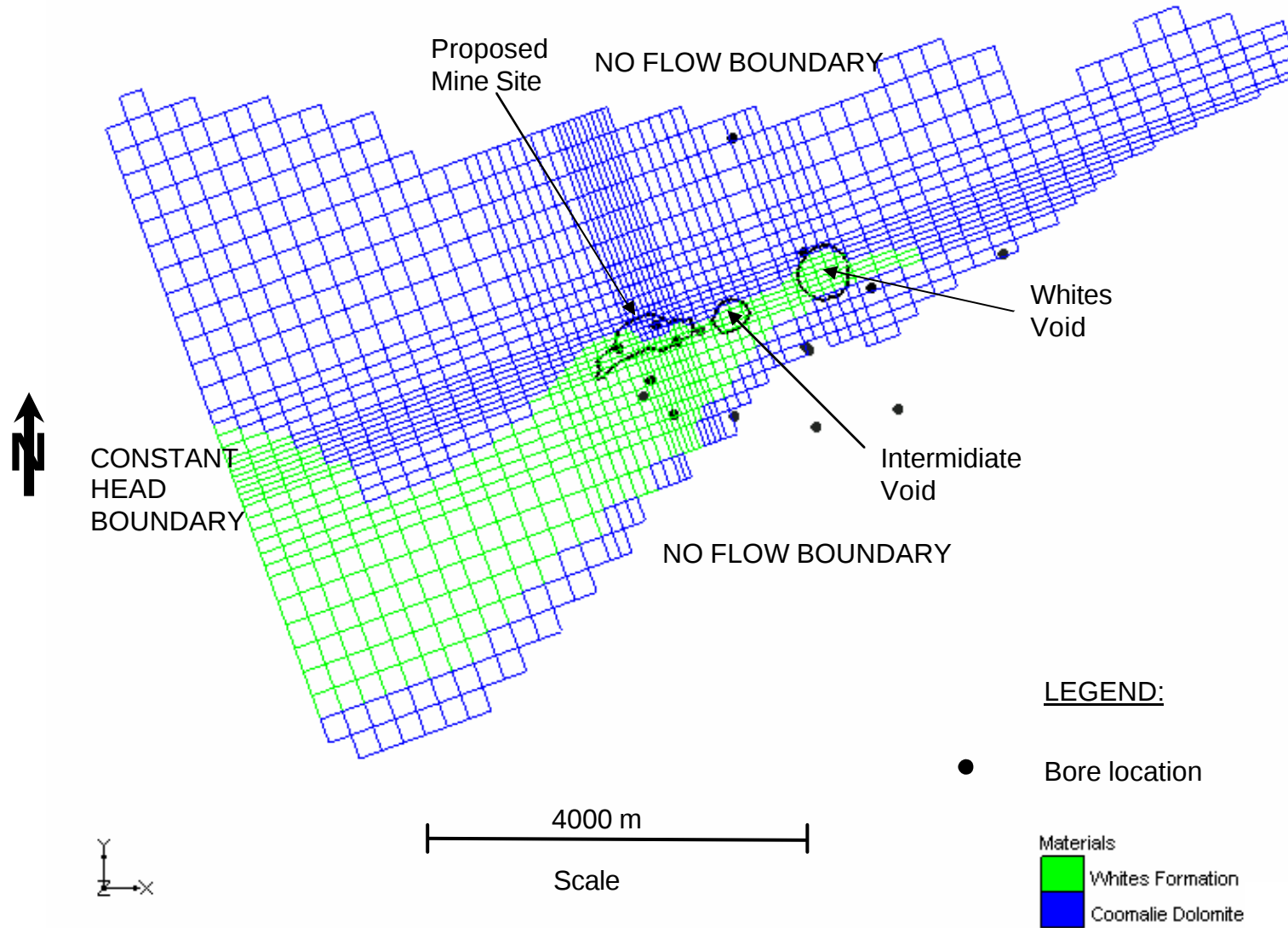
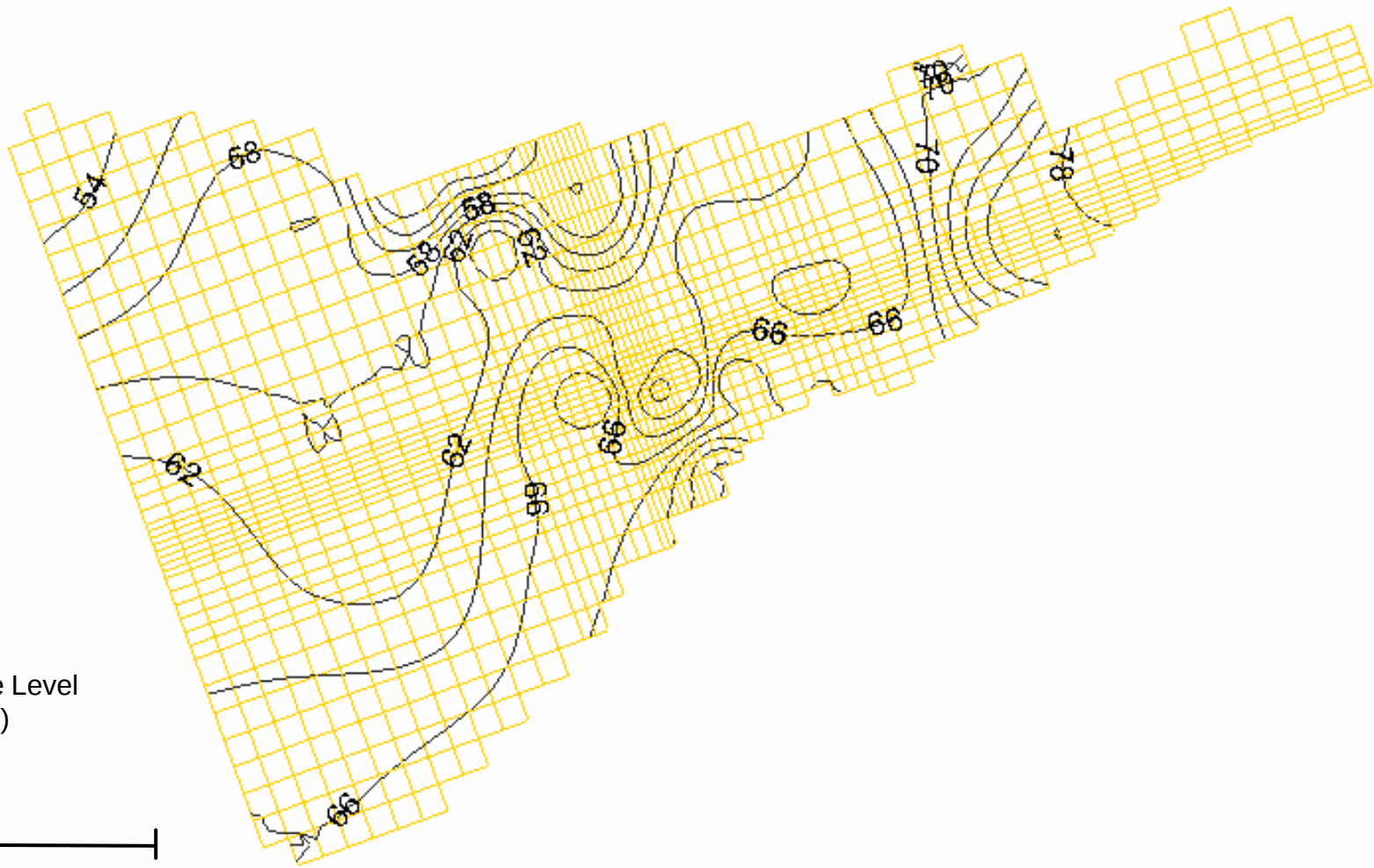




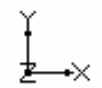
Coffey Geosciences Pty Ltd ACN 066 335 516		Geotechnical Resources Environmental Technical Project Management	
Drawn	DB	COMPASS RESOURCES NL BROWNS OXIDE PROJECT GROUNDWATER MODEL GROUNDWATER MODEL DEFINITION	FIGURE 1
Approved	RB		
Date	10 April 2006		Job no: B18183/2-AC
Scale	As shown		



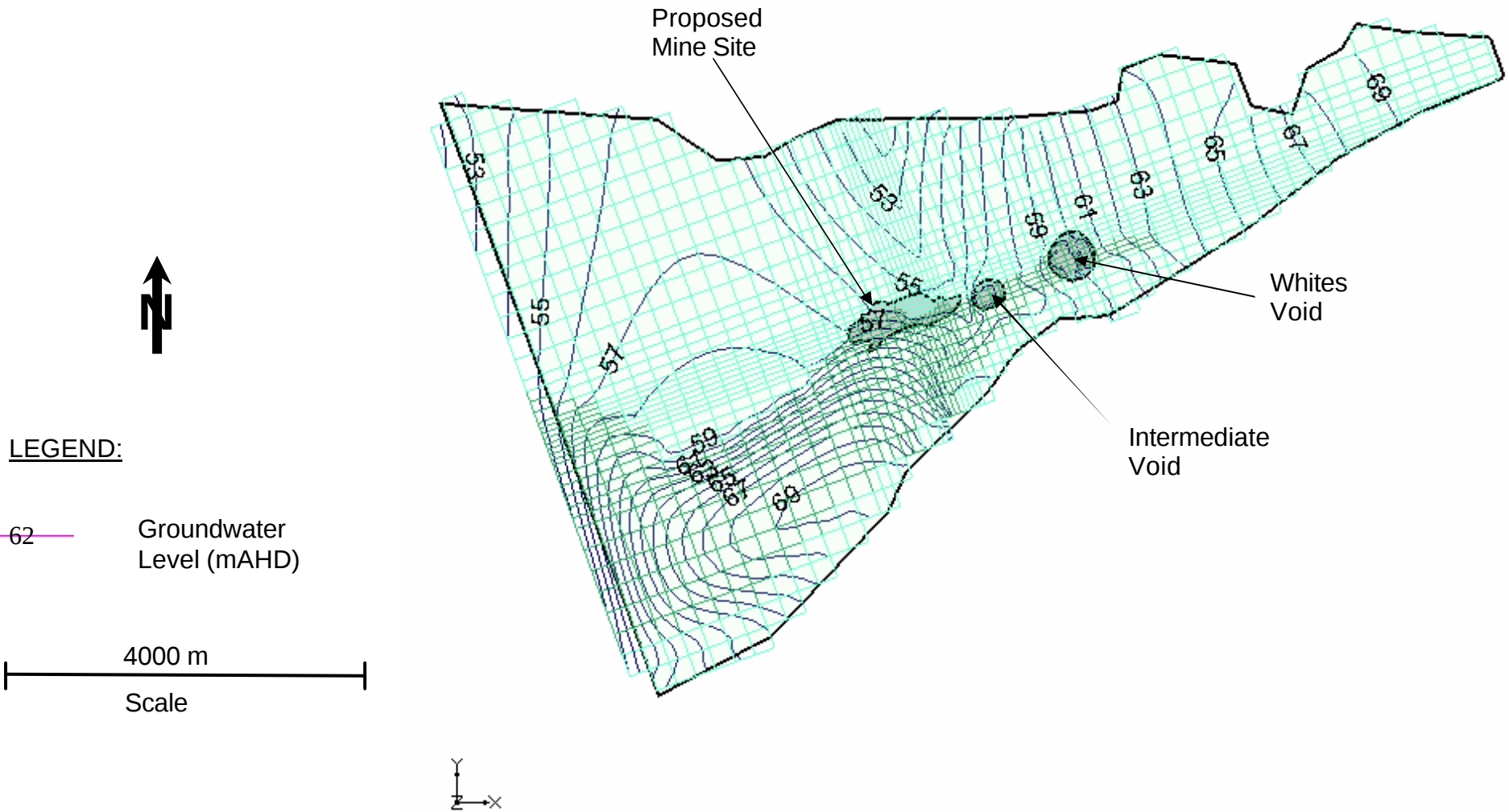
LEGEND:

— 62 — Surface Level (mAHD)

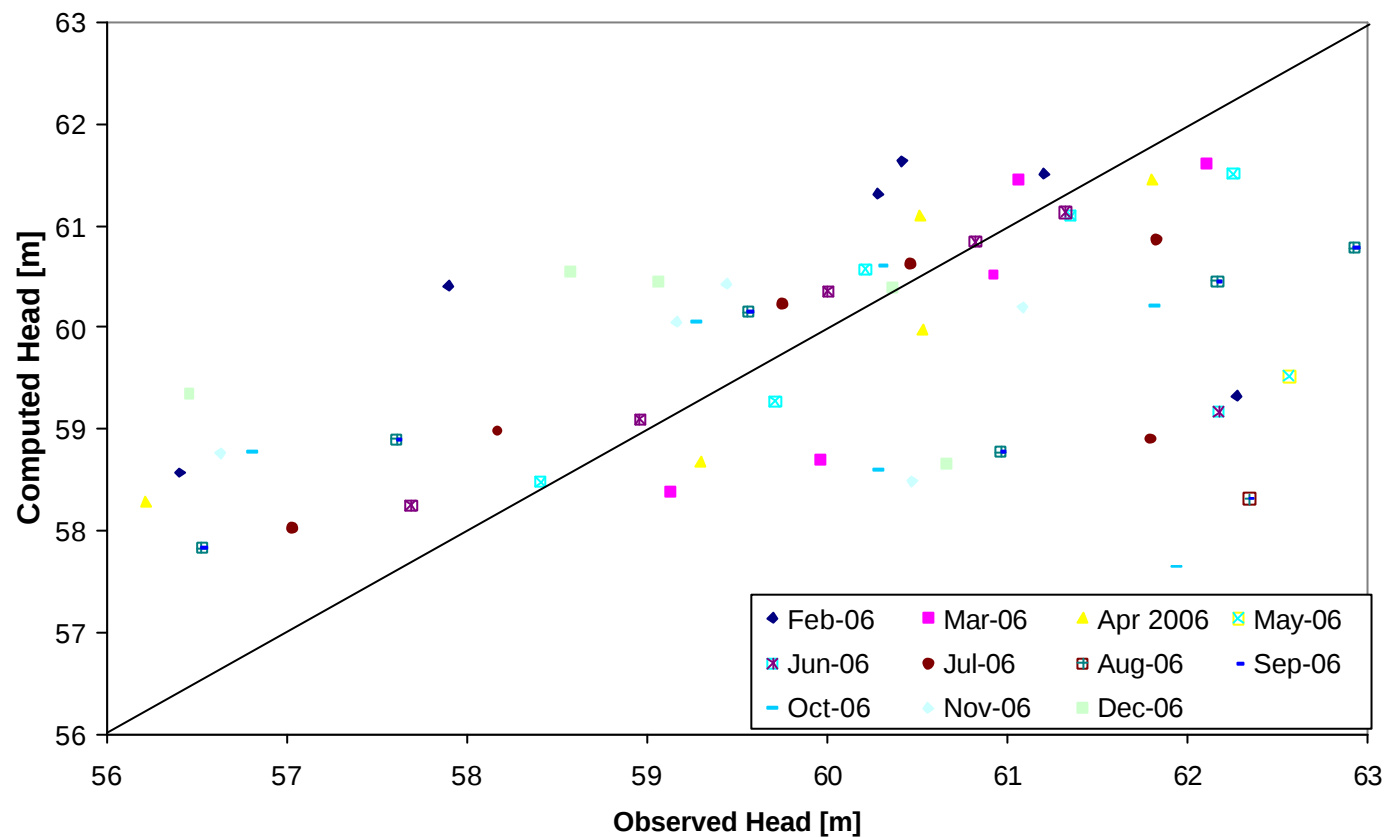
4000 m
Scale



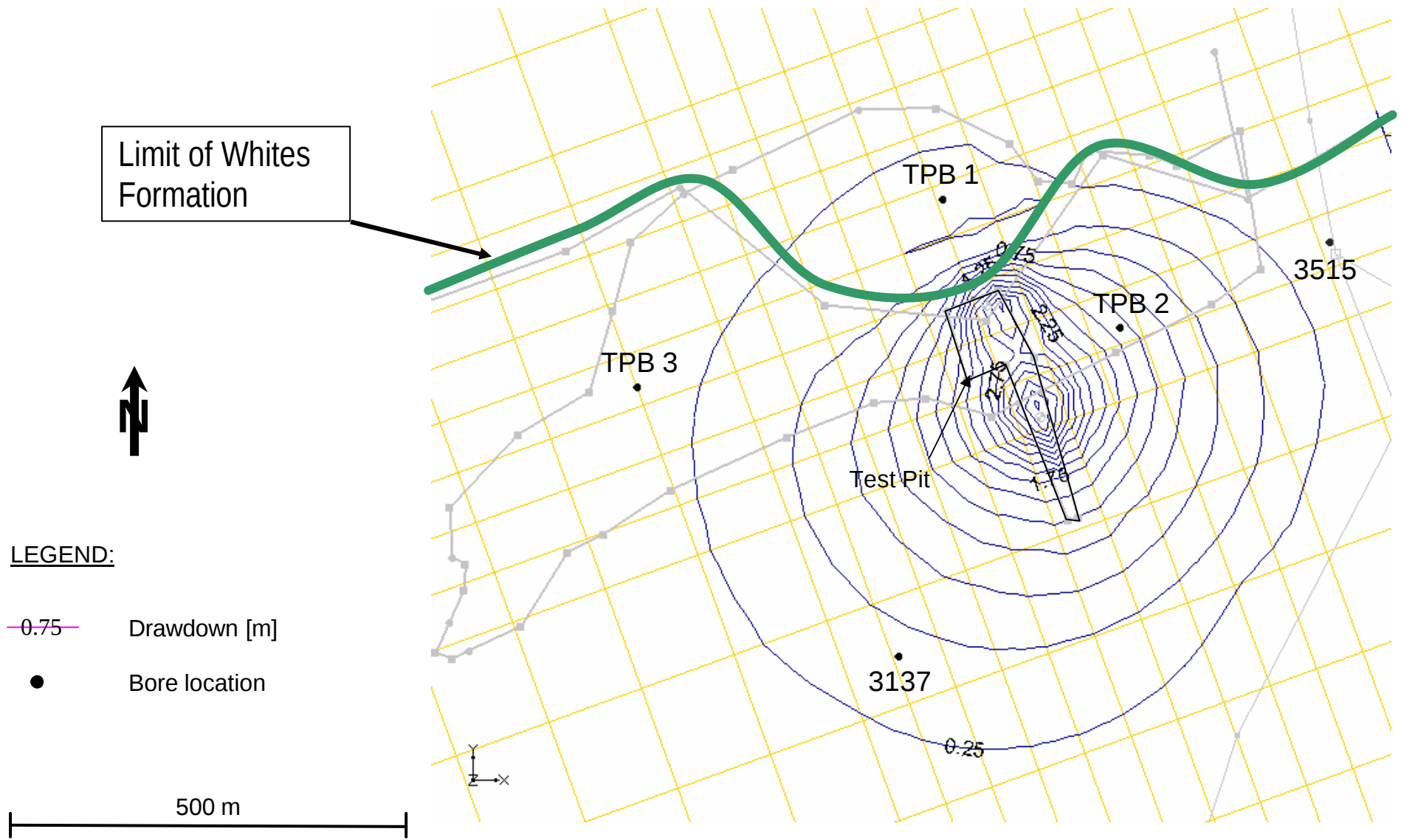
Coffey Geosciences Pty Ltd ACN 056 335 516		Geotechnical Resources Environmental Technical Project Management	
Drawn	DB	COMPASS RESOURCES NL BROWNS OXIDE PROJECT GROUNDWATER MODEL SURFACE CONTOURS	FIGURE 2
Approved	RB		
Date	10 April 2006		Job no: B18183/2-AC
Scale	As shown		



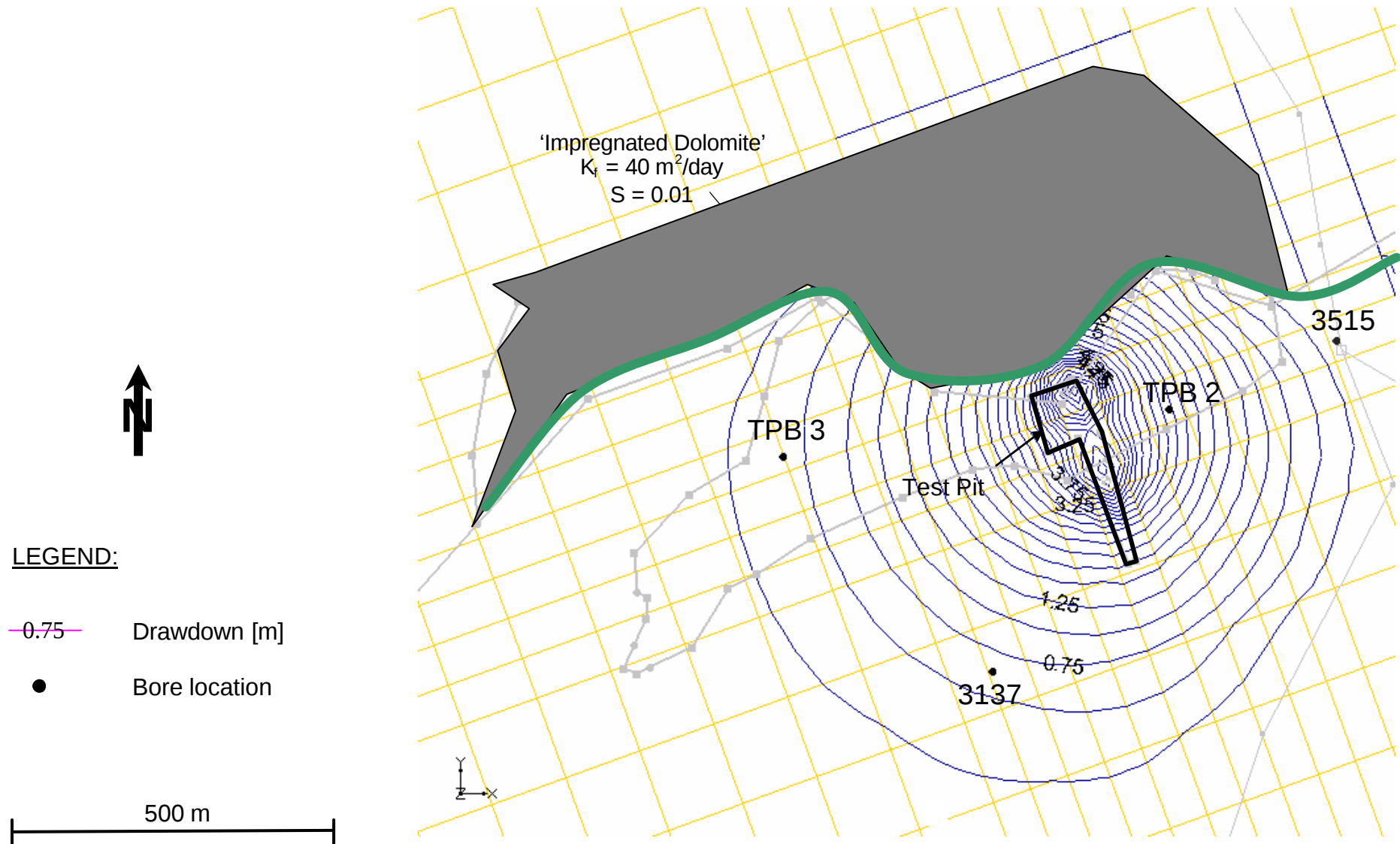
Coffey Geosciences Pty Ltd ACN 056 335 516		Geotechnical Resources Environmental Technical Project Management	
Drawn	DB	COMPASS RESOURCES NL BROWNS OXIDE PROJECT GROUNDWATER MODEL STEADY STATE GROUNDWATER LEVELS - CALIBRATION	FIGURE 3
Approved	RB		
Date	10 April 2006		Job no: B18183/2-AC
Scale			



Coffey Geosciences Pty Ltd		ACN 056 335 516	Geotechnical Resources Environmental Technical Project Management
Drawn	DB	COMPASS RESOURCES NL BROWNS OXIDE PROJECT GROUNDWATER MODEL CALIBRATION COMPARISON	
Approved	RB		
Date	10 April 2006		
Scale			
			FIGURE 4
			Job no: B18183/2-AC



Coffey Geosciences Pty Ltd ACN 056 335 516		Geotechnical Resources Environmental Technical Project Management	
Drawn	DB	COMPASS RESOURCES NL BROWNS OXIDE PROJECT GROUNDWATER MODEL TEST PIT PUMPING, COMPUTED DRAWDOWN IN SEPTEMBER 2002, INITIAL TRIAL	FIGURE 5
Approved	RB		
Date	10 April 2006		Job no: B18183/2-AC
Scale			



Coffey Geosciences Pty Ltd ACN 056 335 516

Geotechnical | Resources | Environmental | Technical | Project Management

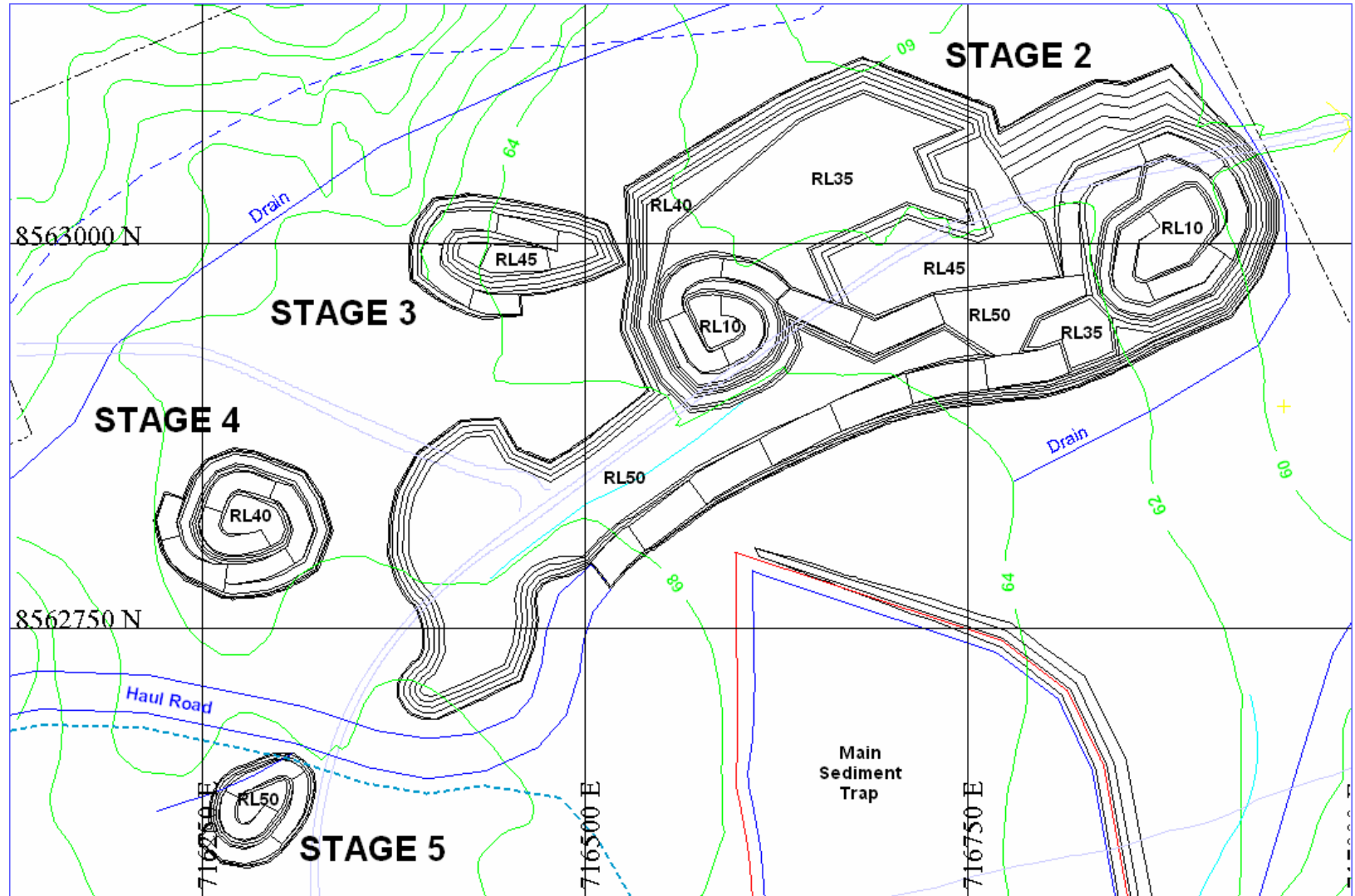
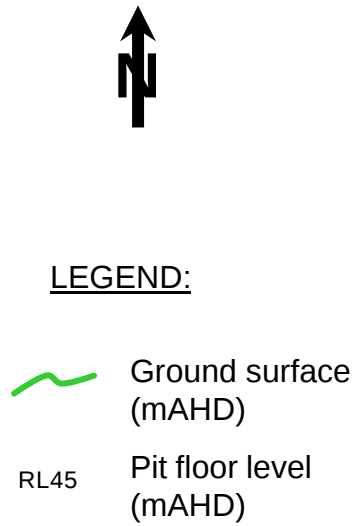
Drawn
Approved
Date
Scale

DB
RB
 10 April 2006

COMPASS RESOURCES NL
 BROWNS OXIDE PROJECT
 GROUNDWATER MODEL
TEST PIT PUMPING, DRAWDOWN IN SEPTEMBER 2002
 ('Impregnated Dolomite': $T = 40 \text{ m}^2/\text{day}$)

FIGURE 6

Job no: B18183/2-AC



Coffey Geosciences Pty Ltd ACN056 335 516

Geotechnical | Resources | Environmental | Technical | Project Management

Drawn
Approved
Date
Scale

DB
RB
12 April 2006
As shown

COMPASS RESOURCES NL
BROWNS OXIDE PROJECT
GROUNDWATER MODEL
POSSIBLE PIT LAYOUT

FIGURE 7

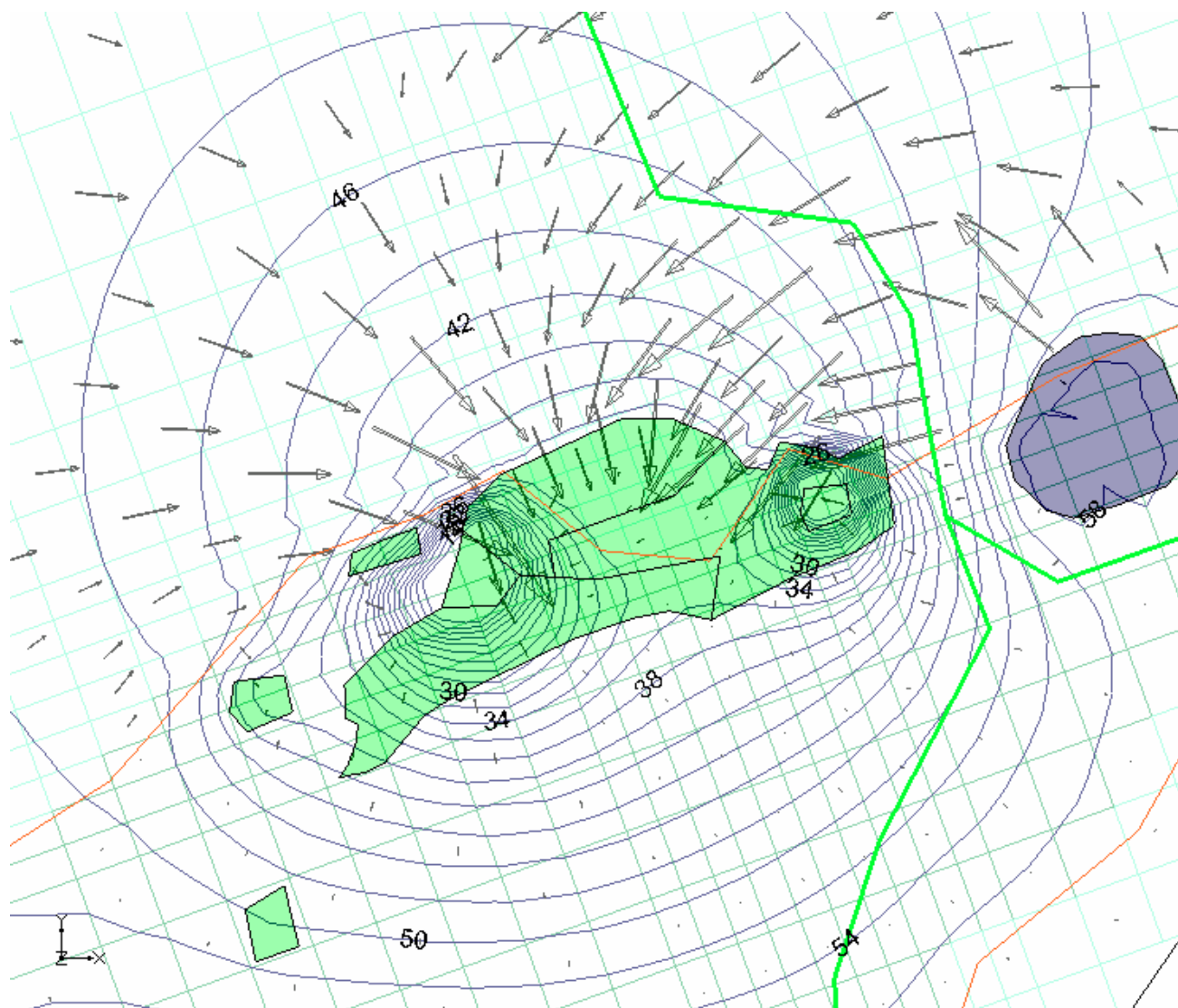
Job no: B18183/2-AC



LEGEND:

- 34 Groundwater Level [mAHD]
- Groundwater Flow
- ~ East Finniss River
- Browns Oxide Mine
- Intermediate Mine Void

500 m



Coffey

Coffey Geosciences Pty Ltd ACN 066 335 516

Geotechnical | Resources | Environmental | Technical | Project Management

Drawn	DB	COMPASS RESOURCES NL BROWNS OXIDE PROJECT GROUNDWATER MODEL MODELLLED AVERAGE GROUNDWATER LEVELS (MINE OPERATES AT FULL DEPTH FROM THE OUTSET)	FIGURE 8
Approved	RB		
Date	12 April 2006		Job no: B18183/2-AC
Scale	As shown		



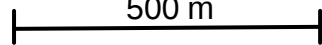
LEGEND:

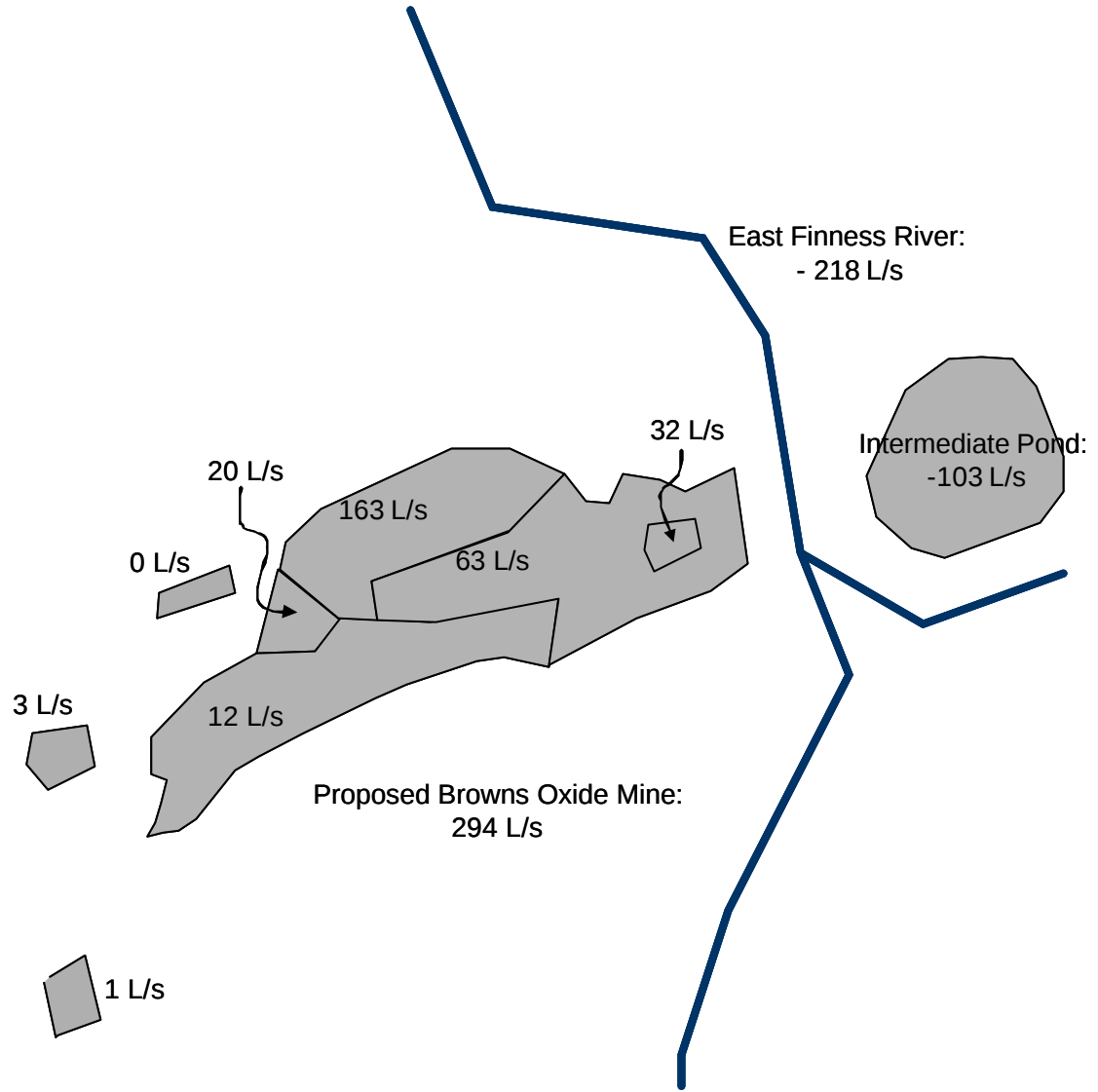
63 L/s Flow Rate
(-ve indicates flow reduction)

 East Finniss River

 Browns Oxide Mine

 Intermediate Mine Void

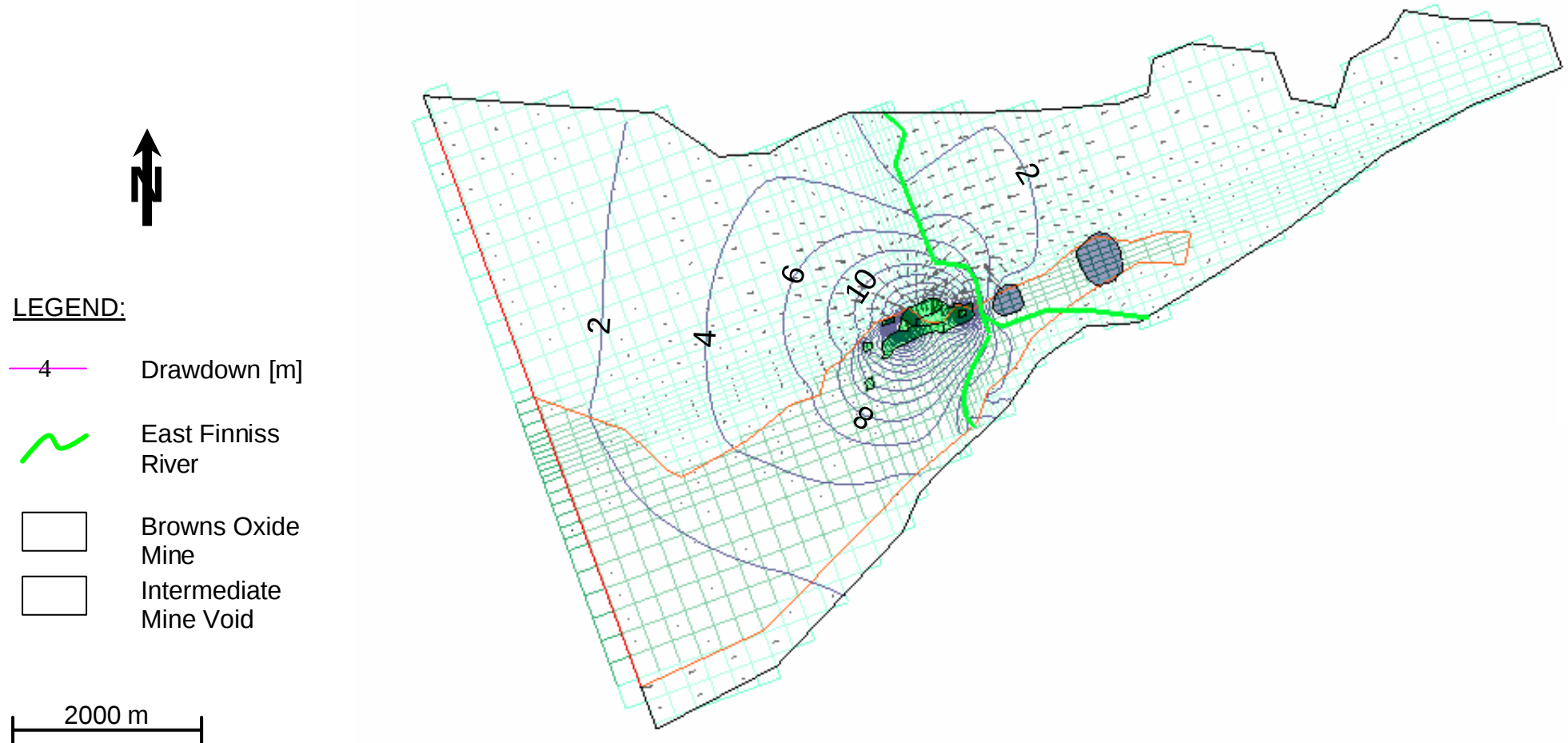
 500 m



Coffey Geosciences Pty Ltd ACN 056 335 516

Geotechnical | Resources | Environmental | Technical | Project Management

Drawn	DB	COMPASS RESOURCES NL BROWNS OXIDE PROJECT GROUNDWATER MODEL MODELLED FLOW RATES (MINE OPERATES AT FULL DEPTH FROM THE OUTSET)	FIGURE 9
Approved	RB		
Date	12 April 2006		Job no: B18183/2-AC
Scale	As shown		



Coffey Geosciences Pty Ltd ACN 056 335 516

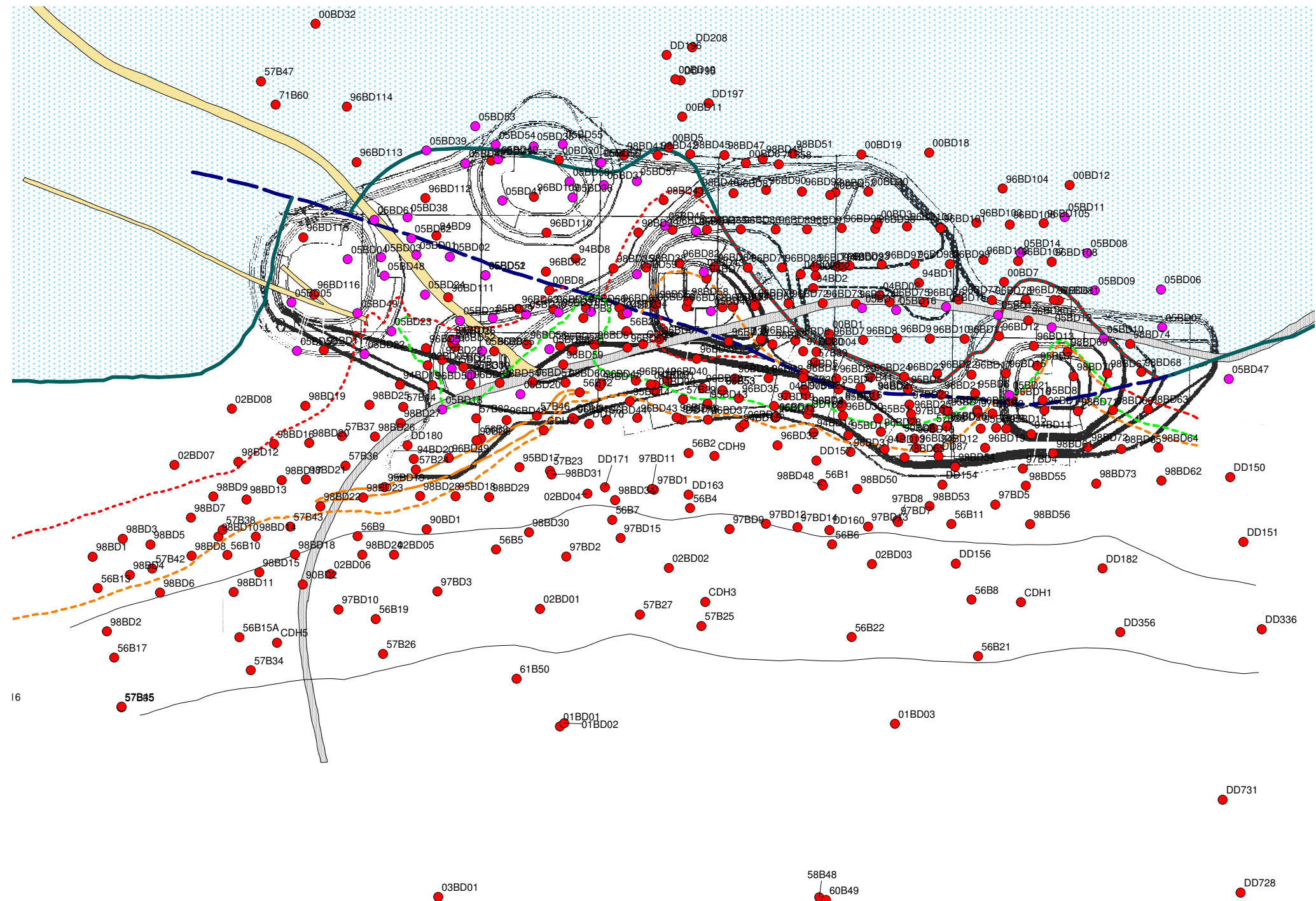
Geotechnical | Resources | Environmental | Technical | Project Management

Drawn	DB	COMPASS RESOURCES NL BROWNS OXIDE PROJECT GROUNDWATER MODEL MODELLED AVERAGE DRAWDOWN (MINE OPERATES AT FULL DEPTH FROM THE OUTSET)	FIGURE 10
Approved	RB		
Date	12 April 2006		Job no: B18183/2-AC
Scale	As shown		

APPENDIX A

Mineralisation Study Results Provided By Compass Resources





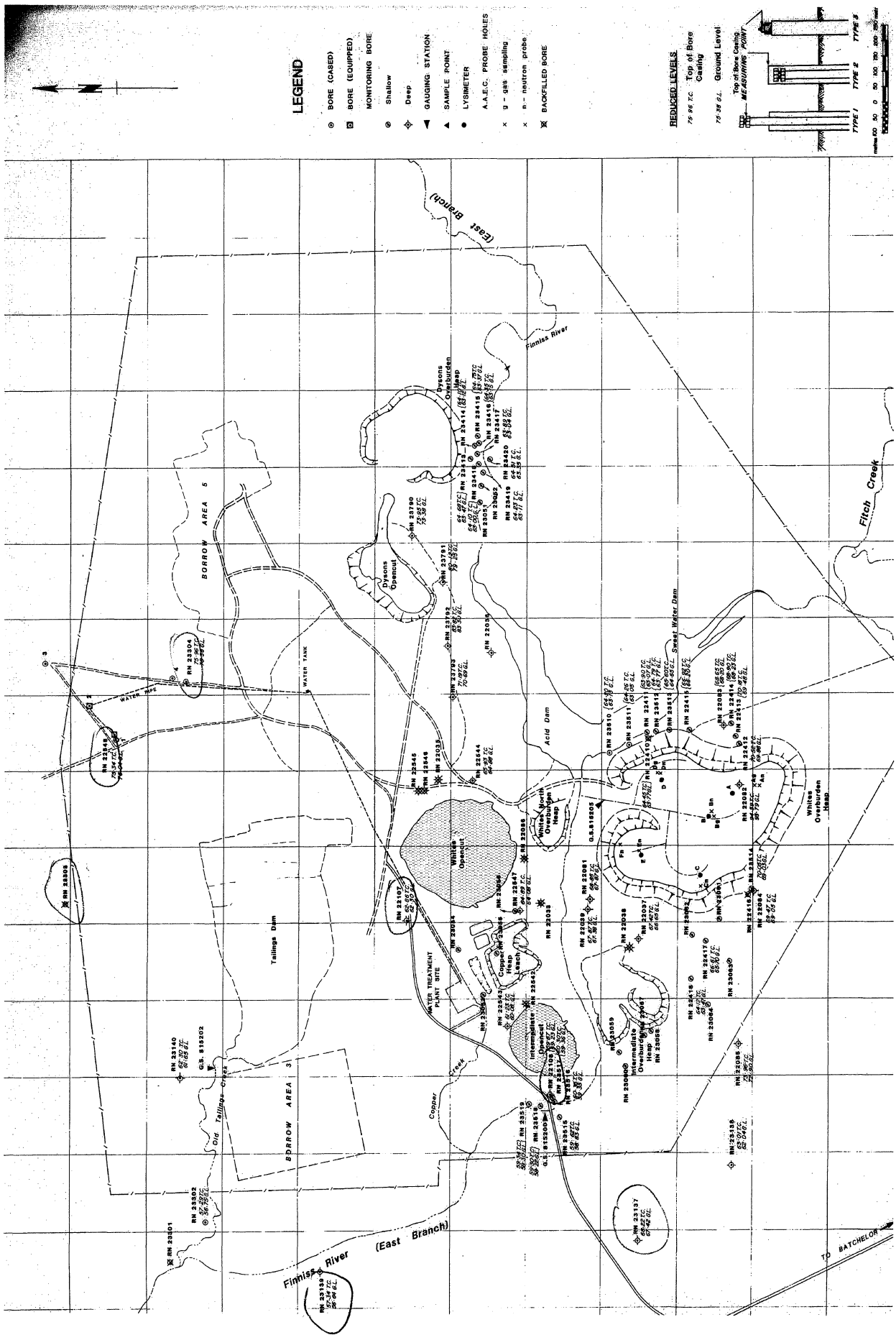
APPENDIX B

Water Quality Test Results

		Pre-remediation									
	Site	TPB 1	TPB 2	TPB 3	RN22107	RN22108	RN22108	RN22107		RN22108	
	Sampling depth	10 m	10 m	10 m	15 m	25 m	50 m				
	Date	16/03/2010	16/03/2010	16/03/2010	16/03/2010	16/03/2010	16/03/2010	18/8/83	30/11/83	22/8/83	30/11/83
		Weathered carbonate aquifer	Weathered Whites formation/carbonate contact	Fault zone							
Parameter	Unit										
EC	µS/cm	408	2,970	107	2,110	4,480	4,710	4,940	5,330	3,660	3,640
pH	units	6.8	9.3	7.1	6.0	6.5	6.5	7	6	6	6
Alkalinity	mg/L	45	17	42	55	229	251	71		30	
NO3_N	mg/L	0.735	<0.005	<0.005	1.93	<0.005	<0.005				
Cl	mg/L	2.2	56	1.7	19.5	75	79.7	110	105	50	55
SO4_F	mg/L	149	1880	10.1	1300	2990	3180	3,685	3,770	2,615	2,330
Ca_F	mg/L	20.9	157	4.4	163	347	362	390	391	285	260
Mg_F	mg/L	34.5	384	9.1	232	649	720	684	724	488	486
Na_F	mg/L	4.3	34.1	1.5	22.1	58.1	61.7	46	100	35	32
K_F	mg/L	1.2	8.3	1.6	3.6	6.9	7	3	5	7	6
Ag_F	µg/L	0.1	<0.5	<0.05	<0.5	<0.5	<0.5				
Al_F	µg/L	0.5	<1	2.2	108	3.6	3.2				
As_F	µg/L	2.35	3.55	8.2	2.65	171	412				
Cd_F	µg/L	0.16	<0.2	<0.02	4.18	0.48	0.38				
Co_F	µg/L	5.93	0.82	1.48	4,720	1,780	1,700	3,500	3,900	5,200	46,000
Cr_F	µg/L	0.1	<2	<0.1	<2	<2	<2				
Cu_F	µg/L	48.4	0.38	0.07	3,040	15.6	14.3	2,800	7,600	10,000	8,500
Fe_F	µg/L	<20	<200	3,320	1,560	4,060	9,440				
Hg_F	µg/L	<0.02	<0.2	<0.02	<0.2	<0.2	<0.2				
Mn_F	µg/L	15.3	757	248	49,000	13,200	14,500	108,000	113,000	24,000	20,000
Ni_F	µg/L	51.3	0.71	1.48	3,450	846	794	3,400	4,400	4,600	47,000
Pb_F	µg/L	0.29	0.14	0.31	28.9	4.05	4.5				
U_F	µg/L	0.07	0.02	0.08	17	65.6	101				
Zn_F	µg/L	31.8	6.2	1.9	2,220	181	152	3,100	2,400	2,240	2,300

APPENDIX C

Information provided by Mr Peter Jolly, Government consultant to the EPA

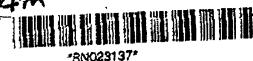


RUM JUNGLE BORE RESULTS

LAB No	DATE SAMPLED	BORE No	BOTTLE No	pH	COND	Ca mg/L	Mg mg/L	SO ₄ mg/L	Cu mg/L	Mn mg/L	Zn mg/L	Ni mg/L	Co mg/L
203	2/12/86	23139	28792	7.49	1930	186	201	960	<0.05	<0.05	<0.05	0.03	<0.05
204	2/12/86	22543	23056	7.99	1135	66	120	490	<0.05	<0.05	<0.05	0.01	<0.05
205	2/12/86	22547	0M182	7.39	937	104	66	325	<0.05	<0.05	<0.05	<0.05	<0.05
206	3/12/86	23140	23413	7.47	468	30	44	23	<0.05	<0.05	<0.05	<0.05	<0.05
207	3/12/86	23793	TP041	6.53	981	4.64	133	595	<0.05	<0.05	<0.05	<0.05	<0.05
208	3/12/86	22107	23417	7.45	3260	269	334	1980	<0.05	2.28	<0.05	0.01	<0.05
209	3/12/86	22544	6E43	6.64	6910	569	1032	5000	<0.05	16.75	<0.05	0.15	0.21
210	3/12/86	23792	23053	7.25	467	23	48	22	<0.05	0.12	<0.05	<0.05	<0.05
211	3/12/86	23790	23063	7.56	739	59	61	214	<0.05	<0.05	<0.05	<0.05	<0.05
212	3/12/86	23051	23062	2.86	6260	283	653	4850	3.33	26.25	1.04	6.15	4.44

2574

RN 23137 Index No. 80/2578 Advice No.																																								
20. Describe rock type, colour etc. any changes must be recorded. From - To 0 - 3m REDISH CLAYS 3.4 - 4.7m GREENISH CLAYS + LATERITE 4.7 - 17.4m AMPHIBOLITE WITH TRACES OF CLAYS. 17.4 - 19m AMPHIBOLITE WITH TRACES OF CLAYS, QUARTZ + MICA SHIST 19 - 40 AMPHIBOLITE + TRACES OF QUARTZ + MICA SHIST			1. Name of Bore RUM JUNGLE A/84 2. Name of Property 3. Owner of Property 4. Type of Lease 5. Lease/Block No. 6. Bore or Well BORE 7. Name of Contractor WATER DIV 8. Name of Driller M. BALLARD 9. Depth Recommended 40.00m 10. Depth Drilled 40.00m 11. Date Commenced 21.9.84 12. Date Completed 24.9.84 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. 8" from 0m to 40m.from.....to..... 16. Casing Installed ☒ Steel ☐ ABS ☒ PVC ☐ Fibreglass ☐ Other..... Steel 8 3/4" Dia from 0m to 6.5m PVC 6" Dia from 0m to 40.0m Threaded Welded 17. Screens ☒ None installed ☐ Stainless Steel ☐ Bronze ☐ PVC Dia.....Slot Size.....From.....to..... Dia.....Slot Size.....From.....to..... Screens are Screwed connected by Pac 18. Perforation in casing ☐ Percussion Slotted ☐ Oxycut ☒ Drilled Other..... 6" PVC Slot/hole size 3/4" From 21m to 40m Slot/hole size.....From.....to..... 19. Is any strata cemented off ☒ Yes ☐ No If so, give depth 0m to 6.5m																																					
21. Sample of strata and water have been will be left at Darwin Katherine also Spring, other.....			22. WATER <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>1st Supply</th> <th>2nd Supply</th> <th>3rd Supply</th> <th>4th Supply</th> <th>5th Supply</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>Struck at</td> <td>21m</td> <td>23m</td> <td>24.7m</td> <td>25.1m</td> <td>34m</td> <td></td> </tr> <tr> <td>Standing Water Level</td> <td>7.8m</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Discharge</td> <td>0.9 L/s</td> <td>1.1 L/s</td> <td>1.3 L/s</td> <td>1.4 L/s</td> <td>1.5 L/s</td> <td></td> </tr> <tr> <td>Duration of</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				1st Supply	2nd Supply	3rd Supply	4th Supply	5th Supply	Remarks	Struck at	21m	23m	24.7m	25.1m	34m		Standing Water Level	7.8m						Discharge	0.9 L/s	1.1 L/s	1.3 L/s	1.4 L/s	1.5 L/s		Duration of						
	1st Supply	2nd Supply	3rd Supply	4th Supply	5th Supply	Remarks																																		
Struck at	21m	23m	24.7m	25.1m	34m																																			
Standing Water Level	7.8m																																							
Discharge	0.9 L/s	1.1 L/s	1.3 L/s	1.4 L/s	1.5 L/s																																			
Duration of																																								



PUMPING TEST DATA

DATE: 17 10 04

THE BORE BEING PUMPED IS:

R.N. 23137

THE DRAWDOWN DATA BELOW IS FROM THE PUMPED/~~OBSERVATION~~ BORE

R.N. 23137

Start 07.20

DURATION	DRAWDOWN (m)	PUMPING RATE (l/s)	WATER SAMPLE IDENTIFICATION	REMARKS
1	2.52			ID. 40.79
2	3.40			Pump ret 23.10
3	3.67			SuL 8.67
4	4.05	29 1/5		ADD 14.43
5	4.36			
6	4.62			DISCHARGE CLEAR FROM START.
7	4.90			
8	5.08			
9	5.22			
10	5.31			COND 158
12	5.49			
15	5.69			
20	5.95		SAMPLE = 42	COND 157 TEMP = 30°
20	6.19			
40	6.36			
50	6.53			
60	6.66			
70	6.78	65/23 28 1/5		COND 166 TEMP 30°
80	6.94			DISCHARGE CRYSTAL CLEAR
90	7.10			
100	7.23			
120	7.35	65/22.5		
130	7.63			
140	8.00			
150	8.65	65/22.5		COND = 182 TEMP = 30°
160	9.62	65/23		DAY TEMP = 31
170	10.22	65/23		COND = 168 TEMP = 30°
180	11.01	65/23		COND - 155 TEMP = 30°
190	13.02		Sample 23137 2nd sample	

0730 2300 1630 7 hours

WATER ANALYSIS

Department of Transport & Works
Water Division, Darwin N.T.D. VERMA
S. CLARKE

Laboratory Register No.

84/85/56

Date received in Laboratory

6.12.84

WR 4/1A

Boyle No.
8096Time of sampling
1440Date of sampling
21.9.84

LOCATION AND DETAILS

RUM JUNGLE R/N 23137 DEPTH 19m DISCH 0.3LPS
RJD 0601 8/2571 RSP 1670

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

ANALYSIS - PHYSICAL

☐ pH	6.9	☐ Colour (Hazen units)	
☐ Specific conductance (microsiemens/cm at 25° C)	190	☐ Turbidity (NTU's)	
☐ Total dissolved solids (mg/L - by evaporation at 180° C)	150	☐ Suspended solids (mg/L)	

ANALYSIS - CHEMICAL (mg/L)

☐ Sodium, Na	5	☐ Chloride, Cl	2
☐ Potassium, K	1	☐ Sulphate, SO ₄	41
☐ Calcium, Ca	12	☐ Nitrate, NO ₃	1
☐ Magnesium, Mg	13	☐ Bicarbonate, HCO ₃	55
☐ Total Hardness (as CaCO ₃)	83	☐ Carbonate, CO ₃	
☐ Total Alkalinity (as CaCO ₃)	45	☐ Fluoride, F	0.2
☒ Iron, (total) Fe	UNSUITABLE FOR ANALYSIS	☐ Orthophosphate, PO ₄	
☐ Silica, SiO ₂	41	☐ NaCl (calc. from chloride)	23

ANALYSIS - ADDITIONAL (mg/L)

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

THE SAMPLE AS ANALYSED COMPLIES/DOES NOT COMPLY WITH NORTHERN TERRITORY DRINKING WATER STANDARDS AS RECOMMENDED BY THE NORTHERN TERRITORY DEPARTMENT OF HEALTH.



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

Analysed By: *Ken Cook*

Date 25/1/85

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

MINISTRY OF LANDS AND FORESTRY

Index No

Advice No

RN 23140
80/2574

20. Describe rock type, colour etc.
any changes must be recorded.

From - To

0 - 1.4m LATELITE, QUARTZ & REDISH
CLAYS.

1.4 - 3.5m QUARTZ & YELLOWISH
CLAYS

3.5 - 12.47m WEATHERED TROMOLITE
SHIST.

12.47 - 17m WEATHERED TROMOLITE
SHIST & DOLOMITES

1. Name of Bore

Rum Jungle D/84

2. Name of Property

3. Owner of Property

4. Type of Lease

5. Lease/Block No.

6. Bore or Well

BORE

7. Name of Contractor

WATER DIV

8. Name of Driller

M. BALLARD.

9. Depth Recommended

10. Depth Drilled.

17m.

11. Date Commenced

28. 9. 84.

12. Date Completed.

1. 10. 84.

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 Poly

Size of drilling Bit 8" from 0m to 17m.

16. Casing Installed

☒ Steel

☐ ABS

☐ PVC

☐ Fibreglass

☐ Other

Steel 8" Dia from 0m to 11.7m.

PVC 6" Dia from 0m to 16m.

Threaded

Welded

17. Screens

☒ None installed

☐ Stainless Steel

☐ Bronze

☐ PVC

Dia.....Slot Size.....From.... to....

Dia.....Slot Size.....From.... to....

Screens are Screwed connected by Riv

21. Sample of strata and water

will be left at

Driller Katherine

Other

18. Perforation in casing

☐ Percussion Slotted

☐ Oxycut

☒ Drilled

Other

6" PVC Slot/hole size 3/4" From 11m to 16m.

Slot/hole size.....From.... to....

19. Is any strata cemented off

☒ Yes ☐ No

If so, give depth 0m to 11.7m.

22. Supply	1st Supply	2nd Supply	3rd Supply	4th Supply	5th Supply	Remains
Strat. Lvl	12.9m	14m	16m	17m		
Standing Water Level	6.0m					
Discharge	0.4 L/s	1.4 L/s	6.6 L/s	8.7 L/s		
Duration of						



RN023140

PUMPING TEST DATA

DATE: 29.10.84

THE CORE BEING PUMPED IS:

Rum Jungle

RN. 23140

THE DRAWDOWN DATA BELOW IS FROM THE PUMPED/OBSERVATION BORE

R.N. 23140

Start 0800

[illegible]

PARTICULARS OF

Index No

Advice No

RW 23139

80/2573

20. Describe rock type, colour etc. any changes must be recorded.		1. Name of Bore		2. Name of Property		
From - To		RUM JUNGLE 0/84				
0 - 1.4m LATORITE + QUARTZ GRAVELS		3. Owner of Property		4. Type of Lease		
1.4 - 7.3m HAEMATITE + QUARTZ		5. Lease/Block No.		6. Bore or Well		
7.3 - 19.5m " "		7. Name of Contractor		8. Name of Driller		
19.5 - 25.5m WEATHERED HAEMATITE + QUARTZ		WATER DIV		M. BALWAD		
25.5 - 29.13m HAEMATITE + QUARTZ		9. Depth Recognised		10. Depth Drilled.		
29.13 - 33.2m RED SANDSTONE + HAEMATITE		11. Date Commenced		12. Date Completed.		
33.2 - 40m HAEMATITE		27.9.84		28.9.84		
40 - 63.1m HAEMATITE + QUARTZ		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 8" from 0m to 63.1m				
		16. Casing Installed		☒ Steel ☐ ABS ☐ PVC		
		☐ Fibreglass ☐ Other				
		8 5/8" Dia from 0m to 7.3m				
		Dia from..... to.....				
		Threaded Welded				
		17. Screens		☒ None installed		
		☐ Stainless Steel ☐ Bronze ☐ PVC				
		Dia.....Slot Size.....From.... to.....				
		Dia.....Slot-Size.....From.... to.....				
		Screens are Screwed connected by Pat				
NOTE OPEN HOLE FROM 7.3m - 63.1m		18. Perforation in casing		☐ Percussion Slotted		
		☐ Oxy-cut ☐ Drilled ☐ Other				
		Slot/hole size.....From.... to.....				
		Slot/hole size.....From.... to.....				
21. Sample of strata and water have been will be left at Darwin Katherine Alice Springs Other		19. Is any strata cemented off		☒ Yes ☐ No		
		If so, give depth 0m to 7.3m				
22. WATER	1st Supply	2nd Supply	3rd Supply	4th Supply	5th Supply	Remarks
Struck at	13.73m					
Standing Water Level	6.6m					
Discharge	0.10 L/s					



RN023139

PARTICULARS OF COMPLETED BOREHOLE

RW 23303

80/2577

20. Describe rock type, colour etc. any changes must be recorded. From - To 0 - 1m LAMINATE QUARTZ GRAVELS. 1 - 13.7m QUARTZ GRAVELS + GRANITE 13.7 - 13.93m AMPHIBOLITE, QUARTZ + GRANITE		1. Name of Bore Run down C/S		2. Name of Property		
		3. Owner of Property		4. Type of Lease		
		5. Lease/Block No.		6. Bore or Well Bore		
		7. Name of Contractor WATER DIV		8. Name of Driller M. DAWSON		
		9. Depth Recorded		10. Depth Drilled. 13.93m		
		11. Date Commenced 3.10.84		12. Date Completed. 3.10.84		
		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. 8" from 0 to 13.93m from to				
		16. Casing Installed ☐ Steel ☐ ABS ☐ PVC ☐ Fibreglass ☐ Other..... Dia from to Dia from to Threaded Welded				
		17. Screens ☐ None installed ☐ Stainless Steel ☐ Bronze ☐ PVC Dia..... Slot Size..... From..... to..... Dia..... Slot Size..... From..... to..... Screens are Screwed connected by Pac				
NOTE BACK FILLED						
21. Sample of strata and water have been will be left at Darwin Katherine Alice Springs Other.....		18. Perforation in casing ☐ Percussion Slotted ☐ Oxycut ☐ Drilled Other..... Slot/hole size..... From..... to..... Slot/hole size..... From..... to.....				
		19. Is any strata cemented off ☐ Yes ☒ No If so, give depth to				
22. WATER	1st Supply	2nd Supply	3rd Supply	4th Supply	5th Supply	Remarks
Struck at						
Standing Water Level	DUD BORE					
Discharge						
Duration of						



RNO23303

PARTICULARS OF COMPLETED BORE/WELL



RN023304

Registration No. RN 23304Index No 90/2578

Advice No

20. Describe rock type, colour etc.
any changes must be recorded.

From - To

0 - 1.5m WATERLITE1.5 - 26.4m WEATHERED TREMOLITE26.4 - 36m TREMOLITE SHIST

1. Name of Bore

Rum JUNGLE 11/84

2. Name of Property

3. Owner of Property

4. Type of Lease

5. Lease/Block No.

6. Bore or Well

BORE

7. Name of Contractor

WATER DIV

8. Name of Driller

M. BALLARD

9. Depth Recommended

10. Depth Drilled.

36.0m

11. Date Commenced

4. 10. 84

12. Date Completed.

5. 10. 8413. Proposed use of Bore ☒ Domestic☐ Pastoral☐ Stock Route☐ Irrigation☒ Town Supply☐ Observation☐ Investigation14. Bore has been drilled by ☒ Rotary☐ Cable Tool☐ Jetting☐ Other15. Bore Drilled Using ☒ Air☐ Mud☒ Foam☒ Water☐ Degradable PolymerSize of drilling Bit 8" from 0m to 36m

.....from.....to.....

16. Casing Installed ☒ Steel ☐ ABS ☐ PVC☐ Fibreglass☐ Other.....8 1/8" Dia from 0m to 12m6 5/8" Dia from 0m to 36mThreadedWelded17. Screens ☐ None installed☒ Stainless Steel☐ Bronze ☐ PVCDia 6 5/8" Slot Size 120 mesh From 20.95m to 22.0mDia 6 5/8" Slot Size 120 mesh From 24.3m to 26.4mScreens are Screwed connected by PacWANDA

21. Sample of strata and water

~~have been~~ will be left atDarwinKatherine~~Allen Springs~~ Other.....18. Perforation in casing ☐ Percussion Slotted☐ Oxycut☐ Drilled

Other.....

Slot/hole size.....From.....to.....

Slot/hole size.....From.....to.....

19. Is any strata cemented off ☒ Yes ☐ NoIf so, give depth 9m to 12m

22. WATER	1st Supply	2nd Supply	3rd Supply	4th Supply	5th Supply	Remarks
Struck at	<u>21m</u>	<u>22m</u>	<u>24.0m</u>	<u>26.0m</u>	<u>26.4m</u>	
Standing Water Level						
Discharge	<u>1.8 L/s</u>	<u>3.2 L/s</u>	<u>3.7 L/s</u>	<u>4.3 L/s</u>	<u>7.1 L/s</u>	
Duration of						

PUMPING TEST DATA

DATE: 26. 10. 84

THE BORE BEING PUMPED IS: Rum Jungle

R.N. 23304

THE DRAWDOWN DATA BELOW IS FROM THE PUMPED/OBSERVATION BORE

R.N. 23304

Start 0800

DURATION	DRAWDOWN (m)	PUMPING RATE (l/s)	WATER SAMPLE IDENTIFICATION	REMARKS	
1	1.06			TD	36.00
2	1.34	4.6		pump set	20.40
3	1.52			swl	12.80
4	1.57			a.d.d.	7.60
5	1.75			cag.	0.70
6	1.87			distance to OB N°4	10.20
7	1.97				
8	2.07			discharge cloudy	
9	2.13				
10	2.19				
12	2.33				
15	2.48	4.6			Cond 31
20	2.68		H5		287
30	3.00				
40	3.27				
50	3.41				
60	3.60				361 31
70	3.66				
80	3.78				
90	3.91			discharge clear	
100	4.01				360 31
120	4.13				
150	4.33	4.6			
200	4.56			discharge clear	322 31
300	4.91				285 31
400	5.17				327 31
500	5.39				
600	5.72				283 31
700	5.82				302 31
800	6.18			discharge clear	313 31
900	6.37				295 31
1000	6.57				326 31
1100	6.69				295 31
1200	7.01	4.6			310 31
1300	7.22				315 31
1440	7.59				

PARTICULARS OF COMPLETED BORE/WELL

RN 22548.

Registration No. 22548.

Index No 80/2402

Advice No

20. Describe rock type, colour etc. any changes must be recorded.

From - To

0 - 2.6m Red & Gray sandy Clays.
2.6 - 3.12m. Laterite + Quartz.
3.12 - 11.36m. Brown + white Clays.
11.36 - 21.56 yellow + Brown sandy Clays.
21.56 - 24.0 Hard silicified Quartz Band.
Very Hard.
24.0 - 25.32 Weathered Water stained Quartz.
25.32 - 25.62 Cavity. (Lost Circulation).
25.62 - 27.3 Fractured - Distorted Quartz.
27.3 - 27.92 Cavity.
27.92 - 38.55. Quartz Crystal Very Broken
Greenish zone, possibly Fault
Zone. (Bad Drilling).
(Continuous Fall in Encountered)

Total Depth. 38.55m.

1. Name of Bore

BATCHelor

2. Name of Property

RUN JUNGLE MINES

3. Owner of Property

4. Type of Lease

5. Lease/Block No.

6. Bore or Well

BORE

7. Name of Contractor

W.R.B.

8. Name of Driller

L. WOODBRIDGE

9. Depth Recorded

30.5m.

10. Depth Drilled.

38.55.

11. Date Commenced

19.1.84

12. Date Completed.

28.1.84

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. 7/8" from 0 to 30.50

5/8" from 24.0 to 38.55

16. Casing Installed

☒ Steel

☐ AIS

☐ PVC

☐ Fibreglass

☐ Other

8" Dia from 0 to 29.20m

.....Dia from..... to.....

Threaded

Welded

17. Screens

☐ None installed

☒ Stainless Steel

☐ Bronze

☐ PVC

Dia. 8" TELE Slot Size 1/8" From 27.9 to 30.50

Length of Screen exposed is 1.3m.

Dia.....Slot Size.....From..... to.....

Screens are Screwed connected by Packer
WELDED WITH SOMP.

21. Sample of strata and water

have been will be left at

Darwin Katherine

Alice Springs Other

18. Perforation in casing

☐ Percussion Slotted

☐ Oxycut

☐ Drilled

☐ Other

Slot/hole size.....From..... to.....

Slot/hole size.....From..... to.....

19. Is any strata cemented off

☐ Yes

☐ No

If so, give depth 0 to 0m

22. WATER

1st Supply

2nd Supply

3rd Supply

4th Supply

5th Supply

Remarks

Struck at

26-38.5.

Standing Water Level

13.1mrs.

Discharge

12-16lps.

Duration of Test

15min.

Good Quality

WATER SAMPLE.

DU 75 & SE 30.



RN22548

PUMPING TEST DATA

DATE: 7. 3. 82 THE PUMPED BORE IS RUM JUNGLE R.N. 22548

THE DRAWDOWN DATA BELOW ARE FROM THE PUMPED/OBSERVATION BORE R.N. _____

CONSTANT DISCHARGE

DURATION MINS.	DRAWDOWN (m)	PUMPING RATE (l/s)	WATER SAMPLE IDENTIFICATION	REMARKS
0	0	0		
1	1.41			checked. Flow Rate with
2	1.56	18.8 l/s		200% pressure & stop watch
3	1.67			Discharge opaque.
4	1.74			
5	1.81			
6	1.87			Discharge opaque.
7	1.93			
8	1.98			Slight Rain.
9	2.01			
10	2.04	18.8 l/s		
12	2.11			
15	2.20			Discharge clear
20	2.31			
30	2.50			
40	2.66			
50	2.81			Discharge clear.
60	2.89			
70	3.00	18.8 l/s		
80	3.09			
90	3.17			
100	3.27		SAMPLE A55A	COND 200 TEMP 31.5°
120	3.39			
150	3.57			
200	3.79			
300	4.17			Heavy Rain.
400	4.46			
500	4.68			
600	4.82	18.8 l/s	SAMPLE A23A	COND 250 Temp 31.5°
700	4.96			Heavy Rain & stopped
800	5.00			
900	5.15			
1000	5.28			
1100	5.39			Slight Drizzle during Night
1200	5.49			
1300	5.60			Discharge clear.
1400	5.36	18.8 l/s	Check Discharge	1st 1st 18.8 l/s approx.
1440	5.36		SAMPLE I701	Conduct 400 Temp 31.5

WATER ANALYSIS

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

RAS

80/2402.



Laboratory Register No.

83/84/1606

Date received in Laboratory

31-1-84

Bottle No.

5530

Time of sampling

11:30

Date of sampling

20-1-84

WR 4/1A

LOCATION AND DETAILS

RUM JUNGLE MINE AREA R/N 22549 DEPTH 38.12 DISH 8-10LPS

RJ603

RSP 882

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

1

ANALYSIS - PHYSICAL

☐ pH	7.6	☐ Colour (Hazen units)	
☐ Specific conductance (microsiemens/cm at 25° C)	328	☐ Turbidity (NTU's)	
☐ Total dissolved solids (mg/l - by evaporation at 180° C)		☐ Suspended solids (mg/l)	

ANALYSIS - CHEMICAL (mg/l)

☐ Sodium, Na	6	☐ Chloride, Cl	5
☐ Potassium, K	1	☐ Sulphate, SO ₄	8
☐ Calcium, Ca	16	☐ Nitrate, NO ₃	<1
☐ Magnesium, Mg	29	☐ Bicarbonate, HCO ₃	207
☐ Total Hardness (as CaCO ₃)	159	☐ Carbonate, CO ₃	
☐ Total Alkalinity (as CaCO ₃)	170	☐ Fluoride, F	0.3
☐ Iron, (total) Fe	<0.1	☐ Orthophosphate, PO ₄	
☐ Silica, SiO ₂	33	☐ NaCl (calc. from chloride)	8

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

Stock watering —

Yes/No

Irrigation —

Yes/No

Others (specify)

Yes/No



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Analysed By

Date

28/3/84

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