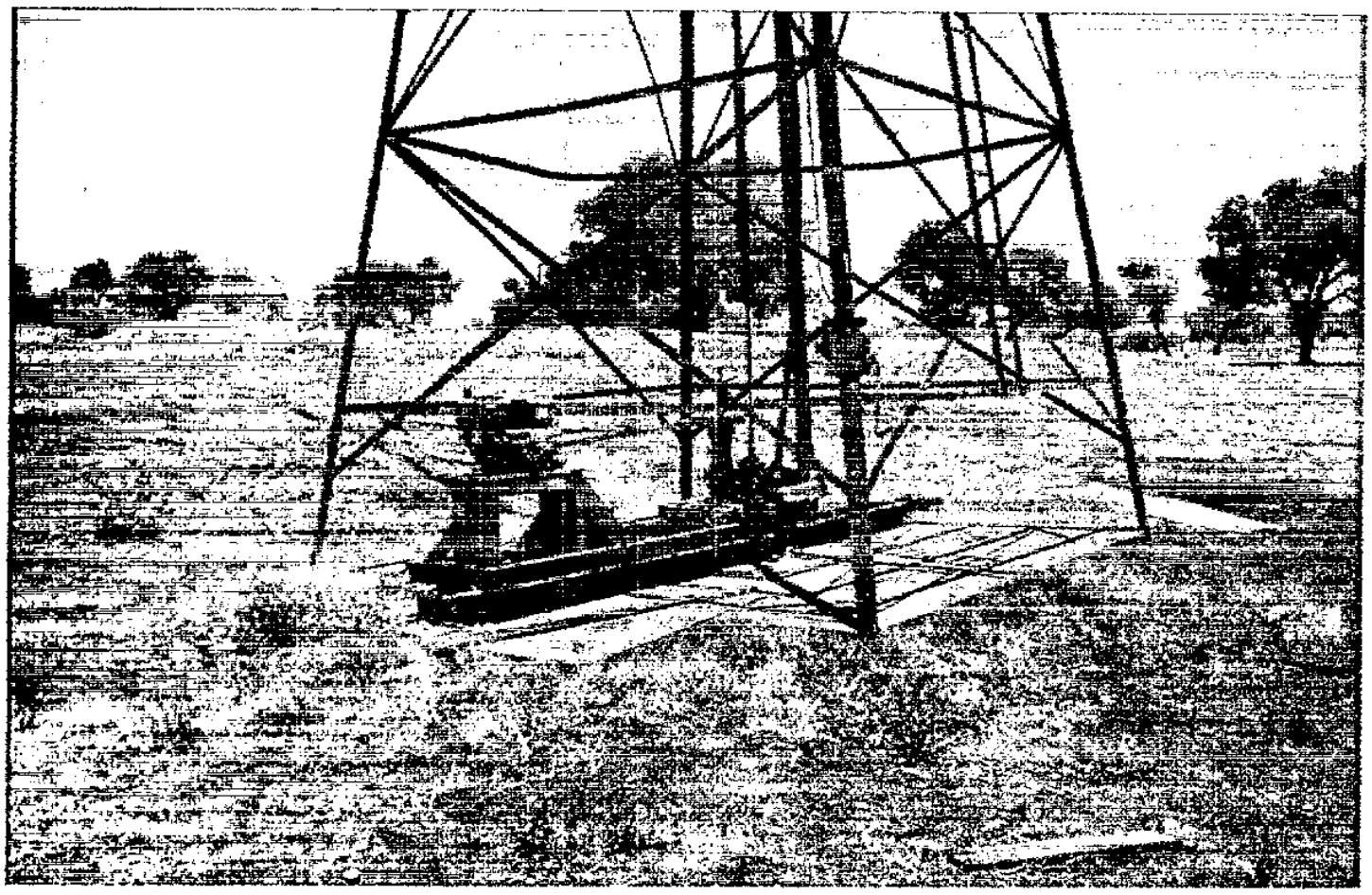
WATER RESOURCES ASSESSMENT PROJECT *** ALICE SPRINGS REGION

AMOONGUNA August 1997

BORE INFORMATION SHEET *** Amoonguna No 13(3)

REGISTERED BORE NUMBER: RN 4712

AMOONGUNA NUMBER 13(3): Unsuccessful Production Bore
This bore is also known as Amoonguna 13 third attempt.



Rockyhill number 1 bore

This bore was drilled by the Water Resources Branch for the Welfare Branch of the Northern Territory Administration, Federal Department of Interior in February 1965

The bore was drilled using a cable tool rig by contract driller JP Cole (driller Rex Villiers). It was drilled to a total depth of 168 metres (550 feet) for a supply of 300 gph of good quality water. The standing water level was 56.69 metres (186 feet), total dissolved salts content of 850 mg/l..

This bore is also called Amoonguna no 13 third attempt. It was drilled 500 feet west of Amoonguna number 12.

LOCATION:

Locality:

WATER RESOURCES ASSESSMENT PROJECT *** ALICE SPRINGS REGION

AMOONGUNA August 1997

BORE INFORMATION SHEET *** Amoonguna No 13(3)

Owner:	
Location:	xxxx metres south of the Community Office

Australian Grid Co-ordinates	Zone SG53	Easting: 391 xxx	Northing: 7 369 xxx
Located by GPS	14	Latitude:	Longitude:

DRILLING DETAILS:

Total Depth: 168 metres	**Drilling Commenced:** 15/1/65 **Drilling Completed:** 18/2/65
Driller:	Rex Villiers, Contract Driller for JP Cole
Drilling Technique:	Cable Tool
Equipment Above Ground:	Nil
Equipment Below ground:	Nil

MAJOR WATER BEARING STRATA (Aquifers)

Depth (metres)	**Supply** (litres per second)	**Standing Water Level** (metres)	**Quality**
62.48 (205 feet)	300 gph (bailer)	56.69 (186 feet)	good

WATER ANALYSIS:

There is one known water analysis of a sample from this bore.

1. Water analysis data sheet sample from bore RN 4712 : sampled 23/3/65 bore at 513 - 515 feet

Analysed By: Northern Territory Administration, Aniimal & Industries Branch,: Dean Newman

Total dissolved salts: 850 Date analysed: 4/4/65
Conductivity @ 25°C: pH 7.9

Sodium	104	Chloride	70
Potassium	11	Sulphate	184
Calcium	102	Nitrate	

WATER RESOURCES ASSESSMENT PROJECT *** ALICE SPRINGS REGION

AMOONGUNA August 1997

BORE INFORMATION SHEET *** Amoonguna No 13(3)

Magnesium	31	Bicarbonate	416
Total Hardness	382	Carbonate	
Total Alkalinity	341	Fluoride	
Iron		Phosphate	
Silica		Sodium Chloride	

DISCUSSION ON CHEMICAL QUALITY OF THE GROUNDWATER:

The water is suitable for human consumption, agricultural and stock use. Except for the hardness it is good quality groundwater.

DRILLERS LOG:

From (metres)	To (metres)	Strata
0	2	Top soil
2	3	Gravelly brown clay
3	8	Brown clay
8	16	Boulders & quartz
16	26	Brown clay
26	62	Gravelly brown clay with some bands of brown clay
62	63	Gravel bed (1st water)
63	168	Brown clay & Gravelly clay

GEOLOGISTS LOG:

Detailed geologistslog on file

INTERPRETATION OF THE LOGS:

From (metres)	To (metres)	Strata
0	29	Quaternary aged Sediments
29	168	Tertiary aged sediments

BORE INFORMATION SHEET *** Amoonguna No 13(3)

GENERAL INFORMATION:

ADJACENT BORES:

GEOLOGY:

GROUNDWATER AVAILABILITY:

This Bore:

As a result his was not a reliable bore. It is not known whether other aquifers exist deeper.

The General Area:

Bores yielding up to 4 litres per second can be constructed into the alluvial basin where good sand and or gravel aquifers are located. The difficulty is locating the sand beds and sand lenses which are very variable and often limited in extent.

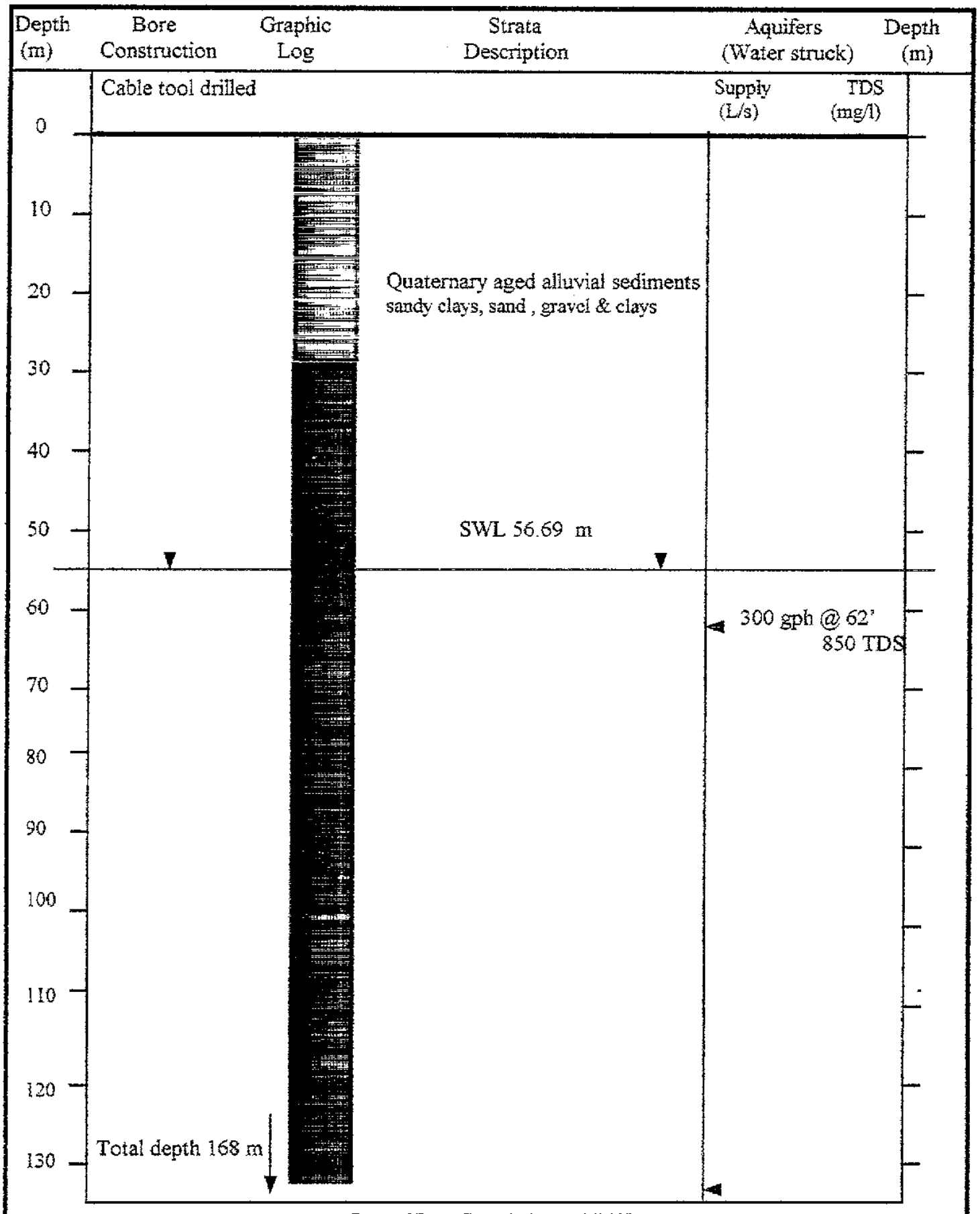
The second major difficulty is constructing stable bores because the sand is often very fine and in narrow bands. The two problems is identifying the location of the beds then stabilising the bores so that they do not pump sand and ultimately fail.

Some of the Amadeus Basin formations at depth are also likely to include aquifers but it would be quite expensive to determine where potable supplies are located and the sustainable yield of these aquifers.

WATER RESOURCES ASSESSMENT PROJECT *** ALICE SPRINGS REGION

AMOONGUNA August 1997

BORE INFORMATION SHEET *** Amoonguna No 13(3)



Date of Bore Completion: 18/2/65

COMPOSITE LOG OF BORE: RN 4712

NATIONAL LANDCARE PROGRAMME

Assessment by Landcare Engineer: Graham Ride

Origin of Water ~~MOOMOOMA~~ Reference SN 65 / 513

~~MOOMOOMA 43. NO. 3 BRY AT 513-515 FT.~~ Specimen Advice Note No. 3649

Date Sampled 23/3/65 Date Received 25/3/65

Results in parts per million

HARDNESS (Calculated as CaCO3)		
"	Total	382
"	Temporary	341
"	Permanent	41
ALKALINITY IN EXCESS OF TOTAL HARDNESS		Nil
CHLORIDE	70	1·97
SULPHATE	184	3·83
FLUORIDE	Not Determined	
CALCIUM	102	5·09
BICARBONATE	416	6·82
CARBONATE	Nil	
SODIUM	104	4·52
POTASSIUM	11	0·28
MAGNESIUM	31	2·55
NITRATE	Not Determined	
NITRITE	*	*
AMMONIA	*	*
RESIDUE ON EVAPORATION TOTAL DISSOLVED SALTS	850	

pH 7.9

General remarks of Analysing Officer with particular reference to suitability of the water for the purpose for which it is stated to be required.

The above results are forwarded for your information.

Signature W. M. R. Newman

6,250 ppm. equals approx. 1 oz. per gall. Date 14-4-65.

1200—1.68 7523

N.N4112. Amoonguna D/16

AMOONGUNA "13" NO. 3 ATTEMPT

Description of samples

0– 10'	Reddish-brown medium to coarse silty and clayey sand
10– 28'	Red-brown fine to coarse sandy and silty clay
28– 33'	Medium to very coarse silty sand
33– 41'	Dark red-coarse silty cky
41– 50'	Brown medium to very coarse silty polymict sand
50– 95'	Brown medium to coarse sandy and silty clay
??	UNCONFORMITY - TOP OF TERTIARY
95–105'	Cream medium to coarse sandy clay
105–113'	Very coarse sub-angular gravel (clasts are mainly pink to grey quartzite)
113–150'	Pinkish brown medium to coarse sandy clay
150–160'	Brown, with some small patches of pale grey, medium grained sandy clay
160–175'	Medium to very coarse sandy clay, pinkish brown
175–190'	Pinkish brown medium grained sandy clay
190–205'	Yellow brown medium grained very sandy clay
205–207'	Medium to very coarse sand and gravel. Overall colour is grey, and has appearance of a Tertiary sand. Large proportion of transluscent frey quartz grains in sand fraction (aquifer)
207–225'	Dark purplish-brown and grey clay
225–235'	Dark brown & grey clay. Very little sand
235–250'	Creamy grey medium to coarse grained very clayey sand
250–270'	Red-brown, and grey clay
270–330'	Red-brown clay, with a small amount of coarse sand grains within the clay
330–360'	Creamy grey coarse very sandy clay
360–390'	Pale brown and grey medium grained very sandy clay
390–420'	Pinkish brown slightly sandy clay
420–450'	Dark brown, some pale grey streaks, medium to very coarse very sandy clay
450–480'	Mottled pale grey and kakhi silty clay
480–500'	Dark yellow-brown very silty cky
500–520'	Yellow-brown fine to medium grained very sandy clay
520–550'	Mottled pale grey and kakhi fine to medium grained slightly sandy clay

.....

D. WOOLLEY

Resident Geologist.
18.3.65

NAME Amoonguna No.13, 3rd Att. Job 200 — 500' W of Amoonguna No.12

INDEX No. 16/761

LOCALITY Crown Land

REG. No.... 4712

DEPTH 550' 167.68m

FILE No. ... Job 200

CASINGS All casing removed

PERFORATIONS / SCREENS 60' 1/8" drilled holes

LOCATION / / E N

SURFACE LEVEL R.L.

B M LEVEL R.L.

DATUM

CONTRACTOR J. P. Cole

DRILLER R. Villiers

DATE STARTED 15/1/65

DATE FINISHED 18/2/65

WATER

AQUIFERS	625			
DEPTH STRUCK	205			
AQUIFER THICKNESS..	567			
STANDING WATER LEVEL	186			
PUMP TEST G.P.H.	300			
DRAWDOWN LEVEL..				
PUMP LEVEL				
DURATION OF PUMP TEST HOURS ...	1			
R.L. S.W.L.				
WATER TEMPERATURE °C				
TRANSMISSIBILITY				
STORAGE COEFF.....				

ANALYSES

BINOMIAL CLASSIFICATION				
T.D.S.....				
CONDUCTIVITY				
TOTAL HARDNESS				
CHLORIDE				
BICARBONATE				
CARBONATE				
SULPHATE.....				
NITRATE				
FLUORIDE.....				
SODIUM.....				
POTASSIUM				
CALCIUM				
MAGNESIUM				

REG. ANAL. No.....

EQUIPMENT

REMARKS

STRATA SECTION

DEPTH FEET	CASING	AQU.	SEC.	STRATA
0				Top soil
10				Gravelly brown clay
				Brown clay
65				Quartz stone and billy
82				Clay
87				Boulders and quartz
90				
				Brown clay
80				
				Gravelly clay
95				Gravelly clay
105				Quartzite boulder
113				Sandy clay
115				
				Gravelly clay
140				
				Brown clay
160				
				Gravelly brown clay
175				
				Soft brown clay
190				
				Gravelly brown clay
205				Gravel bead (first water)
207				
				Brown clay
225				
				Brown clay
235				
				Gravelly clay
250				
				Brown clay
270				
				Brown clay
290				
				Hard brown clay
330				
				Gravelly clay
360				
				Not very much change in strata eight other samples taken - brown clay and gravelly clays

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N.T.A. WATER RESOURCES BRANCH

RN004712

BORE DATA SHEET

NAME Amoongunа No.13, 3rd Att. Job 200 — 500' W of Amoongunа No.12

LOCALITY Crown Land

DEPTH 550' 167.7m

CASINGS All casing removed

PERFORATIONS / SCREENS 60' 1/8" drilled holes

LOCATION / / E N — SURFACE LEVEL R.L. — B M LEVEL R.L. — DATUM

CONTRACTOR J. P. Cole — DRILLER R. Villiers — DATE STARTED 15/1/65 — DATE FINISHED 18/2/65

INDEX No. 16/761

REG. No. ... 4712

FILE No. ... Job 200

WATER

AQUIFERS				
DEPTH STRUCK	205			
AQUIFER THICKNESS..				
STANDING WATER LEVEL	186			
PUMP TEST G.P.H.	300			
DRAWDOWN LEVEL..				
PUMP LEVEL				
DURATION TEST HOURS ...	½			
R.L. S.W.L.				
WATER TEMPERATURE °C				
TRANSMISSIBILITY				
STORAGE COEFF.....				
ANALYSES	23/3/65			
BINOMIAL CLASSIFICATION				
T.D.S.	850			
CONDUCTIVITY				
TOTAL HARDNESS				
CHLORIDE				
BICARBONATE				
CARBONATE				
...ATE.....				
NITRATE				
FLUORIDE.....				
SODIUM.....				
POTASSIUM				
CALCIUM				
MAGNESIUM				
REG. ANAL. No.....				

EQUIPMENT

REMARKS

STRATA SECTION

DEPTH FEET | CASING | AQU. | SEC. | STRATA

5'	Top soil
10'	Gravelly brown clay
	Brown clay
32'	Quartz stone and billy
33'	Clay
41'	Boulders and quartz
50'	
	Brown clay
80'	
	Gravelly clay
95'	Gravelly clay
105'	Quartzite boulder
113'	Sandy clay
115'	
	Gravelly clay
140'	
	Brown clay
160'	
	Gravelly brown clay
175'	
	Soft brown clay
192'	
	Gravelly brown clay
207'	Gravel bead (first water)
209'	
	Brown clay
225'	
	Brown clay
234'	
	Gravelly clay
250'	
	Brown clay
270'	
	Brown clay
290'	
	Hard brown clay
330'	
	Gravelly clay
340'	

Not very much change in strata eight other samples taken - brown clay and gravelly clays

5M—10.64 1556

44

N.T.A. 181

THE NORTHERN TERRITORY OF AUSTRALIA

Control of Waters Ordinance

16/761

Regulation 8.

FINAL STATEMENT OF BORE

RN4712

From	To	Description of Strata
0.5		Top soil
5	10	Gravy brown clay
10	28	Brown clay
28	33	Quartz stone & billy
33	41	Clay
41	50	Boulders & quartz
50	80	Brown clay
80	95	Gravy clay
95	105	Gravy clay
105	113	Quartzite boulders
113	115	Sandy clay
115	140	Gravy clay
140	160	Brown clay
160	175	Gravy brown clay
175	190	Soft brown clay
190	205	Gravy brown clay
205	207	Gravy gravel bead (first water)
207	225	Brown clay
225	235	" " (refer to back)

Location of Bore (or supply sketch on back hereof)—

500ft ~~Xxxs~~

(*a*) ~~N~~ ~~NE~~ / ~~X~~ ~~XSE~~ / ~~E~~ ~~NW~~ / ~~W~~ ~~SW~~ of (*b*) Amoongana No. 12

(*a*) Circle appropriate direction.
(*b*) Use known point such as existing bore, homestead, outstation, etc.

Additional information of interest about the bore—

Samples of strata and water supplies
have been*
will be*
left at the following trading place—

B.M.P.

R. Villiers
Signature

*Strike out which does not apply.

For office use only—

WATER RESOURCES BRANCH
26 MAR 1965
N.T. ADMINISTRATION

5M—2.64 4018

Name of Bore—
Amoongana No 13. 3rd A.T.T. Job 200

Name of Property—
Crown

Description of Property—

Name of Owner—

Name of Contractor—
J.P.Cole

Name of Driller—
Ree Villiers

Date of Commencement—
15.1.65

Date of Completion—
18.2.65

Total Depth—
550

Particulars of Casing—
All casing removed

Particulars of Perforations or Screens—
60 feet ⅛" drilled holes

Water	1st Supply	2nd Supply	3rd Supply
Struck at	205		
Standing Water Level	186		
Pumping Supply : G.P.H.	300		
Duration of Pump Test	½hr baller		
Water Level During Test			
Quality : Good, Fair or Bad	Good.		

From	To	Description
235	250	Grey clay
250	270	Brown clay
270	290	" "
290	330	Hard brown clay
330	350	Grey, clay
350	550	Not very much change in strata. Light other & mpleo tarem, brown clay and Grey clays.