



TONKIN & TAYLOR

43 Halifax Street
P O Box 1009
NELSON
Tel: (03) 546 6339
Fax: (03) 546 7619

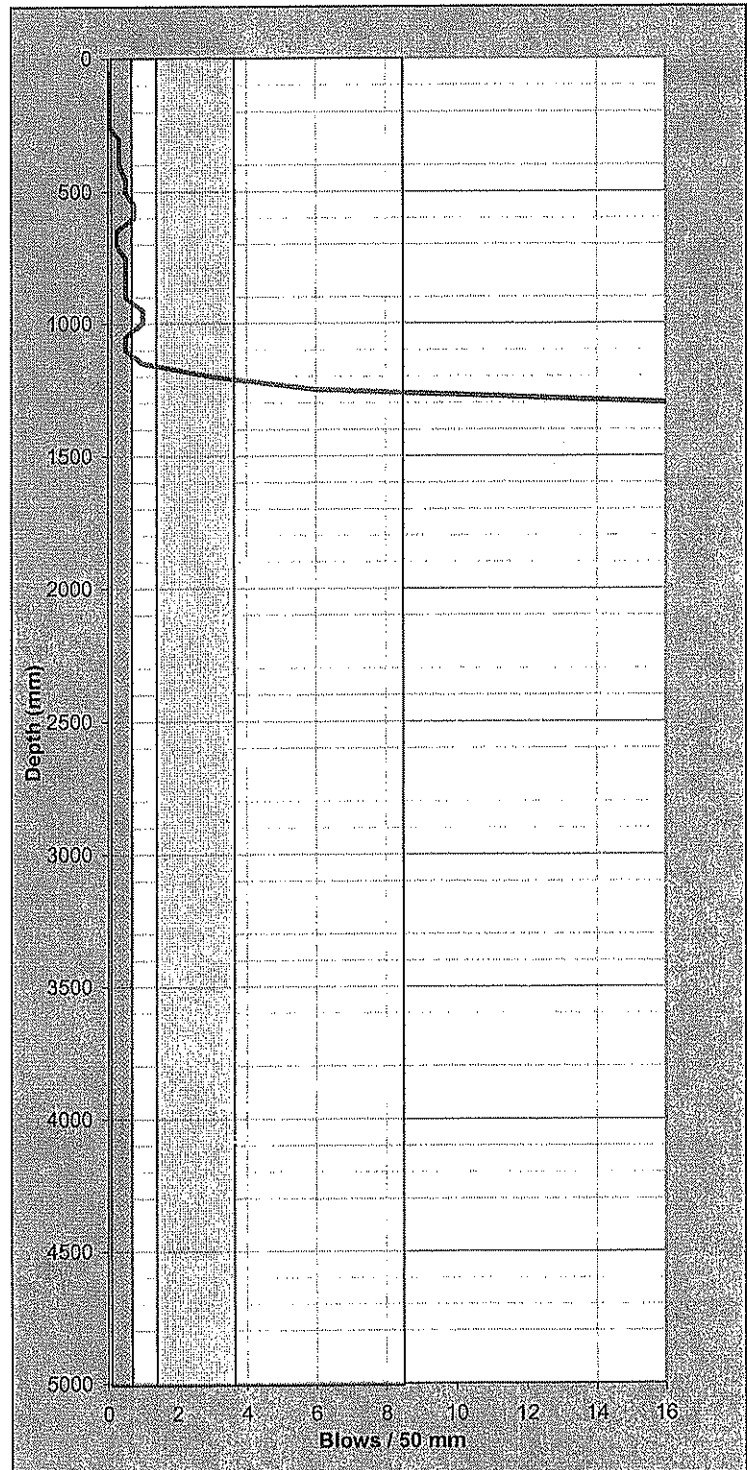
SCALA PENETROMETER LOG

Job No: 22032.002
Project: Waimea Dam
Location: Lee River Valley
Position: Adjacent TP1

Date: 17/05/2006
Operated by: JXWW
Logged by: JXWW
Checked by: MPD

Test No. SC1
Sheet 1
of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0	2550	
100	0	2600	
150	0	2650	
200	0	2700	
250	0	2750	
300	0.33	2800	
350	0.33	2850	
400	0.33	2900	
450	0.5	2950	
500	0.5	3000	
550	0.75	3050	
600	0.75	3100	
650	0.25	3150	
700	0.25	3200	
750	0.5	3250	
800	0.5	3300	
850	0.5	3350	
900	0.5	3400	
950	1	3450	
1000	1	3500	
1050	0.5	3550	
1100	0.5	3600	
1150	1	3650	
1200	3	3700	
1250	6	3750	
1300	16	3800	
1350		3850	
1400		3900	
1450		3950	
1500		4000	
1550		4050	
1600		4100	
1650		4150	
1700		4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





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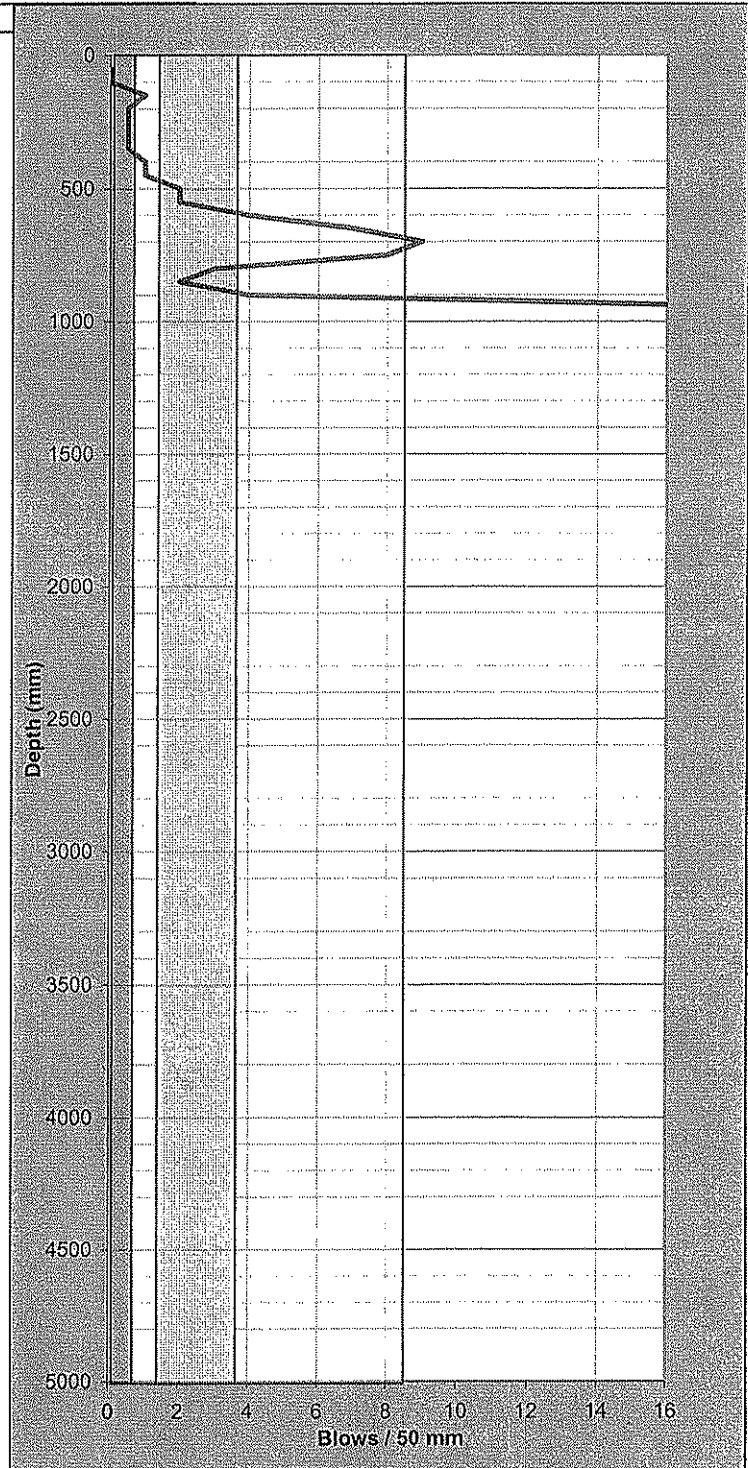
SCALA PENETROMETER LOG

Job No: 22032.002
 Project: Waimea Dam
 Location: Lee River Valley
 Position: Adjacent TP4

Date: 17/05/2006
 Operated by: JXWW
 Logged by: JXWW
 Checked by: O MFD

Test No. SC2
 Sheet 1
 of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0	2550	
100	0	2600	
150	1	2650	
200	0.5	2700	
250	0.5	2750	
300	0.5	2800	
350	0.5	2850	
400	1	2900	
450	1	2950	
500	2	3000	
550	2	3050	
600	4	3100	
650	7	3150	
700	9	3200	
750	8	3250	
800	3	3300	
850	2	3350	
900	4	3400	
950	20	3450	
1000	bouncing	3500	
1050		3550	
1100		3600	
1150		3650	
1200		3700	
1250		3750	
1300		3800	
1350		3850	
1400		3900	
1450		3950	
1500		4000	
1550		4050	
1600		4100	
1650		4150	
1700		4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





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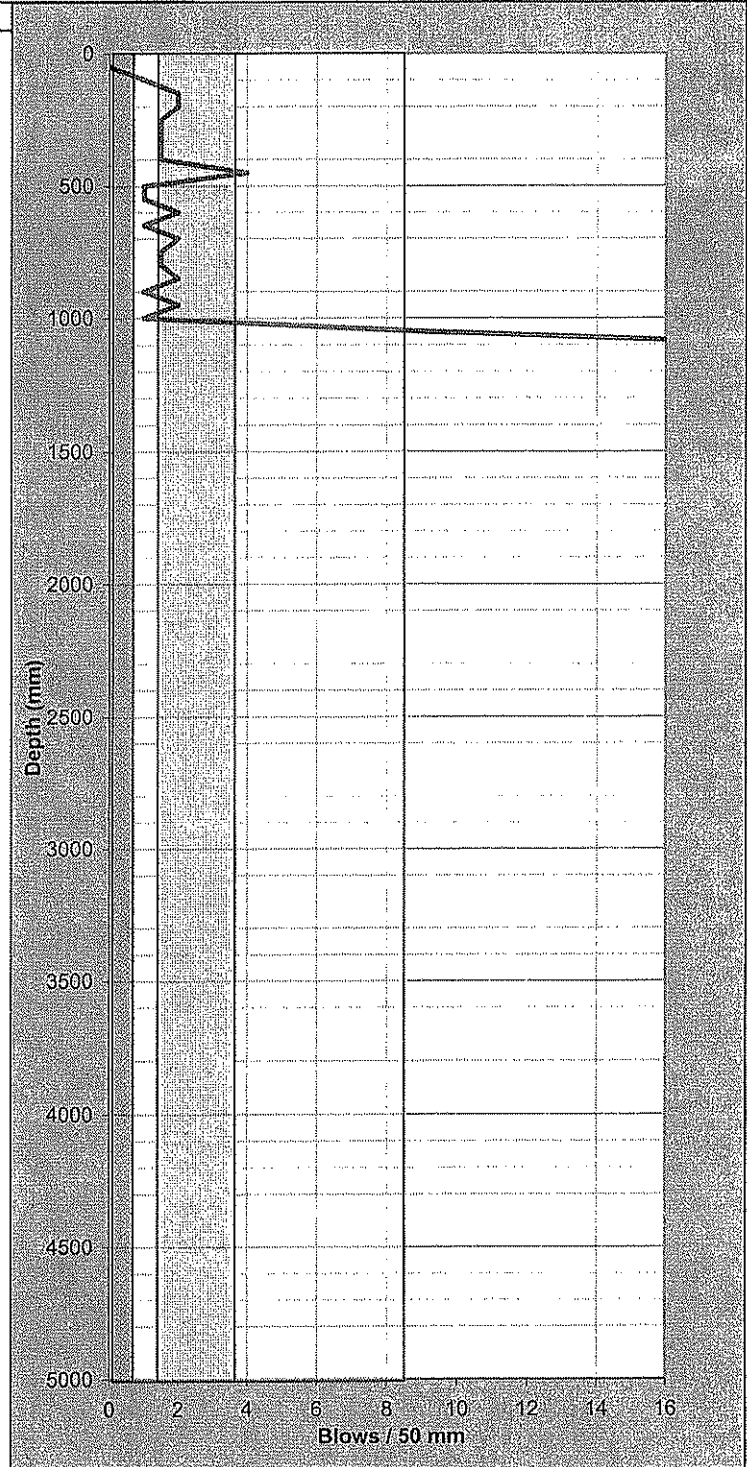
SCALA PENETROMETER LOG

Job No: 22032.002
 Project: Waimea Dam
 Location: Lee River Valley
 Position: Adjacent Tp7

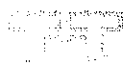
Date: 17/05/2006
 Operated by: JXWW
 Logged by: JXWW
 Checked by: O.M.P.D

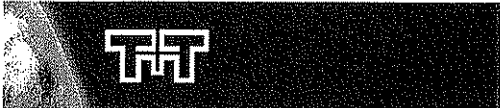
Test No. SC3
 Sheet of 1/1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0	2550	
100	1	2600	
150	2	2650	
200	2	2700	
250	1.5	2750	
300	1.5	2800	
350	1.5	2850	
400	1.5	2900	
450	4	2950	
500	1	3000	
550	1	3050	
600	2	3100	
650	1	3150	
700	2	3200	
750	1.5	3250	
800	1.5	3300	
850	2	3350	
900	1	3400	
950	2	3450	
1000	1	3500	
1050	9	3550	
1100	20	3600	
1150	bouncing	3650	
1200		3700	
1250		3750	
1300		3800	
1350		3850	
1400		3900	
1450		3950	
1500		4000	
1550		4050	
1600		4100	
1650		4150	
1700		4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





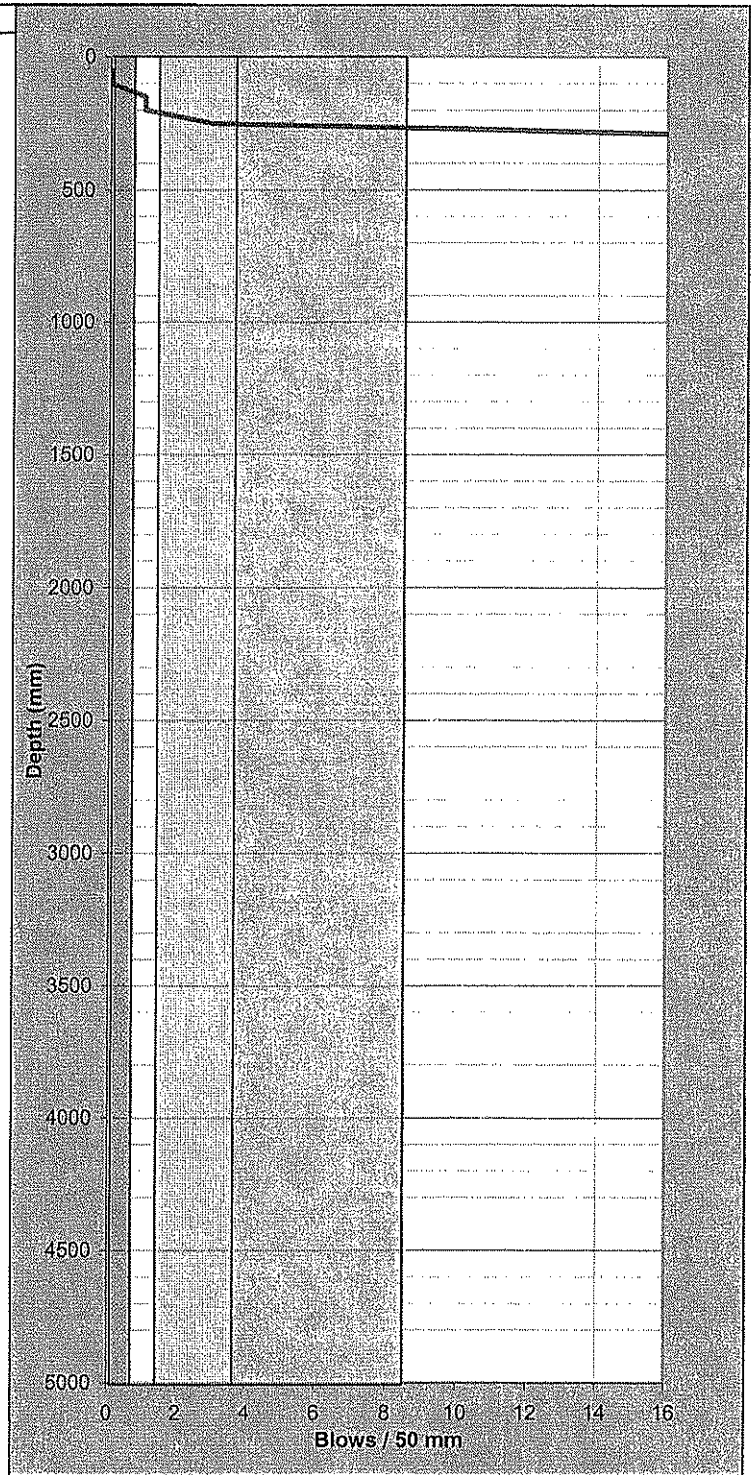
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 Fax: (03) 546 7619

SCALA PENETROMETER LOG

Job No: 22032.002	Date: 17/05/2006	Test No. SC4
Project: Waimea Dam	Operated by: JXWW	Sheet 1
Location: Lee River Valley	Logged by: JXWW	of 1
Position: Adjacent TP6	Checked by: OMM D	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0	2550	
100	0	2600	
150	1	2650	
200	1	2700	
250	3	2750	
300	20	2800	
350	bouncing	2850	
400		2900	
450		2950	
500		3000	
550		3050	
600		3100	
650		3150	
700		3200	
750		3250	
800		3300	
850		3350	
900		3400	
950		3450	
1000		3500	
1050		3550	
1100		3600	
1150		3650	
1200		3700	
1250		3750	
1300		3800	
1350		3850	
1400		3900	
1450		3950	
1500		4000	
1550		4050	
1600		4100	
1650		4150	
1700		4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





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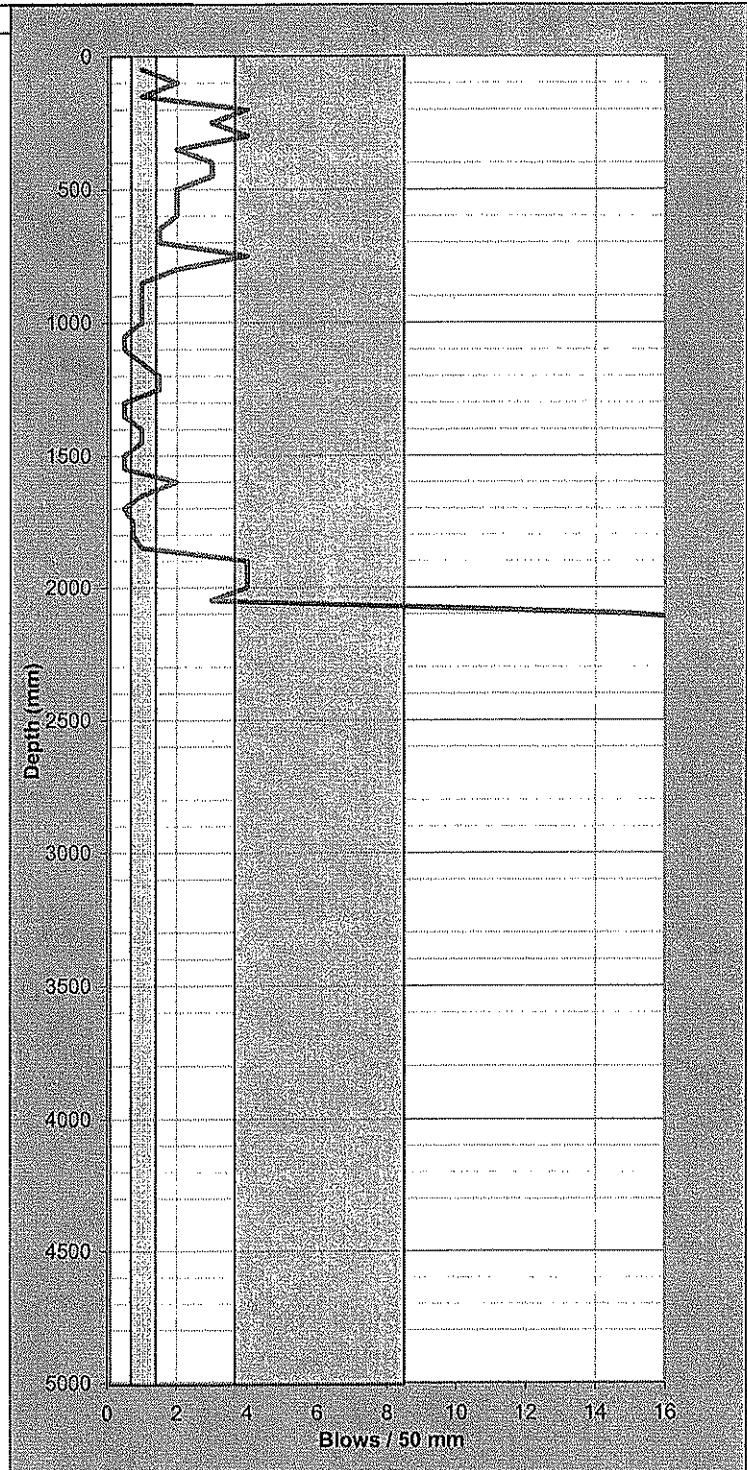
SCALA PENETROMETER LOG

Job No: 22032.002
 Project: Waimea Dam
 Location: Lee River Valley
 Position: Adjacent TP 5

Date: 17/05/2006
 Operated by: JXWW
 Logged by: JXWW
 Checked by: O.M.P.D

Test No. SC5
 Sheet of 1/1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	2550	
100	2	2600	
150	1	2650	
200	4	2700	
250	3	2750	
300	4	2800	
350	2	2850	
400	3	2900	
450	3	2950	
500	2	3000	
550	2	3050	
600	2	3100	
650	1.5	3150	
700	1.5	3200	
750	4	3250	
800	2	3300	
850	1	3350	
900	1	3400	
950	1	3450	
1000	1	3500	
1050	0.5	3550	
1100	0.5	3600	
1150	1	3650	
1200	1.5	3700	
1250	1.5	3750	
1300	0.5	3800	
1350	0.5	3850	
1400	1	3900	
1450	1	3950	
1500	0.5	4000	
1550	0.5	4050	
1600	2	4100	
1650	1	4150	
1700	0.5	4200	
1750	0.75	4250	
1800	0.75	4300	
1850	1	4350	
1900	4	4400	
1950	4	4450	
2000	4	4500	
2050	3	4550	
2100	15	4600	
2150	20	4650	
2200	Refusal	4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





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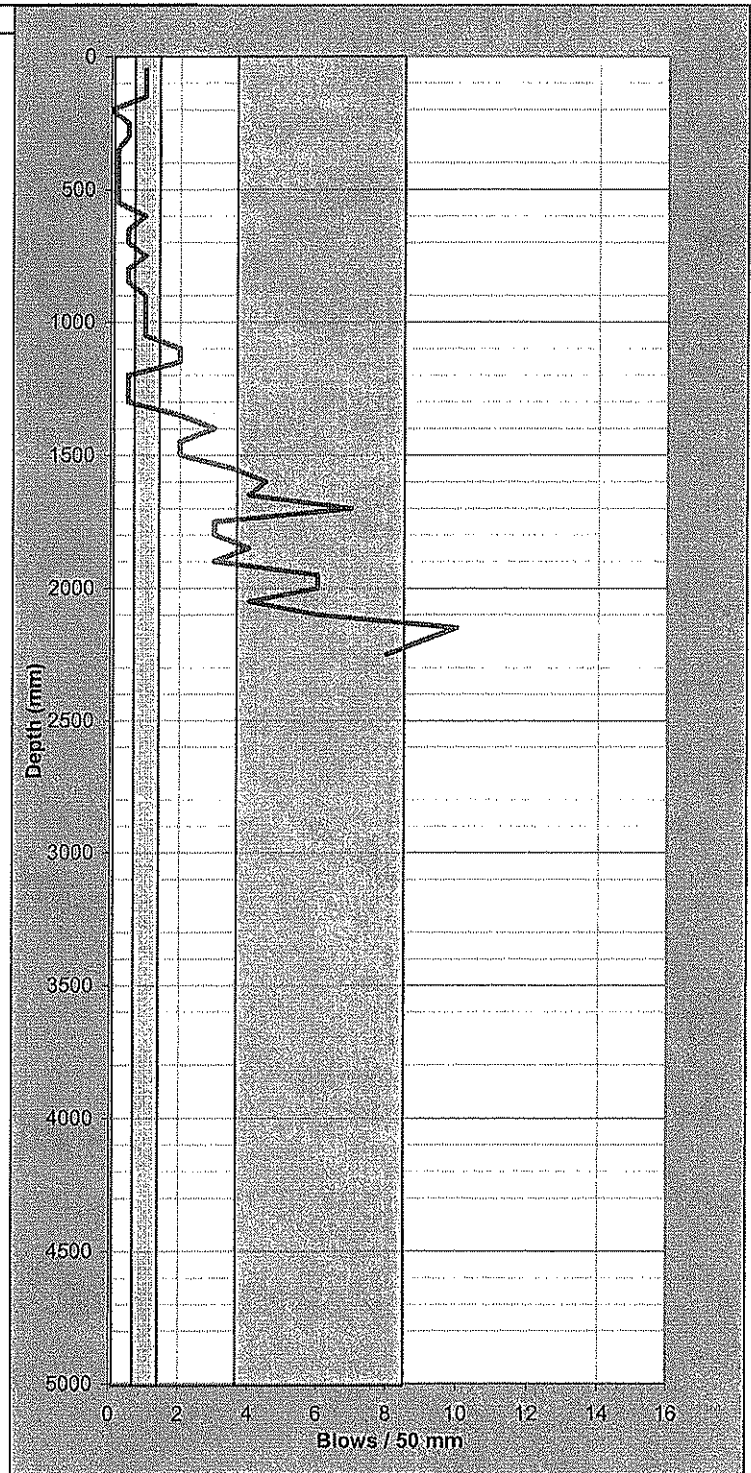
SCALA PENETROMETER LOG

Job No: 22032.002
Project: Waimea Dam
Location: Lee River Valley
Position: Adjacent TP6

Date: 17/05/2006
Operated by: JXWW
Logged by: JXWW
Checked by: OJPD

Test No. SC6
Sheet of 1
of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	2550	
100	1	2600	
150	1	2650	
200	0	2700	
250	0.5	2750	
300	0.5	2800	
350	0.2	2850	
400	0.2	2900	
450	0.2	2950	
500	0.2	3000	
550	0.2	3050	
600	1	3100	
650	0.5	3150	
700	0.5	3200	
750	1	3250	
800	0.5	3300	
850	0.5	3350	
900	1	3400	
950	1	3450	
1000	1	3500	
1050	1	3550	
1100	2	3600	
1150	2	3650	
1200	0.5	3700	
1250	0.5	3750	
1300	0.5	3800	
1350	2	3850	
1400	3	3900	
1450	2	3950	
1500	2	4000	
1550	3.5	4050	
1600	4.5	4100	
1650	4	4150	
1700	7	4200	
1750	3	4250	
1800	3	4300	
1850	4	4350	
1900	3	4400	
1950	6	4450	
2000	6	4500	
2050	4	4550	
2100	6	4600	
2150	10	4650	
2200	9	4700	
2250	8	4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



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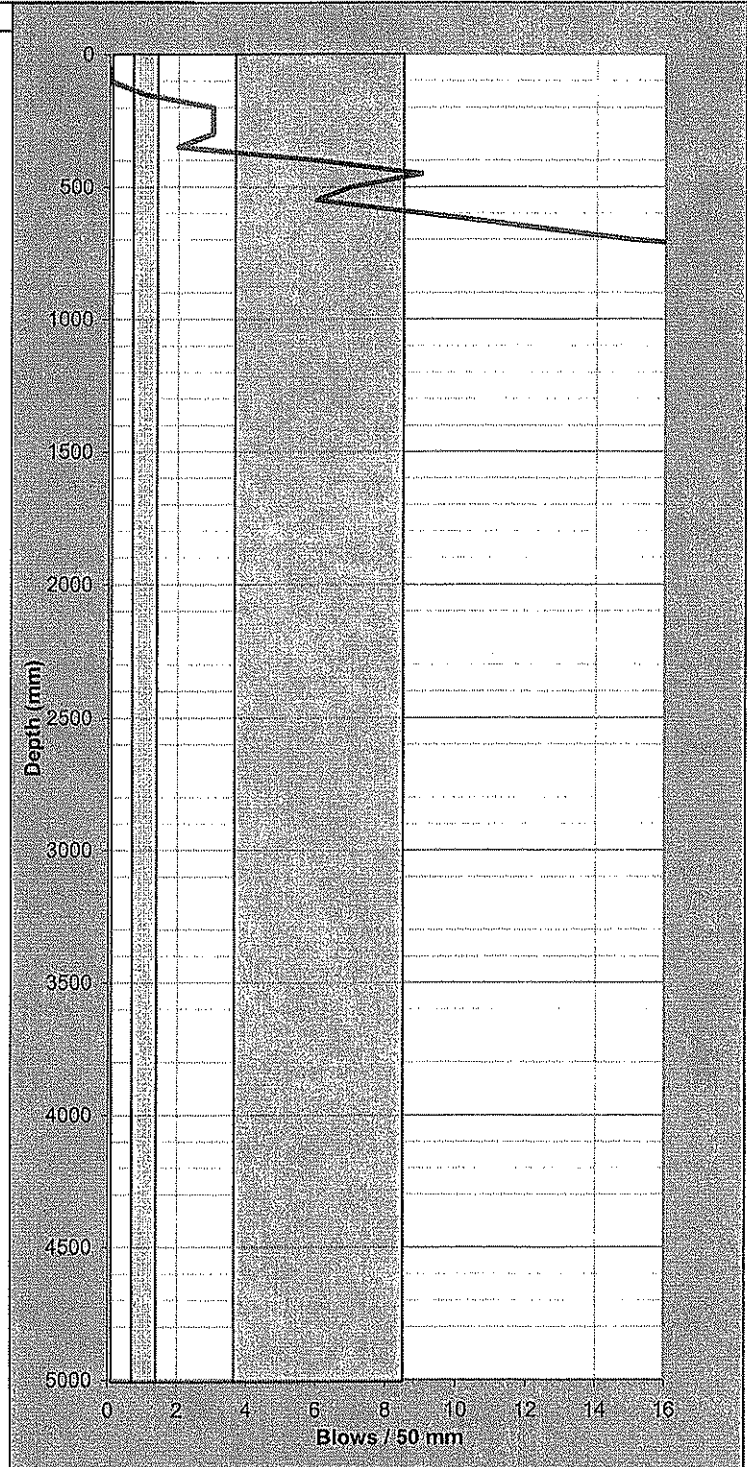
SCALA PENETROMETER LOG

Job No: 22032.002
Project: Waimea Dam
Location: Lee River Valley
Position: Adjacent TP11

Date: 17/05/2006
Operated by: JXWW
Logged by: JXWW
Checked by: OMPD

Test No. SC7
Sheet of 1
of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0	2550	
100	0	2600	
150	1	2650	
200	3	2700	
250	3	2750	
300	3	2800	
350	2	2850	
400	6	2900	
450	9	2950	
500	7	3000	
550	6	3050	
600	9	3100	
650	12	3150	
700	15	3200	
750	20	3250	
800	Refusal	3300	
850		3350	
900		3400	
950		3450	
1000		3500	
1050		3550	
1100		3600	
1150		3650	
1200		3700	
1250		3750	
1300		3800	
1350		3850	
1400		3900	
1450		3950	
1500		4000	
1550		4050	
1600		4100	
1650		4150	
1700		4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





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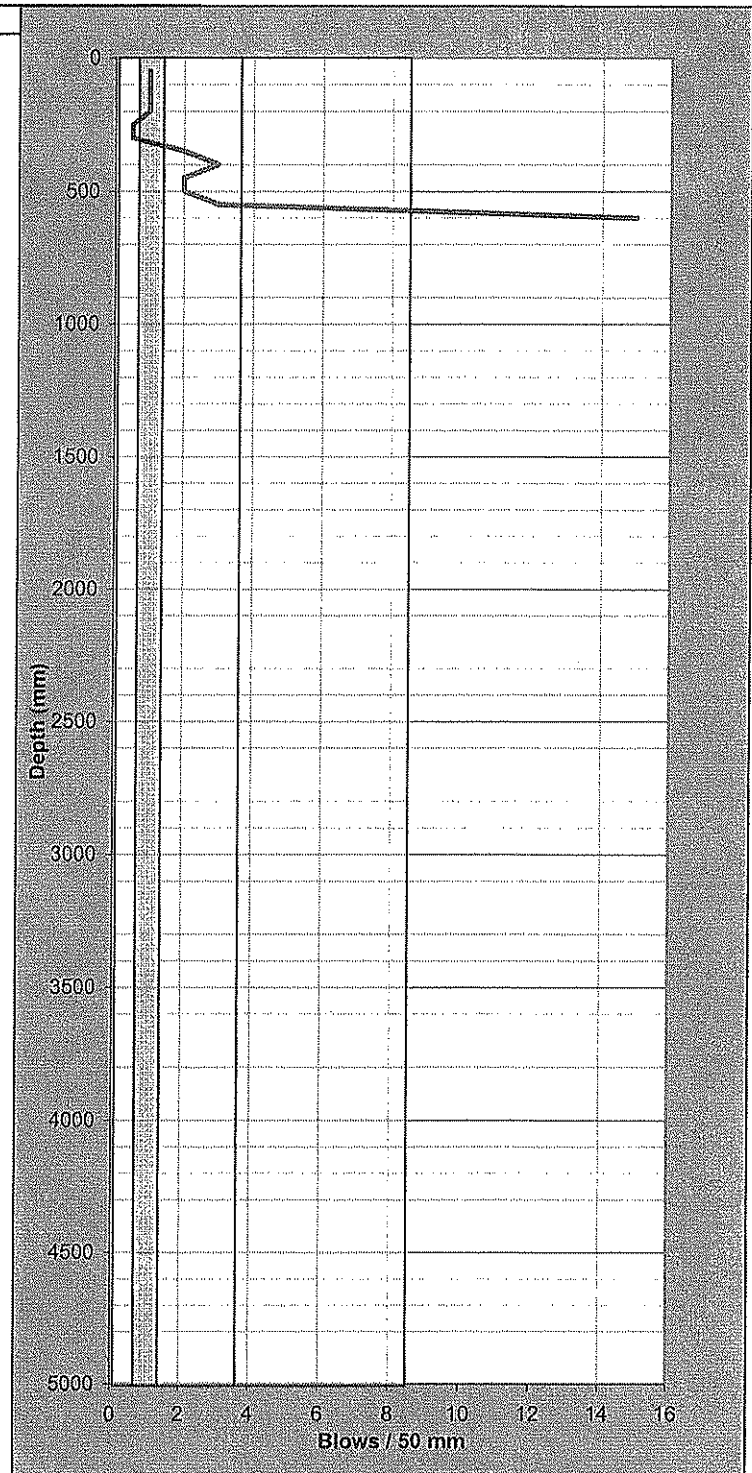
SCALA PENETROMETER LOG

Job No: 22032.002
 Project: Waimea Dam
 Location: Lee River Valley
 Position: Adjacent TP8

Date: 17/05/2006
 Operated by: JXWW
 Logged by: JXWW
 Checked by: OMRD

Test No. SC8
 Sheet of 1
 of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	2550	
100	1	2600	
150	1	2650	
200	1	2700	
250	0.5	2750	
300	0.5	2800	
350	2	2850	
400	3	2900	
450	2	2950	
500	2	3000	
550	3	3050	
600	15	3100	
650	bouncing	3150	
700		3200	
750		3250	
800		3300	
850		3350	
900		3400	
950		3450	
1000		3500	
1050		3550	
1100		3600	
1150		3650	
1200		3700	
1250		3750	
1300		3800	
1350		3850	
1400		3900	
1450		3950	
1500		4000	
1550		4050	
1600		4100	
1650		4150	
1700		4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





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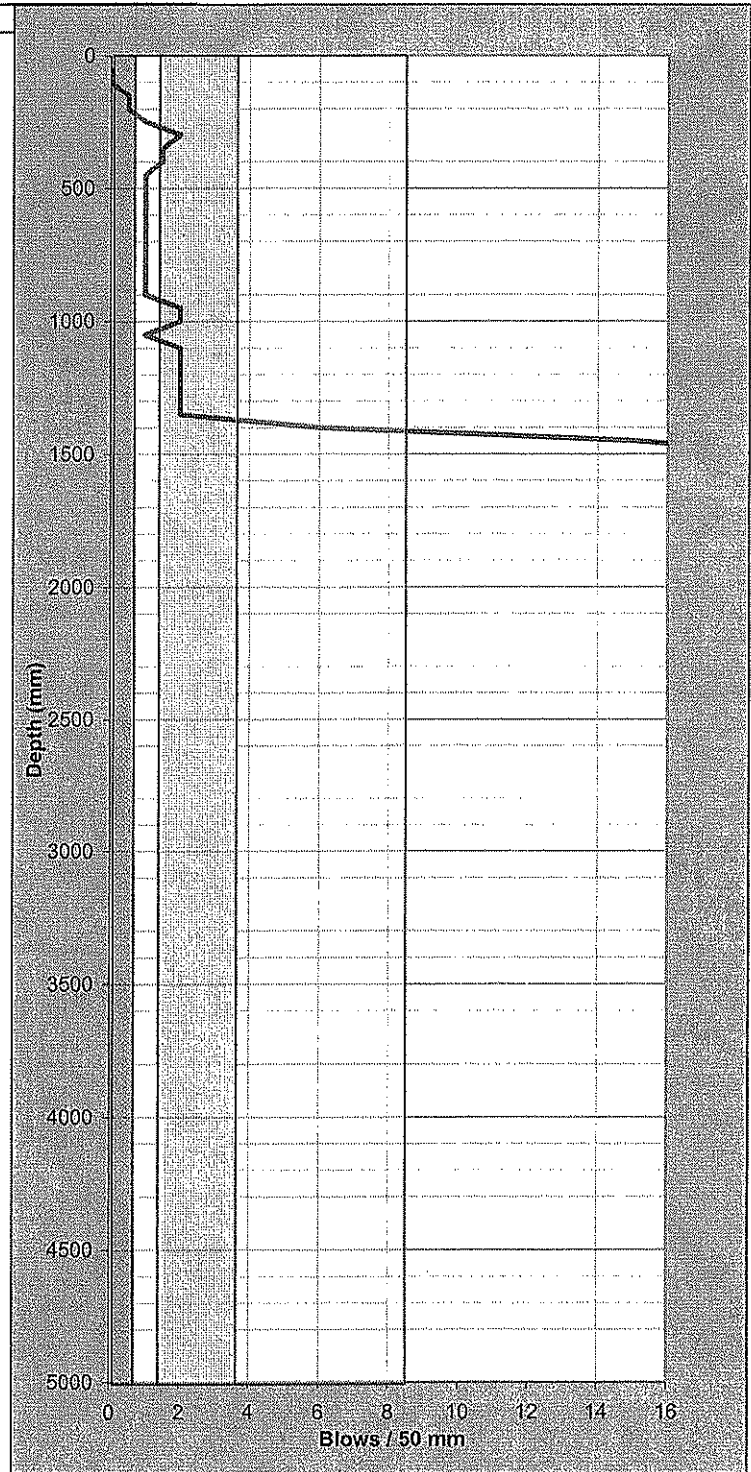
SCALA PENETROMETER LOG

Job No: 22032.002
 Project: Waimea Dam
 Location: Lee River Valley
 Position: Adjacent TP12

Date: 18/05/2006
 Operated by: JXWW
 Logged by: JXWW
 Checked by: OMPD

Test No. SC9
 Sheet of 1
 of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0	2550	
100	0	2600	
150	0.5	2650	
200	0.5	2700	
250	1	2750	
300	2	2800	
350	1.5	2850	
400	1.5	2900	
450	1	2950	
500	1	3000	
550	1	3050	
600	1	3100	
650	1	3150	
700	1	3200	
750	1	3250	
800	1	3300	
850	1	3350	
900	1	3400	
950	2	3450	
1000	2	3500	
1050	1	3550	
1100	2	3600	
1150	2	3650	
1200	2	3700	
1250	2	3750	
1300	2	3800	
1350	2	3850	
1400	6	3900	
1450	15	3950	
1500	20	4000	
1550	Refusal	4050	
1600		4100	
1650		4150	
1700		4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer



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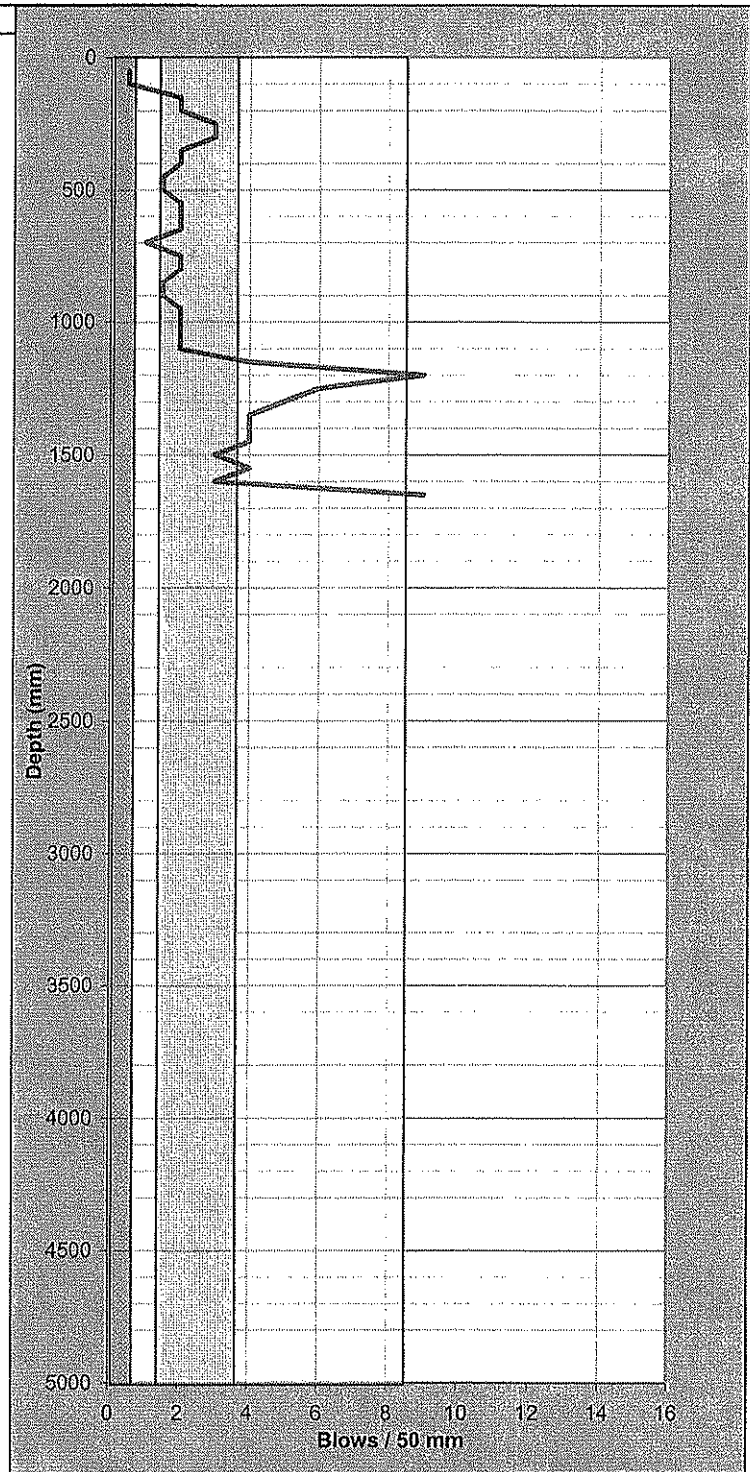
SCALA PENETROMETER LOG

Job No: 22032.002
 Project: Waimea Dam
 Location: Lee River Valley
 Position: Adjacent TP13

Date: 18/05/2006
 Operated by: JXWW
 Logged by: JXWW
 Checked by: OMPD

Test No. SC10
 Sheet of 1
 of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0.5	2550	
100	0.5	2600	
150	2	2650	
200	2	2700	
250	3	2750	
300	3	2800	
350	2	2850	
400	2	2900	
450	1.5	2950	
500	1.5	3000	
550	2	3050	
600	2	3100	
650	2	3150	
700	1	3200	
750	2	3250	
800	2	3300	
850	1.5	3350	
900	1.5	3400	
950	2	3450	
1000	2	3500	
1050	2	3550	
1100	2	3600	
1150	4	3650	
1200	9	3700	
1250	6	3750	
1300	5	3800	
1350	4	3850	
1400	4	3900	
1450	4	3950	
1500	3	4000	
1550	4	4050	
1600	3	4100	
1650	9	4150	
1700	bouncing	4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





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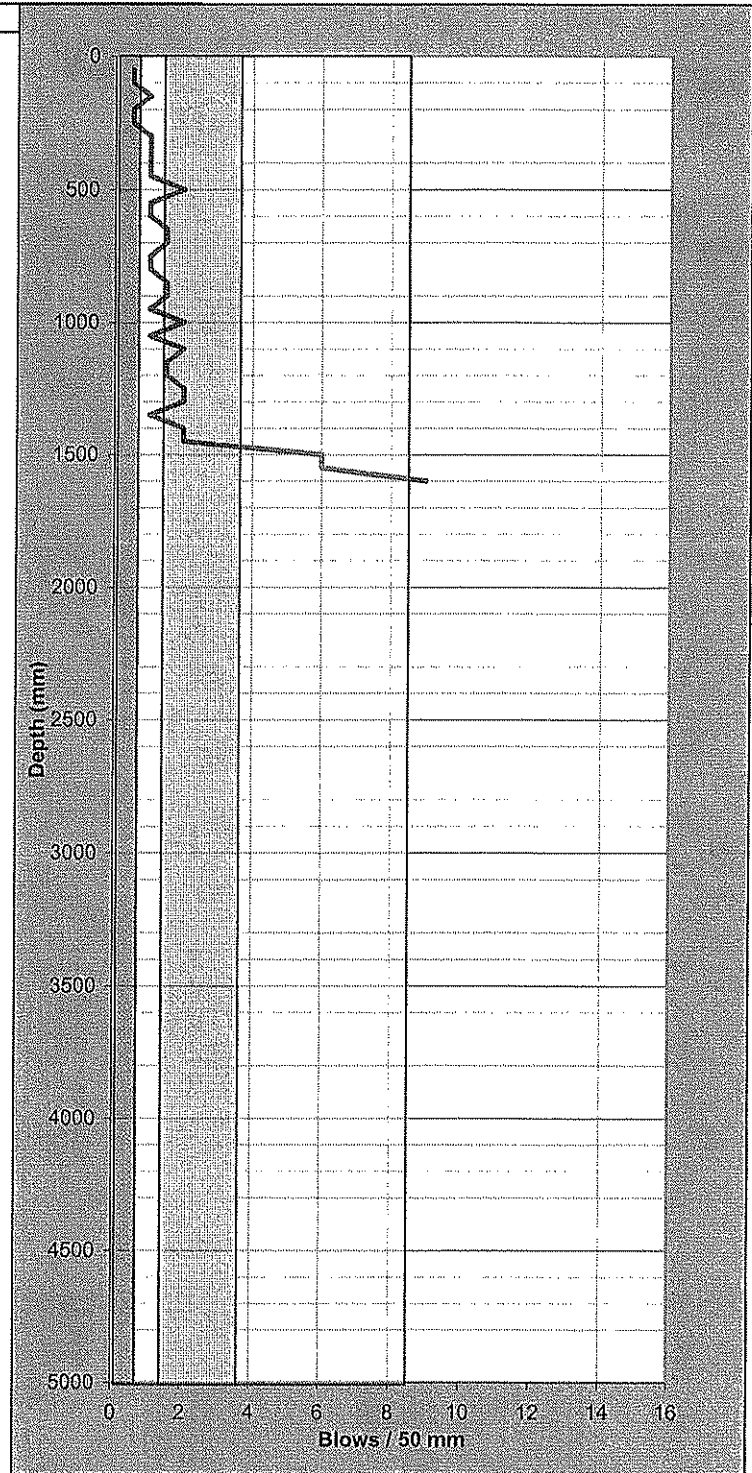
SCALA PENETROMETER LOG

Job No: 22032.002
Project: Waimea Dam
Location: Lee River Valley
Position: Adjacent TP15

Date: 18/05/2006
Operated by: JXWW
Logged by: JXWW
Checked by: OMRD

Test No. SC11
Sheet of 1 of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0.5	2550	
100	0.5	2600	
150	1	2650	
200	0.5	2700	
250	0.5	2750	
300	1	2800	
350	1	2850	
400	1	2900	
450	1	2950	
500	2	3000	
550	1	3050	
600	1	3100	
650	1.5	3150	
700	1.5	3200	
750	1	3250	
800	1	3300	
850	1.5	3350	
900	1.5	3400	
950	1	3450	
1000	2	3500	
1050	1	3550	
1100	2	3600	
1150	1.5	3650	
1200	1.5	3700	
1250	2	3750	
1300	2	3800	
1350	1	3850	
1400	2	3900	
1450	2	3950	
1500	6	4000	
1550	6	4050	
1600	9	4100	
1650	bouncing	4150	
1700		4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





TONKIN & TAYLOR

43 Halifax Street
P O Box 1009
NELSON
Tel: (03) 546 6339
Fax: (03) 546 7619

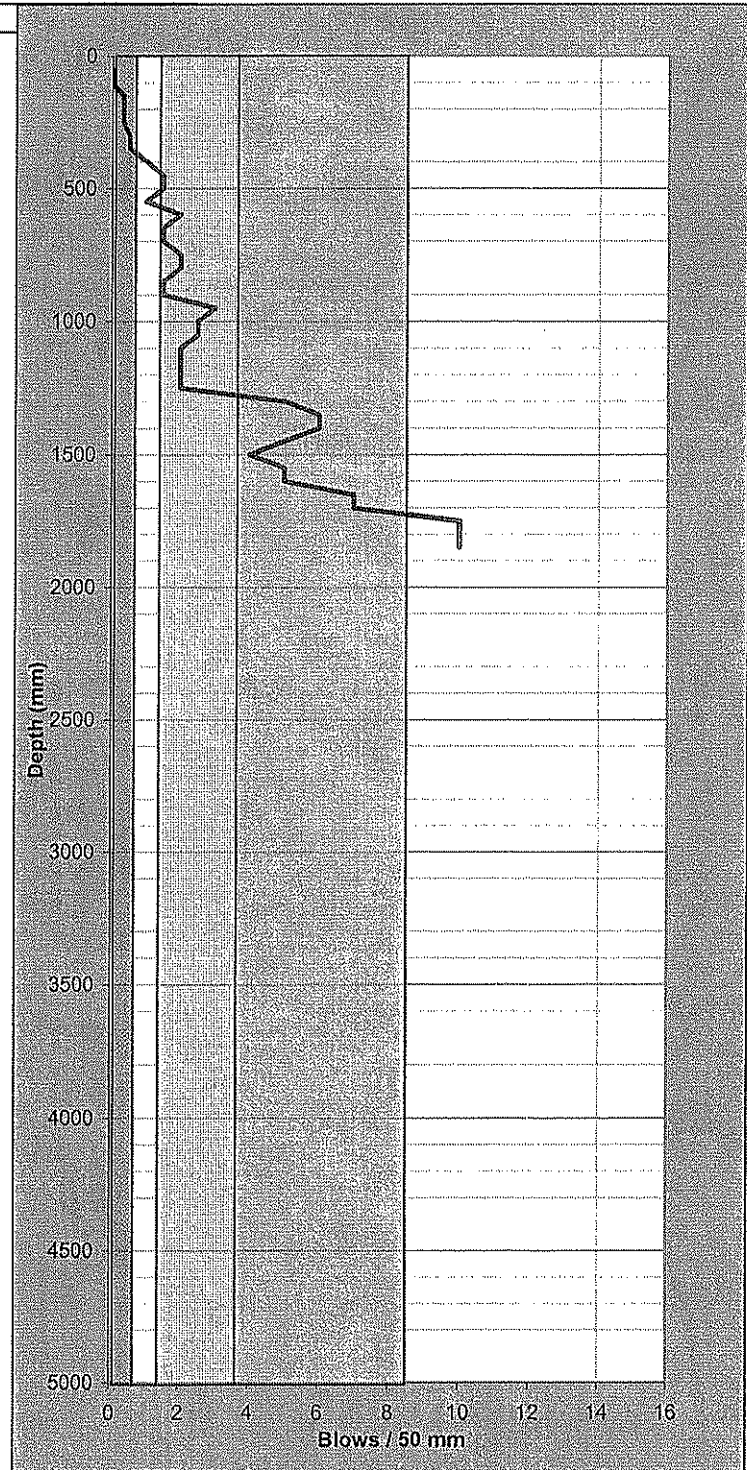
SCALA PENETROMETER LOG

Job No: 22032.002
Project: Waimea Dam
Location: Lee River Valley
Position: Adjacent TP14

Date: 18/05/2006
Operated by: JXWW
Logged by: JXWW
Checked by: OMRD

Test No. SC12
Sheet of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0	2550	
100	0	2600	
150	0.33	2650	
200	0.33	2700	
250	0.33	2750	
300	0.5	2800	
350	0.5	2850	
400	1	2900	
450	1.5	2950	
500	1.5	3000	
550	1	3050	
600	2	3100	
650	1.5	3150	
700	1.5	3200	
750	2	3250	
800	2	3300	
850	1.5	3350	
900	1.5	3400	
950	3	3450	
1000	2.5	3500	
1050	2.5	3550	
1100	2	3600	
1150	2	3650	
1200	2	3700	
1250	2	3750	
1300	5	3800	
1350	6	3850	
1400	6	3900	
1450	5	3950	
1500	4	4000	
1550	5	4050	
1600	5	4100	
1650	7	4150	
1700	7	4200	
1750	10	4250	
1800	10	4300	
1850	10	4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





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43 Halifax Street
P O Box 1009
NELSON
Tel: (03) 546 6339
Fax: (03) 546 7619

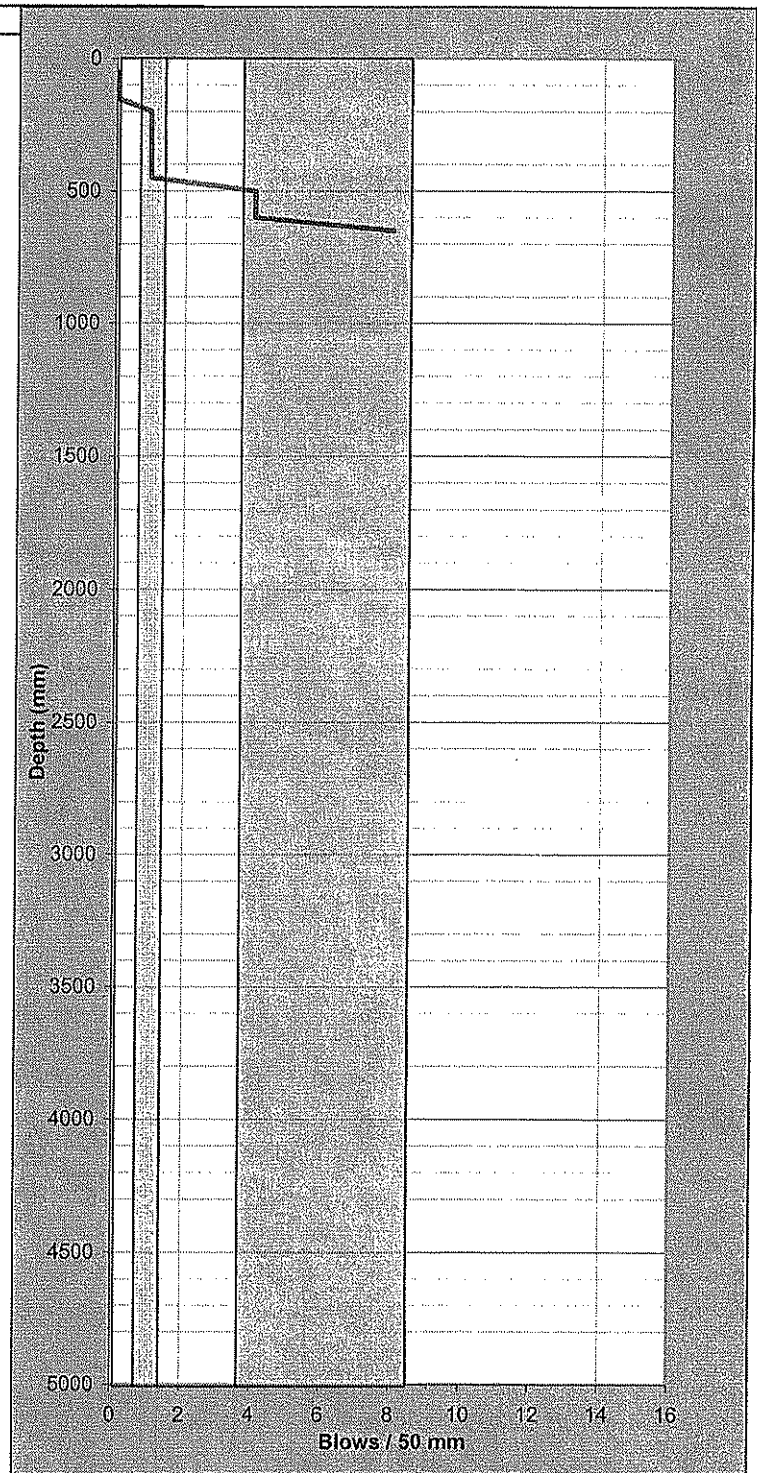
SCALA PENETROMETER LOG

Job No: 22032.002
Project: Waimea Dam
Location: Lee River Valley
Position: Adjacent TP16

Date: 6/06/2006
Operated by: JXWW
Logged by: JXWW
Checked by: OMRD

Test No. SC13
Sheet 1
of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0	2550	
100	0	2600	
150	0	2650	
200	1	2700	
250	1	2750	
300	1	2800	
350	1	2850	
400	1	2900	
450	1	2950	
500	4	3000	
550	4	3050	
600	4	3100	
650	8	3150	
700	bounce	3200	
750		3250	
800		3300	
850		3350	
900		3400	
950		3450	
1000		3500	
1050		3550	
1100		3600	
1150		3650	
1200		3700	
1250		3750	
1300		3800	
1350		3850	
1400		3900	
1450		3950	
1500		4000	
1550		4050	
1600		4100	
1650		4150	
1700		4200	
1750		4250	
1800		4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer





TONKIN & TAYLOR

43 Halifax Street
 P O Box 1009
 NELSON
 Tel: (03) 546 6339
 Fax: (03) 546 7619

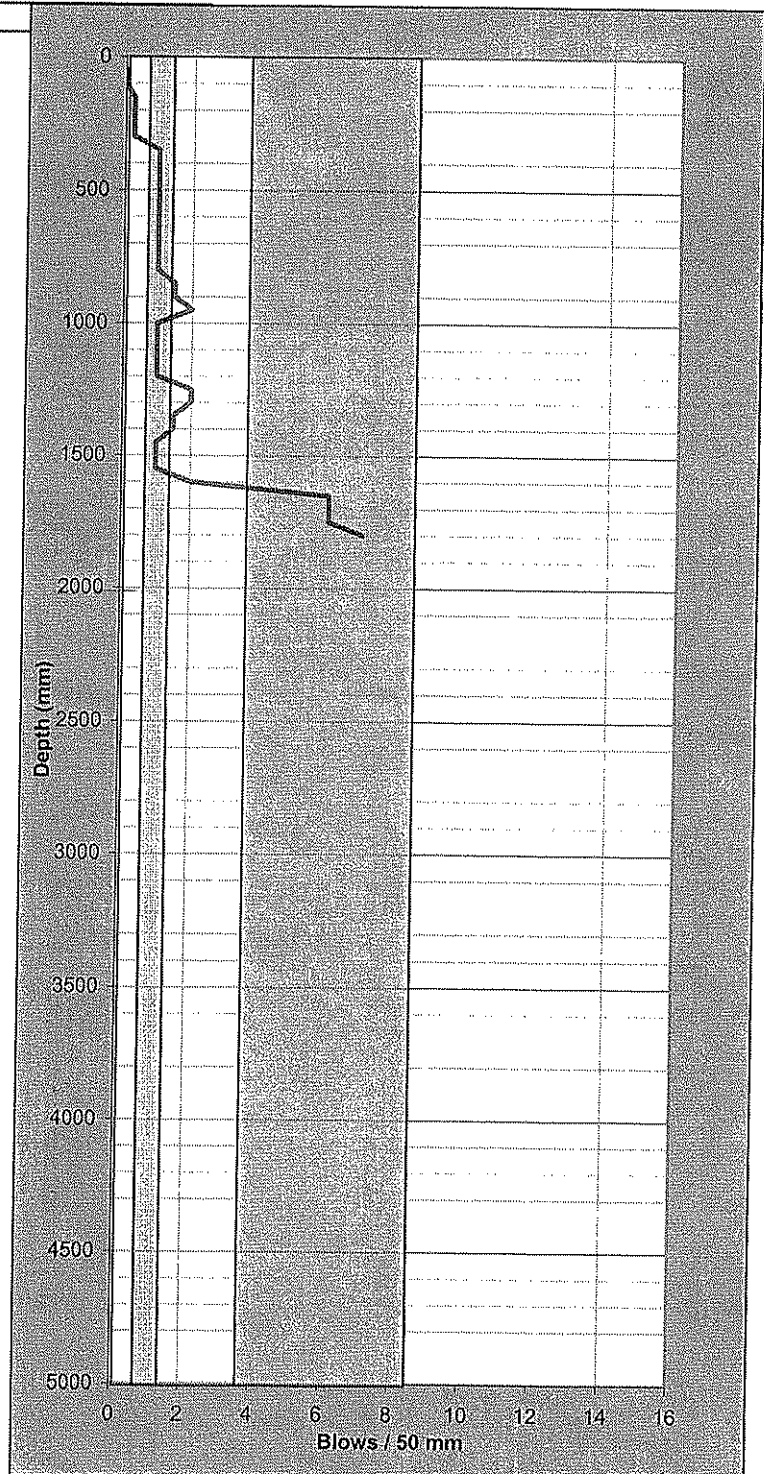
SCALA PENETROMETER LOG

Job No: 22032.002
 Project: Waimea Dam
 Location: Lee River Valley
 Position: Adjacent TP16

Date: 23/06/2006
 Operated by: JXWW
 Logged by: JXWW
 Checked by: OMPD

Test No. SC14
 Sheet of 1

mm Driven	No. of Blows	mm Driven	No. of Blows
50	0	2550	
100	0	2600	
150	0.25	2650	
200	0.25	2700	
250	0.25	2750	
300	0.25	2800	
350	1	2850	
400	1	2900	
450	1	2950	
500	1	3000	
550	1	3050	
600	1	3100	
650	1	3150	
700	1	3200	
750	1	3250	
800	1	3300	
850	1.5	3350	
900	1.5	3400	
950	2	3450	
1000	1	3500	
1050	1	3550	
1100	1	3600	
1150	1	3650	
1200	1	3700	
1250	2	3750	
1300	2	3800	
1350	1.5	3850	
1400	1.5	3900	
1450	1	3950	
1500	1	4000	
1550	1	4050	
1600	2	4100	
1650	6	4150	
1700	6	4200	
1750	6	4250	
1800	7	4300	
1850		4350	
1900		4400	
1950		4450	
2000		4500	
2050		4550	
2100		4600	
2150		4650	
2200		4700	
2250		4750	
2300		4800	
2350		4850	
2400		4900	
2450		4950	
2500		5000	



Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

