered to an acceptable level.

Analysed By: J. ALCOCK Date 23 / 12 82

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

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GEOPHYSICAL DOWN HOLE LOGGING

80.

OPERATOR	ASM.
DATE	13/10/83.
GAMMA RAY	4/8/1
RESISTIVITY	
S. P.	
CALIPER	
TEMP.	
GAMMA GAMMA	

80/2115
RN021768.

WR 9/1

DRILLERS LOG

DATE Tues 30-11-82 BORE No. McMinn 23/82 RN 21768 Driller: P. Eopie

Time	Depth	Feet drilled	Mins lapsed	Drillers remark, casing details	BIT DATA No.	Size	Type	Worn cond'n	STRING DATA Item	O.D.	Length	Prog. tally	MUD DATA
0730				Clean access to site & clear site		9"	Drag bit		Bit	9"	0.90	0.90	
1005				Set up rig & equipment & commence					D.P.	4½"	6.10	7.00	
1018	5.9	5.9	13	Topsoil & 0.3m Red clay to 2m Brown, yellow, white clay to 5.9m									
1030				Add 5½" D.C & cont					D.C	5½"	6.20	13.20	
1040	12.10	6.2	10	Brown, yellow & white clay									
1100				Add 5½" D.C. & cont.					D.C	5½"	5.90	19.10	
1105	13.5	5	1.4	Change to mud - hole not cleaning									1 Bucket
1135				Continue									
1145	18.0	4.5	10	Brown, yellow & white clay									
1200				Add rod & cont.					D.P.	4½"	6.10	25.20	
1225	24.1	6.1	25	As above to 22.9m White & yellow clay to 24.1									
				Waiting on water - mix more mud									1 Bucket
1329				Add rod & cont.					D.P.	4½"	6.10	31.30	
1350	30.2	6.1	21	Pink & white clay to 28m - yellow & white clay to 30.2m									
1355				Add rod & cont					D.P.	4½"	6.10	37.40	
1405	36.3	6.1	10	Pink white & yellow clay									
1412				Add rod & cont.					D.P.	4½"	6.10	43.50	
1435	42.4	6.1	23	Pink white & yellow clay - some quartz									
1440				Add rod & cont					D.P.	4½"	6.10	49.60	
1503	48.5	6.1	23	As above.									
1507				Add rod & cont.					D.P.	4½"	6.10	55.70	
1520	54.6	6.1	13	As above.									
1525				Add rod & cont					D.P.	4½"	6.10	61.80	
1550	60.7	6.1	25	White clay & quartz									
1555				Add rod & cont.					D.P.	4½"	6.10	67.90	
1610	66.8	6.1	15	White clay & quartz - trip out - clean up & knock off									

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WR 9/1

DRILLERS LOG

DATE Wed 1-12-82 BORE No. McMinn 23/82 RN 21768 Driller: P. Eapie

Time	Depth	Feet drilled	Mins lapsed	Drillers remark, casing details
0730	66.8			Service rig - depth of hole = 19m
0812	6			Trip in & clean out hole & mix mud
0950				Commence drilling
1015	70.0	3.2	25	Harder at 69.9m Sandy, yellow & white clay, brown & tan & quartz
1025				Trip out & change to 7⅜" R.R.
1126				Continue.
1130	72.6	2.6	4	Sandy brown & yellow clay, quartz & some dolomite (weathered)
1133				Add rod & cont
1220	78.7	6.1	47	As above to 77.2. 77.2-78.7m Dolomite
1222				Trip out
1305				Run casing
1510				Casing on bottom - cut casing
				Clean mud out of lines - test hammer
1530				Trip in with 43-15
1609				Commence with hammer
1617	79.3	0.6	8	Dolomite, quartz & brown s/stone
				Pull back one rod
				Pack up gear - hose down rig
K.40				Clean up & knock off

BIT DATA

No.	Size	Type	Worn cond'n
	9"	Drag	bit
1	6.28	-	
2	6.19	-	12.47
3	6.38	-	18.85
4	5.77	-	24.62
5	6.34	-	30.96
6	6.35	-	37.31
7	6.39	-	43.70
8	6.44	-	50.14
9	6.46	-	56.60
10	6.47	-	63.07
11	6.46	-	69.53
12	6.28	-	75.81
13	6.14	-	81.95

STRING DATA

Item	O.D.	Length	Prog. tally
Bit	9"	0.90	0.90
2DC	5½"	12.10	13.00
9DP	4½"	54.90	67.90
D.P.	4½"	6.10	74.00
Bit	7⅜"	0.60	73.70
D.P.	4½"	6.10	79.80
Bit	5½"	1.20	1.20
2D.C.	4½"	12.10	13.30
11D.P.	4½"	67.10	80.40

MUD DATA

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WR 9/1

DRILLERS LOG

DATE Thurs 2-12-82 BORE No. McMinns 23/82 RN 21768 Driller: P Esquie

Time	Depth	Feet drilled	Mins lapsed	Drillers remark, casing details	BIT DATA No.	Size	Type	Worn cond'n	STRING DATA Item	O.D.	Length	Prog. tally	MUD DATA
0730	79.3			Service rig		5½"	Button bit		Bit	5½"	1.20	1.20	
				Trip in & clean out hole					20.C.	4½"	12.10	13.30	
0805				Add rod & cont					11 D.P.	4½"	67.10	80.60	
0848	85.4	6.1	43	Dolomite					D.P.	4½"	6.10	86.6	
0850				Add rod & cont.					D.P.	4½"	6.10	92.60	
0933	91.5	6.1	43	Dolomite - no water									
0940				Trip out - oil & run 43-15									
1027				Pulled casing back 9.1m to 69.6m									
1045				Trip in 7 D.P. & airlift from 41.6m									
1115				Trip out - Flow = 1.5l/sec Water sample	A. 30 C.								
1135				Depth of hole 84m Glue P.V.C.									
1145				Run 2" P.V.C.									
1153				P.V.C at 86m - gravel pack back to 69.2m									
				S.W.L = 15.8m									
1214				Pull out 6" casing									
1411				Casing out									
				Make up cap for P.V.C.									
				Put cement plug around casing									
				Fill in mud pit, pack up									
				clean up site & move off									
1650				Knock off									

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