

URS Australia

MONITORING WELL T2-1

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: **McArthur River Mining**

Logged By: **D. Lacey**

Bore Size: **203 mm**

Relative Level: **28.76 mAHD**

Drill Type: **Rotary**

Checked By: **C. Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8183141.88 mN**

Drill Model:

Date Started: **2-10-05**

Orientation: **0 deg.**

617496.42 mE

Drill Fluid: **Mud**

Date Finished: **3-10-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

Depth (m)

CLAY, minor sand, low plasticity, brown, soft

CLAY, low plasticity, light brown, hard, brittle

Weathered BEDROCK, orange/brown/red, banded, hard, brittle, some clay, hard drilling

Weathered BEDROCK, blue/black, hard

End of Hole 15m

WELL CONSTRUCTION DETAILS

Lockable wellhead

PVC end cap

Concrete steel casing

UPVC Class 9 pipe

Bentonite

Hole 279mm
0-2.5m

Hole 203mm
0-15m

Gravel filterpack

Dry well

Slotted UPVC Class 9 pipe

Slotted interval
3-15m

URS Australia

MONITORING WELL T3-1

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H20**

Project No. 42213689

Client: **McArthur River Mining**

Logged By: **D. Lacey**

Bore Size: **203 mm**

Relative Level: **31.77mAHD**

Drill Type: **Rotary**

Checked By: **C. Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8181814.78 mN**

Drill Model:

Date Started: **24-9-05**

Orientation: **0 deg.**

617572.14 mE

Drill Fluid: **Mud**

Date Finished: **24-9-05**

Permit No: **N/A**

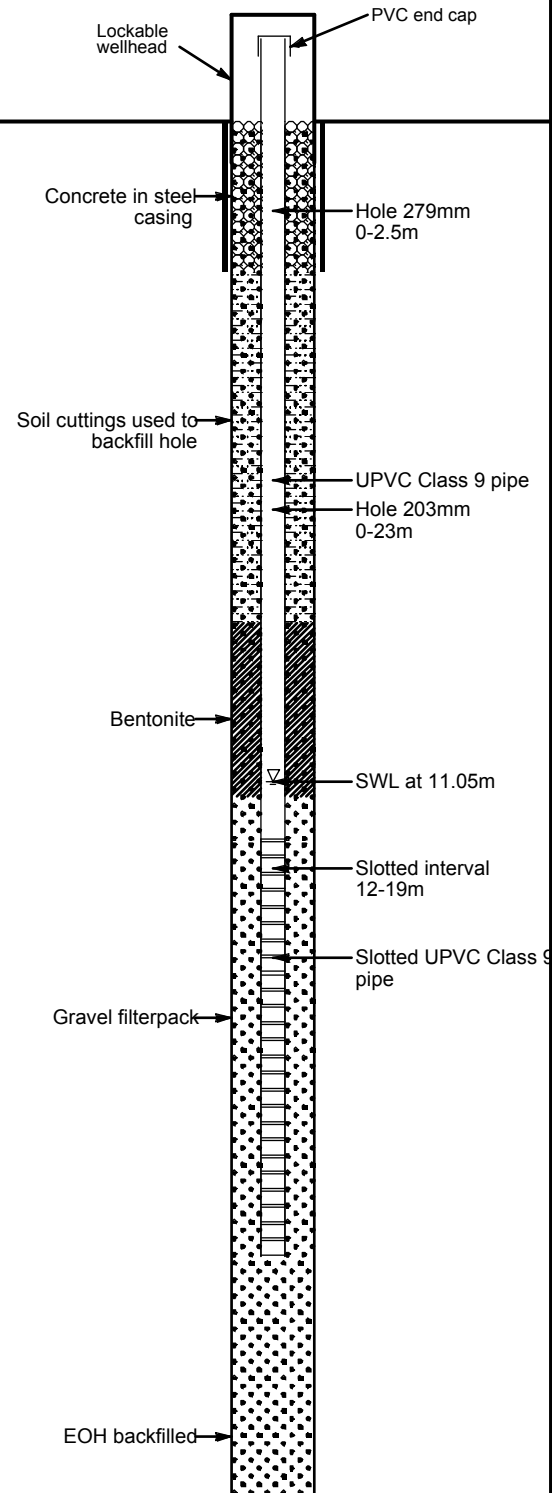
Legend

DESCRIPTION OF STRATA

Depth (m)

0	CLAY- dark brown,hard,brittle
1	CLAY- brown, hard, brittle, low plasticity
2	CLAY- brown,hard,rumbly sand/silty
3	
4	
5	CLAY/CALCRETE-brown,dry,as above,silty,calcrete white with quartz grains
6	SAND- brown,silt/clay poorly sorted, clay as above
7	
8	SAND- brown, poor sorted sand,quartz,some feldspar and minor clay
9	
10	SAND- brown,minor gravel,mainly clay,poor sorted,mainly sand,quartz,20% feldspar, gravels pebbles to (20mm) blue/brown,minor clay
11	
12	GRAVEL- white/brown/grey some blue,very coarse,mostly sand,some brown banded fragments,quartz,sand,gravel increases in size at 14m
13	
14	
15	GRAVEL- cobels of (10-30mm)
16	GRAVEL- some clay/sand
17	
18	
19	
20	GRAVEL/CLAY- minor sand,clay increase to 40-50%
21	
22	CLAY/DOLOMITE- grey/white,hard,bedrock
23	End of Hole 23m

WELL CONSTRUCTION DETAILS



URS Australia

Production Bore T3-1P

URS Australia Pty. Ltd. Phone 08 8980 2900
 Arkaba House, The Esplanade, Darwin, NT Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. **42213689**

Client: **McArthur River Mining**

Logged By: **D. Lacey** Bore Size: **203 mm**

Relative Level: **31.44mAHD**

Drill Type: **Rotary**

Checked By: **C. Mac Hunter** Hole Angle: **90 deg.**

Coordinates: **8181831.51 mN**

Drill Model:

Date Started: **11-10-05** Orientation: **0 deg.**

617588.12 mE

Drill Fluid: **Mud**

Date Finished: **11-10-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

Depth (m)

SAND/CLAY- brown, minor gravels, silt

SAND/CLAY- orange/brown, fine to medium grained, moderately sorted, soft, crumbly

SAND- brown/yellow, medium grained, minor clay, sub rounded, soft

CLAY- orange/brown, minor sand, sand increasing, soft

SAND/CLAY- brown, minor gravel 3-4mm, sub angular, quartz, clay soft, low plasticity

SAND- brown, sub angular, minor gravel, very minor clay, poorly sorted

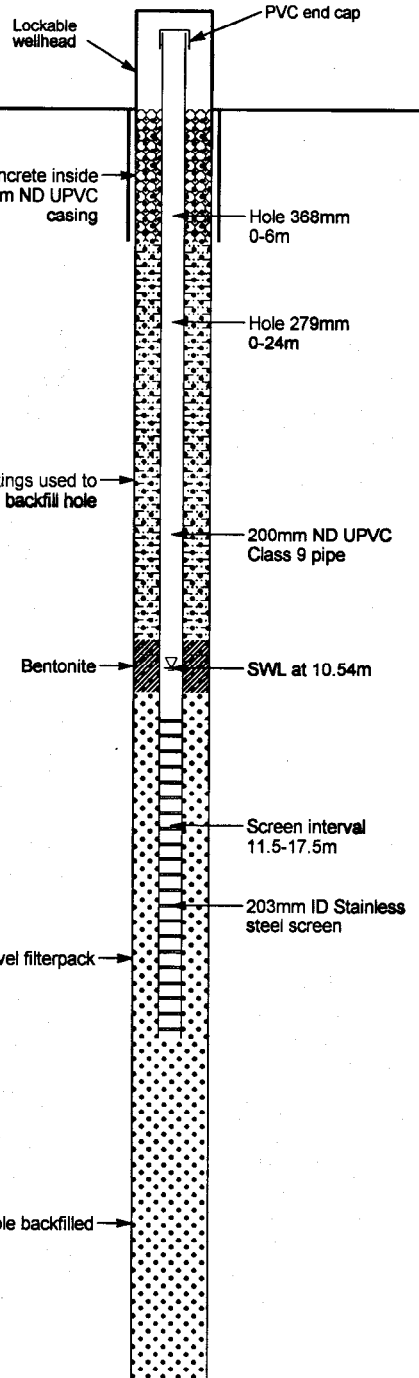
SAND/GRAVEL- brown/green/white, angular to sub angular, gravel 3-6mm, very poorly sorted

SAND/GRAVEL- brown, sand, gravel 60/40%, very poorly sorted

BEDROCK- black shale

End of Hole 24m

WELL CONSTRUCTION DETAILS



WELL_MELB_BORELOGS.GPJ MCC_AUS.GDT 21/10/05

URS Australia

MONITORING WELL T3-2

URS Australia Pty. Ltd. Phone 08 8980 2900
 Arkaba House, The Esplanade, Darwin, NT Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

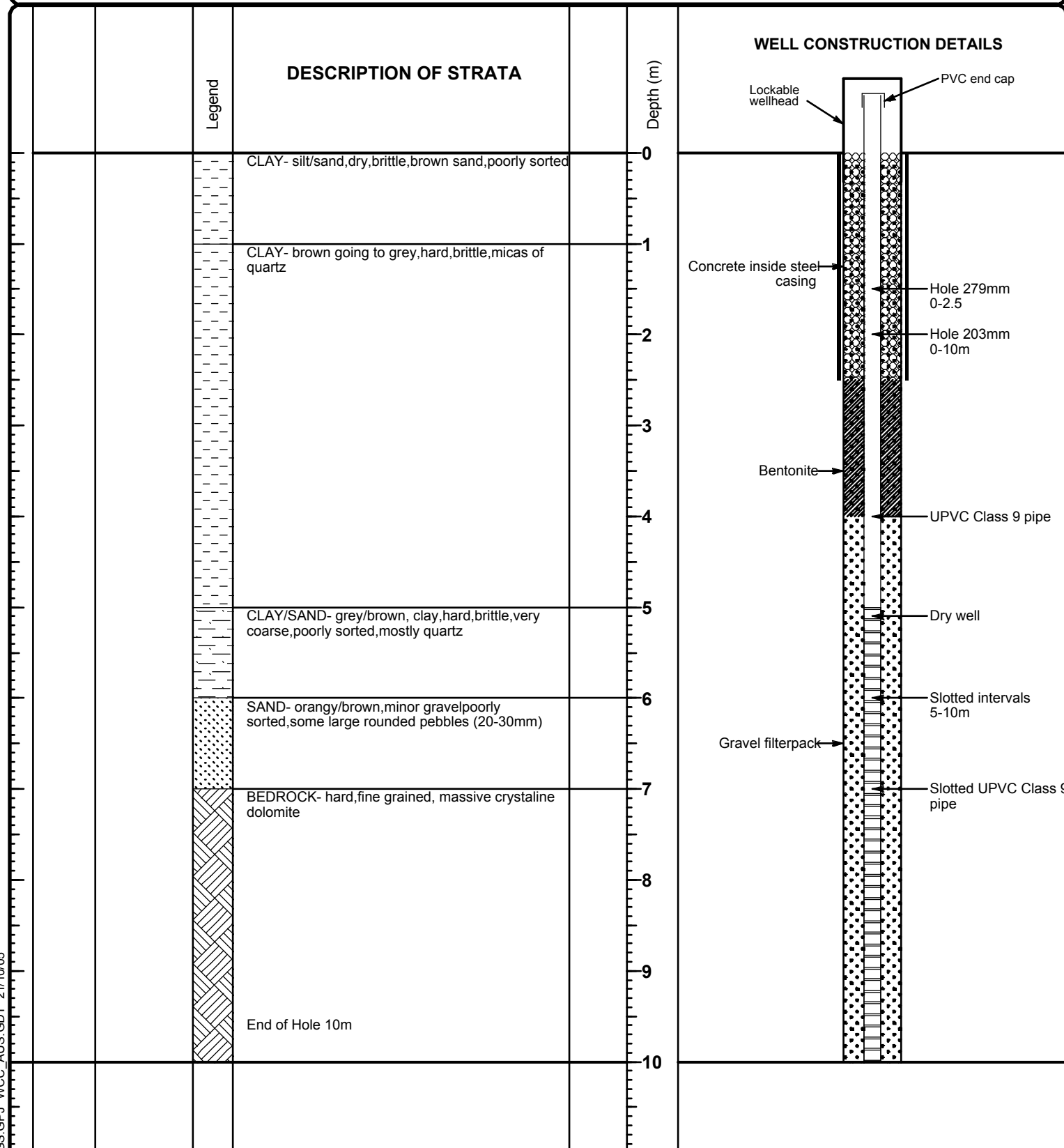
Project No. 42213689

Client: McArthur River Mining

Logged By: **D. Lacey** Bore Size: **203 mm**
 Checked By: **C. Mac Hunter** Hole Angle: **90 deg.**
 Date Started: **25-9-05** Orientation: **0 deg.**
 Date Finished: **25-9-05**

Relative Level: **31.52m AHD**
 Coordinates: **8181719.47 mN**
617692.23 mE
 Permit No: **N/A**

Drill Type: **Rotary**
 Drill Model:
 Drill Fluid: **Mud**



WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_21/10/05

URS Australia

MONITORING WELL T3-3

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Client: McArthur River Mining

Drilling Contractor: **H2O**

Project No. 42213689

Logged By: **D. Lacey**

Bore Size: **203 mm**

Relative Level: **37.29mAHD**

Drill Type: **Rotary**

Checked By: **C. Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8181518.21 mN**

Drill Model:

Date Started: **26-9-05**

Orientation: **0 deg.**

617830.01 mE

Drill Fluid: **Mud**

Date Finished: **26-9-05**

Permit No: **N/A**

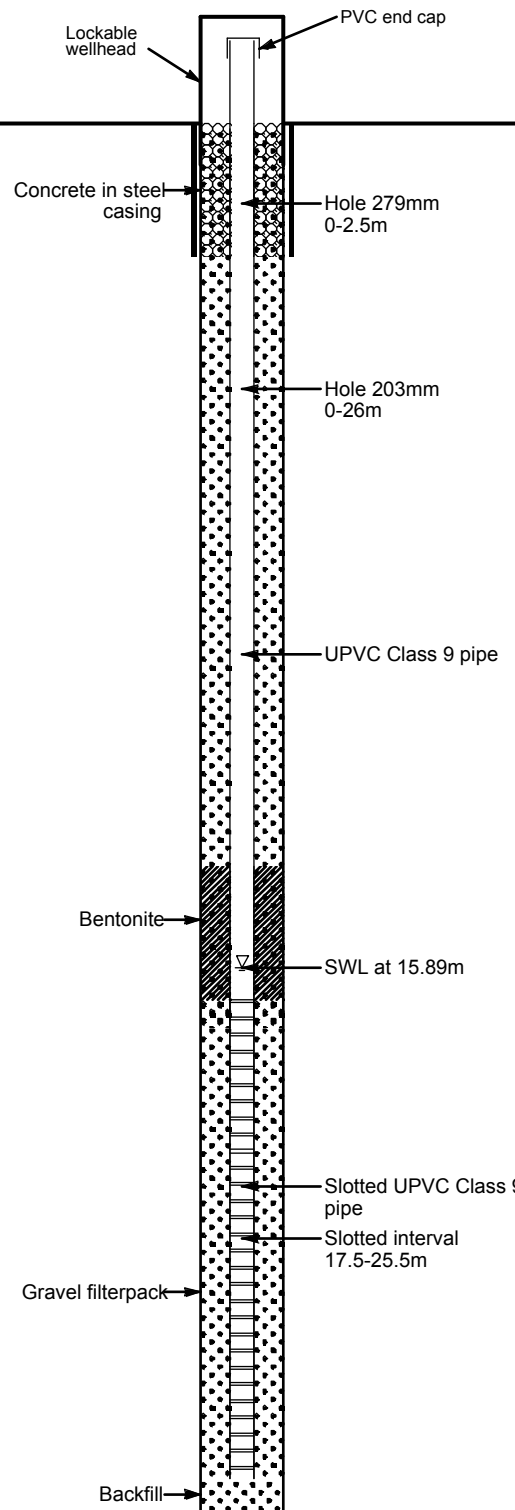
Legend

DESCRIPTION OF STRATA

Depth (m)

0	CLAY- brown,hard,low plasticity
1	
2	CLAY- orange/brown,hard,brittle,minor silt
3	
4	CLAY-orange,silty,soft-hard,low plasticity
5	
6	
7	SAND/CLAY- orange/brown,minor silt,occasional gravel, sand fine to coarse,poorly sorted,sub angular to sub rounded,soft,low plasticity
8	
9	
10	SAND- silty,minor clay,well sorted,sub angular to sub rounded,quartz
11	
12	SAND- light brown,well sorted,sub angular to sub rounded,quartz
13	
14	
15	CLAY/SAND- dark brown,soft,low plasticity
16	
17	
18	GRAVEL- mixed colours,shingles (3mm-30mm),sub angular to sub rounded
19	
20	
21	
22	
23	
24	
25	
26	End of Hole 26.2m

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T4-1D

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT
Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: McArthur River Mining

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **31.50mAHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8180565.51 mN**

Drill Model:

Date Started: **22-7-05**

Orientation: **0 deg.**

615719.14 mE

Drill Fluid: **Mud**

Date Finished: **23-7-05**

Permit No: **N/A**

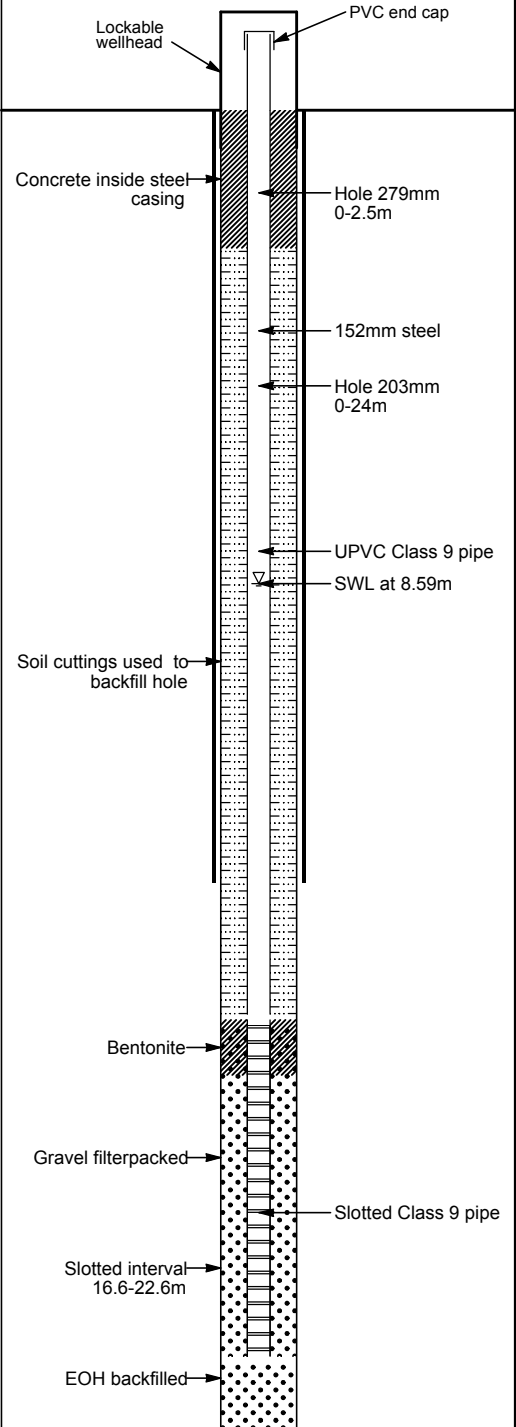
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DESCRIPTION OF STRATA

Depth (m)

0 - 1	SAND - red/brown, very fine grain, silty, sub angular, well sorted
1 - 2	SAND-red/brown fine to med grain, slightly clayey, sub angular
2 - 3	
3 - 4	
4 - 5	SAND- light brown, fine to medium grain, quartz, sub angular more clay/silty beds.
5 - 6	SAND- tan brown, medium to coarse grain, well sorted, sub angular, soft.
6 - 7	
7 - 8	CLAY- yellow blown, dry, sandy, medum to coarse grain, quartz, silty, large white well rounded pebbles
8 - 9	
9 - 10	CLAY- brown, rounded white pebbles, slightly plastic in part, minor white sandy CLAY, calcrete
10 - 11	
11 - 12	
12 - 13	SILT- dark yellow, dry
13 - 14	GRAVEL- dark yellow, very course, well rounded minor pebbles
14 - 15	BEDROCK-weathered, green grey
15 - 16	DOLOMITE- dark/blue/ grey, minor fractures
16 - 17	DOLOMITE- dark/blue/ grey, medium to well fractured
17 - 18	
18 - 19	
19 - 20	DOLOMITE- dark/blue/grey- medium to well fractured
20 - 21	
21 - 22	
22 - 23	

WELL CONSTRUCTION DETAILS



WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_29/11/05

URS Australia

MONITORING WELL T4-1S

URS Australia Pty. Ltd.
 Arkaba House, The Esplanade, Darwin, NT
 Phone 08 8980 2900
 Fax 08 8941 3920

Drilling Contractor: **H2O**

Logged By: **B.Monek**
 Checked By: **C.Mac Hunter**
 Date Started: **23-7-05**
 Date Finished: **24-7-05**

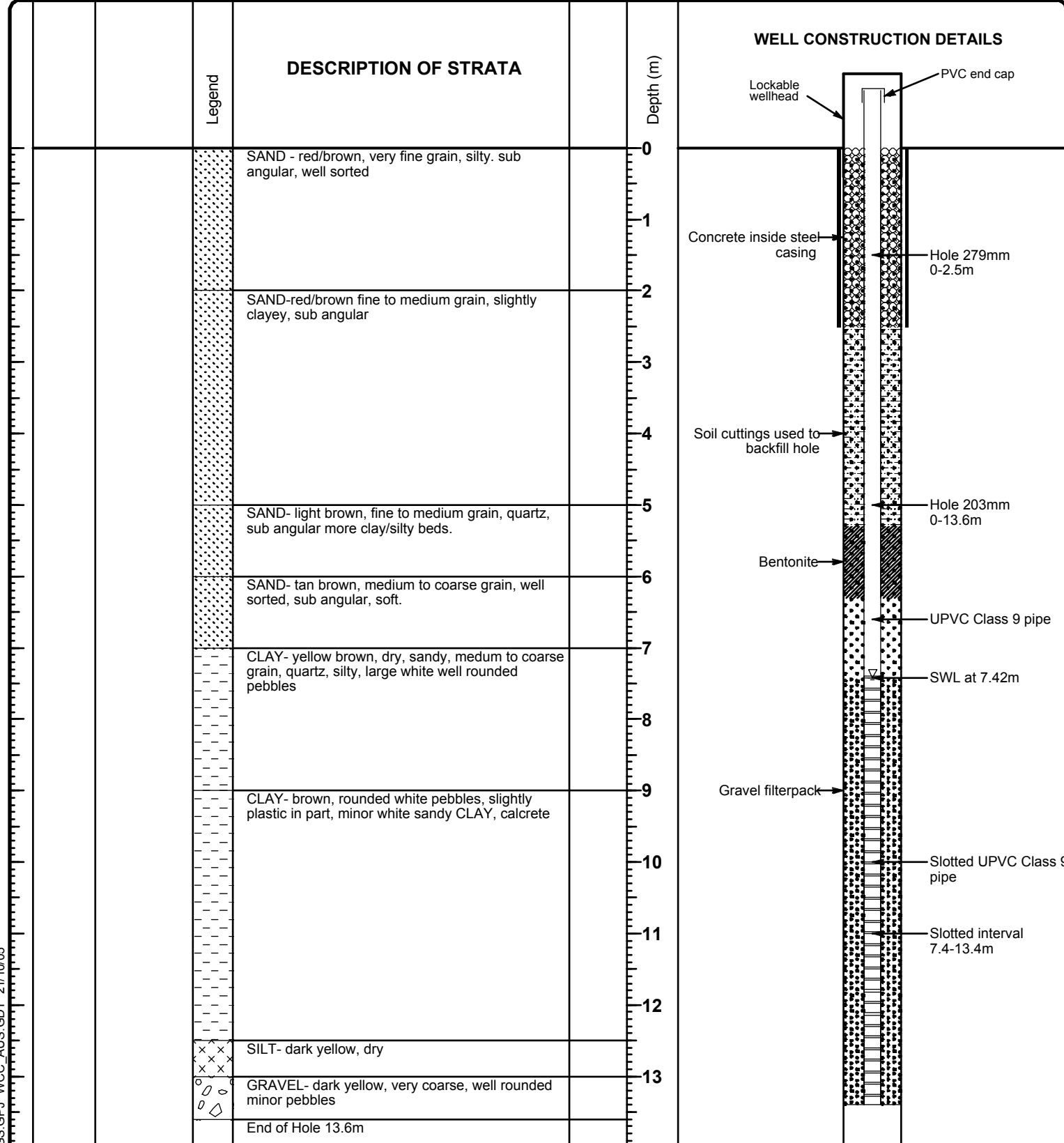
Bore Size: **203 mm**
 Hole Angle: **90 deg.**
 Orientation: **0 deg.**

Project: McArthur River
Project No. 42213689

Project Reference: **McArthur River Mine Groundwater Investigation**
 Client: **McArthur River Mining**

Relative Level: **31.47mAHD**
 Coordinates: **8180562.44 mN**
615715.02 mE
 Permit No: **N/A**

Drill Type: **Rotary**
 Drill Model:
 Drill Fluid: **Mud**



WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_21/10/05

URS Australia

MONITORING WELL T4-2D

URS Australia Pty. Ltd. Phone 08 8980 2900
 Arkaba House, The Esplanade, Darwin, NT Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: McArthur River Mining

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **31.55m AHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8180678.13 mN**

Drill Model:

Date Started: **6-9-05**

Orientation: **0 deg.**

615643.75 mE

Drill Fluid: **Mud**

Date Finished: **7-9-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

Depth (m)

0 SAND-brown,loam,moist,topsoil,minor vegetation,soft,very fine to medium grained

1

2 As above,trace calcrete

3

4

5 SAND/CLAY-cream/brown,calcrete,hard nodules,fine to medium grained

6

7 GRAVEL- angular to sub angular pebbles and gravel up to 1mm in a fine grained sand,clay matrix

8

9

10 PEBBLES- sub angular to rounded pebbles,coarsening downwards and getting rounder,quartz

11 GRAVEL- fine to medium grained,angular to sub rounded

12

13 DOLOMITE- grey/brown,silicouse,minor quartz veining,weathered bedrock

14

15

16

17

18

19

20

21

22

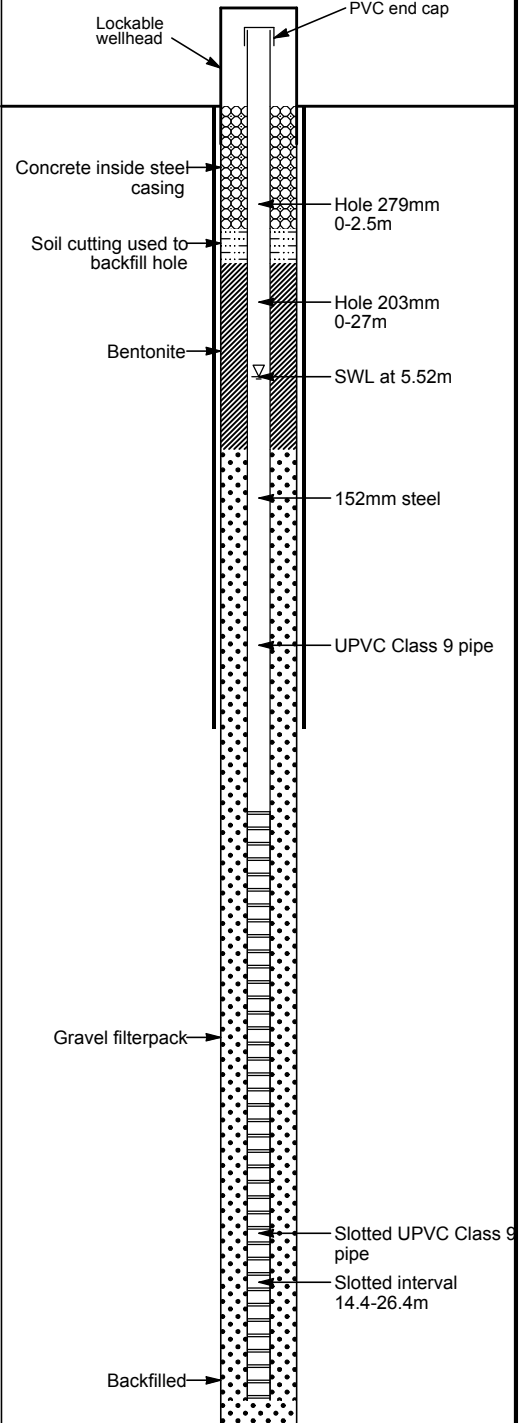
23

24

25

26

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T4-2S

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT
Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: McArthur River Mining

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **31.43m AHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8180676.22 mN**

Drill Model:

Date Started: **7-9-05**

Orientation: **0 deg.**

615641.06 mE

Drill Fluid: **Mud**

Date Finished: **7-9-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

Depth (m)

0 SAND-brown, loam, moist, topsoil, minor vegetation, soft, very fine to medium grained

1

2 As above, trace calcrete

3

4

5 SAND/CLAY-cream/brown, calcrete, hard nodules, fine to medium grained

6

7 GRAVEL- angular to sub angular pebbles and gravel up to 1mm in a fine grained sand, clay matrix

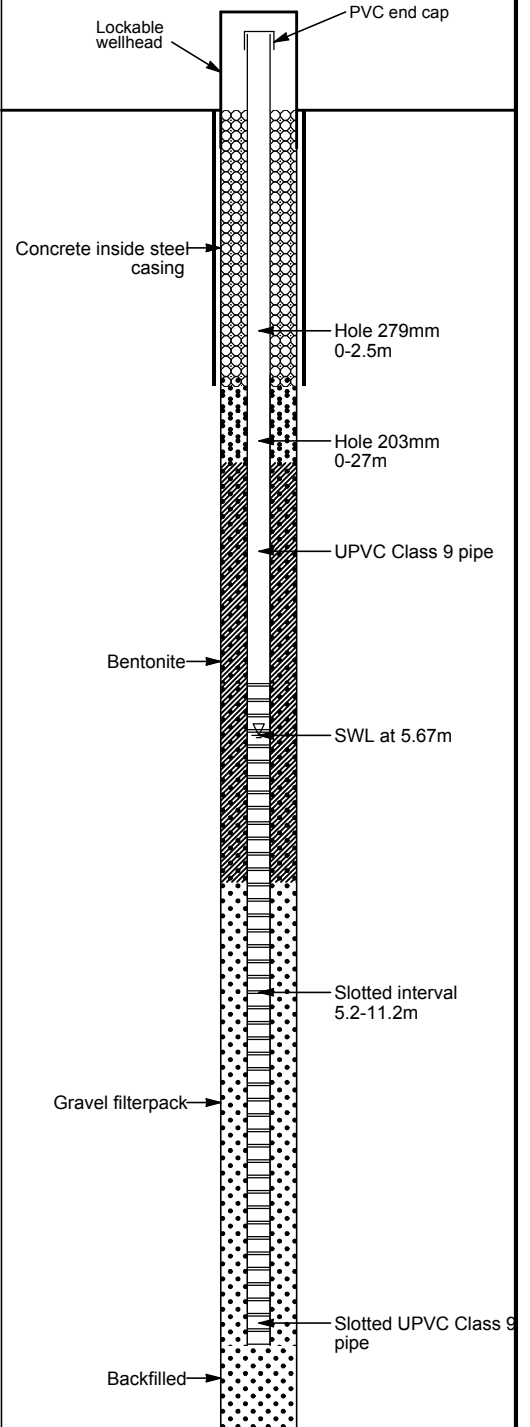
8

9 PEBBLES- sub angular to rounded pebbles, coarsening downwards and getting rounder, quartz

10 GRAVEL- fine to medium grained, angular to sub rounded

11

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T4-3D

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT
Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: McArthur River Mining

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **32.22m AHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8180470.97 mN**

Drill Model:

Date Started: **8-9-05**

Orientation: **0 deg.**

615784.84 mE

Drill Fluid: **Mud**

Date Finished: **9-9-05**

Permit No: **N/A**

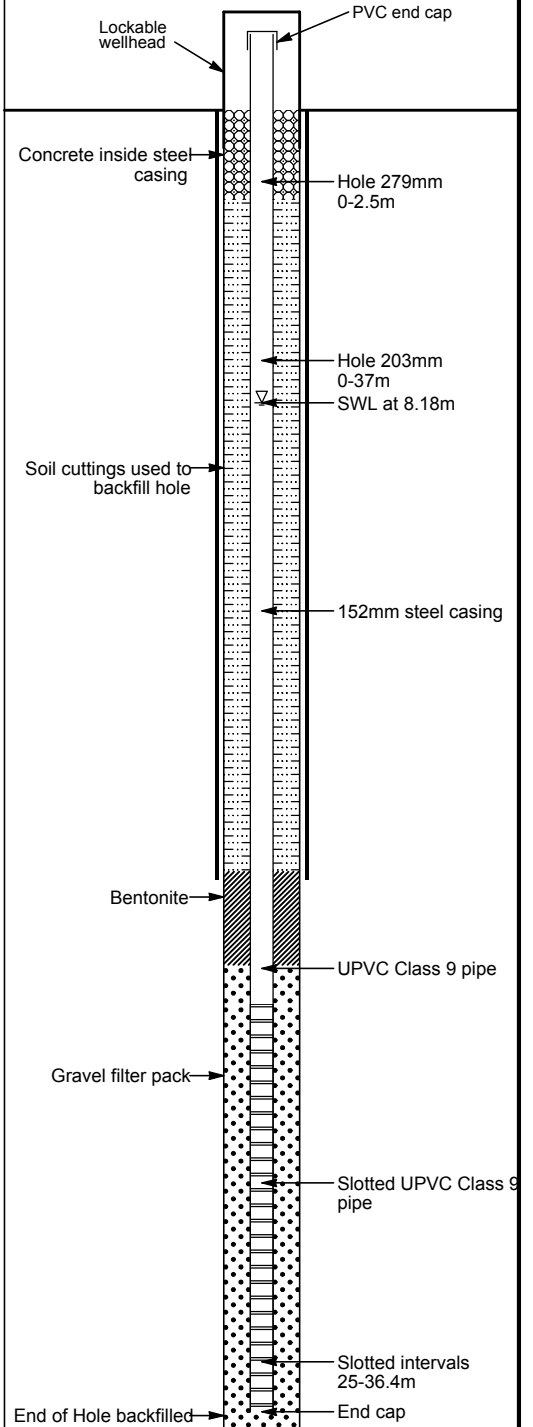
Legend

DESCRIPTION OF STRATA

Depth (m)

0-6	SAND-brown,loam,moist,topsoil,soft,very fine to medium grained
6-7	As above,trace calcrete
7-10	SAND/CLAY-cream/brown,calcrete,hard nodules,fine to medium grained
10-14	GRAVEL- angular to sub angular pebbles and gravel up to 1mm in a fine grained sand,clay matrix
14-18	GRAVEL- sub angular to rounded pebbles,coarsening downwards and getting rounder,quartz
18-20	SAND/CLAY- grey/brown,very fine to medium grained,soft
20-22	GRAVEL- fine to medium grained,angular to sub rounded
22-26	DOLOMITE- grey/brown,siliceous,minor quartz veining,weathered bedrock
26-30	DOLOMITE- grey,shale shearing,very fine grained
30-36	BEDROCK/DOLOMITE- grey,significant fracturing,iron oxide on fractures

WELL CONSTRUCTION DETAILS



WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_29/11/05

URS Australia

MONITORING WELL T4-3S

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT
Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: McArthur River Mining

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **32.30mAHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8180472.21 mN**

Drill Model:

Date Started: **9-9-05**

Orientation: **0 deg.**

615786.46 mE

Drill Fluid: **Mud**

Date Finished: **9-9-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

Depth (m)

WELL CONSTRUCTION DETAILS

Lockable wellhead
PVC end cap

Concrete inside steel casing

Hole 279mm/ 0-2.5m

152mm steel casing

203mm hole 0-20.7m

Soil cuttings used to backfill hole

UPVC Class 9 pipe

SWL at 8.49m

Bentonite

SAND-brown,loam,moist,topsoil,minor vegetation,soft,very fine to medium grained

As above,trace calcrete

SAND/CLAY-cream/brown,calcrete,hard nodules,fine to medium grained

GRAVEL- angular to sub angular pebbles and gravel up to 1mm in a fine grained sand,clay matrix

GRAVEL- sub angular to rounded pebbles, coarsening downwards end getting rounder,quartz

SAND/CLAY- grey/brown,very fine to medium grained,soft

GRAVEL- fine to medium grained,angular to sub rounded

Gravel filterpacked

Slotted UPVC Class 9 pipe

Slotted interval 13.8 - 19m

EOH backfilled

WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_29/11/05

URS Australia

MONITORING WELL T4-4D

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT
Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: McArthur River Mining

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **33.02m AHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8180405.89 mN**

Drill Model:

Date Started: **10-9-05**

Orientation: **0 deg.**

615847.02 mE

Drill Fluid: **Mud**

Date Finished: **11-9-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

Depth (m)

TOPSOIL/LOAM- dark brown, clay rich, very fine to medium grained

CLAY/SAND- cream/tan, weathered zone, minor calcrite in zones, iron oxides

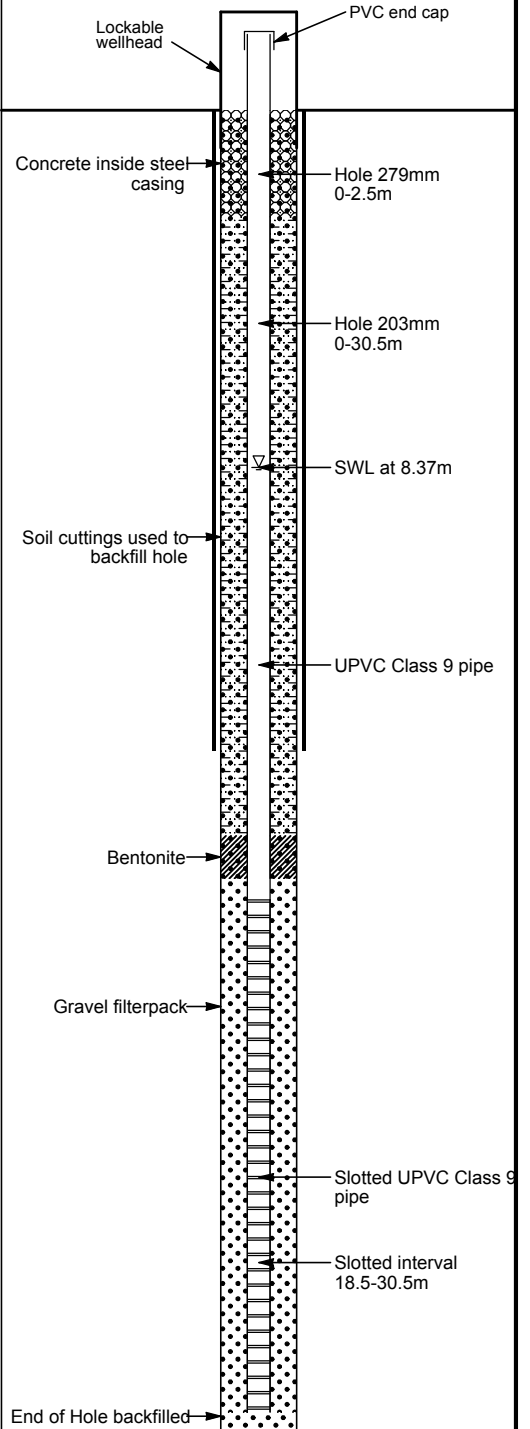
CLAY/SAND- light brown/tan, gravel up to 25mm, coarsening downwards, very fine to coarse grained

DOLOMITE- grey/brown/tan, highly weathered, soft and brittle

DOLOMITE- grey/brown, massive significant fracturing, iron oxides on surfaces, minor quartz veining

DOLOMITE- grey, hard, minor weathered zones, fractured bedrock minor iron oxide along fractures

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T4-4S

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT
Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: McArthur River Mining

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **32.98mAHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8180407.09 mN**

Drill Model:

Date Started: **11-9-05**

Orientation: **0 deg.**

615848.01 mE

Drill Fluid: **Mud**

Date Finished: **11-9-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

TOPSOIL/LOAM- dark brown, clay rich, very fine to medium grained

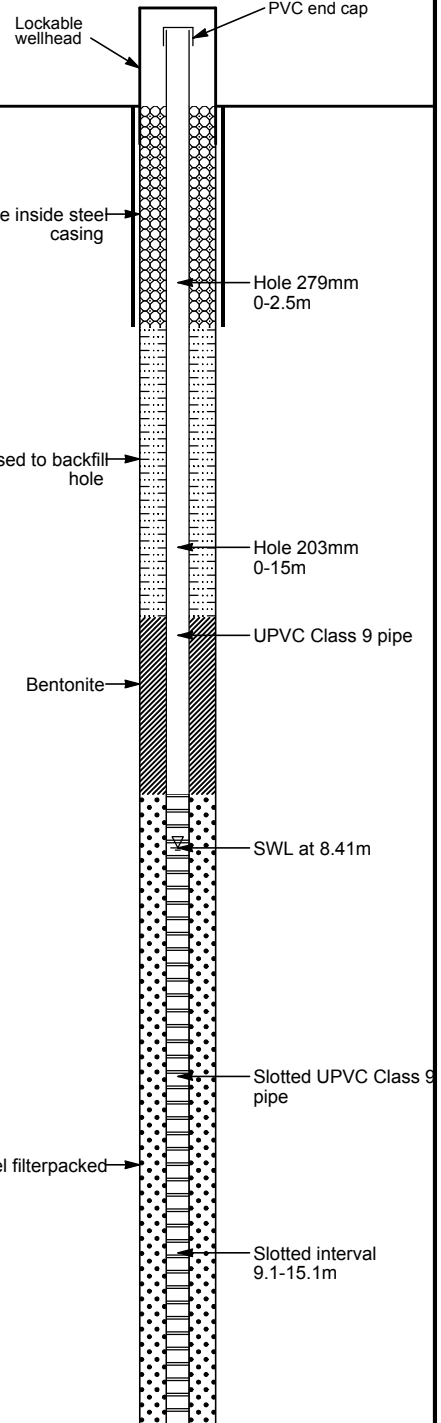
CLAY/SAND- cream/tan, weathered zone, minor calcrete in zones, iron oxides

SAND/PEBBLES- light brown/tan, gravel up to 25mm, coarsening downwards, very fine to coarse grained

BEDROCK- weathered

Depth (m)

WELL CONSTRUCTION DETAILS



WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_29/11/05

URS Australia

MONITORING WELL T5-1

URS Australia Pty. Ltd. Phone 08 8980 2900
 Arkaba House, The Esplanade, Darwin, NT Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H20**

Project No. 42213689

Client: **McArthur River Mining**

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **31.36**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8182657.13 mN**

Drill Model:

Date Started: **12-9-05**

Orientation: **0 deg.**

617780.34 mE

Drill Fluid: **Mud**

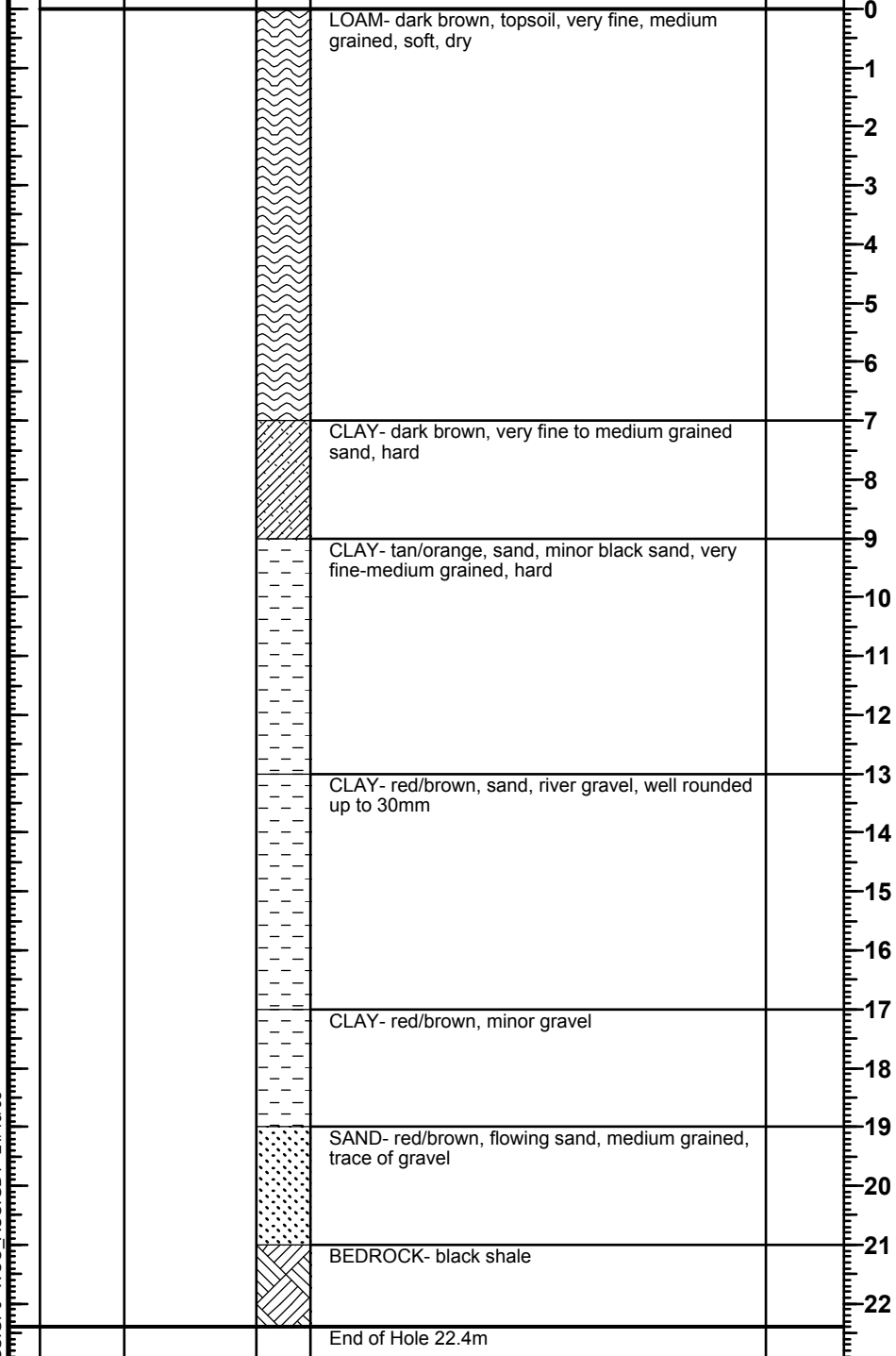
Date Finished: **13-9-05**

Permit No: **N/A**

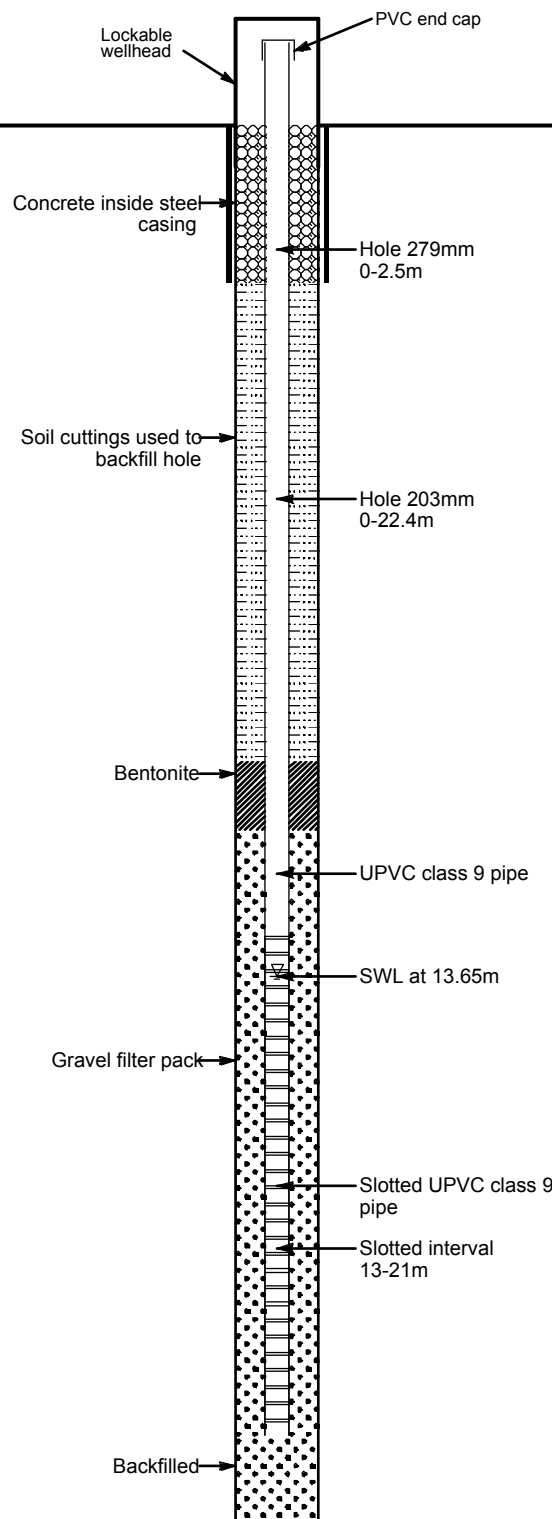
Legend

DESCRIPTION OF STRATA

Depth (m)



WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T5-2

URS Australia Pty. Ltd. Phone 08 8980 2900
 Arkaba House, The Esplanade, Darwin, NT Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H20**

Project No. 42213689

Client: **McArthur River Mining**

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level:

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8182539.31 mN**

Drill Model:

Date Started: **13-9-05**

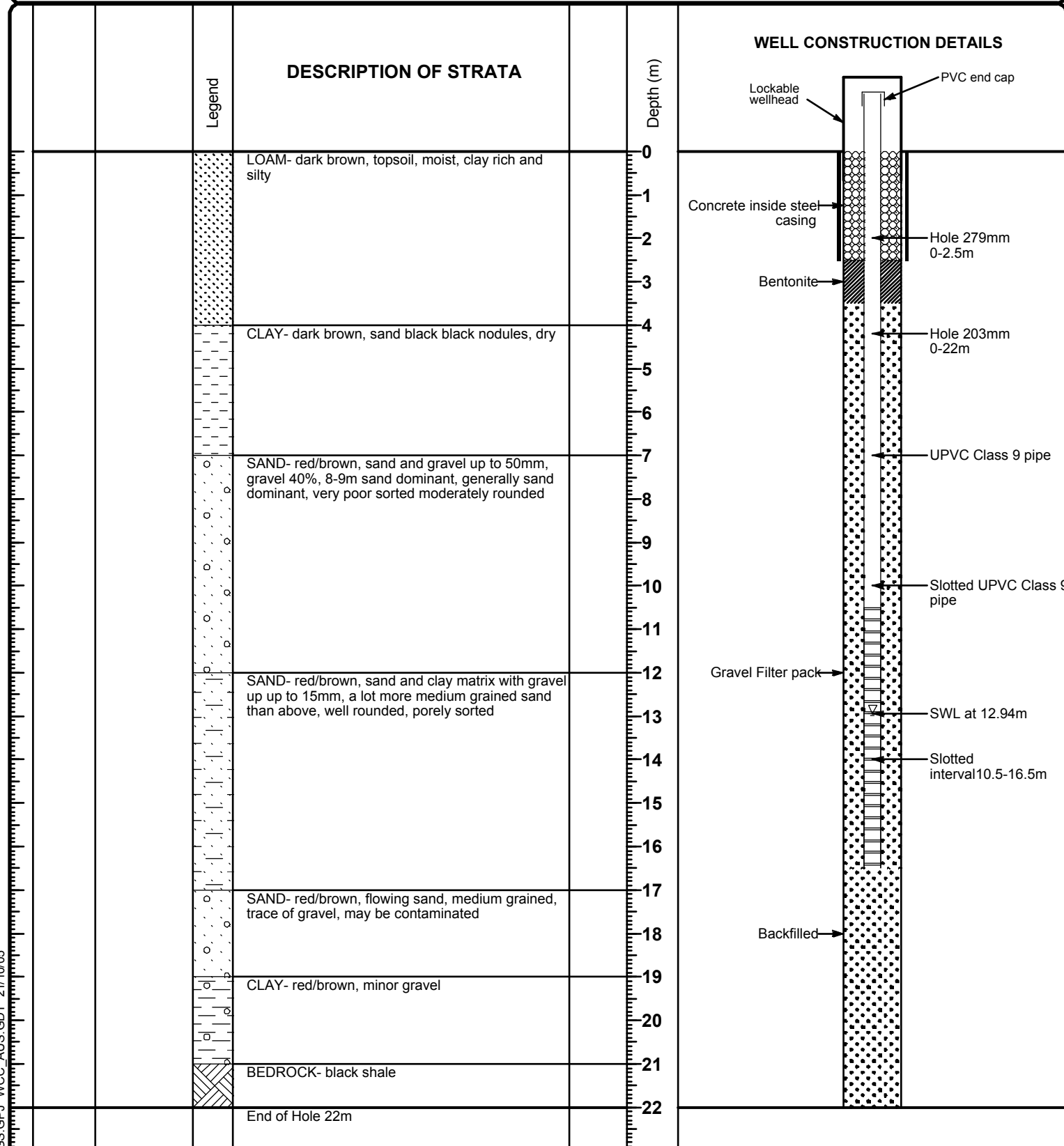
Orientation: **0 deg.**

617797.27 mE

Drill Fluid: **Mud**

Date Finished: **14-9-05**

Permit No: **N/A**



WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_21/10/05

URS Australia

MONITORING WELL T5-3

URS Australia Pty. Ltd. Phone 08 8980 2900
 Arkaba House, The Esplanade, Darwin, NT Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: McArthur River Mining

Logged By: **B.Monek** Bore Size: **203 mm**

Relative Level: **30.23mAHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter** Hole Angle: **90 deg.**

Coordinates: **8182391.17 mN**

Drill Model:

Date Started: **14-9-05** Orientation: **0 deg.**

617788.28 mE

Drill Fluid: **Mud**

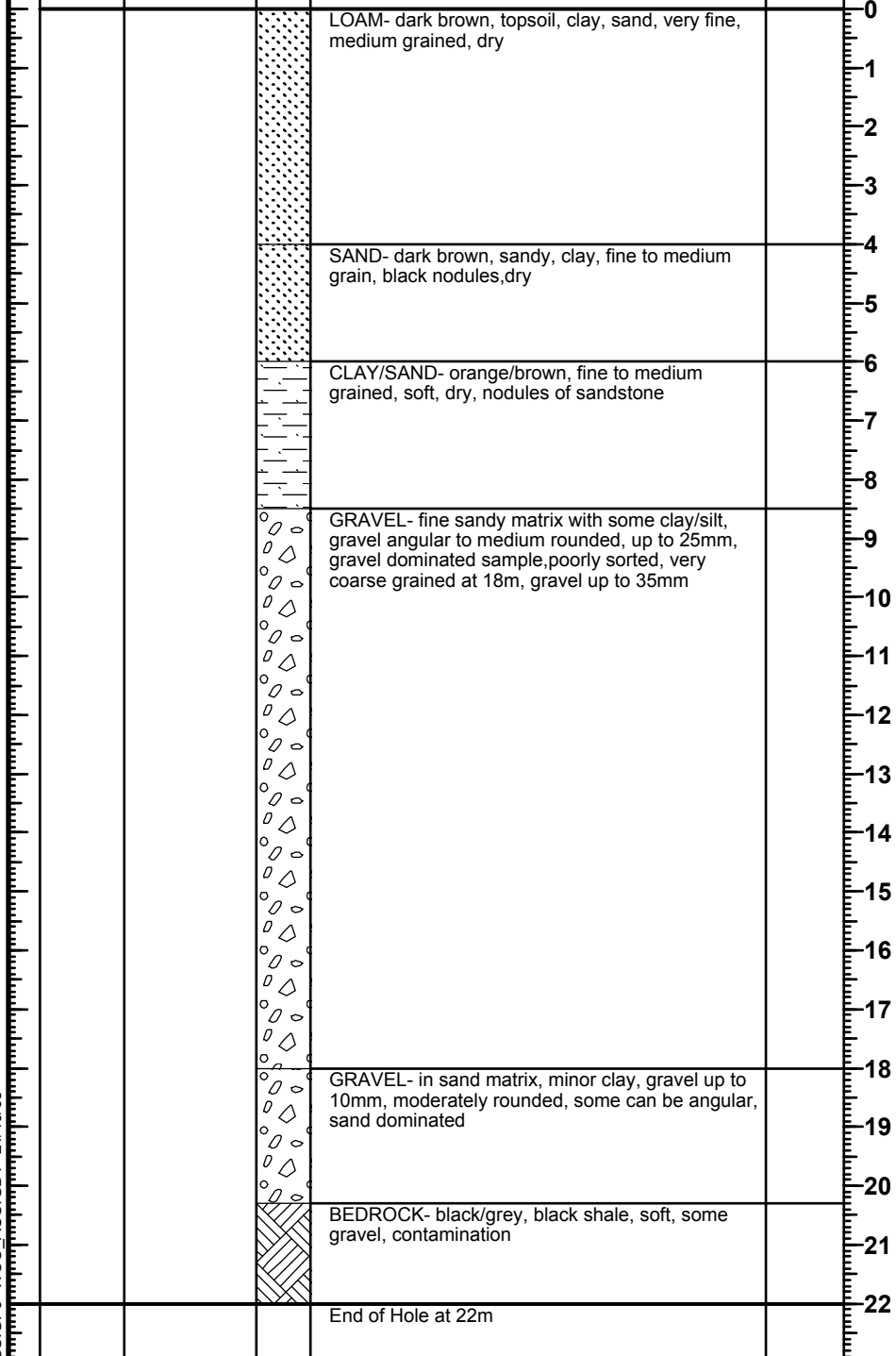
Date Finished: **15-9-05**

Permit No: **N/A**

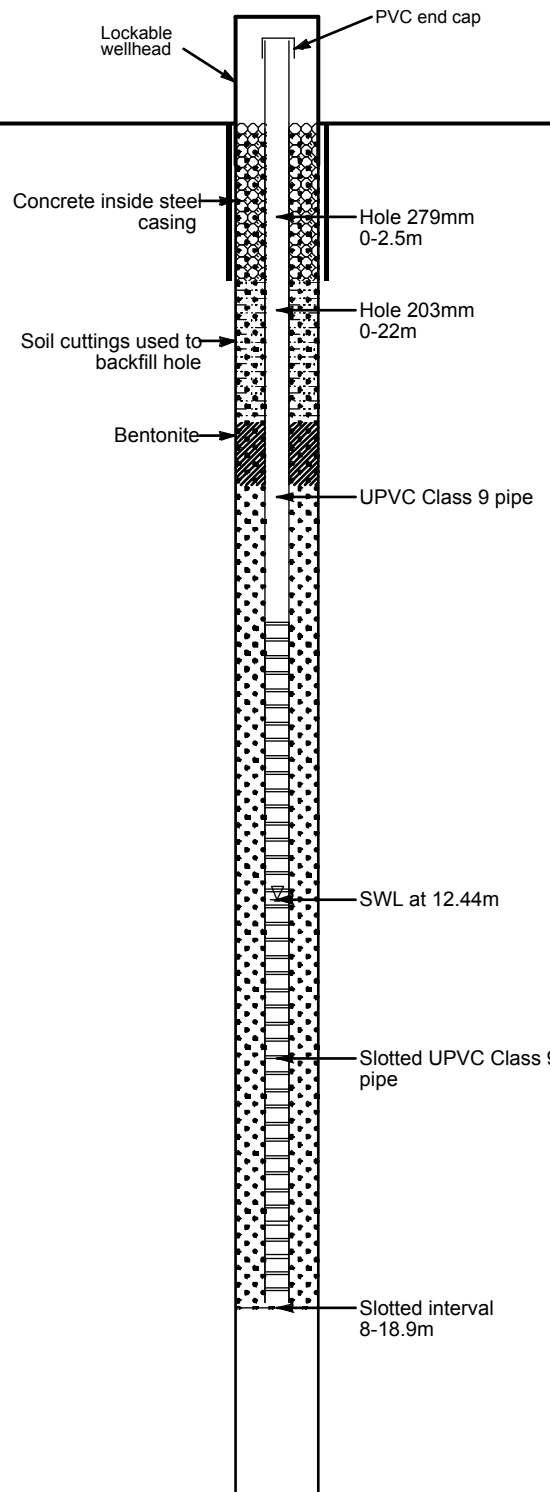
Legend

DESCRIPTION OF STRATA

Depth (m)



WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T5-4

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: **McArthur River Mining**

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **31.23mAHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8182259.34 mN**

Drill Model:

Date Started: **15-9-05**

Orientation: **0 deg.**

617730.22 mE

Drill Fluid: **Mud**

Date Finished: **16-9-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

Depth (m)

CLAY/SAND- dark brown, loam/topsoil, very fine, medium grained

CLAY- dark brown hard clay and sand, clay dominant

SAND- tan/orange, fine grained sand with clay, nodules of calcrete

SAND- tan/orange, fine grained sand, some clumps of sandstone, pebbles

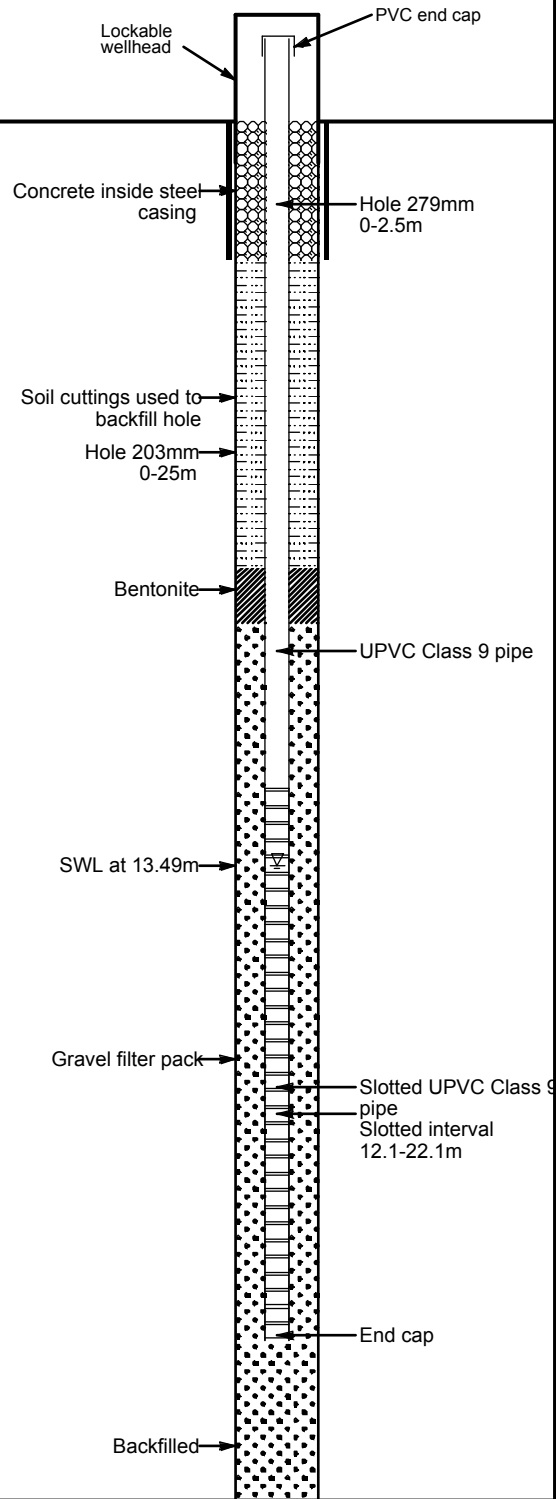
GRAVEL/SAND- brown, becoming more gravel dominant with depth

GRAVEL- gravel dominant up to 20cm, some sand, fine grained, losing water had to get another truck, sub angular to rounded

BEDROCK- black shale

End of Hole 25m

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T5-6

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: **McArthur River Mining**

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **28.62mAHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8181984.16 mN**

Drill Model:

Date Started: **17-9-05**

Orientation: **0 deg.**

617675.65 mE

Drill Fluid: **Mud**

Date Finished: **17-9-05**

Permit No: **N/A**

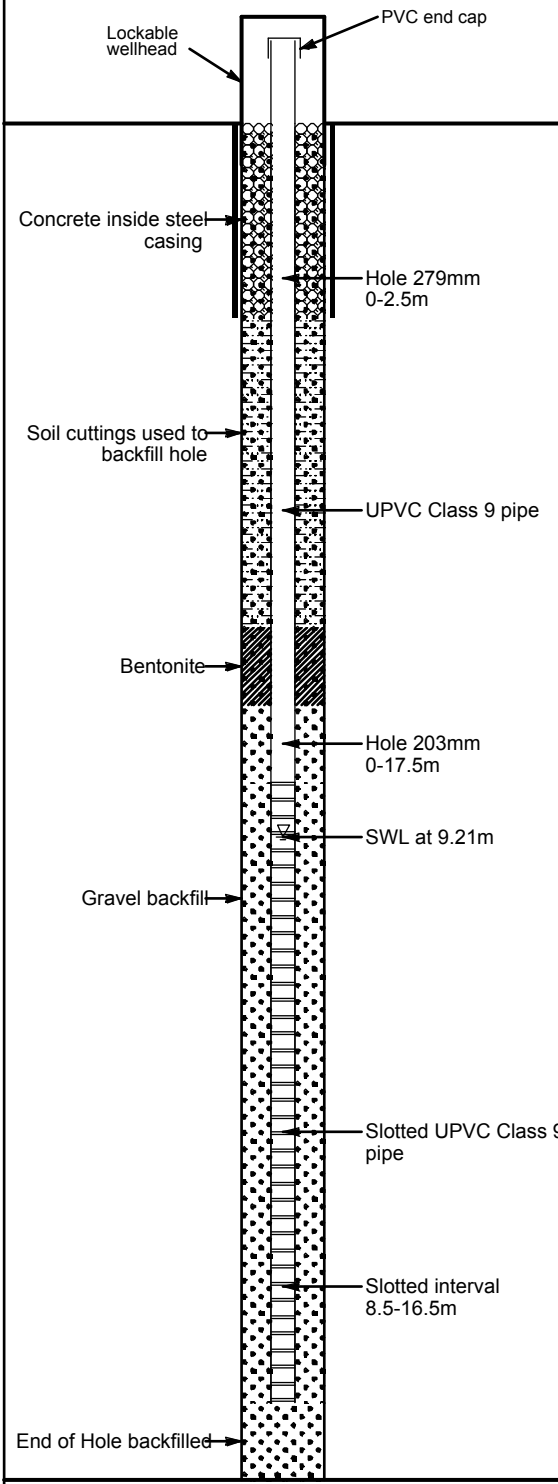
Legend

DESCRIPTION OF STRATA

Depth (m)

x x x x	LOAM- dark brown, topsoil, very fine grained, soft	0
- - - -	CLAY- brown, very fine grained, dry, hard, black nodules, trace gypsum	1
. . . .	SAND- orange/brown, very fine sand grained, <20% clay component	5
- - - -	CLAY- brown/grey, moist soft, very fine grained, clumps	9
/ / / /	BEDROCK- grey/brown, weathered, soft, weathered shale	15
/ / / /	BEDROCK- black, shale	17
	End of Hole 17.5m	18

WELL CONSTRUCTION DETAILS



WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_21/10/05

URS Australia

MONITORING WELL T5-7

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Client: McArthur River Mining

Drilling Contractor: **H2O**

Project No. 42213689

Logged By: **B.Monek**

Bore Size: **203 mm**

Relative Level: **30.65mAHD**

Drill Type: **Rotary**

Checked By: **C.Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8181866.31 mN**

Drill Model:

Date Started: **18-9-05**

Orientation: **0 deg.**

617562.25 mE

Drill Fluid: **Mud**

Date Finished: **18-9-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

Depth (m)

CLAY- dark brown

SAND- orange/brown, very fine grained sand, minor clay content, some calcrete nodules

SAND- orange/brown, very fine grained sand, medium clay content, some calcrete nodules

SAND- orange/brown, very fine to medium grained, rounded well sorted, some clay dominant clay zonzess present

GRAVEL- brown, sand and traces of clay, gravel up to 35mm, very poorly sorted, sub angular to rounded

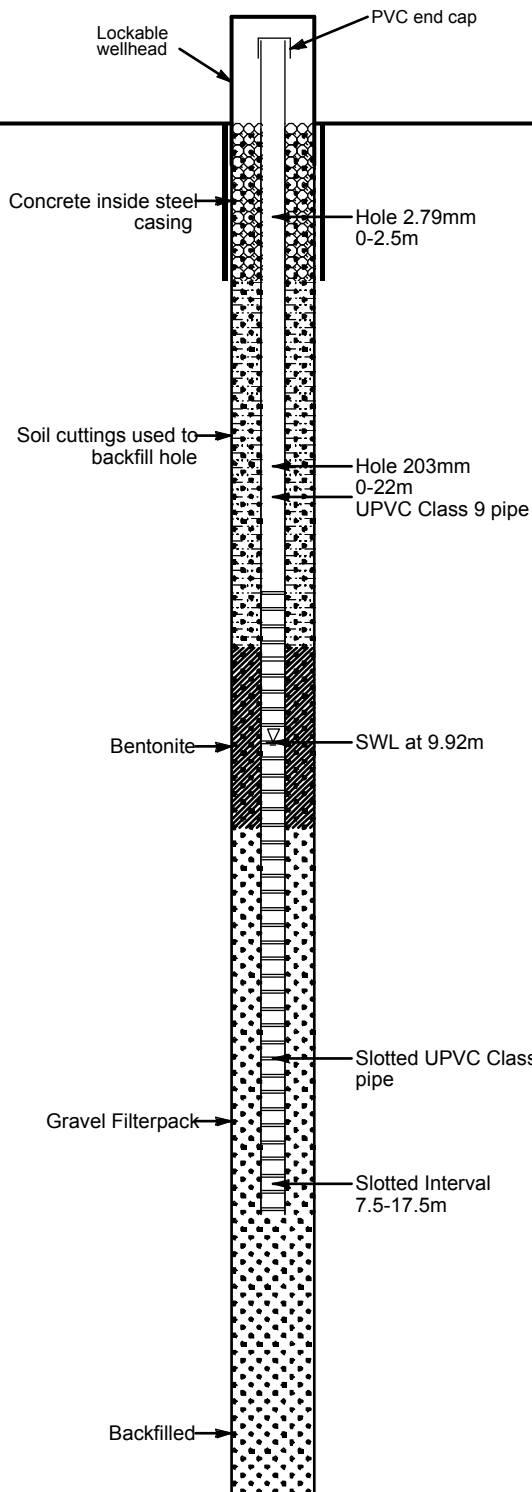
SAND- brown, sand and gravel up to 10mm, angular to sub rounded, poorly sorted, sand dominated

CLAY- grey, gravel, some sand present

SHALE- black, bedrock, weathered between 19-19.4m

End of Hole 22m

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T5-8

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: **McArthur River Mining**

Logged By: **D. Lacey**

Bore Size: **203 mm**

Relative Level: **30.40mAHD**

Drill Type: **Rotary**

Checked By:

Hole Angle: **90 deg.**

Coordinates: **8181832.33 mN**

Drill Model:

Date Started:

Orientation: **0 deg.**

617401.10 mE

Drill Fluid: **Mud**

Date Finished:

Permit No: **N/A**

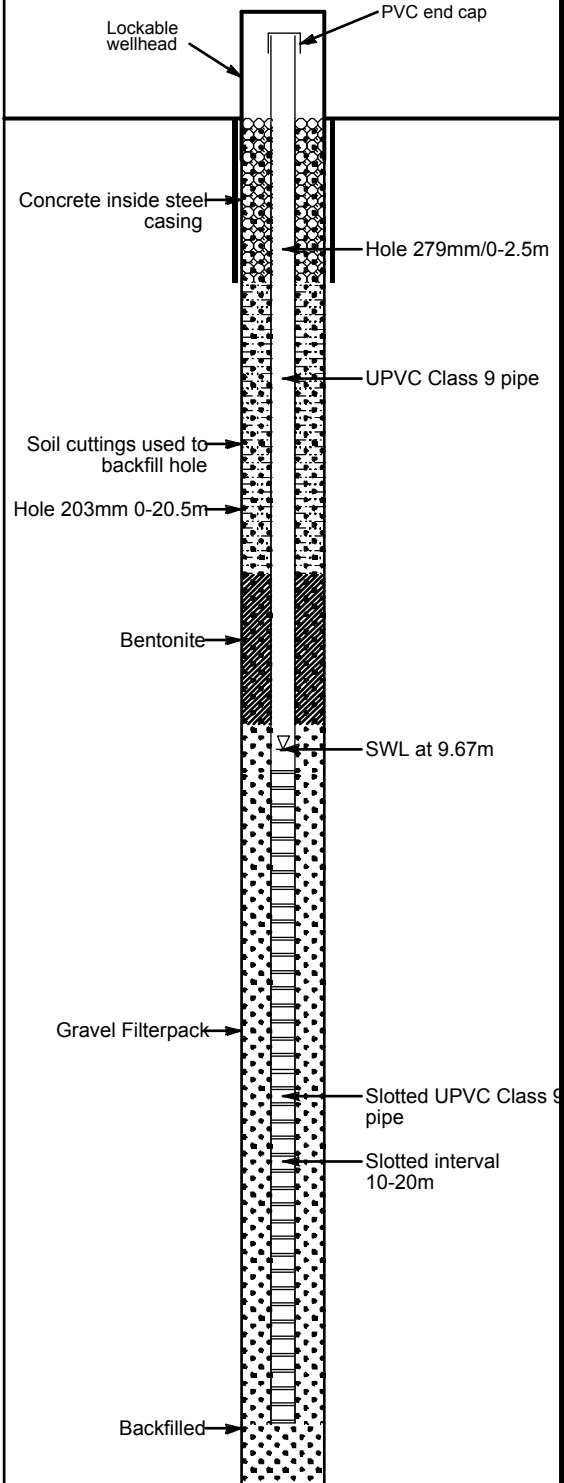
Legend

DESCRIPTION OF STRATA

Depth (m)

CLAY- brown, topsoil, silty, low plasticity	0
CLAY- brown, topsoil, silty, low plasticity, consolidated, brittle	2
CLAY- brown, topsoil, silty, low plasticity	6
CLAY- brown, topsoil, silty, low plasticity, consolidated, brittle	8
CLAY- as above with white sandstone, medium grained	10
CLAY- brown/green, soft, low plasticity, some brittle	10
GRAVEL- white/blue/brown, river shingles, coarse grained, mostly rounded pebbles (2cm), brown white quartz, minor clay increasing	12
CLAY- red/brown, silt, minor brown gravels	14
CLAY- as above with low plasticity	18
CLAY- red/brown, minor gravel, soft	19
BEDROCK- black shale	21
End of Hole 21m	21

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T5-9

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Client: McArthur River Mining

Drilling Contractor: **H2O**

Project No. 42213689

Logged By: **D. Lacey**

Bore Size: **203 mm**

Relative Level: **32.42mAHD**

Drill Type: **Rotary**

Checked By: **C. Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8181866.35 mN**

Drill Model:

Date Started: **23-9-05**

Orientation: **0 deg.**

617211.27 mE

Drill Fluid: **Mud**

Date Finished: **24-9-05**

Permit No: **N/A**

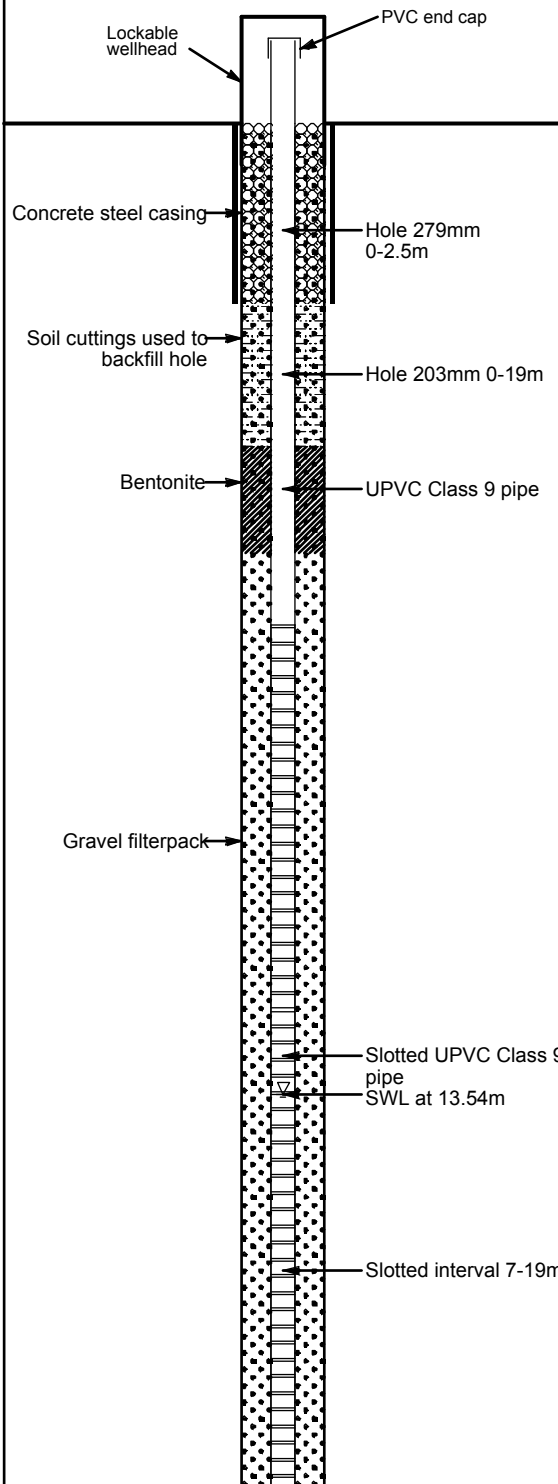
Legend

DESCRIPTION OF STRATA

Depth (m)

0	CLAY-brown/red, silty,soft,brittle,sandy
1	
2	CLAY/SAND/SILT- orange,clay soft,low plasticity,sand well sorted
3	
4	CLAY- brown,firm,brittle,minor silt
5	CLAY/SAND/ orange/brown,clay soft,firm,low plasticity to brittle,silty,some light green, sand/clay poorly sorted, weathered quartz, feldspar and minor sandstone
6	
7	
8	
9	CALCRETE- white,minor sand/clay,soft,low plasticity,sandstone poorly sorted moderately large calcrete particles,white,hard,brittle
10	
11	CLAY/CALCRETE- white,some moderate quartz,soft,medium plasticity
12	
13	
14	CLAY- brown, very sandy,soft,medium plasticity,sand and quartz moderately sorted
15	CLAY- brown,soft,medium plasticity
16	
17	
18	CLAY/BEDROCK- as above with hard dolomite,fine frained,quartz rich,dark mineral veins,white/grey going into fresh black bedrock
19	End of Hole 19m

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T6-1

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Client: McArthur River Mining

Drilling Contractor: **H2O**

Project No. 42213689

Logged By: **D. Lacey**

Bore Size: **203 mm**

Relative Level: **32.75mAHD**

Drill Type: **Rotary**

Checked By: **C. Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8180913.53 mN**

Drill Model:

Date Started: **28-9-05**

Orientation: **0 deg.**

616444.03 mE

Drill Fluid: **Mud**

Date Finished: **28-9-05**

Permit No: **N/A**

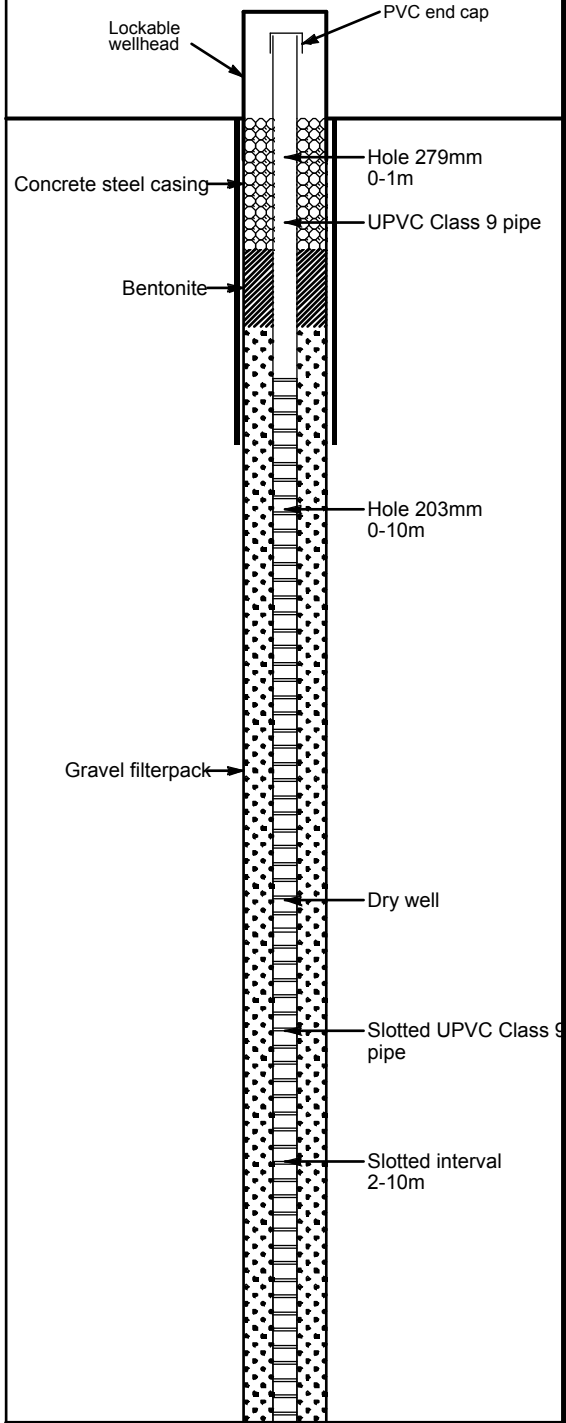
Legend

DESCRIPTION OF STRATA

Depth (m)

CLAY, low plasticity, brown, crumbly	0
Silty CLAY, slightly sandy, brown, fine grained sand	2
As above, well sorted fine grained, red sand	3
DOLOMITE, banded, green, hard	4
End of Hole 10m	10

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL T6-2

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Client: McArthur River Mining

Drilling Contractor: **H2O**

Project No. 42213689

Logged By: **D. Lacey**

Bore Size: **203 mm**

Relative Level: **37.68mAHD**

Drill Type: **Rotary**

Checked By: **C. Mac Hunter**

Hole Angle: **90 deg.**

Coordinates: **8180641.50 mN**

Drill Model:

Date Started: **29-9-05**

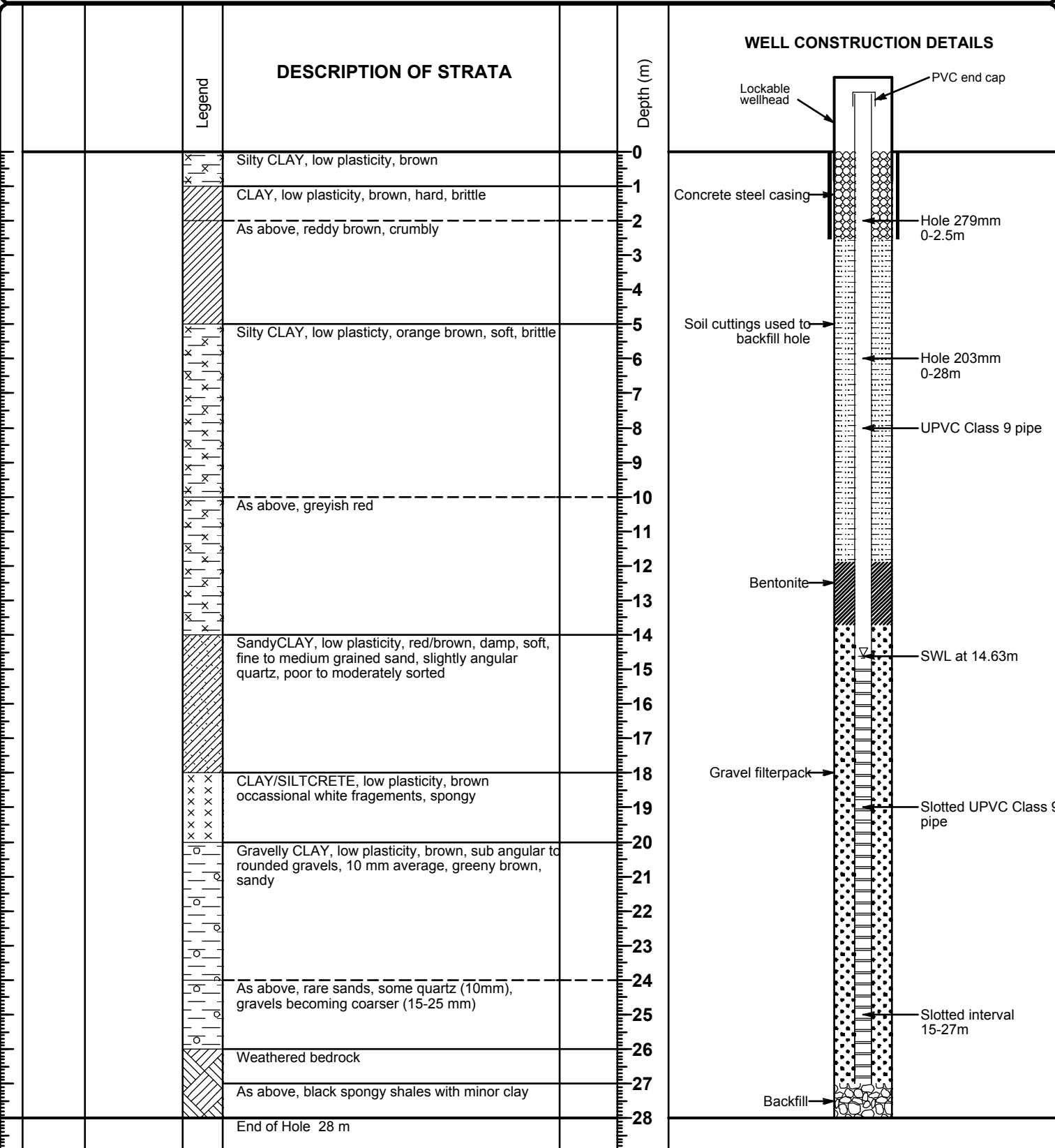
Orientation: **0 deg.**

616536.28 mE

Drill Fluid: **Mud**

Date Finished: **29-9-05**

Permit No: **N/A**



WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_21/10/05

URS Australia

MONITORING WELL GW24

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT
Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: McArthur River Mining

Logged By: **D. Lacey**

Bore Size: **203 mm**

Relative Level: **32.55m AHD**

Drill Type: **Rotary**

Checked By: **C. Mac Hunter**

Hole Angle: **deg.**

Coordinates: **8182767.68 mN**

Drill Model:

Date Started: **30-9-05**

Orientation: **deg.**

617603.10 mE

Drill Fluid: **Mud**

Date Finished: **1-10-05**

Permit No: **N/A**

Legend

DESCRIPTION OF STRATA

Depth (m)

0-1: Sandy CLAY, low plasticity, dark brown, fine grained sand, moderately sorted

1-3: Silty SAND, minor clay, red, fine grained, well sorted, slightly angular to slightly rounded

3-10: Silty Sandy CLAY, low plasticity, red, fine to medium grained sand, poor to moderately sorted, slightly angular to slightly rounded

10-14: As above, with gravels (15mm)

14-15: SAND, GRAVEL, CLAY, minor white weatehred siltcrete (?) fragments (3mm), poorly sorted sand, angular to slightly angular gravels, banded dolomite (5mm chips)

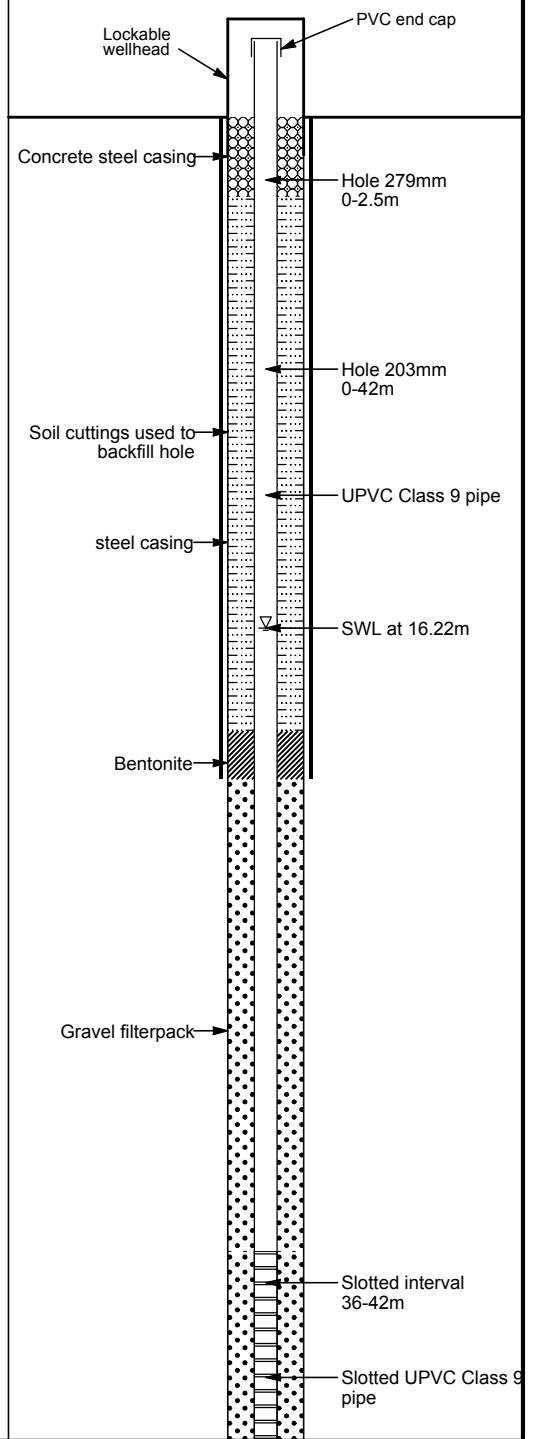
15-17: CLAY, with gravels, low plasticity, orangey brown, soft

17-20: CLAY (Weathered bedrock), low to moderate plasticity, orange- light brown, some grey and white, rare gravels, soft to slightly firm

20-21: As above, with black shale

21-22: SHALE (Bedrock), black, hard

WELL CONSTRUCTION DETAILS



URS Australia

MONITORING WELL GW25

URS Australia Pty. Ltd.
Arkaba House, The Esplanade, Darwin, NT

Phone 08 8980 2900
Fax 08 8941 3920

Project: McArthur River

Project Reference: McArthur River Mine Groundwater Investigation

Drilling Contractor: **H2O**

Project No. 42213689

Client: **McArthur River Mining**

Logged By: **D. Lacey**

Bore Size: **203 mm**

Relative Level: **32.51mAHD**

Drill Type: **Rotary**

Checked By: **C. Mac Hunter**

Hole Angle: **deg.**

Coordinates: **8182777.20 mN**

Drill Model:

Date Started: **2-10-05**

Orientation: **deg.**

617603.94 mE

Drill Fluid: **Mud**

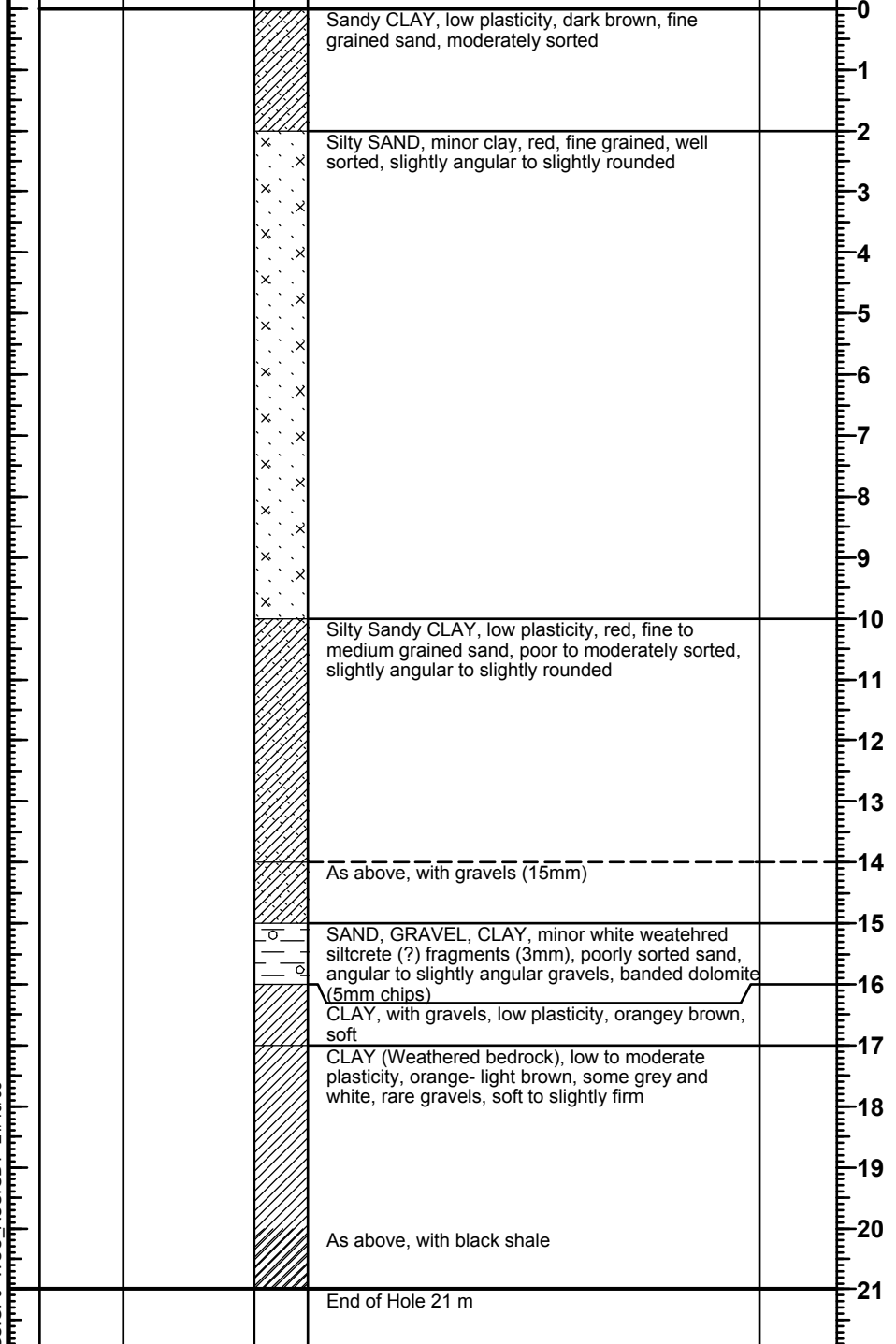
Date Finished: **2-10-05**

Permit No: **N/A**

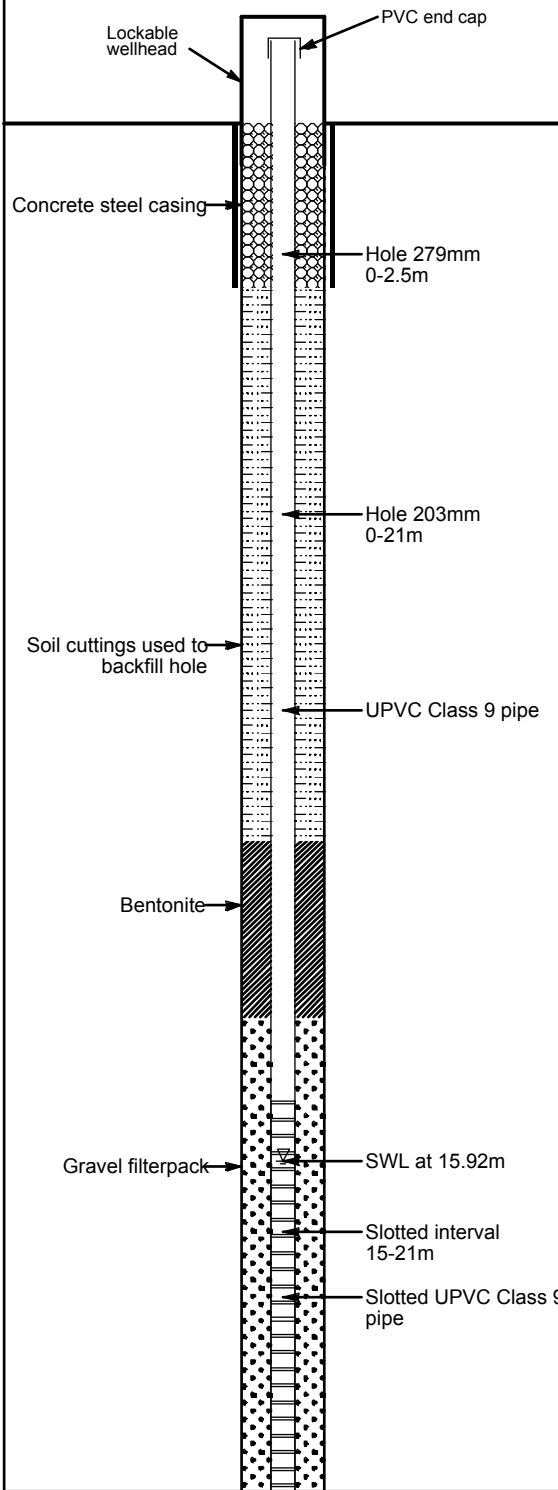
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DESCRIPTION OF STRATA

Depth (m)



WELL CONSTRUCTION DETAILS



WELL_MELB_BORELOGS.GPJ_WCC_AUS.GDT_21/10/05