TEST HOLE LOGS

EXPLANATION OF SYMBOLS AND TERMS

The symbols and terms used on the test hole logs to summarize the results of the field investigation and the laboratory testing are described on the following sheets.

Soils are classified and described according to their engineering properties and behaviour. The descriptions applied to the various soil units as shown on the logs follow the Unified Soil Classification system with slight modification to recognize inorganic clays to medium plasticity (CI). Such descriptions are judgmental in nature and may differ in detail from that actually encountered in the field. The descriptions noted in the logs from test holes are based solely on inspections of soil and rock samples recovered or cuttings observed. The actual nature of the materials between samples may vary.

Laboratory tests have been performed on the various samples noted, following standard testing procedures or protocol unless otherwise noted. The test results are intended to provide a general indication of some of the engineering properties of the material.

ABBREVIATIONS

w or MC	Moisture content (ASTM D2216)		PP	Pocket Penetrometer
W₀ or Pl	Plastic limit (ASTM D4318)		v	Init weight
Wiorll	Liquid limit (ASTM D4318)		7 Vd	Dry unit weight
la or Pl	Plasticity Index		10	Density
NP	Non-plastic soil		р 04	Dry density
SH	Shelby tube sample		р <u>и</u>	Unconfined compressive strength
ALL	Auger sample		Ч ^и С.,	Undrained shear strength
B	Bulk Sample		SO4	Concentration of water-soluble sulphates
UD	Undisturbed Sample		TCR	Total Core Recovery
RC	Rock Core Sample		ROD	Rock Quality Index
SPT	Standard Penetration Test		SCR	Solid Core Recovery
VST	Vane Shear Test		FL	Fracture Index
ISI	lar Slake Index (I)			
331	sur sidic mack (ij)			
SIZE RAN	GES OF SOIL COMPONENTS			
Component	Size Range			
	mm (US Sieve)			SECONDARY CONSTITUENTS
Boulders	Over 300 (12 inch)			Term Percentage
Cobbles	75 (3 inch) to 300 (12 inch)			and 35% - 50%
Gravel:				y/ey 20% - 35%
Coarse	19(3/4 inch) to 75(3 inch)			some 10% - 20%
Fine	5 (#4) to 19 (3/4 inch)			trace 0 – 10%
Sand:	5 (#4) to 15 (5) 4 meny			
Coarse	-2(#10) to $5(#4)$	-		
Medium	0.4 (#40) to 3 (#4)		M T	
wiediann	0.4 (#40) to 2 (#10)			
Fine	$0.08(\#200) \pm 0.04(\#40)$			
Fine Clay and Silt	0.08 (#200) to 0.4 (#40)			

	CONSISTENCY OF FINE GRAINED SOILS												
Term	Undrained Shear Strength (kPa)	SPT N	Description										
Very soft	< 12	< 2	Easily penetrated with fist										
Soft	12 – 25	2 – 4	Easily penetrated with thumb										
Firm	25 – 50	4 – 8	Moderate effort to penetrate with thumb										
Stiff	50 - 100	8 – 15	Great effort to indent with thumb										
Very Stiff	100 - 200	15 – 30	Easily indented with thumbnail										
Hard	> 200	> 30	Effort required to indent with thumbnail										

DENSITY OF COARSE GRAINED SOILS												
Term	SPT N	Approx. Relative										
		Density (%)										
Very loose	0-4	0 - 15										
Loose	4 - 10	15 – 35										
Compact	10 - 30	35 - 65										
Dense	30 – 50	65 – 85										
Very Dense	> 50	85 - 100										

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Test Hole Logs Explanation of Symbols and Terms

UNIFIED SOIL CLASSIFICATION SYSTEM (MODIFIED)



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ROCK CORE LOGGING **QUICK REFERENCE SHEET**

CORE CONDITION

Total Core Recovery (TCR)

Percentage of drill core recovered, regardless of quality or length, measured relative to the total length of core run

TCR = (Total length recovered) / (total length of core run) * 100 Solid Core Recovery (SCR)

Percentage of drill core recovered at full diameter, regardless of length, measured relative to the total length of the core run.

SCR = (Length of solid core recovered) / (total length of core run) * 100 Rock Quality Designation (RQD)

Percentage of solid drill core ≥100 mm in length, measured relative to total core run

RQD = (Sum of intact pieces ≥100 mm) / (total length of core run) * 100

Fracture Index (FI)

The number of naturally occurring, discontinuities (physical separation) per metre of rock core. Mechanically induced breaks caused by drilling are not included.



at least one full diameter no single full diameter non-intact no recovery

core run

Key

1

2

3

4

5 6

rock quality designation solid core recovery SCR TCR total core recovery

	ROCK TYPE & DESCIPTION
TYPE	DESCRIPTION
Sandstone	Coarse-grained texture with visible sand-sized grains and feel for a gritty texture when rubbing the sample between your fingers. Presence of cross-bedding or layering indicative of sedimentary deposition
Siltstone	observe a fine-grained texture with no visible sand-sized grains, and a smooth feel when rubbing the sample between your fingers due to the presence of silt-sized particles. Additionally, siltstone often exhibits a tendency to break into thin, flat layers - fissility
Claystone	Ultra-fine-grained texture with no visible sand or silt-sized grains, Smooth, sometimes slightly sticky feel when rubbing the sample between fingers - dominance of clay-sized particles.
Shale	fine-grained texture with no visible sand-sized grains, tendency to break into thin, flat layers, - fissility. May exhibit a dark color, often gray or black

WEATHERING											
TERM	DESCRIPTION										
Fresh	No visible signs of decomposition.										
Slightly	Slight discoloration inwards from open fracture.										
Moderately	Discoloration throughout. Strength somewhat less than fresh, but cannon be broken by hand or scraped with knife. Texture observed.										
Highly	Most minerals somewhat decomposed. Specimens can be broken with hand with effort or shaved with knife. Texture becomes indistinct, fabric preserved										
Completely	Minerals decomposed to soil but fabric and structure preserved. Specimens easily crumbles or penetrated										
Residual Soil	Advanced state of decomposition resulting in plastic soil. Rock fabric and structure completed destroyed										

	DISC	CONTINUI	ΓΥ DATA	SPACING	;
TYPE	DESCRIPTION	INFILL	DESCRIPTION	Ext wide:	>6 m
Joint	Stress induced, planar, one or more sub-parallel sets	Clean	Clean, unaltered, unstained discontinuity surface	Very wide:	2 - 6 m
Vein	Mineral infill or healed discontinuity	Partially coated	Partially thin coverage of infill material across the core diameter	Wide:	600 - 2 m
Fault	Discontinuity with signs of significant movement	Completely coated	Complete thin coverage of Infill material across the core diameter	Moderate:	200 - 600 mm
Bedding	The surface that separates one stratum, layer or bed from another	Filled	Infill material is thick enough to fill the discontinuity surface roughness	Close:	60 - 200 mm
Contact	The surface along which one rock type touches an- other	Stained	Chemical alteration of the discontinuity surface through oxidation, carbonation, and solution and has no coatings or infilling	Very close:	20 - 60 mm
DISCONT	INUITY ANGLE: Measured angle degree (°) relative to t	the vertical co	re axis	Ext close: <	<20 mm

		ROCK STREN	GTH
TERM	GRADE	Unconfined Compressive Strength (MPa)	DESCRIPTION
Extremely Strong	R6	>250	Can only be chipped with hammer, rings when struck
Very Strong	R5	100 - 250	Many hammer blows to fracture
Strong	R4	50 - 100	More than one hammer blow to fracture
Medium strong R3		25 - 50	Single firm hammer blow to fracture, cannot be cut or peeled by knife
Weak	R2	5 - 25	Shallow indentations can be made with firm hammer blow
Very Weak	R1	1 - 25	Crumbles under firm blows with hammer, can be peeled with knife
Extremely weak	R0	0.25 - 1	Indented with thumbnail

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ROCK CORE LOGGING

QUICK REFERENCE SHEET

	CORE BOX LABELING
	Project Name
	Project Number
	Test Hole No.
	Box of
	Depth:m to m
Project Name	Date
Project No. Test Hole No.	
Box of Date Runto Depth m to	Project Name. Project No., Test Hole No. Box No., Run No.
	top left
24	
ac	livision of Englobe
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с	CLIENT Eastern Irrigation Distric					PROJECT NAME Snake Lake Reservoi								Expansion			
Р	ROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT	LOCATION		١	NE 1/4 32-19-1	16				
D	ATE	STARTED	06/22/2022	_ COMPLETED	06/22	2/2022	GR	OUND	ELEVATION	777.3m	N	5609544	_ E	415224			
D	RILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd GROUND WATER ELEVATION / DE						н						
D	RILL	ING METHOD		6" SSA			DAT	re gro	OUND WATER RI	ECORDED							
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO ⊢ PLASTIC - LIO SPT (N) Blows/ 10 20 3 100 200 3 ▲ POCKET PEN 	ONTENT QUID /300 mm 30 40 00 400 (kPa)		Standpipe/ Instrument Elevation (m)					
		CLAY TILL, cor (Weathered), s plastic, brownis inclusions SHALE (Weath weathered, ligh oxidation staini extremely weal	mpletely weatl ilty, dry, very s sh grey, suspe nered), clayey, nt brown to dai ing, damp, me k	trace silt, highly rk grey mottling, some dium plastic,	*	AU1		13.3	•					777-			
-3	· · · ·				-	AU2		12.6	•		2.5 m -	Sand = 1.7 Silt = 57.1% Clay = 41.2	% % %				
-4		BENTONITE (SHALE (Weath	3.2 m), small s nered), ""	eams	*	AU4 AU3		10.7 13.2	•		3.2 m - 3.2 m -	Sand = 20.9 Silt = 25.7% Clay = 53.4 LL = 84.4% PL = 23.2% PI = 61.2%	9% % %	774–			
5	· · · · · · · · · · · · · · · · · · ·				Ŧ	AU5		8.6	• +		-5.5 m -	LL = 53.8% PL = 18%		772			
			End of Borehole	9@6.1 m							-	<u>P1 = 33.8%</u>		771- 770- 769- 768-			
		Notes:															
11/01/2024		No seepage or	sloughing ob	served upon completio	n. B	ackfilled	l with t	pentor	nite chips.		Loggeo Review	d By: ved By:	<u>(</u> ד	C. Tams			



	CLIENT Eastern Irrigation District						_ PRC	JECT	NAME	Snake Lake Reservoir Expansion					
	PROJ	IECT NUMBER		1560-193-00			_ PRC	JECT			NE 1/4 32-19-1	16			
	DATE	STARTED	06/22/2022	_ COMPLETED)6/22	2/2022	_ GRO	DUND	ELEVATION 774.6m	N	5609515	_ E	415474		
	DRILL	ING CONTRACT	OR	Chilako Drilling Services	s Lto	1.	GR0	DUND	WATER ELEVATION / DEPT	н	772.65 m	35 m 1.9			
	DRILL	ING METHOD		6" SSA			_ DAT	E GRO	OUND WATER RECORDED		01/2	5/2023			
Depth (m)	SOIL SYMBOL	Soil Description SHALE (Weathered), clay and silt, some sand, highly weathered, dark brown with oxidation spec			Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 40 100 200 300 400 POCKET PEN (kPa) 	-	REMARKS	3	Elevation (m)		
- - - - - - - - - - - - - - - - - - -		SHALE (Weath highly weathere moist, high plas	ered), clay an ed, dark browi stic, extremely	d slit, some sand, n with oxidation specs, r weak to hard soil	æ	AU1		18.5	•	1 m -	Sand = 12.09 Silt = 43.9%	% %	774-		
						D2 AU2		17.8	• F	_2.3 m	- Sand = 4.4 Silt = 52.5%	% % %	773-		
		4 m - becomir	ng very weak		#	AU3		16.7	•	2.3 m 2.5 m 4 m -	Clay = 43.2 - LL = 63.0% PL = 24% PI = 39.0% - LL = 56.6% PL = 22.3% PI = 34.3% Sand = 2.9% Silt = 54.9% Clay = 42.2	9% 	771-		
			End of Borehole	·@6.1 m	æ	AU4		15.2	•	-5.5 m	- LL = 74.6% PL = 21.7% PI = 52.9%)	769-		
													768-		
										_			766		
	1	Notes:							1	1					
11/01/2024	4	No seepage or m. Backfilled sa	sloughing obs and and bento	served upon completion nite.	n. 2	5 slotted	PVC	pipe ii	nstalled to a depth of 6.1	Logge Revie	ed By: wed By:	<u>с</u> т	2. Tams . Curtis		



	CLIENT Eastern Irrigation Distr						_ PRO	OJECT	NAME	Snake Lake Reservoir Expansion							
	PROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT		1	NE 1/4 32-19-1	16					
	DATE	STARTED	06/22/2022	_ COMPLETED	06/2	2/2022	_ GRO	OUND	ELEVATION774.6m	N	5609524	_ E	415356				
	DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GR0	OUND	WATER ELEVATION / DEP	тн							
	DRILL	ING METHOD		6" SSA			_ DAT	E GR	OUND WATER RECORDED								
Depth (m)	SOIL SYMBOL	Soil Description CLAY TILL, silty, some medium grained sand lenses, moist, firm, medium to high plastic, dark				Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT ⊢ PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 40 100 200 300 400 ▲ POCKET PEN (kPa) 	_	REMARKS	3	Standpipe/ Instrument Elevation (m)				
		CLAY TILL, silt lenses, moist, f brown, some o	y, some mediu îrm, medium t xidation staini	ım grained sand o high plastic, dark ng									774-				
- 		SHALE (Weath highly weather some oxidation weak	nered), clay an ed, dark browi i staining, moi	d silt, some sand, n to dark grey mottling, st, high plastic, very	-	AU1		14.3	•••••••••••••••••••••••••••••••••••••••	1 m - [Classif % Disp 1 m - S	Dispersivity fication = ND persion = % Sand = 7.9% Silt = 39.5%	13	773-				
2 2 					-	AU2		17.5	•	1 m - E - 1 m - S 1 m - p	Clay = 52.6 EC: 8.8 dS/m SAR: 20.2 bH: 6.8	:% 1	772				
-3										1.8 m	- Sand = 5.2' Silt = 52.1% Clay = 42.8 - LL = 61.0% PL = 23%	% % %	771–				
4 					=	AU3		19.0		2.5 m	PI = 38.0% - LL = 57.5% PL = 18.9% PI = 38.6% Sand = 3.3%		770—				
- - - - - - - - - - - - - - - - - - -					-	AU4		16.7	•	4 m - L	Silt = 50.2% Clay = 46.5 _L = 65.7% PL = 21.3% PI = 44.4%	6 9% 9	769				
- - - - - - - - - - - - - - - - - - -				e@6.1 m									768-				
- - - - - - - - - - - - - - - - - - -													767-				
													766-				
- - - - - - -													765-				
	I	Notes:						I	1	1							
		No seepage or	sloughing obs	served upon completion	n. B	ackfilled	with t	pentor	nite chips.	Logae	d By:	С	. Tams				
11/01/2024	1									Review	wed By:	T.	Curtis				



(CLIENT Eastern Irrigation District						_ PRC	DJECT	NAM	IE	_	Snake Lake Reservoir Expansion							
	PRO	JECT NUMBER		1560-193-00			PROJECT LOCATION							NE 1/4 32-19-16					
	DATE	STARTED	06/22/2022		6/2	2/2022	_ GRO	DUND	ELEV	/ATIOI	٩.	778.2	!m	_ N _	5609550	_ E _	415	131	
	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Lto	Ltd. GROUND WATER ELEVATION / DEP					PTH		773.92 m		4.23	m			
	DRILI	LING METHOD		6" SSA	DATE GROUN				DUNE	WAT	ER RE	CORDE	D		01/2	25/2023			
Depth (m)	SOIL SYMBOL	Soil Description CLAY TILL, some silt, some sand, trace gravel, dry			Sample Type	Sample Number	SPT (N)	() () () () () () () () () ()						Standpipe	Elevation (m)				
		CLAY TILL, so soft, low to me precipitates SHALE (Weath highly weather oxidation staini weak	ne silt, some dium plastic, b lered), silt anc ed, brown with ng, damp, hig	sand, trace gravel, dry, rown, some white I clay, trace sand, n grey mottling, some h plastic, extremely	=	AU1 AU2		9.4 14.2		•			1 2	m - L .5 m -	L = 55.6% PL = 14.2% PI = 41.4% Sand = 1.9 Silt = 53.6% Clay = 44.5	6 6 9% 5%		778	
		5.2 m - becor 5.5 m - becor	ning very wea ning some sai End of Borehole	k nd ∌ @6.1 m	=	AU3 AU4		11.8 13.9		• ⊢			 4 5 5	.5 m - m - h .5 m -	LL = 41.9% PL = 16.5% PI = 25.4% ard drilling Sand = 10. Silt = 43.9% Clay = 45.6	5% 5% 5%		775 774 773 772	
				2 (60.11)														771	
		Notes:																	
		No seepage an depth of 6.1 m.	id minor sloug Backfilled wit	hing observed upon co h sand and bentonite.	mp	letion. 25	5 mm :	slotte	d PV	C pip	e insta	alled to	a I	odder	d By:	ſ	Tar	ne	
													P	eview	ved Rv		5. ian Curt	is	
11/01/2024	Ļ												1		icu Dy.		. ouri	10	



	CLIE	NT		Eastern Irrigation Distric	t		_ PRO	OJECT	NAM	E		5	Snake La	ake Reservoir	Expansio	on
	PROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT	LOCA	ATION	I			NE 1/4 32-19-	6	
	DATE	STARTED	06/22/2022	_ COMPLETED	06/2	2/2022	_ GR	OUND	ELEV	ATION	N	777.7m	N	5609659	_ E	415146
	DRILI	LING CONTRACT	OR	Chilako Drilling Service	es Lto	ł.	GR	OUND	WATE	R EL	EVATION	/ DEPT	н			
	DRILI	LING METHOD		6" SSA			_ DAT	E GR	OUND	WAT	ER RECO	RDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H P ■ SF 10 ▲ P0	OISTU PLASTI PT (N) 0 20 00 20 00 20	IRE CONTE C - LIQUID Blows/300 (20 30 00 300 <u>F PEN (kPa</u>	NT nm 40 400		REMARKS		Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt plastic, greyish SHALE (Weath dark brown, so plastic, extreme BENTONITE (4 SHALE (Weath 5.5 m - becon	y, some sand, brown, some ered), clayey, me oxidation s sly weak	stiff, dry, medium oxidation staining highly weathered, staining, damp, high eams eams		AU1 AU2 AU3 D1 AU4		12.1 15.2 13.3 11.6		● ● ● ●			4 m - 1 4 m - 1 4 m - 1 4.4 m 5.5 m	LL = 51.8% PL = 19.6% PI = 32.2% Sand = 1.4% Silt = 49.3% Clay = 49.3 LL = 48.8% PL = 17% PL = 31.8% Clay = 75.3 Clay = 75.3 Clay = 75.3 Clay = 137.00 PL = 39% PI = 98.0% PL = 12.9% PI = 31.8%	5 % % % %	777- 776- 775- 774- 774- 777- 777- 777- 777- 777
		Notes:														770-769-768-
11/01/2024	4				, D	Connicu				po.			Logge Reviev	d By: wed By:	C T.	. Tams Curtis



	CLIE	NT		Eastern Irrigation District			_ PRO	DJECT	NAM	IE	_		S	Snake La	ke Reservoir	Expansio	n	
1	PRO	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	1 _			N	IE 1/4 32-19-	16		
1	DATE	STARTED	06/21/2022	COMPLETED	06/2 ⁻	1/2022	GR0	DUND	ELE\	/ATIOI	N.	778	3.0m	N	5609688	_ E	41502	6
ı	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	1.	GR0	DUND	WATI	ER EL	EVATI	ON / E	EPTI	н				
۱ I	DRILI	LING METHOD		6" SSA			_ DAT	E GR	OUNE) WAT	ER RE	COR	DED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M ⊢ F ■ S _ 1 ▲ P	10ISTU PLASTI PT (N) 10 2 00 2 POCKE	JRE CO IC - LIQ Blows/3 20 30 7 PEN (NTENT UID 300 mm 0 40 10 40 kPa)	- 1 0		REMARK	5	Standpipe/ Instrument	Elevation (m)
-1		CLAY TILL, silt plastic, light bro SHALE (Weath highly weather staining, damp blocky	y, some sand, pwn eed, clay an ed, dark brown , high plastic, -	dry, soft, medium		AU1 AU2 AU3 AU4		8.1 12.7 13.3 12.4		• •		·····		1 m - S 1 m - L 2.5 m -	and = 11.7' Silt = 48.5' Clay = 39.8 L = 37.7% PL = 12.6' PI = 25.1' Sand = 0.9 Silt = 45.1' Clay = 54.0 LL = 55.1' PL = 18.2' PI = 36.9'	% % % %)%		7777 7776 7775 7774 7773 7772 7771 7770 7769
	I	Notes:															1	L
11/01/2024	1	No seepage or	sloughing obs	erved upon completio	n. B	ackfillec	l with b	pentor	nite c	hips.				Logged Review	l By: ved By:	C T.	. Tams Curtis	



		NT		Eastern Irrigation District			_ PRO	DJECT	NAM	IE			Snake L	ake Reservoir I.	Expansio	n	
1	PROJ	JECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	_			NE 1/4 32-19-1	6		
ı	DATE	STARTED	06/21/2022	COMPLETED 0)6/2´	1/2022	_ GRO	DUND	ELEV	ATION	ı _	778.5r	<u>n</u> N	5609725	_ E	414932	2
ı	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Ltd	l.	GR0	DUND	WATE	ER ELE	EVATIO	ON / DEP	тн				
1	DRILI	LING METHOD		6" SSA			_ DAT	E GR	DUNE) WATE	ER RE	CORDE)				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 11 ▲ P	10ISTU PLASTIC PT (N) I 10 20 00 20 00CKET	RE COM C - LIQU Blows/3 0 300 0 300 PEN (k	NTENT JID 00 mm 0 40 0 400 (Pa)	_	REMARKS	;	Standpipe/ Instrument	Elevation (m)
-1		CLAY TILL, so medium plastic SHALE (Weath highly weather staining, damp	me silt, some s , brown eed, greyish bro , medium plas	gravel, dry, soft, low to d silt, trace sand, own, some oxidation tic, extremely weak		AU1 AU2 AU3		4.5		•			1 m - 2.5 m 4 m - 4.3 m 	LL = 31.5% PL = 12.6% PI = 18.9% - Sand = 3.6' Silt = 48.4% Clay = 48.0 Sand = 15.9% Silt = 48.9% Clay = 35.2 LL = 43.1% PL = 15.8% PI = 27.3% - Auger refus	% 5 %		7778 7777 7776 7775 7774 7773 7772 7771 7771 7770 7769
É																	-
		Notes:															
11/01/2024		No seepage or	sloughing ob	served upon completion	η. В	ackfilled	with t	pentor	nite cl	hips.			Logge Revie	ed By: wed By:	<u> </u>	<u>Tams</u> Curtis	
L																	



	CLIEI	NT		Eastern Irrigation District			_ PRO	OJECT	NAM	ΛE	-		S	Snake La	ke Reservoi	ir Expans	ion	
1	PRO	JECT NUMBER		1560-193-00			_ PRO	OJECT	LOC	OITA	١.			Ν	IE 1/4 32-19	}-16		
l 1	DATE	STARTED	06/22/2022	_ COMPLETED)6/22	2/2022	GR0	OUND	ELE	VATIO	N	77	'8.4m	N	5609818	E _	41499)1
п	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Ltd	1.	GR0	OUND	WAT	ER EL	.EVAT	ION /	DEPT	н				
	DRILI	LING METHOD		6" SSA			DAT	E GR	OUN	D WAT	ER R	ECOR	DED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOISTI PLAST SPT (N) 10 2 100 2 POCKE	JRE CO IC - LIC Blows 20 (20 3 T PEN	DNTEN QUID /300 mr 30 4 00 4 (kPa)	T n 10 00		REMARK	(S	Standpipe/ Instrument	Elevation (m)
-1		SHALE (Weath residual soil, gr staining, damp SHALE (Weath highly weather with oxidation s	ered), clay ar reyish brown, , low plastic, e nered), clay ar ed, light brown specs, damp, l	id silt, trace sand, some oxidation ixtremely weak ad silt, trace sand, n to dark grey mottling, high plastic, very weak		AU1 AU2 AU3 AU4		13.4 15.3 15.0 12.3		• I				1 m - S 2.5 m - 2.5 m -	and = 0.99 Silt = 37.4 Clay = 61. Sand = 0. Silt = 43.7 Clay = 55 LL = 54.6 PL = 18% PI = 36.6 LL = 51.7 ⁴ PL = 18.6 PI = 33.1	% .% .7% 5% .8% % %		778 7777 7776 7775 7774 7773 7772 7771 7770 7770
Ē														-				-
	1	Notes:						I	ļ					1				
11/01/2024	L	No seepage or	sloughing ob	served upon completion	n. B	ackfilled	with t	pentor	nite d	chips.				Loggeo Review	l By: /ed By:	(<u>C. Tams</u> T. Curtis	; ;



	CLIEI	NT		Eastern Irrigation District			_ PR	OJECT	NAME	_	:	Snake La	ake Reservoir	Expansi	on
	PRO	JECT NUMBER		1560-193-00			_ PR	OJECT	LOCATIO	N _			NE 1/4 32-19-	16	
	DATE	STARTED	06/21/2022		06/2	1/2022	_ GR	OUND	ELEVATIO	N	778.3m	N	5609875	_ E	414853
	DRIL	LING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GR	OUND	WATER EL	EVATIO	ON / DEPT	н			
	DRIL	LING METHOD		6" SSA			DA	re gro	OUND WAT	TER RE	CORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTI ⊢ PLAST SPT (N) 10 100 2 POCKE 	URE CO TC - LIQI) Blows/3 20 30 200 30 ET PEN (1	NTENT JID 600 mm 0 40 0 400 kPa)	_	REMARKS	6	Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt plastic, brown, SHALE (Weath trace gravel, hi grey mottling, t medium plastic	y, some sand, trace root hair nered), clay ar ghly weathere race oxidation , extremely w	dry, soft, medium rs		AU1 AU2 AU3		14.0				1 m - 0 1 m - 5 1.1 m -2.5 m 4.3 m very tig	Gravel = 0.2' Sand = 8.1% Silt = 38.29 Clay = 53.5 - LL = 56.3% PL = 16.5% PL = 39.8% - LL = 55.2% PL = 19.3% PL = 35.9% Sand = 3.7% Silt = 46.89 Clay = 49.5 - Auger refus ght drilling	% % 5% 5 5% \$sal,	778- 777- 777- 777- 777- 777- 777- 777-
E															
		Notes:													
11/01/2024	4	No seepage or	sloughing ob	served upon completio	n. B	ackfilled	l with l	pentor	nite chips.			Logge Reviev	d By: wed By:	(<u>). Tams</u> . Curtis
L															



	CLIEI	NT		Eastern Irrigation District				DJECT	NAME	S	Snake Lake Rese	ervoir Ex	pansio	n
	PRO	JECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		NE 1/4 3	2-19-16		
	DATE	STARTED	06/22/2022	_ COMPLETED)6/22	2/2022	_ GRO	DUND	ELEVATION	776.9m	N 56098	882	E	415069
	DRIL	LING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR0	DUND	WATER ELE	EVATION / DEPTI	Η			
	DRIL	LING METHOD		6" SSA			_ DAT	E GR	OUND WATE	ER RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTUF PLASTIC SPT (N) E 10 20 100 20 POCKET 	RE CONTENT C - LIQUID Blows/300 mm 0 30 40 0 300 400 PEN (kPa)	REM#	ARKS		Standpipe/ Instrument Elevation (m)
-1	SHALE (Weathered), clay and silt, some sand, highly weathered, dark brown, with oxidation specs, damp, medium plastic, extremely weak, trace gypsum crystals 5.5 m - becoming high plastic End of Borehole @6.1 m					AU1 AU2 AU3 AU4		15.0 15.4 12.9 16.5	•		1 m - Dispersion (Classification % Dispersion 1 m - LL = 54. PL = 1 PI = 3 2.5 m - Dispersion 2.5 m - LL = 4 PL = 1 PI = 3 4 m - Sand = Silt = 5 Clay = 5.5 m - LL = 5 PL = 1 PI = 3	vity = D2 = % 9% 55.1% rsivity = ND3 = % 8.1% 8% 30.1% 10.5% 51.6% 51.6% 52.3% 53.1% 53.6% 53.1% 53.6% 53.1% 53.6%		7776- 7775 7774 7774 7772 7772 7771 7770 7769
- -9 														768
		Notes:			-									<u>. </u>
11/01/2024	1	No seepage or	sloughing ob	served upon completion	n. B	ackfilled	with t	pentor	nite chips.		Logged By: Reviewed By:	_	<u> </u>	<u>Tams</u> Curtis



	CLIEI	NT		Eastern Irrigation District			_ PRO	OJECT	NAME	Snake L	ake Reservoir I	Expansic	n
	PRO.	JECT NUMBER		1560-193-00			_ PRO	OJECT			NE 1/4 32-19-1	6	
	DATE	STARTED	06/22/2022	COMPLETED 0)6/2	2/2022	_ GR	OUND	ELEVATION 775.7m	<u>N</u>	5609859	E	415201
	DRIL	LING CONTRACT	OR	Chilako Drilling Services	s Lto	1.	GR	OUND	WATER ELEVATION / DEP	гн			
	DRIL	LING METHOD		6" SSA			_ DA1	E GR	OUND WATER RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 40 100 200 300 400 POCKET PEN (KPa) 		REMARKS	i	Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt (Weathered), d brown, some o SHALE (Weath highly weather with oxidation s weak to hard s	y, some sand, lamp, firm, me xidation staini nered), clay ar ed, light brown specs, damp, oil	residual SHALE dium plastic, dark ng nd silt, trace sand, n to dark grey mottling, high plastic, extremely	-	AU1		15.8	•				775
-3		3 m - bentoni	te inclusions		*	AU2		20.8		–2.5 m	- LL = 56.2% PL = 19.2% PI = 37.0%		773-
4 4 5 5		4 m - becomi	ng grey, medii	um plastic, some sand	æ	AU3		11.2	•	4 m -	Sand = 13.6% Silt = 49.8% Clay = 36.6 LL = 45.2% PL = 15.5% PI = 29.7%	6 9 %	771
		Notes:	End of Borehole	e @6.1 m	-	AU4		11.4					770 769 768 767 766
11/01/2024	4	No seepage or	sloughing ob	served upon completion	n. B	ackfilled	with t	pentor	nite chips.	Logge Revie	ed By: wed By:	C T.	. Tams Curtis



CLIENT	Eas	stern Irrigation District			_ PRO	DJECT	NAM	E			Snal	ke Lak	e Reservoir I	Expansi	on	
PROJECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	_			NE	1/4 32-19-1	6		
DATE STARTED	<u>06/22/2022</u> C	OMPLETED	06/22	2/2022	_ GRO	DUND	ELEV	ATION	_	776.2n	<u>1</u>	N	5609941	_ E	41520)4
DRILLING CONTRACT	FOR <u>C</u>	hilako Drilling Service	s Ltd		GR0	DUND	WATE	ER ELE	EVATIC	N / DEP	тн _	7	73.65 m		2.50 m	
DRILLING METHOD		6" SSA			_ DAT	E GRO		WATE	RRE		-		01/2	5/2023		
Depth (m) SOIL SYMBOL	Soil Description		Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H P ■ SI 10 ▲ P	IOISTUF PLASTIC PT (N) B 10 20 00 200 OCKET	RE CON - LIQU Blows/3() 30 0 300 PEN (k	ITENT ID 00 mm <u>40</u> 0 400 Pa)			REMARKS		Standpipe/	Elevation (m)
CLAY, complete silty, dry, soft, l SHALE (Weath highly weather with oxidation weak 	ely weathered SH ow to medium pla nered), clay and si red, light brown to specs, damp, med PAGE, becoming s End of Borehole @S	ALE (Weathered), stic, brown It, trace sand, dark grey mottling, lium plastic, very sandy 3.7 m	-	AU1 AU2 AU3		16.7		• •			3.5 3.7 4 r	n - LL F F 7 m - <i>J</i> n - Sa (= 51.1% PL = 19.1% Pl = 32.0% Pl = 32.0% PL = 13.3% Pl = 24.0% Auger refus ind = 30.9% Silt = 40.8% Clay = 28.3	al 6 %		7776– 7775– 7772– 7772– 7771– 7770– 7769– 7669–
										<u> </u>						
Notes: Seepage enco with sand and	untered at 3.6 m. bentonite.	25 mm slotted PVC	; pip	e install	ed to a	a dept	h of 3	3.7 m.	Back	filled	Lo Re	gged eviewe	By: ed By:	C T	C. Tams	<u> </u>



(NT		Eastern Irrigation District			_ PRO	OJECT	NAM	E	_		S	nake La	ake Reservoir	Expans	ion	
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	_ ۱			1	NE 1/4 32-19-	16		
[DATE	STARTED	06/22/2022	COMPLETED 0)6/22	2/2022	_ GR	OUND	ELEV	ATIOI	N.	777	.1m	N	5609948	_ E _	41506	5
[DRILL	ING CONTRACT	OR	Chilako Drilling Services	s Lto	l.	GR	OUND	WATE	ER EL	EVATI	ON / D	EPTH	ł				
[DRILL	ING METHOD		6" SSA			DAT	E GR	DUNE	WAT	ER RE	CORD	ED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 1 ▲ P	10ISTL PLASTI PT (N) 10 2 00 2 0CKE	JRE CC IC - LIQ Blows/3 20 30 00 30 T PEN (NTENT UID 300 mm 0 40 00 400 (kPa))		REMARKS	5	Standpipe/ Instrument	Elevation (m)
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		SHALE (Weath some sand, col oxidation staini weak, suspect bentonite seam SHALE (Weath highly weathere with oxidation s to hard soil, sus	ered), clay an mpletely weath ng, dry, high p white sulphate is erered), clay an ed, light brown specs, damp, h spect white su	d silt, trace sand, hered, brown, some lastic, extremely inclusions, trace		AU1 AU2 AU3 AU4		12.1 14.2 11.8 15.4		• •				1 m - \$ 1 m - L 2.5 m - 4 m - \$ 5.2 m -	Sand = 0.7% Silt = 36.89 Clay = 62.5 L = 59.9% PL = 18.1% PI = 41.8% LL = 55.6% PL = 21.6% PI = 34.0% Sand = 4.0% Silt = 52.39 Clay = 43.7	6 5% 6 5 6 6 7% 5 5 6 7% 5 7% 5 7% 5 7%		776– 7775– 7774– 7773– 7772– 7771– 7770– 769– 768–
																		-
		Notes:																•
441041000		No seepage or	sloughing obs	erved upon completion	n. B	ackfilled	with I	pentor	nite cl	hips.				Logge Reviev	d By: ved By:		<u>C. Tams</u> Г <u>. Curti</u> s	. <u> </u>
11/01/2024																		



(CLIEI	NT		Eastern Irrigation District			_ PRC	JECT	NAM	IE	_		Sı	nake La	ake Reservoir	Expansi	on	
1	PRO	IECT NUMBER		1560-193-00			_ PRC	JECT	LOC	ATION	_				NE 1/4 32-19-	16		
1	DATE	STARTED	06/21/2022	COMPLETED	06/2 ⁻	1/2022		DUND	ELE\	ATION	۱ _	778	.3m	N	5609946	_ E	41498	52
1	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR0	DUND	WAT	ER EL	EVATIO	D / NC	EPTH	I	774.98 m		3.31 m	. <u> </u>
ſ	DRILI	LING METHOD		6" SSA			_ DAT	E GRO	JUNE	WAT	ER RE	CORD	ED		01/2	5/2023		
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H I ■ S 1 ▲ F	10ISTU PLASTI PT (N) 10 20 00 20 OCKET	RE CO C - LIQI Blows/3 0 30 0 30 7 PEN (1	NTENT JID 600 mm 0 400 kPa))		REMARKS	\$	Standpipe/	Elevation (m)
-		CLAY TILL, sor	ne silt, trace (brown	gravel, dry, soft, low to														778-
		SHALE (Weath highly weather staining, damp	nd silt, trace sand, n, some oxidation very weak	*	AU1		11.5		•+				1 m - 1 1 m - 1 2.5 m	Sand = 1.3% Silt = 49.6% Clay = 49.1 L = 52.8% PL = 18.4% PI = 34.4% - Sand = 1.2	% % > %		777	
	· · · · ·	-				AUZ		14.5		·					Silt = 49.3% Clay = 49.5	6 1%		
-3			End of Borehole	e @4.0 m	-	AU3		14.4		•				3.7 m	Clay = 49.5 - LL = 57.8% - PL = 21.3% PI = 36.5%	°%		775 774 773 772 771 770 769
		Notes:																
11/01/2024		No seepage or with sand and I	sloughing ob pentonite.	served upon completio	n. 2	5 mm sta	andpip	e inst	alled	to 4.0	0 m. E	Backfil	led I	Logge Reviev	d By: wed By:		<u>C. Tams</u> T. Curtis	<u> </u>
. 1/0 1/2024																		



CLIENT		Eastern Irrigation District			_ PRC	DJECT	NAM	1E	_		5	Snake Lake Reservoir E	Expansio	n	
PROJECT NUMBER		1560-193-00			_ PRC	DJECT	LOC	ATION	1			NE 1/4 32-19-1	6		
DATE STARTED	06/21/2022	COMPLETED)6/2 ⁻	1/2022	_ GRO	DUND	ELE\	/ATIO	N	78	0.4m	N5609980	E	41482	8
DRILLING CONTRACT	TOR	Chilako Drilling Service	s Ltd	l.	GRO	DUND	WAT	ER EL	EVATI	ON / E	DEPT	н			
DRILLING METHOD		6" SSA			DAT	E GR	DUNE	D WAT	ER RE	CORI	DED				
Depth (m) SOIL SYMBOL	Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M	AOISTU PLAST SPT (N) 10 2 200 2 200CKE	JRE CC IC - LIQ Blows// 20 3 00 3(T PEN (UID 300 mm 0 40 00 40 (kPa)	Г 1 2 10	REMARKS		Standpipe/ Instrument	Elevation (m)
CLAY TILL, silt soft, low to me	ty, trace gravel dium plastic, b ing residual mu hered), clay an red, dark brown , medium plas	, trace cobbles, dry, rown Idstone d silt, trace sand, n, some oxidation tic, very weak to hard @4.6 m	-	AU1 AU2 AU3 AU4		6.9 13.3 12.4 13.7		•				1 m - Gravel = 0.89 1 m - Sand = 14.5% Silt = 42.0% Clay = 42.7' 1 m - LL = 46.6% PL = 17.9% PI = 28.7% 2.5 m - LL = 57.0% PI = 36.8% 3.2 m - Sand = 5.9° Silt = 45.7% Clay = 48.4' 3.5 m - Auger refus changed auger bit a drilled to 4.6 m 4 m - LL = 48.8% PL = 17.7% PI = 31.1% 4.6 m - Auger refus	5 7 % % al; and al		780- 779- 778- 777- 776- 777- 777- 777- 777- 777
Notes:												<u> </u>		1	L
Notes: No seepage of	r sloughing obs	erved upon completio	n. B	ackfilled	with b	pentor	nite c	hips.				Logged By: Reviewed By:	<u> </u>	<u>. Tams</u> Curtis	 ,



		NT		Eastern Irrigation Distric	:t		_ PR	OJECT	NAME	S	Snake La	ke Reservoir E	Expansio	on	
F	PROJ	IECT NUMBER		1560-193-00			_ PR	OJECT	LOCATION		١	NE 1/4 32-19-1	6		
ı	DATE	STARTED	06/21/2022	COMPLETED	06/2	1/2022	GR	OUND	ELEVATION	775.4m	N	5612279	E	415286	6
(ORILL	ING CONTRACT	OR	Chilako Drilling Servic	es Lto	1.	GR	OUND	WATER ELEVA	TION / DEPTH	Η	770.96 m		4.40 m	
[[ORILL	LING METHOD		6" SSA			DA	TE GR	OUND WATER F	RECORDED		01/2	5/2023		
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 POCKET PEN 	CONTENT QUID s/300 mm 30 40 300 400 v (kPa)		REMARKS		Standpipe/	Elevation (m)
		CLAY TILL, silt medium plastic SHALE (Weath weathered, bro weak	y, sandy, som , brown nered), clay an wn, damp, hig	e gravel, dry, soft, d silt, highly h plastic, extremely ≇@5.5 m		AU1 AU2 AU3 AU4		5.8 8.8 15.6			1 m - E Classif % Disp 1 m - C 1 m - L 2.5 m - 4 m - L 5.5 m -	Dispersivity ication = D2 persion = % Gravel = 15.5 Sand = 27.8% Clay = 23.9' L = 39.6% PL = 14.7% PI = 24.9% LL = 49.3% PL = 17.4% PI = 31.9% LL = 56.2% PL = 19.8% PI = 36.4%	% %		775 7774 7773 7772 7771 7770 7769 7669 7668
E															
		Notes:						1							
11/01/2024		No seepage or sand and bento	sloughing obs onite.	served. 25 mm PVC p	ipe ir	nstalled	to a d	epth c	of 5.5 m. Backfi	illed with	Loggeo Review	d By: ved By:	C T	<u>. Tams</u> Curtis	



	CLIEN	NT		Eastern Irrigation Distric	t		_ PRO	JECT	NAM	E	_		Snake L	ake Reservoir	Expansio	on
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	JECT	LOC	ATION	I _			NE 1/4 32-19-	16	
1	DATE	STARTED	06/20/2022	COMPLETED	06/2	0/2022	_ GRO	UND	ELEV	'ATIOI	_ ۱	775.4	<u>n</u> N_	5612306	_ E	415137
۱ I	DRILL	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	1.	GRO	UND	WATE	ER EL	EVATIO	ON / DEF	тн			
1	DRILL	LING METHOD		6" SSA			_ DATE	E GRO	DUND	WAT	ER RE	CORDE)			
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ SI 11 ▲ P	IOISTU PLASTI PT (N) 00 2 00 2 00CKE	RE COI C - LIQI Blows/3 0 30 7 PEN (I	NTENT JID 00 mm) <u>40</u> 0 400 (Pa)		REMARKS	3	Standpipe/ Instrument Elevation (m)
1 1 2		CLAY TILL, slit fragments, dry oxidation spec SHALE (Weath highly weather moist, high pla	y, some sand, stiff, high pla s nered), clay ar ed, mottled da stic, extremely	trace bedrock stic, brown, with nd silt, trace sand, urk greyish brown, v weak to hard soil,		AU1		7.7	•					LL = 55.1% PL = 16.6% PI = 38.5%)	775
- - - - - - - - - - - - -		blocky, suspec	te inclusions	=	AU2		12.6		•			2.5 m	- Sand = 5.6 Silt = 44.7% Clay = 49.7	% %	773	
4 4 						AU3		15.9		•			4 m -	LL = 66.8% PL = 19.6% PI = 47.2%	5	771
			End of Borehole	e @6.0 m	-	AU4		14.0		•			5.5 m	- Sand = 1.8 Silt = 45.0% Clay = 53.2	% 6 2%	770-
		Notes:													769-	
11/01/2024	Ļ	Borrow search	. Backfilled wi	th bentonite chips.									Logge Revie	ed By: wed By:	C T	<u>Braun</u>



c		NT		Eastern Irrigation District			_ PRC	JECT	NAME	S	ake Lake Reservoir Exp	pansion
P	PROJ	ECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		NE 1/4 32-19-16	
C	DATE	STARTED	06/21/2022)6/2 ⁻	1/2022	_ GRC	DUND	ELEVATION	776.7m	N 5612388	E 415248
C	RILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GRC	DUND	WATER ELEVAT	ION / DEPTH	Η	
C	RILL	ING METHOD		6" SSA			DAT	E GR	OUND WATER R	ECORDED		
Depth (m)	SOIL SYMBOL		Soil Descrip	tion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO PLASTIC - LIC SPT (N) Blows 10 20 3 100 200 3 POCKET PEN 	DNTENT QUID /300 mm 30 40 (00 400 (kPa)	REMARKS	Standpipe/ Instrument Elevation (m)
-1		CLAY and SILT medium plastic SHALE (Weath highly weathere damp, high pla	, some sand , brown, som ered), clay a ed, light brow stic, extreme	some gravel, dry, soft, e oxidation staining nd silt, trace sand, n to dark grey mottling, ly weak	#	AU1 AU2		7.9 13.0	•		1 m - Gravel = 12.2% 1 m - Sand = 10.2% Silt = 41.7% Clay = 35.9% 1 m - LL = 47.6% PL = 16% PI = 31.6%	776
-4		4.5 m - some	cobbles		æ	AU3		11.4	•		4 m - Sand = 8.2% Silt = 50.6% Clay = 41.2%	773
	· · · · ·		End of Boreho	e @6.1 m	-	AU4		15.3	•		5.5 m - LL = 54.4% PL = 17.9% PI = 36.5%	771
												770-
												768-
<u>9</u> 												767
		Notes:										· · ·
11/01/2024		No seepage or	sloughing of	oserved.							Logged By: Reviewed By:	C. Tams T. Curtis



CLIENT		Eastern Irrigation District			_ PRC	JECT	NAME		Snake La	ke Reservoir E	Expansio	n
PROJECT N	JMBER	1560-193-00			_ PRC	JECT	LOCATION		N	IE 1/4 32-19-1	6	
DATE START	ED 06/20/2022)6/20)/2022	_ GRO	DUND	ELEVATION	775.4m	N	5612330	E	414979
DRILLING CO		Chilako Drilling Service	s Ltd		GRC	DUND	WATER ELEV	ATION / DEPT	н			
DRILLING MI	ETHOD	6" SSA			_ DAT	E GRO	OUND WATER	RECORDED				
Depth (m) SOIL SYMBOL	Soil Descrip	tion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - SPT (N) Blo 10 20 100 200 POCKET PI 	CONTENT LIQUID ws/300 mm 30 40 300 400 EN (kPa)		REMARKS		Standpipe/ Instrument Elevation (m)
CLAY to 40 n	TILL, silty, some sand nm, dry, firm, low plas E (Weathered), clayey etely weathered, dark g, moist, medium plas oil, finely fissured, blo ite inclucions	, bedrock fragments up tic, light brown , silty, some sand, brown, some oxidation stic, extremely weak to cky, suspect white	-	AU1		5.2	•		1 m - L	L = 29.4% PL = 12.4% PI = 17.0%		775
			Ŧ	AU2		13.6	•		2.5 m -	Sand = 11.6 Silt = 46.6% Clay = 41.8°	%	773-
4	- becoming high plasti	c	æ	AU3		17.0	•		4 m - L	L = 61.4% PL = 21.2% PI = 40.2%		771
	n - becoming trace sa End of Borehol	nd e @5.9 m	-	AU4		15.5			5.5 m -	Sand = 1.7% Silt = 54.2% Clay = 44.1 Auger refus	6 % al	770 769 768 767 767
11/01/2024	v search. Backfilled w	ith bentonite chips.							Logged Review	l By: ved By:	<u> </u>	Braun Curtis



CLIENT			Eastern Irrigation Distri	ct		_ PRC	JECT	NAME		Snake La	ake Reservoir I	Expansio	n
PROJECT N	UMBER		1560-193-00			_ PRC	JECT	LOCATION		1	NE 1/4 32-19-1	6	
DATE START	TED	06/20/2022	COMPLETED	06/20	0/2022		DUND	ELEVATION	778.0m	N	5612444	E	415101
DRILLING C	ONTRACT	OR	Chilako Drilling Servic	es Lto	1.	GRO	DUND	WATER ELEVAT	TION / DEPT	н			
DRILLING M	ETHOD		6" SSA			DAT	E GRO	OUND WATER R	RECORDED				
Depth (m) SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LIC SPT (N) Blows 10 20 100 200 3 POCKET PEN 	ONTENT QUID \$/300 mm 30 40 300 400 I (kPa)	-	REMARKS		Standpipe/ Instrument Elevation (m)
CLAY stiff, h suspe	TILL, silty igh plastic ect white s E (Weath weathere , high plas y, oxide sp ions - becomir m plastic	y, some sand, c, and some c ulphate inclus ered), clayey, ed, mottled bristic, extremely becs, suspect ng sandy, som	trace gravel, moist, exidation staining, sions, coal specs		AU1 AU1 AU3 AU4		12.0 13.6 8.2 10.8			1 m - L 2.5 m - 4 m - C 4 m - S	L = 51.7% PL = 16.8% PI = 34.9% PL = 15.3% PL = 15.3% PI = 37.9% Sand = 34.7% Silt = 46.2% Clay = 18.8 L = 39.7% PL = 14.2% PI = 25.5%	6 5 7%	777- 776- 775- 774- 773- 772- 771- 771- 770- 769-
										-			
Notes	:						1			1			
Borrov 11/01/2024	w search.	Backfilled wit	h bentonite chips.							Loggeo Reviev	d By: ved By:	C. T.	Braun Curtis



CLIENT	Eastern Irrigation Dis	trict	_ PROJECT	NAME	S	Snake Lake Reservoir Expans	ion
PROJECT NUMBER	1560-193-00		PROJECT	LOCATION		NE 1/4 32-19-16	
DATE STARTED	06/20/2022 COMPLETED	06/20/2022	_ GROUND	ELEVATION	777.6m	NN	414893
DRILLING CONTRACT	TOR Chilako Drilling Ser	vices Ltd.	GROUND	WATER ELEVAT	ION / DEPTI	н	
DRILLING METHOD	6" SSA		DATE GR	OUND WATER R	ECORDED		
Depth (m) SOIL SYMBOL	Soil Description	Sample Type Sample Number	SPT (N) Moisture Content (%)	 MOISTURE CO ⊢ PLASTIC - LIO SPT (N) Blows, 10 20 3 100 200 3 ▲ POCKET PEN 	DNTENT QUID /300 mm 30 40 00 400 (kPa)	REMARKS	Standpipe/ Instrument Elevation (m)
SHALE (Weat fragments, trac medium plastic 	hered), clay and silt, some bedroc ce sand, dry, stiff, finely fissured, c, brown, some oxidation staining ture increasing End of Borehole @4.2 m	k E AU1	7.2			1 m - Sand = 7.0% Silt = 43.1% Clay = 49.9% 1 m - Organic Content = 7.7% 1 m - LL = 46.2% PL = 15.2% PI = 31.0% 2.5 m - Sand = 2.9% Silt = 46.8% Clay = 50.3% 2.5 m - LL = 49.6% PL = 20.2% PI = 29.4% 3.5 m - Sand = 8.8% Silt = 38.0% Clay = 53.2% 4.2 m - Auger refusal	7777- 7776- 7775- 7774- 7774- 7773- 7772- 7771- 7770- 7769- 768- 768-
Notes: Borrow search	n. Backfilled with bentonite chips.		<u>I</u>	<u>.</u>		1	
						Logged By: 0	C. Braun
11/01/2024						Reviewed By:	T. Curtis



CLIENT		Eastern Irrigation District			PRC	JECT	NAME		5	Snake Lake	e Reservoir I	Expansio	n	
PROJECT NUMBE	ER	1560-193-00			_ PRC	JECT	LOCATION	ı		NE	1/4 32-19-1	6		
DATE STARTED	06/21/2022	COMPLETED	06/2 ⁻	1/2022	GRO	DUND	ELEVATIO	N	778.1m	N	5612450	_ E	41497	1
DRILLING CONTR	ACTOR	Chilako Drilling Service	s Lto	l.	GR0	DUND	WATER EL	EVATION	/ DEPT	н				
DRILLING METHO	DD	6" SSA			DAT	E GR	OUND WAT	ER RECO	ORDED					
Depth (m) SOIL SYMBOL	Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTL PLASTI SPT (N) 10 2 100 2 	IRE CONTI C - LIQUID Blows/300 20 30 00 300 7 PEN (kPa	ENT mm 40 400	F	REMARKS		Standpipe/ Instrument	Elevation (m)
CLAY, som plastic, bro 	e silt, trace gravel wn with oxidation (eathered), clay ar thered, brown, dar weak End of Borehole	, damp, firm, medium specs d silt, trace sand, mp, medium plastic,		AU1 AU2 AU3 AU4		7.8 10.9 9.5 8.3	• POCKE			1 m - LL P -2.5 m - L P 4 m - Sa S 4 m - LL P P	= 45.3% 'L = 14.5% 'I = 30.8% 'L = 50.6% 'L = 17.1% 'I = 33.5% 'I = 43.6% 'Jay = 48.9 = 49.5% 'L = 16.2% 'I = 33.3%) %		778– 7777– 7776– 7774 7773– 7772– 7771– 7770– 7769– 7699–
Nataa														
Notes: Borrow sea	arch. Backfilled wit	h bentonite chips.								Logged I Reviewe	Зу: d By:	<u> </u>	<u>. Tams</u> Curtis	



(νT		Eastern Irrigation District			_ PR	OJECT	NAM	E			S	nake La	ke Reservoir	Expans	ion	
F	PROJ	ECT NUMBER		1560-193-00			_ PR(OJECT	LOC	ATION	I _			Ν	IE 1/4 32-19-	16		
[DATE	STARTED	06/20/2022	_ COMPLETED	06/20	0/2022	_ GR	OUND	ELEV	'ATION	_ ۱	778.	.5m	N	5612459	_ E _	41486	0
[ORILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	l.	GR	OUND	WATE	ER EL	EVATIO	ON / DE	EPTH	ł				
[ORILL	ING METHOD		6" SSA			DA	TE GR	DUND	WAT	ER RE	CORDI	ED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ SI 11 ▲ P	IOISTU PLASTI PT (N) 10 2 00 20 OCKET	RE CON C - LIQU Blows/3 0 30 0 300 F PEN (k	NTENT JID 00 mm 1 40 0 400 (Pa)			REMARKS	5	Standpipe/ Instrument	Elevation (m)
1^{-1}	CLAY TILL, silty, some gravel, some sand, Grav is fine grained up 15 mm, dry, stiff, medium plass brown, some oxidation staining SHALE (Weathered), clay and silt, sandy, trace gravel, completely weathered, brown, some oxidation staining, moist, medium plastic, extremely weak to hard soil					AU1 AU2 AU3		6.0 8.1 14.6						1 m - G 1 m - S 1 m - L 2.5 m - 2.5 m -	Gravel = 18. and = 16.7' Silt = 34.29 Clay = 30.6 L = 45.0% PL = 17.19 PI = 27.99 Gravel = 0 Sand = 29 Silt = 40.29 PL = 16.79 PI = 23.59	3% % 3% 6 6 6 7% 1% % 6 6		7778- 7777- 7776 7775 7774 7773 7772 7771 7770 7769
		Notes:						1										
11/01/2024		Borrow search	. Backfilled wit	h bentonite chips.										Loggeo Review	l By: ved By:		<u>C. Braun</u> Г. Curtis	



C		T		Eastern Irrigation District			PR0	DJECT	NAME	8	Snake La	ke Reservoir	Expansio	n	
F	PROJ	ECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		N	E 1/4 32-19-	16		
[DATE	STARTED	06/20/2022		06/20	0/2022	GR0	DUND	ELEVATION	779.5m	N	5612462	_ E	414770)
[ORILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	ł.	GR	DUND	WATER ELEVA	TION / DEPT	Η				
0	DRILL	ING METHOD		6" SSA			DAT	E GR	OUND WATER	RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE (PLASTIC - L SPT (N) Blow 10 20 100 200 POCKET PE 	CONTENT IQUID vs/300 mm <u>30 40</u> 300 400 N (kPa)		REMARKS	3	Standpipe/ Instrument	Elevation (m)
-1		CLAY TILL, grai is medium glastic coal specs	nelayer of coal bered, brown some s, brown some hered), clay an pered), clay an staining, moist staining, moist staining, moist stain of Borehole	nd, some silt, Gravel nm, moist, dry, stiff, oxidation staining, d silt, some sand, thered, mottled brown , medium plastic, @3.0 m	-	AU1 AU2		8.7			1 m - Ll 2.5 m - 2.5 m - 3 m - Ai	_ = 43.6% PL = 14.8% PI = 28.8% Gravel = 0. Sand = 10. Silt = 44.6% Clay = 43.6 LL = 48.0% PL = 16.2% PI = 31.8% uger refusal	9% 9% 6 1%		7779 7778 7777 7776 7775 7774 7773 7772 7771 7771 7770
		Notes:	De el d'il e la la la	h handan (4 1.)	<u> </u>		1		1					1	
		Borrow search.	Backfilled wit	n bentonite chips.							Logged	By:	<u>С.</u> т	Braun	
11/01/2024												Sa Dy.		Juilio	



C	LIEN	IT		Eastern Irrigation District			_ PRO	OJECT	NAM	IE	_		S	nake Lake Reser	voir Ex	(pansio	n	
PI	ROJI	ECT NUMBER		1560-193-00			_ PRO	OJECT	LOC	ATION	۱ _			NE 1/4 32	-19-16			
D	ATE	STARTED	06/20/2022	_ COMPLETED	06/20	0/2022	_ GRO	OUND	ELE\	ATION	۱ ـ	779.	5m	N 561245	2	E	41466	8
DI	RILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	1.	GR0	OUND	WATI	ER EL	EVATI	ON / DE	PTH	ł				
DI	RILL	ING METHOD		6" SSA			DAT	E GR	OUNE) WAT	ER RE	CORD	ΞD					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● N ⊢ F ■ S _ 1 ▲ P	10ISTU PLASTI PT (N) 10 2 00 20 00CKET	RE CO C - LIQI Blows/3 0 30 7 PEN (NTENT UID 300 mm 0 40 kPa)		REMAI	RKS		Standpipe/ Instrument	Elevation (m)
		CLAY TILL, gra is medium to co mm, damp, firn oxidation staini 2 m - becomin	ivelly, some si parse grained n, medium pla ng <u>ng sandy, trac</u> End of Borehole	and, some silt, Gravel , well rounded up to 60 stic, brown with <u>e gravel</u> 2 @2.2 m		AU1 AU2		12.1						1 m - Gravel = 1 m - Sand = 5 Silt = 18 Clay = 7 1 m - LL = 49.7 PL = 18 PI = 31 2 m - Gravel = 2 m - Sand = 2 Silt = 35 Clay = 3 Clay = 3 2 m - LL = 42.6 PL = 15 PI = 27 2.2 m - Auger r	58.8% 1% 17.6% 6% 3.3% 1.3% 9.6% 35.8% % 5.4% c.2% efusal	б >		779 778 7777 7776 7775 7775 7774 7774 7772 7771
		Notos:																
11/01/2024		Notes: Burrow search.	Backfilled wit	th bentonite chips.										Logged By: Reviewed By:	-	<u> </u>	Braun Curtis	ı



	CLIE	NT		Eastern Irrigation Distri	ct		_ PR	OJECT	NAME	Snake La	ake Reservoir	Expansio	on
	PROJ	JECT NUMBER		1560-193-00			PR	OJECT		1	NE 1/4 32-19-1	16	
	DATE	STARTED	06/20/2022	COMPLETED	06/2	0/2022	GR	OUND	ELEVATION 775.6m	<u>N</u>	5612357	_ E	414709
	DRILI	LING CONTRACT	OR	Chilako Drilling Servio	es Lto	1.	GR	OUND	WATER ELEVATION / DEP	гн			
	DRILI	LING METHOD		6" SSA			DA	TE GR	OUND WATER RECORDED		01/2	5/2023	
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT ⊢ PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 40 100 200 300 400 ▲ POCKET PEN (kPa) 		REMARKS	3	Standpipe/ Instrument Elevation (m)
		CLAY TILL, sai damp, stiff, low SHALE (Weath highly weather extremely weat specs, suspect	nd, silty, some plastic, browr nered), clayey, ed, dark grey, k, blocky, finel white sulphat	bedrock fragments, n, oxide staining silty, trace sand, moist, high plastic, y fissured, oxide e inclusions	=	AU1		6.0	•	1 m - S	Sand = 48.49 Silt = 32.3% Clay = 19.3	% %	775
-3	specs, suspect white sulphate inclusions					AU2		10.6	•	–2.5 m ·	- LL = 50.5% PL = 18.2% PI = 32.3%)	773-
		BENTONITE (4 SHALE (Weath	n layer	-	AU3		15.1			L = 57.8% PL = 19.4% PI = 38.4%)	771	
		5.5 m - becor	ning some sar	nd @6.0 m	#	AU4		12.9	•	5.5 m ·	- Sand = 16. Silt = 47.3% Clay = 35.8	9% % %	770-
													769 768 767 766
		Notes:	25 mm stord	ning installed to 6.0	n Pr	okfilled	with -	and ar	ad bontonito china				
11/01/2024	1	DOTION SEALCH	. 25 mm stand	יוזיגמוופט נס ס.U ז	п. ¤а		with Sa	anu ar	a bentonite chips.	Logge Reviev	d By: ved By:	<u></u> С т	. Braun
L													



	CLIEI	NT		Eastern Irrigation Distrie	ct		_ PRO	OJECT	NAME	Snake L	ake Reservoir	Expansic	on
	PRO	IECT NUMBER		1560-193-00			_ PRO	OJECT			NE 1/4 32-19-	16	
	DATE	STARTED	06/20/2022	COMPLETED	06/2	0/2022	_ GR	OUND	ELEVATION 774.5n	<u>n</u> N	5612385	_ E	414576
	DRIL	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	ł	GR	OUND	WATER ELEVATION / DEP	гн			
	DRIL	LING METHOD		6" SSA			_ DAT	re GR	OUND WATER RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 40 100 200 300 400 POCKET PEN (KPa) 		REMARKS	3	Standpipe/ Instrument Elevation (m)
-1		SHALE (Weath trace sand, trac some oxidation extremely weat 2 m - moistur 2.2 m - suspe	nered), RESID ce sand, highly a staining, dam k to hard soil, f e increasing act white sulph ng dark grey End of Borehole	UAL, clay and silt, / weathered, grey, p, high plastic, inely fissured ates @6.0 m		AU1 AU2 AU3 AU4		9.5 17.6 12.9 15.5	POCKET PEN (kPa)	= 1 m - 1 1 m - 1 - 2.5 m 5.5 m	Sand = 7.7% Silt = 41.19 Clay = 51.2 LL = 50.3% PL = 14.5% PI = 35.8% - LL = 67.0% PL = 20.7% PI = 46.3% PI = 46.3% Silt = 53.8% Clay = 45.4	6 9% 9 9 9 9 9 9 6 9%	774 773 777 777 777 777 777 777 777 776 769 768 768 768
	<u> </u>	Notes:							<u> </u>				
		Borrow search. north.	. 25 mm stand	pipe installed to 6.0 r	n. Ba	ckfilled v	with be	entoni	te chips. Moved 5 m	Logge Revie	ed By: wed Bv:	<u>С</u> .	<u>Braun</u> Curtis
11/01/2024	1										· , ·		



0		T		Eastern Irrigation District			_ PRO	DJECT	NAME	5	Snake Lake F	Reservoir E	xpansio	n	
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		NE 1	/4 32-19-16	6		
[DATE	STARTED	06/20/2022	COMPLETED 0)6/20	0/2022	_ GRO	DUND	ELEVATION	774.7m	N 56	312395	E	414479)
ſ	ORILL	ING CONTRACT	OR	Chilako Drilling Services	s Ltd	l.	GR0	DUND	WATER ELEVAT	FION / DEPT	н				
[ORILL	ING METHOD		6" SSA			_ DAT	E GR	OUND WATER F	RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 3 POCKET PEN 	CONTENT QUID s/300 mm 30 40 300 400 4 (kPa)	RE	EMARKS		Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt plastic, brown SHALE (Weath completely wea mottling, damp hard soil, block 2.2 m - becon	y, trace sand, hered), clay an athered, light b , medium plas y, finely fissum ning orangish, End of Borehole	dry, very stiff, medium d silt, trace sand, prown to dark grey tic, extremely weak to ed oxidation staining : @3.7 m		AU1 AU2 AU3		8.7			1 m - Sanc Silt Cla 1 m - LL = Pl 2.5 m - LL Pl 3.5 m - Sa Silt Cla 3.7 m - Au	I = 6.7% = 45.8% y = 47.59 46.9% = 15.6% = 31.3% = 41.5% = 14.6% = 26.9% nd = 10.4 t = 43.3% ay = 46.3% ger refusa	% % al		7774 7773 7772 7771 7770 769 768 768 767 766
_											-				
11/01/2024		Notes: Borrow search.	. Backfilled wit	h sand and bentonite c	hip	S.					Logged By Reviewed	/: By:	<u>С.</u> Т.	<u>Braun</u> Curtis	



CLI	CLIENT Eastern Irrigation District						PROJECT NAME				Snake Lake Reservoir Expansion						
PRO	OJE	ECT NUMBER		1560-193-00			_ PR	PROJECT LOCATION			ــــــ	NE 1/4 32-19-16					
DAT	TE	STARTED	06/20/2022	COMPLETED	06/20	0/2022	_ GR	GROUND ELEVATION 776.0r				N	5612462	E _	41446	64	
DRI	ILLI	ING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR	GROUND WATER ELEVATION / DEP									
DRI	DRILLING METHOD 6" SSA					DATE GROUNE			D WAT	ER RECORDED		01	/25/2023	3			
Depth (m) SOII SYMBOI		Soil Description			Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H I ■ S 1 ▲ F	MOISTU PLASTI SPT (N) <u>10 2</u> 100 2 POCKE	JRE CONTENT C - LIQUID Blows/300 mm 20 30 40 00 300 400 T PEN (kPa)	_	REMARK	S	Standpipe/	Elevation (m)	
		CLAY TILL, gra stiff, medium pl staining 1.2 m - moistr sulphates SHALE (Weath completely wea medium plastic blocky, oxide sl BENTONITE (2 SHALE (Weath	velly, some sa astic, brown, s ure increasing vered), clayey, athered, mottle , extremely we taining 2.2 m), 125 mr vered), "" End of Borehole	and, some silt, damp, some oxidation , suspect white silty, trace sand, ed dark brown, moist, eak to hard soil, n layer @3.0 m		AU1 AU2 AU3		8.7 24.3 14.0 15.3				1 m - S 1 m - L 2.2 m - 2.7 m -	Sand = 10.8 Silt = 41.4 Clay = 47 L = 37.5% PL = 14.4 PI = 23.1 PL = 28.3 PI = 76.0 -LL = 39.9' PL = 14.7' PI = 25.2	\$% % 8% % 3% % %		775 777 777 777 777 777 777 777 777 777	
		Notes:															
Borrow search. 25 mm standpipe installed to 3.0 m. Backfilled with sand and bentonite chips. Moved 10 m west Logged By: <u>C. Braun</u> Reviewed By: <u>T. Curtis</u>											<u>1</u>						



CLIENT				Eastern Irrigation District			_ PR	OJECT	NAME		Snake Lake Reservoir Expansion			
1	PROJECT NUMBER 1560-193-00					_ PR	OJECT	LOCATION		NE 1/4 32-19-16				
1	DATE STARTED 06/20/2022 COMPLETED 0)6/20	0/2022	_ GR	GROUND ELEVATION 775.3			N5612409	414337			
1	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GROUND WATER ELEVATION /				н			
DRILLING METHOD 6" SSA							DA	re gr	OUND WATER F	RECORDED				
Depth (m)	SOIL SYMBOL	Soil Description			Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 POCKET PEN 	CONTENT IQUID s/300 mm 30 40 300 400 v (kPa)	REMARI	Standpipe/ Instrument Elevation (m)		
1		CLAY, silt, som medium plastic CLAY TILL, so Gravel is suba to medium plas inclusions	ie sand, some <u>s, brown</u> me gravel, trai ngular up to 20 stic, brown, su End of Borehole	gravel, moist, soft, ce sand, trace silt, 0 mm, moist, stiff, low spect white sulphate		AU1 AU2		6.3			1 m - Sand = 18. Silt = 41. Clay = 40 1 m - LL = 37.9% PL = 14% PI = 23.9 2.5 m - Dispersiv Classification = N % Dispersion = 9 2.5 m - LL = 51.9 PL = 17.4 PI = 34.5 3 m - Auger refus	1% 7% 2% } ity JD3 <u>6</u> .% ;% ;al	775 7774 7773 7773 7772 7771 7770 7769 769 768 768 768 766 766	
Ē										: :	-			
		Notes:												
11/01/2024	Borrow search. Backfilled with bentonite chips. Logged By: <u>C. Braun</u> Reviewed By: <u>T. Curtis</u>													
11/01/2024	•										-			



	CLIENT Eastern Irrigation Dis			Eastern Irrigation District			_ PRO	PROJECT NAME Snake Lake Reservoir Expansion						nsion	
	PROJ	IECT NUMBER		1560-193-00			_ PRO	PROJECT LOCATION			NE 1/4 32-19-16				
1	DATE	STARTED	06/20/2022	COMPLETED	06/2	0/2022	GR0	GROUND ELEVATION 775.7			N5612466	414342			
1	DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	1.	GR0	GROUND WATER ELEVATION / DEPTH							
I	DRILL	ING METHOD		6" SSA			DAT	E GR	OUND WATER R	RECORDED					
Depth (m)	SOIL SYMBOL	Soil Soil Description			Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 3 POCKET PEN 	ONTENT QUID 3/300 mm 30 40 300 400 I (kPa)	REMAR	(S	Standpipe/ Instrument Elevation	(m)	
		CLAY TILL, silt brown, trace su SHALE (Weath completely wea plastic, extreme staining	, sandy, dry, fi uspect white s nered), clayey, athered, dark l ely weak to ha End of Borehole	rm, low plastic, light ulphate inclusions silty, trace sand, orown, moist, high ird soil, blocky, oxide		AU1 AU2		4.5			1 m - Sand = 24. Silt = 45.0 Clay = 29 1 m - LL = 29.3% PL = 12.1 PI = 17.2 2.5 m - Sand = 8 Silt = 42.2 Clay = 49 2.5 m - LL = 55.7 PL = 16.8 PI = 38.9	5% 3% .8% % 2% <u>0%</u> % %	77: 77: 77: 77: 77: 77: 77: 77: 77: 76: 76		
		Netoci												_	
11/01/2024	Ļ	Notes: Borrow search	. Backfilled wit	h bentonite chips.							Logged By: Reviewed By:	<u> </u>	. Braun		



CLIENT	Eastern Irrigation District			_ PRO	OJECT	NAME	Snake Lake R	eservoir Expansi	on
PROJECT NUMBER	1560-193-00			_ PR(DJECT		NE 1/4	4 32-19-16	
DATE STARTED	06/20/2022 COMPLETED	06/20)/2022	_ GR	OUND	ELEVATION775.1m	n N 56 ⁻	12427 E	414202
DRILLING CONTRACT	FOR Chilako Drilling Service	s Ltd		GR	OUND	WATER ELEVATION / DEP	ГН		
DRILLING METHOD			_ DAT	E GR	OUND WATER RECORDED		01/25/2023		
Depth (m) SOIL SYMBOL	Soil Description			SPT (N)	Moisture Content (%)	 MOISTURE CONTENT PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 40 100 200 300 400 POCKET PEN (KPa) 	RE	MARKS	Standpipe/ Instrument Elevation (m)
CLAY TILL, sill grained, subar plastic, light or staining, suspe- 1 SHALE (Weath completely weak oxidation spec weak to hard s	ty, sandy, some gravel, gravel is fine ngular up to 15 mm, dry, stiff, high angish brown, with oxidation ect white sulphate inclusions nered), clayey, silty, trace sand, athered, greyish brown, with s, moist, high plastic, extremely soil, blocky, finely fissured		AU1 AU2 AU3		4.8 9.7 10.5		1 m - Grave 1 m - Sand Silt Clay 1 m - LL = 2 PI = 2.5 m - Sar Silt Clay 	el = 10.3% = 31.2% = 32.2% y = 26.3% 40.1% = 16.5% = 23.6% dd = 3.6% = 43.7% y = 52.7% 50.3% = 19.7% = 30.6%	774 773 773 777 777 777 777 777 770 769 769 769 768 768
Notes:									
Borrow search. Backfilled with and bentonite chips. 25 mm standpipe to 3.0 m Logged By: <u>C. Braun</u> Reviewed By: <u>T. Curtis</u>									C. Braun


	CLIEI	NT		Eastern Irrigation District		_ PRO	OJECT	NAME		Snake L	ake Reservoir	Expansi	on	
	PRO	IECT NUMBER		1560-193-00			_ PRO	OJECT	LOCATION			NE 1/4 32-19-	16	
	DATE	STARTED	06/20/2022	COMPLETED	06/20	0/2022	_ GR	OUND	ELEVATION	781.3m	N	5612553	_ E	414905
	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	1.	GR	OUND	WATER ELEVA	ATION / DEPT	н			
	DRILI	LING METHOD		6" SSA			_ DAT	E GR	OUND WATER	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - I SPT (N) Blox 10 20 100 200 POCKET PE 	CONTENT LIQUID ws/300 mm 30 40 300 400 	_	REMARKS	5	Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt grained, Grave mm, dry, stiff, r oxidation staini	y, sandy, some I is coarse we nedium plastic ing ning fine grain ure increasing ning very hard End of Borehole	e gravel, Sand is fine I rounded up to 35 , brown, some ed gravel <u>, suspect bedrock.</u> @4.6 m	*	AU1 AU2 AU3		4.5			1 m - 1 m - 1 m - 1 m - 4 m - 4 m - 4 m - 4.6 m	Gravel = 17.0 Sand = 24.6 Silt = 29.3 Clay = 29.1 LL = 44.8% PL = 19.2% PI = 25.6% Gravel = 4.34 Sand = 43.4 Silt = 24.0% Clay = 28.3 LL = 45.2% PL = 15.5% PI = 29.7% - Auger refus	0% % 6 6 6 7% % % 6 5 sal	781– 780– 779– 777– 777– 777– 777– 777– 777– 77
		Notes:			<u> </u>				2					. I
11/01/2024	ł	Borrow search	. Backfilled wit	h bentonite chips.							Logge Revie	ed By: wed By:	C T	. Braun . Curtis



(NT		Eastern Irrigation District			_ PRO	OJECT	NAME	S	Snake L	ake Reservoir I	Expansio	on	
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT	LOCATION			NE 1/4 32-19-1	6		
[DATE	STARTED	06/22/2022	COMPLETED	06/22	2/2022	_ GR	OUND	ELEVATION	779.0m	N	5610656	E	41487	77
[ORILL	LING CONTRACT	OR	Chilako Drilling Service	s Ltd	l.	GR	OUND	WATER ELEVATI	ON / DEPTH	Η	774.66 m		4.38 m	<u> </u>
[ORILL	LING METHOD		6" SSA			_ DAT	E GR	OUND WATER RE	CORDED		01/2	5/2023		
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CC PLASTIC - LIQ SPT (N) Blows/ 10 20 3 100 200 30 POCKET PEN 	NTENT UID 300 mm 0 40 00 400 kPa)		REMARKS		Standpipe/	Elevation (m)
		CLAY TILL, silt, weathered SHA plastic, brown, SHALE (Weath highly weathere yellow oxidation extremely weat	, trace sand, s ALE (Weather some oxidation rered), clay an ed, light browr n staining, dar c	@6.1 m		AU1 AU2 AU3 AU4		14.0 11.7 12.5 13.3			1 m - 1 1 m - 1 2.5 m 4 m - 1 5 m	Sand = 1.2% Silt = 42.0% Clay = 56.8 LL = 54.4% PL = 19.1% PI = 35.3% - Sand = 1.2° Silt = 43.2% Clay = 55.6 LL = 49.6% PL = 19.9% PI = 29.7% hard drilling fr	9% % %		778 777- 776 7775 7774 7774 7774 7772 7771
		Notes:						I							<u> </u>
		Borrow search.	25 mm stand	pipe installed to 6.0 m	Ba	ckfilled v	with sa	and an	d bentonite chi	os.	10000	d By:	~	Tom	
											Review	wed By:	C	Curtic	<u>,</u>
11/01/2024											I VE VIE	wea by.	1.	Gurds	,



BOREHOLE No : 22BH435b

(NT	Eastern Irrigation District			_ PRO	DJECT	NAM	E	_		S	Snake La	ke Reservoir	Expansi	on		
F	PROJ	ECT NUMBER		1560-193-00			_ PRO	OJECT	LOC	ATION	_			١	NE 1/4 32-19-	16		
[DATE	STARTED	07/27/2022		17/27	7/2022	GR0	OUND	ELEV	ATION	۱ _	769	9.1m	N	5612167	_ E	41462	6
[ORILL	ING CONTRACT	OR	Chilako Drilling Services	s Ltd	Ι.	GR	OUND	WATE	ER EL	EVATI	ON / E	EPTI	Η				
[ORILL	ING METHOD		6" SSA			DAT	E GR	DUNE	WATI	ER RE	COR	DED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on moist coff bigb	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 1 1	IOISTU PLASTI PT (N) 10 20 00 20 00 20	RE CO C - LIQI Blows/3 0 30 PEN (NTENT UID 300 mm 0 40 kPa)	-) 0		REMARKS	3	Standpipe/ Instrument	Elevation (m)
	CLAY TILL, silty, trace sand, moist, soft, high plastic, dark brown to grey, suspect white sulphate inclusions, trace gypsum crystals, suspect white sulphate inclusions 2.1 m - some medium grained sand lenses SHALE (Weathered), clayey, silty, completely weathered, light brown to dark grey mottling, some oxidation staining, moist, high plastic, extremely weak to hard soil, blocky, suspect white sulphate inclusions, trace gypsum crystals 4 m - becoming grey SHALE, silt and sand, clayey completely weathered, grey, damp, medium plastic, very weal ground up End of Borehole @6.1 m					AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		15.8 14.3 16.9 14.4 12.6 12.9 11.0 8.0	•	•				0.6 m - Conter 1.2 m - 3.7 m -	Sand = 9.3 Silt = 43.79 Clay = 47.0 Organic It = 5.4% LL = 56.7% PI = 43.09 LL = 72.1% PI = 43.09 PI = 53.19 Sand = 33. Silt = 39.79 Clay = 26.4	% 6 1% 5 5 5 5 9% 6 F%		768– 767– 765– 765– 764– 763– 763– 762– 761– 760–
-		Notos:																-
11/01/2024		NW Borrow sea	arch. Backfille									Loggeo Review	d By: ved By:	C T	<u>C. Tams</u> . Curtis			



	CLIEN	NT	Eastern Irrigation Distric	t		_ PRO	OJECT	NAME	Snake L	ake Reservoir E.	Expansic	on	
	PROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT			NE 1/4 32-19-1	6	
	DATE	STARTED	06/22/2022	COMPLETED	06/2	2/2022	_ GR	OUND	ELEVATION 778.2r	<u>n</u> N	5610429	E	414948
	DRILL	ING CONTRACT	FOR	Chilako Drilling Service	es Lto	d	GR	OUND	WATER ELEVATION / DEP	тн			
	DRILL	ING METHOD		6" SSA			_ DAT	re gr	OUND WATER RECORDED)			
Depth (m)	SOIL SYMBOL		So Descri	il otion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT H PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 40 100 200 300 400 POCKET PEN (kPa) 		REMARKS		Standpipe/ Instrument Elevation (m)
-1	CLAY IILL, sing, some sand, some gravel, completely weathered SHALE (Weathered), dry, firm, high plastic, brown, some oxidation staining, trace gypsum crystals							7.0		= 1 m - 1 m - 1 m - 2.1 m 	Gravel = 16.2 Sand = 17.4% Silt = 30.4% Clay = 36.00 PL = 51.3% PL = 15.6% PI = 35.7% - Auger refus	% , % al	778 777 777 776 777 777 777 777 777 777
- 										-			
		Notes:			_ <u></u>				_				
		No seepage of	sloughing o	bserved upon completion	on. 2	25 mm s	tandpi	pe ins	stalled to 6.1 m. Backfille	d			
		with sand and	bentonite ch	ips.						Logge	ed By:	C	. Tams
11/01/2024	4									Revie	wed By:	T.	Curtis



BOREHOLE No : 22BH436b

CLIENT	CLIENT Eastern Irrigation District							NAME	S	Snake La	ke Reservoir F	Expansio	n	
PROJECT	NUMBER		1560-193-00			_ PRO	JECT	LOCATION		Ν	IE 1/4 32-19-1	6		
DATE STAI	RTED	07/27/2022	COMPLETED	07/27	7/2022	_ GRO	UND	ELEVATION	769.3m	N	5612115	_ E	415199)
DRILLING	CONTRACTO	OR	Chilako Drilling Serv	ices Ltd		GRO	UND	WATER ELEVAT	ION / DEPTI	н				
DRILLING	METHOD		6" SSA			DATE	GRO	OUND WATER RE	ECORDED					
Depth (m) SOIL SYMBOL		Soil Descriptio	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CC PLASTIC - LIC SPT (N) Blows/ 10 20 3 POCKET PEN 	ONTENT QUID 300 mm 30 40 00 400 (KPa)		REMARKS		Standpipe/ Instrument	Elevation (m)
CLA plas inclu -1 -2 -2 -3 -3 	AY TILL, silt, stic, dark bro usions, salt l ALE (Weathon pletely weathon pect white sites 5 m - becom E	some sand, r wm, suspect v lenses, trace g ered), silt and thered, grey, s high plastic, e ulphate inclus	clay, trace sand, some oxidation xtremely weak, ions		AU1 AU2 AU3 AU4 AU5 AU6		18.9 19.0 19.2 12.6 18.1 5.0			0.6 m - 1.2 m - 3.7 m - 3.7 m - 4.6 m -	LL = 65.9% PL = 16.1% PI = 49.8% Sand = 10.8 Silt = 35.4% Clay = 53.8' Silt = 47.0% Clay = 47.0% Clay = 47.0% PL = 17.1% PI = 68.2% Auger refus	3% % % al		769 768 767 766 765 764 763 764 763 762 761
N	<u></u>													
Note NW 11/01/2024	es: / Borrow sea	rch. Backfille	d with bentonite chi	ps.						Loggec Review	l By: /ed By:	<u> </u>	<u>. Tams</u> Curtis	



	CLIENT Eastern Irrigation District							DJECT	NAM	ΛE	_		Sna	ke Lak	e Reservoir	Expansi	on	
	PROJ	ECT NUMBER		1560-193-00			_ PRC	DJECT	LOC	OITA	_ ۱			N	E 1/4 32-19-	16		
1	DATE	STARTED	07/27/2022		07/27	7/2022	_ GRO	DUND	ELE	VATIO	N	768.3	n	N	5612003	_ E	4152	65
I	DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	Ι.	GR0	DUND	WAT	ER EL	EVATI	ON / DEF	тн					
1	DRILL	ING METHOD		6" SSA			DAT	E GR	DUN	D WAT	ER RE	ECORDE	D _		01/2	25/2023		
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOISTI PLAST SPT (N) 10 2 POCKE	JRE CC IC - LIQ Blows/ 20 3 00 30 T PEN	ONTENT 201D 300 mm 300 40 00 400 (kPa)			REMARK	6	Standpipe/	Elevation (m)
-		CLAY TILL, silt	y, sandy, trac own to dark b	e gravel, damp, firm,														768-
		sulphate inclus	ions, salt lens	ses	Ŧ	AU1		7.1	•				_0.6	6 m -	Gravel = 1	.0%		
- 1													0.6	6 m -	Sand = 22 Silt = 27.1º	.1% %		
	\geq				∎	AU2		10.3		•				6 m	Clay = 49.8	3%		767-
-	· · · · · · ·	Weathered, gre	ered), silty, cl y, some oxida	ayey, completely ation staining, moist,									0.0	- 111 - 	PL = 15.7%	0 0		-
-2	·	high plastic, ex suspect white s	tremely weak sulphate inclu	, thinly laminated, sions, salt lenses	=	AU3		13.7		•					PI = 71.19	6		=
-	·	2.5 m booon	ning como thi	nly haddad aandatana														766-
Ē	·	layers, with ben	ntonite seams	Thy bedded sandstone	æ	AU4		7.6		•	<u> </u>		2.7	7 m - 3	Sand = 8.3 Silt = 47.5°	% %		-
														(7 m	Clay = 44.2	2%		765
-	·												2.1	/ III - 	PL = 20.3%	70 / 0		
-4	·					AU5		9.1							PI = 82.3%	6		
	··				-	AU6		11.2		•								764
-	·																	
- 5 -	· _ · ·																E	
_	·····				■	AU7		10.9		•								763-
-	· <u>··</u> ··				-	AU8		14.8		•							H	
—6 —	<u> </u>		End of Borehol	e @6.1 m													H	
-																		762-
-7																		=
																		761-
-																		
-8																		
																		760-
-9																		
-																		759
		Notes:																
		NW Borrow sea bentonite chips	arch. Comple	ted as a well. 25 mm st	and	pipe ins	talled t	io 6.1	m. E	Backfil	led w	ith	Lo	gged	By:	C	. Tam	6
11/01/2024	1												Re	eviewe	ed By:	Т	Curtis	3



	CLIENT Eastern Irrigation Di						PRO	DJECT	NAME	8	Snake La	ke Reservoir l	Expansio	n	
1	PROJ	IECT NUMBER		1560-193-00			PRO	DJECT	LOCATION		Ν	NE 1/4 32-19-1	16		
1	DATE	STARTED	07/28/2022	COMPLETED	07/2	8/2022	GR0	DUND	ELEVATION	775.2m	N	5612272	_ E	415433	;
1	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GR0	DUND	WATER ELEVAT	ION / DEPT	н				
1	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATER R	ECORDED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LIC SPT (N) Blows 10 20 100 200 3 POCKET PEN 	ONTENT QUID 3/300 mm 30 40 300 400 I (KPa)		REMARKS	;	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt stiff, medium p staining, suspe	, sandy, trace lastic, dark bro ect white sulph	gravel, damp, firm to own, some oxidation ate inclusions	æ	AU1		10.5	•						775
		1 m - becomi	ng moist		Ŧ	AU2		9.6	• +		1.2 m - 1.2 m -	Gravel = 4. Sand = 22.	1% 5%		774-
-2					æ	AU3		12.8	•		1.2 m -	Silt = 45.6% Clay = 27.8 LL = 49.8% PL = 16%	%		773-
3		SHALE (Weath	nered), clav ar	nd silt. trace sand.	-	AU4		13.6	•			PI = 33.8%	I		-
	· · · · · · · · · · · · · · · · · · ·	completely wea staining, damp blocky	athered, grey, , high plastic,	some oxidation extremely weak,	æ	AU5		16.0	•		3.7 m -	Sand = 2.8 Silt = 48.7%	%		
					æ	AU6		17.4	•		3.7 m -	Clay = 48.5 LL = 60.9% PL = 21.3% PI = 39.6%	%		771
5 	· · · · · · · · · · · · · · · · · · ·				æ	AU7		17.4	•						770
6	··	-	End of Borehole	e @6.1 m	-	AU8		17.6	•						769-
															768
-8															767-
															-
9 - - - -															766
Ē											-				
		Notes:							<u></u>		1			<u> </u>	
		NW Borrow sea	arch. Backfille	ed with bentonite chips							Logged	d By:	<u> </u>	Tams	
11/01/2024	Ļ										Review	ved By:	<u>T.</u>	Curtis	



		NT		Eastern Irrigation District				OJECT	NAME	S	Snake La	ake Reservoir	Expansio	on
F F	PROJ	ECT NUMBER		1560-193-00			_ PRO	OJECT				NE 1/4 32-19-	16	
	DATE	STARTED	07/28/2022		07/2	8/2022	GR	OUND	ELEVATION	774.8m	N _	5612264	_ E	415722
ı	ORILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GR	OUND	WATER ELEVAT	ION / DEPTH	н			
(ORILL	ING METHOD		6" SSA			_ DAT	re gro	OUND WATER R	ECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C0 ⊢ PLASTIC - LIC ■ SPT (N) Blows 10 20 3 100 200 3 ▲ POCKET PEN 	ONTENT QUID /300 mm 30 40 00 400 (kPa)		REMARKS	3	Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt firm, medium p sulphate inclus 1 m - becomi 1.1 m - becor	y, gravelly, so lastic, brown, ions ng some grav ning moist, sc	me cobbles, damp, suspect white el me oxidation staining	*	AU1 AU2		7.9 10.3	•		0.6 m 0.6 m	- Gravel = 39 - Sand = 16. Silt = 22.0% Clay = 22.4	9.0% 6% 6 !%	774
2 2 		2 m - becomi	ng trace grave	əl	-	AU3		14.3	•					773–
- 	2.7 m - becoming high plastic					AU4		11.5	• +		2.7 m	- LL = 61.2% PL = 18.2% PI = 43.0%)	772-
	\square				=	AU5		12.3	•					771-
-4	SHALE (Weathered), clayey, silty, completely weathered, grey, some oxidation staining, damp high plastic, extremely weak to hard soil, suspect white sulphate inclusions					AU6		10.8	•					770
					Ŧ	AU7		12.7	•					
- 6 	·		End of Borehole	e @6.1 m	=	AU8		13.0	• ⊢		5.8 m	- LL = 69.8% PL = 22.9% PI = 46.9%	, , , ,	
- - - - - 7 - - -														768-
														767-
- - - - 9														766
														765-
		Notes:												
		NW Borrow sea	arch. Backfille	d with bentonite chips.							Logge	d By:	C	. Tams
11/01/2024											Keviev	vea ву:		Curtis



c		NT	Eastern Irrigation District	t		_ PRO	DJECT	NAME	S	Snake Lak	(e Reservoir E)	pansio	<u>1</u>	
F	ROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		Ν	E 1/4 32-19-16		
C	DATE	STARTED	07/27/2022	COMPLETED	07/2	7/2022	_ GRO	DUND	ELEVATION	771.5m	N	5612271	E	416034
C	RILL	ING CONTRACT	OR	Chilako Drilling Service	es Lto	ł.	GR0	DUND	WATER ELEVAT	ION / DEPTI	Η			
C	RILL	ING METHOD		6" SSA			DAT	E GR	OUND WATER R	ECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO PLASTIC - LIC SPT (N) Blows, 10 20 3 100 200 3 POCKET PEN 	DNTENT QUID (300 mm 30 40 00 400 (kPa)		REMARKS		Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt plastic, dark bro- suspect white s crystals SHALE (Weath weathered, gre- high plastic, ex white sulphate	y, some sand, own, some ox sulphate inclus rered), clayey, y, some oxida tremely weak inclusions	damp, firm, high idation staining, sions, trace gypsum silty, completely tion staining, damp, to hard soil, suspect		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		10.8 14.1 12.5 13.6 19.2 18.3 15.8 16.3		(KPa)	0.6 m - Content 1.2 m - 2.1 m -	Sand = 16.09 Silt = 25.9% Clay = 58.1% Organic : = 5.1% LL = 54.5% PL = 16.9% PI = 37.6% LL = 57.9% PL = 16.4% PI = 41.5% Sand = 3.3% Silt = 57.2% Clay = 39.5%	%	7771 7770 769 768 768 766 766 766 766 766 766 766
-														
11/01/2024		Notes: NW Borrow sea	arch. Backfille	d with bentonite chips.					,		Logged Review	By: _ ed By: _	<u>С.</u> Т.	Tams Curtis



		NT	Eastern Irrigation Distric	t i		_ PR	OJECT	NAME		Snake La	ake Reservoir I	Expansio	on	
F F	PROJ	IECT NUMBER		1560-193-00			_ PR	OJECT	LOCATION			NE 1/4 32-19-1	6	
ı	DATE	STARTED	07/06/2022	COMPLETED	07/0	6/2022	_ GR	OUND	ELEVATION	769.1 769.1	N	5612266	_ E	416335
۱ (DRILI	LING CONTRACT	OR	Chilako Drilling Service	es Lto	1.	GR	OUND	WATER ELE	EVATION / DEPT	н			
[[DRILI	LING METHOD		6" SSA			DA1	TE GR	ound wate	ER RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTUL PLASTIC SPT (N) E 10 20 100 20 POCKET 	RE CONTENT C - LIQUID Blows/300 mm 0 30 40 0 300 400 PEN (kPa)		REMARKS		Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt brown, some o sulphate inclus	, trace sand, c xidation staini ions	Iry, firm, high plastic, ng, suspect white	-	AU1		11.5	•••		= 1 m - \$ 1 m - L	Sand = 8.3% Silt = 50.1% Clay = 41.6 L = 63.2% PL = 14.5% PI = 48.7%	%	769
		2.5 m - becor SHALE (Weath completely weat oxidation spects weak to hard s	ning trace sar nered), clayey, athered, brown s, damp, high oil	d silty, trace sand, nish grey, with plastic, extremely	*	AU2		12.9	•		2.5 m	- Sand = 0.6' Silt = 55.1% Clay = 44.3 - LL = 91.0% PL = 23% PI = 68.0%	% 5 %	766-
5		5.2 m - TRAC	CE SEEPAGE	-	AU4		22.7		•	5.5 m	PL = 22.3% PI = 61.4% - Sand = 1.3 Silt = 56.5% Clay = 42.2	%	764-	
			End of Borehole	e@6.1 m								<u></u>		763 762 761 761
		Notes:												
11/01/2024	L	NE Borrow sea	arch. Trace se	epage encountered at	a de	pth of 5	.2 m. l	Backfi	lled with be	entonite chips.	Logge Reviev	d By: ved By:	С т	. Tams Curtis



	CLIENT Eastern Irrigation Distri						_ PRO	JECT	NAME			Snake La	ake Reservoir I	Expansi	on
	PROJ	JECT NUMBER		1560-193-00			_ PRO	JECT	LOCAT	ION		1	NE 1/4 32-19-1	6	
	DATE	STARTED	07/06/2022		07/0	6/2022	_ GR	OUND	ELEVAT	ΓΙΟΝ	768.2m	N	5612275	_ E	416631
	DRILI	LING CONTRACT	OR	Chilako Drilling Servio	es Lto	ł.	GR	OUND	WATER		TION / DEPT	н			
	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND W	VATER	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOI ⊢ PL4 ■ SPT 10 100 POC 	STURE ASTIC - L (N) Blov 20 200 CKET PE	CONTENT IQUID /s/300 mm 30 40 300 400 N (kPa)	-	REMARKS	5	Standpipe/ Instrument Elevation (m)
-1	SHALE (Weathered), silt and clay, trace sand, completely weathered, brownish grey, trace oxidation staining, damp to moist, high plastic, extremely weak to hard soil, blocky 3 m - hard drilling 5 m - SEEPAGE End of Borehole @6.1 m					AU1 AU2 AU3 AU4		22.8 21.3 18.8 23.0				-5.5 m	Gravel = 0.49 Sand = 15.19 Silt = 22.0% Clay = 62.5 LL = 77.0% PL = 17.6% PI = 59.4% Sand = 1.6 Silt = 50.6% Clay = 47.8 Clay = 47.8 PL = 15.7% PI = 45.0%	% % %	768 767 766 765 764 764 763 764 763 764 763 764 763 764 763 763
										i	, i				
11/01/2024	1	Notes: NE Borrow sea	rch. Backfilled	d with bentonite chips	i.							Logge	d By: ved By:	C T	C. Tams



(CLIE	NT	Eastern Irrigation District			PR	OJECT	NAME		Snake La	ake Reservoir E	Expansio	วท	
1	PROJ	JECT NUMBER		1560-193-00			PR	OJECT	LOCATION		1	NE 1/4 32-19-1	6	
1	DATE	STARTED	07/27/2022	_ COMPLETED)7/2	7/2022	GR	OUND	ELEVATION	770.3m	N	5611890	E	414882
1	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	d	GR	OUND	WATER ELE	VATION / DEPT	н			
1	DRILI	LING METHOD		6" SSA			DA	TE GR	OUND WATER	R RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURI PLASTIC SPT (N) Bit 10 20 100 200 POCKET F 	E CONTENT - LIQUID lows/300 mm 30 40 9 300 400 PEN (kPa)	-	REMARKS		Standpipe/ Instrument Elevation (m)
- - - - - - - -		CLAY TILL, silt high plastic, bro inclusions	, trace sand, r own, suspect	noist, firm, medium to white sulphate	#	AU1		17.1	•		0.6 m ·	- Sand = 2.39 Silt = 47.4%	6	770
	· · · · · · · · · · · · · · · · · · ·	SHALE (Weath completely wea mottling, some plastic, extreme	nd silt, trace sand, prown to dark grey ning, damp, high sky, suspect white	-	AU2		16.6	●		1.2 m ·	Clay = 50.3 - LL = 69.8% PL = 18.6% PI = 51.2%	%	769	
	· · · · ·			₽	AU3		15.2	•		1			768–	
- 				=	AU4		13.2	•		2.7 m ·	- Sand = 5.59 Silt = 51.1% Clay = 43.4	% %	767-	
 - 	·	3.7 m - trace	bentonite sea	æ	AU5		24.6		•	3.7 m ·	- Sand = 3.29 Silt = 43.7% Clay = 53.1	% %		
						AU6		26.4		•	3.7 m - 4.3 m - 4.3 m -	LL = 188.29 PL = 24.4% PI = 163.89 Auger refus Sand = 2.79 Silt = 56.9% Clay = 40.4	% al %	766 765 764 763 763 762 761
		NW Borrow sea	arch. Backfille	d with bentonite chips.										
11/01/2024	1										Logge Reviev	d By: ved By:	C T	<u>. Tams</u> . Curtis



CLIENT		Eastern Irrigation District			_ PRC	DJECT	NAME	_	:	Snake La	ake Reservoir	Expansi	on
PROJECT NUM	/BER	1560-193-00			_ PRC	DJECT	LOCATIO	DN _			NE 1/4 32-19-	16	
DATE STARTE	D 07/27/2022	COMPLETED)7/27	7/2022	GRO	DUND	ELEVATIO	ON	774.5m	N	5611834	_ E	415249
DRILLING CON	ITRACTOR	Chilako Drilling Service	s Ltd		GRO	DUND	WATER E	ELEVATI	ON / DEPT	Ή			
DRILLING MET	HOD	6" SSA			DAT	E GR	OUND WA	ATER RE	ECORDED				
Depth (m) SOIL SYMBOL	Soil Descrip	tion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOIS[®] ⊢ PLAS SPT (1 10 100 POCK 	TURE CC TIC - LIC N) Blows/ 20 3 200 3 ET PEN	UID 300 mm 0 40 00 400 (kPa)		REMARK	5	Standpipe/ Instrument Elevation (m)
high pla suspect crystals	stic, brown, some o white sulphate inclu	vidation staining, isions, trace gypsum	- - - -	AU1 AU2		9.6 9.1	•			0.6 m 0.6 m 1.2 m	- Gravel = 4 - Sand = 35 Silt = 30.09 Clay = 29.8 - LL = 64.4% PL = 16.8%	.8% .4% % 3% %	774-
2			æ	AU3		11.1	•				PI = 47.6%	6	772-
2.7 m	- becoming some sa	and, no gravel	*	AU4 AU5		15.0 15.5	•) 		2.7 m	- Sand = 12. Silt = 41.19 Clay = 46.3 - LL = 50.1% PL = 17.5% PI = 32.6%	.6% % 3% % %	771-
4 SHALE	(Weathered), claye red, light brown to da n staining, damp, hi uspect white sulpha becoming some fine	/, silty, completely ark grey mottling, some gh plastic, extremely te inclusions grained sand	-	AU6		14.4	•			3.7 m	- LL = 53.3% PL = 19.6% PI = 33.7%	6 6	- 770-
			=	AU7		16.4		D					769-
	End of Boreho	le @6.1 m		AU8		13.2							768-
11/01/2024	row search. Backfill	ed with bentonite chips.								Logge Reviev	d By: wed By:	C	2. Tams 2. Curtis



CLIENT		Eastern Irrigation District			_ PRC	JECT	NAME		S	Snake La	ke Reservoir	Expansi	on
PROJECT NUM	/BER	1560-193-00			_ PRC	JECT	LOCATIO	N		Ν	NE 1/4 32-19-	16	
DATE STARTE	D 07/27/2022)7/27	7/2022	_ GRO	DUND	ELEVATIO	N	768.3m	N	5611984	_ E	415375
DRILLING CON		Chilako Drilling Service	s Ltd	l.	GR0	DUND	WATER EL	EVATIO	N / DEPTI	н			
DRILLING MET	THOD	6" SSA			_ DAT	E GRO	DUND WAT	FER REC	ORDED				
Depth (m) SOIL SYMBOL	Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTI PLAST SPT (N) 10 100 2 POCKE 	URE CON TC - LIQUI) Blows/30 20 30 200 300 T PEN (kF	TENT D 0 mm <u>40</u> 2400 2a)		REMARKS	5	Standpipe/ Instrument Elevation (m)
CLAY TI stiff, higi sulphate	ILL, silt. some sand, h plastic, dark brown e inclusions	trace gravel, moist, to grey, suspect white	æ	AU1		16.0	•	E		0.6 m -	· LL = 79.9% PL = 19.7%	0	768–
			■	AU2		16.9	•			1.2 m -	PI = 60.2% Sand = 12. Silt = 42.4% Clay = 44.8	6 8% 6 3%	767—
SHALE SHALE weather high pla suspect	(Weathered), clayey, red, grey, some oxida stic, extremely weak white sulphate inclus	silty, completely tion staining, moist, , thinly laminated, sions, trace gypsum	.	AU3 AU4		14.3 15.7	●⊦ ●			2.1 m -	LL = 92.4% PL = 16.6% PI = 75.8%	0 0	766
			æ	AU5		16.3	•			3.7 m -	Sand = 1.0 Silt = 49.5%	%	765
			₽	AU6		15.9	•				Clay = 49.5	0%	764
			=	AU7 AU8		16.1 17.3	•						763-
	End of Borehole	e @6.1 m											762-
													761–
													760-
9													759
								. !					
Notes: NW Bor	row search. Backfille	d with bentonite chips.								Logged	d By:	C	. Tams
11/01/2024										Review	ved By:	T	Curtis



CLI	EN	IT		Eastern Irrigation Distric	t		_ PRO	DJECT	NAME	S	Snake La	ke Reservoir	Expansi	on
PRO	OJI	ECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		١	NE 1/4 32-19-	16	
DAT	ΤE	STARTED	07/28/2022	COMPLETED	07/2	8/2022	_ GR0	DUND	ELEVATION	774.3m	N	5612027	_ E	415726
DRI	ILL	ING CONTRACT	OR	Chilako Drilling Service	es Lto	1.	GR	DUND	WATER ELEVAT	ION / DEPTH	Η			
DRI	ILL	ING METHOD		6" SSA			_ DAT	E GR	OUND WATER R	ECORDED				
Depth (m) SOII SYMBOI			Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO ⊢ PLASTIC - LIC SPT (N) Blows. 10 20 3 100 200 3 ▲ POCKET PEN 	ONTENT QUID /300 mm 30 40 00 400 (kPa)		REMARKS	;	Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt cobbles, dry, fir brown, suspect 1.5 m - becon SHALE (Weath weathered, gre high plastic, ex suspect white s	y, some sand, m, medium p white sulpha ning damp ered), clay ar y, some oxida tremely weak sulphate inclus	trace gravel, trace lastic, light brown to te inclusions d silt, completely tion staining, damp, to hard soil, blocky, sions	* * *	AU1 AU2 AU3 AU4		10.1 8.2 6.7 14.9	•		0.6 m - 0.6 m - 1.2 m - 2.7 m - 2.7 m -	Gravel = 7. Sand = 16. Silt = 36.09 Clay = 39.7 LL = 47.2% PL = 12.9% PI = 34.3% Gravel = 5. Sand = 16. Silt = 37.69 Clay = 41.0	4% 9% 6 '% ', 3% 1% 6 '%	774– 773– 772– 771–
					*	AU5 AU6 AU7 AU8		18.2 16.4 17.7 17.8	•		3.7 m -	PL = 63.5% PL = 18.4% PI = 45.1%)	770
		Notes:	End of Borehole	e @6.1 m										768-
		NOTES: NW Borrow sea	arch. Backfille	d with bentonite chips										
											Logge	d By:		C. Tams
11/01/2024											Reviev	ved By:	<u> </u>	Curtis



	CLIEN	NT		Eastern Irrigation District			_ PRC	JECT	NAME		Snake La	ke Reservoir	Expansio	'n	
1	PROJ	IECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		N	IE 1/4 32-19-2	16		
1	DATE	STARTED	07/27/2022	COMPLETED	07/2	7/2022	GRO	DUND	ELEVATION	773.2n	<u>N_</u>	5612020	E	416009	1
1	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GR0	DUND	WATER ELEV	ATION / DEP	гн				
1	DRILI	LING METHOD		6" SSA			DAT	E GRO	OUND WATER	RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - 1 SPT (N) Blov 10 20 100 200 POCKET PE 	CONTENT LIQUID ws/300 mm 30 40 300 400 EN (kPa)		REMARKS	;	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		CLAY TILL, sar plastic, light bro inclusions	ndy, some grav own, suspect v	/el, dry, firm, medium /hite sulphate	=	AU1		5.1	•		0.6 m -	LL = 37.2% PL = 13.9% PL = 23.3%	- 		773-
					=	AU2		11.9	•		1.2 m - 1.2 m -	Gravel = 11 Sand = 22.3 Silt = 31.3%	, .0% 2%		
2 2 	· _ · · · · · · · · · · · · · · · · · ·	SHALE (Weath completely wea mottling, some plastic, extreme	d silt, trace sand, rown to dark grey ning, damp, high rd soil, blocky,	-	AU3		16.0	•		2.1 m -	Clay = 35.5 LL = 75.1% PL = 18.8% PI = 56.3%	%		771-	
-3	· · · · · ·	suspect white s crystals 3 m - becomi	sulphate inclus	ions, trace gypsum	-	AU4		10.0	•						770-
	· · · · · ·				-	AU5		17.3	•		3.7 m -	Sand = 1.8 Silt = 47.4% Clay = 50.8	% % %		769
	· ·				-	AU6		10.0							-
	· · · · · ·	5.5 m - becor	ning high plas	ic	=	AU7		17.4	•						768-
6 	······	-	End of Borehole	@6.1 m		AU8		25.3		•					767-
- - - 7 -															766
- - - - - - -															-
															765-
9 															764
Ē															
11/01/2024	L	Notes: NW Borrow sea	arch. Backfille	I with bentonite chips.							Logged Review	l By: ved By:	C T.	<u>. Tams</u> Curtis	
11/01/2024															



	CLIEN	NT		Eastern Irrigation Distric	t		_ PRO	DJECT	NAN	IE	_		S	Snake La	ke Reservoir	Expansion	on	
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	۱ _			N	E 1/4 32-19	-16		
	DATE	STARTED	07/28/2022	COMPLETED	07/28	8/2022	_ GRO	DUND	ELE\	ATION	۱.	771	I.4m	N	5611950	_ E	41633	7
	DRILL	LING CONTRACT	OR	Chilako Drilling Service	es Lto	1.	GR0	DUND	WAT	ER ELI	EVATI	ON / D	EPT	н				
1	DRILL	LING METHOD		6" SSA			DAT	E GR	OUNE) WATI	ER RE	CORE	DED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● N 	10ISTU PLASTI PT (N) 10 2 00 20 POCKET	RE CO C - LIQ Blows/3 00 30 F PEN (NTENT UID 300 mm 0 40 kPa))		REMARK	S	Standpipe/ Instrument	Elevation (m)
-1		CLAY TILL ANI damp, firm, low root hairs	D GRAVEL, so	e @1.5 m		AU1		6.6						0.6 m - 0.6 m - due to s boulder	Gravel = 2 Sand = 33 Silt = 20.7' Clay = 16. Auger refu suspect 's	9.5% .7% % 1% sal		7771– 770– 769– 768– 766– 766– 766– 766– 766– 766– 766
		Notes [.]												1				<u> </u>
11/04/2022	1	NE Borrow sea	arch. Backfilleo	d with bentonite chips.										Logged Review	l By: ved By:	<u> </u>	<u>). Tams</u> . Curtis	<u>.</u>
11/01/2024	T																	



		NT		Eastern Irrigation District			_ PRC	DJECT	NAME	S	Snake Lak	ke Reservoir E	Expansio	n
1	PROJ	JECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATION		N	E 1/4 32-19-1	6	
l (DATE	STARTED	07/28/2022	_ COMPLETED)7/2	8/2022	_ GRO	DUND	ELEVATION	770.8m	N	5611942	E	416626
l 1	ORILI	LING CONTRACT	OR	Chilako Drilling Services	s Lto	ł.	GRO	DUND	WATER ELEVAT	ION / DEPT	н			
l (ORILI	LING METHOD		6" SSA			DAT	E GR	OUND WATER R	ECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO PLASTIC - LIC SPT (N) Blows 10 20 3 100 200 3 POCKET PEN 	ONTENT QUID /300 mm 30 40 00 400 (kPa)	-	REMARKS		Standpipe/ Instrument Elevation
		SAND, gravelly graded, fine gra brown 1 m - becomi CLAY TILL, silt stiff, medium p oxidation staini inclusions 2.5 m - becor mudstone inclu SHALE (Weath highly weather moist, high plas laminated 4 m - becomi SHALE, clayey medium to high	A some silt, trained, sub-rou ng some clay, y, some grave lastic, brown t ng, suspect w ning some co sions hered), silt and ed, grey, som stic, extremely ng some grou y, silty, highly w n plastic, very	ace clay, poorly inded, damp, loose, low plastic el, trace sand, damp, o dark brown, some thite sulphate mpletely weathered d clay, trace sand, e oxidation staining, v weak, thinly nd up shale inclusions veathered, grey, damp, weak, ground up		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		4.3 4.1 18.6 17.1 18.6 15.7 14.8 14.0		(KPa)	0.6 m - 1.2 m - 1.2 m - 2.1 m - 3.7 m -	LL = 23.9% PL = 12.1% PI = 11.8% Gravel = 18 Sand = 50.2 Silt = 11.1% PL = 16.1% PI = 55.1% Sand = 5.99 Silt = 51.8% Clay = 42.3'	8.1% 2% % %	770- 769- 768- 766- 766- 766- 766- 766- 766- 766
		Notes:												
11/01/2024		NE Borrow sea	nrch. Backfille	d with bentonite chips.							Logged Review	By: ed By:	<u> </u>	. Tams Curtis



C		NT		Eastern Irrigation Distric	t		_ PR	OJECT	NAME			Snake L	ake Reservoir	Expans	ion	
F	PROJ	IECT NUMBER		1560-193-00			_ PR	OJECT	LOCATI	ON			NE 1/4 32-19-	16		
0	DATE	STARTED	07/25/2022	COMPLETED	07/2	5/2022	GR	OUND	ELEVAT	ION	775.1m	N	5611525	_ E _	41496	9
0	RILI	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	1.	GR	OUND	WATER	ELEVA	TION / DEPT	н				
0	RILI	LING METHOD		6" SSA			_ DA	re gro	OUND W	ATER F	RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOIS ⊢ PLA ■ SPT 10 100 ▲ POC 	STURE C STIC - LI (N) Blows 20 200 KET PEN	CONTENT QUID s/300 mm 30 40 300 400 y (KPa)	_	REMARKS	3	Standpipe/ Instrument	Elevation (m)
-1		CLAY TILL, silt weathered muc damp, stiff, hig mottling, some sulphate inclus SHALE (Weath highly weather damp, high pla laminated	some completely ons, some gravel, brown to dark grey hing, suspect white d silt, trace sand, e oxidation staining, e weak, thinly ions		AU1 AU2 AU3 AU4		 ≥ 8.9 14.1 16.6 18.7 				= 1 m - 0 1 m - 3 = 1.39 1 m - 1 - 2.5 m	Gravel = 12. Sand = 16.8 Silt = 30.6 Clay = 39.7 Organic Con L = 53.6% PL = 16.1% PI = 37.5% Sand = 8.9 Silt = 44.7% Clay = 46.4 - LL = 70.7% PL = 20.1% PI = 50.6%	9% % tent % % % %		7775 7774 7773 7772 7771 7770 769 769 768 768 766	
-		Notes:										_				
		SW Borrow sea	arch. Backfille	d with bentonite chips								Logge	d By:	(C. Tams	
11/01/2024												Review	wed By:	1	L Curtis	



0	CLIE	NT		Eastern Irrigation District			_ PRO	DJECT	NAM	E			Snake L	ake Reservo	ir Expar	nsion		
F	PRO	JECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	_			NE 1/4 32-1	9-16			
	DATE	STARTED	07/27/2022	COMPLETED 0)7/27	7/2022	_ GRO	DUND	ELEV	ATION	_	773.4r	<u>n</u> N	5611705	E	4	1548	7
	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Ltd	Ι.	GR0	DUND	WATE	R ELE	VATIC	N / DEP	тн					
	DRILI	LING METHOD		6" SSA			DAT	E GRO	DUND	WATE	RRE	CORDE)					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M ⊢ P ■ SI 10 ▲ P	OISTUF PLASTIC PT (N) E 0 20 00 20 OCKET	RE CON - LIQU Blows/30 0 300 PEN (k	ITENT IID 00 mm <u>40</u> 0 400 Pa)		REMAR	٢S		Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt firm to stiff, me suspect white s 1.6 m - becor plastic, trace sa 2.5 m - becor mudstone inclu SHALE (Weath dark grey mottl high plastic, ex sulphate inclus	y, some sand, dium plastic, b sulphate inclus ning some oxid and ning some cor sions iered), clayey, ing, some oxid tremely weak, ions, trace gyp	trace gravel, damp, rown to dark brown, ions dation staining, high npletely weathered silty, light brown to dation staining, damp, blocky, suspect white boum crystals		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		7.5 11.0 14.0 14.8 17.2 16.7 16.2 16.2					0.6 m 1.2 m 2.1 m 2.7 m 3.7 m 	- Sand = 2 Silt = 41.4 Clay = 34 - LL = 43.2 PL = 14.3 PI = 28.9 - LL = 56.5 PL = 17.2 PI = 39.3 - Sand = 7 Silt = 65.4 Clay = 27 - LL = 53.7 PL = 16.9 PI = 36.8	3.2% 1% .4% % !% !% .4% 1% :2%			7773 7772 7771 7769 768 766 766 766 766
<u> </u>	_																	
		Notes:			<u> </u>				-							<u></u>		
11/01/2024		NE Borrow sea	rch. Backfilled	with bentonite chips.									Logge Revie	ed By: wed By:		<u>С. Т</u> Т. С	ams urtis	



	CLIEI	NT		Eastern Irrigation Distric	:t		_ PRO	DJECT	NAME	5	Snake La	ke Reservoir	Expansio	n	
	PRO	JECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		Ν	NE 1/4 32-19-2	6		
1	DATE	STARTED	07/27/2022		07/2	7/2022	GR0	DUND	ELEVATION	768.0m	N	5611676	_ E	415733	3
1	DRILI	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	l.	GR	DUND	WATER ELEVAT	TION / DEPT	н				
1	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATER R	RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 3 POCKET PEN 	ONTENT QUID 3/300 mm 30 40 300 400 I (kPa)		REMARKS	;	Standpipe/ Instrument	Elevation (m)
_		CLAY TILL, silt	, some sand, lastic_brown	trace gravel, damp,											-
-		staining, suspe	ct white sulph	ate inclusions	-	AU1		9.7	•		0.6 m -	LL = 49.2%			-
-								-				PL = 12.9%	i.		767-
		1			-	AU2		7.7	•		1.2 m -	Sand = 22.	5%		-
-												Silt = 48.2%	5 0/_		-
-2												Clay - 29.5	70		766-
	\geq	2.1 m - trace	suspect bento	onite seams	=	AU3		13.2			2.1 m -	LL = 100.09 PL = 14.9%	6		-
-	\geq	0.7			-	A1 14		15.0	•			PI = 85.1%	I.		-
-3	· <u>·</u> ·	2.7 m - becon mudstone	ning some co	mpletely weathered		704		15.0							765-
_	· <u>·</u> ··	SHALE (Weath	nered), clay ar	nd silt, trace sand,											-
-	· <u>··</u> ·	mottling, some	oxidation stai	prown to dark grey ning, damp, high		AL 15		1/ 0			37m-	Sand = 1.8	%		-
-4		plastic, extreme	ely weak, bloc	ky, suspect white		AUJ		14.0				Silt = 55.4%	D		764-
_	··	sulphate inclus	ions		-	AU6		14.1	•			Clay = 42.8	%		-
-	· <u>·</u> ··														-
-5	· <u>··</u> ·	-													763-
	· · · · ·	•			-	AU7		16.2	•						-
-	 	-													-
-6	·	•			-	AU8		17.9	•						762-
-			End of Borehole	e @6.1 m											-
Ē															-
-7															761-
-															-
Ē															-
8															760-
Ē															-
															-
-9															759
_															-
E F															
_															
		Notes:													
		NE Borrow sea	rch.Backfilled	with bentonite chips.							1	1.0.1	~	т.	
											Logged	з Ву:	<u> </u>	Iams	
11/01/2024											Review	ved By:	ſ.	Curtis	



	CLIEN	T		Eastern Irrigation District			_ PRO	DJECT	NAME	5	Snake Lal	ke Reservoir	Expansio	on	
	PROJ	IECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATION		N	E 1/4 32-19-	16		
	DATE	STARTED	07/27/2022)7/27	7/2022	GR0	DUND	ELEVATION	771.4m	N	5611669	_ E	416034	
	DRILI	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	l.	GR	DUND	WATER ELEVAT	ION / DEPT	н				
	DRILI	ING METHOD		6" SSA			_ DAT	E GR	OUND WATER R	ECORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO ⊢ PLASTIC - LIC SPT (N) Blows 10 20 3 100 200 3 ▲ POCKET PEN 	ONTENT QUID /300 mm 30 40 800 400 (kPa)	-	REMARKS	6	Standpipe/ Instrument	Elevation (m)
-1	1.5 m - becoming some to trace gravel 2 m - becoming medium plastic 2.5 m - becoming some completely weathered mudstone inclusions SHALE (Weathered), clayey, silty, completely weathered, light brown to dark grey mottling, som oxidation staining, damp, high plastic, extremely weak to hard soil, suspect white sulphate inclusions, trace gypsum crystals 4.5 m - becoming high plastic, bentonite seams throughout							6.0 7.4 17.2 19.7 17.6 18.4 23.3 39.5		(KPa)	0.6 m - 0.6 m - 1.2 m - 2.7 m - - 3.7 m -	Gravel = 1 Sand = 47. Silt = 25.39 Clay = 9.9 LL = 33.9% PL = 17.2% PI = 16.7% Sand = 1.9 Silt = 50.19 Clay = 48.0 LL = 67.2% PI = 23.9% PI = 43.3% LL = 190.2 PL = 20% PI = 170.2	7.3% 5% % % % % %		7771 770 769 768 767 766 7767 7767 7767 7764 7764
- - - - - - - - -															762
	I	Notes:						I	1		1				
11/01/2024	1	NE Borrow sea	rch. Backfilleo	l with bentonite chips.							Logged Review	By: ed By:	C	. Tams Curtis	



	CLIEI	NT		Eastern Irrigation District			_ PRC	JECT	NAME	5	Snake La	ke Reservoir F	Expansio	n	
1	PRO	IECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		N	E 1/4 32-19-1	6		
1	DATE	STARTED	07/27/2022		07/27	7/2022	_ GRC	DUND	ELEVATION	771.9m	N	5611673	_ E	416342	2
۱ I	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	Ι.	GRC	DUND	WATER ELEVAT	ION / DEPT	н				
1	DRILI	LING METHOD		6" SSA			_ DAT	E GRO	OUND WATER R	ECORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LIC SPT (N) Blows 10 20 100 200 3 POCKET PEN 	ONTENT QUID /300 mm 30 40 800 400 (kPa)	-	REMARKS		Standpipe/ Instrument	Elevation (m)
-1 -1		GRAVEL, silty, well graded, co loose, grey and CLAY TILL, gra medium plastic inclusions 2.5 m - becomin plastic SHALE, clayey damp, medium	clayey, some arse grained, ł brown ivelly, silty, sor ; brown, suspe ning some gra ng some oxida ; silty, complet plastic, very v End of Borehole	sand, some cobbles, sub-rounded, damp, ne sand, moist, stiff, ect white sulphate vel tion staining, high ely weathered, grey, veak, ground up @5.2 m		AU1 AU2 AU3 AU4 AU5 AU6 AU7		 6.4 4.7 4.7 5.0 13.8 16.1 13.0 	•		0.6 m - 1.2 m - 1.2 m - 2.1 m - 3.7 m - 3.7 m - 5.2 m -	LL = 46.0% PL = 18.8% PI = 27.2% Gravel = 29 Sand = 26.0 Silt = 23.5% Clay = 21.3? LL = 43.6% PL = 13.2% PI = 30.4% Gravel = 30 Sand = 15.4 Silt = 27.8% Clay = 26.7' LL = 57.0% PL = 15.1% PI = 41.9% Auger refus	.2%)% , % at		771 770 769 768 767 766 766 765 765
Ē										<u> </u>					
		Notes:												· 1	
11/01/2024	ŀ	NE Borrow sea	rch. Backfilled	with bentonite chips.							Logged Review	By: ed By:	<u> </u>	Tams Curtis	



	CLIEN	T		Eastern Irrigation District			_ PRO	OJECT	NAME		Snake La	ke Reservoir	Expansio	n	
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT	LOCATION		١	NE 1/4 32-19-	16		
	DATE	STARTED	07/27/2022)7/2	7/2022	GR	OUND	ELEVATION	768.5m	N	5611660	_ E	416636	
1	DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	d.	GR	OUND	WATER ELEVA	TION / DEPT	н				
1	DRILL	ING METHOD		6" SSA			DAT	re gr	OUND WATER F	RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blow 10 20 100 200 POCKET PEN 	CONTENT IQUID s/300 mm 30 40 300 400 N (kPa)	-	REMARKS	;	Standpipe/ Instrument Elevation	(m)
-1 -1 -2 -3 -4 -5 -6 -7		CLAY TILL, gra cobbles, moist, hairs SHALE, silt an- weathered, gre weak, trace cla	avelly, some s , firm, high pla d clay, trace s ey, damp, high ny till inclusion	and, some silt, some stic, brown, trace root and, completely plastic, extremely s		AU1 AU2 AU3 AU4 AU5		4.3 16.7 14.5 13.8 14.0			0.6 m - 0.6 m - 1.2 m - 2.1 m - 2.7 m - 3.6 m - 3.7 m -	Gravel = 75 Sand = 15. Silt = 5.1% Clay = 4.59 LL = 55.0% PL = 19.6% PL = 35.4% Clay = 46.4% PL = 52.1% Sand = 0.5 Silt = 52.4% Clay = 47.1 LL = 59.4% PL = 17.9% PL = 17.9% PL = 41.5% Auger refus	5.1% 3% 6 , , , , , , , , , , , , , , , , , ,	7 (7 (7 (7 (7 (7 (7 (7 (7 (7 (68 67 667 667 667 667 667 667 667 667 66
		Notos:													
11/01/2024	Ļ	NE Borrow sea	arch. Backfille	d with bentonite chips.							Loggeo Review	d By: ved By:	<u> </u>	<u>. Tams</u> Curtis	



C		T		Eastern Irrigation District			_ PRO	DJECT	NAME		Snake Lake	e Reservoir E	Expansio	n
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		NE	1/4 32-19-1	6	
C	DATE	STARTED	07/25/2022	COMPLETED	07/25	5/2022	_ GRO	DUND	ELEVATION	777.5m	N	5611229	E	414956
C	RILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	ł.	GR0	DUND	WATER ELEVA	TION / DEPT	н			
C	RILL	LING METHOD		6" SSA			DAT	E GRO	OUND WATER F	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - L SPT (N) Blow 10 20 100 200 POCKET PEI 	CONTENT IQUID s/300 mm 30 40 300 400 N (kPa)	F	REMARKS		Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silf, staining, trace s sulphate inclus SHALE (Weath weathered, dar staining, damp, hard soil 4 m - becomin	y, some sand, astic, light bro gypsum crysta ions ered), clayey, k brown to gre , medium plas ng some sand ng high plastic	some gravel, damp, wn, some oxidation ls, suspect white silty, completely y, some oxidation ic, extremely weak to		AU1 AU2 AU3 AU4		16.5 13.4 11.2 5.8	• •		1 m - Gra 1 m - Sa C 1 m - LL P 12.5 m - L P 4 m - Sa S C	avel = 7.39 nd = 26.79 Silt = 27.4% 2lay = 38.6 = 44.6% 1 = 31.1% L = 49.5% PL = 12.8% PL = 12.8% Pl = 36.7% nd = 12.5% Silt = 48.2% Clay = 39.3	6 6 9% %	777- 776- 775- 774- 773- 772- 771- 770- 769- 768-
-														
		Notes:												
		SW Borrow sea	arch. Backfilleo	d with bentonite chips.							Logged E	Зу:	C.	Tams
11/01/2024											Reviewe	d By:	T.	Curtis



(T		Eastern Irrigation District			_ PRC	DJECT	NAME	5	Snake Lake Reservoir I	Expansio	n
1	PROJ	IECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATION		NE 1/4 32-19-1	16	
	DATE	STARTED	07/26/2022)7/26	6/2022	_ GRO	DUND	ELEVATION	776.7m	N 5611233	_ E	415262
1	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Lto	l.	GR0	DUND	WATER ELEVAT	ION / DEPTI	н		
1	DRILI	ING METHOD		6" SSA			DAT	E GR	OUND WATER R	ECORDED			
Depth (m)	SOIL SYMBOL		So Descri	il ption	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LIC SPT (N) Blows 10 20 100 200 3 POCKET PEN 	ONTENT QUID 5/300 mm 30 40 300 400 1 (kPa)	REMARKS	;	Standpipe/ Instrument Elevation (m)
-1		SAND, some si grained, sub-ro CLAY TILL, sar damp, firm, me white sulphate 1.5 m - becon SHALE (Weath completely wea staining, damp, hard soil, block	ilt, trace clay unded, dan ning clayey nd and silt, s dium plastic inclusions ning trace s neered), silt a athered, gre , medium pl y, suspect v	y, poorly graded, fine p, loose, light brown some gravel, some sand, brown to grey, suspect and nd clay, trace sand, y, some oxidation astic, extremely weak to white sulphate inclusions ole @6.1 m		AU1 AU2 AU3 AU4		6.8 11.7 12.3 11.2			1 m - Sand = 39.19 Silt = 36.5% Clay = 24.4 2.5 m - LL = 43.2% PL = 13.1% PI = 30.1% 4 m - Sand = 13.49 Silt = 48.1% Clay = 38.5	6 5 %	776 7775 7774 7773 7772 7771 7770 7769 769 769 768
F													
	1	Notes:						1	<u>]</u>		<u>I</u>		
11/01/2024		SW Borrow sea	arch. Backfi	led with bentonite chips.							Logged By: Reviewed By:	C. T.	. Tams Curtis

		MP		a division o	f En	glob	е			BOR	EHOLE No : 2	22BH4 PAGE '	1 0F '
	CLIEN	NT		Eastern Irrigation Dis	trict		PRO	OJECT	NAME		Snake Lake Reservoir Ex	(pansion	
	PROJ	ECT NUMBER		1560-193-00			PRO	DJECT	LOCATION		NE 1/4 32-19-16		
	DATE	STARTED	07/27/2022	_ COMPLETED _	07/2	7/2022	GR	DUND	ELEVATION	768.6m	N5611378	E41574	14
	DRILL	ING CONTRACT	OR	Chilako Drilling Serv	ices Lt	d.	GR	DUND	WATER ELEVA	TION / DEPT	н		
	DRILL	ING METHOD		6" SSA			DA1	E GR	OUND WATER F	RECORDED			
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blow 10 20 100 200 POCKET PEN 	CONTENT QUID s/300 mm 30 40 300 400 v (kPa)	REMARKS	Standpipe/ Instrument	Elevation (m)
-		CLAY TILL, silt damp, stiff, hig	, sandy, grave h plastic, brow	lly, some cobbles, /n							4 m. Augusta		768-
1 			End of Borehole	e@1.1 m		AU1		7.2	•		due to cobbles 1 m - Sand = 30.7% Silt = 37.0% Clay = 32.3% 1 m - LL = 54.8% DI - 14%		767-
-3											PI = 40.8%		766-
-4													765-
-5													764-
-6													763
-7													762-
-8													761-
-9													760-
											-		759-
		Notes: NE Borrow sea	arch. Backfillec	l with bentonite chip)S.						Logged By: _	<u> </u>	<u>}</u>
11/01/2024	1										Reviewed By: _	I. Curtis	<u>ز</u>



CLIENT	Eastern Irrigation District		PROJECT	NAME	Sr	nake La	ke Reservoir	Expansi	on
PROJECT NUMBER	1560-193-00		PROJECT			N	IE 1/4 32-19- ⁻	16	
DATE STARTED	07/27/2022 COMPLETED 0	07/27/2022	_ GROUND	ELEVATION	768.8m	_ N _	5611373	_ E	416026
DRILLING CONTRAC	TOR Chilako Drilling Services	s Ltd.	GROUND	WATER ELEVATIO	N / DEPTH				
DRILLING METHOD	6" SSA		DATE GRO	OUND WATER REC	ORDED				
Depth (m) SOIL SYMBOL	Soil Description	Sample Type Sample Number	SPT (N) Moisture Content (%)	 MOISTURE CON ⊢ PLASTIC - LIQUI SPT (N) Blows/30 10 20 30 100 200 300 ▲ POCKET PEN (kł 	TENT ID 0 mm 40 400 Pa)		REMARKS	5	Standpipe/ Instrument Elevation (m)
CLAY TILL, sil damp, firm, hig suspect white staining -1 -2 -2 	t, some sand, trace gravel, dry to gh plastic, light brown to brown, sulphate inclusions, trace coal hered), clay and silt, trace sand, eathered, light brown to dark grey e oxidation staining, damp, high hely weak to hard soil, suspect white sions, trace gypsum crystals	 AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8 	9.4 12.2 14.2 13.7 16.8 15.6 17.1 18.4			0.6 m - Conten 1.2 m - 2.1 m - 3.7 m -	Sand = 13. Silt = 51.19 Clay = 35.5 Organic t = 1.7% LL = 82.0% PL = 16.8% PL = 16.7% PL = 16.7% PI = 68.6% Sand = 0.5 Silt = 44.09 Clay = 55.5 LL = 93.5% PL = 18.1% PI = 75.4%	4% 6 % 6 % 6 % 6 %	768 767 766 765 765 764 764 763 763 762 761
9 Notes: NE Borrow se	arch. Backfilled with bentonite chips.								760-
					l	_ogged	l By:		C. Tams
11/01/2024					F	Review	ed By:	T	Curtis



	CLIEI	NT		Eastern Irrigation Distric	t		PRC	DJECT	NAME	S	Snake Lake Reservoir Ex	kpansior	<u> </u>
	PRO	JECT NUMBER		1560-193-00			_ PRC	DJECT			NE 1/4 32-19-16		
1	DATE	STARTED	07/07/2022	COMPLETED	07/0	7/2022	_ GRO	DUND	ELEVATION _	778.1m	N5610905	E	414945
1	DRILI	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	ł.	GR0	DUND	WATER ELEVATION	ON / DEPT	н		
	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATER RE	CORDED			
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE COI PLASTIC - LIQU SPT (N) Blows/3 10 20 30 100 200 30 POCKET PEN (I) 	NTENT UID 300 mm 0 40 0 400 kPa)	REMARKS		Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt medium plastic staining, trace SHALE (Weath highly weather damp, high pla blocky, trace gy	y, sandy, grav ;, light brown, gypsum crysta nered), clay ar ed, grey, some stic, extremely ypsum crystal:	elly, dry, stiff, low to trace oxidation als id silt, trace sand, e oxidation staining, y weak to hard soil, s		AU1 AU2 AU3 AU4		3.9 16.4 18.9			1 m - Gravel = 30.8% 1 m - Sand = 19.5% Silt = 21.7% Clay = 28.0% 1 m - LL = 44.9% PL = 16.5% PI = 28.4% 2.5 m - LL = 54.7% PL = 21% PI = 33.7% 4 m - Sand = 1.5% Silt = 41.2% Clay = 57.3%	6	7778– 7777– 7776– 7775– 7774– 7774– 7774– 7772– 7772– 7771–
													770-
	I	Notes:			_				<u></u>		1		<u> </u>
11/01/2024	1	SW Borrow sea	arch. Backfille	d with bentonite chips							Logged By: Reviewed By:	<u>С.</u> Т.	<u>Tams</u> Curtis



	CLIE	NT		Eastern Irrigation District			_ PRO	OJECT	NAME	Ξ			Snake l	_ake Reservoir	Expans	on	
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCA	TION				NE 1/4 32-19-	16		
1	DATE	STARTED	07/26/2022	COMPLETED 0)7/26	6/2022	_ GRO	OUND	ELEVA	ATION	ı _	775.2m	<u>N</u>	5610939	_ E _	41525	3
1	DRILI	LING CONTRACT		Chilako Drilling Service	s Lto	l.	GR0	OUND	WATE	R ELE	EVATIO	N / DEP	ГН				
1	DRILI	LING METHOD		6" SSA			DAT	E GR	DUND	WATE	ER REC	ORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MC ⊢ PL ■ SP 10 ▲ PC 	DISTUF LASTIC PT (N) E <u>D 20</u> 0 20 DCKET	RE CON C - LIQU Blows/30 0 30 0 300 . PEN (ki	TENT ID 10 mm 400 Pa)	_	REMARKS	6	Standpipe/ Instrument	Elevation (m)
		SAND, some s grained, sub-ro prown CLAY TILL, sill sand, damp, fii oxidation stain inclusions SHALE (Weath weathered, gre high plastic, ve white sulphate	ilt, trace clay, p punded, damp, t, some sand, s rm, medium pla ing, suspect with hered), clayey, ey, some oxida ery weak, thinly inclusions	and, completely um plastic, very weak, @6.1 m		AU1 AU2 AU3 AU4 AU5 AU6		13.3 19.1 18.7 20.3 15.4 18.6		• • •	PEN (ki		- 1 m - 1 m - - 2.5 m 	Sand = 14.6' Silt = 45.69 Clay = 39.8 PL = 13.6% PI = 32.2% PL = 14.6% PI = 40.6% PI = 40.6% A - Sand = 2.9 Silt = 48.5% Clay = 48.6%	% % 3% 6 6 6 6 6		775– 7774– 7773– 7772– 7771– 7770– 769– 768– 766–
-																	-
11/01/2024	1	Notes: SW Borrow se	arch. Backfilleo	d with bentonite chips.									Logge Revie	ed By: ewed By:	(C. Tams	



(CLIEN	NT		Eastern Irrigation District			_ PRO	OJECT	NAME		Snake L	ake Reservoir	Expansi	on
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT	LOCATION			NE 1/4 32-19-	16	
I	DATE	STARTED	07/26/2022	COMPLETED	07/26	6/2022	_ GRO	OUND	ELEVATION	777.2	<u>m</u> N_	5611071	_ E	415426
1	DRILI	ING CONTRACT	OR	Chilako Drilling Service	s Lto	Ι.	GR0	OUND	WATER ELE\	VATION / DEF	тн			
1	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATEF	R RECORDEI)			
Depth (m)	SOIL SYMBOL		Soil Descripti	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURI PLASTIC SPT (N) Bid 10 200 100 200 POCKET F 	E CONTENT - LIQUID lows/300 mm 30 40 9 300 400 PEN (kPa)		REMARKS	5	Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt sand, dry, firm, oxidation staini inclusions	, some sand, medium plasi ng, suspect w	trace gravel, trace tic, light brown, some hite sulphate	#	AU1		9.9	•		0.6 m 0.6 m 0.6 m 1 m - 1 1 m - 1	- EC: 1.8 dS - SAR: 7.7 - pH: 8.2 Gravel = 9.7' Sand = 15.2 Silt = 38.9% Clay = 36.2	/m % % 2%	777-
		2.5 m - becor mudstone inclu	ning some co sions	mpletely weathered	=	AU2		11.2	•		2.5 m	- LL = 44.3% PL = 13.4% PI = 30.9%		774-
4 4 4		3.5 m - becor	ning some coa	al staining	=	AU3		11.9	•					773
5 5 	· · · · · · · · · · · · · · · · · · ·	highly weather damp, high pla laminated, sus	stic, extremely bect white sul	e oxidation staining, y weak, thinly phate inclusions	Ŧ	AU4		19.0			5.5 m	- Sand = 7.4	%	772
- 6 6 		Notes:	End of Borehole	9@6.1 m							5.5 m	Silt = 54.29 Clay = 38.4 - LL = 60.5% PL = 18.3% PI = 42.2%	6 %	771– 7770– 769– 768–
		SW Borrow sea	arch. Backfille	d with bentonite chips.							Logge Revie	ed By: wed By:	C T	2. Tams
1701/2024	•													



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G	arviolor		- ' ' ' ' '	

	CLIEN	νT		Eastern Irrigation Distri	ict		_ PRO	DJECT	NAM	E		S	Snake La	ke Reservoir	Expansi	on	
	PROJ	ECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	I		1	NE 1/4 32-19-	16		
	DATE	STARTED	07/27/2022	COMPLETED	07/2	7/2022	_ GRO	DUND	ELEV	ATION	۱	774.2m	N	5611071	_ E _	41573	5
	DRILL	ING CONTRACT	TOR	Chilako Drilling Servi	ces Lto	1.	GR(DUND	WATE	ER ELI	EVATION	/ DEPT	н				
		ING METHOD		6" SSA			_ DAT	E GR) WATI	ER RECO	ORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 1 ▲ P	IOISTU PLASTI PT (N) 00 20 00 20 00 20	RE CONTI C - LIQUID Blows/300 00 300 F PEN (kPa	ENT mm <u>40</u> 400	-	REMARK	3	Standpipe/ Instrument	Elevation (m)
-		CLAY TILL, sa silty dry firm	nd, silty, grave low plastic ligh	Ily, some cobbles,													774-
 1			iow plastic, iigi		Ŧ	AU1		5.8	•				0.6 m - 0.6 m -	Gravel = 1 Sand = 50 Silt = 20.69	7.0% .3% %		
	\geq		End of Borehole	e @1.5 m	-	AU2		6.5	•	⊢			1.2 m -	Clay = 12. [•] LL = 29.8% PL = 13.7%	6 6		773-
2 													1.5 m - due to	PI = 16.1% Auger refu cobbles	sal		772-
-3																	771-
-4 																	770
5 																	769
- - - - - - - - -																	768-
- - - - - - - -																	767-
																	766-
9 9 																	765
Ē													1				-
		Notes:											I				L
		SE Borrow sea	arch. Backfillec	I with bentonite chips	; .								Logge	d By:	(C. Tams	·
11/01/2024	1												Reviev	ved By:	T	. Curtis	



	CLIEI	NT		Eastern Irrigation District			_ PRO	DJECT	NAME	S	Snake La	ke Reservoir	Expansio	n	
1	PRO	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		Ν	JE 1/4 32-19-	16		
l 1	DATE	STARTED	07/26/2022	COMPLETED 0)7/26	6/2022	_ GRO	DUND	ELEVATION	773.4m	N	5611056	_ E	416022	2
l (DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Lto	l.	GR	DUND	WATER ELEVAT	ION / DEPT	н				
	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATER R	ECORDED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO ⊢ PLASTIC - LIC SPT (N) Blows 10 20 3 100 200 3 ▲ POCKET PEN 	DNTENT QUID /300 mm 30 40 /00 400 (kPa)	-	REMARKS	3	Standpipe/ Instrument	Elevation (m)
-1		GRAVEL, sand medium graine brown CLAY TILL, silt moist, firm, higl oxidation staini inclusions, trac SHALE (Weath weathered, ligh oxidation staini weak to hard so	y, some silt, t d, Rounded, d , some sand, h plastic, dark ng, suspect w e gypsum cry tered), clayey, tt brown to da ng, damp, hig oil, trace gyps	race clay, well graded, dry, loose, grey to trace to some gravel, brown, some thite sulphate stals silty, completely rk grey mottling, some h plastic, extremely um crystals e @6.1 m		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		9.7 4.2 17.6 15.3 15.7 14.2 19.6 18.5		(KPa)	0.6 m - 0.6 m - 2.1 m - 2.7 m - 2.7 m - 3.7 m -	Gravel = 51 Sand = 26. Silt = 13.09 Clay = 9.89 LL = 54.4% PL = 19.6% PI = 34.8% Gravel = 2. Sand = 18. Silt = 38.29 Clay = 40.7 LL = 48.4% PL = 15.9% PI = 32.5% LL = 69.2% PL = 22.3% PI = 46.9%	I.2% 0% 6 9% 2% 6 %		773 772 771 770 769 768 766 766 765
F											-				-
11/01/2024		Notes: SE Borrow sea	rch. Backfilled	d with bentonite chips.	<u> </u>			1			Loggeo	l By: /ed By:	C T	. Tams Curtis	



	CLIEN	NT		Eastern Irrigation District	t		PRC	DJECT	NAME		Snake Lake Reservoi	r Expansio	on
1	PROJ	IECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATION		NE 1/4 32-19	-16	
п	DATE	STARTED	07/27/2022	COMPLETED	07/2	7/2022	GRO	DUND	ELEVATION	768.0m	N 5611072	_ E	416313
l (DRILI	LING CONTRACT	OR	Chilako Drilling Service	es Lto	d.	GR0	DUND	WATER ELEV	ATION / DEPT	Ή		
l 1	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATER	RECORDED			
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - SPT (N) Blov 10 20 100 200 POCKET PE 	CONTENT LIQUID ws/300 mm 30 40 300 400 EN (kPa)	REMARK	S	Standpipe/ Instrument Elevation (m)
- - - - - - - - - -		CLAY TILL, silt moist, stiff, med white sulphate	y, sandy, some dium plastic, d inclusions	e gravel, damp to ark brown, suspect	-	AU1		8.1	•		0.6 m - Gravel = 3 0.6 m - Sand = 32 Silt = 18.3	30.9% 2.1% %	767-
-		1.6 m - becor	ning trace grav	/el, high plastic	=	AU2		20.9	•		Clay = 18	.7%	
2 					#	AU3 AU4		17.4 18.4	•		2.1 m - Dispersivi Classification = N % Dispersion = % 2.1 m - LL = 71.0°	ty D3 %	766
	· · · · ·	SHALE (Weath completely wea trace oxidation extremely weal	ered), clay an athered, light b staining, dam k to hard soil, l	d silt, trace sand, rown to grey mottling, o, high plastic, blocky		AU5		20.4			PL = 21.6 PI = 49.4	% %	765–
- 	· · · · · · · · · · · · · · · · · · ·				-	AU6		20.6	•		PL = 17.6 PI = 44.2	% %	764
5 6	· · · · · · · · · · · · · · · · · · ·	5.5 m - becor inclusions	ning some gro	und up shale	=	AU7		17.5	•		5.2 m - Sand = 1. Silt = 54.7 Clay = 44. 5.8 m - Auger refu	3% % .0% .sal	763-
- - - - - - - - - - -													761-
-8													760-
- - - - - - - - - - - - - - - - - - -													759
		Notoci											
11/01/2024	ŀ	SE Borrow sea	rch. Backfilled	with bentonite chips.							Logged By: Reviewed By:	C T.	. Tams Curtis



c		NT		Eastern Irrigation District			PR0	OJECT	NAME	8	Snake La	ake Reservoir I	Expansio	on
F	ROJ	IECT NUMBER		1560-193-00			PR	JECT	LOCATION		1	NE 1/4 32-19-1	6	
C	DATE	STARTED	07/27/2022	COMPLETED)7/2	7/2022	GR	OUND	ELEVATION	767.3m	N	5611072	_ E	416626
C	RILL	LING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR	OUND	WATER ELEV	ATION / DEPT	н			
C	RILL	LING METHOD		6" SSA			DA	E GR	OUND WATEF	R RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - SPT (N) Bio 10 20 100 200 POCKET P 	E CONTENT LIQUID bws/300 mm 30 40 300 400 EN (kPa)		REMARKS		Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt firm to stiff, hig sulphate inclus 1 m - becomi SHALE (Weath completely wea mottling, some plastic, extrem sulphate inclus	y, some grave h plastic, dark ions ng trace grave hered), clay an athered, light b oxidation stail ely weak, bloc ions	l, trace sand, moist, brown, suspect white		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		16.4 18.1 18.3 24.1 18.2 14.9 14.9		EN (kPa)	0.6 m - 1.2 m - Conter 2.1 m - Classif % Disp 2.1 m - 3.7 m -	- LL = 70.1% PL = 13.6% PI = 56.5% - Organic at = 4.4% - Dispersivity fication = ND bersion = % - Sand = 2.5' Silt = 45.1% Clay = 52.4 - Sand = 2.1' Silt = 47.4% Clay = 50.5 - LL = 79.0% PL = 16% PI = 63.0%	3 % % %	765- 765- 764- 763- 763- 762- 761- 760- 759- 759-
-														
11/01/2024		Notes: SE Borrow sea	rch. Backfilled	with bentonite chips.			<u> </u>	<u> </u>			Logged Reviev	d By: ved By:	C T	. Tams



CLIENT			Eastern Irrigation District				_ PRO	PROJECT NAME					Snake Lake Reservoir Expansion			
PROJECT NUMBER			1560-193-00				PRO	PROJECT LOCATION				NE 1/4 32-19-16				
DATE STARTED 07/0			07/07/2022	7/07/2022 COMPLETED 07/07/20			GR0	GROUND ELEVATION 778.5n				N	5610638	_ E	414961	
DRILLING CONTRACTOR Chilako Drilling Service						1.	GR	_GROUND WATER ELEVATION / DEPTH								
DRILLING METHOD 6" SSA							DAT	DATE GROUND WATER RECORDED								
Depth (m)	SOIL SYMBOL	Soil Description		Sample Type	Sample Number	SPT (N)	(C) (S) (S) (S) (S) (S) (S) (S) (S			NTENT JID 00 mm 40 0 400 Pa)	REMARKS			Standpipe/ Instrument Elevation (m)		
-1		CLAY TILL, silt plastic, light bro SHALE (Weath trace gravel, tra brownish grey, plastic, extreme 3 m - becomin	y, trace grave own, some ox nered), silt and ace cobbles, o some oxidatic ely weak to ha ng grey End of Borehold	I, dry, stiff, medium idation staining		AU1 AU2 AU3		7.3				1 m - L 2.5 m - 3.4 m - 3.7 m -	L = 49.1% PL = 18.5% PI = 30.6% LL = 53.3% PL = 20.3% PI = 33.0% Sand = 2.22 Silt = 52.5% Clay = 45.3 Auger refus	% 6 % al	778- 777- 776- 775- 774- 774- 777- 777- 777- 777- 777	
												-				
		Notes:						<u> </u>								
SW Borrow search. Backfilled with bentonite chips.												Loggeo Review	l By: /ed By:	C T.	. Tams Curtis	


	CLIEN	T		Eastern Irrigation District			_ PRC	DJECT	NAM	E	_		Snake	Lake	e Reservoir	Expansio	on	
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	JECT	LOC	ATION	I _			NE	1/4 32-19-	16		
1	DATE	STARTED	07/07/2022		07/07	7/2022	_ GRO	DUND	ELEV	ATION	_ ۱	776.6	<u>6m</u> N	۱	5610631	_ E	41525	9
۱ I	DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR0	DUND	WATE	ER ELI	EVATIO	ON / DE	ртн					
۱ I	DRILL	ING METHOD		6" SSA			_ DAT	E GRO	DUND	WATI	ER RE	CORDE	D					
Depth (m)	SOIL SYMBOL		Soil Descript	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ SI 11 ▲ P	IOISTU PLASTI PT (N) 00 20 00 20 00CKET	RE COI C - LIQU Blows/3 0 30 0 30 7 PEN (I	NTENT JID 00 mm 0 40 0 400 (Pa)			REMARKS	3	Standpipe/ Instrument	Elevation (m)
-1		CLAY TILL, silt mm, dry, firm to trace oxidation inclusions SHALE (Weath trace gravel, co oxidation stain weak to hard s	y, some sand, o stiff, medium staining, susp mered), silt and ompletely wea ing, damp, hig oil, blocky bal staining ming ground u End of Borehole	some gravel up to 50 plastic, light brown, bect white sulphate		AU1 AU2 AU3 AU4		4.7 14.9 18.4 21.4		•	•		1 m 2.5 r 4 m 5.5 r 5.8 r	- LL F F - LL F F m - \$ \$ \$ 0 m - \$	= 37.8% 2L = 13.2% 2l = 24.6% Sand = 6.8 Silt = 46.9% Clay = 46.3 = 69.3% 2L = 22.1% 2l = 47.2% Sand = 3.7 Silt = 52.1% Clay = 44.2 Auger refus	% % % % % 2% sal		776- 7775- 7774- 7773- 7772- 7771- 7770- 769- 768- 768- 768-
Ē																		
	1	Notes:						I	<u> </u>									<u> </u>
11/01/2024	ŀ	SW Borrow sea	arch. Backfille	d with bentonite chips.									Logo Revi	ged l iewe	By: ed By:	C T	<u>. Tams</u> . Curtis	i



(CLIEN	T		Eastern Irrigation Distr	ct		_ PRO	DJECT	NAM	Ξ		Snake Lake Reserv	/oir Expansi	on	
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCA	TION		NE 1/4 32-	19-16		
[DATE	STARTED	07/26/2022	COMPLETED	07/2	6/2022	_ GRO	DUND	ELEV	ATION	775.8m	N561068	2 E	41543	0
(DRILI	ING CONTRACT	OR	Chilako Drilling Servi	ces Lto	ł.	GR	DUND	WATE	RELEV	ATION / DEPT	н			
(DRILI	ING METHOD		6" SSA			DAT	E GR	OUND	WATER	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M ⊢ P 1 10 ▲ P0	OISTURE LASTIC - PT (N) Blo 0 20 00 200 DCKET P	E CONTENT LIQUID bws/300 mm 30 40 300 400 EN (kPa)	REMAF	RKS	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt cobbles, dry, fir	y, gravelly, sor m, medium pl End of Borehole	ne sand, some astic, light brown		AU1 AU2 AU3		5.1 5.1 3.0				0.6 m - LL = 32 PL = 13 PI = 19 1.2 m - Gravel = 1.2 m - Sand = Silt = 24 Clay = 2 2 m - Auger refi due to cobbles	7% 5% .2% = 39.5% 14.1% .2% 22.2% isal		7775 7774 7773 7772 7771 7770 7669 7668 7667
- - - - - - -												-			766-
		Notes:													
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite chip	3.							Logged By: Reviewed By:	C T	<u>C. Tams</u> C. Curtis	



CLIE	ENT		Eastern Irrigation Distric	ct		_ PRO	DJECT	NAME	S	nake L	ake Reservoir I	Expansio	on	
PRO	JECT NUMBER		1560-193-00			_ PRO	DJECT				NE 1/4 32-19-1	6		
DAT	E STARTED	07/26/2022	COMPLETED	07/26	6/2022	GR0	DUND	ELEVATION	775.1m	N _	5610666	_ E	41573 ⁻	1
DRIL	LLING CONTRACT	OR	Chilako Drilling Servic	es Lto	l.	GR0	DUND	WATER ELEVATION	N / DEPTH	H	771.76 m		3.33 m	
DRIL	LLING METHOD		6" SSA			DAT	E GRO	OUND WATER REC	ORDED		01/2	5/2023		
Depth (m) SOIL SYMBOL		Soil Descripti	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONT PLASTIC - LIQUIE SPT (N) Blows/300 10 20 300 100 200 300 POCKET PEN (KP 	TENT D 0 mm 40 400 'a)		REMARKS		Standpipe/	Elevation (m)
	CLAY TILL, silt, mm, moist, stiff brown, some or crystals, trace i 1.5 m - trace	, trace sand, t , medium plas xidation staini ronstone inclu SEEPAGE ereed), silt and thered, grey, high plastic, o y	race gravel up to 25 stic, brown to dark ng, trace gypsum usions		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		 ≥ 14.5 19.2 19.8 15.9 21.6 19.6 20.1 	• • • • • • • • • • • • • • • • • • •		0.6 m Conte 0.6 m 1.2 m 3.7 m 5.2 m 5.2 m	- Organic nt = 4.3% - LL = 47.9% PI = 30.1% - Gravel = 17. Sand = 14. Silt = 43.2% Clay = 25.7 - Sand = 5.1° Silt = 53.9% Clay = 41.0 - Dispersivity fication = D2 persion = % - LL = 59.2% PI = 41.5%	2.0% 1% %		7775 7774 7773 7772 7771 7770 7769 768 768 766
	Notes:					l	1	<u> </u>						
11/01/2024	SW Borrow sea	arch. Backfille	d with bentonite chips	5.						Logge Revie	d By: wed By:	C T	<u>. Tams</u> . Curtis	



	CLIEI	NT		Eastern Irrigation District			PRC	DJECT	NAM	IE	_		S	Snake La	ake Reserve	oir Expa	ansior	1	
1	PRO	JECT NUMBER		1560-193-00			_ PRC	JECT	LOC	ATION	1 _				NE 1/4 32-1	9-16			
1	DATE	STARTED	07/26/2022)7/2e	6/2022	GRO	DUND	ELEV	/ATIO	N	77	0.1m	N	5610677	E		41603	1
1	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GR0	DUND	WATE	ER EL	EVAT	ION / E	DEPTI	н					
1	DRILI	LING METHOD		6" SSA			DAT	E GRO	DUNE) WAT	ER RI	ECORI	DED						
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 ▲ P	10ISTL PLASTI PT (N) 10 2 00 2 OCKE	IRE CC C - LIG Blows/ 20 3 00 3 T PEN	ONTEN QUID 300 mn 30 40 00 40 (kPa)	Г 1 0 10		REMAR	KS		Standpipe/ Instrument	Elevation (m)
-		SAND, clayey, brown, trace ro	silty, trace gra	vel, moist, loose, dark															-
					-	AU1		14.2		•				0.6 m	- Sand = 4 Silt = 25.	4%			-
-1 -					=	AU2		14.1		●⊢				1.2 m	Clay = 29 - LL = 25.9	Э.3% Э%			769
		: CLAY TILL, silt	, trace sand,, t	race gravel, moist,	-										PL = 17.3 PI = 8.6	3% %			-
2		staining, suspe	ct white sulph	ate inclusions	-	AU3		22.3		ŀ	•			2.1 m	- LL = 53.3	3%			768-
		SHALE (Weath	iered), clay an	d silt, completely	-	AU4		25.4			•			2.7 m	PL = 10.4 PI = 34.9 Sand = 8	+% 3% }2%			-
-3		high plastic, ex	tremely weak,	thinly laminated											Silt = 47. Clay = 44	6% 4.2%			767-
	·	• - - -			-	AU5		21.8			•				-				-
4	· · · · · · · · · · · · · · · · · · ·																		766-
	··	-			=	AU6		21.0			•			4.3 m	- LL = 75. PL = 20.8	/% 3% 9%			-
5 	· <u> </u>		End of Borehole	@5.0 m	-	AU7		37.6				•		5 m - /	Auger refu	sal			765-
6																			764
																			-
- 7																			763-
-																			-
-																			
																			762-
F																			-
-9																			761-
E																			
-																			-
										<u> </u>									-
		Notes:																	
		SE Borrow sea	rch. Backfilled	with bentonite chips.										Loage	d Bv:		C	Tams	
														Review	wed By:		 T. /	Curtis	
11/01/2024	ļ														,				



(CLIEN	T		Eastern Irrigation District			_ PRO	DJECT	NAME		Snake La	ke Reservoir I	Expansio	n	
	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		N	IE 1/4 32-19-1	6		
	DATE	STARTED	07/26/2022		07/2	6/2022	GR0	DUND	ELEVATION	770.2m	N	5610673	E	416338	\$
	DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GR	DUND	WATER ELEVA	TION / DEPT	н				
	DRILL	ING METHOD		6" SSA			DAT	E GR	OUND WATER F	RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descript	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - L SPT (N) Blow 10 20 100 200 POCKET PER 	CONTENT IQUID s/300 mm 30 40 300 400 N (kPa)		REMARKS	i	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		CLAY TILL, silt plastic, brown, white sulphate	y, trace grave some oxidatic inclusions	, moist, stiff, medium n staining, suspect	=	AU1		10.5			0.6 m -	LL = 43.4% PL = 11.5% PL = 31.9%			770
- - - - - - - - - - - - - - - - - - -					-	AU2 AU3		12.8 20.2	•		1.2 m - 1.2 m -	Gravel = 59 Sand = 17. Silt = 10.9% Clay = 12.2).8% 1% %		769-
		SHALE (Weath completely wea mottling, some to high plastic, white subpate	nered), silt and athered, light l oxidation stai extremely we	clay, trace sand, prown to dark grey ning, damp, medium ak, blocky, suspect	-	AU4		19.2	•						767
- - 	·		Inclusions		-	AU5 AU6		20.4	•		4.3 m -	Sand = 2.0 ⁶	%		766
 5 5	·	4.5 m - becor	ning grey			AU7		21.1	•			Silt = 53.3% Clay = 44.7	%		765-
-	· · · · · · · · · · · · · · · · · · ·				-	AU8		18.7	•						-
		Notes:	End of Borehole	:@6.1 m							-				764
		Notes: SE Borrow sea	rch. Backfilled	l with bentonite chips.											
			2000000								Logged Review	l By: /ed By:	<u>С</u> Т.	<u>. Tams</u> Curtis	
11/01/2024	L .											<u> </u>			



0		NT		Eastern Irrigation Distric	t		_ PRO	JECT	NAME	S	Snake La	ake Reservoir E	Expansio	on	
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	JECT	LOCATION		1	NE 1/4 32-19-1	6		
ſ	DATE	STARTED	07/26/2022	COMPLETED	07/2	6/2022	_ GRO	UND	ELEVATION	769.0m	N	5610679	E	41663	8
[DRILL	ING CONTRACT	OR	Chilako Drilling Service	es Lto	1.	GRO	UND	WATER ELEVA	TION / DEPT	н	766.30 m		2.70 m	
ſ	ORILL	ING METHOD		6" SSA			_ DATI	E GRO	OUND WATER F	RECORDED		01/2	5/2023		
Depth (m)	SOIL SYMBOL		Soil Descripti	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blow 10 20 100 200 POCKET PEN 	CONTENT IQUID s/300 mm 30 40 300 400 0 (kPa)		REMARKS		Standpipe/	Elevation (m)
		firm, low plastic hairs, suspect v 1.5 m - becon sandy SHALE, silt and moist, high plas	, brown to lig white sulphate ning moist and d clay, highly v stic, very weal End of Borehole	ht grey, trace root e inclusions d medium grained weathered, grey, very k		AU1 AU2 AU3 AU4 AU5 AU6		 6.0 7.4 11.9 20.6 18.7 16.8 	•	4	1.2 m 1.2 m 2.1 m 3.7 m 4.3 m	- Gravel = 29 - Sand = 27.0 Silt = 21.2% Clay = 21.3 - LL = 28.6% PL = 10.3% PI = 18.3% PI = 18.3% PI = 17.3% PI = 44.6% - Sand = 6.0° Silt = 53.7%	.9% 3% % ₩		768— 766— 766— 765—
-5 											4.6 m	Clay = 40.3 - Auger refus	% al		764
		Notes: SE Borrow sea	rch. 25 mm st	andpipe installed to 4.	6 m.	Backfill	ed with	i sano	d and bentonit	e.					
											Logge	d By:	C	. Tams	
11/01/2024											Review	ved By:	T	Curtis	



	CLIEI	NT		Eastern Irrigation District			_ PRC	DJECT	NAME		5	Snake La	ke Reservoir l	Expansio	on
1	PRO	JECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATIO	ON .		Ν	NE 1/4 32-19-1	6	
1	DATE	STARTED	07/06/2022	COMPLETED	07/06	6/2022	_ GRO	DUND	ELEVATI	ON	777.1m	N	5610332	E	414964
	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GRO	DUND	WATER I	ELEVAT	ION / DEPT	н			
	DRILI	LING METHOD		6" SSA			DAT	E GRO	DUND W	ATER R	ECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOIS ⊢ PLAS SPT (10 100 ▲ POCH 	STURE C STIC - LIC N) Blows 20 200 3 KET PEN	DNTENT QUID /300 mm 30 40 00 400 (kPa)	-	REMARKS		Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt brown, some o SHALE (Weath weathered, gre high plastic, ex BENTONITE (6 SHALE (Weath 5.5 m - becor	y, trace sand, xidation staini hered), silt and y, some oxida tremely weak	dry, firm, high plastic, ng I clay, highly tion staining, damp, to hard soil, blocky		AU1 AU2 AU3 AU4		15.8 21.2 16.2 16.2		• • • • • • • • • • • • • • • • • • •		1 m - L 2.5 m - Classif % Disp 2.5 m - 5.5 m -	L = 54.3% PL = 12.8% PI = 41.5% Dispersivity ication = ND bersion = % LL = 51.6% PL = 21.4% PI = 30.2% Silt = 45.3% Clay = 40.0 LL = 49.1% PL = 13.2% PI = 35.9%	7%	777– 776– 775– 774– 773– 772– 771– 771– 770– 769– 768–
-												-			
		Notes:	anala Distance												
11/01/2024	ł	SW Borrow sea	arch. Backfille	d with bentonite.								Loggeo Review	d By: ved By:	C T	. Tams Curtis



(CLIEI	NT		Eastern Irrigation District			_ PRC	DJECT	NAM	ΛE			S	Snake Lak	e Reservoir	Expansi	on
	PRO	JECT NUMBER		1560-193-00			_ PRC	DJECT	LOC	CATIO	N			N	E 1/4 32-19-	16	
	DATE	STARTED	07/06/2022		7/06	6/2022	_ GRO	DUND	ELE	VATIC	N	77	75.9m	N	5610340	_ E _	415250
	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Ltd	l.	GR0	DUND	WAT	ER E	LEVAT	ION /	DEPTI	Η			
	DRILI	LING METHOD		6" SSA			_ DAT	E GR	DUN	D WA	TER R	ECOR	DED				
Depth (m)	SOIL SYMBOL		So Descri	l otion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOIST PLAST SPT (N 10 20CKE	URE C [IC - LIC) Blows 20 200 3 200 3 200 3 200 3 200 3 200 3 200 3 200 3 200 3 200 3 3 3 3 3 3 3 3 3 3 3 3 3	ONTEN QUID 3/300 mi 30 4 300 4 (kPa)	T m <u>40</u> 00		REMARKS	3	Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt SHALE (Weath brown, some o SHALE (Weath highly weather damp, high pla blocky	y, some con hered), damp xidation stai hered), silt an ed, grey, sor stic, extreme End of Boreho	npletely weathered b, stiff, high plastic, dark ning, trace sand pockets and clay, some sand, ne oxidation staining, ely weak to hard soil,	*	AU1 AU2 AU3		16.8 22.2 20.9						1 m - O = 4.5% 1 m - LL 2.5 m - Classific % Dispe 2.5 m - 4 m - Sa 4.3 m -	rganic Con _ = 58.5% PL = 16.3% PI = 42.2% Dispersivity cation = D2 ersion = % LL = 61.9% PL = 19.4% PI = 42.5% and = 10.0% Silt = 57.2% Clay = 32.8 Auger refus	tent / / / / / / / / / / / / /	7775- 7774- 7773- 7772- 7771- 7770- 769- 768- 768- 768- 767-
-																	766-
		Notes:															
11/01/2024	1	SW Borrow sea	arch. Backfil	ed with bentonite.										Logged Reviewe	By: ed By:	<u></u>	<u>). Tams</u> Curtis



CLIENT	Eastern Irrigation Distric	t	PROJECT	NAME	Snal	ke Lake Reservoir Expans	sion
PROJECT NUMBER	1560-193-00		_ PROJECT			NE 1/4 32-19-16	
DATE STARTED	07/26/2022 COMPLETED	07/26/2022	_ GROUND	ELEVATION7	74.9m	N 5610357 E	415436
DRILLING CONTRACT	OR Chilako Drilling Service	es Ltd.	GROUND	WATER ELEVATION /	DEPTH	771.94 m	2.94 m
DRILLING METHOD	6" SSA		DATE GR	OUND WATER RECO	RDED	01/25/2023	8
Depth (m) SOIL SYMBOL	Soil Description	Sample Type Sample Number	SPT (N) Moisture Content (%)	 MOISTURE CONTEI PLASTIC - LIQUID SPT (N) Blows/300 n 10 20 30 100 200 300 POCKET PEN (kPa) 	NT 1m 40 400	REMARKS	Standpipe/ Instrument Elevation (m)
CLAY TILL, silt firm, medium p staining, suspe SHALE (Weath Weathered, dat oxidation stain weak, blocky, s BENTONITE (SHALE (Weath SHALE (Weath SHALE (Weath SHALE, claye) damp, medium	y, some gravel, trace sand, moist, lastic, dark brown, some oxidation act white sulphate inclusions hered), clay and silt, completely rk brown to grey mottling, some ing, moist, high plastic, extremely suspect white sulphate inclusions 4.1 m), 200 mm layer hered), "" ng grey y, silty, completely weathered, grey, a plastic, very weak, ground up End of Borehole @6.1 m	 AU1 AU2 AU3 AU4 AU4 AU5 AU6 AU7 AU8 	14.6 20.6 18.0 19.3 14.9 12.4 16.9 15.3		0.6 2.7 4.5 5.8	6 m - Sand = 8.6% Silt = 24.7% Clay = 66.7% 1 m - LL = 56.9% PL = 17.7% PI = 39.2% 3 m - LL = 51.2% PL = 13.9% PI = 37.3% 8 m - Sand = 5.4% Silt = 51.9% Clay = 42.7%	▼ 774- 7773- 7770- 7770- 7770- 7769- 7689- 769- 7689- 769- 769- 769- 769- 769- 769- 769- 76
	arch. 25 mm standpipe installed to 6	.1 m. Backfil	led with sar	and bentonite.	Lo	ogged By:	767- 766- 765- 765- <u>765-</u> <u>765-</u> <u>765-</u>



	CLIEI	NT		Eastern Irrigation Distric		_ PRO	OJECT	NAM	Е	_		S	Snake La	ke Reservoir	Expansio	n		
	PRO	IECT NUMBER		1560-193-00			PR0	OJECT	LOC	ATION	ı _			N	E 1/4 32-19-	16		
	DATE	STARTED	07/26/2022	COMPLETED	07/2	6/2022	GR	OUND	ELEV	IOITA	Ν.	77	4.8m	N	5610374	_ E	415732	2
1	DRILI	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	d.	GR	OUND	WATE	ER EL	EVATI	ON / [DEPTI	Η				
1	DRILI	LING METHOD		6" SSA			DA1	E GR	OUNE	WAT	ER RE	CORI	DED					
Depth (m)	SOIL SYMBOL		Soil Descript	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 ▲ P	IOISTU PLASTI PT (N) 10 2 00 2 <u>OCKE</u>	IRE CO C - LIQ Blows/: 20 3 00 30 <u>T PEN (</u>	NTEN ⁻ UID 300 mn 0 40 kPa)	Г 1 0 00		REMARKS	3	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt dry, stiff, mediu suspect white s	y, sandy, grav ım plastic, ligh sulphate inclus	elly, some cobbles, t brown to brown, sions	=	AU1		6.7	•					0.6 m - 0.6 m -	Gravel = 4. Sand = 46.	9% 5%		774-
-1					=	AU2		7.3	•	⊢			I	0.6 m - 0.6 m -	Silt = 28.0% Clay = 20.6 EC: 3.4 dS SAR: 10.6	% %% /m		773-
2	\geq		End of Borehole	e @2.1 m	_ =	AU3		8.7	•					0.6 m - 1.2 m -	pH: 8.2 <u>LL = 40.6%</u> PL = 15.5% PI = 25.1%			
- 3 														2.1 m -	Auger refus	al		772-
4 4																		771-
5																		770-
6																		769-
- - - - - - - -																		768-
																		767-
-9																		766
- - - -																		765
		NOTES:	arch Backfillo	d with bentonite														
				a with benionite.										Logged	By:	C 	. Tams	
11/01/2024	1													Review	еа Ву:	I.	Curtis	



	CLIEN	NT		Eastern Irrigation District	(_ PRO	DJECT	NAM	IE	_		Snake La	ake Reservoir	Expansio	'n	
	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	ı _		١	NE 1/4 32-19-	16		
	DATE	STARTED	07/26/2022	COMPLETED	07/26	6/2022	GR0	DUND	ELE\	ATIO	N _	772.6n	<u>n</u> N_	5610376	_ E	416034	4
l	DRILL	ING CONTRACT	TOR	Chilako Drilling Service	s Ltd	Ι.	GR0	DUND	WATI	ER EL	EVATIO	ON / DEP	тн				
	DRILL	ING METHOD		6" SSA			DAT	E GR	OUNE) WAT	ER RE	CORDED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 ▲ P	10ISTU PLASTI PT (N) 10 2 00 2 POCKE	JRE CO C - LIQI Blows/3 20 30 00 30 T PEN (I	NTENT UID 300 mm 0 40 0 400 kPa)	_	REMARKS	8	Standpipe/ Instrument	Elevation (m)
-		CLAY TILL, sili low to medium	ty, gravelly, so plastic, light l	ome cobbles, dry, stiff, prown to brown	-	AU1		6.8	•	L			0.6 m -	-11 = 29.4%	'n		772-
_ 1						7.01		0.0						PL = 12.7% PI = 16.7%	, 0 / 0		-
-	\geq		End of Borehol	e @1.5 m	-	AU2		6.8	•				1.2 m - 1.2 m - 1.2 m -	- EC: 1.1 dS - SAR: 4.9 - pH: 7 8	/m		771-
_2													1.5 m ·	- Auger refus	sal		
-																	770
-3																	
-																	769
-4																	
-																	768-
5																	
-																	767-
6																	
_																	-
-																	766-
-																	-
																	765
																	764
-9																	-
-																	760
																	- 60
		Notes:															L
		SE Borrow sea	arch. Backfille	d with bentonite.									Logge	d By:	~	Tame	
11/01/2024	1												Reviev	ved By:	U	Curtis	
L																	



(CLIEN	Т		Eastern Irrigation District			PRO	DJECT	NAM	E	_		S	nake Lal	ke Reservoir	Expansio	n	
	PROJ	ECT NUMBER		1560-193-00			PRO	DJECT	LOCA	ATION	ı _			N	E 1/4 32-19-	16		
I	DATE	STARTED	07/26/2022)7/26	6/2022	GR0	DUND	ELEV	ATION	N .	770.	8m	N	5610378	_ E	41633	3
	DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	1.	GR	DUND	WATE	R EL	EVATI	ON / DE	PTH	ł				
1	DRILL	ING METHOD		6" SSA			DAT	E GR	DUND	WATI	ER RE	CORD	ED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M ⊢ P 1 10 ▲ P0	OISTU PLASTI PT (N) 0 2 00 20 00 20 00 KET	IRE CO C - LIQ Blows/3 20 30 7 PEN (NTENT UID 300 mm 0 40 kPa)			REMARK	6	Standpipe/ Instrument	Elevation (m)
-		CLAY TILL, silt firm, high plast staining, suspe	y, some grave ic, yellowish b ct white sulph	el, trace sand, damp, rown, some oxidation nate inclusions		AT 11		0.8										-
						AUT		9.0										770
- '					-	AU2		6.4	•	⊢				1.2 m -	LL = 50.6%	, 0		
		1.5 m - becor	ning gravelly	with some cobbles											PL = 13.2% PI = 37.4%	6		769-
2 -	$ \sim$		End of Borehole	e @2.1 m	∎	AU3		16.1		•				2.1 m -	Auger refu	sal		
-														due to d	coddies			
- 3																		768-
Ē																		-
-																		
-4																		/6/-
-																		-
-																		766-
- 5 -																		-
-																		
																		765-
—6 																		-
-																		
-7																		764-
																		-
-																		763-
-8																		105
-																		
-																		762-
-9																		
-																		
Ę																		761-
		Notes:																
		SE Borrow sea	rch. Backfilled	d with bentonite.											-	_	_	
														Logged	By:	C 	. Tams	<u> </u>
11/01/2024	ļ													I VE VIEM	eu by.	I.	Guitis	



	CLIEI	NT		Eastern Irrigation District	t		_ PRC	JECT	NAME		Snake Lak	e Reservoir I	Expansio	'n	
1	PRO	JECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		NE	E 1/4 32-19-1	6		
1	DATE	STARTED	07/26/2022	COMPLETED	07/2	6/2022	_ GRO	DUND	ELEVATION	769.0m	N	5610376	E	416626	6
1	DRILI	LING CONTRACT	OR	Chilako Drilling Service	es Lto	ł.	GRO	DUND	WATER ELE	VATION / DEPT	тн				
1	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATE	R RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTUR PLASTIC SPT (N) B 10 200 100 200 POCKET I 	E CONTENT - LIQUID lows/300 mm <u>30 40</u>) 300 400 PEN (kPa)	_	REMARKS		Standpipe/ Instrument	Elevation (m)
-		SAND, trace si graded, fine gra light brown	lt, trace clay, ti ained, sub-rou	ace gravel, poorly nded, damp, loose,	-	AU1		2.2	•		0.7 m (Gravel - 0	10/		-
1 1						AU2		3.4	•		0.7 m - 9	Sand = 83.5 Silt = 9.7%	5%		768-
		1.5 m - becor	ning medium g	rained, some clay				-			1.2 m - I Classific	Dispersivity ation = ND	4		
		25 m - becor	nina moist		=	AU3		8.7	•		1.2 m - 0 1.2 m - 0 1.2 m - 0	Gravel = % Gravel = 2.0 Sand = 82.0	6%)%		
-3			ning molet		=	AU4		15.8	•		(1.2 m - (Silt = 7.6% Clay = 7.8% Organic	, D		766-
		3.5 m - becor	ning clayey		-	AU5		14.5	•		2.1 m - S	= 0.6% Sand = 77.′ Silt = 4.0%	1%		
4 		CLAY TILL, silt brown, some o crystals	y, moist, firm, xidation stainii	nedium plastic, ng, trace gypsum	-	AU6		23.2		•		51ay - 10.9	70		
5 5		damp, medium	plastic, very v	veak	-	AU7		14.3	•		5.2 m - S	Sand = 12.9 Silt = 56.4%	9%		764
6		6 m - some in	onstone inclus	ions	-	AU8		22.0		•	(5.8 m - l	Clay = 30.7 _L = 32.0% P <u>L = 11.8%</u>	%		763-
			End of Borehole	@6.1 m							F	PI = 20.2%	1		-
															762-
8															761-
															-
-9															760-
		Notes:							<u> </u>						
		SE Borrow sea	rch. Backfilled	with bentonite.											
											Logged	By:	C.	. Tams	
11/01/2024	1										Reviewe	ed By:	T.	Curtis	



	CLIEI	NT		Eastern Irrigation District			_ PRO	DJECT	NAME	:	Snake Lake Res	ervoir Expar	nsion	
	PRO	JECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		NE 1/4 3	82-19-16		
	DATE	STARTED	07/26/2022)7/2	6/2022	_ GRO	DUND	ELEVATION	774.9m	N56100	064 E	41542	28
	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GR0	DUND	WATER ELEVAT	TION / DEPT	н			
	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATER R	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descrip	tion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 3 POCKET PEN 	CONTENT QUID s/300 mm 30 40 300 400 1 (KPa)	REM.	ARKS	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, sai dry, firm, high p	nd, silty, som plastic, light b	e gravel, trace sand, rown, suspect white										-
		sulphate inclus	ions		=	AU1		7.7	•		0.6 m - Grave	el = 4.1% - 39.5%		=
		1 m - becomi	ng trace grav	el, moist. dark brown		4110					Silt =	23.1%		774
-					-	AU2		20.9			- Clay = 1.2 m - LL = 5	= 33.3% 59.2%		-
		SHALE (Weath	nered), clay a	nd silt, completely							PL = 2	16.3% 12.9%		773-
2 E	·····	oxidation staini	ing, damp, hi	gh plastic, extremely	-	AU3		29.4		•		12.070		
-	· · · ·	weak to hard s	oil, suspect v	/hite sulphate										-
-3	·····	BENTONITE (1.8 m), 200 m pered) " "	nm layer	=	AU4		34.7		•				772-
Ē	·		lorou),											
-	· <u>··</u> ·	-				AL 15		22.0						
-4	·····	•				703		22.0						771
Ē	<u> </u>	-			-	AU6		21.7	•					_
Ē	·	-												
5	· _ · · · ·	-												770—
-		• 			=	AU7		11.8	•		-5.2 m - LL = 6 PL = 2	67.1% 19.9%		
-	·	-			-	AU8		19.9	•		PI = 4	17.2%		769-
6 -	<u> </u>	-	End of Boreho	le @6.1 m										
-				0										
														768-
—7 E														
-														-
-8														767-
Ĕ														
E														
-9														766-
E														
-														
F											-			765
	•	Notes:			-								1	
		SW Borrow sea	arch. Backfill	ed with bentonite.										
											Logged By:		C. Tame	3
11/01/2024	1										Reviewed By	:	I. Curtis	3



		NT		Eastern Irrigation District			_ PRO	OJECT	NAME	S	Snake La	ke Reservoir	Expansi	on
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	JECT	LOCATION		١	NE 1/4 32-19-	16	
1	DATE	STARTED	07/26/2022	_ COMPLETED)7/2	6/2022	_ GR0	OUND	ELEVATION	773.4m	N	5610063	_ E	415730
l 1	ORILL	ING CONTRACT	OR	Chilako Drilling Services	s Lto	l.	GR0	OUND	WATER ELEVA	TION / DEPTH	Η			
ı	ORILL	ING METHOD		6" SSA			DAT	E GR	OUND WATER F	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C ⊢ PLASTIC - LI SPT (N) Blow 10 20 100 200 ▲ POCKET PEN 	CONTENT IQUID /s/300 mm 30 40 300 400 N (kPa)		REMARKS	3	Standpipe/ Instrument Elevation
		CLAY TILL, silt mudstone inclu dark brown, so sulphate inclus SHALE (Weath trace sand, cor dark grey mottl high plastic, ex white sulphate 2.7 m - becor bentonite seam	, sandy, some isions, moist, me oxidation ions iered), residua npletely weat ing, some oxi tremely weak inclusions, tra ning trace sar	e completely weathered firm, medium plastic, staining, suspect white al soil, clay and silt, hered, light brown to dation staining, damp, to hard soil, suspect ace gypsum crystals and tic and silty with e @6.1 m		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		 ≥ 16.4 15.8 15.4 18.7 15.8 21.5 17.3 40.3 		300 400 N (kPa)	0.6 m - 1 m - E 1 m - S 1 m - p 1.2 m - 1.2 m - 2.1 m - 2.1 m - 2.1 m - 2.7 m - 4.3 m -	Sand = 10. Silt = 25.8% Clay = 63.7 C: 13.0 dS/ AR: 32.6 H: 8.5 Sand = 4.8 Silt = 40.5% Clay = 54.7 LL = 74.0% PL = 19.8% PI = 54.2% Dispersivity ication = ND version = % LL = 79.0% PL = 22.9% PI = 56.1% Sand = 1.9 Silt = 47.1% Clay = 51.0 LL = 78.7% PI = 54.2%	5% % m % % % % % %	Image: state stat
- -9 														764-
		Notes:						<u> </u>			1			
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.							Loggeo Review	d By: ved By:	C T	2. Tams : Curtis



C		νT		Eastern Irrigation Distric		_ PRO	DJECT	NAME	S	Snake La	ake Reservoir	Expansio	on	
F	PROJ	ECT NUMBER		1560-193-00			_ PRO	DJECT			1	NE 1/4 32-19-	16	
[DATE	STARTED	07/26/2022	COMPLETED	07/2	6/2022	_ GRO	DUND	ELEVATION	771.5m	N	5610079	_ E	416036
[DRILL	ING CONTRACT	OR	Chilako Drilling Service	es Lto	ł.	GR	DUND	WATER ELEVATI	ION / DEPTI	н			
[DRILL	ING METHOD		6" SSA			_ DAT	E GR	OUND WATER RE	ECORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CC PLASTIC - LIQ SPT (N) Blows/ 10 20 3 100 200 33 POCKET PEN 	ONTENT QUID 300 mm 30 40 00 400 (kPa)		REMARKS	5	Standpipe/ Instrument Elevation (m)
	///////////////////////////////////////	CLAY TILL, silt medium plastic	y, gravelly, sol , brown, trace	ne sand, damp, firm, gypsum crystals	-	AU1 AU2		10.0	•		0.6 m · 1.2 m ·	- Sand = 31. Silt = 41.8% Clay = 26.9 - LL = 40.0%	3% % %	771
2		SHALE (Weath weathered, bro oxidation staini weak to hard so	ered), clay ar wn to dark gre ng, damp, hig pil, suspect wl	d silty, completely ey mottling, some h plastic, extremely nite sulphate	-	AU3		21.7	•			PL = 14.6% PI = 25.4%)	770
-3	inclusions, trace gypsum crystals					AU4		22.0	•					769-
-4	· · · · ·					AU5 AU6		19.8 20.1	•					767—
-5	· · · · ·				#	AU7		19.3	•		5.2 m ·	- LL = 62.8% PL = 19.5% PL = 43.3%		766-
			End of Borehole	9 @5.8 m		AUO		17.0	•		5.8 m ·	- Auger refus	al	765
														764
														763-
-9														762-
-														
		Notes:			_	1					1			<u> </u>
		SE Borrow sea	rch. Backfilleo	l with bentonite.							Logge	d By: ved Bv:	<u></u> С т	. Tams
11/01/2024												· j.		



	CLIEN	NT		Eastern Irrigation District			_ PRC	JECT	NAME	-		S	nake La	ake Reservoir	Expansi	on	
1	PROJ	IECT NUMBER		1560-193-00			_ PRC	JECT	LOCATIO	N			1	NE 1/4 32-19	-16		
1	DATE	STARTED	07/26/2022)7/2	6/2022	_ GRO	DUND	ELEVATIC	N	769	.6m	N	5610072	_ E _	41634	1
1	DRILL	LING CONTRACT	OR	Chilako Drilling Services	s Lto	l.	GRO	DUND	WATER E	LEVAT	ON / D	EPTH	┥				
1	DRILL	LING METHOD		6" SSA			DAT	E GRO	DUND WA	TER RE	ECORE	DED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOIST H PLAST SPT (N 10 100 POCKE 	URE CC FIC - LIC)) Blows/ 20 3 200 3 <u>ET PEN</u>	0NTENT 101D 300 mm 10 400 100 400 (kPa))		REMARK	S	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		CLAY TILL silt	d, sub-rounde	vel, poorly graded, d, damp, loose, brown	#	AU1		5.7	•				0.6 m ·	- Sand = 58 Silt = 18.8 Clay = 22.	.8% % 4%		769-
- - - 2		medium plastic staining, coal s inclusions	, yellowish bro taining, suspe	wn, some oxidation ct white sulphate	-	AU2		16.4	•				1.2 m ·	- LL = 49.99 PL = 13.19 PI = 36.89	% %		768
		SHALE (Weath weathered, ligh oxidation staini weak to hard so	clay, completely k grey mottling, some a plastic, extremely	-	AU4		24.9		•			2.7 m ·	- Sand = 3.0 Silt = 54.1 Clay = 42.5)% % 9%		767–	
- - - - - - - - - -	·				-	AU5		20.9		•			1.0				766-
- - - 		4.3 m - trace SHALE, clayey damp, medium	suspect bento , silty, complet plastic, very v	nite seams ely weathered, grey, /eak, ground up		AU6		20.9					4.3 m ·	- LL = 102.3 PL = 17.89 PI = 84.59	% %		765-
						AU7 AU8		16.2 15.8	•								764-
			End of Borehole	@6.1 m													763
- - - - -																	760
		Notes:															
11/01/2024	SE Borrow search. Backfilled with bentonite.												Logge Reviev	d By: ved By:	T	C. Tams	;



	CLIEN	NT		Eastern Irrigation District			_ PRO	DJECT	NAME	1			Snake La	ke Reservoir	Expansi	on	
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCA	TION			Ν	IE 1/4 32-19-	16		
	DATE	STARTED	07/26/2022	COMPLETED 0)7/2	6/2022	GR0	DUND	ELEVA	TION	_	770.2m	<u>N_</u>	5610086	_ E	41663	1
	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Lto	l.	GR	DUND	WATE	R ELE	VATIC	N / DEP	гн				
	DRILI	LING METHOD		6" SSA			DAT	E GR	DUND	WATE	ER REC	CORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MC ⊢ PL ■ SP 10 100 ▲ PC 	DISTUF _ASTIC T (N) E <u>20</u> 0 20 0CKET	RE CON - LIQU Blows/30 0 300 PEN (k	ITENT ID 00 mm 40 400 Pa)		REMARK	6	Standpipe/ Instrument	Elevation (m)
-		SAND, some s grained, sub-ro	ilt, some clay, ounded, damp	poorly graded, fine , very loose, light													770
- - -		brown			=	AU1		3.6	•				0.6 m -	Sand = 79 Silt = 6.8%	.3%		-
		1.2 m - silty, o	clayey, low pla	stic	=	AU2		3.7	•	н			1.2 m -	LL = 17.3% PL = 13.5% PI = 3.8%	6 6		769-
2 2		graded, mediu loose, brown, s staining, trace	m grained, sul some oxidatior gypsum crysta	n staining, some coal	æ	AU3		6.7	•				2.1 m - 2.1 m -	Gravel = 1 Sand = 65	.8% .0%		768-
					-	AU4		7.1	•					Silt = 14.39 Clay = 18.9	% 9%		_
	·	SHALE (Weath weathered, ligh oxidation staini	silty, completely rk grey mottling, some dium to high plastic,		AL 15		10.1		•							767-	
-4	· · · · · ·		ĸ		-	AU5		18.3		•							766—
 5	 	SHALE, clayey damp, medium	v, some silt, hig plastic, very v	ghly weathered, grey, weak, ground up									-				-
-		5.2 m - suspe	ect trace bento	onite seams	=	AU7		17.5		۴			-5.2 m -	LL = 100.4 PL = 16.9% PL = 83.5%	% 6		765-
- 6 6		-	End of Borebole	a@6.1 m	=	AU8		16.5		•			-				764
				2 @0.1 m													704
-7																	-
-																	763-
																	-
																	762-
-																	-
-9																	-
-																	761-
-																	-
_										:		1					
		Notes:	urch Backfillor	with hentonite													
		52 DOI10W 364		a with bontofile.									Logged	l By:	C	. Tams	
11/01/2024	Ļ												Review	ed By:	T	. Curtis	
L																	



CLIENT	Eastern Irrigation Distric	t	_ PROJECT	NAME	Si	nake La	ke Reservoir I	Expansi	on
PROJECT NUMB	ER1560-193-00		_ PROJECT			Ν	IE 1/4 32-19-1	6	
DATE STARTED	07/26/2022 COMPLETED	07/26/2022		ELEVATION	774.6m	N	5609762	E	415420
DRILLING CONT	RACTOR Chilako Drilling Service	es Ltd.	GROUND	WATER ELEVATI	ON / DEPTH	ł			
DRILLING METH	DD 6" SSA		DATE GR	OUND WATER RE	ECORDED				
Depth (m) SOIL SYMBOL	Soil Description	Sample Type Sample Number	SPT (N) Moisture Content (%)	 MOISTURE CC ⊢ PLASTIC - LIQ SPT (N) Blows/ 10 20 3 100 200 3 ▲ POCKET PEN 	DNTENT 1UID 300 mm 10 40 00 400 (kPa)		REMARKS		Standpipe/ Instrument Elevation (m)
CLAY TILI weathered firm, high staining, s	 , silt, some sand, some completely I shale inclusions, trace gravel, moist, plastic, dark brown, some oxidation uspect white sulphate inclusions, trace ystals 	■ AU1■ AU2	26.6 18.6	•		0.6 m - 1.2 m -	Sand = 12. Silt = 43.6% Clay = 43.9 LL = 52.0% PL = 15.9% PI = 36.1%	5% %	774
SHALE (V completely damp, hig suspect w	Veathered), silt and clay, some sand, y weathered, grey with oxidation staining h plastic, extremely weak to hard soil, hite sulphate inclusions	a AU3 ■ AU4	16.4 16.0	•		2.7 m -	Sand = 13.9 Silt = 45.7% Clay = 40.8	5% 5 %	772
		■ AU5■ AU6	19.5	•		4.3 m -	LL = 58.3%		771
		- ≇ AU7	21.6	•			PL = 20.5% PI = 37.8%	1	770
6	ecoming ground up shale End of Borehole @6.1 m	- ■ AU8	18.9	•					769-
									767-
									766
									765
Notes:	u agarah Daakfillad with hartarita								
SW Borrov 11/01/2024	w search. Backfilled with bentonite.		I	Loggec Review	l By: /ed By:	C T	<u>. Tams</u> Curtis		



	CLIEN	NT		Eastern Irrigation District		_ PRO	DJECT	NAME	-		S	Snake La	ake Reservoir	Expansi	on	
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATIO	N			1	NE 1/4 32-19-	-16	
1	DATE	STARTED	07/26/2022	COMPLETED	07/2	6/2022	_ GRO	DUND	ELEVATIO	ON	773	3.4m	N	5609781	_ E	415727
1	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	d.	GR	DUND	WATER E	LEVAT	ION / D	EPTH	Η			
1	DRILI	LING METHOD		6" SSA			_ DAT	E GR	DUND WA	TER RI	ECORE	DED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOIST ⊢ PLAS[*] SPT (N 10 100 POCKI 	TURE CC TIC - LIC I) Blows/ 20 3 ET PEN	ONTENT 2UID 300 mm 30 40 00 400 (kPa)) 0 0		REMARK	S	Standpipe/ Instrument Elevation
-1		TOPSOIL SHALE (Weath trace sand, cor grey mottling, s plastic, extrem laminated, sus	nered), residua mpletely weath some oxidation ely weak to ha pect white sulp ming some gro oming medium bentonite incl End of Borehole	al soil, clay and silt, hered, dark brown to h staining, moist, high and soil, thinly ohate inclusions bund up shale h plastic usions		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		25.4 24.0 23.9 20.9 22.5 20.6 18.8 39.2	<u>▶ РОСК</u>	• •	(KPa)	+	0.6 m · 1.2 m ·	- Sand = 4.1 Silt = 39.0° Clay = 56.9 PL = 15.59 PI = 62.89 PI = 62.89 PL = 24.79 PL = 24.79 PI = 17.99	1% % 9% 6 6 6 6 6	 773- 772- 771- 770- 769- 768- 768- 768- 766- 766- 766- 766-
																764-
	•	Notes:						•	-							<u> </u>
11/01/2024	ŀ	SW Borrow sea	arch. Backfille	d with bentonite.									Logge Reviev	d By: ved By:	C T	. Tams . Curtis



CLIE	ENT		Eastern Irrigation Distric			_ PRC	DJECT	NAM	1E	_		S	Snake La	ke Reservoir	Expansio	on	
PRC	JECT NUMBER		1560-193-00			_ PRC	DJECT	LOC	ATION	_ ۱			١	NE 1/4 32-19-	16		
DAT	E STARTED	07/26/2022	COMPLETED	07/2	6/2022	_ GRO	DUND	ELE	/ATIOI	N	77	1.9m	N	5609767	_ E	416032	_
DRII	LLING CONTRACT	TOR	Chilako Drilling Service	s Lto	ł.	GR0	DUND	WAT	ER EL	EVATI	ON / [DEPTI	Η				
DRII	LLING METHOD		6" SSA			_ DAT	E GR	DUNE	D WAT	ER RE	COR	DED					
Depth (m) SOIL SYMBOL		Soil Descrip	tion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOISTL PLASTI SPT (N) 10 2 POCKE	JRE CC IC - LIG Blows/ 20 3 00 30 T PEN	0NTEN UID 300 mn 0 4 00 40 (kPa)	Г 1 0 10		REMARKS	3	Standpipe/ Instrument Elevation	(m)
	CLAY TILL, sil brown, suspec	t, trace sand, t white sulpha suspect bent End of Borehol	dry, firm, high plastic, te inclusions onite seams e @4.3 m	***	AU1 AU2 AU3 AU4 AU5 AU6		14.2 14.8 13.4 14.4 12.6 14.7		•				0.6 m - 1.2 m - 2.7 m - 4.2 m - 4.3 m -	• Sand = 2.0 Silt = 35.99 Clay = 62.1 LL = 70.2% PL = 22.1% PI = 48.1% • Sand = 0.5 Silt = 47.49 Clay = 52.1 LL = 68.4% PL = 17.6% PI = 50.8% • LL = 106.74 PL = 19.3% PI = 87.4% • Auger refus	% % % % %	77 ⁷ 770 769 769 769 769 769	99-
	Notes: SE Borrow sea	arch. Backfille	d with bentonite.										Logged	d By:	C	764 763 762 . Tams	4
11/01/2024													Review	ved By:	T	Curtis	



		NT		Eastern Irrigation District			_ PRO	JECT	NAME	S	Snake Lake Reservo	ir Expansio	on
1	PROJ	JECT NUMBER		1560-193-00			_ PRO	JECT	LOCATION		NE 1/4 32-1	9-16	
(DATE	STARTED	07/26/2022	COMPLETED)7/2	6/2022	GRC	DUND	ELEVATION	770.4m	N5609784	E	416336
I	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Lto	ł.	GRC	DUND	WATER ELEVAT	ION / DEPT	Η		
I	DRILI	LING METHOD		6" SSA			DATI	E GRO	OUND WATER R	ECORDED			
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO ⊢ PLASTIC - LIO SPT (N) Blows 10 20 3 100 200 3 ▲ POCKET PEN 	DNTENT QUID /300 mm 30 40 000 400 (KPa)	REMARI	٢S	Standpipe/ Instrument Elevation (m)
-1	 plastic, light brown to brown, suspect white sulphate inclusions SHALE (Weathered), clay and silt, completely weathered, light brown to dark grey mottling, som oxidation staining, damp, high plastic, extremely weak to hard soil, blocky, suspect white sulphate inclusions, trace gypsum crystals -3 -4 -5 -6 .5.9 m - becoming some ground up shale End of Borehole @6.1 m 							11.6 14.4 16.6 17.8 19.1 21.0 17.1 16.7			0.6 m - Sand = 3 Silt = 38.6 Clay = 31 1.2 m - LL = 81.0 PL = 15.8 PI = 65.2 5.2 m - LL = 68.5 PL = 18.4 PI = 50.1	0.1% 5% .3% % % %	770- 769- 768- 766- 767- 767- 767- 767- 767- <t< td=""></t<>
		Notes:											
11/01/2024		SE Borrow sea	rch. Backfilled	with bentonite.							Logged By: Reviewed By:	C T	2. Tams . Curtis



	CLIE	NT		Eastern Irrigation District			_ PRO	OJECT	NAME	s	Snake La	ake Reservoir	Expansi	on
1	PROJ	JECT NUMBER		1560-193-00			_ PRO	OJECT	LOCATION		1	NE 1/4 32-19-	16	
	DATE	STARTED	07/26/2022)7/2	6/2022	GR	OUND	ELEVATION	768.3m	N	5609776	_ E	416635
	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Lto	d.	GR	OUND	WATER ELEVAT	ION / DEPTH	Η			
	DRILI	LING METHOD		6" SSA			_ DAT	E GR	OUND WATER R	ECORDED				
Depth (m)	SOIL SYMBOL		Soil Descrip	tion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LIC SPT (N) Blows 10 20 100 200 3 POCKET PEN 	ONTENT QUID 3/300 mm 30 40 300 400 I (kPa)		REMARKS	\$	Standpipe/ Instrument Elevation
-		CLAY TILL, sar trace sand, dar suspect white s	nd, silty, some np, stiff, med sulphate inclu	e gravel, some cobbles, ium plastic, brown, sions	-	AU1		10.0			0.6 m ·	- Gravel = 8.	8%	768
- 1 1 		1 m - becomii	ng high plasti	c, no gravel, trace sand	-	AU2		16.0	•		0.6 m	- Sand = 33. Silt = 29.1% Clay = 28.5	6% 6 %	767
-2	· · · · ·	SHALE (Weath completely wea mottling, some	nered), clay a athered, light oxidation sta	nd silt, trace sand, brown to dark grey ining, damp, medium	-	AU3		19.1	•		1.2 111	PL = 22.3% PI = 50.1%)	
3	· · · · · · · · · · · · · · · · · · ·	plastic, extreme	ely weak to h	ard soil, blocky	æ	AU4		19.7	•		2.7 m ·	- Sand = 1.0 Silt = 43.6%	%	766
-	· ·	3.3 m - trace	suspect bent	onite seams	-	AU5		20.1	⊦ ●		3.7 m ·	- Sand = 1.2	%	765
-4					æ	AU6		21.9	⊢ ●−		3.7 m ·	Clay = 56.8 - LL = 97.1% PL = 17.7%	° %	764
5 5 	·				-	AU7		18.7	•		4.3 m ·	PI = 79.4% - LL = 99.2% PL = 15.9% PI = 83.3%		763
6			End of Porobol	0.@f.1.m	=	AU8		18.8	•					
Ē				e @0.1111										762
- -														
-/														704
-														701
-8														
-														760
-														
-9														
E														759
-														
-										<u> </u>				
		Notes:												
		SE Borrow sea	rch. Backfille	d with bentonite.							Logac	d By:	r	Tame
											Review	ved By:	 T	Curtie
11/01/2024	1										I VEVIEN	veu Dy.	I	. Out lis



CI	LIEN	NT			_ PRO	OJECT	NAN	ΛE	-		5	Snake La	ke Reservoii	Expans	sion			
PF	ROJ	ECT NUMBER		1560-193-00			_ PRO	JECT	LOC	OITA	_ ۱			N	E 1/4 32-19	-16		
D	ATE	STARTED	07/25/2022	COMPLETED	07/2	5/2022	_ GR	OUND	ELE	VATIO	N	78	3.1m	N	5611637	_ E _	41434	45
DI	RILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	1.	GR0	OUND	WAT	ER EL	EVAT	ION / E	EPT	н				
DI	RILL	ING METHOD		6" SSA			_ DAT	E GR	DUNI	D WAT	ER RI	ECORI	DED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOISTI PLAST SPT (N) 10 2 POCKE	JRE CC IC - LIC Blows/ 20 3 20 3 T PEN	ONTENT QUID 300 mm 30 40 00 40 (kPa)	- 1) 0	-	REMARK	S	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt plastic, light bro suspect white s mudstone SHALE (Weath completely wea mottling, some plastic, extreme sulphate inclus	y, some grave own, some oxi sulphate inclus ning some cor nered), silt and athered, light b oxidation stain ely weak to ha ions	I, damp, firm, high dation staining, ions npletely weathered clay, trace sand, rown to dark grey hing, damp, medium rd soil, suspect white		AU1 AU2 AU3 AU4		7.9 12.8 11.0 13.9		• •			•••••	1 m - D Classifi % Disp 1 m - Ll 2.5 m - 2.5 m - 4 m - Ll	ispersivity cation = NI ersion = % PL = 16.39 PI = 36.59 Gravel = 1 Sand = 5.3 Silt = 44.4 Clay = 48. and = 2.19 Silt = 54.1 Clay = 43. _ = 41.7% PL = 13.79 PI = 28.09	D2 % % 3% 5% 6 % 8% %		783 782 781 781 780 778 778 778 777 777 777 777 777
_												· i						
11/01/2024		Notes: SW Borrow sea	arch. Backfille	d with bentonite.										Logged Review	By: ed By:		C. Tams T. Curtis	<u> </u>



	CLIEN	NT		Eastern Irrigation District			_ PRO	OJECT	NAME	_	5	Snake La	ake Reservoir	Expansi	on
	PROJ	ECT NUMBER		1560-193-00			_ PRO	OJECT	LOCATIO	N _		1	NE 1/4 32-19-	16	
	DATE	STARTED	07/25/2022	COMPLETED	07/2	5/2022	_ GR	OUND	ELEVATIO	N _	779.5m	N	5611636	_ E	414440
	DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR	OUND	WATER EI	LEVATIO	ON / DEPT	Η			
	DRILL	ING METHOD		6" SSA			_ DA1	re GR	OUND WA	TER RE	CORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOIST PLAST SPT (N 10 100 POCKE 	URE COI FIC - LIQU) Blows/3 20 30 200 30 <u>ET PEN (</u> I	NTENT JID 00 mm) 40 0 400 (Pa) -	-	REMARKS	3	Standpipe/ Instrument Elevation (m)
	CLAY TILL, slity, trace sand, trace gravel, dry, fir medium plastic, brown, trace oxidation staining, suspect white sulphate inclusions SHALE (Weathered), silt and clay, trace sand, completely weathered, light brown to dark grey mottling, some oxidation staining, dry, medium plastic, extremely weak to hard soil, ground up					AU1 AU2 AU3 AU4		8.3 12.7 12.9 14.1	• FOOK			1 m - L 2.5 m 4 m - L 5.2 m	L = 46.6% PL = 16.3% PI = 30.3% - Sand = 2.7 Silt = 63.1% Clay = 34.2 L = 42.8% PL = 22.8% PI = 20.0% - Auger refus - Sand = 5.1 Silt = 50.9% Clay = 44.0	% 6 % 5 5 5 6 %	779-7778-7778-7776-7776-7775-7775-7775-7774-7774-7774
		Notes: SW Borrow sea	arch. Backfille	d with bentonite.								Logge	d By:		7773 7772 7771 7771 7770
11/01/2024	1											Review	wed By:	T	: Curtis



(CLIE	NT		Eastern Irrigation District			_ PRC	JECT	NAME	S	Snake La	ke Reservoir I	Expansio	n	
F	PRO	IECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		Ν	IE 1/4 32-19-1	6		
ſ	DATE	STARTED	07/25/2022)7/25	5/2022	_ GRC	DUND	ELEVATION	782.7m	N	5611510	E	414357	
[DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Ltd	l.	GRC	DUND	WATER ELEVA	TION / DEPTI	Η				
[DRILI	LING METHOD		6" SSA			_ DAT	E GRO	OUND WATER F	RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - L SPT (N) Blow 10 20 100 200 POCKET PEI 	CONTENT IQUID /s/300 mm 30 40 300 400 N (kPa)		REMARKS		Standpipe/ Instrument Elevation	(m)
		CLAY TILL, silt medium plastic staining, suspe	, some sand, f , light brown, s ct white sulph athered, clay an athered, dark t ng, damp, hig pil, blocky, sus	race gravel, dry, firm, some oxidation ate inclusions d silt, trace sand, prown to grey with h plastic, extremely spect white sulphate		AU1 AU2 AU3 AU4		10.3 14.5 16.0 16.4			1 m - S 2.5 m - 4 m - L 5.5 m -	and = 12.8% Silt = 43.8% Clay = 43.4 LL = 50.8% PL = 13.3% PI = 37.5% Sand = 3.6% Silt = 44.4% Clay = 52.0 L = 48.0% PL = 19.4% PI = 28.6% LL = 54.3% PL = 31.9%	, %	78 78 78 78 78 77	332 331 30 79 77 77 77 77 77 77 77 77 77
-		Notoci													
		SW Borrow sea	arch. Backfille	d with bentonite.							Logged	d By:	C.	Tams	
11/01/2024											Review	ved By:	T.	Curtis	
															_



CLIENT	Eastern Irrigation District		PRC	JECT	NAME	S	inake Lake Reservoir Expa	ansion
PROJECT NUMBER	1560-193-00		PRC	JECT			NE 1/4 32-19-16	
DATE STARTED	07/25/2022 COMPLETED 0	07/25/2022	GRC	DUND	ELEVATION	781.0m	N 5611552 E	414444
DRILLING CONTRACT	TOR Chilako Drilling Service	s Ltd.	GRC	DUND	WATER ELEVATION	/ DEPTH	H	
DRILLING METHOD	6" SSA		DAT	E GRO	OUND WATER RECO	RDED		
Depth (m) SOIL SYMBOL	Soil Description	Sample Type Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTE ⊢ PLASTIC - LIQUID SPT (N) Blows/300 r 10 20 30 100 200 300 ▲ POCKET PEN (kPa) 	NT nm 40 400	REMARKS	Standpipe/ Instrument Elevation (m)
CLAY TILL, sil weathered sha plastic, light br suspect white	silt, trace clay, poorly graded, fine bunded, dry, loose, light brown ty, some sand, some completely ale inclusions, dry, firm, medium own, some oxidation staining, sulphate inclusions	- € AU1		1.3	•		2.5 m - Sand = 2.2%	780-
33 m - becom	ing more weathered shale	AU3		12.3	•		Silt = 58.6% Clay = 39.2% 4 m - LL = 42.8%	778-
5 SHALE (Weating Completely we mottling, some plastic, extrem	athered, silt and ciay, some sand, athered, light brown to dark grey e oxidation staining, damp, medium lely weak to hard soil, suspect white sions			12.0			PL = 20.7% PI = 22.1%	776-
	End of Borehole @6.1 m	■ AU4		13.5			5.5 m - Sand = 13.2% Silt = 57.0% Clay = 29.8%	775-
SW Borrow se	arch. Backfilled with bentonite.							
11/01/2024							Logged By: Reviewed By:	C. Tams T. Curtis



СІ	LIEN	NT		Eastern Irrigation District			_ PRC	JECT	NAME		Snake Lake Reservoir Ex	pansion	1
PF	ROJ	IECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		NE 1/4 32-19-16		
D	ATE	STARTED	07/25/2022	COMPLETED	07/2:	5/2022	_ GRO	DUND	ELEVATION	780.3m	N5611525	E	414547
DI	RILL	LING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GRO	DUND	WATER ELEV	ATION / DEPT	н		
DI	RILL	ING METHOD		6" SSA			_ DAT	E GRO	OUND WATER	RECORDED			
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - SPT (N) Blo 10 20 100 200 POCKET PE 	CONTENT LIQUID ws/300 mm 30 40 300 400 EN (kPa)	REMARKS		Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt medium plastic suspect white s SHALE (Weath dark grey mottl high plastic, ex laminated, susp 4 m - some b	y, some sand, , brown, some sulphate inclus ing, some oxid tremely weak bect white sulp entonite seam	trace gravel, dry, firm, oxidation staining, ions d silt, dark brown to lation staining, damp, to hard soil, thinly shate inclusions s		AU1 AU2 AU3 AU4		8.9 14.6 21.6			1 m - Gravel = 1.5% 1 m - Sand = 14.8% Silt = 46.1% Clay = 37.6% 2.5 m - LL = 50.5% PL = 18.2% PI = 32.3% 4 m - Sand = 5.9% Silt = 61.4% Clay = 32.7% 4 m - EC: 8.2 dS/m 4 m - SAR: 17.1 4 m - PH: 7.2 4 m - LL = 63.5% PL = 17.6% PI = 45.9% 5.5 m - LL = 48.1% PL = 17.2% PI = 30.9%		780- 779- 777- 777- 777- 777- 777- 777- 77
											1		
<u> </u>		Notes:									•		· · · · ·
11/01/2024		SW Borrow sea	arch. Backfilleo	d with bentonite.							Logged By:	<u>С.</u> Т. (Tams Curtis



		ΙT		Eastern Irrigation District			_ PRO	DJECT	NAM	1E		S	nake La	ke Reservoir	Expansi	on	
F	PROJ	ECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	ı		١	NE 1/4 32-19-	16		
ı	DATE	STARTED	07/21/2022	COMPLETED	07/2	1/2022	GR0	DUND	ELE\	/ATION	N	78.2m	N	5611542	_ E	41465	2
(ORILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	ł.	GR0	DUND	WATI	ER ELI	EVATION /	DEPTH	H				
۱ ۱	ORILL	ING METHOD		6" SSA			DAT	E GR	OUNE) WATI	ER RECOF	RDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 ▲ P	NOISTU PLASTI SPT (N) <u>10 20</u> 200 20 POCKET	IRE CONTEN C - LIQUID Blows/300 m 20 30 2 1 00 300 2 1 PEN (kPa)	NT 1m 40 400		REMARKS	}	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, cla low to medium SHALE (Weath completely wea oxidation staini extremely weal white sulphate	yey, silty, trac: plastic, light b lered), clay ar athered, dark l ng, damp, me < to hard soil, inclusions	e gravel, damp, firm, irown id silt, trace silt, brown to grey, some dium plastic, blocky, trace suspect	-	AU1		12.7		• [1 m - L	L = 48.8% PL = 15.8% PI = 33.0%	, , D		778
					æ	AU2		16.0		•		-	2.5 m -	Sand = 1.4 Silt = 47.59 Clay = 51.1	% 6 %		776-
-4				æ	AU3		14.1		●⊨			4 m - L	L = 50.2% PL = 17.7% PI = 32.5%) D		774-	
5 		5 m - becomir	ng very weak,	some sand	-	AU4		13.2		•			5.5 m -	Sand = 11. Silt = 41.29 Clay = 47.8	0% % }%		773-
- - - - - - 7 - -				e (eo. 1 m													772
- - - - - - - - - - - - - - - - -																	770
- 9 																	769
	-	Notes:															
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.									Loggeo Review	d By: ved By:		<u>). Tams</u> [. Curtis	



0	CLIEN	NT		Eastern Irrigation District			_ PRO	OJECT	NAM	ИE	-		Snak	e Lake	Reservoir	Expansio	on
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	CATIO	N _			NE	1/4 32-19-1	6	
ſ	DATE	STARTED	07/21/2022	COMPLETED 0)7/2 ⁻	1/2022	_ GRO	OUND	ELE	VATIO	N	775.5r	n	N_5	5611524	_ E	414758
ſ	DRILL	LING CONTRACT	'OR	Chilako Drilling Service	s Lto	l.	GR0	OUND	WAT	ER EI	LEVAT	ION / DEP	тн_				
[DRILL	LING METHOD		6" SSA			_ DAT	E GR	OUN	D WA	TER R	ECORDE) _				
Depth (m)	SOIL SYMBOL		Soil Descript	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOIST PLAST SPT (N <u>10</u> POCKE	URE CO FIC - LIC) Blows/ 20 3 200 3 21 PEN	DNTENT QUID /300 mm 30 40 00 400 (kPa)		R	REMARKS		Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt brown, some o sulphate inclus	y, damp, stiff, xidation staini ions	medium plastic, ng, suspect white													775–
		SHALE (Weath completely wea staining, damp suspect white s 1.6 m - red ird	nered), silt and athered, grey, , medium plas sulphate inclus onstone staini	l clay, some sand, some oxidation tic, very weak, blocky, sions	*	AU1		9.5		•							774-
					=	AU2		13.6		●⊢			- 2.5 	m - Ll Pl Pl	L = 49.4% L = 15.6% I = 33.8%		773-
	End of Borehole @4.3 m					AU3		13.9					4 m 4 m 4.3	n - San Si Cl n - LL = Pl m - Au	nd = 10.9% lit = 49.6% lay = 39.5 = 46.6% L = 15.2% I = 31.4% uger refus	6 % al	771 770 769 768 767 766
	1	Notes: SW Borrow sea	arch. Backfille	d with bentonite.										naed R	3V [.]	ſ	Tams
11/01/2024	Ļ												Rev	viewec	d By:	T	Curtis



		NT		Eastern Irrigation District			_ PRO	DJECT	NAME	S	Snake La	ake Reservoir I	Expansic	n
F	PROJ	ECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION			NE 1/4 32-19-1	6	
Г	DATE	STARTED	07/21/2022)7/2	1/2022	_ GR0	DUND	ELEVATION	772.1m	N	5611541	_ E	414838
[[ORILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	Ι.	GR	DUND	WATER ELEVA	ATION / DEPTI	н			
ı	ORILL	ING METHOD		6" SSA			DAT	E GR	OUND WATER	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE H PLASTIC - I SPT (N) Blow 10 20 100 200 POCKET PE 	CONTENT LIQUID ws/300 mm 30 40 300 400 :N (KPa)		REMARKS	;	Standpipe/ Instrument Elevation (m)
$-\frac{1}{2}$	SHALE (Weathered), silt and clay, trace sand, completely weathered, grey, some oxidation staining, damp, high plastic, extremely weak, thin laminated, trace gypsum crystals, trace quartz crystals SHALE, silt and clay, some sand, completely weathered, grey, damp, medium plastic, very weathered, grey, damp, medium plastic, weathered, grey, damp, medium plastic, grey, damp, gre							19.5 17.7 20.9 14.8			2.5 m 2.5 m 4 m - L	LL = 55.4% PL = 22.3% PI = 33.1% - Sand = 5.6' Silt = 63.7% Clay = 30.7 - LL = 50.7% PL = 17.3% PL = 33.4% LL = 65.6% PL = 21.1% PI = 44.5% - Sand = 3.6' Silt = 57.6% Clay = 38.8	% 5 %	7772– 7771– 7770– 769– 768– 766– 766– 766– 765– 765– 764– 763–
		Notes:							<u> </u>					
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.							Logge Reviev	d By: wed By:	<u> </u>	. Tams Curtis



(Т		Eastern Irrigation District			_ PRC	JECT	NAME	S	nake Lake Reser	voir Expan	ision
F	PROJ	ECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		NE 1/4 32	-19-16	
[DATE	STARTED	07/25/2022)7/25	5/2022	_ GRC	DUND	ELEVATION	782.4m	N 561141	0 E .	414392
[ORILL	ING CONTRACT	OR	Chilako Drilling Services	s Ltd		GRC	DUND	WATER ELEVAT	ION / DEPTH	۱		
[ORILL	ING METHOD		6" SSA			DAT	E GRO	OUND WATER R	ECORDED			
Depth (m)	SOIL SYMBOL		Soil Descrip	tion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO PLASTIC - LIO SPT (N) Blows/ 10 20 3 100 200 3 POCKET PEN 	DNTENT QUID /300 mm 30 40 00 400 (kPa)	REMA	RKS	Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt medium plastic staining, suspe 2 m - becomii	y, some sand ;, light brown; ct white sulp ng damp, stif	I, trace gravel, dry, firm, some oxidation hate inclusions f, high plastic	-	AU1		4.7	•				782- - 781- -
		2.5 m - coal s	nd silt, some sand	-	AU2		14.5	•		2.5 m - LL = 55 PL = 18 PI = 36	.1% .6%).5%	780-	
		SHALE (Weath completely wea mottling, some plastic, extreme sulphate inclus	ered), clay a athered, light oxidation sta ely weak to h ions	nd slit, some sand, brown to dark grey iining, damp, high ard soil, suspect white	-	AU3 AU4		15.1	•		4 m - Sand = 2 Silt = 4 Clay = 4 4 m - LL = 51.9 PL = 18 PI = 33 5.5 m - LL = 51 PL = 17 PL = 17	.4% 3.8% 48.8% % 5.5% 3.4% .2% 7.6%	779- - 778- 777-
	•		End of Boreho	le @6.1 m	-						PI = 33	.0%	776-
7 7 													775-
													774-
-9													773-
-		Natar											
44/04/0000		Notes: SW Borrow sea	arch. Backfill	ed with bentonite.							Logged By: Reviewed By:		<u>C. Tams</u> T. Curtis
11/01/2024											,		



		NT			_ PRC	JECT	NAM	E	_		S	Snake La	ake Reservoir	Expansi	on			
F	PROJ	JECT NUMBER		1560-193-00			_ PRC	JECT	LOC	ATION	_			١	NE 1/4 32-19-	16		
(DATE	STARTED	07/25/2022	COMPLETED	07/2	5/2022	_ GRO	DUND	ELEV	ATION	_ ۱	782	2.8m	N	5611426	_ E	414433	3
[[DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	Ι.	GR0	DUND	WATE	ER ELE	EVATIO	ON / E	EPTI	н				
ı	DRILI	LING METHOD		6" SSA			_ DAT	E GRO	DUND	WATE	ER RE	COR	DED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ SI 11 ▲ P	IOISTU PLASTIC PT (N) I 0 2 00 20 00 20	RE COI C - LIQU Blows/3 0 30 00 30 □ PEN (I	NTENT JID 00 mm <u>) 4(</u> 0 40 (Pa)	-) 0		REMARKS	5	Standpipe/ Instrument	Elevation (m)
-1		CLAY TILL, silt dry to damp, st some oxidation inclusions, trac SHALE (Weath completely weat oxidation staini extremely weat sulphate inclus	£	AU1 AU2 AU3 AU4		11.5 11.8 13.5 12.6		• •				1 m - L 2.5 m - 2.5 m - 4 m - L 5.6 m -	L = 44.2% PL = 16% PI = 28.2% - Gravel = 7. - Sand = 24. Silt = 30.6% Clay = 37.6 L = 49.1% PL = 16.7% PI = 32.4% - Sand = 3.4 Silt = 60.5% Clay = 36.1 - Auger refus	4% 4% 6 3% % 6 %		782 781 780 779 777 777 777 777 777 777 777 777		
E																		
		Notes:			<u> </u>									•				
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.										Loggeo Reviev	d By: ved By:		<u>C. Tams</u> C. Curtis	



		NT		Eastern Irrigation District			_ PRC	DJECT	NAM	ИE			5	Snake L	ake Reservo	ir Exp	ansior	۱	
F F	PROJ	IECT NUMBER		1560-193-00			_ PRC	DJECT	LOC	CATIC	N				NE 1/4 32-1	9-16			
[[DATE	STARTED	07/25/2022)7/25	5/2022	_ GRO	DUND	ELE	VATIO	ON	7	79.5m	N	5611440	E		41453	1
ı	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Ltd	l.	GR0	DUND	WAT	ER E	LEVA	FION /	DEPT	н					
[[DRILI	LING METHOD		6" SSA			DAT	E GR	OUN	D WA	TER F	RECOF	DED						
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOIST PLAS SPT (N <u>10</u> POCK	TURE C TIC - LI I) Blows 20 200 ET PEN	ONTEN QUID 5/300 m 30 4 300 4 I (kPa)	IT m 40 00	-	REMARI	٢S		Standpipe/ Instrument	Elevation (m)
1 1 2		SAND, some s younded, damp CLAY TILL, silt plastic, brown, white sulphate SHALE (Weath	ilt, poorly grac b, loose, light t y, some sand, some oxidatio inclusions	led, fine grained, sub- prown damp, firm, medium on staining, suspect	-	AU1		12.0		•				1 m - 3	Sand = 11. Silt = 46. Clay = 41	4% 3% .8%			779
- - 		staining, damp hard soil	some oxidation tic, extremely weak to	æ	AU2		13.0		•			1	2.5 m	- LL = 45.7 PL = 18.7 PI = 27.0	7% 7% 0%			777	
								12.8		•••				4 m - 1	Sand = 4.4 Silt = 60.3 Clay = 35 LL = 46.1% PL = 16.2 PI = 29.9	% 2% 5.4% ?% 9%			775
- - - - - - - - - - - - - - - - - - -	· · · · ·		End of Borebold	a@6.1 m	-	AU4		14.4		•	I		1	5.5 m	- LL = 45.8 PL = 19.1 PI = 26.7	% % %			774
- - - - - - - - - - - - - - - - - - -		Notes:																	773 772 771 770
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.										Logge Revie	d By: wed By:	_	<u>С.</u> Т.	<u>Tams</u> Curtis	



0		T		Eastern Irrigation District			_ PRO	DJECT	NAME	S	Snake La	ake Reservoir	Expansio	n	
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT			1	NE 1/4 32-19-	16		
	DATE	STARTED	07/25/2022)7/2	5/2022	_ GRO	DUND	ELEVATION	781.4m	N	5611432	_ E	414640	
	DRILI	ING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR	DUND	WATER ELEVATI	ON / DEPT	н				
	DRILI	ING METHOD		6" SSA			DAT	E GR	OUND WATER RE	ECORDED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CC PLASTIC - LIQ SPT (N) Blows/3 10 20 3 100 200 33 POCKET PEN (UNTENT UID 300 mm 0 40 20 400 (kPa)		REMARKS	3	Standpipe/ Instrument	Elevation (m)
-		SAND, some s grained, sub-ro	ilt, trace clay, ounded. damp	poorly graded, fine . loose. light brown											
1		CLAY TILL, silt completely wea firm, medium p staining	y, some sand athered muds lastic, brown,	, some gravel, some tone inclusions, damp, some oxidation	*	AU1		10.1	·····•		1 m - L	L = 38.7% PL = 15.6% PI = 23.1%)		780
3		SHALE (Weath	pered) silt and	I clay some sand	=	AU2		13.8	•		.2.5 m · 2.5 m ·	- Gravel = 9. - Sand = 9.4 Silt = 39.0%	9% % %		779
		ironstone inclus oxidation staini extremely weal inclusions	sions, highly v ng, damp, me k, blocky, susj	veathered, grey, some edium plastic, bect white sulphate	æ	AU3		11.7	•••••		2.5 m · '4 m - L	Clay = 41.7% - LL = 51.7% PL = 17.3% PI = 34.4% L = 43.0% PL = 13.8% PI = 29.2%	% 		778
5 6			End of Borebol	a@61m	æ	AU4		13.2	•		5.5 m ·	- Sand = 6.8 Silt = 49.0% Clay = 44.2	% % !%		776-
-				e @0.1 m											775-
															-
7 															774-
															-
-															-
															773
-9															-
															- - 772—
															-
_										<u> i </u>					
		Notes:	arch Backfillo	d with hentonite											
		CTA DOLLOW 200		a mar bontorino.							Logge	d By:	C.	Tams	
11/01/2024											Reviev	ved By:	T.	Curtis	



(CLIEN	NT		Eastern Irrigation District			_ PRC	JECT	NAME	5	Snake Lake	Reservoir E	xpansior	۱	
F	PROJ	ECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATION		NE [·]	1/4 32-19-16	6		
[DATE	STARTED	07/21/2022	COMPLETED 0)7/21	1/2022	_ GRO	DUND	ELEVATION	778.8m	N 5	611432	E	414748	3
[ORILL	ING CONTRACT	OR	Chilako Drilling Services	s Ltd		GRO	DUND	WATER ELEVAT	ION / DEPT	н				
[ORILL	ING METHOD		6" SSA			DAT	E GRO	OUND WATER R	ECORDED					
Depth (m)	SOIL SYMBOL		Soil Descriptio	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO PLASTIC - LIO SPT (N) Blows/ 10 20 3 100 200 3 POCKET PEN 	DNTENT QUID /300 mm 30 40 .00 400 (KPa)	R	EMARKS		Standpipe/ Instrument	Elevation (m)
-1-1-2-2		SAND, silty, so sub-rounded, d CLAY TILL, silt stiff, medium pl staining	me clay, poorly lamp, very loos y, some sand, lastic, brown, s	/ graded, fine grained, se, light brown trace gravel, damp, come oxidation	-	AU1		3.9	•		1 m - San Sil Cl	d = 61.8% lt = 24.7% ay = 13.5%	6		778
	SHALE (Weathered), silt, clayey, sandy, highly weathered, grey, some oxidation staining, dam high plastic, extremely weak, thinly laminated, trace gypsum crystals					AU2		10.8	•	1	2.5 m - LL PL PI	_ = 45.6% _ = 15.3% = 30.3%			776
		nigh plastic, extremely weak, thinly laminated, race gypsum crystals				AU3		14.0	•		4 m - San Sil Cl 4 m - LL = Pl Pl	d = 26.2% lt = 40.0% ay = 33.8% = 50.3% _ = 18.4% = 31.9%	6		775
			End of Borehole	@6.1 m	æ	AU4		13.9	•	1	5.5 m - LL PL PI	_ = 44.2% _ = 17.5% = 26.7%			773-
				G											772
															771
- - - - - - - - - - - - - - - - - - -															770-
															769
		Notes: SW Borrow sea	arch. Backfillec	l with bentonite.							Logged B	y:	<u> </u>	Tams	
11/01/2024											Reviewed	By:	T.	Curtis	


CLIENT	Eastern Irrigation District	t		_ PRO	JECT	NAME	Snake Lake Reservoir Expan	sion
PROJECT NUMBER	1560-193-00			_ PRO	JECT		NE 1/4 32-19-16	
DATE STARTED	07/21/2022 COMPLETED	07/21	/2022	_ GRC	UND	ELEVATION 776	2m N 5611428 E	414842
DRILLING CONTRAC	TOR Chilako Drilling Service	es Ltd		GRC	UND	WATER ELEVATION / DI	EPTH	
DRILLING METHOD	6" SSA			_ DATI	E GRO	OUND WATER RECORD	ED	
Depth (m) SOIL SYMBOL	Soil Description	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 400 100 200 300 400 POCKET PEN (kPa) 	REMARKS	Standpipe/ Instrument Elevation (m)
CLAY TILL, sil brown, trace g	ty, damp, firm to stiff, medium plastic ypsum crystals hered), silt and clay, some sand, red, dark brown to grey, some ing, damp, medium plastic, very psum crystals grained sand lenses, trace sand		AU1 AU2 AU3 AU4		13.4 12.5 16.7 18.1	POCKET PEN (kPa)	1 m - LL = 49.1% $PL = 17.4%$ $PI = 31.7%$ $2.5 m - Sand = 13.2%$ $Silt = 50.6%$ $Clay = 36.2%$ $4 m - LL = 46.5%$ $PL = 20.6%$ $PI = 25.9%$ $5.5 m - Sand = 3.1%$ $Silt = 52.8%$ $Clay = 44.1%$	7776 7775 7774 7774 7773 7772 7772 7771 7770 7770 7769 768 768 768
								-
Notes:				I		1	I	
SW Borrow se	earch. Backfilled with bentonite.						Logged By: Reviewed By:	C. Tams T. Curtis



CLIENT	Eastern Irrigation Distric	ct		_ PRO	DJECT	NAME	Snake Lake Reservoir Expan	sion
PROJECT NUMBER	1560-193-00			_ PRO	DJECT		NE 1/4 32-19-16	
DATE STARTED	07/25/2022 COMPLETED	07/25	5/2022	_ GR	DUND	ELEVATION780.5n	N 5611332 E	414345
DRILLING CONTRACT	OR Chilako Drilling Servic	es Ltd		GR	DUND	WATER ELEVATION / DEP	ГН	
DRILLING METHOD	6" SSA			_ DAT	E GR	OUND WATER RECORDED		
Depth (m) SOIL SYMBOL	Soil Description	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT PLASTIC - LIQUID SPT (N) Blows/300 mm 20 30 40 100 200 300 400 POCKET PEN (KPa) 	REMARKS	Standpipe/ Instrument Elevation (m)
CLAY TILL, silt firm, medium p staining, suspe gypsum crystal SHALE (Weath completely weath oxidation staining) SHALE (Weath	y, some sand, trace gravel, moist, lastic, dark brown, trace oxidation ct white sulphate inclusions, trace ls, trace salt lenses nered), clayey, silty, trace sand, athered, dark brown to grey, some ng, damp, high plastic, extremely oil trace owners.	-	AU1		14.6	•	- 1 m - Sand = 13.6% Silt = 29.7% Clay = 56.7%	780-
	oli, trace gypsum crystais	=	AU2		15.3		-2.5 m - LL = 54.1% PL = 19.2% 	778-
-4 	SHALE, clayey, some silt, completely weathere grey, damp, high plastic, very weak				15.4	•	4 m - Sand = 3.8% Silt = 49.2% Clay = 47.0%	776
	End of Borehole @6.1 m	-	AU4		12.5	•	-5.5 m - LL = 55.1% PL = 18.8% PI = 36.3%	775
								774 773 772 771
Notes:	arch Doolfillod with hostonite							
SW Borrow sea	arch. Backfilled with bentonite.						Logged By: Reviewed By:	C. Tams T. Curtis



PROJECT NUMBER 1560-193-00 PROJECT LOCATION NE 1/4 32-19-16 DATE STARTED OTZSZ022 COMPLETED OTZSZ022 GROUND ELEVATION 78.0m N 5611337 E 414450 DRILLING CONTRACTOR Chiako Drilling Services Ld GROUND WATER ELEVATION JOETTH		CLIEN	NT		Eastern Irrigation District		_ PRC	DJECT	NAN	ЛЕ	_		S	Snake La	ake Reservoi	r Expans	sion		
DATE STARTED 0725/2022 COMPLETED 0725/2022 GROUND LEVATION 782.0m N 5611337 E 414450 DRILLING CONTRACTOR Chiako Drilling Services Ld. GROUND WATER RECORDED GROUND WATER RECORDED	1	PROJ	IECT NUMBER		1560-193-00			_ PRC	DJECT	LOC		_ ۱			1	NE 1/4 32-19	-16		
DRILLING CONTRACTOR Chilako Drilling Services Ltd. GROUND WATER ELEVATION / DEPTH DRILLING METHOD 6' SSA DATE GROUND WATER RECORDED Image: Solid Description 9' g g g g g g g g g g g g g g g g g g g	1	DATE	STARTED	07/25/2022)7/2	5/2022	_ GRO	DUND	ELE	VATIO	N	782	2.0m	N	5611337	_ E _	4144	50
DRILLING METHOD 0'SSA DATE GROUND WATER RECORDED g g g g Soli Soli g g g g g g g g MOISTURE CONTENT H PLASTIC -LIQUID SFI(h) Blow/300 mm	1	DRILL	LING CONTRACT	OR	Chilako Drilling Services	s Ltd	l.	GRO	DUND	WAT	ER EL	EVATI	ON / D	EPTI	Η				
Image: Solid Description Image: Solid De	1	DRILL	LING METHOD		6" SSA			DAT	E GR	OUN	D WAT	ER RE	CORD	DED					
AU1 SAND, silly, trace clay, poorly graded, fine grained, CLAY TILL, sill, some sand, some gravel, damp, firm, high plastic, brown, some oxidation staining, suspect while sulphate inclusions, trace coal staining AU2 AU3 AU4 AU4 AU4 AU4 AU3 AU4 AU4 AU4 AU4 AU4 AU3 AU	Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOISTU PLASTI SPT (N) <u>10 2</u> 100 2 POCKE	JRE CO IC - LIQ Blows/3 20 30 00 30 T PEN (NTENT UID 300 mm 0 400 kPa))		REMARK	S	Standpipe/ Instrument	Elevation (m)
			SAND, silty, tra sub-rounded, c CLAY TILL, silt firm, high plast suspect white s staining SHALE (Weath completely weat some oxidation extremely weat trace gypsum c 4.5 m - becor	y graded, fine grained, rown // some gravel, damp, ne oxidation staining, sions, trace coal d silt, some sand, n to dark grey mottling, np, high plastic, te sulphate inclusions, k	=	AU1 AU2 AU3 AU4		9.4 13.3 13.4 14.6		•		kPa)		1 m - L 2.5 m - 2.5 m - 4 m - L 5.5 m -	L = 51.0% PL = 16.3° PI = 34.7° - Gravel = 1 - Sand = 11 Silt = 40.9 Clay = 45. L = 50.5% PL = 19.7° PI = 30.8° - Sand = 2. Silt = 48.7 Clay = 48.7	% .8% .9% 4% 4% % 9%		781- 780- 779- 778- 777- 777-	
Notes: SW Borrow. Backfilled with bentonite.			Notes: SW Borrow. Ba	End of Borehole	entonite.										Logged	d By: ved By:		<u>C. Tam</u> T. Curti	775 774 773 <u>5</u>



	CLIEI	NT		Eastern Irrigation Distric			PR(OJECT	NAM	IE	_		5	Snake L	ake Reservoir	Expansion	on	
F	PRO	JECT NUMBER		1560-193-00			PR	OJECT	LOC	ATION	I _				NE 1/4 32-19-	16		
ſ	DATE	STARTED	07/25/2022	COMPLETED	07/2	5/2022	GR	OUND	ELEV	/ATIOI	N	77	9.8m	N	5611328	_ E	41454	6
[DRIL	LING CONTRACT	OR	Chilako Drilling Service	s Ltd	Ι.	GR	OUND	WATE	ER EL	EVATI	ON / E	EPT	н				
ſ	DRIL	LING METHOD		6" SSA			DA	re gro	DUNE) WAT	ER RE	CORI	DED					
Depth (m)	SOIL SYMBOL		Soil Descript	lion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 ▲ P	10ISTL PLASTI PT (N) 10 2 00 2 OCKE	IRE CC C - LIQ Blows/ 20 30 00 30 7 PEN (UID 300 mm <u>0 40</u> 70 40 740	- 1 <u>)</u> 0		REMARK	6	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt medium plastic staining, suspe SHALE (Weath highly weather damp, medium laminated, susp	, trace sand, , , light brown, ct white sulph ed, grey with plastic, extre bect white sul	trace gravel, dry, firm, some oxidation hate inclusions d clay, trace sand, oxidation staining, mely weak, thinly phate inclusions		AU1 AU2 AU3 AU4		14.6 13.3 14.9 11.9		● -		<u>kPa</u>)		1 m - 1 2.5 m 4 m - 1 5.5 m	Sand = 1.9% Silt = 80.99 Clay = 17.2 - LL = 47.09 PL = 15.99 PI = 31.19 Sand = 5.6% Silt = 64.59 Clay = 29.9 LL = 44.8% PL = 18.69 PI = 26.29 - LL = 49.99 PL = 19.29 PI = 30.79	6 22% 6 6 6 6 7 9% 6 6 6 6 6 6 6		779 778 777 777 777 777 777 777 777 777
														-				
		Notes:																
		SW Borrow sea	arch. Backfille	ed with bentonite.										Logge Revie	d By: wed By:	<u></u> т	<u>. Tams</u> <u>Cu</u> rtis	
11/01/2024															-			



CLIENT	г		Eastern Irrigation District			_ PRO	DJECT	NAME		Sn	nake La	ke Reservoir	Expansi	ion
PROJE	CT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION	I		Ν	IE 1/4 32-19-	16	
DATE S	STARTED	07/25/2022)7/2:	5/2022	_ GRO	DUND	ELEVATION	N781	1.0m	_ N _	5611348	_ E _	414666
DRILLI	NG CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR	DUND	WATER ELE	EVATION / D	EPTH				
DRILLI	NG METHOD		6" SSA			_ DAT	E GR	ound wate	ER RECORE	DED				
Depth (m) SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTUL PLASTIC SPT (N) E 10 20 100 20 POCKET 	RE CONTENT C - LIQUID Blows/300 mm 0 30 40 00 300 40 FPEN (kPa)) 0 0		REMARKS	3	Standpipe/ Instrument Elevation (m)
	SAND, some si ounded, damp CLAY TILL with some sand, so high plastic, da some oxidation	It, poorly grac , loose, light to completely w me gravel, da rk brown to da staining	ed, fine grained, sub- rown reathered shale, silty, np, stiff, medium to ark grey mottling,	#	AU1 AU2		11.9	•		1 1 2 0 9 2	2.5 m - Classifi % Disp 2.5 m -	L = 42.4% PL = 16.7% PI = 25.7% Dispersivity Ication = D2 ersion = % Sand = 11. Silt = 41.0% Clay = 47.9	/ 1% 6 9%	780-
-4 -5 -6 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7	SHALE (Weath veathered, gre high plastic, ex	ered), clayey, y, some oxida tremely weak,	silty, completely tion staining, damp, blocky		AU3		12.9			Silt = 41.0% Clay = 47.9% 4 m - LL = 48.6% PL = 16.7% PI = 31.9% 5.5 m - Sand = 4.3% Silt = 52.5% Clay = 43.2%				777- 776- 775- 774- 773- 773- 772-
N S 11/01/2024	Notes: SW Borrow sea	arch. Backfille	d with bentonite.							F	₋oggeo Review	l By: ved By:	(1	C. Tams ſ. Curtis



CI	LIEN	Т		Eastern Irrigation District			_ PRO	DJECT	NAM	E	_		S	Snake La	ake Rese	ervoir E	xpansic	n	
PF	ROJ	ECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	ı _				NE 1/4 3	2-19-1	6		
D/	ATE	STARTED	07/21/2022)7/2´	1/2022	GR0	DUND	ELEV	IOITA	١.	78).9m	N	56113	322	E	41476	4
DI	RILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	Ι.	GR	DUND	WATE	ER EL	EVATI	ON / E	EPT	Η					
DI	RILL	ING METHOD		6" SSA			_ DAT	E GR	DUNE	WAT	ER RE	CORI	DED						
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 ▲ P	IOISTU PLASTI PT (N) 10 2 00 21 OCKE	RE CC C - LIQ Blows/; 0 3 00 30 Г РЕМ (NTEN UID 300 mm 0 40 kPa)	- 1) 0		REM	ARKS		Standpipe/ Instrument	Elevation (m)
	CLAY TILL, sil stiff, medium p staining, susp		me clay, poor ry, very loose y, some sand, astic, brown, ct white sulph	ly graded, fine grained, , light brown .trace gravel, damp, some oxidation late inclusions	-	AU1 AU2 AU3 AU4		2.6 13.2 12.6 13.5		• - •		<u></u>		1 m - \$ 2.5 m 4 m - \$ 4 m - \$ 4 m - \$ 4 m - \$ 5.5 m 5.8 m due to	Sand = Silt = $(2 - LL = 4)$ PL = 1 PI = $(3 - 2)$ Sand = $(2 - 2)$ Sand	68.9% 19.6% - 11.5% 9.3% 16.9% 32.4% 4.0% 48.7% - 47.3% dS/m 0 .0% 15.9% 26.1% i6.4% 25.6% refusa d shal	, % al		7780 7779 7778 7777 7776 7776 7776 7774 7774
		Notes:																	772
		SVV Borrow sea	arcn. Backfille	a with pentonite.										l oque	d Bv		C	Tame	
													Review	ved Rv		<u> </u>	Curtie		
11/01/2024																	1.	00103	



	CLIE	NT		Eastern Irrigation District			_ PRO	DJECT	NAN	ΛE	_		S	Snake La	ake Reservoir	Expansi	on	
1	PRO	JECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	OITA	_ ۱			1	NE 1/4 32-19-	16		
1	DATE	STARTED	07/21/2022	COMPLETED 0	07/2	1/2022	_ GRO	DUND	ELE	VATIO	N	77	7.9m	N	5611339	_ E _	41485	0
I	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Lto	1.	GR0	DUND	WAT	ER EL	EVAT	ON / [DEPT	н				
1	DRILI	LING METHOD		6" SSA			_ DAT	E GRO	JUNI	D WAT	ER RI	ECOR	DED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOISTU PLAST SPT (N) <u>10 2</u> POCKE	JRE CC IC - LIC Blows/ 20 3 7 PEN	0NTEN 101D 300 mr 10 4 00 4 (kPa)	T n 0 00		REMARK	5	Standpipe/ Instrument	Elevation (m)
-4		SAND, silty, po rounded, dry, v CLAY TILL, silt brown, some o SHALE (Weath completely wea staining, damp hard soil, block	orly graded, fi ery loose, ligh y, some sand, xidation staini nered), silt and athered, grey, , medium plas y	ne grained, sub- t brown dry, medium plastic, ng clay, trace sand, some oxidation tic, extremely weak to		AU1 AU2 AU3		10.3		•				2.5 m - 3.5 m - 3.7 m - due to shale	L = 42.2% PL = 16.2% PI = 26.0% Sand = 4.5 Silt = 51.8% Clay = 43.7 LL = 40.3% PL = 19.5% PI = 20.8% Auger refus to calcified	6 6 7% 5 6 5 6 5 8 8		7777 7776 7775 7774 7773 7772 7771 7770 7769
F														-				-
	I	Notes:			<u> </u>	L								1			1	·
11/01/2024	Notes: SW Borrow search. Backfilled with bentonite. Logged By: <u>C. Tams</u> Reviewed By: <u>T. Curtis</u>																	



CLIE	NT		Eastern Irrigation Distr	ict		_ PRO	JECT	NAME	5	Snake La	ake Reservoir I	Expansic	on
PRO	JECT NUMBER		1560-193-00			_ PRO	JECT	LOCATION		1	NE 1/4 32-19-1	6	
DATE	E STARTED	07/25/2022	_ COMPLETED	07/2	5/2022	_ GRO	UND	ELEVATION	780.2m	N	5611247	E	414340
DRIL	LING CONTRACT	OR	Chilako Drilling Servi	ces Lto	1.	GRO	UND	WATER ELEVATION	N / DEPT	н			
DRIL	LING METHOD		6" SSA			_ DATE	E GRO	OUND WATER REC	ORDED				
Depth (m) SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONT PLASTIC - LIQUII SPT (N) Blows/300 100 200 300 100 200 300 POCKET PEN (kP 	FENT D 0 mm <u>40</u> 400 'a)		REMARKS		Standpipe/ Instrument Elevation (m)
	CLAY TILL, silf firm, medium p sulphate inclus SHALE (Weath completely weather staining, damp hard soil, block	y, some sand lastic, dark br ions nered), clay ar athered, grey, , high plastic, y nd silt, trace s ay, damp, high End of Borehold	trace gravel, moist, own, suspect white		AU1 AU2 AU3 AU4		 19.3 17.4 17.4	POCKET PEN (KP		1 m - S 2.5 m - 4 m - L 5.5 m -	Sand = 10.6% Silt = 33.4% Clay = 56.0 PL = 21.4% PI = 35.3% Sand = 4.9% Silt = 43.7% Clay = 51.4 L = 55.2% PL = 19.6% PI = 35.6% PL = 21.8% PI = 35.5%	6 % %	7780 7779 7778 7778 7777 7776 7776 7776 7775 7775
													772
9													771-
I	Notes:					I				•			
11/01/2024	SW Borrow se	arch. Backfille	d with bentonite.							Logge Reviev	d By: ved By:	<u>С</u> т.	. Tams Curtis



CLIENT		Eastern Irrigation District			_ PRC	DJECT	NAME	S	Snake Lake Reservoir Exp	pansion	
PROJECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATION		NE 1/4 32-19-16		
DATE STARTED	07/25/2022		07/2	5/2022	_ GRO	DUND	ELEVATION	781.0m	N5611240	E4	14452
DRILLING CONTRAC	TOR	Chilako Drilling Service	s Lto	Ι.	GR0	DUND	WATER ELEVAT	ION / DEPTI	н		
DRILLING METHOD		6" SSA			DAT	E GR	OUND WATER R	ECORDED			
Depth (m) SOIL SYMBOL	Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LIC SPT (N) Blows 10 20 100 200 3 POCKET PEN 	ONTENT QUID 300 40 300 400 (kPa)	REMARKS	Otors during 1	Standpipe/ Instrument Elevation (m)
CLAY TILL, si firm, high plas staining, susp coal staining, SHALE (Weat completely we staining, dam hard soil, thinl inclusions 3.1 m - trace	ty, some sand tic, dark browr ect white sulph trace gypsum hered), silt and athered, grey, o, high plastic, y laminated, si e SEEPAGE	, trace gravel, moist, h, some oxidation hate inclusions, trace crystals d clay, trace sand, some oxidation extremely weak to uspect white sulphate e @6.1 m		AU1 AU2 AU3 AU4		16.8 17.7 18.2 15.0	▲ POCKET PEN	(KPa)	1 m - LL = 57.9% PL = 13.8% PI = 44.1% 2.5 m - Gravel = 3.7% 2.5 m - Sand = 18.5% Silt = 36.7% Clay = 41.1% 4 m - LL = 54.0% PL = 17.9% PI = 36.1% 5.5 m - Sand = 1.4% Silt = 40.0% Clay = 58.6%	6 5	780 779 778 777 777 777 777 777 777 777 777
											772
Notes:											
SW Borrow se	earch. Backfille	d with bentonite.							Logged By:	C. Ta	ams urtis



CLIE	ΕN	IT		Eastern Irrigation District			_ PRC	DJECT	NAME	8	Snake Lake F	Reservoir E	xpansio	า	
PRC	JJE	ECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATION		NE 1	/4 32-19-16	6		
DAT	E	STARTED	07/25/2022	COMPLETED)7/25	5/2022	_ GRO	DUND	ELEVATION	780.4m	N 56	311243	E	414545	
DRI	LL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd		GR0	DUND	WATER ELEVA	TION / DEPT	н				
DRI	LL	ING METHOD		6" SSA			DAT	E GR	OUND WATER F	RECORDED					
Depth (m) SOIL SYMBOL			Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - L SPT (N) Blow 10 20 100 200 POCKET PEI 	CONTENT IQUID /s/300 mm <u>30 40</u> 300 400 N (KPa)	RE	EMARKS		Standpipe/ Instrument Elevation	(m)
		CLAY TILL, silt firm, medium p staining, suspe SHALE (Weath highly weather some oxidation extremely weat	, some sand, t lastic, brown, s ct white sulpha eed, dark browr staining, dam < to hard soil, t	race gravel, damp, some oxidation ate inclusions clay, trace sand, to dark grey mottling, p, medium plastic, blocky	=	AU1 AU2 AU3		9.6 13.7 17.2			1 m - Sand Sill Cla 2.5 m - LL PL 4 m - Sand Sill Cla 4 m - LL = PI	d = 10.1% z = 43.0% iy = 46.9% = 47.1% = 19.7% = 27.4% d = 1.3% t = 49.8% ay = 48.9% 52.9% = 17%	6	7: 7 7 7 7 7	79 777 777 776 776 776 776 776 776 776 7
			End of Borehole	@6.1 m	-	AU4		15.9	•		5.5 m - LL PI PI	= 17.% = 35.9% = 48.7% = 16.2% = 32.5%		7 7 7 7 7 7 7	773
	:	Notes: SW Borrow sea	arch. Backfiller	with bentonite											
11/01/2024			20111100								Logged By Reviewed	': By:	<u>С.</u> Т.	Tams Curtis	



(NT		Eastern Irrigation District		_ PR	OJECT		E		Snake	Lake Reservoir	Expansi	on		
F	PROJ	IECT NUMBER		1560-193-00			_ PR	OJECT	LOC4	ATION			NE 1/4 32-19-1	16		
ſ	DATE	STARTED	07/25/2022	COMPLETED)7/25	5/2022	_ GR	OUND	ELEV	ATION	778.6	<u>m</u> N	5611253	_ E	41463	5
ſ	ORILL	LING CONTRACT	OR	Chilako Drilling Service	s Ltd	l.	GR	OUND	WATE	R ELE	VATION / DEF	PTH	774.98 m		3.65 m	
[ORILL	LING METHOD		6" SSA			_ DA	TE GR	OUND	WATE	R RECORDEI	D	01/2	:5/2023		
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H P ■ SF 1 10 ▲ P0	OISTUR LASTIC PT (N) BI 0 20 00 200 DCKET I	E CONTENT - LIQUID lows/300 mm <u>30 40</u>) 300 400 PEN (kPa)		REMARKS	\$	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt plastic, brown, white sulphate SHALE (Weath completely wea staining, damp hard soil, block	y, trace gravel some oxidatio inclusions nered), silt, cla athered, grey, s , high plastic, e y, suspect whi	damp, firm, medium n staining, suspect /ey, trace sand, some oxidation extremely weak to te sulphate inclusions	-	AU1		10.7		5 -		1 m - 2.5 n	· LL = 41.6% PL = 18.7% PI = 22.9% n - Sand = 2.7	%		778
						AU2		45.0					Silt = 65.1% Clay = 32.2	" .%		776
- 4 					-	AU3		15.2		•		4 m -	PL = 53.5% PL = 17.4% PI = 36.1%)		774
			End of Borehole	@6.1 m		AU4		16.9		•						773 7772 7771 7770 7770 7769
-									<u> </u>			_				
	1	Notes:			<u> </u>			1								
11/01/2024	L	SW Borrow sea	arch. Standpip	e installed to 6.1 m. Ba	ackfi	illed with	n sano	d and b	bento	nite.		Logg Revi	led By: ewed By:	<u>с</u> т	<u>. Tams</u> . Curtis	



		NT		Eastern Irrigation District			_ PR	OJECT	NAM	E			Sna	ake La	ke Reservoir	Expans	sion
1	PROJ	IECT NUMBER		1560-193-00			_ PR	OJECT	LOC	ATION				N	E 1/4 32-19-	16	
1	DATE	STARTED	07/21/2022	COMPLETED)7/2 <i>^</i>	1/2022	_ GR	OUND	ELEV	ATION	ı _	780.7	'n	_ N	5611234	_ E _	414752
(ORILI	LING CONTRACT	OR	Chilako Drilling Service	s Ltd	Ι.	GR	OUND	WATE	ER ELE	EVATIC	N / DEI	PTH				
I	ORILL	LING METHOD		6" SSA			_ DA	TE GR	OUND	WATE	ER REG	CORDE	D				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H P ■ SI 1(▲ P	OISTUI PLASTIC PT (N) I 0 20 00 20 OCKET	RE CON C - LIQU Blows/30 0 300 PEN (k	ITENT IID 00 mm <u>40</u> 0 400 Pa)			REMARKS	6	Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt SHALE (Weath firm, medium p staining SHALE (Weath gravel, comple some oxidatior extremely wea staining, suspe SHALE (Weath SHALE (Weath	y, some complered), trace g lastic, light bro hered), clay an tely weathered is staining, dam k to hard soil, l ect white sulph 5.6 m), 100 mr hered), "" End of Borehole	etely weathered ravel, trace sand, dry, wwn, some oxidation d silt, sandy, trace l, dark brown to grey, p, medium plastic, plocky, trace coal ate inclusions n layer @6.1 m		AU1 AU2 AU3 AU4 AU5		10.7 11.2 16.0 13.7 38.0		•		<u>•</u>	1 1 1 1 2 2 2 4 5 	m - E m - S m - pl m - L .5 m - .5 m -	C: 5.8 dS/n AR: 6.0 H: 7.7 L = 45.6% PL = 15.1% PI = 30.5% Gravel = 1 Sand = 26. Silt = 35.9% Clay = 36.6 L = 50.0% PL = 18% PI = 32.0% LL = 107.9 PL = 31% PI = 76.9 %	n 6 6 5% 6 6 %	780 779 777 777 777 777 777 777 777 777 77
Ē										i i							
		Notes:															
11/01/2024		SW Borrow sea	arch. Backfilled	d with bentonite.									L R	ogged Review	l By: red By:		C. Tams T. Curtis



		NT		Eastern Irrigation Distric	t		_ PR	OJECT	NAME	8	Snake La	ake Reservoir	Expans	ion
	PROJ	IECT NUMBER		1560-193-00			_ PR	OJECT	LOCATION		1	NE 1/4 32-19-	16	
	DATE	STARTED	07/21/2022	COMPLETED	07/2	1/2022	_ GR	OUND	ELEVATION	780.5m	N	5611229	_ E _	414847
	DRILL	ING CONTRACT	TOR	Chilako Drilling Servic	es Lto	1.	GR	OUND	WATER ELEVA	ATION / DEPT	Η			
	DRILL	ING METHOD		6" SSA			_ DA	TE GR	OUND WATER	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - I SPT (N) Blov 10 20 100 200 POCKET PE 	CONTENT LIQUID ws/300 mm 30 40 300 400 EN (kPa)	-	REMARKS	8	Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt completely we medium plastic	t, some sand, : athered shale, c, brown with c	some gravel, some trace sand, dry, stiff, xidation specs	-	AU1 AU2		10.0	•		1 m - L 2.5 m -	L = 44.9% PL = 13.8% PI = 31.1% - Gravel = 7.	1%	780
-3											2.5 m ·	- Sand = 10. Silt = 47.7% Clay = 34.6	6% % ;%	777
-4 		SHALE (Weath highly weather damp, medium suspect white crystals	nered), clay ar ed, grey, some n, extremely we sulphate inclus	nd silt, trace sand, e oxidation staining, eak, thinly laminated, sions, trace gypsum		AU3		11.2			4 m - L	L = 46.1% PL = 15.1% PI = 31.0%	5	776
- - - 6	· · · · · ·				-	AU4		13.8	•		5.5 m ·	- Sand = 3.1 Silt = 40.5% Clay = 56.4	% % .%	775
		Notes:												774
11/01/2022	L	SW Borrow se	arch. Backfille	d with bentonite.							Logge Reviev	d By: ved By:	(C. Tams
11/01/2024														



С	LIEN	NT		Eastern Irrigation Distric	ct		_ PRO	DJECT	NAME	8	Snake Lake Reserv	oir Expansio	on
Р	ROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		NE 1/4 32-1	9-16	
D	DATE	STARTED	07/25/2022		07/2	5/2022	_ GRO	DUND	ELEVATION	781.5m	N5611127	E	414348
D	RILL	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	Ι.	GR	DUND	WATER ELEVAT	FION / DEPT	н		
D	RILL	LING METHOD		6" SSA			DAT	E GR	OUND WATER F	RECORDED			
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 POCKET PEN 	ONTENT QUID \$/300 mm 30 40 300 400 I (kPa)	REMAR	KS	Standpipe/ Instrument Elevation (m)
-2		CLAY TILL, silt stiff, medium pl staining SHALE (Weath highly weathere damp, high pla blocky, suspect	, trace sand, ti astic, brown, f ed, grey, some stic, extremely white sulphat	ace gravel, damp, race oxidation		AU1 AU2 AU3 AU4		12.2 17.1 17.3 15.1			1 m - Sand = 3.6 Silt = 50. Clay = 4 -2.5 m - LL = 55.0 PL = 18. PI = 36. -4 m - Sand = 2.3 Silt = 44. Clay = 5: 4 m - LL = 52.49 PL = 17. PI = 35. 5.5 m - LL = 48.9 PL = 18. PI = 30.	5% 1% 5.3% 5% 6% 3.1% 6 2% 2% 5% 1% 4%	781 780 779 777 777 777 777 777 777 777 777 77
-											-		
		Notes:											
		SW Borrow sea	arch. Backfille	d with bentonite.							Longer De	~	Torre
											Loggea By:	<u> </u>	
11/01/2024											Reviewed By:	<u> </u>	



PROJECT NUMBER 1560-193-00 PROJECT LOCATION NE 1/4 32-19-18 DATE STARTED 07/25/2022 COMPLETED 07/25/2022 GROUND ELEVATION 781.0m N 5611135 E	
DATE STARTED 07/25/2022 COMPLETED 07/25/2022 GROUND ELEVATION 781.0m N 5611135 E 4 DRILLING CONTRACTOR Chilako Drilling Services Ltd. GROUND WATER ELEVATION / DEPTH	
DRILLING CONTRACTOR Chilako Drilling Services Ltd. GROUND WATER ELEVATION / DEPTH DRILLING METHOD 6' SSA DATE GROUND WATER RECORDED Understand 6' SSA DATE GROUND WATER RECORDED Understand 0 function 0 function 0 function Understand 0 function 0 function 0 function 0 function Understand 0 function 0 function 0 function 0 function 0 function Understand 0 function 0 function 0 function 0 function 0 function 0 function Understand 0 function	4452
DRILLING METHOD 6" SSA DATE GROUND WATER RECORDED u 0 <	
Image: Construct of the second sec	
 CLAY TILL, silty, some gravel, trace sand, damp to moist, firm, medium plastic, brownish red, some oxidation staining, suspect white sulphate inclusions, trace gypsum crystals AU1 1.4 m - 900 mm layer of ironstone staining AU2 SHALE (Weathered), silt and clay, trace sand, highly weathered, grey, some oxidation staining, damp, high plastic, extremely weak, blocky, trace gypsum crystals AU3 AU3 AU3 AU3 	Elevation (m)
 SHALE (Weathered), silt and clay, trace sand, highly weathered, grey, some oxidation staining, damp, high plastic, extremely weak, blocky, trace gypsum crystals AU2 AU3 AU2 AU3 AU3<td>780-</td>	780-
a AU3 12.3 b b $= 53.4\%$	778
PL = 10.5% PI = 36.9%	777–
■ AU4 16.6 ■ 5.5 m - Sand = 1.4% Silt = 50.6% Clay = 48.0%	775-
	774-
	772-
Notes:	
SW Borrow search. Backfilled with bentonite. Logged By: <u>C. T</u> Reviewed By: <u>T. C</u>	ums urtis



CLIENT	Eastern Irrigation District		PROJEC	CT NAME	Sn	ake Lake Reservoir	Expansio	1
PROJECT NUMBER	1560-193-00		PROJEC	CT LOCATION		NE 1/4 32-19-	-16	
DATE STARTED	07/25/2022 COMPLETED 0	07/25/2022	GROUN	D ELEVATION	781.4m	N5611134	_ E	414551
DRILLING CONTRACT	OR Chilako Drilling Services	s Ltd.	GROUN	ID WATER ELEVATION	N / DEPTH			
DRILLING METHOD	6" SSA		DATE G	ROUND WATER REC	ORDED			
Depth (m) SOIL SYMBOL	Soil Description	Sample Type Sample Number	SPT (N) Moisture Content (%)	 MOISTURE CONT ⊢ PLASTIC - LIQUII ■ SPT (N) Blows/300 10 20 30 100 200 300 ▲ POCKET PEN (kP 	FENT D 0 mm 40 400 'a)	REMARK	8	Standpipe/ Instrument Elevation (m)
CLAY TILL, silt medium plastic staining, suspective staining, suspective staining, suspective suppart of the staining extremely weat sulphate inclus 	 trace sand, some gravel, dry, firm, preserved, dry, firm, some oxidation act white sulphate inclusions 	 AU1 AU2 AU2 AU3 AU4 	11. 10. 11. 24.		"a) 	m - Sand = 4.9% Silt = 54.79 Clay = 40.4 Clay = 40.4 PL = 16.79 PI = 30.09 m - Sand = 2.3% Silt = 57.69 Clay = 40.4 PL = 20.89 PI = 21.29 5.5 m - LL = 50.49 PL = 19.39 PI = 31.19	5 % 4% 6 6 6 6 6 6 6 6	781– 780– 778– 7778– 7778– 7776– 7777– 7776–
								-
Notes:								
SW Borrow se:	arch. Backfilled with bentonite.				L	ogged By: Reviewed By:	<u> </u>	<u>Tams</u> Curtis



CLIE	NT			Eastern Irrigation Distric	t		_ PRO	DJECT	NAME		Snake La	ke Reservoir I	Expansic	n
PRO	JECT NUM	MBER		1560-193-00			_ PRO	DJECT	LOCATION		Ν	IE 1/4 32-19-1	6	
DATE	E STARTE	D	07/21/2022	COMPLETED	07/2	1/2022	GR0	DUND	ELEVATION	779.5m	N	5611142	_ E	414784
DRIL	LING CON	NTRACT	OR	Chilako Drilling Service	es Lto	ł.	GR0	DUND	WATER ELEVA	TION / DEPT	н			
DRIL	LING MET	THOD		6" SSA			DAT	E GR	OUND WATER F	RECORDED				
Depth (m) SOIL SYMBOL			Soil Descript	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 POCKET PEN 	ONTENT QUID \$/300 mm 30 40 300 400 I (kPa)		REMARKS		Standpipe/ Instrument Elevation (m)
	CLAY T medium some g	y, sandy, som , light brown w crystals ered), silt and athered, brown staining, dan (to hard soil, gypsum cryst	e gravel, dry, firm, vith oxidation specs, i clay, trace sand, n to dark grey mottling np, medium plastic, blocky, trace coal als e inclusions		AU1 AU2 AU3 AU4		8.5 12.8 12.9			1 m - G 1 m - S 2.5 m - 4 m - L 5.5 m -	Gravel = 4.19 Sind = 21.29 Silt = 38.8% Clay = 35.9 LL = 48.1% PL = 15.9% PI = 32.2% Sint = 45.5% Clay = 42.7 L = 50.6% PL = 16.7% PI = 33.9% LL = 54.1% PL = 16.7% PI = 37.4%	6 6 9%	779 778 777 777 776 777 777 777 777 777 777	
_														
11/01/2024	Notes: SW Bor	row sea	arch. Backfille	d with bentonite.							Loggeo Review	l By: /ed By:	<u> </u>	. Tams Curtis



CLIE	INT			Eastern Irrigation Distri	ct		PR0	OJECT		ЛЕ	_		S	Snake La	ke Reservoir	Expansi	on
PRO	JECT N	UMBER		1560-193-00			PR	OJECT	LOC		_ ۱			Ν	IE 1/4 32-19-	16	
DATI	E STAR	TED	07/21/2022	COMPLETED	07/2	1/2022	GR	OUND	ELE	VATIO	N	779	9.7m	N	5611128	_ E _	414845
DRIL	LING C	ONTRACT	OR	Chilako Drilling Servio	es Lte	d.	GR	OUND	WAT	ER EL	EVATI	ON / D	EPTI	Η			
DRIL	LING N	IETHOD		6" SSA			DA	TE GR	OUN	d wat	ER RE	COR	DED				
Depth (m) SOIL SYMBOL			Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOISTU PLAST SPT (N) 10 2 POCKE	JRE CC IC - LIQ Blows/: 20 3 00 30 T PEN (NTENT UID 300 mm <u>0 40</u> wPa)	- 1) 0		REMARKS	6	Standpipe/ Instrument Elevation (m)
	1.5 m - becoming some completely weathered shale SHALE (Weathered), clay and silt, some sand, trace gravel, completely weathered, dark brown grey, some oxidation staining, damp, medium plastic, extremely weak to hard soil, blocky, trac coal staining					AU1 AU2 AU3 AU4		8.6 12.8 15.0 18.5		POCKE ● · · · · F- ● · · · · · · · · · · · · · · · · · · ·		<u></u>		1 m - L 2.5 m - 2.5 m - 4 m - L 5.5 m -	L = 45.4% PL = 16.39 PI = 29.19 Gravel = 4 Sand = 13. Silt = 40.89 Clay = 41.4 L = 46.5% PL = 14.69 PI = 31.99 Sand = 18. Silt = 53.99 Clay = 27.5	6 6 5% 4% 6 6 6% 5%	7779– 7778– 7777– 7776– 7776– 7776– 7776– 7774– 7774– 7774– 7774– 7772– 7771– 7771–
	Note																
11/01/2024	Notes SW E	s: Borrow se	arch. Backfille	d with bentonite.										Loggeo Review	l By: /ed By:	C	C. Tams



	CLIEI	NT		Eastern Irrigation Distric	t		_ PRO	DJECT	NAME	Snake L	ake Reservoir	Expansi	on
	PRO	JECT NUMBER		1560-193-00			_ PRO	OJECT			NE 1/4 32-19-	16	
	DATE	STARTED	07/25/2022	COMPLETED	07/2	5/2022	_ GRO	OUND	ELEVATION 781.1n	nN	5611030	_ E	414350
	DRILI	LING CONTRACT	OR	Chilako Drilling Service	es Lto	ł.	GR0	OUND	WATER ELEVATION / DEP	тн			
	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATER RECORDED)			
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 40 100 200 300 400 POCKET PEN (KPa) 		REMARKS	3	Standpipe/ Instrument Elevation (m)
-1-1-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-		CLAY TILL, silt firm, medium p staining, suspe SHALE (Weath completely wea staining, moist, weak, thinly lar inclusions	, trace sand, tr lastic, brown, .ct white sulph hered), clay an athered, grey, . medium to his ninated, suspe	ace gravel, damp, some oxidation ate inclusions d silt, trace sand, some oxidation gh plastic, extremely act white sulphate	-	AU1		16.6	•	1 m	Sand = 0.7% Silt = 44.29 Clay = 55.1	6 %	781
					-	AU2		16.0		⊣ 2.5 m	- LL = 48.8% PL = 18.1% PI = 30.7%		778
					€	AU3		17.6	•	4 m 4 m -	Sand = 2.9% Silt = 40.89 Clay = 56.3 LL = 52.1% PL = 19.0% PI = 33.1%	6 9%	777
		SHALE, clay, s damp, high pla	ilty, completely stic, very weal	/ weathered, grey, <	=	AU4		14.7	•	—5.5 m	- LL = 51.3% PL = 18.6% PL = 32.7%		
		Notes:	End of Borehole	@6.1 m									775-7774-7774-7773-7773-7772-
		NOTES: SW Borrow set	arch Backfille	d with bentonite									
11/01/2024	4	220100 301								Logge Revie	ed By: wed By:	C T	. Tams . Curtis



CLI	IEN	т		Eastern Irrigation District			_ PRC	JECT	NAME	Sr	nake L	ake Reservoir E	xpansio	on	
PR	OJE	ECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION _			NE 1/4 32-19-1	6		
DA	TE	STARTED	07/25/2022	COMPLETED 0)7/25	5/2022	_ GRO	DUND	ELEVATION	781.1m	_ N _	5611037	E	414455	5
DR	ILLI	ING CONTRACTO	OR	Chilako Drilling Services	s Ltd	•	GR0	DUND	WATER ELEVATI	ON / DEPTH	l	777.48 m		3.58 m	
DR	ILLI	ING METHOD		6" SSA			_ DAT	E GRO	DUND WATER RE	CORDED		01/25	5/2023		
Depth (m) sour symbol			Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO PLASTIC - LIQ SPT (N) Blows/3 10 20 3 100 200 3C POCKET PEN (C) 	NTENT UID 300 mm 0 40 10 400 kPa)		REMARKS		Standpipe/	Elevation (m)
		CLAY TILL, silty stiff, high plastic staining, suspect 1.6 m - mediun SHALE (Weathor highly weathere moist, high plas thinly laminated trace gypsum co	r, trace gravel, c, dark brown, ct white sulpha m grained sar ered), clay an d, grey with o tic, extremely , suspect whit rystals	trace sand, moist, some oxidation ate inclusions d lenses d silt, trace sand, xidation staining, weak to hard soil, e sulphate inclusions, @6.1 m		AU1 AU2 AU3 AU4		18.9 10.9 11.7 15.8			1 m - 1 1 m - 1 2.5 m	Sand = 2.7% Silt = 52.3% Clay = 45.0° L = 53.3% PL = 16.7% PI = 36.6% - Sand = 1.39 Silt = 45.6% Clay = 53.1° LL = 52.2% PL = 19.2% PI = 33.0% - Sand = 2.19 Silt = 45.5% Clay = 52.4°	% % %		770- 7779- 7778- 7776- 7776- 7776- 7776- 7774- 7773- 7772-
_										:					
11/01/2024	;	Notes: SW Borrow sea	rch. Backfilleo	I with bentonite.						L	_ogge Revie	d By: wed By:	C T.	. Tams Curtis	



0		NT		Eastern Irrigation District			_ PRO	DJECT	NAM	1E	-		9	Snake Lake Res	ervoir E	Expansic	n	
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATIO	N _			NE 1/4 3	32-19-1	6		
[DATE	STARTED	07/25/2022	COMPLETED	07/25	5/2022	_ GRO	DUND	ELE\	/ATIO	N	78	31.4m	N 5611	046	E	41453	9
	ORILI	LING CONTRACT	OR	Chilako Drilling Service	s Ltd	l.	GR	DUND	WAT	ER El	EVAT	ION /	DEPT	н				
	DRILI	LING METHOD		6" SSA			_ DAT	E GRO	DUNE	D WAT	ER R	ECOF	RDED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M 	MOISTI PLAST SPT (N) 10 200 2 200CKE	URE CO IC - LIC) Blows/ 20 3 7 PEN	ONTEN QUID /300 m 30 4 (kPa)	IT m 40 00	REM	ARKS		Standpipe/ Instrument	Elevation (m)
	CLAY TILL, silt, some sand, some gravel, dry, f medium plastic, brown, some oxidation staining suspect white sulphate inclusions SHALE (Weathered), silt and clay, trace sand, completely weathered, dark brown to grey, som oxidation staining, damp, medium plastic, extremely weak to hard soil, suspect white sulphate inclusions End of Borehole @6.1 m				-	AU1 AU2 AU3 AU4		10.0 14.8 12.3 12.9		• • •				1 m - Gravel 1 m - Sand = Silt = Clay = 2.5 m - LL = 4 PL = PI = 5 4 m - Sand = Silt = Clay = 4 m - LL = 49 PL = PI = 5 5.5 m - LL = 4 PI = 5 5.5 m - LL = 4 PI = 5 EXAMPLE	= 11.0 16.3% 37.8% = 34.9° 17.5% 13.8% 33.7% 1.7% 54.2% = 44.1° .3% 13.6% 35.7% 14.1% 15.5% 28.6%	%		781 780 779 777 777 777 777 777 777 777 777 77
_										<u> </u>	1	:	:					-
		Notes:																
		SW Borrow sea	arch. Backfille	d with bentonite.														
														Logged By:		C	. Tams	
11/01/2024														Reviewed By	:	T.	Curtis	
·																		



CLIENT	Eastern Irrigation	District	_ PROJECT	NAME	S	Snake Lake Reservoir E	xpansion
PROJECT NUMBE	R 1560-193-0	00	_ PROJECT	LOCATION		NE 1/4 32-19-10	6
DATE STARTED	07/21/2022 COMPLETED	07/21/2022	_ GROUND	ELEVATION	778.2m	NN	E414839
DRILLING CONTR	ACTOR Chilako Drilling	Services Ltd.	GROUND	WATER ELEVA	TION / DEPTI	н	
DRILLING METHO	D 6" S	SA	DATE GR	OUND WATER F	RECORDED		
Depth (m) SOIL SYMBOL	Soil Description	Sample Type Sample Number	SPT (N) Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blow 10 20 100 200 POCKET PEN 	CONTENT IQUID s/300 mm 30 40 300 400 0 (kPa)	REMARKS	Standpipe/ Instrument Elevation (m)
CLAY TILL, plastic, brow suspect wh	silty, some gravel, damp, stiff, m wn, some oxidation staining, trace ite sulphate inclusions eathered), residual soil, clayey, si weathered, brown with grey mott tion staining, damp, medium plas yeak to hard soil	edium AU1 Ity, ling, tic, AU2	10.1	•		1 m - LL = 36.7% PL = 13.2% PI = 23.5%	778- 777- 776-
		➡ AU3	19.4			4 m - LL = 44.9% PL = 18.8% PI = 26.1%	775-
-7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -	and clay, trace sand, completely grey, trace brown mottling, damp emely weak, blocky End of Borehole @6.1 m	a, high ■ AU4	18.4			5.5 m - Sand = 3.19 Silt = 58.2% Clay = 38.79	6 7773- 7772- 7771- 7770- 769-
SW Borrow	search. Backfilled with bentonite					Logged By: Reviewed By:	C. Tams T. Curtis



c	LIEN	NT		Eastern Irrigation Distric	t		PR	OJECT	NAM	1E	_		S	Snake La	ake Reserv	/oir Ex	pansio	<u>ו</u>	
Р	ROJ	IECT NUMBER		1560-193-00			PR	OJECT	LOC	OITA	N _				NE 1/4 32-	19-16			
D	ATE	STARTED	07/07/2022	COMPLETED	07/07	7/2022	GR	OUND	ELE	VATIO	N	78	0.4m	N	561093	Э	E	41433	6
D	RILL	ING CONTRACT	OR	Chilako Drilling Service	es Lto	1.	GR	OUND	WAT	ER EL	EVAT	ON / [DEPT	н					
D	RILL	ING METHOD		6" SSA			DA	TE GR	JUNE	D WAT	ER RI	CORI	DED						
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOISTU PLAST SPT (N) 10 2 20CKE	JRE CC IC - LIC Blows/ 20 3 T PEN	0NTEN UID 300 mn 0 40 00 40 (kPa)	Г 1 2 0	-	REMAF	₹KS		Standpipe/ Instrument	Elevation (m)
-1	And the second s					AU1 AU2 AU3 AU4		17.0 14.3 11.2 18.3		•				1 m - 3 2.5 m 4 m - 1 5 m - 1 5.3 m	Sand = 5. Silt = 53 Clay = 4 - LL = 45. PL = 18. PI = 27 Sand = 3. Silt = 51 Clay = 4 L = 49.2' PL = 15. PI = 33 L = 47.9' PL = 17. PI = 30 - Auger re	8% .2% 1.0% 4% .4% .0% 1% 5.7% % 5.5% 5.5% 5.5% 1.1% 8.8% 2fusal			780 7779 7778 7777 7776 7776 7775 7774 7773 7772 7771
											-			1					
11/01/2024		Notes: SW Borrow sea	arch. Backfille	d with bentonite.										Logge Reviev	d By: wed By:	_	<u> </u>	<u>Tams</u> Curtis	



(NT		Eastern Irrigation Distr	ict		_ PRC	DJECT	NAME		Snake La	ke Reservoir Ex	pansio	n
1	PROJ	ECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		١	NE 1/4 32-19-16		
I	DATE	STARTED	07/07/2022	_ COMPLETED	07/07	7/2022	GRO	DUND	ELEVATION	780.5m	N	5610918	E	414431
1	ORILL	ING CONTRACT	OR	Chilako Drilling Servi	ces Ltd	Ι.	GR0	DUND	WATER ELEVA	TION / DEPT	н			
1	ORILL	ING METHOD		6" SSA			DAT	E GRO	OUND WATER I	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE 0 PLASTIC - L SPT (N) Blow 10 20 100 200 PCCKET PEI 	CONTENT IQUID /s/300 mm 30 40 300 400 N (kPa)		REMARKS		Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silty, trace to some rounded gravel, damp, stiff, high plastic, dark brown, some oxidation staining, trace red staining SHALE (Weathered), silt and clay, trace sand, completely weathered, grey, some oxidation staining, damp, high plastic, extremely weak to hard soil, blocky				AU1 AU2 AU3 AU4		17.9 17.2 18.0			2.5 m - 2.5 m - 2.5 m - 2.5 m - 2.5 m - 4 m - L 5.5 m -	L = 60.0% PL = 17% PI = 43.0% Silt = 48.5% Clay = 48.7% EC: 9.6 dS/m SAR: 20.0 pH: 7.0 LL = 51.2% PL = 18.2% PI = 33.0% L = 51.8% PL = 18.3% PI = 33.5% Sand = 2.2% Silt = 44.3% Clay = 53.5%	,	780- 7779- 7778- 7776- 7772- 7776- 7776- 7772- 7771-
<u> </u>											-			
		Notes:			_						•			· · ·
		SW Borrow sea	arch. Backfille	d with bentonite.							Logged	d By:	<u>C.</u>	Tams
11/01/2024											Review	ved By: _	Ι.	



CLIENT	Eastern Irrigation Distric	:t		_ PRO	JECT	NAME	S	Snake Lake Reservoir Exp	ansion
PROJECT NUMBER	1560-193-00			_ PRO	JECT	LOCATION		NE 1/4 32-19-16	
DATE STARTED	07/07/2022 COMPLETED	07/07	7/2022	_ GRO	UND	ELEVATION	780.0m	NN	414536
DRILLING CONTRACT	OR Chilako Drilling Service	es Ltd	l.	GRO	UND	WATER ELEVAT	ION / DEPTI	н	
DRILLING METHOD	6" SSA			DATE	E GRO	OUND WATER RI	ECORDED		
Depth (m) SOIL SYMBOL	Soil Description	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CC PLASTIC - LIC SPT (N) Blows/ 10 20 3 100 200 3 POCKET PEN 	2010 2010 300 mm 30 40 00 400 (kPa)	REMARKS	Standpipe/ Instrument Elevation (m)
CLAY TILL, silt dry, firm, media oxidation stain SHALE (Weath completely weath oxidation stain weak to hard s SHALE, clay, s some oxidation extremely weath SHALE, clay, s some oxidation extremely weath 6	t, sandy, some gravel up to 30 mm, um plastic, light brown, some ing hered), clay and silt, trace sand, athered, dark brown to grey, some ing, damp, high plastic, extremely oil, blocky		AU1 AU2 AU3 AU4		6.2 16.5 17.3		(KPa)	1 m - Gravel = 4.3% 1 m - Sand = 28.0% Silt = 37.3% Clay = 30.4% 2.5 m - LL = 52.4% PL = 17.6% PI = 34.8% 4 m - Sand = 2.9% Silt = 47.1% Clay = 50.0% 4 m - LL = 48.8% PL = 14.6% PI = 34.2% 5.5 m - LL = 56.4% PL = 18.7% PI = 37.7%	779 7778 7778 7776 7776 7776 7776 7776 7
Notes:						1		1	I
11/01/2024	arch. Backfilled with bentonite.							Logged By:	C. Tams T. Curtis



(NT		Eastern Irrigation District			_ PRC	JECT	NAME	S	Snake Lal	ke Reservoir I	Expansio	n	
F	PROJ	ECT NUMBER		1560-193-00			_ PRC	JECT			N	IE 1/4 32-19-1	6		
[DATE	STARTED	07/07/2022		07/07	7/2022	GRC	DUND	ELEVATION	780.2m	N	5610941	E	414641	
[DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	1.	GRC	DUND	WATER ELEVATION	/ DEPTH	Η				
[DRILL	ING METHOD		6" SSA			DAT	E GRO	DUND WATER RECO	RDED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTE PLASTIC - LIQUID SPT (N) Blows/300 10 20 30 100 200 300 POCKET PEN (kPa 	ENT mm 40 400		REMARKS		Standpipe/ Instrument Elevation	(m)
-1-2-2		CLAY TILL, silt inclusions, som trace gravel, da dark brown, gro trace gypsum o trace gypsum o	y, completely te medium gra amp to moist, ey specs, som crystals	weathered mudstone ained sand lenses, stiff, medium plastic, ne oxidation staining, inclusions	æ	AU1		14.9	•		1 m - Ll	L = 46.4% PL = 15.9% PI = 30.5%		780) 9
			5		-	AU2		18.4	•		2.5 m -	Sand = 4.8 Silt = 44.9% Clay = 50.3	% %	778	3
		SHALE (Weath completely wea staining, damp hard soil, block	nered), silt and athered, grey, , high plastic, :y	d clay, trace sand, trace oxidation extremely weak to	-	AU3		20.3	····· • •		4 m - Ll	L = 52.9% PL = 17.4% PI = 35.5%		776	
			End of Borebok	a@6.1 m	-	AU4		16.6	•		5.5 m -	Sand = 2.2 Silt = 54.4% Clay = 43.4	% 5 %	775	5
		Notes:		- (((), f ()))										773	1
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.							Logged Review	l By: ed By:	<u> </u>	. Tams Curtis	
															—



	CLIE	NT		Eastern Irrigation District			_ PRO	OJECT	NAM	1E	_		Snake L	ake Reservoir I	Expansio	n	
	PROJ	IECT NUMBER		1560-193-00			_ PRO	JECT	LOC	ATION	ı _			NE 1/4 32-19-1	6		
I	DATE	STARTED	07/07/2022	COMPLETED	07/07	7/2022	_ GRO	OUND	ELE\	/ATION	N _	779.0r	nN	5610940	E	41477	1
1	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Ltd	Ι.	GR	OUND	WAT	ER EL	EVATIO	ON / DEP	тн				
1	DRILI	LING METHOD		6" SSA			_ DAT	E GR	OUNE	D WAT	ER RE	CORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M 	MOISTU PLASTI SPT (N) 10 2 200 20 200CKET	IRE COI C - LIQL Blows/3 20 30 00 30 7 PEN (I	NTENT JID 00 mm 0 40 0 400 (Pa)	_	REMARKS		Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt firm, medium p staining SHALE (Weath completely wea oxidation staini extremely wea	, some gravel, lastic, brown, athered, browr ng, damp, me k to hard soil,	trace sand, damp, trace oxidation d silt, trace sand, hish grey, some dium plastic, blocky	=	AU1 AU2		18.4		•		1	1 m - 5 2.5 m	Sand = 4.4% Silt = 42.6% Clay = 53.0 - LL = 45.6% PL = 15.2% PI = 30.4%) %		778-
		5 m - becomi	ng grey, grour	d up shale inclusions	-	AU3 AU4		16.4		•			4 m - 1 4 m - 1 +15.5 m	Sand = 5.5% Silt = 40.0% Clay = 54.5 LL = 53.7% PL = 18.3% PI = 35.4% PL = 49.5% PL = 19.6% PI = 29.9%) %		775
			End of Borehole	: @6.1 m													772
		Notes: SW Borrow sea	arch. Backfille	d with bentonite.	_		_		_				Logge	d By:	<u> </u>	<u>Tams</u>	
11/01/2024	1												Revie	wed By:	T.	Curtis	



(T		Eastern Irrigation District			_ PRC	JECT	NAM	IE	_		S	inake La	ke Reservoir	Expansio	on	
F	PROJ	ECT NUMBER		1560-193-00			_ PRC	JECT	LOC	ATION	_			N	E 1/4 32-19-1	6		
[DATE	STARTED	07/07/2022	COMPLETED	07/07	7/2022	_ GRC	DUND	ELEV	ATION	۱ _	779	9.5m	N	5610932	E	414849	
[ORILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	1.	GRC	DUND	WATE	ER ELI	EVATIO	ON / D	EPTH	۰				
[ORILL	ING METHOD		6" SSA			_ DAT	E GRO	OUNE) WATI	ER RE	CORE	DED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 ▲ P	10ISTU PLASTIC PT (N) 10 2 00 20 00 20 00CKET	RE COI C - LIQU Blows/3 0 30 0 30 - PEN (I	NTENT JID 500 mm 50 40 0 40 kPa)	0		REMARKS		Standpipe/ Instrument Elevation	(m)
		CLAY TILL, silt mm, some com trace larger col plastic, dark br	, some sand, ; ipletely weath obles, damp, f own, some ox	some gravel up to 30 ered shale inclusions, irm to stiff, medium idation staining	#	AU1		9.3	••••••	• •		4		1 m - Ll	L = 32.4% PL = 12.9% PI = 19.5%		77	79
3		SHALE (Weath highly weather damp, high pla	nered), clay ar ed, grey, some stic, extremely	d silt, trace sand, e oxidation staining, / weak to hard soil,	#	AU2		17.0		•				2.5 m - 2.5 m -	Gravel = 7. Sand = 13. Silt = 42.6% Clay = 36.4	5% 5% %	77	77
4 		DIOCKY			æ	AU3		16.9		•				4 m - Ll	L = 53.4% PL = 18.4% PI = 35.0%		77	75
- - - - - - - - - - - - - - - - - - -			End of Borehole	e @6.1 m	-	AU4		18.4		•				5.5 m -	Sand = 2.1 Silt = 46.2% Clay = 51.7	% %	77	74
7																	77	73
																	77	71-
9																	77	70-
		Notes:			<u> </u>													
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.										Logged Review	By: ed By:	C T	. Tams Curtis	
1/01/2024																		



0		T		Eastern Irrigation District			_ PRC	DJECT	NAME			S	inake La	ke Reservoir	Expansio	on	
F	PROJ	IECT NUMBER		1560-193-00			_ PRC	DJECT	LOCAT	ION			١	NE 1/4 32-19-	16		
[DATE	STARTED	07/07/2022		07/07	7/2022	_ GRO	DUND	ELEVAT	ION	78	0.0m	N	5610840	_ E	414351	
	ORILI	ING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GRO	DUND	WATER	ELEVA	TION / E	DEPTI	Η				
	ORILI	ING METHOD		6" SSA			DAT	E GR	OUND W	/ATER	RECORI	DED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOI ⊢ PLA SPT 10 POC 	STURE (STIC - L (N) Blow 20 200 :KEŢ PE	CONTEN IQUID vs/300 mn <u>30 4</u> 0 300 40 N (kPa)	Г D Ю		REMARKS	8	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt lenses, moist, s brown, some o SHALE, clay a grey with oxida extremely weal	y, trace fine g stiff, medium t xidation staini nd silt, trace s ttion staining, k, thinly lamin	ravel, trace sand to high plastic, dark ing nand, highly weathered, damp, high plastic, ated	#	AU1 AU2		19.4 26.9		-	•		1 m - S 2.5 m - 2.5 m -	Sand = 6.5% Silt = 34.89 Clay = 58.7 Sand = 13. Silt = 38.49 Clay = 48.6 LL = 52.9% PL = 15.3% PL = 15.3%	0% 6%		779
					#	AU3 AU4		15.5		•			5.5 m -	• LL = 62.2%)		776
		Notes:	End of Borehole	e @6.1 m										PL = 19.0% PI = 43.2%			7774
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.									Loggeo Review	d By: ved By:	C T	. Tams Curtis	



		NT		Eastern Irrigation Distric	t		_ PRO	OJECT	NAME	S	Snake La	ake Reservoir	Expansio	on
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT	LOCATION		1	NE 1/4 32-19-1	16	
[DATE	STARTED	07/07/2022	COMPLETED	07/0	7/2022	_ GRO	OUND	ELEVATION	779.8m	N	5610834	_ E	414445
[ORILL	ING CONTRACT	OR	Chilako Drilling Servic	es Lto	1.	GR	OUND	WATER ELEVAT	TION / DEPTI	Η			
ſ	ORILL	ING METHOD		6" SSA			DAT	re gro	OUND WATER F	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 : POCKET PEN 	CONTENT QUID s/300 mm 30 40 300 400 V (kPa)		REMARKS	5	Standpipe/ Instrument Elevation (m)
		CLAY TILL, so inclusions, silty plastic, dark br SHALE (Weath highly weather damp, high pla thinly laminated	me completely , trace sand, c own, some ox nered), clay ar ed, grey, some stic, extremely d, trace gypsu	v weathered shale damp, stiff, medium idation staining id silt, trace sand, e oxidation staining, v weak to hard soil, m crystals		AU1		17.8	•		1 m - L	L = 52.7% PL = 17.5% PI = 35.2%))	779–
					-	AU2		18.3	•		2.5 m ·	- Sand = 2.3 Silt = 44.8% Clay = 52.9	% 6 %	777-
4 4 5					-	AU3		17.8	•		4 m - L	L = 52.3% PL = 19.2% PI = 33.1%)	776-
		5 m - becomi	ng ground up End of Borehole	shale inclusions	-	AU4		16.1	•		5.5 m ·	- Sand = 1.3 Silt = 46.1% Clay = 52.6	% % %	774
														773-
														771-
9 														770
	-	Notes:			-									
11/01/2024	L	SW Borrow sea	arch. Backfille	d with bentonite.							Logge Reviev	d By: wed By:	<u> </u>	. Tams Curtis



CLI	EN	IT		Eastern Irrigation District			_ PRC	JECT	NAM	E		Sn	ake La	ake Reservoir I	Expansion	on	
PRO	OJI	ECT NUMBER		1560-193-00			_ PRC	JECT	LOC	ATION			1	NE 1/4 32-19-1	6		
DAT	ΤE	STARTED	07/07/2022	COMPLETED	07/07	7/2022	_ GRO	DUND	ELEV	ATION	780.	3m	_ N _	5610840	E	41453	9
DRI	ILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	l.	GR0	DUND	WATE	ER ELE	EVATION / DE	PTH		776.92 m		3.39 m	
DRI	ILL	ING METHOD		6" SSA			_ DAT	E GR	OUNE) WATE	ER RECORDI	ED		01/2	5/2023		
Depth (m) SOII SYMBOI	GOL STRUCL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 1 ▲ P	IOISTUI PLASTIC PT (N) I 10 20 00 20 <u>OCKET</u>	RE CONTENT C - LIQUID Blows/300 mm 0 30 40 0 300 400 - PEN (kPa)			REMARKS		Standpipe/	Elevation (m)
		CLAY TILL, silt, plastic, light bro SHALE (Weath completely wea moist, high plas blocky 3.5 m - SEEP 4.6 m - becon	some sand, d wn ered), silt and thered, dark t tic, extremely AGE hing wet	dry, firm, medium clay, trace sand, prown to grey, damp to weak to hard soil, @6.1 m		AU1 AU2 AU3 AU4		10.0 16.5 20.2 25.5		OCKET	PEN (kPa)		m - 5 m - 5 m - L	Sand = 12.19 Silt = 52.4% Clay = 35.3 PL = 18.1% PI = 30.9% Sand = 4.5% Silt = 53.2% Clay = 42.3 L = 50.7% PL = 17.6% PI = 33.1% PL = 17.6% PI = 39.2%	6 % %		780 7779 7778 7777 7776 7776 7774 7773
		Notes:															
11/01/2024		SW Borrow sea	rch. Backfille	d with bentonite.								L	ogge Reviev	d By: ved By:	C T	. Tams . Curtis	



		NT		Eastern Irrigation District			_ PRO	JECT	NAME	_		Sna	ke Lake Reservoir	Expansic	n	
1	PROJ	IECT NUMBER		1560-193-00			_ PRO	JECT	LOCATIO	N _			NE 1/4 32-19-	16		
(DATE	STARTED	07/07/2022	COMPLETED 0)7/07	7/2022	_ GRC	DUND	ELEVATIC	N	778	.6m	N 5610836	_ E	41464	3
ı	DRILI	ING CONTRACT	OR	Chilako Drilling Services	s Lto	l.	GRC	DUND	WATER E	LEVATI	ON / DE	EPTH				
۱ I	DRILI	ING METHOD		6" SSA			DAT	E GRO	DUND WA	ter re	ECORD	ED .				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOIST H PLAS1 SPT (N 10 100 POCKE 	URE CC FIC - LIC) Blows/ 20 3 200 3 ET PEN	ONTENT UID 300 mm 60 40 00 400 (kPa)		REMARK	8	Standpipe/ Instrument	Elevation (m)
-1		CLAY TILL, silt dark brown with staining SHALE (Weath highly weathere moist, high plas	y, sandy, mois h light brown s ered), silt and ad, grey, some stic, very weak	t, stiff, medium plastic, and, trace oxide clay, trace sand, e oxidation staining, s, thinly laminated	-	AU1		17.2				1 1	m - LL = 40.5% PL = 11.9% PI = 28.6%	6 6		778
		3.5 m - trace	pentonite sea	ns	=	AU2		17.0	•)		2.	5 m - Sand = 1.9 Silt = 50.3 Clay = 47.8	9% % 3%		776
-4					-	AU3		19.5		P		4 Cl % 4	m - Dispersivity assification = D2 Dispersion = % m - Sand = 1.7% Silt = 44.3° Clay = 54.0	2 %)%		774
		SHALE, clay ar weathered, gre weak to hard so	nd silt, trace s y, damp, med bil, ground up End of Borehole	and, completely um plastic, extremely @6.1 m		AU4		12.2	•			4	m - LL = 51.9% PL = 18.59 PI = 33.49 5 m - Sand = 0.7 Silt = 43.9° Clay = 55.4	6 6 % 4%		773– 7772– 7771– 7770– 769–
11/01/2024	ł	SW Borrow sea	arch. Backfille	d with bentonite.								Lo Re	ogged By: eviewed By:	<u> </u>	<u>. Tams</u> Curtis	



0		NT		Eastern Irrigation District			_ PRO	OJECT	NAN	ΛE	_		Snake	e Lak	e Reservoir	Expansio	on	
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT	LOC		_ ۱			N	E 1/4 32-19-1	6		
ı	DATE	STARTED	07/07/2022	COMPLETED	07/07	7/2022	_ GRO	OUND	ELE	VATIO	N	778.8	8m	N	5610837	_ E	41474	,5
٦ (ORILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR0	OUND	WAT	ER EL	EVATI	ON / DE	РТН _					
٦ (ORILL	ING METHOD		6" SSA			_ DAT	E GR	JUNI	D WAT	ER RE	CORDE	D _					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOISTU PLASTI SPT (N) 10 2 100 2 POCKE	JRE CC IC - LIQ Blows/3 20 30 00 30 T PEN (NTENT UID 300 mm 0 40 00 400 kPa)			REMARKS	;	Standpipe/ Instrument	Elevation (m)
-1-1-2		CLAY TILL, silt mm, damp, firn SHALE (Weath highly weatherd damp, high pla	, trace sand, s n, medium pla nered), clay ar ed, grey, some stic, extremely	ome gravel up to 50 stic, brown d silt, trace sand, e oxidation staining, y weak, finely fissured	-	AU1		18.9		•			1 m	ı - Sa	and = 4.9% Silt = 43.2% Clay = 51.9	5 %		778
-3					=	AU2		18.8		F			2.5	m - 	LL = 55.7% PL = 16.9% PI = 38.8%	•		776
-4		SHALE, clayey damp, high pla laminated	, silty, comple stic, extremely	tely weathered, grey, / weak, thinly	-	AU3		15.8		●F			4 m 4 m	1 - Sa ; 1 - LL 	and = 8.5% Silt = 38.7% Clay = 52.8 - = 52.3% PL = 17.8% PI = 34.5%	%		775–
			End of Borehole	e @6.1 m	-	AU4		12.0		•			5.5 	m - 	LL = 54.8% PL = 18.5% PI = 36.3%			773
																		770
		Notes:			_		_	_										
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.									Log Rev	iged /iewe	By: ed By:	<u></u> т	. Tams . Curtis	;



(NT		Eastern Irrigation District			_ PRO	DJECT	NAME	_		Sna	ake Lal	ke Reservoir	Expansio	n	
F	PROJ	ECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATIO	N _			N	E 1/4 32-19-	16		
[DATE	STARTED	07/07/2022		07/07	7/2022	_ GRO	DUND	ELEVATIO	N	779.	4m	_ N	5610838	_ E	414837	7
[RILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd		GR	DUND	WATER EI	EVATI	ON / DE	PTH					
[DRILL	ING METHOD		6" SSA			_ DAT	E GRO	DUND WA	TER RE	CORD	ED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOIST H PLAST SPT (N 10 100 200 POCKE 	URE CO TIC - LIQ) Blows/3 20 30 200 30 21 PEN (NTENT UID 300 mm 0 40 kPa)			REMARKS	6	Standpipe/ Instrument	Elevation (m)
1		CLAY TILL, silf, sand, dry, stiff, oxidation staini 2.3 m - grave SHALE (Weath completely wea staining, damp, hard soil 4.5 m - becon	y, some grave high plastic, liq ng, trace coal lly ered), clay an athered, grey, s medium plast ning highly we	Up to 30 mm, trace ght brown, trace staining	-	AU1 AU2 AU3 AU4		12.9 8.6 15.1 16.6	• •			1 222 4 5	m - Ll .5 m - .5 m - .5 m -	_ = 61.1% PL = 17.6% PI = 43.5% Sand = 39. Silt = 32.0% Clay = 19.6 _ = 52.3% PL = 18.6% PI = 33.7% Sand = 1.6 Silt = 48.0% Clay = 50.4	2% 0% % % %		779 778 777 776 777 777 777 777 777 777 777
-																	-
		Notes:			·											_,I	
44/04/0000		SW Borrow sea	arch. Backfilleo	d with bentonite.								L	ogged eview	By: ed By:	C T.	. Tams Curtis	
11/01/2024																	



CLIENT	Eastern Irrigation District		PROJECT	NAME	Snake Lake Reservoir Expans	sion
PROJECT NUMBER	1560-193-00		PROJECT		NE 1/4 32-19-16	
DATE STARTED	07/07/2022 COMPLETED	07/07/2022	_ GROUND	ELEVATION779	.4m N 5610733 E	414454
DRILLING CONTRACT	OR Chilako Drilling Service	s Ltd.	GROUND	WATER ELEVATION / D	EPTH	
DRILLING METHOD	6" SSA		DATE GRO	OUND WATER RECORD	ED	
Depth (m) SOIL SYMBOL	Soil Description	Sample Type Sample Number	SPT (N) Moisture Content (%)	 MOISTURE CONTENT PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 400 100 200 300 400 POCKET PEN (KPa) 	REMARKS	Standpipe/ Instrument Elevation (m)
SHALE (Weatr grained sand le residual soil, d staining, moist staining, moist race gypsum o	nered), clayey, slity, trace medium enses, completely weathered to ark brown to grey, some oxidation , medium plastic, extremely weak to (y, suspect white sulphate inclusions) crystals	. ■ AU1	20.2	•	1 m - Sand = 26.5% Silt = 21.1% Clay = 52.4% 1 m - LL = 47.6% PL = 14.4% PI = 33.2% 2.5 m - Sand = 6.8%	779– 778– 777–
-3	ming grey, increasing oxidation				Silt = 56.3% Clay = 36.9%	776
	nasuc, trace sang	➡ AU3	19.1		4 m - LL = 51.4% PL = 20% PI = 31.4%	775
	up shale End of Borehole @6.1 m	■ AU4	17.8	•	5.5 m - Sand = 2.8% Silt = 48.3% Clay = 48.9%	774- 773- 772- 771- 770-
SW Borrow se	arch. Backfilled with bentonite.				Logged By: Reviewed By:	C. Tams T. Curtis



	CLIEN	NT		Eastern Irrigation District			_ PRO	DJECT	NAN	ΛE			5	Snake Lake Reservoir Expa	nsion
	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	CATIO	N			NE 1/4 32-19-16	
I	DATE	STARTED	07/07/2022		07/07	7/2022	_ GRO	DUND	ELE	VATIC	DN	7	79.9m	NE	414553
1	DRILL	LING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR	DUND	WAT	ER E	LEVAT	ION /	DEPT	н	
1	DRILL	LING METHOD		6" SSA			DAT	E GR	DUNI	D WA	TER R	ECOF	DED		
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)		MOIST PLAST SPT (N <u>10</u> POCKE	TURE C TIC - LI I) Blows <u>20</u> 200 200 200 200 200 200 200	ONTEN QUID 5/300 m 300 4 (kPa)	IT m 40 00	REMARKS	Standpipe/ Instrument Elevation
-1		CLAY TILL, silt medium plastic staining SHALE (Weath completely wea staining, damp hard soil, block	y, trace sand, ; light brown, : nered), silt and athered, grey, , medium plas y	trace gravel, dry, firm, some oxidation		AU1 AU2 AU3		9.8		•		(KFa)		1 m - Dispersivity Classification = ND4 % Dispersion = % 1 m - LL = 42.5% PL = 17.1% PI = 25.4% 2.5 m - Sand = 2.0% Silt = 51.1% Clay = 46.9% 3.7 m - LL = 36.6% PL = 18.5% PI = 18.1% 3.9 m - Auger refusal	779 778 777 776 776 776 777 772 772
-															
		Notes:												1	
11/01/2024	Ļ	SW Borrow sea	arch. Backfille	d with bentonite.										Logged By: Reviewed By:	C. Tams T. Curtis


		T		Eastern Irrigation Distric	t		_ PRO	DJECT	NAME	Sr	nake La	ake Reservoir E	xpansic	n
1	PROJ	ECT NUMBER		1560-193-00			_ PRO	DJECT				NE 1/4 32-19-1	6	
1	DATE	STARTED	07/07/2022	COMPLETED	07/0	7/2022	_ GR0	DUND	ELEVATION	778.5m	N	5610739	E	414649
ſ	ORILL	ING CONTRACT	OR	Chilako Drilling Service	es Lto	ł.	GR0	DUND	WATER ELEVATI	ON / DEPTH	l			
I	ORILL	ING METHOD		6" SSA			_ DAT	E GR	OUND WATER RE	ECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CC PLASTIC - LIQ SPT (N) Blows/ 10 20 3 100 200 3 POCKET PEN 	DNTENT UID 300 mm 0 40 00 400 (KPa)		REMARKS		Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt stiff, medium to oxidation staini SHALE (Weath completely weat oxidation staini extremely weat 3 m - becomin 5 m - becomin 5 m - groun	y, some grave high plastic, ng ered), silt and athered, brown ng, damp, me c to hard soil, ng grey ng grey <u>d up shale</u> End of Borehole	el up to 30 mm, moist, dark brown, some d clay, trace sand, nish grey, some dium plastic, blocky		AU1 AU2 AU3 AU4		19.4 16.7 17.7 13.4			1 m - I 2.5 m 4 m - I	LL = 46.8% PL = 10.7% PI = 36.1% - Sand = 1.8% Silt = 53.2% Clay = 45.0° LL = 47.6% PL = 17.7% PI = 29.9% Sand = 3.5% Silt = 37.4% Clay = 59.1°	6 %	778 777 776 775 774 774 773 777 777 777 777 777 777 777
-														
		Notes:												
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.						I	Logge Reviev	d By: wed By:	<u> </u>	. Tams Curtis



CI	LIEN	ΙT		Eastern Irrigation District			_ PRO	DJECT	NAME		Snake La	ake Reservoir	Expansio	'n
PF	ROJ	ECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION			NE 1/4 32-19-	16	
D	ATE	STARTED	07/07/2022	COMPLETED	07/07	7/2022	_ GR0	DUND	ELEVATION	778.7m	N	5610733	_ E	414756
DI	RILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	1.	GR0	DUND	WATER ELEVA	ATION / DEPT	н			
DI	RILL	ING METHOD		6" SSA			_ DAT	E GR	OUND WATER	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - I SPT (N) Blov 10 20 100 200 POCKET PE 	CONTENT LIQUID vs/300 mm <u>30 40</u> 300 400 :N (kPa)	-	REMARKS	3	Standpipe/ Instrument Elevation
		TOPSOIL - 300 CLAY TILL, silt grained sand le dark brown, so suspect white s SHALE (Weath highly weather staining, damp blocky) mm y, some grave enses, damp, me oxidation sulphate inclus nered), clay ar ed, brownish g , high plastic,	el up to 60 mm, fine stiff, medium plastic, staining, yellow sand, sions ad silt, trace sand, grey, trace oxidation very weak to hard soil, n staining		AU1 AU2 AU3 AU4		16.2 16.6 17.5 18.2			1 m - (1 m - S -2.5 m -4 m - L -5.5 m	Gravel = 25.6 Sand = 18.19 Silt = 30.89 Clay = 25.5 - LL = 54.5% PL = 19.4% PI = 35.1% Sand = 1.9% Silt = 47.29 Clay = 50.9 LL = 52.1% PL = 18.8% PI = 33.3% - LL = 55.6% PI = 35.9%	5% % 6 %	778 777 776 775 774 773 772 771 771 770
														769
		Notes:												
11/01/2024		SW Borrow sea	arch. Backfille	d with bentonite.							Logge Reviev	d By: wed By:	<u> </u>	. Tams Curtis



		T		Eastern Irrigation District			_ PRC	DJECT	NAME		Snake La	ake Reservoir I	Expansio	n	
F	PROJ	IECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATION		1	NE 1/4 32-19-1	.6		
ſ	DATE	STARTED	07/07/2022		07/07	7/2022	GRO	DUND	ELEVATION	779.0m	N	5610735	_ E	414862	2
[DRILI	ING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GR0	DUND	WATER ELEVA	TION / DEPT	н				
ſ	DRILI	ING METHOD		6" SSA			DAT	E GRO	OUND WATER F	RECORDED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - L SPT (N) Blow 10 20 100 200 POCKET PET 	CONTENT IQUID s/300 mm 30 40 300 400 v (kPa)		REMARKS		Standpipe/ Instrument	Elevation (m)
		CLAY TILL, silt dry, stiff, high p staining, suspe SHALE (Weath completely wea oxidation staini weak to hard s 3 m - becomin	y, trace to sor lastic, light br ct white sulph athered), silt and athered, brown ng, damp, hig oil, blocky ng more groun ning some sa End of Borehold	ne gravel up to 30 mm, own, some oxidation nate inclusions		AU1 AU2 AU3 AU4		7.6 17.4 15.2 13.5			2.5 m	L = 50.4% PL = 18.2% PI = 32.2% - Sand = 0.9' Silt = 51.2% Clay = 47.9 L = 51.8% PL = 18.2% PI = 33.6% - Sand = 11.2 <u>Silt = 54.8%</u> Clay = 34.0 - Auger refus	% %		7778 7777 7776 7775 7774 7773 7772 7771 7770
-															_
		Notes:	arch Bookfills	d with bontonito											
11/01/2024		SVV BOLLOM SE	arcn. Backfille	a with pentonite.							Logge Reviev	d By: ved By:	<u> </u>	. Tams Curtis	



CLIENT	Eastern Irrigation District			_ PRC	JECT	NAME	S	nake Lak	e Reservoir Ex	pansio	n	
PROJECT NUMBER	1560-193-00			_ PRC	JECT			N	E 1/4 32-19-16			
DATE STARTED	07/06/2022 COMPLETED 0	07/06	6/2022	_ GRO	DUND	ELEVATION _	779.8m	N	5610634	E	41455	7
DRILLING CONTRACT	OR Chilako Drilling Services	s Ltd		GR0	DUND	WATER ELEVATIO	ON / DEPTH	H7	′76.67 m		3.18 m	
DRILLING METHOD	6" SSA			DAT	E GR	OUND WATER REG	CORDED		01/25/	2023		
Depth (m) SOIL SYMBOL	Soil Description	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CON PLASTIC - LIQU SPT (N) Blows/30 10 20 30 100 200 300 POCKET PEN (k 	NTENT JID 00 mm 1 40 0 400 (Pa)		REMARKS		Standpipe/	Elevation (m)
CLAY TILL, silt medium plastic SHALE (Weath some oxidation extremely wea 	t, trace sand, trace gravel, dry, stiff, c, light brown, trace oxidation specs, nered), silt and clay, trace sand, grey, n staining, damp, high plastic, k to hard soil, blocky ming some sand <u>CE SEEPAGE</u> End of Borehole @4.0 m		AU1 AU2 AU3		9.1			1 m - Gi 1 m - Sa 2.5 m - 3.5 m - 3.5 m -	ravel = 1.5% and = 2.5% Silt = 49.5% Clay = 46.5% PL = 19% PI = 31.9% Sand = 11.7% Silt = 52.7% Clay = 35.6% LL = 50.0% PL = 18.7% PI = 31.3% Jger refusal	ζ δ		779 778 7777 7776 7775 7774 7773 7772 7771
							1					-
Notes:												
SW Borrow sea	arch. Standpipe installed to 4.0 m. Ba	ackfi	lled with	n sand	and t	pentonite.		Logged Reviewe	By:	<u> </u>	<u>Tams</u> Curtis	



PROJECT NUMBER 150-195-00 PROJECT LOATION NE 14 32-19-16 DATE STARTED 0707/022 COMPLETED 0707/022 GROUND ELEWITION TT2 But	c	LIEN	T		Eastern Irrigation District			_ PRO	DJECT	NAM	E	_		S	Snake La	ake Reserv	/oir Ex	pansio	n	
Determining Comparison Comparison <thcomparison< th=""> Comparison Compari</thcomparison<>	F	ROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOC	ATION	_			1	NE 1/4 32-	19-16			
DRILING CONTRACTOR Chiaka Dulling Services List CORUND WATER RECORDED DRILING METHOD 6'SA DATE GROUND WATER RECORDED ge g	C	ATE	STARTED	07/07/2022	COMPLETED	07/07	7/2022	_ GRO	DUND	ELEV	ATION	۱.	778	.2m	N	561063	6	E	41465	4
DBILLING METHOD 0 'SSA DATE GROUND WATER RECORDED ge c 0 Soil 0 'SSA MOSTURE CONTENT REMARKS 0 'SGA ge c 0 0 Soil 0 'SGA NOSTURE CONTENT REMARKS 0 'SGA 1 CLAY TILL slip, most, stiff, high plastic, brown. 0 0 'SGA 1 m - IL = 62.6% 7/12 2 ShALE (Weathered), clay and slit, trace sand, in your staff, high plastic, brown. 0 AU1 24.6 1 m - IL = 62.6% 7/12 2 ShALE (Weathered), clay and slit, trace sand, in your staff, high plastic, extremely condition staining most, high plastic, extremely 0 2.5 m - Sand = 2.6% 7/12 3 m - becoming grey 0 AU2 21.3 0 2.5 m - Sand = 2.6% 7/12 4 m - becoming grey 0 AU2 21.1 0 <	C	RILL	ING CONTRACT	OR	Chilako Drilling Service	s Ltd	l.	GR	DUND	WATE	R ELI	EVATI	ON / D	EPTł	Η					
End of Borehold (B) Solid Description B	C	RILL	ING METHOD		6" SSA			DAT	E GRO	DUND	WAT	ER RE		ED						
CLAY TILL, silt, moist, stift, high plastic, brown, trace oxidation staining 1 m - LL = 62.6% PI = 14.3% PI = 48.3% PI = 17.9% PI = 43.0% PI =	Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H P ■ SI 10 ▲ P	OISTU PLASTIC PT (N) 0 2 00 20 00 20	RE CC C - LIQ Blows/: 0 30 00 30 _ PEN (NTENT UID 300 mm 0 400 kPa))		REMAF	RKS		Standpipe/ Instrument	Elevation (m)
Notes: SW Borrow search. Backfilled with bentonite. 11/01/2024			CLAY TILL, silt trace oxidation SHALE (Weath completely wea oxidation staini weak to hard so 2.1 m - SEEP 3 m - becomin SHALE, silt and grey, damp, hig up	y, moist, stiff, staining ered), clay ar thered, brown ng, moist, hig bil, blocky AGE ng grey	high plastic, brown, Id silt, trace sand, hish grey, some h plastic, extremely and, highly weathered, remely weak, ground a @6.1 m		AU1 AU2 AU3 AU4		24.6 21.3 27.1 14.8		<u>OCKE</u>	•••			1 m - L 2.5 m - 4 m - L	L = 62.6 ^d PL = 14. PI = 48 - Sand = 1 Silt = 48 Clay = 4 L = 60.9 ^d PL = 17. PI = 43 - Sand = 1 Silt = 52 Clay = 4	% 3% 3% 2.6% 0.0% 9.4% % 9% .0% 0.4% 2.0% 7.6%			7778 7777 7776 7775 7774 7773 7772 7771 7770 7770 7769
Notes: SW Borrow search. Backfilled with bentonite. 11/01/2024 Logged By: <u>C. Tams</u> Reviewed By: <u>T. Curtis</u>	-																			-
SW Borrow search. Backfilled with bentonite. Logged By: <u>C. Tams</u> Reviewed By: <u>T. Curtis</u>			Notes:																	
11/01/2024 Logged By: <u>C. Tams</u> Reviewed By: <u>T. Curtis</u>			SW Borrow sea	arch. Backfille	d with bentonite.													-	-	
11/01/2024 Reviewed By: <u>T. Curtis</u>															Logge	a By:	-	<u> </u>	lams	
	11/01/2024														Reviev	ved By:	_	T.	Curtis	



(NT		Eastern Irrigation District			PR0	DJECT	NAME		5	Snake La	ke Reservoir E	Expansio	on
	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION	۱		Ν	IE 1/4 32-19-1	6	
I	DATE	STARTED	07/07/2022	COMPLETED	07/07	7/2022	GR0	DUND	ELEVATIO	N	778.4m	N	5610638	E	414750
	DRILI	LING CONTRACT	OR	Chilako Drilling Service	s Ltd		GR	DUND	WATER EL	EVATIO	N / DEPT	н			
1	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WAT	ER REC	ORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTL PLASTI SPT (N) 10 2 100 2 POCKE 	JRE CONT IC - LIQUII Blows/300 20 30 00 300 <u>T PEN (kP</u>	TENT D 0 mm 40 400 a)	-	REMARKS		Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt firm to stiff, me staining 2 m - ground SHALE (Weath completely wea staining, damp hard soil, block SHALE, clay ar grey, damp, hig up	, trace sand, ti dium plastic, b up mudstone nered), clay an athered, grey, high plastic, o y	ace gravel, damp, rown, some oxidation inclusions d silt, trace sand, some oxidation extremely weak to and, highly weathered, emely weak, ground @6.1 m		AU1 AU2 AU3 AU4		11.7 15.9 16.2 11.8	•			1 m - G 1 m - S 1 m - L 2.5 m - 4 m - L 5.5 m -	Gravel = 1.0% Sind = 7.2% Clay = 22.3' L = 47.5% PL = 19.3% PI = 28.2% LL = 51.0% PL = 19.4% PI = 31.6% Sint = 49.2% Clay = 44.0' L = 50.5% PL = 19.3% PI = 31.2% LL = 53.4% PI = 35.4%	%	778- 777- 776- 775- 774- 773- 7774-
_											1				
		Notes: SW Borrow sea	arch. Backfille	d with bentonite.								Logged	l By:	C	. Tams
11/01/2024												Review	ved By:	T.	Curtis



	CLIEI	NT		Eastern Irrigation Distric	t		_ PRC	DJECT	NAME	5	Snake La	ake Reservoir	Expansio	on
	PRO	JECT NUMBER		1560-193-00			_ PRC	DJECT	LOCATION		1	NE 1/4 32-19-1	16	
	DATE	STARTED	07/07/2022	COMPLETED	07/0	7/2022	_ GRO	DUND	ELEVATION	779.0m	N	5610636	_ E	414844
	DRILI	LING CONTRACT	OR	Chilako Drilling Service	es Lto	ł.	GR0	DUND	WATER ELEVAT	ION / DEPT	н			
	DRILI	LING METHOD		6" SSA			DAT	E GR	OUND WATER RE	ECORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO PLASTIC - LIC SPT (N) Blows/ 10 20 3 100 200 3 POCKET PEN 	ONTENT QUID 300 mm 30 40 00 400 (kPa)		REMARKS	3	Standpipe/ Instrument Elevation (m)
- - - - - - - - - - - - - - - - - - -		brown, some o	y, dry, firm to s xidation staini ions	sun, mealum plastic, ng, suspect white	æ	AU1		10.1		 I	1 m - L	L = 41.6% PL = 12.6% PI = 29.0%	1	778
- - 2 - -		SHALE (Weath highly weather damp, high pla blocky	nered), clay ar ed, grey, some stic, extremely	nd silt, trace sand, e oxidation staining, y weak to hard soil,	æ	AU2		17.7	•		2.5 m ·	- Dispersivity		777
-3					-	AU3		23.5	·····		2.5 m	cation = ND persion = % Sand = 0.8° Silt = 36.7° Clay = 62.5° - LL = 64.3° PL = 20.9°	% % %	776
- - - - - - - - - - - - - - - - - - -		5 m - becomi	ng more shale	e inclusions							4 m - L	PI = 43.4% L = 51.2% PL = 19.4% PI = 31.8%))	774
- - - - - - - - - - - - - - - - - - -			End of Borehole	e @6.1 m	-	AU4		14.9	•		5.5 m ·	- Sand = 4.0 Silt = 51.9% Clay = 44.1	% % %	773
- - - - - - - - -														772
8 E														771-
É														
Ē														
9 -														770-
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								-						
		Notes: SW Borrow sea	arch. Backfille	d with bentonite.							Logge	d By:	C	. Tams
11/01/2024	1										Reviev	ved By:	T	Curtis



	CLIEN	NT		Eastern Irrigation Distri	ct		_ PRC	JECT	NAME	S	Snake La	ke Reservoir	Expansio	'n
1	PROJ	IECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		N	IE 1/4 32-19-1	6	
1	DATE	STARTED	07/06/2022	COMPLETED	07/0	6/2022	_ GRO	DUND	ELEVATION	778.9m	N	5610545	_ E	414547
1	DRILL	LING CONTRACT	OR	Chilako Drilling Servio	es Lto	1.	GR0	DUND	WATER ELEVATI	ON / DEPT	н			
1	DRILL	LING METHOD		6" SSA			DAT	E GR	OUND WATER RE	CORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO PLASTIC - LIQ SPT (N) Blows/3 10 20 3 100 200 33 POCKET PEN (NTENT UID 300 mm 0 40 10 400 kPa)	-	REMARKS	1	Standpipe/ Instrument Elevation (m)
-1-1-2-2		CLAY, silty, trac plastic, brown SHALE (Weath completely wea oxidation staini weak, blocky	ce sand, very nered), clay ar athered, brown ing, moist, hig	moist, soft, medium nd silt, trace sand, nish grey, some h plastic, extremely	-	AU1		31.1		•	1 m - S	and = 3.5% Silt = 36.1% Clay = 60.4	%	778-
- - 						AUZ		19.5			2.5 111 -	PL = 15.6% PI = 35.5%		776
-4		4 m - becomi	ng grey		-	AU3		18.3			4 m - S 4 m - Ll	and = 4.1% Silt = 43.3% Clay = 52.6 L = 53.6% PL = 17.5% PI = 36.1%	%	775–
- - - - - - - - - - - - -	· · · · · · · · · · · · · · · · · · ·		End of Borehole	e @6.1 m	#	AU4		18.9	•		5.5 m -	LL = 55.6% PL = 18.6% PI = 37.0%	1 9	773-
														772-
- - 		Notes:												
11/01/2024	Ļ	SW Borrow sea	arch. Backfille	d with bentonite.							Logged Review	l By: /ed By:	<u> </u>	. Tams Curtis



с		NT		Eastern Irrigation District			_ PRO	OJECT	NAME		5	Snake La	ake Reservoir	Expans	ion
Р	ROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATIO	N		I	NE 1/4 32-19-	16	
D	ATE	STARTED	07/06/2022	COMPLETED 0)7/06	6/2022	GR	OUND	ELEVATIO	N _	778.5m	N	5610533	_ E _	414652
D	RILL	LING CONTRACT	TOR	Chilako Drilling Services	s Lto	l.	GR	OUND	WATER EI	LEVATIC	N / DEPT	н			
D	RILL	LING METHOD		6" SSA			DAT	E GR	OUND WAT	TER REG	CORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOIST ⊢ PLAST SPT (N 10 100 ▲ POCKE 	URE CON FIC - LIQU) Blows/30 20 300 200 300 ET PEN (k	ITENT IID 00 mm 40) 400 Pa)	-	REMARK	6	Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silf plastic, brown, inclusions SHALE (Weath completely weated very weak to h 0.8 m - 400 m 1.3 m - high p	ty, moist, stiff, i trace organics nered), clay an athered, grey, ard soil, thinly nm ironstone la olastic layer	nedium to high s, trace bentonite d silt, trace sand, moist, medium plastic, laminated ayer		AU1 AU2 AU3		18.8 17.9 16.2		• •	<u></u>	2.5 m	L = 44.2% PL = 14.29 PI = 30.09 - Sand = 2.1 Silt = 47.3° Clay = 50.0 LL = 51.4% PL = 18.79 PI = 32.79	6 6 % 3%	778- 777- 7776- 7775- 7774-
			End of Borehole	@5.8 m	-	AU4		16.5	•			5.5 m	- Sand = 1.2 Silt = 38.6 Clay = 60.3 - Auger refu	2% 2% sal	773- 772- 771- 770- 769-
11/01/2024		Notes: SW Borrow se	arch. Backfille	d with bentonite.								Logge Reviev	d By: ved By:		C. Tams T. Curtis



	CLIE	Т		Eastern Irrigation District			_ PRO	OJECT	NAME	Ξ	_		S	nake L	ake Reservoir	Expar	nsion		
	PROJ	IECT NUMBER		1560-193-00				OJECT	LOCA	TION	_				NE 1/4 32-19	-16			
	DATE	STARTED	07/06/2022		07/06	6/2022	_ GR0	OUND	ELEV	ATION	I _	777.9	9m	N	5610541	_ E	4^	14745	;
	DRILI	LING CONTRACT	OR	Chilako Drilling Services	s Lto	l.	GR	OUND	WATE	RELE	EVATIO	ON / DE	PTH	┥					
	DRILI	LING METHOD		6" SSA			DAT	E GR	DUND	WATE	ER RE	CORDE	Ð						
Depth (m)	SOIL SYMBOL		Soil Descript	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 M H P I I I I P P 	OISTUI LASTIC PT (N) E 0 20 00 20 DCKET	RE COM C - LIQU Blows/3 D 30 0 300 PEN (H	NTENT JID 00 mm 0 40 0 400 (Pa)			REMARK	S	Ctondaino/	standpipe/ Instrument	Elevation (m)
		CLAY TILL, sor inclusions, silty brown, sand po SHALE (Weath completely wea staining, damp, hard soil, block	ne completely , moist, stiff, n ickets ered), clay ar ithered, grey, high plastic, y	weathered shale hedium plastic, greyish d silt, trace sand, some oxidation extremely weak to	-	AU1		21.6			•			1 m - 3	Sand = 3.5% Silt = 35.1 Clay = 61.	% 4%			777-
					æ	AU2		18.7		•				2.5 m	- LL = 50.59 PL = 19.89 PI = 30.79	6 6 6			775
- - - - - - - - - - - - - - - - - - -					-	AU3		12.7		•			 	4 m - 1 4 m - 1	Sand = 4.2% Silt = 42.7 Clay = 53. LL = 47.5% PL = 17.4% PI = 30.1%	5 % 1% %			774–
		SHALE, clay ar grey, damp, hig laminated	nd silt, trace s h plastic, extr End of Borehole	and, highly weathered, emely weak, thinly :@6.1 m		AU4		14.9		•				5.5 m	- LL = 56.59 PL = 18.99 PI = 37.69	6 6 6			772-
																			770-
																			/ 60-
11/01/202	4	Notes: SW Borrow sea	arch. Backfille	d with bentonite.										Logge Revie [,]	ed By: wed By:		<u>C. Ta</u> T. Ci	ams urtis	



	CLIE	NT		Eastern Irrigation Distric			PR0	OJECT	NAM	IE	_		S	Snake La	ke Reservoi	Expans	ion	
1	PROJ	JECT NUMBER		1560-193-00			_ PRO	OJECT	LOC	ATION	ı _			١	NE 1/4 32-19	-16		
1	DATE	STARTED	07/06/2022	COMPLETED	07/0	6/2022	GR0	OUND	ELEV	ATIO	N,	778	3.6m	N	5610538	_ E _	41484	6
ı	DRILI	LING CONTRACT	OR	Chilako Drilling Service	es Lto	ł.	GR0	OUND	WATI	ER EL	EVATI	ON / D	EPT	н				
۱ I	DRILI	LING METHOD		6" SSA			DAT	E GRO	DUNE) WAT	ER RE	CORE	DED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	● M H F ■ S 	10ISTU PLASTI PT (N) 10 2 00 2 POCKE	JRE CC C - LIQ Blows/3 20 30 00 30 T PEN (NTENT UID 300 mm 0 40 00 40 kPa)) 0		REMARK	S	Standpipe/ Instrument	Elevation (m)
-1		CLAY TILL, silt some oxidation SHALE (Weath completely wea oxidation stain weak to hard s	y, dry, firm, me n staining hered), silt and athered, browr ing, damp, hig oil, blocky bentonite inclu	dium plastic, brown, clay, trace sand, ish grey, some n plastic, extremely usions from 3.8 m		AU1 AU2 AU3 AU4		11.7 14.5 18.2 16.7		•				1 m - L 2.5 m - 4 m - S 5.5 m - 5.8 m -	L = 53.6% PL = 16% PI = 37.6° Sand = 2.9% Silt = 50.2 Clay = 48. Clay = 48. Clay = 55. L = 51.5% PL = 20.5° PI = 31.0° Sand = 4. <u>Silt = 55.7</u> Clay = 40. Auger refu	% % 8% 3% % 1% 2% sal		778- 777- 776- 775- 774- 777- 777- 7772- 7771- 7770-
- - - - - -																		769
		Notes:																
11/01/2024	ł	SW Borrow sea	arch. Backfilled	d with bentonite.										Loggeo Review	d By: ved By:	(<u>C. Tams</u> Г. Curtis	<u>;</u>



C		ΙT		Eastern Irrigation District			_ PRO	JECT	NAME	Snake	Lake Reservoir I	Expansio	n
F	PROJ	ECT NUMBER		1560-193-00			_ PRO	JECT	LOCATION		NE 1/4 32-19-1	6	
0	DATE	STARTED	07/06/2022	COMPLETED	07/06	6/2022	_ GRC	DUND	ELEVATION779.	0m N	5610438	E	414647
0	DRILL	ING CONTRACT	OR	Chilako Drilling Service	s Lto	l.	GRC	DUND	WATER ELEVATION / DE	PTH			
[ORILL	ING METHOD		6" SSA			_ DAT	E GRO	OUND WATER RECORD	ED			
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTENT PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 30 400 100 200 300 400 POCKET PEN (kPa) 		REMARKS		Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt up to 15 mm, d brown, some o crystals, coal si <u>1.4 m - 200 m</u> SHALE (Weath highly weathered damp, high plat blocky, trace gy	y, some sand, amp, stiff, me xidation staini taining, trace m ironstone l ered), clay ar ed, grey, some stic, extremely rpsum crystal	some rounded gravel, dium plastic, greyish ng, trace gypsum bentonite seams ayer nd silt, trace sand, e oxidation staining, y weak to hard soil, s	£ £	AU1 AU2 AU3 AU4		14.7 18.4 16.2 15.6		1 m - 2.5 m 4 m - 5.2 m 	LL = 49.7% PL = 14.4% PI = 35.3% - Sand = 2.5' Silt = 45.7% Clay = 51.8 - LL = 52.9% PL = 20.1% PI = 32.8% Sand = 2.1% Silt = 44.6% Clay = 53.3 - Auger refus	% % al	778– 777– 7776– 7775– 7774– 7774– 7774– 7774– 7772– 7771– 7771– 7770–
-										_			
		Notes:											
		SW Borrow sea	arch. Backfille	d with bentonite.						Logg	ed By:	C.	Tams
11/01/2024										Revie	ewed By:	T.	Curtis



	CLIEN	NT		Eastern Irrigation Distric	t		PRO	DJECT	NAME			5	Snake La	ake Reservoir I	Expansi	on
	PROJ	JECT NUMBER		1560-193-00			PRO	DJECT	LOCA	TION			1	NE 1/4 32-19-1	6	
1	DATE	STARTED	07/06/2022		07/0	6/2022	GR0	DUND	ELEVA	TION		777.7m	N	5610434	E	414753
	DRILI	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	ł.	GR	DUND	WATE	R ELE	VATIO	N / DEPT	н			
	DRILI	LING METHOD		6" SSA			DAT	E GR	DUND	WATE	R REC	ORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MC H PL SP 10 PC 	DISTUF _ASTIC ^I T (N) E 0 20 0 20 DCKET	RE CONT - LIQUII Blows/300) 30 0 300 PEN (kP	TENT D 0 mm 40 400 ra)	-	REMARKS		Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt weathered sha plastic, dark br	y, trace sand, le inclusions, own, trace oxi	some completely moist, stiff, medium dation staining												7777
		SHALE (Weath completely wea oxidation staini weak to hard s	nered), clay ar athered, brown ng, damp, hig oil, blocky	nd silt, trace sand, nish grey, some h plastic, extremely	_ *	AU1		17.8		•			1 m - 5	Sand = 8.5% Silt = 20.8% Clay = 70.7	%	776
- - - - - - - - - - - - - - - - - - -				æ	AU2		17.6		•						775	
		3.5 m - increa	asing oxidation	n staining	-	AU3		16.6		•			4 m - S 4 m - L	Sand = 2.4% Silt = 49.1% Clay = 48.5 L = 51.7% PL = 20.1%) %	774
		5 m - becomi SHALE, clay a damp, high pla	ng grey nd silt, highly stic, very wea	weathered, grey, k, thinly laminated	-	AU4		14.5		•			-5.5 m ·	PI = 31.6% - LL = 55.8% PL = 17.1% PI = 38.7%		772
- - - - - - - 7 - - 7 - - 7 - -																771
- - - 																770
- - - - - - - - - - - -																769
- - - - - -													-			768
		Notes:		al a state to the M												
11/01/2024	1	SW Borrow sea	arch. Backfille	d with bentonite.									Logge Review	d By: wed By:		C. Tams



CLIENT		Eastern Irrigation Distric	t		_ PRO	DJECT	NAME		Snake La	ake Reservoir	Expansio	on
PROJECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		1	NE 1/4 32-19-1	6	
DATE STARTED	07/06/2022	COMPLETED	07/0	6/2022	_ GR	DUND	ELEVATION	1 778.2m	N	5610336	E	414655
DRILLING CONTRAC	TOR	Chilako Drilling Service	es Lto	1.	GR	DUND	WATER ELI	EVATION / DEPT	Ή			
DRILLING METHOD		6" SSA			DAT	E GR	DUND WATE	ER RECORDED				
Depth (m) SOIL SYMBOL	Soil Descriptic	'n	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	MOISTU PLASTIG SPT (N) 10 2 100 20 POCKET	RE CONTENT C - LIQUID Blows/300 mm 0 30 40 0 300 400 7 PEN (kPa)	-	REMARKS		Standpipe/ Instrument Elevation (m)
CLAY TILL, sil grained sand I shale inclusion brown, some of crystals SHALE (Weat completely we moist, high pla gypsum crysta 3 4 m - benton 4.2 m - beco	CLAY TICL, sill, some gravel, some medulum grained sand lenses, some completely weathere shale inclusions, moist, stiff, medium plastic, dar brown, some oxidation staining, trace gypsum crystals SHALE (Weathered), silt and clay, trace sand, completely weathered, grey, with oxidation spece moist, high plastic, very weak to hard soil, trace gypsum crystals 4 m - bentonite seams 4.2 m - becoming ground up shale End of Borehole @4.3 m								-1 m - C 1 m - S -2.5 m - 4 m - L 4.3 m -	Gravel = 6.89 Sand = 23.79 Silt = 20.7% Clay = 48.8 PL = 20.8% PL = 20.8% PI = 33.0% Sand = 3.9% Silt = 50.0% Clay = 46.1 L = 52.4% PL = 18.4% PI = 34.0% Auger refus	6 6 5 %	778 777 776 776 775 774 774 777 777 777 777 777 777 777
Notes:												
SW Borrow se	earch. Backfilled	with bentonite.							Logge Reviev	d By: ved By:	C T	:. Tams . Curtis



(CLIE	NT		Eastern Irrigation Distri	ct		_ PRO	DJECT	NAME	S	Snake La	ke Reservoir	Expansio	n
F	PRO	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		Ν	NE 1/4 32-19-	16	
[DATE	STARTED	07/06/2022	COMPLETED	07/0	6/2022	_ GRO	DUND	ELEVATION	778.5m	N	5610330	_ E	414743
[ORILI	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	ł	GR0	DUND	WATER ELEVA	TION / DEPTI	н			
[DRILI	LING METHOD		6" SSA			_ DAT	E GRO	OUND WATER	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - L SPT (N) Blov 10 20 100 200 POCKET PE 	CONTENT .IQUID vs/300 mm <u>30 40</u> 300 400 .N (kPa)		REMARKS	3	Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt damp, firm, me oxidation staini SHALE (Weath completely wea staining, damp	y, some sand, dium plastic, ng lered), clay ar athered, grey, high plastic,	, trace gravel, dry to light brown, some and silt, trace sand, some oxidation extremely weak		AU1 AU2 AU3		11.3			1 m - L 2.5 m - 4 m - L 4.3 m -	L = 49.8% PL = 15% PI = 34.8% Sand = 1.7 Silt = 46.6% Clay = 51.7 L = 51.4% PL = 21.4% PI = 30.0% Auger refus	% % %	778 777 777 776 776 777 777 777 777 777
_														
		Notes:												
		SW Borrow sea	arch. Backfille	d with bentonite.							Logged	d By:	C	. Tams
11/01/2024											Review	ved By:	T.	Curtis
L														



	CLIE	NT		Eastern Irrigation Distric	t		_ PRO	OJECT	NAME	Sn	iake Lał	ke Reservoir I	Expansi	on
	PROJ	IECT NUMBER		1560-193-00			_ PRO	OJECT			N	<u>E 1/4 32-19-1</u>	16	
	DATE	STARTED	07/06/2022	_ COMPLETED	07/0	6/2022	_ GRO	OUND	ELEVATION 7	77.7m	_ N	5610330	_ E	414851
	DRILI	LING CONTRACT	OR	Chilako Drilling Servic	es Lto	1.	GR0	OUND	WATER ELEVATION /	DEPTH		775.08 m		2.60 m
1	DRILI	LING METHOD		6" SSA			DAT	re gro	OUND WATER RECOM	RDED		01/2	5/2023	
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CONTEI PLASTIC - LIQUID SPT (N) Blows/300 m 10 20 30 100 200 300 POCKET PEN (KPa) 	NT nm <u>40</u> 400		REMARKS	5	Standpipe/ Instrument Elevation (m)
		CLAY TILL, silt brown, some of sulphate inclus SHALE (Weath highly weathere damp, high plas blocky, thinly la sulphate inclus	y, dry, firm, lov xidation staini ions ereed), clay an ed, grey, some stic, extremely minated, trace ions	v to medium plastic, ng, suspect white d silt, trace sand, oxidation staining, weak to hard soil, suspect white	#	AU1		13.5	•	1	∣ m - Sa	and = 10.49 Silt = 33.0% Clay = 56.6	6 6 %	777-
		3 m - hard dri	lling		-	AU2		16.6	•	2	2.5 m -	LL = 54.9% PL = 19.8% PI = 35.1%		775
					æ	AU3		16.4	•	4	l m - Sa l m - Ll	and = 2.4% Silt = 49.0% Clay = 48.6 _ = 50.5% PL = 18.7%	% %	774-
- - - - - - - - - - - - - - - - - - -		BENTONITE (5 SHALE (Weath	5.5 m), 100 mr lered), "" End of Borehole	n layer @6.1 m		AU4		36.6	P	5	5.5 m -	LL = 158.19 PL = 35.4% PI = 122.79	% %	772
														771-
														769-
11/01/2024	1	Notes: SW Borrow sea	arch. 25 mm F	VC standpipe installe	d to :	a depth	of 6.1	m.		L	.ogged Review	By: ed By:	C	C. Tams



(NT		Eastern Irrigation District			PRO	DJECT	NAME	5	Snake La	ke Reservoir E	xpansio	n	
F	PROJ	IECT NUMBER		1560-193-00			_ PRO	DJECT	LOCATION		N	E 1/4 32-19-1	6		
	DATE	STARTED	07/27/2022	COMPLETED	07/27	7/2022	GR0	DUND	ELEVATION	774.4m	N	5612096	E	41584	4
	RILL	LING CONTRACT	OR	Chilako Drilling Service	s Ltd	Ι.	GR	DUND	WATER ELEVA	TION / DEPT	н				
[RILL	LING METHOD		6" SSA			DAT	E GRO	OUND WATER F	RECORDED		01/25	5/2023		
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - L SPT (N) Blow 10 20 100 200 POCKET PET 	CONTENT IQUID s/300 mm <u>30 40</u> 300 400 <u>V (kPa)</u>		REMARKS		Standpipe/	Elevation (m)
-1		CLAY TILL, silt medium plastic inclusions 1 m - becomin 2 m - becomin SHALE (Weath completely weat staining, damp blocky, suspect	y, gravelly, sor , brown, suspe ng trace to sor ning damp, da ng some oxida uered), clay an athered, grey, s , high plastic, e t white sulphat	ect white sulphate ne gravel, no cobbles rk brown tion staining d silt, trace sand, some oxidation extremely weak, e inclusions		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		5.2 8.4 11.0 12.5 16.3 15.8 16.3			0.6 m - 1.2 m - 2.1 m - 2.7 m -	LL = 40.6% PL = 13.3% PI = 27.3% Gravel = 4.2 Sand = 21.1 Silt = 42.4% Clay = 32.3% LL = 49.9% PL = 13.2% PI = 36.7% Sand = 9.79 Silt = 50.6% Clay = 39.79	2% % 6 %		7774 7773 7772 7771 7770 769 769 768 766 766
		Notes: NW Borrow sea	arch. Backfilled	d with bentonite chips.	<u> </u>		1	1	I		Logged Review	By: ed By:	<u>C.</u> T.	Tams Curtis	
11/01/2024												,			



	CLIEI	NT		Eastern Irrigation Distric	t		PR0	DJECT	NAME	5	Snake La	ke Reservoir I	Expansic	n
1	PRO	JECT NUMBER		1560-193-00			PRO	DJECT	LOCATION		Ν	IE 1/4 32-19-1	6	
1	DATE	STARTED	07/28/2022	COMPLETED	07/2	8/2022	GR0	DUND	ELEVATION	775.0m	N	5612107	E	415586
1	DRIL	LING CONTRACT	OR	Chilako Drilling Service	es Lto	d.	GR	DUND	WATER ELEVAT	TION / DEPT	н			
1	DRIL	LING METHOD		6" SSA			DAT	E GR	OUND WATER R	RECORDED				
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE C PLASTIC - LIC SPT (N) Blows 10 20 100 200 3 POCKET PEN 	ONTENT QUID 3/300 mm 30 40 300 400 I (kPa)	-	REMARKS		Standpipe/ Instrument Elevation (m)
-1		CLAY TILL, silt firm, medium p staining, suspe SHALE (Weath completely wea mottling, some plastic, extreme sulphate inclus	d silt, trace sand, rown to dark grey ning, damp, high ky, suspect white osum crystals		AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		12.9 12.9 15.6 16.6 13.1 18.3 17.6 18.8	•		0.6 m - 0.6 m - 1.2 m - 2.1 m - 2.7 m -	Gravel = 2. Sand = 11.2 Silt = 43.3% Clay = 43.4 LL = 44.9% PL = 14.2% Sand = 3.00 Silt = 58.1% Clay = 38.9 LL = 58.8% PL = 16.4% PL = 42.4% LL = 62.1% PL = 18% PI = 44.1%	1% 2% % %	774– 7773– 7772– 7771– 7770– 769– 768– 768– 768–	
														766-
		Notes:												
11/01/2024	L	NW Borrow sea	arch. Backfille	d with bentonite chips							Loggeo Review	l By: /ed By:	<u> </u>	. Tams Curtis



		NT		Eastern Irrigation District			_ PRC	JECT	NAME	5	Snake Lal	ke Reservoir E	Expansio	n	
F	PROJ	IECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		N	E 1/4 32-19-1	6		
	DATE	STARTED	07/28/2022	COMPLETED 0	7/28	3/2022	_ GRO	DUND	ELEVATION	774.7m	N	5612325	E	415581	
	DRILL	ING CONTRACT	OR	Chilako Drilling Services	: Ltd	l.	GRO	DUND	WATER ELEVAT	ION / DEPT	н				
	DRILL	ING METHOD		6" SSA			_ DAT	E GR	OUND WATER R	ECORDED					
Depth (m)	SOIL SYMBOL		Soil Descripti	on	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE CO PLASTIC - LIC SPT (N) Blows 10 20 3 POCKET PEN 	DNTENT QUID /300 mm 30 40 /00 400 (kPa)		REMARKS		Standpipe/ Instrument	Elevation (m)
-1		CLAY TIL, silt, s to stiff, medium staining, suspe gypsum crystal 1 m - becomin 2 m - becomin 2 m - becomin SHALE (Weath highly weathered damp to moist, blocky, suspect 4.5 m - becom	ome gravel, damp, firm brown, some oxidation ate inclusions, trace vel c, trace sand i clay, trace sand, e oxidation staining, extremely weak, te inclusions ion staining	* * *	AU1 AU2 AU3 AU4 AU5 AU6 AU7 AU8		5.4 12.1 19.4 21.0 20.9 19.2 18.1 16.6			0.6 m - 1.2 m - 2.1 m - 2.7 m -	LL = 32.3% PL = 12.4% PI = 19.9% Gravel = 9.' Sand = 18.6 Silt = 36.0% PL = 16% PI = 43.1% Sand = 6.29 Silt = 50.6% Clay = 43.2'	1% 3% %		7774 7773 7772 7771 7770 769 768 767	
											-				766
		Notes:												<u> </u>	
11/01/2024		NW Borrow sea	arch. Backfille	d with bentonite chips.							Logged Review	By: ed By:	<u> </u>	<u>Tams</u> Curtis	



BOREHOLE No : 22VWP-05

C		NT		Eastern Irrigation Distric	ct		_ PRC	JECT	NAME		Sna	ake La	ke Reservoir	Expansi	ion	
F	PROJ	ECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION			Ν	IE 1/4 32-19-	16		
[DATE	STARTED	09/13/2022	COMPLETED	09/13	3/2022	_ GRC	DUND	ELEVATION	768.	0m	N_	5611825	_ E	414850	_
0	DRILL	ING CONTRACT	OR	Val's Drilling			GRC	DUND	WATER ELEV	ATION / DE	PTH					_
0	DRILL	ING METHOD		6" SSA			DAT	E GRO	OUND WATER	R RECORDI	ED					_
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTURE PLASTIC - SPT (N) Bio 10 200 100 200 POCKET P 	E CONTENT LIQUID ows/300 mm <u>30 40</u> 300 400 EN (kPa)			REMARKS	5	Standpipe/ Instrument Elevation	(m)
	///////////////////////////////////////	CLAY TILL, silt medium plastic inclusions, trac 1 m - becomi	y, trace fine g , brown, susp e coal stainin ng very silty, r	ravel, damp, stiff, ect white sulphate g no gravel, moist	=	AU1		9.5	•						767	
		BENTONITE (1	I.8 m), 150 m	m thin bentonite	-	AU2		16.5	•							
_2	/	seams CLAY TILL, "' SHALE (Weath	" nered), silt, cla	yey, some sand,	_/ ਵ	AU3		19.8			• 2	7 m	Sand - 10	504	766	;
-3	· · · · ·	completely wea mottling, some plastic, extreme suspect white s	athered, light l oxidation stai ely weak to ha sulphate inclu	prown to dark grey ning, damp, high ard soil, blocky, sions	-	AU4		20.4			2.	.7 m -	Saint = 10. Silt = 61.3% Clay = 28.2 LL = 88.2% PL = 15.2%	% %	765	;;
-4		.4.3 m - trace	gypsum cryst	als		AU5 AU6		22.6	• •		_ ▲4.	.3 m -	PI = 73.0% LL = 123.9° PL = 17.8%	%	764	
		high plastic, ex unoxidized	tremely weak	, thinly laminated,	æ	AU7		22.0	⊢●		5.	.2 m -	PI = 106.1 LL = 94.7% PI = 16.5%	%	763	
-6		5.6 m - becor	ning dark gre	/	æ	AU8		17.9	•				PI = 78.2%)	762	2
7					æ	AU9		16.4	•						761	
			End of Borehole	e @7.6 m	-	AU10		16.3	•		7.	.3 m -	Sand = 0.4 <u>Silt = 68.49</u> Clay = 31.2	% <u>6</u> %	760	
-9															759	
		Notes:	1/2521 0.1	13385												
		v vvp instali. 1:	143531, 2: 14	+3363							Lo R	oggeo eview	l By: /ed By:	(C. Tams ſ. Curtis	_
11/01/2024													•	-		_



BOREHOLE No : 22VWP-06

(NT		Eastern Irrigation District			PR	OJECT	NAME		5	Snake La	ake Reservoir	Expans	sion	
F	PROJ	IECT NUMBER		1560-193-00			_ PR	OJECT	LOCATION	I		I	NE 1/4 32-19-1	16		
[DATE	STARTED	09/13/2022	COMPLETED	09/1	3/2022	GR	OUND	ELEVATION	N <u>77</u>	'0.0m	N	5611032	_ E _	4155	92
0	DRILI	LING CONTRACT	OR	Val's Drilling			GR	OUND	WATER ELI	EVATION / I	DEPT	н				
[DRILI	LING METHOD		6" SSA			DA	re gro	OUND WATE	ER RECOR	DED					
Depth (m)	SOIL SYMBOL		Soil Descript	ion	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	 MOISTU PLASTIC SPT (N) 10 2 100 20 POCKET 	IRE CONTEN C - LIQUID Blows/300 mr 20 30 4 00 300 4 F PEN (kPa)	T n 10 00		REMARKS	6	Standpipe/	Elevation (m)
	/	CLAY TILL, silt	y, trace fine g ace coal stain	ravel, moist, stiff, high ing												
-				0	-	AU1		33.8		•						
-1																769-
	/				=	AU2		36.1	▲ I	•		1.2 m	- LL = 77.2% PL = 19.7%			-
-		1.5 m - becor	ning medium	grained sandy									PI = 57.5%)		-
-2					=	AU3		16.3	•							768-
	/															-
-		2.7 m - becor	ning very moi	st, firm	=	AU4		20.2	A							767
-	/	2.9 m - SEEP	AGE													/0/
	- <u></u> -	SHALE (Weath weathered, ligh	ered), clayey It brown to da	, silty, completely irk grey mottling, trace				07.0				0.7	11 - 00.00/			-
-4		oxidation staini	ng, damp, hig bil, blocky, tra	h plastic, extremely		AUS		27.0	F			3.7 m	PL = 82.9%	•		766-
	<u></u>		on, blocky, tra		-	AU6		21.9		• 4	•		PI = 66.1%)		-
-		-														-
	. <u></u> .											5.0	0	0/		765-
-	· · · ·	-			₽	AU7		21.6	H	•		5.2 m	Silt = 49.6%	% , 0		-
-		5.7 m - becor	ning some gro	ound up shale		AUS		18.4				52 m	Clay = 47.0	%		-
6 -		nclusions	eilty highly	vestbered arev damp	1								PL = 17.4%			764-
-		high plastic, ex	tremely weak	, thinly laminated,	'								PI - 92.0%)		-
		unoxidized 6.1 m - becor	ning ground ι	ıp	=	AU9		17.4	•							700
		-				AU10		18.0								/03-
		-			-			10.5								-
8	_															762
					=	AU11		15.2	•							
Ē								45.0				8.8 m	- Sand = 0.5	%		
-9			End of Dorohol	a @0.1 m		AU12		15.3	• •			0.0 111	Silt = 60.2%	,0 0		761-
				ະ ເພສ. ເ ແເ									Clay = 39.3	%		-
		Notes:	1/2525 0.4	12517 Bookfilled with	~~~	ont are:	+									
		v vvr mstan. T	143030, 2. 14	+3347. Daukiilleu Wilh (Jem	ent grou	ι.					Loaae	d By:		C. Tam	s
11/04/005												Review	ved By:		T. Curti	s
11/01/2024													-			



	CLIEN	NT	East	ern Irri	gatio	on Distri	ct		F	PROJ		AME	Si	nake Lake Reservoir Expai	nsion
	PROJ	IECT NUMBER		1560	-193	8-00			F	PROJ	JECT L	OCATION	N	NE 1/4 32-19-16	
	DATE	STARTED	08/11/2023 CC	OMPLE	TEI	D	08/11/	2023		GROU	UND E	LEVATIO	N 767.62m	N 5611494.100 E	416865.300
	DRILL	LING CONTRACT	OR	V	al's	Drilling			0	GRO	UND V	ATER EL	EVATION / DEPTH	l	
	CORI	NG TYPE	HQ3 DIA	AMETE	R (m	nm)	61	I	C	DATE	GRO	JND WAT	TER RECORDED		
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	 MOIS ⊢ PLAS ■ SPT (10 50 POCI 	STURE CONTENT STIC - LIQUID (N) Blows/300 mm 20 30 40 100 150 200 :KET PEN (kPa)	REMARKS	Standpipe/ Instrument Elevation (m)
-1 -2 -3 4 		CLAY AND SIL stiff, low plastic CLAY TILL, silt gravel up to 30 medium plastic oxidation staini crystals, trace coal staining 1.2 m - becor completely wea SHALE (Weath highly weathere mottling, damp weak, blocky, t oxidation staini precipitates, tra 3.0 m - 270 n 3.3 m - 200 n 3.6 m - becor weathered \3.9 m - 80 mr SHALE, clayey grey, damp, hig weak, moderat fractures, thinly 4.6 m - 100 n 5.5 m - some 6.4 m - becor 7.0 m - 62° fr 7.4 m - 42° fr 7.6 m - mech 8.3 m - 45° fr	T, sandy, gravelly, e c, light brown y, trace sand, trace 0 mm, moist, firm, c, brown, some ing, trace gypsum white precipitates, f ming no gravel, som athered shale inclus hered), clayey, silty, ed, dark brown to g h, high plastic, extre hinly laminated, tra ing, trace white ace gypsum crystal nm of core loss nm of slough ming moderately m of crumbled core y, silty, unweathered gh plastic, extremel tely widely spaced y laminated nm of cre loss nm of crumbled core ming very weak mechanical rubble ming weak acture ancure acture	dry, trace ne sions yrey mely ce s d, y e un		AU1 AU2 AU3 AU4 RC1 RC2 RC3 RC3	3.05 - 4.57 4.57 - 6.09 - 7.61 7.61 - 9.13	1 2 3 4	49 82 64 75 93 78 89 100 90 87 100 89	2 3 2 2	18.2 26.6 22.3 24.3			0 m - Lost circulation and used lots of water this hole. Seismic cap and wire -found nearby. 1.2 m - Gravel = 0.1% 1.2 m - Sand = 6.4% Clay = 50.9% 1.2 m - Dispersivity Classification = ND3 % Dispersion = 78% 2.1 m - Dispersivity Classification = D2 % Dispersion = 45% 3.05 m - Switched from 6" SSA to HQ3 Rotary Coring	767 766 765 764 764 763 764 763 762 761 761
- - - 9 - - - - - - - - - - -						RC5	9.13 - 10.65	5	93 93 93	1				-	758
		Notes:							Mon	itorir	ng Ins	tallation	Pipe Work		
11/01/2024	4	Target depth of a 50 mm well.	f 10 m achieved. Ce Packer test comple	oreho ted af	le c ter	omplet coring.	ed as	D	epth T 0.00 7.60	ор	Dept	h Bottom 7.60 0.60	n Pipe Type PLAIN SLOTTED	Logged By:C	2. Tams . Curtis

		MP		a divis	sio	n of	Eng	glo	be				COR	EHOLE No :	23C	H7 .GE 2	02 0F 2
	CLIEN	NT		Eastern Irr	igati	on Distr	ict		P	PROJ	ECTI	NAME	S	Snake Lake Reservoi	r Expansion		
	PROJ	ECT NUMBER		1560)-193	3-00			P	ROJ	ECTI	LOCATION		NE 1/4 32-19	-16		
	DATE	STARTED	08/11/2023	COMPL	ETE	D	08/11/	2023	 3 G	RO	JND E	ELEVATION		N 5611494.100) E 41	6865.3	300
	DRILL		TOR	,	Val's	 Drillina				ROL	JND V	VATER ELEV	ATION / DEPT	— H			
	CORI	NG TYPE	HQ3	DIAMETE	ER (n		6	1		ATE	GRO	UND WATER					
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	acture Index (#/m)	isture Content (%)	 MOISTU PLASTIC SPT (N) 10 20 	RE CONTENT C - LIQUID Blows/300 mm D 30 40	REMAR	٢S	Standpipe/ Instrument	Elevation (m)
						0,				ЦЦ	β	50 10 POCKET	0 150 200 Г PEN (kPa)	7			
		10.0 m - 500 rubble <u>10.6 m - 100</u>	mm of mecha	anical													757- 755- 755- 754- 753- 752- 751- 755- 755- 755- 755-
Ē																	740
Ē																	/48-
—		Netes															
		NOTES: Target depth of	of 10 m achiev	ed Corebo	nle r	omolo	ted as	-	Mon	itorir	ng Ins	stallation Pip	be Work				
		a 50 mm well.	Packer test c	ompleted a	after	coring	.eu as		epth To	ор	Dept	th Bottom	Ріре Туре		o =		
						5			7.60			10.60	SLOTTED	Logged By:	<u> </u>	<u>ns</u>	
11/01/2024	1									Reviewed By:	T. Cur	tis					



	CLIEI	NT	E	astern Irri	gati	on Distr	ict		F	PROJ	ECTI	NAM	E	_		Sn	ake La	ike Reservoir I	Expar	ision		
	PRO	JECT NUMBER		1560	-19	3-00			F	PROJ	ECT I	LOC	ATION				١	NE 1/4 32-19-1	6			
	DATE	STARTED	08/07/2023	COMPLE	ΞTE	D _	08/07/	2023	80	GROL	JND E	ELEV	ATION	_	779.	07m	_ N _	5612596.600	_ E .	414	519.2	200
	DRILI	LING CONTRACT	OR	V	/al's	Drilling			0	GROL	JND V	NATE	ER ELE	EVATIC) N / DE	EPTH						
	CORI	ING TYPE	HQ3	DIAMETE	R (r	nm)	61	1	C	DATE	GRO	UND	WATE	ER RE	CORD	ED						
																				7	t ɗ	
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m	Moisture Content (%	● ⊢ ■	MOIST PLAST SPT (N 10 50 POCK	FURE C FIC - LIC N) Blows 20 : 100 1 ET PEN	CONTEN QUID 5/300 m <u>30 4</u> 50 20 1 (kPa)	NT m .0 D0		REMARK	8	Of the second		Elevation (m)
-		TOPSOIL, silty	, sandy, some cl	lay, trace																X		
Ē		root hairs	plastic, brown,	uace	-	AU1																
E ,		CLAY TILL, silt	y, sandy, trace fi	ine stic	-																	-
E'		brown, some w	hite precipitates	site, s, trace	-	AU2																778
-		oxidation staini	ing	al un ta																		
-		30 mm	ning some grave	ei up to																		
2 -					-	AU3																777-
Ē																						
-		SHALE (Weath	nered), clayey, si	ilty,	-	AU4																-
-3	<u> </u>	trace sand, hig	hly weathered, g	grey, veak to																		776-
-	· <u>···</u> ·	hard soil, block	cy, thinly laminate	ed,																		-
-	· <u>···</u> ·	some oxidation	n staining, trace v	white		AU5																
-4	··		ning moderatelv	,	-																	775_
-	·	weathered, trac	e oxidation stair	ning		RC1	4.27 -	1	72	3							4.27	m - Switched	ł			
F	· ·	4.3 m - 100 m	nm of core loss		Π	AU6	5.79		93								from	6" SSA to H	Q3			-
- -	<u></u>	4.0 m - 100 m -	in benionite sea	am					80								Rotar	ry Coring				-
		5.2 m - 73° fr	acture																			774
-			acture																			
	· <u>·</u> ··	5.6 m - some	crumbled core	d rup		RC2	5.79 -	2	66	4												-
—6 _	· <u>··</u> ·	210 mm of core	e loss	u run,			7.31		86							+						773-
	· · ·	· 64 m traca	hontonito inclusi	ione					00													-
Ē	···	0.4 m - trace		10115																		-
-7	·	6.9 m - 63° fr	acture														-					772-
Ē	<u></u>	7.1 m - some	crumbled core			RC3	7.31 -	3	80	3												-
Ē	<u> </u>						8.83		82													-
-8	· · · · · ·	7 9 m - becor	ning slightly was	othorod					00													
F		very weak	ining singinary wea																			
-		.∖.8.1 m - 65° fr	acture	/																		-
Ē,		grey, damp, hic	, siity, unweatne gh plastic, very w	veak,		RC4	8.83 -	4	92	1												
Ē		moderately wic	lely spaced fract	tures,			10.35		92													770-
F		Ithinly laminated	d acture																			-
E																						-
		Notes:		Mon	itorir	ng Ins	stalla	ation F	Pipe W	/ork												
		a well refer to	ted as iter	D	epth T	ор	Dept	th Bo	ottom	Pip	е Тур	е										
		coring.			pi	2.00 01			0.00 13 40	,		13.4 14 9	υ 1	P SI (oggeo	d By:	С	. Tam	IS	
11/01/2024	1															F	Review	ved By:	С	Brau	In	
1																						



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	CLIE	NT		Eastern Irriç	gatio	on Distri	ict		F	PROJ	IECT	NAME	E		S	Snake	Lake Reservoir	Expar	ision	
	PROJ	IECT NUMBER		1560-	193	3-00			F	PROJ	IECT	LOCA	TION				NE 1/4 32-19-	16		
	DATE	STARTED	08/07/2023	COMPLE	TEI	D	08/07/	2023	80	GROL	JND E	ELEVA	ATION		779.07m	<u>N</u>	5612596.600	E	414519.	200
	DRILI	LING CONTRACT	OR	Va	al's	Drilling			0	GROL	JND \	VATE	R ELE	VATIO	N / DEPT	н				
	CORI	NG TYPE	HQ3		R (m	חm)	61	1	C	DATE	GRO	UND	WATE	R REC	ORDED					
Depth (m)	SOIL SYMBOL	C	Soil)escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTI PLASTI SPT (N) <u>10 2</u> 50 1 <u>POCKE</u>	URE CC C - LIQ) Blows/ 20 3/ 00 15 T PEN	DNTENT UID 300 mm 0 40 0 200 (kPa)		REMARK	S	Standpipe/ Instrument	Elevation (m)
		10.2 m - 120 10.6 m - 56° f 10.8 m - bedo widely spaced f 10.9 m - beco bedded sandsto	mm of core los fracture ding fracture, b fractures oming weak, sc one layers	ecoming		RC5	10.35 - 11.87	5	97 100 97	1										768
		11.8 m - trace 12.1 m - 75° 1	e shell fragmen fracture	ts		RC6	11.87 - 13.39	6	100 100 100	1										767-
		13.0 m - 550 extremely weak 13.6 m - 180 shale 14.2 m - 78° 1	mm of very hig < shale mm of strong c fracture	_l h plastic, calcified		RC7	13.39 - 14.91	7	100 100 100	1										766
																				763
- - - - - - - - - - - - - - - - - - -																				760
		Notes:							Mon	itorir	ng Ins	stalla	tion Pi	pe W	ork		-			
11/01/202	4	Target depth of a well, refer to coring.	f 14 m achieved diagram. Packo	d. Corehol er test con	le c npl	omplet eted af	ed as ter	D	epth T 0.00 13.40	ор	Dep	th Bo 13.40 14.91	ttom)	Pipe PL SLO	AIN TTED	Logg Revi	ged By: ewed By:	C C	<u>. Tams</u> . Braun	

		MP		a divis	io	n of	Enc	ilo	be						COR	EHOLE No :	23CH70	0B
							E.1.9	,										01 0
	CLIE	NT		Eastern Irri	igati	on Distr	ict		P	ROJ	IECT I	NAME	Ξ		S	nake Lake Reservoi	ir Expansion	
	PROJ			1560)-193	3-00			P	ROJ	IECT I					NE 1/4 32-19	<u>)-16</u>	
		STARTED	08/07/2023		ETEI	D	08/08/	2023	<u> </u>	GROU	JND E				779.05m	N 5612605.40	<u> </u>	00
			10R		/al's	Drilling			(GROU						1		
			Other			nm)	1	r	L		GRU		WAIER	REC	ORDED			
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTUI PLASTIC SPT (N) E <u>10 20</u> 50 100 POCKET	RE CC - LIQ Blows/) <u>3</u> 0 15 - PEN	DNTENT UID /300 mm 0 40 50 200 (kPa)	REMAR	Standpipe	Elevation (m)
-1 -2 -3 -4 -5 -6 -7 -7 -8 -9																		778 7777 7776 7775 7774 7773 7772 7772 7771
<u> </u>	1	Notes:					L		Moni	itorir	na Ins	stalla	tion Pin	e W	ork			
		100 mm PVC	well installed t	o 25 m for	pun	nping t	est.	D	epth Te	op	Dept	th Bo	ottom	Pipe	е Туре			
									0.00		4	22.00		PL SL O		Logged By:	C. Tams	
11/01/2024	4								22.00		4	_0.00	-	510		Reviewed By:	C. Braun	

		MP		a divis	io	n of	Enc	ilo	be				COR	EHOLE No	23CH700B
				F		Dist		,							
				Eastern Irri			ICI		P				8		Ir Expansion
	PRUJ		08/07/2022		-193	<u>-00</u>	00/00/	2022					770.05m	N 5612605.40	0 = 414525400
			00/07/2023			Drilling	00/00/	2023						N0012000.40	<u> </u>
			Othor		ais D(m				(n	
			Other			iiii)	T	1	L		GRU		RECORDED		
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	 MOISTUF ⊢ PLASTIC ■ SPT (N) E 10 20 50 100 ▲ POCKET 	RE CONTENT - LIQUID Blows/300 mm <u>30 40</u> - 150 200 PEN (kPa)	REMAR	Standpipe Instrumen Elevation (m)
															768- 767- 767- 766- 765- 764- 764- 763- 763- 763-
		Notes: 100 mm PVC	well installed t	o 25 m for	pun	nping t	est.	D	Mon epth T 0.00 22.00	itorir	ng Ins Dept	stallation Pip th Bottom 22.00 25.00	e Work Pipe Type PLAIN SLOTTED	Logged By:	C. Tams

		MP		a divis	io	n of	Eng	glo	be			COREHOLE No : 23CH700) B 0F 3
		NT		Fastern Irr	iaati	on Distr	ict		F	PRO.I	FCT	NAME Snake Lake Reservoir Expansion	
	PROJ	IECT NUMBER		1560)-193	3-00			· F	PROJ	ECTI	LOCATION NE 1/4 32-19-16	
	DATE	STARTED	08/07/2023	COMPLI	ETE	D	08/08/	2023	 3 G	GROU	JND E	ELEVATION 779.05m N 5612605.400 E 414525.40	00
	DRILI	_ING CONTRAC			/al's	Drillina	00,00,		C	ROL	JND V	WATER ELEVATION / DEPTH	
	CORI	NG TYPE	Other	DIAMETE	ER (n	nm)			`	ATE	GRO		
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	racture Index (#/m)	10 10 10 10 10 10 10 10 10 10 10 10 10 1	• MOISTURE CONTENT H PLASTIC - LIQUID SPT (N) Blows/300 mm 10 20 50 100	Elevation (m)
										ш	Σ	POCKET PEN (kPa)	
-22													- - 757- - 755- - 755- - 754- - - 753-
27													752-
-28													751-
29 													750-
		Notes:					•		Mon	itorir	ng Ins	istallation Pipe Work	
11/01/2024	1	100 mm PVC	well installed t	o 25 m for	pun	nping t	est.	D	epth T 0.00 22.00	op	Dept	Define Type22.00PLAIN25.00SLOTTEDReviewed By:C. TamsC. Braun	



		NT		igati	on Distr	ct		F	PROJ	ECTN	IAME	Ξ			Sn	ake Lak	e Reservoi	r Expar	nsion			
	PROJ	IECT NUMBER		-193	3-00			F	PROJ	ECT L	.OCA	TION				NE	E 1/4 32-19	-16				
	DATE	STARTED	08/09/2023		ETE	D	08/09/2	2023	80	GROL	JND E	LEV	ATION		770.2	8m	_ N_56	612525.300) Е	416	317.	500
	DRILI	LING CONTRACT	OR	١	/al's	Drilling			0	GROL	JND V	VATE	RELE	VATIO	N / DE	PTH						
	CORI	NG TYPE	HQ3	DIAMETE	ER (n	nm)	61		C	DATE	GRO	UND	WATE	R REC	ORDE	D						
Depth (m)	SOIL SYMBOL	D	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLASTI SPT (N 10 2 50 1 POCKE	URE CC IC - LIQ) Blows/ 20 3 00 15 ET PEN	ONTEN UID /300 mr 0 4(50 20 (kPa)	T n <u>)</u> 0		REMAR	<s< td=""><td></td><td>Instrument</td><td>Elevation (m)</td></s<>		Instrument	Elevation (m)
-		SILT AND SAN low plastic, ligh	D, some clay, o It brown, trace	dry, firm, root																X	1 🛛	770-
					=	AU1					3.3	•	н				0.6 m ·	- LL = 17. PL = 13%	1% %			-
	\geq	CLAY TILL, silt gravel, damp, s	y, sandy, trace stiff, low to med	fine lium	-	AU2											0.6 m ·	PI = 4.1 - Sand =	%			769-
-	··	plastic, brown, precipitates	some white	/													62.5%	Silt = 26.	.4%			-
2 2	·	SHALE (Weath some sand, co	nered), clayey, s mpletely weath	silty, ered.	-	AU3												Clay = 1	1.1%			
-	· _ · · ·	dark brown to g	grey mottling, d	amp, o hard																		/68
-3	· · · · ·	soil, blocky, sor	me oxidation st	aining	=	AU4 RC1	3 05 -	1	21	13							3 05 m	n - Switche	⊳d			
-	·	3.0 m - 100 m 3.3 m - becon	nm of core loss ning trace sand	d, highly			4.57	•	93								from 6	" SSA to H	HQ3			767-
-	·	weathered	0	, U ,					03								TOLATY	Coning				-
4 	···	-																				766-
-	·	4.4 m - becon	ning trace gyps	sum		RC2	4.57 -	2	44	7												100
-5	· <u>··</u> ·	crystals 4.6 m - 150 m	nm of core loss				6.09		90 59													-
-	· · · · · ·	5.0 m - some	crumbled core	1																		765
-	·																					-
-6	·· <u>··</u> ·	5.9 m - some	crumbled core	1		RC3	6.09 -	3	61	5												764
-	· · · ·	6.4 m - becon weathered	ning moderatel	У			7.61		86													704
-7		$6.8 \text{ m} - 83^{\circ} \text{ fra}$	acture																			
-	·	7.1 m - 76° fra	acture																			763-
	· ·	7.4 m - 100 m	lale		RC4	7.61 - 9 13	4	94 96	3													
-8	·	8.2 m - beddi 8.3 m - 65° fra	ng fracture acture						95													762
-	··	8.4 m - becon very weak, moo	ning slightly we derately widely	eathered, spaced																		702
-9		fractures 9.0 m - 68° fra	acture					_														
-	··	9.1 m - becon	ning grey with t	trace		RC5	9.13 - 10.65	5	97	3												761—
-	··	9.3 m - 78° fra				97													-			
_	••									;												
	Notes: Target depth of 27 m achieved. Corehole completed								Mon	itorir	ng Ins	talla	tion P	ipe W	ork							
	a well, refer to diagram. Packer test completed								epth To	ор	Dept	h Bo	ottom	Pipe	е Туре ДІЛІ	<u>.</u>		Dun	~	、 .		
	coring.								25.90		2	27.37	7	SLO	TTE) _	ogged	ву:	C	. Ian	<u>IS</u>	
11/01/2024	/2024															F	eviewe	eu By:	C	. Brai	111	



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	CLIE	NT		Eastern Irri	gati	on Distr	ict		P	ROJ	ECTI	NAM	E		Sr	iake L	.ake Rese	rvoir E	Expan	sion		
	PRO	JECT NUMBER		1560-	-19	3-00			P	ROJ	ECT I		ATION	_			NE 1/4 32	-19-1	6			
	DATE	STARTED	08/09/2023		TE	D _	08/09/	2023		ROL	JND E	ELEV	ATION	_	770.28m	_ N	5612525	.300	Ε.	416	317.5	00
	DRIL	LING CONTRACT	OR	V	′al's	Drilling			0	ROL	JND V	VATE	ER ELE	VATIC	N / DEPTH							
	COR	ING TYPE	HQ3	DIAMETE	R (r	nm)	6		C	ATE	GRO	UND	WATE	RRE	CORDED							
Depth (m)	SOIL SYMBOL	C	Soil lescription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 50 1 POCKI	URE C IC - LIC I) Blows 20 : 100 1 ET PEN	ONTENT QUID 5/300 mm 30 40 50 200 4 (kPa)	-	REMA	\RKS	3	Ctondaino/	otariupuper Instrument	Elevation (m)
		10.1 m - 64° 1	fracture																			760-
11		SHALE, silty, c grey, damp, hig moderately wid thinly laminated 10.6 m - becc thin weakly cen	layey, unweath gh plastic, very lely spaced fra d ming some ve nented layers fracture	nered, v weak, actures, ery thin to		RC6	10.65 - 12.17	6	98 100 98	1				-								759
		11.4 m - bedo widely spaced 1 12.3 m - beco	ling fracture, b fractures oming weak	ecoming		RC7	12.17 - 13.69	7	106 106 106	0												758
						RC8	13.69 - 15.21	8	99 100 99	1												757
		14.7 m - 72° 1 15.5 m - 41° 1	fracture fracture			RC9	15.21 - 16.73	9	95 100 96	2												755
		16.1 m - becc 16.3 m - 67° 1 16.4 m - som 16.8 m - 50 m inclusions 16.9 m - becc	oming very wea fracture e crumbled co nm of bentoniti oming weak	ak re c		RC10	16.73 - 18.25	10	87 100 91	1												754
		17.9 m - 60° 1 18.0 m - bedo crumbled core 18.0 m - 420 18.2 m - 90 m		RC11	18.25 - 19.77	11	84 94 84	1												752-		
- - - - - - -		19.5 m - 65° 1 19.6 m - trace 19.6 m - som	fracture e shell fragmer e crumbled co	nts re		RC12	19.77	12	97	1												751
11/01/202	4	Notes: Target depth of a well, refer to coring.	27 m achieve diagram. Pack	d. Coreho er test cor	le c npl	complet eted af	ed as ter	D	Moni epth To 0.00 25.90	itorin op	ig Ins Dept	stalla th Bo 25.9 27.3	ation P ottom 0 7	Pipe W Pip P SLC	/ork e Type LAIN DTTED F	.ogge Revie	ed By: wed By:		<u> </u>	. Tam Brau	is in	



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	CLIE	NT	E	Eastern Irriga	tion Distr	ict		F	PROJ	ECT	NAME	_	Sn	ake L	ake Reservoir I	Expar	ision	
	PROJ	JECT NUMBER		1560-1	93-00			F	PROJ	ECTI	LOCATIO	N _			NE 1/4 32-19-1	6		
	DATE	STARTED	08/09/2023	COMPLET	ED	08/09/	/2023	30	GROL	JND E	ELEVATIO)N _	770.28m	_ N _	5612525.300	_ E .	416317.	.500
	DRILL	LING CONTRACT	TOR	Val	's Drilling			0	3ROL	JND V	VATER EL		N / DEPTH					
			HQ3		(mm)	61 	<u>1</u> T	L	DATE	GRU	UND WAI	FER REG						 -T
Depth (m)	SOIL SYMBOL	E	Soil Description	Samula Tune	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	 MOIS ⊢ PLAS ■ SPT 10 50 <u>POC</u> 	STURE C STIC - LIC (N) Blows 20 100 1 CKET <u>PEN</u>	ONTENT 2UID 3/300 mm 30 40 50 200 N (kPa)		REMARK	S	Standpipe Instrumen	Elevation (m)
F		-				- 21 29		100										750-
- - - - - - 21 - - - -		20.6 m - 77° - 20.8 m - 78°	fracture fracture		RC13	21.29	13	86	1									749-
- - 22 			fracture			22.81		90						-				748-
-23		22.7 m - 130 -	mm of core loss	3	RC14	22.81	14	88 88	1				ļ!					
- - - - - - - - - - - - - - - - - - -		- 23.3 m - bedo	ding fracture			24.33		88										747
Ē	E	24.2 m - 180	mm of core lose	s	RC15	24.33	15	82	3									746-
-25		24.5 m - verti 24.7 m - 64° 25.2 m - 79°	ical fractures fracture fracture			- 25.85		101 84										745
- 26 		25.8 m - 130	mm of core lose	s	RC16	25.85	16	91 91	1									
- - 		26.5 m - bedo	ding fracture			21.31		91										744
				•'	 													/43
- 28 													ļ					
																		742-
-29																		
																		741
													<u> </u>	-				
		Notes: Target depth o a well, refer to	f 27 m achieved diagram. Packe	I. Corehole er test com	complet	ted as fter	D	Mon epth T	itorin op	ıg Ins Dept	stallation th Botton 25.90	Pipe W	/ork e Type				Termo	
11/01/202	24	coring.				25.90)		27.37	SLC)TTED F	Revie	юву wed By:	C	<u>. Tams</u> . Braun			

		MP		a divis	sio	n of	Eng	Jlo	be						CO	REHOLE	E No : 2 3	PAGE	1 OF 3
	CLIEN	NT		Eastern Irr	igatio	on Distr	ict		P	ROJ	ECT	NAME	E			Snake Lake	Reservoir Expa	ansion	
	PROJ	IECT NUMBER		1560)-193	3-00			P	ROJ	ECT I		TION			NE	1/4 32-19-16		
	DATE	STARTED	08/12/2023		ETEI	D _	08/14/	2023	3 G	ROL	JND E	ELEVA	TION	_	767.74	m N 561	11502.200 E	416865	5.900
	DRILL	ING CONTRACT			/al's	Drilling			G	ROL	JND V	VATE	R ELE	VATIC	N / DEF	ΎН			
	CORI	NG TYPE	Other		ER (m	חm)			D	ATE	GRO	UND	WATE	R RE	CORDE	DC			
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ↓ ■	MOIST PLAST SPT (N 10 1 50 1	URE C IC - LIC) Blows 20 : 20 :	ONTENT QUID 5/300 mm 30 40 50 200	F	REMARKS	Standpipe/	Elevation (m)
-										-	~		POCKE	ET PEN	l (kPa)			~	× :
-1																			767- 766- 765- 764- 763- 763- 763- 763- 763- 763- 763- 763
Ē																			, 30-
	1	Notes:					ļ		Moni	itorir	ng Ins	tallat	tion P	ipe W	/ork				
		100 mm PVC	well installed t	o 25.9 m fo	or pı	umping	g test.	D	epth To	op	Dept	h Bo	ttom	Pip	е Туре				
									0.00 22.90			22.90 25.90)	P SLC	LAIN DTTED	Logged B Reviewed	by:	<u>C. Tams</u> C. Braun	

		MP		a divis	io	n of	Eng	Jlo	be						CO	RE	HOLE No : 23	CH702E PAGE 2 0F
	CLIEN PROJ	NT ECT NUMBER		Eastern Irr 1560	igatio)-193	on Distr 8-00	ict		P P	ROJ	ECT I	NAMI LOC#	E ATION	_		Sn	ake Lake Reservoir Expa NE 1/4 32-19-16	nsion
	DATE	STARTED _	08/12/2023		ETE	D _	08/14/	2023	3 G	ROL	JND E	ELEV	ATION	_	767.74	m	N 5611502.200 E	416865.900
	DRILL	ING CONTRAC	TOR	١	/al's	Drilling			G	ROL	JND V	VATE	RELE	VATIO	N / DEF	РΤΗ		
	CORII	NG TYPE _	Other	DIAMETE	ER (m	ım)			D	ATE	GRO		WATE	R REC	CORDEI	D		
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 50 1 POCKI	URE CI IC - LIC) Blows 20 3 00 1 ET PEN	ONTENT QUID /300 mm 30 40 50 200 (kPa)		REMARKS	Standpipe Instrumen Elevation
-11 -12 -13 -14 -15 -16 -17 -18 																	12 m - Used 10 m3 of water to drill. Seismic cap and wire found nearby. Water seeping out of ground 25 m away. Hole initially bridged off at 12 m, had to be reamed out.	757 756 755 754 753 752 751 750 750 749 749
		Notes: 100 mm PVC	well installed to	o 25.9 m fo	or pu	umpino	g test.		Moni enth Tr	torir	ng Ins	stalla	tion P	ipe W Pin/	ork			
					F 7	1	,		0.00	-h	Depi	22.9)	PIP			.ogged By: C	C. Tams
									22.90		2	25.9)	SLC	TTED	F	Reviewed By: C	. Braun

	Q	MP	5	a divis	io	n of	Eng	Jlo	be						COI	VEHOLE IN	10 . ZJ	PAGE 3	0F 3
	CLIEN	IT		Eastern Irri	gatio	on Distr	ict		P	ROJ	ECTI	NAM	E			Snake Lake Res	ervoir Expa	Insion	
	PROJ	ECT NUMBER		1560	-193	8-00			P	ROJ	ECTI		ATION			NE 1/4 3	2-19-16		
	DATE	STARTED _	08/12/2023		ETED	D _	08/14/	2023	<u> </u>	ROL	JND E	ELEV	ATION	_	767.74	m N 561150	2.200 E	416865.9	900
	DRILL	ING CONTRAC	TOR	V	/al's	Drilling			G	ROL	JND V	VATE	ER ELE	VATIC	N / DEF	PTH			
	CORII	NG TYPE _	Other	_ DIAMETE	R (m	ım)	1	1	D	ATE	GRO		WATE	R RE	CORDEI)			
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● □ ■	MOIST PLAST SPT (N 10 50 1 POCKE	URE C IC - LIC) Blows 20 : 00 1 -T PEN	ONTENT QUID 5/300 mm 30 40 50 200	REM	IARKS	Standpipe. Instrumen	Elevation
_													FUCK		(кга)				
-22 -22 -23 -24																			747- 746- 745- 744- 743-
																			742-
27 27 																			741
20 29																			739-
- F																			738-
_																			1 30-
	I	Notes:		0E 0 fr	<u> </u>				Moni	itorir	ng Ins	stalla	ation P	ipe W	/ork				
		IUU MM PVC	weil installed to	o ∠o.9 m to	л рі	umping	j iest.	D	epth To 0.00 22.90	qc	Dept	th Bo 22.9 25.9	ottom 0 0	Pip P SLC	e Type LAIN DTTED	Logged By:	(<u>C. Tams</u>	



	CLIEI	NT	Easte	ern Irrigat	ion Distr	ict		F	PROJ	ECTN	AME			:	Snake Lał	ke Reservoir Expa	ansior	1		
	PRO	IECT NUMBER		1560-19	3-00			F	PROJ	ECT L	.OCA	TION			N	E 1/4 32-19-16				_
	DATE	STARTED	06/21/2023 CC	MPLETE	D	06/21/	2023		GRO	JND E	LEVA	TION	_	767.59n	n_N_5	610313.300 E	41	6850).200	_
	DRIL	LING CONTRACT	OR	Val's	Drilling			0	GRO	JND W	VATE	R ELE	/ATIOI	N / DEPT	н					_
	CORI	NG TYPE	HQ3 DIA	METER (I	mm)	61		C	DATE	GRO	UND	WATE	R REC	ORDED						_
Depth (m)	SOIL SYMBOL	C	Soil Description	Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTU PLASTI SPT (N) <u>10 2</u> 50 10 POCKE	JRE CC C - LIQ Blows/ 0 30 15 T PEN	DNTENT UID 300 mm 0 40 0 200 (kPa)		REMARKS		Standpipe/	Elevation	(m)
- - - - - - - - - - - - - - - - - - -		TOPSOIL, san firm, low plastic hairs SAND AND SII grained, sub-rc loose, brown 1.0 m - becor	dy, some silt, damp c, brown, trace root T, poorly graded, fi bunded, damp, very ning moist	, ne ■	AU1 AU2 SPT1					5.5 15.0	•	•			1.2 m 62.9%	- Sand =			767	7-1-1
-2		2.3 m - SEEF 2.5 m - becor	PAGE ning very moist	=	AU3 AU4 SPT2					20.3 27.8			•		2.1 m 31.0%	Clay = 14.2% - Sand = Silt = 54.1% Clay = 14.9%			765	5
- - - - - - - - - - - - - - - - - - -		up to 50 mm, v plastic, dark br	y, sandy, trace grav ery moist, stiff, med own	dium	AU5					20.9			•		3.7 m 14.0% 3.7 m	- Gravel = - - Sand =			764	4
		4.2 m - becor sandy, some gr SHALE, silty, c weathered, gre extremely weat spaced fracture	ning coarse grained avel layey, slightly y, damp, high plast k, moderately widel es, thinly laminated	ic, y	AU6 RC1 SPT3	4.50 - 6.02	1	14 49 46	2	24.7			•		45.7% 3.7 m Classi % Dis	Silt = 29.3% Clay = 11.0% - Dispersivity ification = ND3 persion = %			763	3
		4.5 m - 780 n 5.6 m - 49° fr 6.2 m - becor 6.5 m - 73° fr 6.7 m - some	nm of core loss acture ning unweathered acture crumbled core		RC2	6.02 - 7.54	2	23 96 69	3						4.3 m 15.6% 4.3 m 47.4%	- Gravel = - Sand = Silt = 26.0% Clay = 11.0%			762 761	2
		7.5 m - 60 mr 7.5 m - becor cemented layer 7.6 m - 59° fr 8.2 m - 39° fr	n of core loss ning some thin wea 's acture acture	ıkly	RC3	7.54 - 9.06	3	22 100 91	2										760	0
- - - - - - - - - - - -		9.1 m - becor 9.9 m - 74° fr	ning very weak acture		RC4	9.06 - 10.58	4	54 100 92	3										758	8
	I	Notes:				Mon	itorir	na Ins	tallat	ion Pi	pe W	ork				<u> </u>				
11/01/2024	1	Target depth of after coring. Co	f 25 m achieved. Pa ompleted as a well,	acker tes refer to	st comp diagran	leted n.	D	epth T 0.00 24.10	op	Depti 2 2	h Boi 24.10 25.60	ttom	Pipe PL SLO	AIN TTED	Logged Review	By:	<u>C. Ta</u> C. Bra	<u>.ms</u> aun		_



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	CLIEN	NT	I	Eastern Irrig	gati	on Distri	ct		F	PROJ	ECT	NAME	Ξ			Snal	ke Lak	e Reservo	ir Ex	xpan	sion		
	PROJ	ECT NUMBER		1560-	193	3-00			F	PROJ	ECT	LOCA	TION	_			N	E 1/4 32-1) -16	;			_
	DATE	STARTED	06/21/2023	COMPLE	TE	D	06/21/	2023	<u> </u>	GROL	JND E	ELEV	ATION	-	767.59r	n	N_5	610313.30	0	Ε_	41685	50.200	
	DRILL	LING CONTRACT	OR	Va	al's	Drilling			(GROL	JND \	VATE	R ELE	VATIO	ON / DEP	TH -							—
	CORI	NG TYPE	HQ3		ר (n	nm)	61		[GRO		WATE	R RE	CORDED	-							
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 50 1 POCKI	URE C IC - LIC I) Blows 20 100 1 <u>ET PEN</u>	CONTENT QUID s/300 mm 30 40 150 200 V (kPa)			REMAR	KS		Standpipe/	Instrument Elevation	(m)
Ē		10.1 m - 76° 1	fracture																				
- - - - - - - - - - - - - - - - - - -		10.6 m - 80 m core 11.0 m - bedc 11.2 m - sub- 11.5 m - 55° f	nm of extremely ling fracture vertical fracture iracture	y weak		RC5	10.58 - 12.10	5	61 101 72	3												75 75	.7-
		11.8 m - verti 12.1 m - mec 12.4 m - 75° 1	cal fracture hanically fractu fracture	ired run		RC6	12.10 - 13.62	6	42 100 94	1												75	;5-
		13.0 m - 42° 1 13.1 m - becc 13.6 m - mec 13.7 m - becc	fracture oming extremel hanically fractu oming very wea	y weak ired run ik		RC7	13.62 - 15.14	7	7 101 91	2												75	- - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -		15.3 m - 65° 1	fracture			RC8	15.14 - 16.66	8	21 100 89	2												75 75	.3-
10		16.2 m - 75° 1 16.7 m - 40 n 17.0 m - 76° 1	fracture nm of crumbled fracture	l core		RC9	16.66 - 18.18	9	0 100 93	1												75	i1-i-i-i-i-i-i-i-i-i-i-i-i-i-i-i-i-i-i-
		17.8 m - 67° 1 18.6 m - bedo 18.7 m - som	fracture ding fracture e crumbled cor	e		RC10	18.18 - 19.70	10	37 100 89	3												75 74	9-
		19.1 m - 67° 1	fracture			RC11	19.70	11	26	2												74	8—
		Notes:							Mon	itorir	ng Ins	stalla	tion P	ipe V	Vork]							
11/01/2024	4	Target depth of after coring. Co	f 25 m achieved ompleted as a v	d. Packer t well, refer t	tes to (t comp diagran	leted n.	D	epth T 0.00 24.10	ōр)	Dep	th Bo 24.10 25.60	ottom))	Pip P SL(e Type LAIN DTTED	Lo Re	ogged eviewe	By: ed By:		<u> </u>	<u>. Tams</u> Braur		_


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	CLIEI	NT		Eastern Irrig	ation Distr	ict		I	PROJ	ECTI	NAME	Sna	ake Lake Reservoir I	Expan	sion	
	PRO	IECT NUMBER		1560-1	93-00				PROJ	ECTI			NE 1/4 32-19-1	6	440050	
	DATE		06/21/2023	_ COMPLET	ED	06/21/	2023	3	GROU				N 5610313.300	_ E _	416850.4	200
			UR			6,	1									
	Т		ΠQ3					'		GRU						
Depth (m)	SOIL SYMBOL	D	Soil escription	F F	Sample Type Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	 MOIST ⊢ PLAST SPT (N 10 50 POCK 	URE CONTENT IC - LIQUID I) Blows/300 mm 20 30 40 100 150 200 ET PEN (kPa)	REMARK	3	Standpipe Instrumen	Elevation (m)
-		20.2 m - 60° f	racture		I	-		100								
-21		20.7 m - 180 calcified shale 20.8 m - 58° f 21.9 m - bedc 22.0 m - 70° f	mm of very stro fracture ling fracture fracture	ong	RC12	21.22	12	51 100 95	1							747
-23		22.7 m - 60 m 22.9 m - beco spaced fracture 23.0 m - 80° f	nm of core loss oming weak, wi s racture e crumbled cor	dely	RC13	22.74 - 24.26	13	80 96 91	1							745-
-24 25 26		24.6 m - som 25.0 m - 36° f	e crumbled cor racture	e	RC14	24.26 25.78	14	33 100 94	2							743-
																741-
27 																740-
-28																
																739-
																738–
	1	Notes:				L		Mor	nitorin	na Ins	tallation F	Pipe Work				<u> </u>
11/01/2024	4	Target depth of after coring. Co	25 m achieved ompleted as a v	d. Packer to well, refer to	est comp o diagrar	leted n.	D	epth 7 0.00 24.10	Top 0 0	Dept	h Bottom 24.10 25.60	Pipe Type PLAIN SLOTTED R	ogged By: eviewed By:	C.	<u>. Tams</u> Braun	



	CLIEI	NT		Eastern Irri	gatio	on Distri	ct		F	PROJ	ECTI	NAM	E			Sna	ke La	ke Resei	voir E	xpan	sion		
	PRO	JECT NUMBER		1560	-193	3-00			F	PROJ	ECT I		ATION				N	E 1/4 32	-19-1	6			
	DATE	STARTED	06/13/2023		TE	D	06/14/	2023	<u> </u>	BROL	JND E	ELEV	ATION	_	771.21	m	N_5	5609474	300	Ε_	416	207.2	.00
	DRIL	LING CONTRACT	OR	V	al's	Drilling			0	ROL	JND V	VATE	R ELE	VATIC	N / DEP	тн							
	CORI	ING TYPE	HQ3	DIAMETE	R (m	nm)	61		C	DATE	GRO	UND	WATE	R REC	CORDE								
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCK	TURE C TIC - LIC I) Blows 20 3 100 1 ET PEN	ONTENT QUID 5/300 mm 30 40 50 200 I (kPa)			REMA	ARKS	3	Ctondaria Ctondaria	Instrument	Elevation (m)
		CLAY, silty, sor medium plastic SHALE (Weath highly weather mottling, down	ne sand, damp c, light brown nered), clayey, ed, dark browr	o, stiff, silty, n to grey	Ŧ	AU1																	771
	· · · · · · · · · · · · · · · · · · ·	weak to hard s laminated, som trace white pre crystals	, high plastic, e oil, blocky, thin ne oxidation sta cipitates, trace	aining, gypsum	= X	AU2 SPT1																	770
- 2 					= =	AU3 AU4																	769
-3		3.3 m - 70° fr <u>3.4 m - some</u> SHALE, clayey weathered, dar mottling, damp	acture crumbled core , silty, moderat k brown to gre , high plastic, e	e tely ey extremely	Ĭ	RC1 SPT2	3.00 - 4.52	1	89 100 93	4													768
- 4 		fractures, thinly oxidation staini crystals 4.0 m - 78° fr. 5.1 m - horizo	/ laminated, so / laminated, so ing, trace gyps acture ontal fracture	cea ome sum		RC2	4.52 - 6.04	2	96 97 96	3													767
- - - - - - - - - - - - - - - - - - -		5.4 m - 64° fr 5.6 m - 56° fr 5.7 m - 72° fr 6.0 m - 40 mr 6.2 m - sub-h 6.4 m - 74° fr 6.5 m - mech	acture acture acture n of core loss orizontal fractu acture anically fractur	ure		RC3	6.04 - 7.56	3	66 97 70	7													765
		6.8 m - 50 mr 7.0 m - 77° fr 7.2 m - 60° fr 7.5 m - 60 mr 7.7 m - becor oxidation staini	m of crumbled acture acture m of core loss ning grey, trac ng	e		RC4	7.56 - 9.08	4	59 84 70	3													764-
		8.1 m - 34 [°] fr 8.2 m - becor 8.4 m - 74° fr 8.6 m - 70° fr 8.8 m - 240 n 9.1 m - becor weak 9.7 m - 42° fr 9.8 m - 74° fr	acture ning very weal acture acture ning core loss ning slightly we acture acture	k s eathered,		RC5	9.08 - 10.60	5	80 100 84	5													763
		Notes: Target depth of	f 20 m achieve	d. Packer	tesi	t comp	eted	D	Mon epth T	itorir op	ig Ins Dept	stalla th Bo	ation F	Pipe W	/ork e Type								
		after coring. Co diagram.	prehole comple	eted as a v	vell,	, refer t	0		0.00			18.5	0	P		Lo	ogged	By:		C.	. Tarr	IS	
diagram. 18. 18.50 20.												20.0	<u> </u>			Re	eview	ed By:		<u> </u>	Brau	<u>in</u>	



	CLIE	NT		Eastern Irri	igati	ion Distr	ict		F	PROJ	ECT	NAM	IE	_		Sna	ake La	ake Res	ervoir E	Expan	sion		
	PROJ	IECT NUMBER		1560	-19	3-00			F	PROJ	ECT	LOC	ATION	_			1	NE 1/4 3	2-19-1	6			
	DATE	STARTED	06/13/2023	COMPLE	ETE	D	06/14/	2023		ROL	JND E	ELEV	ATION	_	771.2	21m	N	560947	4.300	E	416	207.2	:00
	DRILI	LING CONTRACT	OR		/al's	Drilling			Ģ	ROL	JND \	NATI	ER ELE	VATIO) DN / DE	PTH							
	CORI	NG TYPE	HQ3	DIAMETE	ER (r	nm)	61		C	DATE	GRO) WATE	R RE	CORD	ED							
	1			_	Ň	,					-	T										s t	
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKI	URE C IC - LIC) Blows 20 : 100 1 ET PEN	ONTEN QUID 5/300 m 30 4 50 20	m 0 00		REM	IARKS	3	Ctandara C	סיושוישי Instrumen	Elevation (m)
-		10.1 m - becc	oming some ve	ry thin																			761-
- - - 		weakly cement 10.4 m - 41° 10.7 m - 75° 10.8 m - becc	ed layers fracture fracture oming unweath	ered,		RC6	10.60 - 12.12	6	93 100 100	2													760
		11.4 m - 69° f	fractures, unox fracture	odized																			-
		12.1 m - becc strong	oming moderat	ely		RC7	12.12 - 13.64	7	100 100 100	1													759
13 		13.0 m - horiz 13.3 m - horiz	zontal fracture zontal fracture			RC8	13.64	8	100	1													758
		14.1 m - 76°	fracture				- 15.16		100														757
E		14.4 m - noriz	zontal fracture																				_
15 		15.6 m - 61°	fracture			RC9	15.16 - 16.68	9	76 84 78	2													756
-16		15.7 m - 73°	fracture																				-
- - - - - - - - - - - - - - - - - - -		16.2 m - horiz extremely weał 16.4 m - 240 16.7 m - 100 16.8 m - verti	zontal fracture < clay infill mm of core los mm of crumble cal fracture	with ss ed core		RC10	16.68 _ 18.20	10	71 96 86	1													755
																							-
		18.0 m - 35° 1 18.1 m - 60 n	fracture nm of core loss fracture	5		RC11	18.20 - 19.72	11	85 100 86	1													753-
-19		10.0 III - 20	nacture																				-
		19.5 m - 41° 19.8 m - 200 calcified shale 19.9 m - 60 n	fracture mm of very str nm of crumbled	ong d core		RC12	19.72	12	39	2													752
		Notes:					•		Mon	itorir	ng Ins	stall:	ation P	ipe V	/ork								
	epth T	op	Dep	th B	ottom	Pip	е Тур I ДІЛ	e		d D		~	Ter										
		diagram.	,						18.50		:	20.0	0	SLO	DTTE		ogge	а Ву:		<u> </u>	<u> </u>	IS	
11/01/2024	1															R	eviev	ved By:		<u> </u>	Brau	IN	

	CLIEN	ΝT		Eastern Ir	rigatio	on Distr	ict		P	ROJ	ECTN	NAME				Sna	ake Lake Reservoi	r Expansio	n	
	PROJ	ECT NUMBER		156	0-193	3-00			P	ROJ	ECTL	OCA	TION				NE 1/4 32-19	-16	40007	
	DATE	STARTED	06/13/2023	COMPL	ETE	D	06/14/	2023	<u> </u>	ROL					771.2	1m	_ N _ 5609474.300) E _4	16207.3	200
				DIAMET	Val's	Drilling	0.		6	ROU					N / DE	PIH				
	CORII		HQ3		ER (m	1m)	6	1		AIE	GRO	UND	WAIE	K REC	ORDE	<u>י</u> ש ד			t /	 T
Depth (m)	SOIL SYMBOL	E	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOISTU PLASTI SPT (N) <u>10 2</u> 50 10	JRE CC C - LIQ Blows/ 20 3 00 15	ONTEN UID /300 mr <u>0 4(</u> 50 20	T n <u>)</u> 0	REMAR	٨S	Standpipe Instrumen	Elevation (m)
		20.1 m - 78° 20.4 m - sub- 20.5 m - 50 n bentonitic clay 20.6 m - 620	fracture horizontal frac nm of extreme mm of core lo	cture ely weak			21.24		59 43					I PEN	<u>(kPa)</u>					751-
22 																				749-
																				748-
																				746-
26																				745-
27																				744-
- 28 																				743-
29 																				742-
								L					i 							
		Notes:	f 20 m achiow	od Packa	r too	toomn	lotod		Mon	itorir	ig Ins	talla	tion Pi	pe W	ork					
		after coring. Co	prehole compl	eted as a	well	, refer	to	D	epth To	op	Dept	h Bo	ttom	Pipe ID		<u>.</u>	. 5	<u> </u>		
		diagram.							18.50		2	20.00)	SLO	TTEC) R	oggea ву: eviewed By:	C. Ia C. Br	ams raun	



COREHOLE No : 23CH704B

	CLIE	NT		Eastern Irri	igati	on Distri	ct		P	ROJ	ECT	NAME	Ξ			Sna	ake Lake Reservoir	Expar	nsion		_
	PROJ	JECT NUMBER		1560	-193	3-00			P	ROJ	ECT I		TION				NE 1/4 32-19-	16			_
	DATE	STARTED	06/16/2023		ETE	D _	06/17/	2023		ROL	JND E	ELEVA	ATION	_	771.3	2m	N 5609458.400	_ E .	41620	94.500	_
	DRILI	LING CONTRACT	OR	V	/al's	Drilling			0	ROL	JND V	VATE	R ELE	VATIO	N / DE	PTH					_
	CORI	NG TYPE	HQ3	DIAMETE	R (n	nm)	61	1	C	ATE	GRO	UND	WATE	R REC	ORDE	D					_
Depth (m)	SOIL SYMBOL	D	Soil Jescription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCK	TURE CC TIC - LIQ I) Blows/ 20 3 100 15 ET PEN	DNTEN ⁻ UID /300 mn <u>0 40</u> 50 200 (kPa)	Г 1 0 D	REMARK	S	Standpipe/	Elevation	(m)
		TOPSOIL, silty, frace gravel, dr brown, trace ro SHALE, clayey weathered, bro damp, high plas hard soil, block some oxidation crystals, trace v SHALE, silty, cl weathered, bro	, sandy, some y, firm, low pla ot hairs ; silty, complet wn to grey mc stic, extremely sy, thinly lamin: n staining, trac white precipita layey, modera wn to dark gre	clay, astic, light tely ottling, / weak to ated, e gypsum tes tely ey		AU1 AU2 RC1	1.50 - 3.02	1	63 75 64	1							1.5 m - No samp kept this hole.	les		771 770 769	
		mottling, damp, weak, moderati fractures, thinly oxidation staini crystals 1.5 m - 380 m 1.9 m - 56° fra 3.2 m - 100 m	, high plastic, (ely widely spa (laminated, sc ng, trace gyps nm of core los: acture nm of mechan	extremely ced ome sum s ical rubble		RC2	3.02 - 4.54	2	62 99 80	2										768	
		3.5 m - 80 mr 4.5 m - mech	n of mechanic anically fractu	al rubble		RC3	4.54 - 6.06	3	55 100 95	1									I	767 766	
		6.1 m - 220 m	ım of core loss	S		RC4	6.06 - 7.58	4	19 86 46	2				-					I	765	
		7.2 m - becon grey 7.6 m - mech	ning slightly w anically fractu	eathered, red run		RC5	7.58 - 9.10	5	0 100 66	2									I	764 763	
		9.1 m - mecha 9.4 m - becon	anically fractur ning very wea	red run k		RC6	9.10 - 10.62	6	23 89 72	2				-						762	
		Notes:							Mon	itorin	ng Ins	stalla	tion F	ipe W	ork	7			I		
11/01/2024	1	Target depth of a well, refer to o	[°] 25 m achieve diagram.	d. Coreho	ole c	omplet	ed as	D	epth To 0.00 16.00	op	Dept	h Bo 16.00 19.00	ottom))	Pipe PL SLO	e Type AIN TTEC	, Lo , R	ogged By: eviewed By:	C C	<u>. Tams</u> . Braun		_



COREHOLE No : 23CH704B

	CLIEN	T	E	Eastern Irrig	ation Dis	trict		F	PROJ	ECT	NAME		Sna	ake Lake	Reservoir I	Expan	sion	
	PROJ	IECT NUMBER		1560-1	93-00			F	PROJ	ECT I	LOCATIO	N		NE	1/4 32-19-1	6		
	DATE	STARTED	06/16/2023	COMPLET	ED _	06/17/	2023	<u> </u>	GROL	JND E	ELEVATIO	N _	771.32m	N_560	09458.400	_ E _	416204	.500
	DRILL	ING CONTRACT	OR	Va	l's Drilling	9			GROL	JND V	WATER EL	LEVATIC	N / DEPTH					
	CORI	NG TYPE	HQ3	DIAMETER	(mm)	6	1		DATE	GRO	UND WAT	TER REC	CORDED					
Depth (m)	SOIL SYMBOL	C	Soil Description	F	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	 MOIS ⊢ PLAS SPT 10 50 POC 	STURE C STIC - LIC (N) Blows 20 3 100 1 CKET PEN	ONTENT 2UID 3/300 mm 30 40 50 200 ((kPa)	F	REMARK	3	Standpipe/ Instrument	Elevation (m)
		10.4 m - 170 11.2 m - becc widely spaced f	mm of core los oming unweathe fractures, unoxe	s ered, odized	RC7	10.62	7	89 93 93	1									761
		12.0 m - 100 12.7 m - 62° 1	mm of core los fracture	s	RC8	12.14 - 13.66	8	100 100 100	1									759
		13.7 m - becc 13.8 m - 78° 14.0 m - 71°	oming weak fracture fracture		RC9	13.66 - 15.18	9	100 100 100	2									758
15 15 		14.8 m - 68° t 15.2 m - becc cemented layer 15.5 m - 66° t 15.6 m - 44° t	fracture oming some thi rs fracture fracture	n weakly	RC10) 15.18 - 16.70	10	95 105 98	1									756
		17.3 m - 74° 1	fracture		RC11	16.70 - 18.22	11	93 101 96	1									755
- 		18.6 m - bedo	ding fracture		RC12	2 18.22	12	91 93 91	1					19 m - F in - insta	Hole sloug	hed		753
- - - - - -		19.4 m - 150 shale 19.6 m - 100	mm of strong c	alcified s	RC13	3 19.74	13	67	1					19 m.				752
11/01/2024	4	Notes: Target depth of a well, refer to	f 25 m achieved diagram.	d. Corehole	e comple	eted as	D	Mon epth T 0.00 16.00	itorir op	ng Ins Dept	stallation th Botton 16.00 19.00	Pipe W n Pipe Pl SLC	/ork e Type LAIN Lo DTTED R	ogged B eviewed	by:	<u> </u>	. Tams Braun	



COREHOLE No : 23CH704B

PAGE 3 0F 3

	CLIEN	NT	Ea	astern Irriga	tion Distr	ict		F	PROJ	ECTI	NAM	E			Snake	e Lake R	eservoir E	Expan	sion	
	PROJ	IECT NUMBER		1560-19	93-00			F	PROJ	ECTI	LOCA	ATION	_			NE 1/	4 32-19-1	6		
	DATE	STARTED	06/16/2023	COMPLET	ED	06/17/	2023	<u> </u>	GROL	JND E	ELEV	ATION	_	771.32r	n	N_5609	458.400	E	416204	.500
	DRILI	ING CONTRACT	OR	Val	s Drilling				GROL	JND V	NATE	RELE	VATIO	N / DEP	тн _					
	CORI	NG TYPE	HQ3	DIAMETER ((mm)	61	1		DATE	GRO	UND	WATE	R REC	CORDED) _					
Depth (m)	SOIL SYMBOL	E	Soil Description	Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOISTI PLASTI SPT (N) 10 2 50 11 POCKE	URE CI IC - LIC) Blows 20 3 00 1: ET PEN	ONTENT QUID 5/300 mm 30 40 50 200 I (KPa)		RI	EMARK	6	Standpipe/ Instrument	Elevation (m)
- - - - - -		20.3 m - bedo 20.4 m - beco strong	ding fracture oming moderatel	у		- 21.26		70 67												751-
21		20.8 m - 450 recovered on n 21.4 m - 100 21.5 m - 69° t 21.6 m - becc spaced fracture	mm of core loss ext run mm weak layer fracture oming very widel es	, У	RC14	21.26 - 22.78	14	126 126 126	1											750
-23					RC15	22.78 - 24.30	15	112 112 112	0											748-
-24		25.7 m 80 m	nm of coro loss		RC16	24.30 	16	95 95 95	0											747
-26 		4 <u>.20.7 m - 00 m</u>																		745
- - - - - - - - - - - - - - - - - - -																				744
																				742
		Notoo																		
11/01/2024	4	Target depth of a well, refer to	f 25 m achieved. diagram.	Corehole	complet	ted as	D	Mon epth T 0.00 16.00	itorir op	ng Ins Dept	stalla th Bc 16.00 19.00	ottom D D D	ipe W Pipe Pl SLC	/ork e Type LAIN DTTED	Log	gged By viewed I	 Зу:	C.	. Tams . Braun	



	CLIEI	NT	E	astern Irri	gati	on Distri	ict		F	PROJ	ECTI	NAME				Sna	ke Lake Reserv	oir Ex	pan	sion		
	PRO	JECT NUMBER		1560-	-193	3-00			F	PROJ	ECTI	LOCA	TION				NE 1/4 32-1	9-16				
	DATE	STARTED	06/12/2023	COMPLE	TE	D	06/12/	2023	(GROL	JND E	ELEVA	TION		776.43	m	N 5609460.7	00	Ε_	41498	6.100)
	DRILI	LING CONTRACT	OR	V	/al's	Drilling			0	GROL	JND V	VATE	R ELE	VATIO	V / DEP	TH .						
	CORI	ING TYPE	HQ3	DIAMETE	R (n	nm)	61	I	[DATE	GRO	UND	WATE	R REC	ORDED) .						
Depth (m)	SOIL SYMBOL	D	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTI PLASTI SPT (N) 10 2 50 1 POCKE	URE CC C - LIQI) Blows/2 20 30 00 15 T PEN	DNTENT JID 300 mm 0 40 0 200 (kPa)		REMAR	RKS		Standpipe/	Elevation	(m)
		TOPSOIL, clay trace gravel, m plastic, brown, CLAY TILL, sar gravel, moist, v plastic, brown, staining, trace grey mottling, c extremely weat thinly laminated staining, trace gypsum crystal 2.0 m - becon dark grey 3.4 m - horized crumbled core SHALE, clayey weathered, gre extremely weat	ey, sandy, some oist, stiff, mediut trace root hairs ndy, silty, trace f rery stiff, mediur some oxidation gypsum crystals lered), clayey, s athered, dark br damp, high plast k to hard soil, bl d, some oxidatic white precipitate s ning highly wea ontal fracture with s, silty, highly y, damp, high plast k, blocky, closel es thinly lamina	e silt, m ine n s wilty, own to tic, oocky, yn es, trace thered, th some lastic, y ted		AU1 AU2 SPT1 AU3 AU4 SPT2 RC1 RC2	3.10 - 4.62 4.62 -	1	82 100 95 91	5							3.5 m - Switch otary coring	ed to			דד דד דד דד דד	74 773 773 773
		some oxidation crystals 3.8 m - horizo 3.8 m - horizo 4.2 m - 80° fra 4.4 m - becon weathered 4.6 m - 70 mr 4.7 m - 88° fra 4.8 m - becon	es, thinly lamina e staining, trace ontal fracture n bentonite sea acture ning moderately n of mechanica acture ning slightly wea	rea, gypsum m / I rubble athered,		RC3	6.14 6.14 - 7.66	3	100 95 71 100 75	4											77 77	
		very weak, moc fractures, unoxo 5.7 m - 84° fra 6.1 m - 200 m 6.3 m - 300 m fractured area 6.6 m - 53° fra crumbled core	derately widely s odized acture nm of slough nm mechanically acture followed	spaced / by		RC4	7.66 - 9.18	4	9 50 17	20			-								76 76	39
		6.7 m - 51° fra 6.9 m - 68° fra 7.0 m - 39° fra 7.5 m - becon cemented layer	acture acture acture ning some thin v s	weakly		RC5	9.18 - 10.70	5	92 100 95	3											76	37-
		Notes:							Mon	itorin	ig Ins	stallat	tion Pi	pe Wo	ork	1						
11/01/2024	1	Target depth of after coring. Co diagram.	[:] 15 m achieved prehole complet	. Packer ed as a v	tes vell	t compl , refer t	leted o	D	epth T 0.00 12.20	ōp)	Dept	th Bot 12.20 15.20	ttom	Pipe PL SLO	Type AIN TTED	Lo Re	ogged By: _ eviewed By: _		<u>С</u> .	<u>. Tams</u> Braun		



	CLIEN	NT		Eastern Irr	igati	on Distr	ct		F	PROJ	IECT	NAME				Snake	e Lake Re	servoir E	Expan	sion	
	PROJ	IECT NUMBER		1560	-193	3-00			F	PROJ	IECT	LOCA	TION				NE 1/4	32-19-1	6		
	DATE	STARTED	06/12/2023		ETE	D _	06/12/	2023	<u> </u>	GROU	JND E	ELEVA	TION		776.43n	<u>n</u> N	N 56094	60.700	Ε.	414986	.100
	DRILL	ING CONTRACT	OR	١	/al's	Drilling			0	GROL	JND \	NATEI	R ELE	VATIO	N / DEPT	н _					
	CORI	NG TYPE	HQ3	DIAMETE	R (n	nm)	61		C	DATE	GRC	UND	WATE	R REC	ORDED						
Depth (m)	SOIL SYMBOL	E	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 2 50 1 POCKE	URE CO IC - LIQ) Blows 20 3 00 15 ET PEN	ONTENT UID /300 mm 0 40 50 200 (kPa)		RE	MARKS	6	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		7.7 m - mecn 7.9 m - 360 n 8.3 m - 760 n 9.2 m - mech 9.5 m - 74° fr 9.5 m - becor weak 9.8 m - 73° fr vertical fracture	anically fracture nm of crumbled nm of core loss anically fracture acture ning unweathe acture followed	ed area I core ed run red,		RC6	10.70 - 12.22	6	86 96 88	3											766
12		10.4 m - 63° 10.5 m - 76° f 11.0 m - 76° f 11.1 m - becc moderately stro 11.8 m - 81° f	fracture fracture fracture oming very silty ong fracture	,		RC7	12.22 - 13.74	7	95 100 100	2											764-
-14 -15 15 		11.8 m - 50 m 11.9 m - 100 12.0 m - 140 shale 12.2 m - 60 n 12.4 m - 73° 12.5 m - 40° fractures 13.7 m - becc 14.6 m - 74° 14.6 m - 74° 14.9 m - horiz some crumbled 15.2 m - 60 n	am of crumbled mm of bentonit mm of strong c and of core loss fracture fracture poming very clay fracture zontal fracture v tore and of core loss	core tic clay calcified		RC8	13.74	8	96 96 96	2											763 761 760 759 758 758
Ē																					-
├		Notes:							Marc	ite -l			lior D	ine 14	ork						
11/01/2024	4	Target depth of after coring. Co diagram.	f 15 m achieved prehole comple	d. Packer ted as a v	tes well	t comp , refer t	leted o	D	epth T 0.00 12.20	op	Dep	th Bo 12.20 15.20	ttom	Pipe VV Pipe PL SLC	Type AIN TTED	Logo Rev	ged By: iewed B	y:	C C.	<u>. Tams</u> Braun	



	CLIE	NT		Eastern Irrig	gati	on Distr	ct		F	PROJ	ECT	AME		Snake Lake Reservoir Expa	nsion
	PROJ	IECT NUMBER		1560-	-193	3-00			F	PROJ	ECTL	OCATION		NE 1/4 32-19-16	
	DATE	STARTED	06/28/2023		TE	D	06/28/	2023	<u> </u>	GROI	JND E	LEVATION	782.50m	N 5611622.400 E	414331.600
	DRILI	LING CONTRACT	TOR	V	al's	Drilling			(GROI	JND V	VATER ELE	EVATION / DEPT	Ή	
		NG TYPE	HQ3		R (n	nm)	61		C		GRO	UND WATE	RRECORDED		
Depth (m)	SOIL SYMBOL	[Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	 MOIST ⊢ PLAST ■ SPT (N 10 50 POCK 	TURE CONTENT TIC - LIQUID I) Blows/300 mm 20 30 40 100 150 200 ET PEN (kPa)	REMARKS	Standpipe/ Instrument Elevation
1 1 2		clay, damp, firr trace root hairs CLAY TILL, sili gravel, damp, plastic, brown, trace white pre	ay, some sint, s n, low plastic, t s ty, sandy, trace very stiff, media trace oxide sp ccipitates ming some con	fine um ecks,	=	AU1 AU2 SPT1 AU3					8.4 11.2 11.4	•		 2.1 m - LL = 51.7%	782 ⁻ 781 ⁻
		weathered sha 2.2 m - trace 2.5 m - some 2.6 m - becou SHALE (Weath moderately we	le inclusions bentonite inclu red ironstone ming trace coal nered), silty, cla athered, grey	isions staining I staining ayey, damp	= X	AU4 SPT2					14.8	•		PL = 18.8% PI = 32.9% 2.1 m - Gravel = 5.3% 2.1 m - Sand =	780
- - - - - - 4 -	· · · · · ·	high plastic, ex spaced fractur some oxidatior	stremely weak, es, thinly lamin staining, trace	closely ated, e gypsum	=	AU5					13.6	•		Silt = 24.4% Clay = 24.5% 2.1 m - Dispersivity Classification = ND3	779
		4.4 m - 80 m 4.5 m - 100 r 5.0 m - 60° fr 5.1 m - 52° fr 5.6 m - 72° fr 5.9 m - 100 r	m of core loss nm of crumbled acture acture acture nm of crumbled	d core		RC1	4.42 - 5.94	1	58 95 82	4	14.1	•		% Dispersion = 4% 2.7 m - Dispersivity Classification = D2 % Dispersion = 4% 3.7 m - Gravel = 0.3%	778
		6.3 m - 79° fr 6.4 m - mech \$HALE, silty, c weathered, gre extremely wea fractures, thin!	acture anically fractur layey, slightly ey, damp, high k, medium spa y laminated, so	ed area plastic, ced me		RC2	5.94 - 7.46	2	25 100 75	4				3.7 m - Sand = 14.3% Silt = 40.8% Clay = 44.6% 3.7 m - Dispersivity Classification = ND3	776
- - - - - - - - - - - - - - - - - - -		crystals 7.5 m - 70 m 7.6 m - beco 7.9 m - 70° fr 8.4 m - bedd	m of core loss ming very weak acture ing fracture witl	unn ‹ h gypsum		RC3	7.46 - 8.98	3	49 95 78	3				% Dispersion = 4%	775
		lense 8.6 m - 55° fr 9.0 m - 100 n 9.2 m - becor moderately wic unoxodized 9.3 m - mech 9.9 m - 68° fr	acture nm of core loss ming unweathe lely spaced frac nanically fractur acture	s ered, ctures, red area		RC4	8.98 - 10.50	4	68 93 85	2					774
11/01/2024	1	Notes: Target depth o after coring. Co diagram.	f 10 m achieve orehole comple	d. Packer eted as a v	tes vell	t comp , refer t	leted o	D	Mon epth T 0.00 0.00	itorir op	ng Ins Dept	tallation F h Bottom 3.50 8.50	Pipe Work Pipe Type PLAIN PLAIN	Logged By:0	C. Tams

		MP		a divis	sio	n of	Eng	jlo	be						СО	RE	HOLE No :	23CH	-17 GE 2	062 0F 2
				Fastern Irr	icati	on Dietr	ict		D		ECT		F			Sn	aka Laka Reservoir F	Typansion		
				1560	1940				'		ECTI					On		c		
			00/00/0000	00000	-193	<u></u>	00/00/	0000							700 5	0	NE 1/4 32-19-1	0	221 6	
		SIARIED _	06/28/2023			D	06/28/	2023	<u> </u>						782.5		_ N	E _ +14	551.0	
	DRILL				val's	Drilling			(ROU	JND V	VAIE	RELEV	AHO	N/DE	PIH				
	CORI	NG TYPE _	HQ3		ER (n	nm)	6	1	C	DATE	GRO	UND	WATER	REC	ORDE	Đ				
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOISTU PLASTIC SPT (N) <u>10 20</u> 50 10 POCKET	IRE CO C - LIC Blows 0 3 10 11 T PEN	ONTEN UID /300 mn 60 40 50 20 (kPa)	n D O	REMARKS	25 20 20 20 20 20 20 20 20 20 20 20 20 20	standpipe/ Instrument	Elevation (m)
È		10.1 m - bed	Iding fracture v	with some																
Ē		shell fragment	S		┦╹╹															772-
E11															ļļ.					-
Ē																				
E																				771-
-12																				
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-13																				
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E 18																				
F																				764-
Ē																				
19 																				
ŧ																				763-
Ē																				
Ē		Nataa													. '	_				
		NOTES: Target depth of	of 10 m achiev	ed Packor	r ter	t comp	leted	-	Mon	itorir	ng Ins	talla	tion Pip	pe W	ork					
		after coring. C	orehole comp	leted as a	well	, refer	to		epth To	ор	Dept	n Bo 3 50	ottom	Pipe PI	e Type _AIN		agod Dyr	<u>с</u> т		
		diagram.							0.00			8.50		Pl	AIN				15	
11/01/2024	4															R	eviewed By:	C. Brau	un	



PROJECT NUMBER 1500-133-00 PROJECT LOCATION Itel 14 32:19-16 DATE STARTED 00202223 COMPLETED 00202223 GROUND ELEVATION 770.0m N 511867.700 E 41481.500 DRILLING CONTRACTOR Main During GROUND WATER RECORDED GROUND WATER RECORDED		CLIE	NT		Eastern Irrig	gati	on Distri	ict		F	PRO		IAME	S	nake Lake Reservoir Expa	nsion
DET E STARTED 00/28/2023 COMPLETED 00/28/2023 GROUND ELEVATION 770.10m N 5611877700 E 4148156X DRILLING CONTRACTOR Vala Diffing CAROUND WATER RELEVATION / DEPT H 0 DATE GROUND WATER RELEVATION / DEPT H REMARKS REMARKS E Soil Description Si Si Noistruct content REMARKS REMARKS REMARKS III TOPSOIL, sandy some clay, some lass, brown, trace root hairs Si Si Si Si Si Si Car Si		PRO	JECT NUMBER		1560-	19	3-00			F	PRO	IECT L	OCATION		NE 1/4 32-19-16	
DELLING CONTRATOR War Dilling GROUND WATER RELAVION / DEPTH CORING TYPE H03 DIAME TER (INV) 61 DATE GROUND WATER RECORDED General Contractions Solid Bit Bit <td></td> <td>DATE</td> <td>E STARTED</td> <td>06/28/2023</td> <td></td> <td>TE</td> <td>D</td> <td>06/29/</td> <td>2023</td> <td><u> </u></td> <td>GRO</td> <td>JND E</td> <td>LEVATION</td> <td>770.10m</td> <td>N_5611887.700 E</td> <td>414881.500</td>		DATE	E STARTED	06/28/2023		TE	D	06/29/	2023	<u> </u>	GRO	JND E	LEVATION	770.10m	N_5611887.700 E	414881.500
CORING TYPE HG3 DUALETER (nm) 61 DATE GROUND WATER RECORDED 6 Soli Solid		DRIL	LING CONTRACT	TOR	V	al's	Drilling			(GRO	JND V	ATER ELE	VATION / DEPTH	۱	
Image: state of the second		COR	ING TYPE	HQ3		R (n	nm)	61		[DATE	GRO	JND WATE	R RECORDED		
100 - Sult, sainty, Sulte Lay, Sulte AU1 11 - Built Race gravel, damp, fum, low blassic, brown, trace root hairs AU1 11 - CLY TLL, silly, cances and, damp, sight procipitates AU1 11 - CLY TLL, silly, cances and, damp, sight procipitates AU2 11 - CLY TLL, silly, cances and, damp, sight procipitates AU2 11 - CLY TLL, silly, cances, cancelly, silly, clayey, traces and, highty weathered, brown, trace AU2 12 - CLY TLL, silly, cances, cancelly, silly, clayey, traces, cancelly, weak, moderately, weak, moderately, weak, moderately, weak, moderately, weak, moderately, widely, spaced fractures, thinly, traces, cancelly, and the trace grasm crystals AU4 12 - Bit manual concernsors AU4 12 - Bit main and concernsors AU2 12 - Bit main and concernso	Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	 MOIST ⊢ PLAST ■ SPT (N 10 50 POCK 	TURE CONTENT TC - LIQUID I) Blows/300 mm 20 30 40 100 150 200 ET PEN (kPa)	REMARKS	Standpipe/ Instrument (m)
4 4.0 m - 120 mm of bentonitic clay .4.1 m - 15 mm gypsum crystal .4.2 m - becoming very weak .4.2 m - becoming very weak .4.2 m - 40 mm of core loss .5.0 m - 80° fracture 6.24 .5.0 m - 80° fracture .6.1 m - 80° fracture .6.1 m - 80° fracture .6.2 m - 60 mm of core loss .5.0 m - 80° fracture .6.2 m - 60 mm of core loss .6.1 m - 80° fracture .6.2 m - 60 mm of core loss .7 SHALE, silty, clayey, trace sand, slightly weathered, light grey, damp, high plastic, extremely weak, moderately widely spaced fractures, thinly laminated .7.7 m - 73° fracture .8.4 m - 60° fracture .8.5 m - becoming weak .8.4 m - 60° fracture .9.0 m - 67° fracture .9.28 - 5 64 .9.3 m - 80 mm of core loss .9.4 m - mechanically fractured run .9.3 m - 80 mm of core loss .9.4 m - mechanically fractured run .9.4 m - mechanically fractured run .9.4 m - mechanically fractured run .9.4 m - mechanically fractured run .9.4 m - mechanically fractured run			silt, trace grave plastic, brown, CLAY TILL, silt stiff, medium p white precipital SHALE (Weath trace sand, hig to light grey mo plastic, extrem widely spaced laminated, som trace gypsum o 3.2 m - 60 mi 3.3 m - 160 ni	al, damp, firm, I trace root hairs ty, some sand, lastic, brown, tr tes nered), silty, cla hly weathered, ottling, damp, h ely weak, mode fractures, thinly ne oxidation sta crystals m of core loss nm of slough	damp, race yey, brown igh erately f ining,		AU1 AU2 SPT1 AU3 AU4 SPT2 RC1	3.20 - 4.72	1	80 95 90	1	17.2 17.2 18.7 18.7 12.8 12.8 12.8 12.8	•	•	1.2 m - Sand = 4.0% Silt = 44.0% Clay = 52.0% 1.2 m - Dispersivity Classification = D2 % Dispersion = 28% 2.1 m - Sand = 10.0% Silt = 51.1% Clay = 38.9% 2.1 m - Dispersivity Classification = ND3 % Dispersion = 1040%	769- 768- 768-
			4.0 m - 120 n 4.1 m - 15 m 4.2 m - becor 4.3 m - 78° fr 4.7 m - 40 m 5.0 m - 80° fr	nm of bentonitio m gypsum crys ming very weak acture m of core loss racture	c clay tal t		RC2	4.72 - 6.24	2	97 97 97	2				% Dispersion = 104% Silt = 67.3% Clay = 25.5% 2.7 m - Dispersivity Classification = ND3 % Dispersion = 136%	766-
7 SHALE, silty, clayey, trace sand, slightly weathered, light grey, damp, high plastic, extremely weak, moderately widely spaced fractures, thinly laminated RC4 7.76 - 9.28 4 82 1 8 7.7 m - 73° fracture 9.28 95 90 95 90 9 8.4 m - 69° fracture 9.28 - 1.9.0 m - 67° fracture 9.28 - 10.80 5 64 1 1 9 8.5 m - becoming some thin weakly cemented layers RC5 9.28 - 10.80 5 64 1 9.0 m - 67° fracture 9.0 m of core loss 9.4 m - mechanically fractured run 86 1 95 Notes: Target depth of 10 m achieved. Packer test completed after coring. Correpole completed as a well refer to Monitoring Installation Pipe Work Depth Top Pipe Type			16.1 m - 80° fr 6.1 m - becor 6.2 m - 60 mi	acture ming no sand m of core loss			RC3	6.24 - 7.76	3	84 96 93	2					
9 8.5 m - becoming some thin weakly RC5 9.28 - 5 64 1 9 8.5 m - becoming some thin weakly RC5 9.28 - 10.80 5 64 1 9 9.0 m - 67° fracture 10.80 95 86 1 10.80 95 10.80 10.80 95 10.80	-7 		SHALE, silty, c slightly weathe high plastic, ex moderately wic thinly laminate 7.7 m - 73° fr 7.8 m - 80 m 7.9 m - becor	elayey, trace sau ered, light grey, ktremely weak, dely spaced frac d acture m of core loss ming weak macture	nd, damp, ctures,		RC4	7.76 - 9.28	4	82 95 90	1					763- 762-
Notes: Monitoring Installation Pipe Work Target depth of 10 m achieved. Packer test completed as a well refer to Depth Top Depth Bottom Pipe Type	-9 9 		8.4 m - 69° fr 8.5 m - becor cemented layer 9.0 m - 67° fr 9.3 m - 80 m 9.4 m - mech	acture ming some thin rs acture m of core loss anically fracture	weakly ed run		RC5	9.28 - 10.80	5	64 95 86	1				_	761-
arget depth of 10 m achieved. Packer test completed			Notes:	£ 40 m c - h ! - :				la4a -1		Mon	itori	ng Ins	tallation F	ipe Work		
diagram. 0.00 8.50 PLAIN Logged By: C. Tams 1101/2024 0.00 3.50 PLAIN Reviewed By: C. Tams	11/04/2022	1	arget depth of after coring. Co diagram.	orehole comple	a. Packer ted as a w	tes vell	, refer t	ieted :0	D	epth T 0.00 0.00	ор	Dept	h Bottom 8.50 3.50	Pipe Type PLAIN PLAIN	Logged By:C	. Tams . Braun

		MP		a divis	sio	n of	Eng	Jlo	be						СО	RE	HOLE No :	23C	H7 GE 2	207
		NT		Eastern Irr	iaati	on Distr	ict		P	PROJ	ECTI	NAM	E			Sn	ake Lake Reservoir	Expansion		
	PROJ	IECT NUMBER		1560)-193	3-00			 Р	ROJ	ECTI		ATION				NE 1/4 32-19-	16		
	DATE	STARTED	06/28/2023	COMPL	ETE	D	06/29/	2023	 3 G	BROL	JND E	ELEV	ATION		770.1	0m	N 5611887.700	E 414	881.	500
	DRILI	LING CONTRACT	OR	,	Val's	 Drilling				ROL	JND V	VATE	ER ELE	- VATIO	N/DE	PTH				
	CORI	NG TYPE	HQ3	DIAMETE	ER (n	nm)	6	1		DATE	GRO	UND	WATE	R REC	ORDE	D				
Depth (m)	SOIL SYMBOL	C	Soil lescription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	racture Index (#/m)	loisture Content (%)	● ⊥ ■	MOISTI PLASTI SPT (N) 10 2 50 11	JRE C C - LIC) Blows 20 3 00 11	ONTEN UID /300 mn <u>0 40</u> 50 200	T 1 2	REMARK	:S	Standpipe/ Instrument	Elevation (m)
		-								<u> </u>	2		POCKE	T PEN	(kPa)					760-
		10.2 m - 29° 1	racture															- - - - - - - - - - - - - - - - - - -		-
-11																				759-
-																				
Ē																				
-12 -																				758-
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<u> </u>	<u> </u>	Notes:							Moni	itorir			ation Pi	ne W	ork					L
		Target depth of	leted	D	epth Te	op	Dept	th Bo	ottom	Pipe	этх ЭТуре									
		atter coring. Co diagram.	orehole comp	leted as a	well	, refer	to		0.00			8.50		Pl		L	ogged By:	C. Tan	ns	
11/01/2024	ulagram. 2024											5.50	,	Pl		R	eviewed By:	C. Bra	un	



	CLIENT		Eastern Irri	on Distri	ct		F	ROJ		NAME	Ξ			Snake La	ake Reservoir	Expar	sion			
	PROJECT NUMBER	२	1560	-193	3-00			F	ROJ	IECT L		TION				NE 1/4 32-19-	16			
	DATE STARTED	08/11/2023		ΞTE	D	08/11/	2023		GRO	JND E	LEV	ATION		771.41n	nN	5611672.200	_ E .	41604	40.60)0
	DRILLING CONTRA	ACTOR	V	/al's	Drilling			0	BROU	JND V	VATE	RELE	VATIO	N / DEPT	тн					
	CORING TYPE	HQ3	DIAMETE	R (n	nm)	61	1	C	DATE	GRO	UND	WATE	R REC	ORDED						
Depth (m)	SOIL SYMBOL	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 2 50 1 POCKE	URE CC IC - LIQI I) Blows/ 20 3(100 15 ET PEN	DNTENT UID 300 mm 0 40 10 200 (kPa)		REMARK	S	Standpipe/		Elevation (m)
- - - - - - - - - - - - - - - - - - -	CLAY AND stiff, low pla hairs CLAY TILL, gravel, dam dark brown,	SILT, sandy, grav stic, light brown, silty, sandy, som p, stiff, medium p some oxidation	relly, dry, trace root e fine plastic, staining,		AU1 AU2					3.8 16.2	•	•			0.6 n 13.9 0.6 n 56.6	n - Gravel = % n - Sand = %				771
- - - - - - - - - -	trace gypsu precipitates 1.5 m - be weathered s gravel	m crystals, trace coming some co hale inclusions, t	white mpletely trace	ŧ	AU3					19.5			•		1.2 n 0.2% 1.2 n	Silt = 21. Clay = 8. n - Gravel = n - Sand =	1% 4%			770
-3	SHALE (We trace sand, dark brown high plastic, soil, blocky, oxidation sta precipitates	eathered), clayey, completely weath to grey mottling, extremely weak thinly laminated, aining, trace whit , trace gypsum cl 0 mm of core los	silty, nered, damp, to hard some e rystals s		AU4 RC1	2.90 - 4.42	1	23 66 40	5	20.8			•		16.0 1.2 n Class % Di 2.1 n	% Silt = 39. Clay = 43 n - Dispersiv sification = N spersion = % n - Sand = 2 Silt = 43.	9% 3.9% vity ND3 % .9% 5%			- - - 768 - - - - - - - - - - - - - - - - - - -
		0 mm of slough coming highly we me crumbled cor me mechanical r 0 mm of core los 0 mm of crumble coming moderate	eathered e ubble s d core ely		RC2	4.42 - 5.94	2	39 88 49	7						2.1 n Class % Di 2.7 n	Clay = 53 n - Dispersiv sification = N spersion = 9 n - LL = 71.7 PL = 27% PI = 44.7	3.6% vity ND3 % 7%		ing	767
	weathered 	tals alcified		RC3	5.94 - 7.46	3	95 99 77	3						2.7 n Class % Di 2.9 n from Rota	n - Dispersiv sification = I spersion = 3 n - Switched 6" SSA to H ry Coring	102 02 02 01 00 02 02 02 02 02 02 02 02 02 02 02 02			765	
- - - - - - - - - - - - - - - - - - -		mm of core loss coming slightly w	veathered		RC4	7.46 - 8.98	4	89 93 90	2											764
- - - - - - - - - - - - - - - - - - -	\$HALE, silt grey, damp, moderately	k hered, y weak, actures,		RC5	8.98 - 10.50	5	100 100 100	1				-							762	
11/01/2024	Notes: Target deptinested well, completed a	0 mm ker test	D	Mon epth T 0.00 0.00	itorir op	ng Ins Dept	talla h Bc 7.00 3.50	tion P ottom	Pipe Wo Pipe PL PL	ork Type AIN AIN	Logge Reviev	d By: ved By:	C C	. Tams Braur	1					

		MP		a divis	n of	Enc	ulo	ho						CO	RE	HOLE No :	23CH	708	
						11 01	Ling	,10	De									PAGE	: 2 UF 2
	CLIEN	NT		Eastern Irri	igati	on Distr	ict		P	ROJ	ECT	NAME	Ξ	_		Sna	ake Lake Reservoir Ex	(pansion	
	PROJ	ECT NUMBER		1560	-193	3-00			P	ROJ	ECTL		TION	_			NE 1/4 32-19-16		
	DATE	STARTED _	08/11/2023		ETE	D	08/11/	2023	<u> </u>	ROL	JND E	ELEV	ATION		771.41	lm	N 5611672.200	E _ 41604	0.600
	DRILL	ING CONTRAC	TOR	V	/al's	Drilling			G	ROL	JND V	VATE	RELE	VATIC	DN / DEF	РΤΗ			
	CORI	NG TYPE	HQ3	DIAMETE	R (n	nm)	61	1	D	ATE	GRO	UND	WATE	R RE(CORDE	D			
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLASTI SPT (N 10 2 50 1 POCKE	URE C IC - LIC) Blows 20 (00 1 <u>ET PEN</u>	ONTENT QUID 5/300 mm <u>30 40</u> 50 200 I (kPa)		REMARKS	Standpipe/	Elevation (m)
		10.0 m - 52 10.2 m - 72	° fracture ° fracture																761-
Ē																		<u>`</u>	
-11																			-
E																			760-
Ē																			100
-12																			-
Ē																			750-
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-13														ļ	ļļ.				-
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È.																			-
	I	Notes:					L		Maint	torio	a 1=-	tolla	tion D	ine M	lork				
		Target depth	of 10 m achiev	ed. Comple	eted	lasa 5	50 mm		epth To		Dent	h Bo	ottom	Pin	e Tvne				
	nested well, shallow well installed 1 m away. Packer te completed after coring.									-		7.00		P	LAIN	L	ogged By:	<u>C</u> . Tams	
	completed after coring.								0.00			3.50		Р	LAIN	R	eviewed By:	C. Braun	
11/01/2024	4												- ,						



	CLIEN	NT	E	on Distri	ct		F	PROJ		JAME	Ξ			Snake Lake Res	ervoir E	Expan	ision				
	PROJ	IECT NUMBER		1560-	-193	3-00			F	PROJ	IECT L	.OCA	TION			NE 1/4 3	2-19-1	6			
	DATE	STARTED	06/26/2023	COMPLE	TE	D	06/26/	2023	<u> </u>	GROI	JND E	LEVA	ATION	_	777.39r	n N 561105	1.400	Ε.	41541	15.90	0
	ORILI	ING CONTRACT	OR	V	al's	Drilling			0	GROI	UND V	VATE	R ELE	VATIO	N / DEP	ГН					
	CORI	NG TYPE	HQ3	DIAMETE	R (n	nm)	61	1	C	DATE	GRO	UND	WATE	R REC	ORDED						
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTI PLASTI SPT (N) 10 2 50 1 POCKE	URE CO IC - LIQ) Blows 20 3 00 1! ET PEN	ONTENT UID /300 mm 0 40 50 200 (kPa)	REN	IARKS	6	Standpipe/	Elevation	(m)
		TOPSOIL, sam firm, low plastic hairs CLAY, silty, sar plastic, brown CLAY TILL, silt fine gravel, dar plastic, brown, staining, trace 2.6 m - becor 3.0 m - becor weathered shal \$HALE (Weath completely weat grey mottling, of extremely weat laminated, sorr trace gypsum of 4.2 m - becor inclusions 4.4 m - 100 m 4.7 m - 80 m SHALE, silty, c weathered, gre extremely weat spaced fracture some oxidation crystals 5.2 m - 60° fr 5.2 m - 60° fr 6.2 m - 79° fr 6.2 m - 90 m 6.5 m - becor 6.6 m - 75° fr 7.5 m - 82° fr 7.5 m - 82° fr 7.5 m - 81° fr 7.6 m - beddi 7.9 m - 81° fr 8.5 m - 43° fr 8.5 m - 43° fr 8.5 m - 43° fr 8.5 m - 43° fr	dy, some silt, da c, brown, trace dy, dry, firm, lo y, some sand, t mp, very stiff, m some oxidation white precipitat ning trace coal ming some com e inclusions hered), clayey, s athered, dark bid damp, high plass k, blocky, thinly he oxidation sta crystals ning some bent m bentonite se m of core loss m of slough layey, moderately wes, thinly lamina a staining, trace acture	amp, root w trace hedium hes staining pletely silty, rown to stic, hining, tonite eam ely blastic, videly ated, gypsum eathered		AU1 AU2 SPT1 AU3 AU4 SPT2 AU5 AU6 SPT3 RC1 RC2 RC2 RC3	4.67 - 6.19 - 7.71 - 9.23 -	1 2 3 4	71 95 88 15 97 70 68 99 75 64	354	7.1 7.1 6.0 6.0 11.6 12.5 12.5 13.8 13.8 24.2 24.2		•			2.1 m - Gra 9.2% 2.1 m - San 71.4% 2.1 m - San 71.4% 2.1 m - Disp Classificatic % Dispersic 3.28 m - Ro 	rel = d = rersivil $n = 0.3%rersivil n = 0.1rersivil n = 0.1rersivil n = 0.1rersivil rersivil rersivil rersivil rersivilrersivil rersivil rersivilrersivil rersivil rersivilrersivil rersivil rersivilrersivil ightarrow 1ightarrow 1ig$	6 1ty 7 % ty 7 % ty 7 % % % % % % % % 6ty 2 % % % % % % % % % % % % % % % % % % %		7 7 7 7 7 7 7 7 7 7 7	'77 '76 '775 '774 '773 '772 '771 '770 '770 '770 '770
- - - - - -		9.0 m - some 9.1 m - 42° fr 9.4 m - vertic	crumpled core acture al fractures			KU4	9.23 -	4	04 100 78	3						Used ~2000 water	litres	of		7	'68
		Notes:							Mon	itorir	ng Ins	talla	tion Pi	ipe W	ork						
11/01/2024	L	Target depth of after coring. Co diagram.	tes vell	t comp , refer t	leted o	D	epth T 0.00 0.00	ор	Dept	h Bo 9.10 3.40	ttom	Pipe PL PL	e Type _AIN _AIN	Logged By: Reviewed By	:	C C.	<u>. Tams</u> . Braur	1			

		MP		a divis	sio	n of	Eng	glo	be					CO	RE	HOLE No :	23C	H7 AGE 2	' 09 2 0F 2
				Fastern Irr	icati	on Dietr	ict		F		ECT		=		Sn	ake Lake Reservoir	Expansion	,	
				1560	19au				r		ECTI				011		16		
			06/06/0000	COMPL	-190 	<u></u>	06/06	0000	「						0	NE 1/4 32-19-	<u>г</u> 11	5/15 (
			06/26/2023			ם הייים	06/26/	2023	<u> </u>	BROU					igm IDTU	_ N	_ E + 1	5415.3	
					Val's	Drilling			(iROU		VAIE	R ELEVA	HON / DE	:PIH				
	CORI	NG TYPE	HQ3		ER (n	nm)	6	1	C	DATE	GRO		WATER	RECORDE	-D				
Depth (m)	SOIL SYMBOL	[Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTUR PLASTIC - SPT (N) BI 10 20 50 100 POCKET F	E CONTEN LIQUID ows/300 mr <u>30 41</u> 150 20 2EN,(kPa)	T n <u>D</u>	REMARK	S	Standpipe	Elevation (m)
	Notes: Target depth of 10 m achieved. Packer test complete after coring. Corehole completed as a well, refer to																		767
														; ;					
		Notes:				Mon	itorir	ng Ins	stalla	ition Pipe	Work								
		Iarget depth o	orehole comp	ed. Packer leted as a	r tes well	t comp	leted	D	epth T	ор	Dept	th Bo	ottom F	Pipe Type	•				
	diagram.											9.10		PLAIN PLAIN	L	ogged By:	C. Ta	ms	
11/01/2024	01/2024								2.00						R	teviewed By:	C. Bra	aun	

				a alivia	:-		F m a	.l.a	h a						СО	RE	HOLE No :	23CH7	709B
				a divis	010	n or	Eng	JIO	be									PAGI	E 1 0F 3
	CLIEN	NT		Eastern Irr	igatio	on Distr	ict		P	ROJ	ECTI	NAME	Ē	_		Sn	ake Lake Reservoir E	Expansion	
I	PROJ	ECT NUMBER		1560)-193	3-00			P	ROJ	ECTI	_OCA	TION	_			NE 1/4 32-19-1	6	
I	DATE	STARTED _	06/27/2023	_ COMPL	ETEI	D	06/27/	2023	3 G	GROL	JND E	ELEVA	ATION	_	777.0	0m	N 5611051.600	E 4154	15.900
I	DRILL	LING CONTRAC	TOR	Ň	/al's	Drilling			0	GROL	JND V	VATE	R ELE	VATIC	N / DE	PTH			
		NG TYPE	Other		ER (m	חm)		1	C	DATE	GRO		WATE	R RE	CORDE	D			
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 2 50 1	URE C IC - LIC) Blows 20 (00 1	ONTEN QUID 5/300 mn 30 40 50 20	T n) 0	REMARKS	Standpipe/	Elevation (m)
										-	2		POCKE	<u>ET PEN</u>	(kPa)			~	~
$1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$																776- 775- 774- 773- 772- 771- 770- 769- 768-			
⊢ 																			
	1	Notes:			<u> </u>		<u>.</u>		Moni	itorir	ng Ins	stalla	tion P	ipe W	/ork		<u>.</u>	I	I
		100 mm PVC	well installed t	o 25 m for	nping t	est.	D	epth To	ор	Dept	h Bo	ttom	Pip	е Туре	;				
44 10 4 10									0.00			22.00 25.00)	P SLC) F	.ogged By: Reviewed By:	<u> </u>	: 1

		MP		a divis	io	n of	Eng	glo	be						COF	REHOLE No	: 23CH	1709B AGE 2 0F 3
		JT		Fastern Irri	iaatio	on Distr	ict		P	PRO.I	FCTI	NAM	F			Snake Lake Reserv	voir Expansion	
	PROJ	ECT NUMBER		1560)-193	3-00			· P	ROJ	ECT		- ATION			NE 1/4 32-	-19-16	
	DATE	STARTED	06/27/2023	COMPLE	ETE	D	06/27/	2023	3 6	ROL	JND E	ELEV	ATION		777.00	m N 5611051.6	300 E 41	5415.900
	DRILL	- ING CONTRAC	TOR	_ ```	/al's	 Drilling				ROL	JND V	VATE	RELE		N / DEF	 יTH		
	CORI	NG TYPE	Other	DIAMETE	ER (m	<u>י</u> וm)				ATE	GRO	UND	WATE	R RE)		
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 50 1 POCKE	URE C IC - LIC) Blows 20 (100 1 ET PEN	ONTENT QUID 5/300 mm 30 40 50 200 I (kPa)	REMA	RKS	Standpipe/ Instrument Elevation (m)
-11 -12 -13 -14 -15 																		766- 765- 764- 763- 763- 762- 762- 761-
17 17 																		760-
																		759-
	•	Notes:					-		Mon	itorir	ng Ins	stalla	ation P	ipe W	/ork		I	i
		100 mm PVC	well installed t	o 25 m for	pun	nping t	est.	D	epth To 0.00 22.00	ор	Dept	th Bo 22.0 25.0	ottom 0 0	Pip P SLC	e Type LAIN DTTED	Logged By:	C. Tar	ms
11/01/2024	4															Reviewed By:	C. Bra	aun

		MP		a divis	sio	n of	Eng	glo	be						CO	RE	HOLE No :	23C	H70 AGE 3	998 3 OF 3
		NT		Eastern Irr	iaatio	on Distr	rict		P	ROJ	ECTI	NAM	E			Sn	ake Lake Reservoir	Expansio	'n	
	PROJ	ECT NUMBER		1560)-193	3-00			Р	ROJ	ECT	LOC	ATION				NE 1/4 32-19-	.16		
	DATE	STARTED	06/27/2023	COMPLI	ETEI	D	06/27/	/2023		ROL	JND E	ELEV	ATION		777.0	0m	N 5611051.600	E 4	15415.9	900
	DRILL	- ING CONTRAC	TOR		Val's	Drilling				ROL	JND V	NATE	ER ELE	VATIC	N / DE	PTH				
	CORII	NG TYPE	Other	DIAMETE	ER (m	nm)			C	ATE	GRO	UND	WATE	R RE	CORDE	Đ				
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKE	URE C IC - LIC) Blows 20 : 00 1 ET PEN	ONTEN QUID s/300 mr 30 40 50 20 I (kPa)	T n <u>)</u> 0	REMARK	(S	Standpipe/ Instrument	Elevation (m)
-																				
-22 -22 -23 -24 -24																				755- 755- 754- 753- 752-
																				751-
27 																				/50-
28 																				749-
-29														-						748-
	1	Notes:					<u> </u>		Moni	itorir	na Ine	stalls	ation P	ipe W	/ork		1			1
		100 mm PVC	well installed t	o 25 m for	pun	nping t	est.	D	epth To 0.00 22.00	op	Dept	th Bo 22.0 25.0	ottom 0 0	Pip Pip SL(e Type LAIN DTTEE) R	ogged By:	<u> </u>	<u>ams</u> raun	



PAGE 1 0F 2

COREHOLE No : 23CH710

	CLIEN	NT	I	Eastern Irri	on Distri	ict		P	ROJ	ECT N	NAME				Sn	ake Lake Reserv	oir Expa	nsion			
1	PROJ	IECT NUMBER		1560	-193	3-00			P	ROJ	ECT L	OCA ^T	TION				NE 1/4 32-	19-16			
1	DATE	STARTED	08/17/2023		ETE	D	08/17/	2023	80	RO	JND E	LEVA	TION	_	768.0	Dm	N5611052.2	<u>00</u> E	4163	22.2	00
	DRILI		OR	١	/al's	Drilling			0	RO	JND W	VATEF	R ELE	VATIO	N / DEI	PTH					
		NG TYPE	HQ3		ER (n	nm)	61		C	ATE	GRO		WATEI	R REC	ORDE	D				t I	
Depth (m)	SOIL SYMBOL	D	Soil escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTI PLASTI SPT (N) 10 2 50 11 POCKE	JRE CC C - LIQ) Blows/ 20 3 00 15 T PEN	ONTENT UID /300 mm <u>0 40</u> 50 200 (kPa)	- I	REMA	RKS	Standpipe/		Elevation (m)
- - - - - - - - - - - - - - - - - - -		CLAY AND SIL dry, stiff, low pla toot hairs CLAY TILL, silty gravel, moist, s plastic, dark bro	I, sandy, some astic, light brow y, sandy, trace tiff, medium to own, some oxid	e gravel, wn, trace fine high dation	#	AU1 AU2					16.5 21.1		•	•			0.6 m - Grave 0.7% 0.6 m - Sand = 27.4%	=	×	~	767
2		0.7 m - becon gravel 1.0 m - becon weathered shall SHALE (Weath	d, no npletely silty,	ŧ	AU3					21.0			•			Clay = 0.6 m - Disper Classification % Dispersion 1.2 m - Sand =	.3% 66.6% sivity = ND1 = % = 1.8%			766	
		highly weathere mottling, damp, weak, blocky, th oxidation stainin precipitates 3.2 m - 260 m	ey extremely I, some	*	AU4 RC1	3.20 - 4.72	1	66 83 66	2	21.3		-	•			Silt = 4 Clay = 1.2 m - Disper Classification % Dispersion 2.1 m - Sand =	2.2% 56.0% sivity = ND3 = 46% = 0.9%			765	
4 		3.5 m - 100 m 3.9 m - becon crystals 4.1 m - 40 mn 4.3 m - mecha 4.7 m - mecha 5.2 m - 78° fra	Im of slough ning trace gyps n of crumbled o anically fracture anically fracture acture	sum core ed area ed run		RC2	4.72 - 6.24	2	93 100 96	3			-				Silt = 4 Clay = 2.1 m - Disper Classification % Dispersion 2.7 m - Sand = Silt = 4	3.3% 55.8% sivity = ND3 = % = 0.8%			764
		5.8 m - becon weathered 6.2 m - 240 m 6.6 m - 68 mn	ning moderatel im of core loss n of core loss	ly :		RC3	6.24 - 7.76	3	83 84 83	1							2.7 m - Disper Classification % Dispersion 3.2 m - Switch from 6" SSA to Rotary Coring	55.0% sivity = ND3 = % ed > HQ3			762
		7.0 m - 62 m gypsum crystals 7.4 m - becon very weak SHALE, silty, cl grey, damp, hig moderately wid	acture with 5 m s ning slightly we ayey, unweath h plastic, very ely spaced frac	eathered, hered, weak, ctures,	-	RC4	7.76 - 9.28	4	88 90 88	1											760
9		thinly laminated 8.2 m - becon 8.3 m - mecha 9.1 m - 150 m 9.8 m - 40 mn	h ning weak anically fracture of core loss n of crumbled of	ed area		RC5	9.28 - 10.80	5	103 105 103	1											759
	1	Notes:							Moni	itorir	ng Ins	tallat	ion Pi	pe W	ork				I		
11/01/2024	Target depth of 10 m achieved. Corehole completed a a 50 mm well, refer to diagram. Shallow well installed 0.5 m away. Packer test completed after coring.								epth To 0.00 0.00	op	Dept	h Bot 3.50 8.50	ttom	Pipe PL PL	AIN AIN	L	.ogged By: _ Reviewed By: _	(<u>C. Tams</u> C. Braur	s n	

		MP		a divis	sio	n of	Eng	glo	be						СС	RE	EHOLE No :	23CH	171(je 2 0F	0
		NT		Eastern Irr	igati	on Distr	ict		Р	ROJ	ECT	NAM	E			Sr	nake Lake Reservoir	r Expansion		
	PROJ	IECT NUMBER		1560)-193	3-00			P	ROJ	ECT	LOC	ATION				NE 1/4 32-19	-16		_
	DATE	STARTED	08/17/2023	COMPL	ETE	D	08/17/	/2023		ROL	JND E	ELEV	ATION	_	768.	00m	N 5611052.200) E 4163	22.200	_
	DRILL		ror		/al's	Drilling			G	ROL	JND \	NATE	ER ELE	VATIC	N / DE	ЕРТН	 			_
	CORI	NG TYPE	HQ3	DIAMETE	ER (n	nm)	6	1	D	ATE	GRO	UND	WATE	R REC	CORD	ED				
Depth (m)	SOIL SYMBOL	[Soil Description		Sample Type	ample Number	Run Depth (m)	Run Number	RQD TCR SCR	cture Index (#/m)	sture Content (%)	• н	MOIST PLAST SPT (N	URE C IC - LIC I) Blows	ONTEN QUID 5/300 m	NT Im	REMAR	\$) Standbipe/	Elevation	(m)
						S				Fra	Moi		50 1 POCK	00 1	50 9 50 20	00	1			
- - - - - - - - - - - - - - - - - - -																			757	7
-12														-					756	3
																			755	5
																			754	1
																			753	3
																			752	2
- 																			751	1- - -
- 																			750	
- - - - - - - - - - - - - - - - - - -														-					749	9
		Notes:							L											_
		Target depth o a 50 mm well, 0.5 m away P	ted as alled	D	Moni epth To 0.00	itorir op	ng Ins Dept	th Bo 3.50	ation P ottom	ipe W Pipe Pi	/ork e Typ LAIN	e L	_ogged By:	C. Tame	<u>s</u>					
11/01/2024	4	·			0.00			0.50	J		LAIN	F	Reviewed By:	C. Brau	<u>n</u>	_				



	CLIEI	NT	Ea	gati	on Distri	ct		F	PRO	IECT I	NAME		S	nake Lake Reservoir E	xpan	sion		
1	PRO	IECT NUMBER		1560-	193	3-00			F	PRO	IECT I	OCATIC	DN		NE 1/4 32-19-1	6		
(DATE	STARTED	06/13/2023	COMPLE	TE	D	06/13/	2023	<u> </u>	GRO	UND E	LEVATIO	ОМ _	771.69m	N_5610068.500	Ε_	416031	.000
I	DRILI	LING CONTRACT	TOR	V	al's	Drilling			0	GRO	UND V	VATER E	ELEVATIO	N / DEPTH	ł			
	CORI	NG TYPE	HQ3	DIAMETEI	R (n	nm)	61	1	C	DATE	GRO	UND WA	TER REC	CORDED				
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	 MO ⊢ ⊢ PL4 ■ SP1 10 50 PO 	DISTURE C ASTIC - LIC T (N) Blows 20 3 100 1 CKET PEN	ONTENT QUID 5/300 mm 30 40 50 200 I (KPa)	REMARKS	3	Standpipe/	Elevation (m)
		TOPSOIL, silty trace gravel, di brown, trace rc CLAY AND SIL plastic, light br CLAY TILL, silt gravel, damp, s brown, trace of white precipita 1.5 m - becor gypsum crystal 1.8 m - becor weathered sha SHALE (Weath completely wea fractures, thinly oxidation stain crystals 3.2 m - 470 n 6.2 m - 50 m 6.3 m - becor 6.6 m - 69° fr 6.9 m - 51° fr 7.0 m - becor fractures 7.6 m - 55° fr 7.9 m - horize \$HALE, clayey	r, sandy, some cla ry, firm, low plasti bot hairs T, silty, dry, firm, own ty, sandy, some fistiff, medium plas xidation staining, tes ming moist, trace is ming some comp le inclusions nered), clayey, sil athered, dark bro damp, high plasti k, very closely sp y laminated, som ing, trace gypsun nm of core loss mof core loss mof core loss mof core loss mof core loss mof core loss ming highly weath acture ming closely space acture ontal fracture A silty, slightly	ay, ic, light low ne stic, trace letely ty, wn to c, paced e n hered ced		AU1 AU2 SPT1 AU3 AU4 SPT2 RC1 RC2 RC3	3.20 - 4.72 4.72 - 6.24 6.24 - 7.76	1	12 69 22 7 73 13 72 97 84	20 20 7	3.8 3.8 17.7 17.7 21.5 21.5		•		 1.2 m - Gravel = 55.7% 1.2 m - Sand = 42.7% Clay = 0.6 1.2 m - Dispersivit Classification = NI 1.2 m - Dispersivit Classification = NI 32.1 m - Sand = 95.1% Silt = 2.7% Clay = 2.2 2.1 m - Dispersivit Classification = NI % Dispersion = 86 2.7 m - Dispersivit Classification = NI % Dispersion = 42 3.5 m - Switched t rotary coring. 	y y y y y y y y y y y y y y y y y y y		771 770 769 768 766 766
-7		weathered, gree extremely wea spaced fracture trace oxidation crystals 8.1 m - 72° fr 9.0 m - becor 9.2 m - 61° fr 9.3 m - mech 9.4 m - 62° fr 9.6 m - 52° fr 9.7 m - 30 m 9.9 m - 53° fr	ay, damp, high pl k, moderately wides, thinly laminate staining, trace g acture ming unoxodized acture acture acture acture acture m of crumbled co acture	lastic, dely ed, ypsum ł run re		RC4 RC5	7.76 - 9.28 9.28 - 10.80	4	74 100 93 68 89 74	3								764
11/01/2024	Notes: Target depth of 10 m achieved. Packer test complete after coring. Corehole completed as a well, refer to diagram.								Mon epth T 0.00 0.00	itorii op	ng Ins Dept	tallation h Botto 3.50 8.50	n Pipe W m Pipe Pl Pl	/ork e Type LAIN LAIN	Logged By: Reviewed By:	<u> </u>	Tams Braun	

		MP		a divis	sio	n of	Eng	jlo	be						СО	RE	HOLE No :	23C	H7 GE 2	' 11 ? OF 2
	CLIE	NT		Eastern Irr	igati	on Distr	ict		P	ROJ	IECT	NAME	Ξ			Sn	ake Lake Reservoir I	Expansion		
	PROJ	IECT NUMBER		1560)-193	3-00			P	ROJ	IECT	LOCA	TION				NE 1/4 32-19-1	16		
	DATE	STARTED _	06/13/2023	COMPL	ETE	D _	06/13/	2023	<u> </u>	BROL	JND E	ELEV	ATION	_	771.6	i9m	N 5610068.500	_ E416	3031.0	000
	DRILI	ING CONTRAC	TOR	Ň	Val's	Drilling			G	RO	JND \	VATE	RELE	VATIO	N / DE	PTH				
		NG TYPE	HQ3		ER (n	nm)	6	1 1	D		GRO		WATE	R REC	CORDE	Ð				
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOISTI PLASTI SPT (N) 10 2 50 10 POCKE	URE C C - LIC) Blows 20 3 00 1 T PEN	ONTEN QUID 5/300 mr 30 4(50 20 1 (kPa)	T n <u>)</u> 0	REMARK:	S à	Standpipe/ Instrument	Elevation (m)
-		-			Π							1								
Ē		10.0																		761-
		10.6 m - 170	mm of core to	ISS	1"															
-																				-
Ē																				760-
-12 -																				
Ē																				
Ē																				759-
																				-
Ē																				758-
-14																				100
																				-
-																				757-
- 																				
-																				
Ē																				756-
<u>-</u> -																				755-
-17																				100
Ē																				-
Ē																				754-
Ē																				
																				753-
																				-
Ē																				752
-																				1.52
<u> </u>	1	Notes:							Moni	itorir	l Ja Ing	stalla	tion Pi	pe W	/ork		1			L
		Target depth o	epth To	ор	Dep	th Bo	ottom	Pipe	е Туре	•										
		diagram.		eleu as a	weil	, reier	.0		0.00 0.00			3.50 8.50		PI PI	LAIN LAIN	L	ogged By:	C. Tan	ns	
11/01/2024	4										-	F	Reviewed By:	C. Bra	un					



COREHOLE No :

23TH01 PAGE 1 0F 2

	CLIEI	NT		Eastern Irri	gati	on Distri	ct		F	PROJ	ECT I	NAME		_		Sna	ake La	ike Rese	rvoir E	Expans	sion		
	PRO	JECT NUMBER		1560	-193	3-00			F	PROJ	ECT	LOCA	TION	_			١	NE 1/4 32	2-19-1	6			
	DATE	STARTED	06/29/2023		ΞTE	D	06/29/	2023		BROL	JND E	ELEVA	TION	_	777.6	61m	N_	5612578	.400	_ E _	4142	227.40	00
	DRILI	LING CONTRACT	OR	V	′al's	Drilling			0	BROL	JND V	VATE	R ELE	EVATIO	ON / DE	PTH							
	CORI	NG TYPE	HQ3	DIAMETE	R (n	nm)	61	I	C	DATE	GRO	UND	WATE	R RE	CORDE	Ð							
Depth (m)	SOIL SYMBOL	D	Soil escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N <u>10</u> 50 POCK	TURE C TIC - LIC I) Blow 20 100 ET PEN	CONTEN QUID s/300 mr <u>30 41</u> 150 20 N (kPa)	T n D 10		REM/	ARKS	3	Standpipe/	Instrument	Elevation (m)
		TOPSOIL, sand clay, damp, firm trace root hairs	dy, some silt, s n, low plastic, ł	ome prown,		A1 14																	
- - - - - - - - - - - - - - - - - - -		CLAY TILL, silt completely wea inclusions, dam dark brown, tra trace white pred	y, some sand, thered shale up, stiff, mediu ce oxidation st cipitates	some m plastic, taining,	≖ ≖ ▼	AU2 SPT1																	776
2 2	· · · · · · · · · · · · · · · · · · ·	SHALE (Weath completely wea grey mottling, d extremely weak	ered), silty, cla hthered, dark b amp, high pla k, blocky, thinly	ayey, prown to stic, /	▲ =	AU3								-									
		laminated, som trace white pred crystals 1.2 m - some 2.5 m - becon SHALE, clayey, weathered, gree	e oxidation sta cipitates, trace yellow oxide s ning ground up silty, moderat	aining, gypsum pecks b tely	*	AU4 RC1	3.00 - 4.52	1	43 92 72	2													775
		extremely, gre spaced fracture some oxidation crystals 3.0 m - 120 m 3.1 m - 100 m	y, damp, high c, moderately v es, thinly lamin staining, trace im of core loss im of slough	widely ated, e gypsum		RC2	4.52 - 6.04	2	0 97 86	2													773
		4.5 m - 130 m 4.5 m - 40 mn 5.2 m - 60 mn very weak 5.3 m - 86° fra 6.0 m - becon	n of core loss n of crumbled ning slightly we acture ning unweathe	core eathered, ered,		RC3	6.04 - 7.56	3	45 99 84	2					-								772
		unoxodized 6.2 m - becon cemented layer 6.9 m - 75° fra 7.0 m - 72° fra 7.4 m - 2 mm 7.6 m - 40 mn	ning some thin s acture acture wide gypsum n of core loss	i weakly seam		RC4	7.56 - 9.08	4	9 97 94	1													770
		7.8 m - becon 8.2 m - 81° fra 8.6 m - 64° fra \$ILTSTONE, sc sand, unweathe nonplastic, wea	ning weak acture acture ome clay, trace ered, grey, dar ik, widely spac	e fine np, ced		RC5	9.08 - 10.60	5	90 103 100	1													769
		Notos:																					
		Target depth of bentonite chips	15 m achieve	d. Coreho	le b	backfille	d with	D	Mon epth T	itorir op	ng Ins Dept	stallat th Bo	tion P ttom	Pipe V Pip	Vork e Type	e Lo	oggeo	d By:		<u> </u>	Tam	s	
11/01/202	4															R	eviev	ved By:		<u> </u>	Brau	<u>n</u>	



COREHOLE No :

23TH01 PAGE 2 0F 2

	CLIEN	ΙT	E	Eastern Irrig	gatio	on Distri	ct		P	ROJ	ECTI	NAME	Ξ			Sna	ake Lal	ke Rese	voir E	Expan	sion		
	PROJ	ECT NUMBER		1560-	193	3-00			P	ROJ	ECTI		TION				N	E 1/4 32	-19-1	6			
	DATE	STARTED	06/29/2023		TEI	D	06/29/	2023	<u> </u>	ROL	JND E	ELEV	ATION	_	777.6	1m	N_5	5612578	.400	Ε.	414	227.4	00
	DRILL	ING CONTRACT	OR	Va	al's	Drilling			0	BROL	JND V	VATE	R ELE	VATIO	N / DE	PTH							
	CORI	NG TYPE	HQ3		R (m	nm)	61		C	DATE	GRO	UND	WATE	R REC	ORDE	D							
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTI PLASTI SPT (N) 10 2 50 1 POCKE	URE C C - LIC) Blows 20 3 00 1 T PEN	ONTEN QUID /300 mn 30 40 50 20 _(kPa)	Г 1 1 0		REMA	ARKS	3		Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		fractures, thinly gypsum crysta 9.6 m - trace 10.4 m - som sandstone	/ laminated, tra ls, trace shell fr shell fragments e thinly bedded	ce agments 5		RC6	10.60 - 12.12	6	88 100 100	1													767
-12		12.6 m - 200 bentonitic clay 12.8 m - becc	mm of crumble	d əly		RC7	12.12 - 13.64	7	64 92 78	1													765
14 14 15		strong				RC8	13.64 - 15.16	8	95 105 104	2													764
 16																							762
- - - - - - - - - - - - - - - - - - -																							761
- - - 																							760
																							759-
		Neter																					758
11/01/2024	1	Notes: Target depth of bentonite chips	f 15 m achieved S.	l. Corehol	e b	oackfille	ed with	D	Moni epth Te	itorir op	ng Ins Dept	stalla h Bo	tion P ottom	ipe W Pipe	/ork e Type	La R	ogged eview	By: ed By:		<u> </u>	<u>. Tan</u> Bra	ns un	



23TH02 COREHOLE No :

		NT		Eastern Irrig	gati	on Distr	ict		F	PRO	IECT I	NAM	E			S	nake	e Lake Reserv	/oir E	Expan	sion	
F	PROJ	IECT NUMBER		1560-	193	3-00			F	PRO	IECT I		ATION	Ν.				NE 1/4 32-	19-10	6		
ı	DATE	STARTED	08/08/2023		TE	D _	08/08/	2023		GRO	JND E	ELEV	ATIO	N	779	9.80m	1	N 5612565.9	<u>300</u>	Ε.	414787	.100
٦	ORILL	ING CONTRACT	OR	V	al's	Drilling			0	GRO	JND V	VATE	ER EL	EVAT	'ION / [DEPTH	۰ _					
	CORI	NG TYPE	HQ3	DIAMETE	R (n	nm)	61		C	DATE	GRO	UND	WAT	ER R	ECOR	DED						
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊥ ■	MOIS PLAS SPT (10 50 POC	STURE STIC - I (N) Blo <u>20</u> 100 :KET Pl	CONTE LIQUID ws/300 <u>30</u> 150 EN (kPa	ENT mm <u>40</u> 200 a)		REMA	RKS	6	Standpipe/ Instrument	Elevation (m)
		TOPSOIL, silty damp, firm, low root hairs CLAY TILL, silt gravel, damp, s brown, trace op precipitates 1.0 m - becor gravel up to 40 1.5 m - becor mottling, some coal specks 3.0 m - becor weathered shal SHALE (Weath trace sand, hig grey, damp, hig weak, blocky, f spaced fracture trace oxidation crystals 4.4 m - 40 mr 5.8 m - 200 n shale 6.2 m - becor weathered 6.7 m - 69° fr 7.5 m - 30 mr 7.5 m - 30 mr 7.8 m - becor weathered 6.7 m - 69° fr 7.5 m - 30 mr 7.8 m - becor weathered 6.7 m - 69° fr 7.5 m - 30 mr 7.8 m - becor weathered 6.7 m - 69° fr 7.5 m - 30 mr 7.8 m - becor weathered 6.7 m - 50° fr 7.5 m - 30 mr 7.8 m - becor weathered 6.7 m - 50° fr 7.5 m - 30 mr 7.5 m - 50° fr 7.5 m - 50° fr 7.5 m - 30 mr	s sandy, some y plastic, brown y, sandy, trace stiff, medium pl kide specks, tra- ming trace to se mm ning dark brow oxidation stain ming some con le inclusions mered), clayey, hly weathered. gh plastic, extre moderately wide s, thinly lamin staining, trace m of core loss acture n of core loss ning moderate acture m of core loss ning slightly we e oxidation stain gypsum lense acture t, silty, unweath gh plastic, very lely spaced frad d anically fractur	clay, h, trace fine lastic, ace white ome wn to grey ing, trace mpletely silty, , dark emely dely lated, gypsum alcified ely eathered, inining mered, weak, ictures, red run		ST1 ST2 ST3 AU1 AU2 AU3 AU4 RC1 RC2 RC2 RC3	4.45 - 5.97 7.49 7.49 9.01 9.01 - 10.53	1 2 3 4	91 97 93 83 100 95 93 98 96 92 100 92	2 3 3							4.4 frc Rc	45 m - Swito om 6" SSA to otary Coring	shed o HG	23		779 777 777 777 777 777 777 777 777 777
Ē		9.7 m - 73° fr	acture																			770
		Notes:							N/				41.4.11	Dices	\A/z ::-!							I
11/01/2024		Target depth of bentonite chips	f 15 m achieve s. Packer test c	d. Corehol completed	e b afte	oackfille er corin	ed with Ig.	D	Mon epth T	itorii op	ng Ins Dept	stalla th Bo	ation	Pipe n P	vVork ipe Ty	pe	Log Rev	ged By: _ riewed By: _		<u> </u>	<u>. Tams</u> Braun	



23TH02 COREHOLE No :

	CLIEN	NT		Eastern Irri	gati	on Distri	ct		P	ROJ	ECTI	NAM	E			Sna	ake La	ke Reser	voir E	xpan	sion	
	PROJ	IECT NUMBER		1560	-193	3-00			P	ROJ	ECT I	_00/	ATION				Ν	IE 1/4 32	-19-1	6		
	DATE	STARTED	08/08/2023		ETE	D	08/08/2	2023	9 G	ROL	JND E	ELEV	ATION	_	779.8	0m	N_	5612565.	900	Ε_	414787	.100
	DRILL	ING CONTRACT	OR	V	/al's	Drilling			G	ROL	JND V	VATE	ER ELE	VATIO	N / DE	PTH						
	CORI	NG TYPE	HQ3	DIAMETE	R (n	nm)	61		D	ATE	GRO	UND	WATE	R REC	CORDE	D						
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKE	URE C IC - LIC) Blows 20 3 00 1: <u>21 PEN</u>	ONTEN ⁻ QUID 5/300 mn <u>30 40</u> 50 20 L (KPa)	T n) 0		REMA	RKS	5	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		10.3 m - som 10.5 m - 60 n	e crumbled cor nm of core loss	re		RC5	10.53 - 12.05	5	91 96 93	2												769
-12		11.5 m - 5/° 1 11.7 m - 59° 1 11.8 m - shell inclusions 11.8 m - becc thick sandstone 12.0 m - becc 12.2 m - 120	fracture fracture I fragments with oming some mo e layers oming weak mm moderatel	h organic oderately v strong		RC6	12.05 - 13.57	6	100 100 100	1												768-
		layer 13.0 m - beda 13.1 m - trace 14.2 m - 74° 14.3 m - beco inclusions 14.6 m - 50 n	ding fracture e shell fragmen fracture oming some be nm of moderate	ntonitic ely strong		RC7	13.57 - 15.09	7	109 109 109	2												766
16		calcified shale 14.7 m - becc strong	oming moderate	ely																		764
- 																						763
- 																						762
- 																						761
														:	<u> </u>							
11/01/2024	4	Notes: Target depth of bentonite chips	f 15 m achieved s. Packer test c	d. Coreho completed	le b afte	oackfille er corin	ed with g.	D	Moni epth To	itorin op	ig Ins Dept	stalla h Bo	ation P ottom	ipe W Pipe	/ork e Type	E Lo	oggeo eview	l By: /ed By:		<u>C.</u>	<u>Tams</u> Braun	



23TH03 COREHOLE No :

(NT	Ea	astern Irrig	gati	on Distri	ct		F	PROJ	ECT	NAM	E			Sna	ake Lake	e Reservoir	Expan	sion	
F	PROJ	IECT NUMBER		1560-	-193	3-00			F	PROJ	ECT I	-00	ATION				NE	1/4 32-19-1	16		
[DATE	STARTED	08/09/2023	COMPLE	TE	D	08/10/	2023	<u> </u>	GROL	JND E	ELEV	ATION	_	770.6	9m	N_56	612462.100	Ε_	416366.	300
[ORILL	ING CONTRACT	OR	V	al's	Drilling			0	BROL	JND V	VATE	ER ELE	VATIO	N/DE	PTH					
(CORI	NG TYPE	HQ3	DIAMETEI	R (n	nm)	61	1	C	DATE	GRO	UND	WATE	R REC	ORDE	D					
Depth (m)	SOIL SYMBOL	D	Soil escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKE	URE C IC - LIG) Blows 20 3 100 1 ET PEN	ONTEN 201D /300 mm 60 40 50 200 (kPa)	Г]		REMARK	S	Standpipe/ Instrument	Elevation (m)
		CLAY FILL, silty	y, some sand, da astic. brown	amp,																	
- - - - - - - - - - - - - - - -	\sim	CLAY TILL, silty gravel up to 40 medium plastic, oxidation stainin precipitates	y, some sand, tra mm, moist, stiff, , dark brown, so ng, trace white	ace me	-	AU1 AU2															770
2		SHALE (Weath some sand, cor dark brown to g high plastic, ext soil, blocky, trac	ered), clayey, sil npletely weather rey mottling, da tremely weak to ce oxidation stail	lty, red, mp, hard ning	₹	AU3 AU4								-							768
					Ŧ	AU5															767
- - - - - - - - - - - - - - - - - - -		4.6 m - 460 m 4.9 m - 200 m 5.1 m - highly	m of core loss m of slough fractured area		-	AU6 RC1	4.57 - 6.09	1	24 83 40	20				-			4.57 m from 6' Rotary	- Switched ' SSA to H Coring	d Q3		766
6		5.7 m - becon 5.8 m - 63° fra	ning highly weat acture	hered		RC2	6.09 - 7.61	2	64 100 81	5				-							765
		7.6 m - 160 m 8.0 m - some crumbled core 8 1 m - 80 mp	m of core loss highly oxidized,	fied		RC3	7.61 - 9.13	3	28 89 66	5				-							763
9		shale 8.2 m - some 8.4 m - becon weathered 9.1 m - 140 m 9.4 m - becon	concretions ning moderately m of core loss ning slightly wea	thered		RC4	9.13 - 10.65	4	58 91 66	3				-							762
		Notes:							Mon	itorin	ıg Ins	stalla	ation P	ipe W	'ork	'					·
11/01/2024		Target depth of bentonite chips	19 m achieved.	Corehol	le b	backfille	ed with	D	epth T	ор	Dept	h B	ottom	Pipe	е Туре	L	ogged l eviewe	By:	C.	Tams Braun	



23TH03 COREHOLE No :

	CLIEI	NT		Eastern Irriga	ation Dis	trict		F	PROJ	IECT I	NAME	Ξ			Sna	ke Lał	ke Rese	rvoir E	xpan	sion		_
	PRO	JECT NUMBER		1560-1	93-00			F	PROJ	IECT I	LOCA	TION				Ν	E 1/4 32	2-19-10	6			_
	DATE	STARTED	08/09/2023	_ COMPLET	ED .	08/10	/2023	30	GROL	JND E	ELEV	ATION		770.69	m	N_5	612462	.100	Ε_	41636	36.300	_
	DRIL	LING CONTRACT	OR	Va	's Drillir	g		0	GROL	JND V	VATE	RELE	VATIO	N / DEP	TH _							_
	CORI	ING TYPE	HQ3	DIAMETER	(mm)	6	1	C	DATE	GRO	UND	WATE	R REC	CORDE)							_
Depth (m)	SOIL SYMBOL	C	Soil Description	on T chance	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKE	URE CO IC - LIC I) Blows 20 3 100 1: <u>ET PEN</u>	ONTENT QUID 3/300 mm 30 40 50 200 I (KPa)			REMA	ARKS	3	Standpipe/	Elevation	(m)
11		<u>10.1 m - 71°</u> SHALE, clayey grey, damp, hig moderately wic thinly laminated 10.4 m - sub- 11.5 m - bedo	fracture r, silty, unweath gh plastic, very lely spaced fra d d vertical fracture hanically fractu	nered, weak, ctures, es ured area	RC	5 10.65 12.17	5	97 100 99	2												760 75!	9
		12.2 m - becc	oming weak fracture		RC	5 12.17 - 13.69	6	100 100 100	2				-								758	8
14		13.5 m - 77° 1 13.7 m - becc fractures 14.3 m - 60° 1	fracture oming widely s _l fracture	paced	RC	7 13.69 - 15.21	7	103 106 103	1												757	7
15 15 16		15.4 m - 72° 1	fracture		RC	3 15.21 - 16.73	8	100 100 100	1												756	5
 17		16.4 m - 68° f 16.6 m - 30 n clay infill 16.9 m - 30 n inclusions 17.0 m - 270	fracture nm of extremel nm of bentonitio mm moderatel	y weak c v strong	RCS	9 16.73 - 18.25	9	88 100 90	2												754	4
		layer 17.2 m - som 17.7 m - 77° mm of mechan 18.4 m - 84°	e mechanical r fracture followe ical rubble fracture	rubble ed by 400	RC1	0 18.25 - 19.77	10	85 88 86	1				-								753	2
- - - - -		19.5 m - 55° 19.6 m - 190	fracture mm of core los	ss																	751	1
		Notes:						Mon	itorir	ng Ins	stalla	tion P	ipe W	/ork]							
		Target depth of bentonite chips	f 19 m achieve s.	d. Corehole	backfi	lled with	D	epth T	op	Dept	th Bo	ottom	Pipe	е Туре	Lo	ogged	By:		<u> </u>	Tams	<u>.</u>	_
11/01/202	4														Re	eview	еа Ву:		<u> </u>	Braun	<u> </u>	_



23TH04 COREHOLE No :

	CLIE	NT	I	Eastern Irrig	gatio	on Distri	ct		F	PROJ	IECT I	NAM	E			Snak	e Lake Reservoir E	xpans	ion	
	PRO	JECT NUMBER		1560-	193	8-00			F	PROJ	IECT I		ATION				NE 1/4 32-19-16	6		
	DATE	STARTED	08/10/2023	COMPLE	TE	D	08/10/	2023	<u> </u>	GROI	UND E	ELEV	ATION	_	770.73m	<u>1</u>	N 5612438.300	Ε_	416352	100
	DRIL	LING CONTRACT	OR	V	al's	Drilling			0	GRO	UND V	VATE	ER ELE	VATIO	N / DEPT	н_				
	COR	ING TYPE	HQ3	DIAMETE	R (m	nm)	61	1		DATE	GRO	UND	WATE	R REC	CORDED	_				
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCK	⁻ URE C(- LIC I) Blows <u>20 3</u> 100 1 ET PEN	ONTENT 2UID /300 mm 30 40 50 200 (kPa)		REMARKS		Standpipe/ Instrument	Elevation (m)
-1-2-2-3		CLAY FILL, silt low plastic, bro CLAY TILL, silt fine gravel, dar plastic, dark br specks, trace v SHALE (Weath some sand, res to grey mottling extremely weal up 2.9 m - becor weathered, bloo staining, trace v	y, sandy, damp wn y, some sand, t np, stiff, mediu own, trace oxid white precipitate nered), clayey, s sidual soil, dark J, damp, high p k to hard soil, g ning completely cky, trace oxida white precipitate	, stiff, irace m e ess silty, brown lastic, round / tion es		AU1 ST1 ST2 AU2 AU3								-		0. S In In 0.	.5 m - Couldn't pu helby Tube due to loose sloughing fill m - Consolidation idex: 0.24 xpansion Index: .08	ush o n		770-769-768-768-768-767-
		4.6 m - 80 mr 4.7 m - 220 n 4.9 m - becor closely spaced weak, some ox gyosum crystal	n of core loss nm of slough ning highly wea fractures, extre idation staining s	athered, emely , trace		AU4 RC1	4.60 - 6.12	1	31 95 72	5						4. fr R	.6 m - Switched om 6" SSA to HQ otary Coring	13		766
						RC2	6.12 - 7.64	2	92 100 92	3				-						764-
- - - - - - - - - - - - - - -		7.7 m - 260 n 8.3 m - 72° fr 8.5 m - becor weathered, mo	nm of mechanic acture ning moderatel derately widely	cal rubble y spaced		RC3	7.64 - 9.16	3	51 84 58	3				-						763
		fractures 8.9 m - 250 n 9.2 m - 140 n 9.3 m - 200 n 9.5 m - becor weathered, ver	nm of core loss nm of core loss nm of slough ning moderatel y weak	У		RC4	9.16 - 10.68	4	71 91 79	2										762
		Notes:		<u> </u>			_		Mon	itorir	ng Ins	stalla	ation P	Pipe W	/ork				·	. .
11/01/2024	4	Target depth of bentonite chips	f 19 m achieved Packer test co	d. Corehol ompleted a	e b afte	ackfille r coring	ed with g.	D	epth T	ор	Dept	th Bo	ottom	Pipe	е Туре	Log Rev	gged By: viewed By:	<u>С.</u> С.	<u>Tams</u> Braun	



23TH04 COREHOLE No :

	CLIEI	NT		Eastern Irrig	atio	on Distri	ct		F	PROJ	IECT I	NAME	Ξ	_		Sn	ake La	ake Rese	rvoir E	Expan	sion		
	PRO	JECT NUMBER		1560-1	193	3-00			F	PROJ	IECT I	LOCA	TION	_				NE 1/4 3	2-19-1	6			
	DATE	STARTED	08/10/2023	_ COMPLE	TEI	D	08/10/	2023	80	GRO	JND E	ELEV	ATION	-	770	73m	_ N _	5612438	.300	Ε.	4163	52.10	0
	DRILI	LING CONTRACT	ror	Va	ıl's	Drilling			0	GRO	JND V	VATE	R ELE	EVATIO	DN / D	EPTH							
	CORI	NG TYPE	HQ3		R (m	חm)	61	I	C	DATE	GRO	UND	WATE	R RE	CORE	ED							
Depth (m)	SOIL SYMBOL	C	Soil Description	- -	Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCKI	TURE (TIC - LI I) Blow 20 ET PEI	CONTE QUID s/300 n <u>30</u> 150 2 N (kPa)	NT 1m 4 <u>0</u> 00		REM	ARKS	6	Standpipe/	Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		SHALE, clayey grey, damp, hig moderately wid thinly laminate 11.3 m - 64° 11.4 m - som	y, silty, unweath gh plastic, very dely spaced fra d fracture e mechanical i	nered, v weak, ictures, rubble		RC5	10.68 - 12.20	5	89 96 91	2												7	760-1
		11.7 m - 60° 12.0 m - som 12.2 m - som 12.6 m - 76°	fracture le mechanical l le mechanical l fracture	rubble rubble		RC6	12.20 - 13.72	6	85 100 89	2												7	759
- - - - - - - - - - - - - - - - - - -		13.2 m - 73° 14.4 m - 37°	fracture fracture			RC7	13.72 - 15.24	7	100 109 100	1												7	757
		15.6 m - beco	oming weak			RC8	15.24 - 16.76	8	100 100 100	1												7	755-
16 17		16.2 m - 130 shale 16.6 m - bedo 16.8 m - 80 n 16.9 m - 80 n	mm of strong o ding fracture nm of core loss nm of bentoniti	calcified s c clay		RC9	16.76 - 18.28	9	95 95 95	2												7	754
- - - - - - - - - - - - - - - - - - -		17.4 m - 76° 18.0 m - 66° fragments 18.3 m - 90 n	fracture fracture with sl nm of core loss	hell		RC10	18.28 - 19.80	10	89 94 89	1												7	753
- - - - - - - - - - - - - -		19.0 m - 70° 19.6 m - 38°	fracture fracture																			7	751
┝──		Notes:																					
11/01/2024	l	Target depth o bentonite chips	f 19 m achieve s Packer test c	d. Corehole ompleted a	e b fte	eackfille r coring	d with g.	D	Mon epth T	itorir op	ng Ins Dept	stalla th Bo	tion P ottom	Pipe V Pip	Vork be Typ	le L R	.ogge Reviev	d By: wed By:		C C	<u>. Tams</u> Brau	<u>s</u>	



23TH05 COREHOLE No :

	CLIE	NT		Eastern Irri	igati	on Distri	ict		F	PROJ	ECT	NAME				Snake	e Lake R	eservoir E	xpan	sion	
	PRO	JECT NUMBER		1560	-193	3-00			F	PROJ	ECT I		TION				NE 1/4	4 32-19-1	6		
	DATE	STARTED	08/23/2023		ETE	D	08/23/	2023	80	GROU	JND E	ELEVA	TION	_	769.16n	<u>n</u>	N_5611	866.000	Ε_	416809	0.000
	DRIL	LING CONTRACT	OR	N	/al's	Drilling			0	GROU	JND V	VATE	R ELE	VATIO	N / DEPT	гн _					
	COR	ING TYPE	HQ3	DIAMETE	R (n	nm)	61	1	C	DATE	GRO	UND	WATE	R REC	ORDED						
Depth (m)	SOIL SYMBOL	D	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊥ ■	MOIST PLAST SPT (N <u>10</u> 50 1 POCKI	URE C IC - LIC I) Blows 20 3 100 1 ET PEN	ONTENT 2UID /300 mm 30 40 50 200 ((KPa)		RE	EMARKS	3	Standpipe/ Instrument	Elevation (m)
		SILT, sandy, so low plastic, ligh hairs SAND, some si grained, sub-ro	it brown, trace it, poorly grade punded, damp,	o, stiff, root ed, fine	#	AU1 AU2					5.8 4.4	•		-		0. 0. 0. 38	6 m - G 1% 6 m - Sa 3.7% Si	ravel = and = ilt = 36.6°	%		769
2			ning medium g el, trace clay ind staining, trace ning moist	rained, clusions, coal	#	AU3 AU4					8.8					1. 0. 1. 74	Cl 2 m - Gi 1% 2 m - Sa 4.3% Si	lay = 24.0 ravel = and = ilt = 12.9	6% %		767
3 		SHALE, clayey weathered, gre extremely weathered, trace laminated, trace 3.3 m - becon	y, silty, slightly y, damp, high µ k, blocky, thinly e oxidation sta ning unweathe	plastic, , ining red	æ	AU5											CI	lay = 12.`	7%		766
Ē					-	AU6															-
		4.7 m - 140 m 4.9 m - becon moderately wid 5.0 m - mecha	nm of core loss ning very weak ely spaced frac anically fracture	ctures ed run		RC1	4.73 - 6.25	1	76 91 85	2						4. fro Ro	73 m - 5 om 6" S3 otary Co	Switched SA to HC oring	23		764-
6 7 7		6.5 m - beddii shell fragments 6.6 m - becon	ng fracture with i ning widely spa	n some aced		RC2	6.25 - 7.77	2	103 107 103	1				-							763
						RC3	7.77 - 9.29	3	100 100 100	1											761
		9.3 m - 50 mr 9.6 m - becon cemented layer	n of core loss ning some thin s	weakly		RC4	9.29 - 10.81	4	97 97 97	0											760
11/01/2024	1	Notes: Target depth of bentonite chips	530 m achieved S.	d. Coreho	le b	oackfille	ed with	D	Mon epth T	itorir op	ng Ins Dept	tallat h Bo	tion P ttom	lipe W Pipe	′ork e Type	Log Rev	ıged By: viewed E	: Зу:	<u>C.</u>	Tams Braun	

PROJECT NUMBER 1660-183-00 PROJECT LOCATION N 5611666.000 E DATE STARTED 08/23/2023 COMPLETED 08/23/2023 GROUND ELEVATION 769.16m N 5611666.000 E DRILLING CONTRACTOR Vals brilling GROUND WATER ELEVATION / DEPTH GROUND WATER ELEVATION / DEPTH N 5611666.000 E CORING TYPE HQ3 DIAMETER (mm) 61 DATE GROUND WATER RECORDED MOISTURE CONTENT REMARKS UB Soil Description 95 95 95 91 N 56100 95 95 91 N 56100 95 95 95 95 95 95 95 95 95 95 95 95 95 96 95 96 95 96 <	CT NUMBER 1560-193-00 PROJECT LOCATION MI 14 32-19-16 TARTED 08232023 COMPLETED 08232023 GROUND ELEVATION N 5611866.000 E 416909.000 SOII Vals Dining GROUND WATER ELEVATION N 5611866.000 E 416909.000 Soil DAMETER (mn) 61 DATE GROUND WATER RECORDED MOISTURE CONTENT REMARKS 90 Soil Description 90 90 90 91 91 91 91 91 91 91 91 91 91 91 91 91 91 91 92 92 92 92 92 92 92 92 92 92 91 91 91 92 91 91 91 91 91 92 92 92 91 91 91 92 91 92 91 91 91 92 91 92 91 92 92 92 92 92 92 92 92 92 92 92 92 92 92 92 92 <td< th=""><th></th><th>CLIENT</th><th>Eastern I</th><th>Irriga</th><th>tion Distri</th><th>ct</th><th></th><th> P</th><th>ROJ</th><th>ECTN</th><th>NAME</th><th>Ξ</th><th></th><th></th><th>Sn</th><th>ake Lake Reservoir E</th><th>xpansion</th><th></th></td<>		CLIENT	Eastern I	Irriga	tion Distri	ct		P	ROJ	ECTN	NAME	Ξ			Sn	ake Lake Reservoir E	xpansion	
UDDE STARTED DB/23/2023 COMM-LETE ID DB/23/2023 GROUND ELEVATION (7.9) Tom N 301000000 (E DRILLING CONTRACTOR Val's Dmiling GROUND WATER RELEVATION (DEPTH	CARTED DB22022 COMPLETED DB220223 COMPLETED DB230203 COMPLETED DB3000000 E THEMAN THEMAN SCONTRACTOR Vals Drilling GROUND WATER RELEWATION / DEPTH			R	60-19	93-00			P	ROJ	ECTL		TION				NE 1/4 32-19-16	<u>6</u>	000
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Solid Description Use Duming (a) DAMETER (mm) 01 (a) Data GROUND WATER RECORDED MOISTURE CONTENT (b) Buyes300 mm REMARKS Image: Content of the state of the sta			08/23/2023COMP	LETE	ED	08/23/	2023	9 G					-	769. ⁻	16m	N 5611866.000	E 416809	9.000
Count of The image of the	Soil Description and Figure 100 (mm) and Figure 100 (mm) <th></th> <th></th> <th></th> <th>vars</th> <th></th> <th>61</th> <th>1</th> <th>ם ח</th> <th></th>				vars		61	1	ם ח										
understrukt Soil Description understrukt understrukt<	Soil Description is all bescription is all bescription is all be								U									<u></u>	=
-11 16.1 m - 100 mm of core loss -12 15.4 m - 60 mm of core loss -14 15.4 m - 60 mm of core loss -16 16.1 m - 100 mm of extremely weak -17 16.1 m - 100 mm of extremely weak -18 RC9 16.89 9 100 -17 16.1 m - 100 mm of extremely weak RC9 16.89 9 100	11.6 m - 58° fracture followed by 90 m of strong calcified shale RC5 10.81 5 93 1 75 11.9 m - becoming weak RC6 12.33 6 103 0 75 11.9 m - becoming weak RC6 12.33 6 103 0 75 15.4 m - 60 mm of core loss .16.1 m - 100 mm of extremely weak RC9 16.89 100 0 .16.2 m - becoming weak RC9 16.89 100 0 .16.1 m - 100 mm of extremely weak RC9 16.89 100 0 .16.2 m - becoming weak RC9 16.89 100 0 .16.1 m - 100 mm of extremely weak	Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%		MOISTI PLASTI SPT (N) 10 2 50 1	URE CO C - LIC) Blows 20 3 00 1	ONTEN 201D /300 m 60 4 50 20	IT m <u>0</u> 00	REMARKS	Standpipe	Elevation
$\begin{array}{c} 111 \\ 112 \\ 112 \\ 112 \\ 112 \\ 112 \\ 112 \\ 113 \\ 114 \\ 114 \\ 114 \\ 114 \\ 114 \\ 115 \\ 113 \\ 113 \\ 114 \\ 114 \\ 116 \\ 115 \\ 116 \\ 110 \\$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$												POCKE	I PEN	(кРа)				759
11.6 m - 58 'tracture followed by 90 mm of strong calcified shale 11.9 m - becoming weak -12 -13 -13 -14 -14 -14 -15 15.4 m - 60 mm of core loss -16 15.4 m - 60 mm of core loss 16.1 m - 100 mm of extremely weak Dentonitic clay 16.2 m - becoming weak RC9 16.89 9 -17 -18	11.6 m - 58 Tracture followed by 90 mod storage calcified shale RC6 12.33 f 6 103 l 0 75 11.9 m - becoming weak RC6 12.33 f 6 103 l 0 103 l 0 75 11.6 m - 60 mm of core loss I.5.37 l 8 100 l 0 100 l 100 l 75 1.6.1 m - 100 mm of extremely weak entonitic clay RC9 l 16.89 l 9 100 l 0 100 l 100 l 75 1.6.2 m - becoming weak RC9 l 16.89 l 9 100 l 0 100 l 100 l 75 RC9 l 16.89 l 9 100 l 0 100 l 100 l 75 I.6.2 m - becoming weak RC9 l 16.89 l 9 100 l 0 100 l 100 l 75 I.6.2 m - becoming weak I.6.1 m - 100 l I	- -11 -				RC5	10.81 - 12.33	5	93 100 95	1									758
RC7 13.85 16 15.4 m - 60 mm of core loss 16.1 m - 100 mm of extremely weak bentonitic clay 16.2 m - becoming weak RC9 16.89 18.41 RC9 16.89 9 100 100 100 100 100 100 100 100	RC7 13.85 7 96 0 RC7 13.85 7 96 0 RC8 15.37 8 100 0 RC8 15.37 8 100 0 RC9 16.89 9 100 0 RC9 16.80 0 RC9 16.	-12		8° fracture followed by 90 g calcified shale ecoming weak		RC6	12.33 - 13.85	6	103 103 103	0				L					757
15 15.4 m - 60 mm of core loss 16 16.1 m - 100 mm of extremely weak bentonitic clay 16.2 m - becoming weak 17 18	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	-14				RC7	13.85 - 15.37	7	96 96 96	0									756 755
-1716.1 m - 100 mm of extremely weak bentonitic clay16.2 m - becoming weak	.16.1 m - 100 mm of extremely weak	-15 -16	15.4 m - 6	0 mm of core loss		RC8	15.37 - 16.89	8	100 100 100	0									754
	BC10 18 41 10 87 0	-17	16.1 m - 1	00 mm of extremely weak ay ecoming weak	K .	RC9	16.89 - 18.41	9	100 100 100	0									752
18.4 m - 100 mm of core loss 18.5 m - 100 mm of slough 19	18.4 m - 100 mm of core loss - 93 18.5 m - 100 mm of slough - 93 19.93 87 - 75 - -	-18 -19		00 mm of core loss 00 mm of slough		RC10	18.41 - 19.93	10	87 93 87	0									751
RC11 11 0						RC11		11		0									

11/01/2024



23TH05 COREHOLE No :

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	CLIEN	ΙT	E	Eastern Irrig	ation Dis	trict		F	PROJ	ECT	NAM	E	_	S	Snake I	Lake Reservoir E	Expan	sion		
	PROJ	ECT NUMBER		1560-	193-00			F	PROJ	ECT	LOC	ATION	_			NE 1/4 32-19-1	6			
	DATE	STARTED	08/23/2023	COMPLE	TED _	08/23	/2023	<u> </u>	GROI	JND E	ELEV	ATION	Ι_	769.16m	N	5611866.000	Ε.	416	809.0	00
	DRILL	ING CONTRACT	OR	Va	l's Drillin	g			GROU	JND \	NATE	ER ELE	EVATIO	ON / DEPTI	н					
	CORII	NG TYPE	HQ3	DIAMETER	t (mm)	6	1		DATE	GRO	UND	WATE	ER RE	CORDED						
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 50 POCK	TURE (TIC - LI N) Blow 20 100 ET PEI	CONTENT QUID s/300 mm 30 40 150 200		REMARKS	3	Ctandaino/	otal ושטישרישרי Instrument	Elevation (m)
-						19.93		104				FUCK								749-
Ē						21 45		104												3
Ē						21.45		104												
-21																				748-
Ē					RC1	2 21 45	12	100	0											-
E		21.5 m - beco	oming trace sar	ld 🛛				100	ľ											-
-22						22.97		100												
E																				747—
-																				3
-23		~~~~~			RC1	3 22.97	13	97	0											3
Ē		23.0 m - 50 n	nm of slough			-		100												746-
-						24.49		97												3
E																				-
-24																				745—
-					RC1	4 24 49	14	98	0											=
Ē						-	1	98	Ŭ											
-25						26.01		98												744
Ē																				/44
Ē																				3
-26					RC1	5 26 01	15	111	0											-
Ē						-		111	ľ											743-
F						27.53		111												Ξ
F																				-
-21																				742-
E					RC1	6 27.53	16	97	0											=
Ē						-		97												-
-28						29.05		97												741—
Ē																				3
E																				-
-29		29.0 m - 120	mm of core los	s	RC1	7 29.05	17	92	0											740
Ē		29.1 m - 50 n	nm of slough	-		-		95												/40— -
Ē						30.57		92												_
Ē						_									_					-
<u> </u>		Notes:						NA	iter		ate"	tion 5	Jine 1	Vorl						
		Target depth of	f 30 m achieved	l. Corehole	e backfi	lled with		IVION enth T		IG INS	stalla th Rr	attom	-ipe V							
		bentonite chips	5.				F	opui I	90	Deb		5.0011	1 14	o Type		ed Bv	ſ	Tam	IS	
															Povia	wod By:		Bro	<u>.</u>	
11/01/202	4												1		NEVIE	-weu by		Dial		

(MP		a divis	sio	n of	Eng	Jlo	be					COF	REHOLE No	: 2	3TH PAGE 4	1 05 4 OF 4
(CLIEN	1T		Eastern Irr	rigatio	on Distr	ict		P	ROJ	ECT N	NAMI	E		Snake Lake Reserv	oir Expans	ion	
I	PROJ	ECT NUMBER		1560)-193	3-00			P	ROJ	ECTL	-004	ATION		NE 1/4 32-7	19-16		
I	DATE	STARTED _	08/23/2023		ETE	D	08/23/	2023	} G	ROL	JND E	ELEV	ATION	769.16	m N 5611866.0	<u>00</u> E _	416809.	000
I	ORILL	ING CONTRAC	TOR	<u> </u>	√al's	Drilling			G	ROL	JND V	VATE	ER ELE\	ATION / DEP	TH			
(CORIN	NG TYPE	HQ3	DIAMETE	ER (m	וm)	61	1	D	ATE	GRO	UND	WATEF	RECORDED)			
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTL PLASTIC SPT (N) 10 2 50 10 POCKE	IRE CONTENT C - LIQUID Blows/300 mm 0 30 40 100 150 200 T PEN (kPa)	REMA	RKS	Standpipe/ Instrument	Elevation (m)
_																		739-
-					╶┨┛┛│													
-																		738-
-																		_
-32																		737
- - -																		131-
		ľ																
-33		ľ																736-
-		l																
		ľ																
-34		ľ																735-
-		l																
35		l																
-30		ľ																734-
-		ľ																
-36		ľ																
-		ľ																733-
-		ľ																-
-37		l																732-
-																		132-
-		l																-
-38																		731-
_		l																
-39		l																730-
-																		
		Notes:											tion Di					
		Target depth (of 30 m achiev	ed. Coreho	ole b	ackfille	ed with	D	Moni epth To	torin op	Dept	talla	ation Pij	pe Work Pipe Type	-			
		bentonite chip	JS.					_							Logged By:	C.	Tams	
															Reviewed By:	C. !	Braun	


23TH06 COREHOLE No :

	CLIE	NT		Eastern Irri	igati	on Distri	ct		F	PROJ	ECTI	NAME	Ξ		5	Snake L	ake Reservoir I	Expans	ion	
	PRO	JECT NUMBER		1560	-193	3-00			F	PROJ	ECT I		TION				NE 1/4 32-19-1	6		
	DATE	STARTED	08/22/2023		ETE	D	08/23/	2023		GROU	JND E	ELEV	ATION	_	770.31m	N	5611806.000	E_	416805.	000
	DRIL	LING CONTRACT	OR	١	/al's	Drilling				GROU	JND V	VATE	RELE	VATIC	N / DEPT	Η				
	COR	ING TYPE	HQ3	DIAMETE	R (n	nm)	61	I	C	DATE	GRO	UND	WATE	R REC	ORDED					
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCKI	URE C IC - LIC I) Blows 20 3 100 1 ET PEN	ONTENT 2UID /300 mm 30 40 50 200 (kPa)		REMARK	6	Standpipe/ Instrument	Elevation (m)
-1		SILT, sandy, tra low plastic, ligh hairs SAND, some g clay, poorly gra sub-rounded, r 1.5 m - becor mm 2.4 m - becor staining, trace o 2.6 m - 60 m 3.1 m - becor scand and grave SHALE, clayey grey, damp, hig weak, blocky, t 6.2 m - 170 n 6.4 m - becor spaced fracture 7.3 m - 49° fr 8.0 m - 65° fr 8.8 m - 77° fr	ace fine gravel ace fine gravel at brown, trace gravel, some si aded, coarse g moist, compact ming gravelly f ming some oxi- coal staining m coal seam ming some clar ry, sandy, some stiff, high plastic a staining, trace PAGE ming some cor dual bedrock, i el ry, silty, unweath gh plastic, extra hinly laminated m of slough ming very weal es acture acture	, dry, stiff, root It, trace rained, s, brown or 300 dation y e coarse c, grey, e coal mpletely trace hered, emely d k, widely		AU1 AU2 B1 AU3 AU4 AU5 AU6 RC1 RC2	6.25 - 7.77 9.29	1	89 99 89 89 89	1	3.0		• POCK		(KPa)	1.5 r 2.5% 79.9 6.25 from Rota	n - Gravel = n - Sand = % Silt = 8.0% Clay = 9.6 m - Switchec 6" SSA to Ho ary Coring	6 %		769– 768– 766– 766– 766– 766– 766–
- - - - - - - -		9.4 m - 70° fr 9.5 m - becor cemented layer	acture ming some thir rs	n weakly		RC3	9.29 - 10.81	3	100 100 100	1										761
	•	Notes:							Mon	itorir	ng Ins	talla	tion P	Pipe W	/ork	_				
11/01/2024	1	Target depth of bentonite chips	f 30 m achieve s.	d. Coreho	ole b	ackfille	d with	D	epth T	op	Dept	h Bc	ottom	Pip	е Туре	Logge Revie	ed By: wed By:	C. C.	<u>Tams</u> Braun	



23TH06 COREHOLE No :

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	CLIEN	NT	E	Eastern Irrig	ation Distr	rict		F	PROJ	ECT	NAME	_	Sn	ake Lake Reservoir	Expansi	on	
	PROJ	IECT NUMBER		1560-1	93-00			F	PROJ	ECT	LOCATIO	ON _		NE 1/4 32-19-	16		
	DATE	STARTED	08/22/2023	COMPLET	ED _	08/23/	2023	80	GROL	JND E	ELEVATI	ON	770.31m	N 5611806.000	_ E	416805.0)00
	DRILL	LING CONTRACT	TOR	Va	l's Drilling			0	GROL	JND \	WATER I	ELEVATI	ON / DEPTH				
	CORI	NG TYPE	HQ3	DIAMETER	(mm)	61	1	C	DATE	GRC		ATER RE	ECORDED				
Depth (m)	SOIL SYMBOL	ſ	Soil Description	F -	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● MC H PL ■ SP 10 ▲ PC	DISTURE ASTIC - L PT (N) Blov 20 100 DCKET PE	CONTENT IQUID vs/300 mm 30 40 150 200 EN (kPa)	REMARK	S	Standpipe/ Instrument	Elevation (m)
Ē																	760-
		10.8 m - 80 r 11.3 m - 37° [.]	nm of core loss fracture		RC4	10.81 - 12.33	4	89 96 91	1								759
- 12 		12.5 m - 62°	fracture		RC5	12.33 - 13.85	5	104 105 104	2								758
		13.5 m - 45°	fracture			40.05		07									757-
- 14 					RC6	13.85 - 15.37	6	97 99 97	1								756
15 		14.9 m - 68° 15.2 m - 100 shale 15.4 m - 60 r 15.8 m - 53°	fracture mm of strong c nm of core loss fracture	alcified	RC7	15.37 _ 16.89	7	90 96 92	1								755
- - - - - - - -		16.0 m - 480 mechanically fr 16.5 m - beco	mm extremely ractured area oming weak	weak,	RC8	16.89	8	92	0								754
		17.4 m - beco weak	oming very wea	s k to		- 18.41		92 92									753
		17.8 m - som	ne shell fragmen	its	RC9	18.41 _ 19.93	9	100 100 100	0								752
					RC10		10		0								751
	-	Notes:		•				Mon	itorir	ng Ins	stallatio	n Pipe	Work				
		Target depth o bentonite chips	f 30 m achievec s.	I. Corehole	e backfille	ed with	D	epth T	ор	Dep	th Botto	om Pi	pe Type L	ogged By:	<u> </u>	āms	
11/01/202	4												F	Reviewed By:	C. E	Braun	



23TH06 COREHOLE No :

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	CLIEN	ΙT	I	Eastern Irrig	ation Dist	rict		F	PROJ	ECT	NAM	Е			Sna	ake Lake	Reservoir	Expar	ision		
	PROJ	ECT NUMBER		1560-1	93-00			F	PROJ	ECT	LOC	ATIO	Ν.			NE	1/4 32-19-	16			
	DATE	STARTED	08/22/2023	COMPLET	ED _	08/23/	2023	80	GROL	JND E	ELEV	/ATIO	N	77	'0.31m	N_56	11806.000	_ E .	416	805.0	00
	DRILL	ING CONTRACT	TOR	Va	l's Drilling			0	GROL	JND \	NATE	ER EL	EVAT	ION /	DEPTH						
	CORI	NG TYPE	HQ3		(mm)	61	1	C	DATE	GRO	UND) WAT	FER R	ECOF	RDED						
Depth (m)	SOIL SYMBOL	Ľ	Soil Description	- -	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIS PLAS SPT 10 50 POC	STURE STIC - L (N) Blo <u>20</u> 100 ::KET PI	CONT LIQUIE ws/300 30 150 EN (kF	ENT)) mm 40 200 (a)		REMARK	S		standpipe/ Instrument	Elevation (m)
- - - - - - -		20.7 m - som	e mechanical r	ubble		19.93 - 21.45		100 100 100													750
-21 					RC11	21.45	11	103 105	1												749
-22		21.8 m - 72° 22.2 m - trace	fracture e shell fragmen	ts		22.97		103													748
					RC12	22.97 24.49	12	96 96 96	0												747
24 		24.1 m - traco 24.4 m - 60 n 24.5 m - 40 n	e shell fragmen nm of core loss nm of slough	ts	RC13	24.49 - 26.01	13	99 99 99	0												746
- 26					RC14	26.01 - 27.53	14	100 100 100	0												744
27		27.3 m - beco	oming weak		RC15	27.53 - 29.05	15	99 99 99	0												743
					RC16	29.05 - 30.57	16	96 96 96	0												741
<u> </u>		Notes:						L			1		<u> </u>]						
11/01/2024	Ļ	Target depth o bentonite chips	f 30 m achieved s.	d. Corehole	e backfill	ed with	D	Mon epth T	itorir op	ig Ins Dep	stalla th Bo	ation ottorr	Pipe n Pi	Worł ipe T	k ype Lo R	ogged E eviewe	By:	<u> </u>	. Tan . Bra	ns un	

	Ç		٥	a divis	sio	n of	i Enç	Jlo	be						COI	RE	HOLE No :	231	ГН .GE 4	06
	CLIE	NT		Eastern Irr	rigati	on Dist	rict		P	۶ROJ	ECTN	NAME	Ξ	_		Sn	iake Lake Reservoir E	xpansion		
1	PROJ	JECT NUMBER		1560	<u>J-193</u>	3-00			P	'ROJ'	ECT L	-OCA	TION	_			NE 1/4 32-19-16	3		
'	DATE	STARTED	08/22/2023		.ETEſ	D _	08/23/	/2023	<u>3</u> G	BROU	JND E	LEV	ATION	_	770.3	<u>1m</u>	N 5611806.000	E416	3805.0	000
1	DRILL	LING CONTRAC	TOR		Val's	Drilling	<u> </u>		G	€ROU	JND W	VATE	R ELE	VATIC)N / DEF	PTH				
<u> </u>	CORI	NG TYPE	HQ3		ER (m	nm)	6_	1	D	JATE	GRO	UND	WATE	R REC	CORDE	.D				
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTU PLASTI SPT (N) 10 2 50 1 POCKE	JRE C [/] IC - LIC) Blow: 20 100 = T PEI	;ONTENT QUID s/300 mm <u>30 40</u> 150 20(№ (kPa)	n) 0	REMARKS		Standpipe/ Instrument	Elevation (m)
F	E	1					+		1		1		<u>F00</u>			-+		1		- 40-
Ē		$\frac{1}{205m-60}$	mm of core loss	-							1					ļ				740-
Ē "				/	1						1									-
-31	'										1									739-
Ē											1					ļ				
-32	'										1	ļ				J	.			7
-	'										1					ļ				738-
-											1					ļ				
-33									'		1					ļ	-			1
											1					ļ				737-
-											1					ļ				
-34											1						4			
-	'										1					ļ				736-
-											1					ļ				
											1						1			ĺ
-	'										1					ļ				735-
-											1					ļ				.
-36											1						1			
-									'		1					ļ				734-
-									'		1					ļ				.
—37 	'										1					1				733-
-											1					ļ				/ 30
- - 38									'		1									1 -
											1	ľ								732-
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39	'										1	ļ				J				
-											1					ļ				731-
-											1					ļ				ĺ
					\downarrow	 			 '	\vdash	<u> </u>	⊢					4			
		Notes:			┶━━┵			<u> </u>	Mon	itorir	ng Ins	stalla	tion P	ipe V	Vork	7	<u>, </u>	<u>_</u>		
		Target depth c	of 30 m achiever	d. Corehc	ole b	oackfille	ed with	D	epth Tr	op	Dept	h Bc	ottom	Pip	е Туре	;				
		bentonite onip	S.					Γ						1			.ogged By:	C. Tarr	ns	
11/01/202	A													L		R	eviewed By:	C. Bra	un	



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	CLIENT	Eastern	Irrigat	ion Distr	ict		F	PROJ	IECT I	NAM	E	S	Snake Lake Reservoir Expar	sion
	PROJECT NUMBE	R15	60-19	3-00			F	PROJ	IECT L	_OC	ATION		NE 1/4 32-19-16	
	DATE STARTED	08/21/2023 COMF	LETE	D _	08/22/	2023	<u> </u>	GROI	JND E	ELEV	ATION	770.77m	N 5611741.000 E	416802.000
	DRILLING CONTR	ACTOR	Val's	Drilling			0	GROI	JND V	VATI	ER ELE	VATION / DEPT	H	
	CORING TYPE	HQ3 DIAME	TER (mm)	6′	1	C		GRO	UNE	WATE	R RECORDED		
Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKE	URE CONTENT IC - LIQUID) Blows/300 mm 20 30 40 00 150 200 T PEN (kPa)	REMARKS	Standpipe/ Instrument Elevation (m)
- - - - - - - - - - - - - - - - - - -	SILT, sand low plastic, hairs 0.7 m - b GRAVEL, s clay, well g	y, trace fine gravel, dry, sti light brown, trace root ecoming silt and sand sandy, silty, trace to some raded, fine grained, sub-	f, 	AU1 AU2					5.6 2.2	•	•		0.6 m - Gravel = 0.1% 0.6 m - Sand = 26.7%	770
	rounded, d	ry, compact, brown	-	AU3									Clay = 27.8% 	769
3	grained sar CLAY TILL moist, stiff,	coming some coal stanni ecoming gravel and coarse nd , silty, sandy, some gravel high plastic, grey, some	9 	AU4					5.0	•)		57.5% Silt = 15.7% Clay = 9.6% 2.7 m - Gravel =	768
	oxidation s 3.3 m - bo weathered 4.0 m - bo	taining, trace coal staining ecoming some completely shale inclusions ecoming gravelly	-	AU5 AU6									2.7 m - Sand = 57.7% Silt = 12.5% Clay = 9.8%	767
5 5	SHALE, cla grey, damp weak, bloc	ayey, silty, unweathered, , high plastic, extremely ky, thinly laminated		AU7									4.3 m - Gravel = 36.4% 4.3 m - Sand = 30.1% Silt = 18.1%	766
6	 6.1 m - 12	20 mm of core loss	*	AU8 RC1	6.10 -	1	72	2					Clay = 15.4% 4.3 m - Dispersivity Classification = ND2 % Dispersion = 10%	765
- - - - - - 7 - -	6.2 m - 26 6.5 m - b moderately	30 mm of slough ecoming very weak, widely spaced fractures			1.02		74						6.1 m - Switched from 6" SSA to HQ3 Rotary Coring	764
- - - - - - - - - - -	7.4 m - b 7.6 m - 8 7.8 m - 1 7.9 m - b sandstone	ecoming trace fine sand 0 mm of core loss 50 mm of crumbled core ecoming some bedded lavers		RC2	7.62 - 9.14	2	82 95 86	1						763
- - - - - - - - - - - - - - - - - - -	8.5 m - 6 8.6 m - b fractures 9.5 m - b	4 [°] fracture ecoming widely spaced ecoming trace to no		RC3	9.14 - 10.66	3	100 100 100	1						762
E	sandstone	layers												761—
11/01/2024	Notes: Target dep bentonite c	th of 30 m achieved. Core	nole	backfille	ed with	D	Mon epth T	itorir op	ng Ins Dept	stalla h B	ation P ottom	ipe Work Pipe Type	Logged By: <u>C</u> Reviewed By: <u>C</u>	. Tams Braun



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	CLIEN	NT		Eastern Irrig	gati	on Distri	ct		F	ROJ	ECT	NAM	E				Sna	ake La	ake Res	ervoir E	Expan	sion		
	PROJ	IECT NUMBER		1560-	193	3-00			F	ROJ	ECT	LOC	ATIO	N					NE 1/4 3	32-19-1	6			
	DATE	STARTED	08/21/2023		ΤE	D	08/22/	2023	<u> </u>	ROL	JND E	ELEV	ATIO	N		770.7	'7m	_ N _	561174	1.000	Ε.	416	3802.0	00
	DRILL	LING CONTRACT	OR	Va	al's	Drilling			Ģ	ROL	JND \	NATE	ER EL	.EVA	TION	N / DE	PTH							
	CORI	NG TYPE	HQ3	DIAMETER	R (n	nm)	61	1	г		GRO	חאוו	WAT	FRF	REC	ORDI	-П							
			Higo		. (•														t /	
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIS PLAS SPT 10 50 POC	STURI STIC - (N) Bio 20 100 KET F	E CO LIQU ows/3 30 250	DNTEN JID 300 mi <u>) 4</u> 0 20 (kPa)	T n D 10		REN	IARK	3		Standpipe, Instrumen	Elevation (m)
-																								-
- - - - - - - - - - - - - - - - - - -		10.4 m - 71° 1 10.7 m - becc cemented layer	fracture oming some thi rs	n weakly		RC4	10.66 - 12.18	4	100 100 100	0														760
						RC5	12.18 - 13.70	5	94 94 94	0														759
-13		13.6 m - 90 n	om of core loss			RC6	13 70	6	100	1														
- 		13.8 m - trace	e shell fragmen	, its		100	15.22		100 100															757
15 15 		15.3 m - becc	oming weak			RC7	15.22	7	101 104	1														756— - - - -
- 							16.74		101															755
- - - - - - 17 - - - -		16.4 m - 51° 1	fracture			RC8	16.74 - 18.26	8	104 104 104	0														754
- - 		18.3 m - 80 n 18 4 m - 30 n	nm of core loss	5		RC9	18.26	9	89 95	1														753
- 		19.0 m - 30 n layer	nm extremely v	veak			19.78		89															752
-		19.7 m - 72°	fracture			RC10	19.78	10	100	1														751-
<u> </u>	1	Notes:							Mar	itorin		ato!!-	tion	Dinc	<u>۱۸/-</u>	ark								
		Target depth of	f 30 m achieve	d. Corehol	e b	backfille	d with	D	epth T	op	Dep	th Bo	otton	r-ipe ו F	; vvc Pipe	лк Тур	9							
		penionite chips	.							T							Lo	ogge	d By:		C	<u>. Tar</u>	ns	
11/01/202	4																R	eviev	wed By	:	<u> </u>	Bra	un	
L																								



COREHOLE No : 23TH07

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	CLIEN	ІТ		Eastern Irrig	atior	n Distri	ct		P	ROJ	ECTI	NAM	Ξ	_		Snake	e Lake	Reserv	voir E	xpan	sion		
	PROJI	ECT NUMBER		1560-	193-(00			P	ROJ	ECT I	LOCA	TION	_			NE	1/4 32-	19-10	6			
	DATE	STARTED	08/21/2023	_ COMPLE	TED	_	08/22/	2023	80	GROL	JND E	ELEV	ATION	-	770.77r	<u>n</u> 1	N_56	11741.0	000	E	416	802.0	00
	DRILL	ING CONTRACT	OR	Va	al's D	rilling			0	GROL	JND V	VATE	RELE	VATIO	ON / DEPT	ГН _							
	CORIN	NG TYPE	HQ3	_ DIAMETER	R (mn	ו)	61		C	DATE	GRO	UND	WATE	RRE	CORDED								
Depth (m)	SOIL SYMBOL	C	Soil lescription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCK	URE C IC - LIC I) Blows 20 100 1 ET PEN	CONTENT QUID s/300 mm 30 40 150 200 N (kPa)			REMA	RKS	5	Ctords in 1	otal iupiper Instrument	Elevation (m)
-		20.3 m - 87° 1	fracture				- 21.30		100 100														-
		21.8 m - 300 22.1 m - 300	mm of core los mm of mechar	ss nical	F	RC11	21.30 - 22.82	11	62 80 67	1													750
23		23 5 m - 69° 1	iracture		F	RC12	22.82 - 24.34	12	85 97 88	1													748
-24		23.7 m - 60 m 23.8 m - 50 m 23.9 m - 100 24.0 m - becc strong 24.9 m - 65° t 25.1 m - bedc shell fragments	in bentonite si im of core loss mm of slough oming moderat fracture ding fracture wi	eam ely ith some	F	RC13	24.34 - 25.86	13	97 100 98	1													747
26 26 		26.3 m - 49° 1 26.5 m - 33° 1	fracture fracture		F	RC14	25.86 - 27.38	14	104 111 105	1													745
-27					F	RC15	27.38 - 28.90	15	97 100 97	1													744
		28.4 m - 53° 1	fracture		F	RC16	28.90 - 30.42	16	100 100 100	0													742
F		30.0 m - mec	hanically fractu	ured area																			=
11/01/2024	4	Notes: Target depth of bentonite chips	30 m achieve	d. Corehol	e ba	ckfille	d with	D	Moni epth Te	itorir op	ng Ins Dept	talla th Bo	tion P ottom	Pipe V Pip	Vork e Type	Log	ged E viewe	3y: _ d By: _		C.	. Tarr Brau	is in	

	Ć	MP	je i	a divis	io	n of	Enç	jlo	be						COR	EHOLE No	: 2	3TH PAGE 4	07 0F 4
	CLIEN	٩T		Eastern Irri	gatic	on Distr	rict		P	'ROJ	ECT N	NAME	Ξ	_		Snake Lake Reserv	oir Expans	sion	
	PROJ	ECT NUMBER		1560-	-193	3-00			P	'ROJ	ECT L	-OCA	TION	_		NE 1/4 32-2	19-16		
	DATE	STARTED _	08/21/2023		ETEC	כ _	08/22/	/2023	3 G	ROU	JND E	LEVA	ATION	_	770.77r	<u>n</u> N <u>5611741.0</u>	000 E _	416802.0	000
,	DRILL	-ING CONTRAC	TOR	V	/al's	Drilling			G	ROU	JND W	VATE	R ELE	VATIC	N / DEP	ГН			
	CORI	NG TYPE	HQ3		:R (m	וm)	6	1	D	ATE	GRO	UND	WATER	R REC	CORDED	·			
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTU PLASTI SPT (N) 10 2 50 1 POCKE	URE C C - LIC) Blows 20 <u>:</u> 00 1 -T PEN	ONTENT QUID s/300 mm 30 40 150 200 v (kPa)	REMA	RKS	Standpipe/ Instrument	Elevation (m)
F										[]		-	100						-
	1																		740-
- - 																			739–
33																			738-
- - 																			737-
																			736-
- - 36																			735-
 37																			734-
																			733-
- - 																			732-
- - - - - - - -																_			731-
		Notes:		<u> </u>					Moni	itorin	ıg Ins	talla	tion Pi	pe W	/ork				
1		Target depth c	of 30 m achieve יפו	Jd. Corehol	le b	ackfille	∋d with	D	epth To	эр	Dept	h Bo	ottom	Pipe	е Туре	-			
1		Domonice s														Logged By: _	C.	Tams	
11/01/2026	4															Reviewed By: _	С.	Braun	



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(CLIE	NT		Eastern Irri	gati	on Distri	ict		F	PROJ	ECTN	MAN	E			Sna	ake Lake I	Reservoir E	Expan	sion		
	PRO	JECT NUMBER		1560	-193	3-00			F	PROJ	ECT L	.00/	ATION				NE 1	/4 32-19-1	6			
1	DATE	E STARTED	08/21/2023		ΞTE	D	08/21/	2023		GROL	JND E	LEV	ATION	_	767.37	7m	N_561	1680.000	Ε.	41680	0.000	0
	DRIL	LING CONTRACT	OR	N	/al's	Drilling			0	GROL	JND V	VATE	RELE	VATIO	N / DEF	PTH						
		NING TYPE	HQ3	DIAMETE	R (n	nm)	61	1	C	DATE	GRO		WATE	R REC	ORDE	D						
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	• H	MOIST PLAST SPT (N 10 50 1	URE CO IC - LIC) Blows 20 3 100 19	ONTENT 201D /300 mm 60 40 50 200 (kPa)	- I	Я	REMARKS	8	Standpipe/	Instrument	(m)
-1		GRAVEL, sanc coarse grained compact, brow CLAY TILL, silt coarse gravel, plastic, brown, staining, trace 1.5 m - becor shale inclusion: SHALE, silty, c	ly, silty, well gra l, sub-rounded, n woist, firm, me some oxidation coal staining ming some wea s layey, trace sa	aded, , damp, some edium n athered _/		AU1 AU2 AU3					3.0	•					0.6 m - 0 51.1% 0.6 m - 5 31.4% S	Gravel = Sand = Silt = 10.3 Clay = 7.2	% %		7	67
		high plastic, ex thinly laminate 3.2 m - 130 n	red, light grey, tremely weak, d nm of core loss	damp, blocky,	= 	AU4 RC1	3.20 - 4 72	1	79 91	1							3.2 m - S	Switched	זר		7	- - -
		3.4 m - becor weak, widely s 4.2 m - 60° fr 4.6 m - some 4.7 m - mech 4.9 m - 73° fr	ning unweathe baced fractures acture crumbled core anically fractur acture	ered, very		RC2	4.72 - 6.24	2	98 98 98 98	1							Rotary C	Coring	20		7	63
		5.7 m - 66° fr 6.2 m - some	acture mechanical ru	bble		RC3	6.24 - 7.76	3	80 99 86	1				-							7	
		7.6 m - trace fragments, som 7.9 m - 62° fr	shell and amm re mechanical acture	ionite rubble		RC4	7.76 - 9.28	4	102 102 102	1											7	60
- -9 		9.0 m - 70° fr 9.3 m - becor 9.8 m - 58° fr	acture ning weak acture			RC5	9.28 - 10.80	5	102 105 103	1											7	58
11/01/2024	4	Notes: Target depth of bentonite chips	f 30 m achieve 3.	d. Coreho	le t	backfille	ed with	D	Mon epth T	itorir op	ng Ins Dept	talla h Bo	ation P	ipe W Pipe	′ork e Type		ogged By Reviewed	y: By:	C C.	. Tams Braun		



23TH08 COREHOLE No :

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	CLIEN	ΝT		Eastern Irr	igati	ion Distr	ict		P	ROJ	ECTI	NAM	Ξ	_		Sna	ake La	ake Rese	ervoir E	Expan	sion		
	PROJ	ECT NUMBER		1560	-19	3-00			P	ROJ	ECTI	LOCA	TION	_			I	NE 1/4 3	2-19-1	6			
	DATE	STARTED	08/21/2023		ETE	D	08/21/	2023		ROL	JND E	ELEV	ATION	_	767.	37m	_ N _	561168	0.000	Ε.	416	800.0	00
	DRILL	ING CONTRACT	OR	١	/al's	Drilling			0	ROL	JND V	VATE	RELE	VATIO	ON / DE	EPTH							
	CORII	NG TYPE	HQ3		ER (r	mm)	61			ATE	GRO	UND	WATE	RRE	CORD	ED							
Depth (m)	SOIL SYMBOL	D	Soil escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 50 1 POCKI	TURE C TIC - LIC I) Blows 20 100 1 ET PEN	CONTEN QUID s/300 m 30 4 150 21 (kPa)	NT m 10 00		REM	IARKS	6		Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		11.0 m - 69° fi	racture			RC6	10.80 - 12.32	6	100 100 100	1													757
-12		11.9 m - 20 m shale	m of strong ca	alcified		RC7	12.32 - 13.84	7	100 100 100	1													755
- - - - - - - - - - - - - - - - - - -		13.2 m - 76° f 13.8 m - 90 m clay	racture	ly weak		RC8	13.84 - 15.36	8	94 94 94	0													754
		15.3 m - 90 m 15.8 m - 67° f	im of core loss racture	5		RC9	15.36 - 16.88	9	103 107 103	1													752
- - - - - - - - - - - - - - - - - - -		16.2 m - 41° f 16.4 m - 100 i	racture mm of bentoni	itic clay		RC10	16.88 - 18.40	10	100 100 100	1													751
- - - - - - - - - - - - - - - - - - -		18.9 m - bedd clay infill	ling fracture w	rith some		RC11	18.40 - 19.92	11	106 106 106	1													749
						RC12		12		0													/ 40
		Notes: Target dopth of	30 m achiova	d Coroba	ا مار	hackfille	d with	_	Mon	itorir	ig Ins	stalla	tion P	Pipe V	Vork								
		bentonite chips		a. Corenc	ne (Jackiiile	u with	D	epth To	op	Dept	th Bo	ottom	Pip	е Тур	e Lo	ogge	d By:		С	. Tar	ns	
11/01/2024	Ļ															R	eviev	wed By:		С.	Bra	un	



23TH08 COREHOLE No :

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	CLIEN	IT		Eastern Irri	igat	ion Distri	ct		F	PROJ	ECTI	NAM	E	_		Sna	ake La	ake Rese	ervoir	Expan	sion		
	PROJI	ECT NUMBER		1560	-19	3-00			F	PROJ	ECTI	LOC	ATION	_			1	NE 1/4 3	2-19-1	16			
	DATE	STARTED	08/21/2023		ETE	D	08/21/	2023	<u> </u>	GROL	JND E	ELEV	ATION	ι.	767.3	7m	_ N _	5611680	0.000	_ E .	416	800.0	00
	DRILL	ING CONTRACT	OR	١	/al's	Drilling			0	GROL	JND V	VATE	ER ELE	EVATIO	ON / DE	PTH							
	CORIN	NG TYPE	HQ3	DIAMETE	R (r	nm)	61		C	DATE	GRO	UND	WATE	ER RE	CORDE	D							
Depth (m)	SOIL SYMBOL	D	Soil escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 50 POCK	TURE (TIC - LI N) Blow 20 100 ET PEI	CONTEN QUID 15/300 mi <u>30 4</u> 150 20 N (kPa)	T n 2 0		REM	ARK	S		Standpipe/ Instrument	Elevation (m)
- - - -							19.92 - 21.44		98 98 98														747
21						RC13	21.44	13	100	0													746
-22							- 22.96		100 100														-
23		22.7 m - trace	e shell fragmer	nts		RC14	22.96	14	100 100 100	1													745
- - 24		23.5 m - 76° f	racture																				-
- - - 25		24.9 m - bedo	ling fracture			RC15	24.48 - 26.00	15	100 100 100	1													743
						RC16	26.00	16	99 100	1													742
		26.2 m - 72° f some very wea	racture follow k core	ed by			27.52		99														741
		27.3 m - 190	mm of slough			RC17	27.52 - 29.04	17	100 100 100	1													740
						Doto	00.04																739-
		29.0 m - 50 m 29.3 m - trace	im of core loss shell fragmer	s nts		RC18	29.04 - 30.56	18	97 97 97	0													738-
<u> </u>		Notes:						<u> </u>		<u> </u>	<u> </u>	<u> </u>											
		Target depth of bentonite chips	30 m achieve	ed. Coreho	le I	oackfille	ed with	D	Mon epth T	itorir op	ng Ins Dept	stalla th Bo	ation F ottom	Pipe V	vork e Type) (oque	d Bv [.]		C	. Tar	ns	
																R	eviev	ved By:		 C.	. Bra	un	
11/01/202	4								-					-				,			_		

		MP		a divis	sio	n of	Eng	jlo	be					COR	EHOLE No :	23TH08 PAGE 4 0F
	CLIEN	IT		Eastern Irr	igati	on Distr	ict		P	'ROJ	ECT N	NAM	E		Snake Lake Reservoir I	Expansion
	PROJI	ECT NUMBER		1560)-193	3-00			P	ROJ	ECTL	-004	TION		NE 1/4 32-19-1	16
	DATE	STARTED _	08/21/2023		ETEI	D _	08/21/	2023	; G	ROL	JND E	ELEV	ATION	767.37n	n N 5611680.000	_ EE
	DRILL	ING CONTRAC	TOR	<u> </u>	/al's	Drilling			G	ROL	JND V	VATE	RELEV	ATION / DEPT	ГН	
	CORIN	NG TYPE	HQ3		ER (m	nm)	61	1	D	ATE	GRO	UND	WATER	RECORDED		
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOISTUF PLASTIC SPT (N) E 10 20 50 100 POCKET	RE CONTENT - LIQUID Blows/300 mm 0 30 40 0 150 200 PEN (kPa)	REMARK	<i>co</i> Standpipe/ Instrument Elevation
-																
-		<u> </u>			₋┤▋▋					Í						737-
										ĺ						
-																736
-																
-32																
-																735-
-33																
																734-
-34																722
-																100
-35																
																732-
-																
-36																
-																731-
-										ĺ						
-37																
-										ĺ						730-
-38										ĺ						
-																720
-										ĺ						123
-39										ĺ						
-																728
-										ĺ						
-																
		Notes:							Moni	itorir	ıg Ins	stalla	tion Pip	e Work		
		Target depth of bentonite chir	of 30 m achiev os.	ed. Coreho	ble b	ackfille	ed with	D	epth To	эр	Dept	h Bo	ottom	Ріре Туре		
		·													Logged By:	C. Tams
11/01/2024	4														Reviewed By:	C. Braun



23TH09 COREHOLE No :

CLIENT	Eastern Ir	rigati	on Distri	ct		P	ROJ	ECT	NAM	E			Sn	ake Lake Reservoir	Expan	sion	
PROJECT NUMBER	156	0-193	3-00			P	ROJ	ECT l		ATION				NE 1/4 32-19-2	16		
DATE STARTED	08/16/2023 COMPL	ETE	D	08/17/2	2023		ROL	JND E	ELEV	ATION	_	768.0	0m	N_5611593.000	_ E _	416793	.500
DRILLING CONTRAC	TOR	Val's	Drilling			0	ROL	JND V	VATE	ER ELE	VATIO	N / DE	PTH				
CORING TYPE	HQ3 DIAMET	ER (n	nm)	61		C	ATE	GRO	UND	WATE	R REC	CORDE	D				
Depth (m) SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCK	TURE C TIC - LIC I) Blows 20 3 100 1: ET PEN	ONTEN QUID 5/300 mr 30 4(50 20 1 (kPa)	T n <u>)</u> 0	REMARK	S	Standpipe/ Instrument	Elevation (m)
GRAVEL, san graded, sub-rc brown, trace c 0.7 m - beco clayey, some s 1.3 m - beco sandy to and s clay, moist to N 1.3 m - beco sandy to and s clay, moist to N 1.3 m - beco gravel, some s oravel, some clay, we SMALE, mode damp, medium oxide staining 3.2 m - 130 l due to Shelby 3.6 m - 320 l core 4.3 m - beco very weak to N 5.2 m - 35° f 5.3 m - beco moderately str 5.9 m - 65° f 6.3 m - 100 l crumbled core 5.9 m - 65° f 6.3 m - 100 l crumbled core 6.3 m - beco moderately str 7.2 m - 69° f 7.2 m - 29° f 7.2 m - 60° f 7.9 m - 61° f	dy, silty, trace clay, well bunded, damp, loose, organics ming silty, some clay to sand, coal staining ming fine grained grave and some silt, trace very moist age, wet ming coarse grained and to sandy, some silt, t trately weathered, grey, n plastic, very weak, mm core loss, potentially tubes mm fractured/crumbled mm crumbled core ming slightly weathered veak mm core lose mm fractured/crumbled racture ming weak to ong racture mm mechanically mm mechanically mm mechanically ming unweathered, ong racture racture racture ming weak to ong racture racture ming moderately strong racture ming moderately strong		B1 ST1 ST2 RC1 RC2 RC3 RC3 RC4	3.20 - 4.52 - 6.04 - 7.56 - 9.08 - 10.60	1 2 3 4 5	56 90 56 55 82 51 93 100 86 94 90 100 106 93	15 10 2 2							0 m - bulk sample from 0m to 2.0 m 3 m - Consolidatie Index: 0.24 Expansion Index: 0.07	on		767- 766- 765- 765- 763- 763- 763- 763- 763- 763- 763- 763
									-					-			
Notes:						Mon	itorir	na Inc		ation C	Dine M	lork		<u>_</u>			1
Target depth c bentonite chip	of 30 m achieved. Coreh s.	ole b	backfille	d with	D	epth To	onr	Dept	h Bo	ottom	Pipe	e Type	; L	.ogged By: Reviewed By:	J. C.	Boyd Braun	



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	CLIE	NT		Eastern Irrig	ation Distr	ict		P	ROJ	ECT	NAME	1			Sna	ake La	ike Reser	voir E	Expan	sion		
	PRO	IECT NUMBER		1560-1	93-00			P	ROJ	ECT	LOCA	TION				Ν	NE 1/4 32	-19-1	6			
	DATE	STARTED	08/16/2023	COMPLET	ED	08/17/	2023	8 G	ROL	JND E	ELEVA	TION	_	768.00	Om	N_	5611593.	000	Ε.	416	793.50	00
	DRILI		TOR	Va	l's Drilling			0	ROL	JND \	NATE	R ELE	VATIC	N / DEI	PTH							
	CORI	NG TYPE	HQ3		(mm)	6	1 T	C	DATE	GRO		WATE	R REC	CORDE								
Depth (m)	SOIL SYMBOL	ſ	Soil Description	L class	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N <u>10</u> 50 1 POCKE	URE C IC - LIG) Blows 20 3 00 1 <u>ET PEN</u>	ONTENT QUID //300 mm 30 40 50 200 _(kPa)	- 1		REMA	RKS	8	Standning	odairupinen Instrument	Elevation (m)
-		9.9 m - 35° fr	racture																			-
- - - - - - - - - - - - - - - - - - -		10.7 m - 85° 10.9 m - bec	fracture oming weak		RC6	10.60 - 12.12	6	100 100 98	2				-									757
		11.9 m - 82° 12.2 m - bec strong	fracture oming moderate	əly	RC7	12.12 - 13.64	7	87 87 82	2													756
		13.2 m - 38° 13.4 m - 77°	fracture fracture followe	d by 200	RC8	13.64	8	104	1													755
- 14 		mm core loss 13.7 m - bec	oming weak			- 15.16		104 103														754
- 		14.7 m - 100 14.8 m - 89° moderately stro 15.2 m - 14°	mm very weak fracture, becom ong to strong fracture	section ning	RC9	15.16 _ 16.68	9	95 95 79	2													753
16 		15.9 m - bec strong	oming moderate	əly																		752
-17		16.6 m - 84° loss	fracture, 80 mm	n core	RC10	16.68 - 18.20	10	95 100 92	1													751-
- - - 		17.4 m - 24° 17.6 m - 89° 17.8 m - mec 18.2 m	fracture fracture chanical fracturi	ng to	RC11	18.20	11	100	0													750-
- - - - - - - -						- 19.72		100 100														749-
		19.7 m - bec	oming weak		RC12	19.72	12	20	1													-
		Notes:	£00					Mon	itorir	ng Ins	stalla	tion P	ipe W	/ork								
		larget depth o bentonite chips	t 30 m achieved s.	1. Corehole	e backfille	ed with	D	epth T	op 🛛	Dep	th Bo	ttom	Pip	е Туре	Lo	oggeo	d By:		J.	Boy	<u>d</u>	
11/01/202	4														R	eview	ved By:		<u> </u>	Brau	IN	



23TH09 COREHOLE No :

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	CLIE	NT	E	Eastern Irrig	gatio	on Distri	ct		P	ROJ	ECTI	NAM	IE	_		Sna	ake La	ake Resei	voir E	Expan	sion		
	PROJ	IECT NUMBER		1560-	193	-00			P	ROJ	ECTI	LOC	ATION	_			١	NE 1/4 32	-19-1	6			
	DATE	STARTED	08/16/2023	COMPLE	TE	D	08/17/	2023	0	ROL	JND E	ELEV	ATION	-	768.0)0m	_ N _	5611593	000	Ε_	416	793.50	00
	DRILI	ING CONTRACT	OR	Va	al's	Drilling			0	ROL	JND V	NATE	ER ELE	EVATIO	ON / DE	PTH							
	CORI	NG TYPE	HQ3	DIAMETER	R (m	ım)	61		C	ATE	GRO	UNE	WATE	ER RE	CORD	ED							
Depth (m)	SOIL SYMBOL	D	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCK	FURE C FIC - LIC N) Blow 20 100 ET PEN	CONTEN QUID s/300 mi <u>30 4</u> 150 20 N (kPa)	T n 0		REMA	\RKS	3	Standnine/		Elevation (m)
		20.0 m - mec	hanically fractu	red area			-		44														
- - 		20.4 m - 850 bit chewed up r 21.2 m - 90 m	mm of core loss un nm of core loss	s; core		RC13	21.24	13	20 84	1													747—
							- 22.76		94 89														746—
		22.2 m - 60 m 22.2 m - becc	nm of crumbled	core y weak			22.76	14	100	0													
-23		22.8 m - becc 22.9 m - becc	oming very wea oming weak	k		11014	24.28	14	100 100 100	0													745
																							744
- 24 - - - -						RC15	24.28 -	15	99 99	0													
25							25.80		99														743—
26		26.3 m - 10 m	nm of extremely	v weak		RC16	25.80 - 27.32	16	103 103 103	1													742
-27		clay infill 27.0 m - 85° f	fracture																				741
		27.3 m - 120	mm of core loss	S		RC17	27.32 - 28.84	17	92 92 92	0													-
-28							20.01		02														740
						RC18	28.84	18	107	0													739-
							- 30.36		107														-
Ē																							_
<u> </u>		Notes:							Mon	Itorin		stall	ation 5	Dine V	Vork								
		Target depth of bentonite chips	f 30 m achieved	I. Corehol	e b	ackfille	d with	D	epth Te	op	Dept	th B	ottom	Pip	е Тур	e	0000	d By:			Boy	Ч	
																R	eview	ved Rv [.]			Brai	un	
11/01/202	4							L										. 34 Dy.			2.40	<u></u>	

	C		E	a divis	sio	n of	Eng	Jlo	be					COF	REHOLE No :	23TH09 PAGE 4 0F
	CLIEM	NT		Eastern Irr	rigati	on Distr	rict		P	'ROJ	IECT I	NAMI	E		Snake Lake Reservoir	Expansion
'	PROJ	ECT NUMBER		1560)-193	3-00			P	'ROJ	ECT I	LOC/	ATION		NE 1/4 32-19-1	16
	DATE	STARTED	08/16/2023		ETEI	D _	08/17/	2023	<u>}</u> G	ROL	JND E	ELEV	ATION	768.00	<u>m N 5611593.000</u>	E 416793.500
	DRILL	LING CONTRA	CTOR	<u> </u>	√al's	Drilling			G	ROL	JND V	NATE	R ELEV	ATION / DEP	'TH	
	CORI	NG TYPE	HQ3		ΞR (m	nm)	61	1	D	ATE	GRO	UND	WATER	RECORDE)	
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	• н	MOISTU PLASTIC SPT (N) 10 21 50 10 POCKE	IRE CONTENT - LIQUID Blows/300 mm 0 30 40 00 150 200 T PEN (kPa)	REMARK	Co Standpipe/ Instrument Elevation
Ę		1			T		1				<u> </u>	╞	100.12			
-31																737-
																735-
																734
35 																733-
																732-
37																731-
																730-
																729
		Notes:										1-110	See Di	- \\/		
		Target depth bentonite chi	of 30 m achiev ps.	ed. Corehc	ole b	ackfille	əd with	D	Moni epth To	itorin op	ig Ins Dept	stalia th Bo	ation Pip ottom	pe Work Pipe Type	_ Logged By:	J. Boyd
11/01/000															Reviewed By:	C. Braun



23TH10

С	LIEN	١T		Eastern Irri	igati	on Distri	ict		F	ROJ	ECT N	IAM	E	_		Sr	ake Lak	e Reserv	/oir E	xpans	sion	
Р	ROJ	ECT NUMBER		1560	-193	3-00			F	ROJ	ECT L	.004	ATION	_			N	E 1/4 32-	19-16	6		
D	ATE	STARTED	08/14/2023		ETE	D	08/14/	2023	80	BROL	JND E	LEV	ATION	_	769.	61m	_ N_5	611536.0	000	Ε_	416794	.000
D	RILL	ING CONTRACT	OR	١	/al's	Drilling			0	BROL	JND V	VATE	RELE	VATIC	DN / D	EPTH						
C	ORI	NG TYPE	HQ3	DIAMETE	R (n	nm)	61		C	ATE	GRO	UND	WATE	R REO	CORD	ED						
Depth (m)	SOIL SYMBOL	D	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLASTI SPT (N 10 2 50 1 POCKE	URE C IC - LIC) Blows 20 (00 1 <u>ET PEN</u>	ONTE QUID 5/300 m 30 2 50 2 I (kPa)	NT Im 40 00		REMA	RKS	;	Standpipe/ Instrument	Elevation (m)
-1		TOPSOIL, silty, plastic, brown, SAND AND SIL poorly graded, rounded, damp 2.0 m - becon 2.6 m - trace Cas, well grade angular, very m SHALE, clayey, grey, damp, hig weak, moderate fractures, thinly 4.6 m - 180 m 5.4 m - 77° fra	, sandy, damp, trace root hairs T, trace fine gr fine grained, su , loose, brown ning very silty, SEEPAGE fine gravel sand, trace silt, ed, fine grained noist, loose, dan , silty, unweath gh plastic, extre ely widely space / laminated nm of core loss m of slough acture	firm, low savel, ub- moist , trace , sub- rk brown ered, ered, ered		AU1 AU2 AU3 AU4 AU5 AU6 RC1	4.62 - 6.14	1	85 88 85	1	9.3	•	•				0.6 m 0.8% 0.6 m 56.0% 3.7 m 65.3% 4.62 m from 6 Rotary	- Grave - Sand : Clay = Clay = - Sand : Clay = - Sand : Clay = - Switc " SSA to c Coring	I = = 25.69 17.6 17.6 = = 0.1% :4.89 ched o HG	% 5% %		769 769 768 767 766 766
		6.1 m - 60 mn 6.4 m - 73° fra 7.2 m - 72° fra 7.7 m - becon 7.9 m - becon	n of core loss acture acture ning very weak ning some thin	weakly		RC2 RC3	6.14 - 7.66 7.66 - 9.18	2	93 96 93 91 100	1												763
-9		cemented layer 8.0 m - 51° fra 8.1 m - 67° fra 9.3 m - 74° fra 9.3 m - 130 m shale 9.4 m - some 9.9 m - 72° fra	s acture acture nm of strong ca crumbled core acture	lcified		RC4	9.18 - 10.70	4	44 84 59	2												761
		Notes:							Mon	itorir	ng Ins	talla	tion P	ipe W	/ork							
11/01/2024		Target depth of bentonite chips	30 m achieved Packer test c	d. Coreho ompleted	ole b afte	er corin	ed with Ig.	D	epth T	ор	Dept	h Bo	ottom	Pip	е Тур	e L	.ogged Reviewe	By: _ ed By: _		<u>C.</u>	<u>Tams</u> Braun	



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	CLIEN	T		Eastern Irrig	atio	on Distri	ct		F	PROJ	ECTI	NAM	E		S	Snake I	_ake Reservo	ir Expa	insio	۱	
	PROJ	IECT NUMBER		1560-	193	-00			F	PROJ	ECTI	LOC	ATION				NE 1/4 32-19	9-16			
	DATE	STARTED	08/14/2023	COMPLE	TE	D	08/14/	2023	<u> </u>	GROL	JND E	ELEV	ATION	_	769.61m	N	5611536.00	0_ E	4	16794.0	000
	DRILI	ING CONTRACT	OR	Va	al's	Drilling			0	BROL	JND V	NATE	ER ELE	VATIC	N / DEPTI	Η					
	CORI	NG TYPE	HQ3	DIAMETER	R (m	ım)	61	1	C	DATE	GRO	UND	WATE	R RE	CORDED						
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKI	URE C IC - LIC I) Blows 20 : 100 1 <u>ET PEN</u>	ONTENT QUID 5/300 mm 30 40 50 200 1 (kPa)	_	REMAR	KS		Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		10.2 m - 200 10.4 m - 250 10.9 m - 80 n shale 11.0 m - som 11.2 m - becc	mm of crumble mm of core los nm of strong ca e crumbled coro oming weak	d core s lcified e		RC5	10.70 - 12.22	5	97 100 99	1											759
						RC6	12.22 - 13.74	6	100 100 100	1											757-
- - - - - - - - - - - - - - - - - - -		13.5 m - 67° ⁻ 14.2 m - 79° ⁻	fracture fracture			RC7	13.74 - 15.26	7	91 99 92	1											756
15 		14.9 m - mec 15.3 m - 60 n 15.8 m - 73° [.]	hanically fractu nm of core loss fracture	red area		RC8	15.26 - 16.78	8	93 96 95	1											754
- - - - - - - - - - - - - - - - - - -						RC9	16.78 - 18.30	9	89 102 97	1											753
		17.7 m - 80 n calcified shale 17.8 m - beco weak 17.9 m - 44° 18.5 m - som 18.8 m - beco	nm of fractured, oming very to e fracture e crumbled cor oming weak	, strong xtremely e		RC10	18.30 - 19.82	10	95 108 97	2											752
		19.3 m - 70° 19.8 m - beco fractures	fracture oming widely sp	baced		RC11	19.82	11	100	1											750
		Notes:							Mon	itorir	ng Ins	stalla	ation P	ipe W	/ork						
11/01/2024	1	Target depth of bentonite chips	f 30 m achieved s. Packer test o	d. Corehole ompleted a	e b afte	ackfille er corin	ed with g.	D	epth T	ор	Dept	th Bo	ottom	Pip	е Туре	Logg Revie	ed By: ewed By:	(<u>C. Ta</u> C. Br	ims aun	



COREHOLE No : 23TH10

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	CLIEN	IT		Eastern Irrig	gatio	on Distri	ict		F	PROJ	ECTI	NAM	E	_		Sna	ake La	ake Rese	ervoir E	Expan	sion		
	PROJI	ECT NUMBER		1560-	-193	3-00			F	PROJ	ECT I	LOCA	ATION	_			1	NE 1/4 3	2-19-1	6			
	DATE	STARTED	08/14/2023	_ COMPLE	TEI	D	08/14/	2023	80	GROL	JND E	ELEV	ATION	I _	769.6	1m	N_	5611536	6.000	. Е <u>.</u>	416	794.0	00
	DRILL	ING CONTRACT	OR	V	al's	Drilling			0	GROL	JND V	VATE	R ELE	EVATIO	ON / DE	PTH							
	CORIN	NG TYPE	HQ3		R (m	nm)	61		C	DATE	GRO	UND	WATE	ER RE	CORDE	D							
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCK	FURE C FIC - LI N) Blow <u>20</u> 100 ET PEI	CONTEN QUID s/300 mr <u>30 4(</u> 150 20 N (kPa)	T n) 0		REM	ARKS	\$	Otordaina)	otal iupipe Instrument	Elevation (m)
-		20.1 m - 61° i	fracture				- 21.34		100														
21		21.9 m - 78° 1	fracture			RC12	21.34	12	97 99 97	1													749
-23						RC13	22.86 	13	99 99 99	1													747
-24		23.9 m - 64° 1 24.2 m - som 25.1 m - 51° 1	rracture e crumbled co fracture	re		RC14	24.38 - 25.90	14	81 90 85	1													745
- - 26 		25.8 m - 150 25.9 m - som 26.2 m - 24° 1	mm of core los e mechanical r fracture	ss rubble		RC15	25.90 - 27.42	15	78 100 82	3													744
27		26.8 m - 19° t 26.9 m - 70° t 27.4 m - mec 28.2 m - bedg	fracture fracture hanically fractu ding fracture	ured run		RC16	27.42 	16	93 103 93	2													742
		29.0 m - trace 29.7 m - 73° t	e shell fragmer	nts		RC17	28.94 - 30.46	17	101 110 101	2													741
		Notes:							Mon	itorir			tion [Dine V	Vork								
11/01/2024	4	Target depth of bentonite chips	ि30 m achieve अ Packer test o	d. Corehol completed	le b afte	oackfille er corin	ed with ig.	D	epth T	op	Dept	th Bo	ottom	Pip	оотк ре Туре	e Lo Ro	ogge eviev	d By: ved By:		C.	<u>. Tarr</u> Brau	<u>is</u> un	

	Q	MP	e a	divisio	on	of E	ng	lo	be						COF	REHOLI	E No :	23TH1 PAGE 4 0F	0 F 4
	CLIEN	11	E	astern Irriga	ation [District			P	'ROJ	ECT I	NAME	E	_		Snake Lake	Reservoir Ex	xpansion	
ľ	PROJI	ECT NUMBER		1560-1	93-00	1			P	ROJ	ECTL	.OCA	TION	_		NE	1/4 32-19-16	j	
ľ	DATE	STARTED	08/14/2023	COMPLET	ED	0	3/14/2	2023	; G	ROL	JND E	LEVA	ATION	_	769.61	m N56	11536.000	E 416794.000)
	DRILL	ING CONTRAC	CTOR	Val	's Dril	ling			G	ROL	JND V	VATE	R ELE	VATIC	ON / DEP	тн			
	CORIN		HQ3	DIAMETER	(mm)		61		D	ATE	GRO	UND	WATE	R RE	CORDE)			
Depth (m)	SOIL SYMBOL		Soil Description	Samula Tyne		Sattiple Ivuitibet	(m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTI PLASTI SPT (N) 10 2 50 1	URE C C - LIC) Blows 20 : 00 1	CONTENT QUID s/300 mm 30 40 150 200		REMARKS	Standpipe/ Instrument Elevation	(m)
E		30.0 m - so	me crumbled core			+	\neg	-			 I		PUURL		<u>(крај</u>				-
31																		73	39 <u> </u>
																		73	84
																		73	37-
- - - - - - - - - - - - - - - - - - -																		73	36-
																		73	35-
																		73	34-
																		73	33-
																		73	32-
																		73	31-
39 																		73	30-
<u> </u>														:	· ·				
	ļ	Notes:	f 00 m a shi sa sh	Quarteria	I I	- C III -			Moni	torin	ıg Ins	talla	tion P	ipe V	Vork				
		Target depth bentonite chi	of 30 m achieved. ps. Packer test cor	Corenoie mpleted a	bacı fter c	ctillea v oring.	/ith	De	epth To	эр 🛛	Dept	h Bo	ttom	Pip	е Туре	4			
						- 0										Logged E	Зу:	C. Tams	_
11/01/2024	4															Reviewee	d By:	C. Braun	_



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	CLIEI	NT		Eastern Irr	igati	on Distr	ict		P	ROJ	ECT	NAM	E			Sn	ake Lake Reservoir Ex	pansio	<u>۱</u>	
l	PRO	JECT NUMBER		1560)-193	3-00			P	ROJ	ECT I	LOCA	ATION	_			NE 1/4 32-19-16			
l	DATE	STARTED	08/15/2023		ETE	D	08/16/	2023	<u> </u>	GROL	JND E	ELEV	ATION	_	764.6	67m	N 5611281.000	E _4	16785.9	900
	DRILI		OR	١	/al's	Drilling			0	GROL	JND V	VATE	RELE	VATIC)N / DE	PTH				
		NG TYPE	HQ3		ER (r	nm)	6	1		DATE	GRO		WATE	RRE	CORDI	=D				
Depth (m)	SOIL SYMBOL	D	Soil escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 50 1 POCKI	URE C IC - LIC I) Blows 20 3 100 1 ET PEN	ONTEN QUID 5/300 mi <u>30 4</u> 50 20 I (kPa)	IT m 0 00	REMARKS		Standpipe. Instrumen	Elevation (m)
- - - - - - - - -		CLAY TILL, silt stiff, high plasti white precipitat crystals	y, trace sand, c, dark brown, es, trace gyps	moist, , trace sum	#	AU1														764
-		1.0 m - becon staining 1.4 m - becon	ning trace oxic ning very silty,	dation damp	-	AU2														763
2 		SHALE (Weath	ered), clayey,	silty,	=	AU3														762-
-3		highly weathere mottling, damp weak, blocky, th oxidation staini crystals 3.1 m - 420 m 3.8 m - some	ed, dark browr , high plastic, o ninly laminated ng, trace gyps nm of core loss crumbled core	n to grey extremely d, some sum s e		RC1	3.13 - 4.65	1	50 72 53	3							3.13 m - Switched from 6" SSA to HQ3 Rotary Coring	3		761
		3.39 m - becon SHALE, silty, cl grey, damp, hig moderately wid thinly laminated 4.6 m - mecha 170 mm of core	ning slightly w layey, unweatl gh plastic, very ely spaced fra d anically fracture loss	reathered/ hered, / weak, actures, red run;		RC2	4.65 - 6.17	2	74 89 74	1										760
6 		4.8 m - 46° fra 6.3 m - 59° fra	acture acture			RC3	6.17 - 7.69	3	96 100 97	1										758-
		7.2 m - 56° fra 7.7 m - 100 m	acture nm of core loss	S		RC4	7.69 - 9.21	4	83 93 88	1										757-
- - - - - - - - - - - - - - - - - - -		8.3 m - becon 8.8 m - 59° fra	ning weak acture																	756-
		9.4 m - becon cemented layer	ning some thir s	n weakly		RC5	9.21 - 10.73	5	95 100 95	1										755
	I	Notes:			L				Moni	itorir	ng Ins	stalla	tion P	ipe W	/ork		1		<u> </u>	L
		Target depth of bentonite chips	30 m achieve	ed. Coreho	ole k	oackfille	ed with	D	epth Te	op	Dept	th Bo	ottom	Pip	е Туре	e L	ogged By:	C. Ta	ims	
11/01/2024	1															F	Reviewed By:	C. Br	aun	



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	CLIEI	ТИ	!	Eastern Irrig	gati	ion Distri	ct		F	PROJ	ECT	NAM	E			Sna	ake Lake	Reservoi	ir Exp	ansio	n	
	PRO	JECT NUMBER		1560-	-19	3-00			F	PROJ	ECT	LOC	ATION				NE	1/4 32-19	€-16			
	DATE	STARTED	08/15/2023		TE	D	08/16/	2023		ROL	JND E	ELEV	ATION		764.0	67m	N_56	11281.00	0 E	= _4	16785.	900
	DRILI	LING CONTRACT	ror	V	al's	Drilling				BROL	JND \	NATE	ER ELE	VATIC) DN / DE	EPTH						
	CORI	ING TYPE	HQ3	DIAMETEI	R (r	nm)	61	I	C	DATE	GRO	UND	WATE	RRE	CORD	ED						
Depth (m)	SOIL SYMBOL	E	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCK	TURE C TIC - LIC I) Blows 20 : 100 1 ET PEN	CONTEN QUID s/300 m 30 4 50 20 1 (kPa)	IT m 0 00		REMAR	KS		Standpipe/ Instrument	Elevation (m)
		10.1 m - 76° 1	fracture																			-
Ē		10.5 m - 52° ·	fracture			RC6	10 73	6	99	2												754—
11 1		10.8 m - 75° 1	fracture				12.25		100 99	2												
 		11.6 m - 62° f	fracture																			753-
- '2		12.1 m - 110	mm of strong c	alcified		RC7	12.25	7	91	1												-
		-shale 12.2 m - 90 n	nm of core loss	;			- 13.77		94 91													752-
-13		12.9 m - 60 n	nm of bentoniti	c clav			10.77															
-		13.3 m - som																				-
-		10.0 m - 30m		C		DC0	10 77	0	00	1												751-
-14		14.0 m boor	oming widoly o	nanad		RCo	-	0	93	1												-
		fractures	oming widely sp	paced			15.29		89													-
-		14.1 m - 66° 1	fracture																			750-
15		14.8 m - som	e crumbled cor	re																		=
Ē	<u> </u>	15.2 m - 100	mm of core los	s		RC9	15.29	9	100	0												
-		15.3 m - mec	nanically fractu	irea run			- 16.81		100													749
-16		-																				-
-		-																				-
-		-				RC10	16 81	10	100	0												748-
- 	===	-					-		100													-
-		-					18.33		100													-
		· -																				747-
—18 -		-																				_
-		-				RC11	18.33	11	84 88	1												-
-		- - -					19.85		84													746
19 E		-	6 h																			-
-		$119.2 \text{ m} - 46^{\circ} \text{ m}$	iracture																			
		19.7 m - 180 19.8 m - som	mm of core los e mechanical r	ss ubble		RC12	19.85	12	97	1												/45
		Notes:							M					Nim c. 14	المعاد							
		Target depth of	f 30 m achieved	d. Corehol	le t	backfille	d with	D	ivion epth Ta	op	Dept	stalla th Be	auon F ottom	Pin	e Tvp	е						
		bentonite chips	3							-r	- 4			- · · ·		L	ogged E	Зу:		<u>С. Т</u>	ams	
11/01/2022																R	eviewe	d By:		С. В	raun	
11/01/2024	+																					-



23TH11 PAGE 3 0F 4

	CLIEN	NT		Eastern Irrig	jatior	n Distri	ict		P	'ROJ	ECT	NAM	1E	_		Sna	ake Lak	e Reserv	voir E:	xpansi	ion		
	PROJ	JECT NUMBER		1560-	193-	-00			P	'ROJ	ECT	LOC	ATION	_ ۱			NE	E 1/4 32-	-19-16	;			
	DATE	STARTED	08/15/2023	_ COMPLE	TED	,	08/16/	2023	, G	GROL	JND E	ELEV	/ATIOI	N _	764.6	37m	N_5	611281.0	000	Е_	4167	85.90)0
	DRILI	LING CONTRAC		Va	al's E	Drilling			G	GROL	JND \	NATI	ER EL	EVATIO	ON / DE	PTH							
	CORI	NG TYPE	HQ3		२ (mr	m)	61	<u> </u>	C	DATE	GRO	UNE) WAT	ER RE	CORDI	ΞD							
Depth (m)	SOIL SYMBOL	Ĩ	Soil Description	1	Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIS PLAS SPT (10 50 POC	STURE C STIC - LI (N) Blow 20 100 K <u>ET PE</u>	CONTEN QUID s/300 mi <u>30 4</u> 150 2(N <u>(kPa)</u>	T m 0 00		REMA	RKS		Standpipe/		Elevation (m)
Ē		-					- 21 37	[100														-
-21		20.7 m - 62°	fracture		F	RC13	21.37	13	100 100 100	1													744
- - - - - - - - - - - - - - - - - - -		22.5 m - bed	ding fracture		F	RC14	22.89 - 24.41	14	100 100 100	1													742
- 		23.7 m - 90 r layer 24.9 m - bec	nm moderately coming very we	[,] strong ak	F	RC15	24.41 	15	100 100 100	0													741
26 26 		25.9 m - 300 26.4 m - som 26.6 m - 60 ı shale	। mm of core los ne mechanical ⊨ mm of strong c⊧	ss rubble alcified	F	२C16	25.93 - 27.45	16	79 80 79	1													739
- - - - - - - - - - - - - - - - - - -		27.0 m - beco	oming weak ne mechanical r	rubble	F	RC17	27.45 - 28.97	17	103 105 103	1													737-
		28.7 m - 68°	fracture		F	RC18	28.97 - 30.49	18	100 100 100	0													736-
<u> </u>	<u> </u>	Notes:					لـــــــ	屵				- 4 - 114	- 4: - 10	Dinely		_							
11/01/202	24	Target depth o bentonite chip	of 30 m achieve s	d. Corehole	e ba	ackfille	d with	De	epth To	op	ig Ins Dept	stalla th B	ation ottom	Pipe V I Pip	vorк е Туре		ogged eviewe	By: _ ed By: _		<u> </u>	<u>Tams</u> Brau	<u>s</u>	

	Q			a divis	sio	n of	i Enç	jlo	be						COR	EHOLE No :	23TH1 PAGE 4 0F
(CLIEN	ΙT		Eastern Irr	rigatic	on Dist	rict		F	'ROJ	ECT I	NAMI	E	_	Ş	Snake Lake Reservoir	Expansion
1	PROJI	ECT NUMBER		1560	<u>)-193</u>	3-00			P	'ROJ	ECTI	LOCF	ATION	_		NE 1/4 32-19-1	16
1	DATE	STARTED _	08/15/2023		ETE	D _	08/16/	/2023	<u> </u>	€ROL	JND E	ELEV	ATION	_	764.67m	<u>N 5611281.000</u>	_ EE
1	DRILL	ING CONTRAC	TOR	<u> </u>	Val's	Drilling	L		¢	€ROL	JND V	VATE	ER ELEV	VATIO	N / DEPT	н	
1	CORIN	NG TYPE	HQ3		ΞR (m	nm)	6′	1	D	JATE	GRO!	UND	WATEF	REC	ORDED		
Depth (m)	SOIL SYMBOL		Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTU PLASTIC SPT (N) 10 2 50 1(POCKE	JRE CC C - LIQ) Blows 20 3 00 1! -T PEN	ONTENT IUID /300 mm 30 40 50 200 (kPa)	REMARK	standpipe/ Instrument Elevation
-		1					+	+	<u> </u>				<u></u>				
																	73
-32				I													73
-33				I													73
-21				I													73
-				I													73
-35				I													72
-36				I													
-37				I													72
-38				I													72
- 39				I													72
				I													72
										Ŀ		t	 		<u> </u>	—	
	ļ	Notes:	-f 20 m achiev	and Corebu	~lo h	kfill	ad with		Moni	itorin	ıg Ins	stalla	ation Pir	pe W	ork		
		bentonite chir	JT 3U III aomese JS		11E D.	ackins	30 With		epth Ic	<u>p</u>	Dept	h Bo	ottom	Pipe	э Туре	1 D	0 T
																	C Brown
1/01/202	4															Revieweu by.	C. Braun



23TH12 COREHOLE No :

	CLIEI	NT		Eastern Irr	igati	on Distri	ct		F	PROJ	ECTI	NAME	Ξ	_		Snake	e Lake R	eservoir l	Expar	sion		
	PRO	JECT NUMBER		1560	-193	3-00			F	PROJ	ECT I	LOCA	TION	_			NE 1/-	4 32-19-1	16			
	DATE	STARTED	06/23/2023		ETE	D	06/23/	2023	<u> </u>	GROL	JND E	ELEVA	ATION	_	767.78n	<u>n</u> 1	N 5611	071.100	_ E .	4167	85.00	00
	DRIL	LING CONTRACT	OR	١	/al's	Drilling			0	GROL	JND V	NATE	R ELE	VATIC	N / DEP1	ГН _						
	COR	ING TYPE	6" SSA	DIAMETE	ER (n	nm)	61		C	DATE	GRO	UND	WATE	R REC	CORDED						1	
Depth (m)	SOIL SYMBOL	D	Soil escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOIST PLAST SPT (N 10 2 50 1 POCKE	URE C IC - LIC) Blows <u>20 3</u> 100 1 <u>ET PEN</u>	ONTENT QUID \$/300 mm <u>30 40</u> 50 200 I (kPa)		RE	EMARK	S	Standpipe/	Instrument	Elevation (m)
		TOPSOIL, sand moist, loose, br GRAVEL, sand well graded, su loose, light brow mm 1.0 m - becon compact CLAY TILL, silt sandy, trace gra- low to medium staining, suspe inclusions, sand coal specks SHALE (Weath completely weath gray, damp, medianal staining, suspe	dy, gravely, sor own, organics y, trace clay, tr b-rounded, da wn, oxide pock ning trace to so y, , some sand avel, damp, ve plastic, brown, ct white sulpha d pockets to 25 rered), residua athered, brown	me silt, ace silt, mp, kets to 5 come clay, to to try stiff, , oxide ate 5 mm, I soil to and bard soil		AU1 AU2 SPT1 AU3 AU4 RC1 SPT2	3.00 - 4.52	1	27 72 27	20												767
		to extremely we gravel, oxide st sulphate inclus mm 3.0 m - 420 m 3.4 m - 240 m 3.8 m - 400 m drumbled core SHALE, grey, d	RC2	4.52 - 6.04	2	22 98 37	8												764 763 			
		extremely weak staining, suspe inclusions 4.4 m - becon 4.5 m - becon 4.6 m - 160 m 4.8 m - highly	c, blocky, oxide ct white sulpha ning highly we ning very weak m crumbled or fractured core	e ate athered < to weak ore e to run		RC3	6.04 - 7.56	3	90 100 87	3												762
- - - - - - - - - - - - - - - - - - -	termination 6.0 m - 150 mm crumbled core 6.3 m - 80° fracture 6.9 m - 78° fracture, shell fragments 7.3 m - becoming weak, moderately weathered								90 100 88	3												760
	⁻⁹ 7.5 m - silt and sand content increasing 7.7 m - 140 mm crumbled core 8.2 m - 81° fracture 8.6 m - 88° fracture 9.1 m - 72° fracture								95 100 93	2				-								759
	1	Notes:			Mon	itorir	na Ins	stalla	tion P	ipe W	/ork]										
11/01/2024	4	Target depth of bentonite chips	d with	D	epth T	op	Dept	th Bo	ottom	Pip	е Туре	Log	ged By: viewed E	 Зу:	J C.	. Boyc Brau	l <u>n</u>					



23TH12 PAGE 2 0F 2

	CLIEN	NT	E	Eastern Irri	gati	ion Distri	ict		P	ROJ	ECT	NAM	IE			Sna	ake Lake F	Reservoir	Expan	sion	
	PROJ	JECT NUMBER		1560	-19	3-00			P	ROJ	ECT I	LOC	ATION	_			NE 1	/4 32-19-	16		
	DATE	STARTED	06/23/2023	COMPLE	TE	D	06/23/	2023	80	ROL	JND E	ELEV	ATION	ı _	767.7	'8m	N_561	1071.100	_ E _	416785	5.000
	DRILI	LING CONTRACT	OR	V	/al's	Drilling				ROL	JND V	NATE	ER ELE	EVATIO	DN / DE	PTH					
	CORI	NG TYPE	6" SSA	DIAMETE	R (r	nm)	61	1	C	ATE	GRO	UND) WATE	ER RE	CORDE	ED					
										(c	(%)e/	
Depth (m)	- SYMBOL	C	Soil Description		nple Type	ole Number	in Depth (m)	Number	RQD TCR SCB	e Index (#/n	e Content (• н	MOIS ⁻ PLAST	TURE C	ONTEN	т	R	EMARK	S	Standpi	levation (m)
	SOIL				Sar	Sam	R	Rui		actur	istur		SPT (1 10	N) Blow: 20	s/300 mi 30 4	n D					ш
										Ľ.	ĕ		50 POCK	100 1 <u>ET PEN</u>	50 20 <u>(kPa)</u>	0					
-		9.4 m - becon moderately stro 9.7 m - 60 mr	ning weak to ong n crumbled cor	e		RC6	10.60	6	100	2											
11		10.0 m - horiz 10.8 m - 82° f 10.9 m - 85° f	zontal fracture fracture fracture				- 12.12		100 97												757—
-		11.4 m - 87° f	fracture																		-
		• • •						_													756
-		12.1 m - 260	mm mechanica	ılly		RC7	12.12	1	100	0											-
-					П		13.64		100												755
-13				Ħ	UD2B															/ 55	
-	==	-		Н	UD2C															-	
-		13.5 m - becc	oming moderate		RC8	13.64	8	100	1											754-	
-14		strong to strong) fracture		- 15.16		100														
-		-																			
																					753-
-15		- - -				RC9	15 16	q	100	1											
] 15.4 m - 44° !	fracture				-		100	· ·											-
-							16.68		95												752-
16 E		16.0 m - 84° f	fracture																		
-		16.3 m - 70 m	nm mechanicall	у																	
		crumbled core				RC10	16.68	10	100	1											751-
—17 -		-					18.20		99												-
_		-																			-
- 40		17.7 m - 73° f	fracture																	750-	
-18					RC11	18.20	11	86	1											-	
-		18.4 m - 79° f	fracture		- 19.72		86 84												-		
- 19		- - -																749-			
		19.1 m - 370															-				
F		crumbled core																			
-								_									/48—				
	I	Notes:	L		Moni	itorir	ng Ing	stalls	ation F	Pine M	/ork										
		Target depth of bentonite chips	ed with	D	epth To	op	Dept	th Be	ottom	Pip	е Туре					_ .					
													ogged By	/:	J.	Boyd					
11/01/2024	1															R	eviewed	Ву:	<u> </u>	Braun	



COREHOLE No : 23TH13

(CLIE	NT		Eastern Irr	igati	on Distri	ct		P	ROJ	ECT N	IMAI	Ξ			Snake La	ike Reservo	oir Expar	nsion		
1	PROJ	ECT NUMBER		1560	-19	3-00			P	ROJ	ECT L	.oc4	TION			١	NE 1/4 32-1	9-16			
1	DATE	STARTED	06/22/2023		ETE	D	06/23/	2023		ROL	JND E	LEV	ATION		767.10r	mN	5610791.20	00 E	416	6783.0	000
1	DRILI	ING CONTRACT	OR	١	/al's	Drilling			0	ROL	JND W	VATE	RELE	VATIO	N / DEP	тн					
	CORI	NG TYPE	HQ3	DIAMETE	R (r	nm)	61		C	ATE	GRO	UND	WATE	R REC	ORDED						
Depth (m)	SOIL SYMBOL	D	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊢ ■	MOISTI PLASTI SPT (N) 10 2 50 11 POCKE	URE CO IC - LIQ) Blows/ 20 3 00 15 ET PEN	DNTENT UID 7300 mm 0 40 50 200 (kPa)		REMAR	RKS		Standpipe/ Instrument	Elevation (m)
-	\$\$ \$\$ \${ \$	TOPSOIL, sand firm, low plastic hairs	dy, some silt, c c, brown, trace	damp, e root /		AU1															767-
- 		SAND, some si grained, sub-ro brown 1.4 m - becon 1.5 m - becon	ilt, poorly grad ounded, damp, ning medium g ning moist	led, fine , loose, grained	- - X	AU2 SPT1					1.5	•				1.2 m 0.4% 1.2 m 86.59	n - Gravel = n - Sand = %	=			766
2 		2.2 m - SEEP SHALE, silty, cl	AGE layey, modera	Itely	*	AU3					16.9		•			2.1 m	Silt = 5. Clay = 8 - Gravel	0% 8.1% =			765
-3		extremely weak spaced fracture some oxidation 3.0 m - 420 m 3.4 m - 100 m	y, damp, nigh k, moderately es, thinly lamin staining nm of core loss nm of sloughed	widely nated, s d in sand		RC1 SPT2	2.96 - 4.48	1	47 72 47	0					I	2.1 m 79.99	n - Sand = % Silt = 8. Clay = ?	9% 11.1%			764
		4.3 m - becon unoxodized 4.5 m - mecha 4.7 m - becon 5.0 m - some	ning unweathe anically fractu ning very wea crumbled core	ered, red run k e		RC2	4.48 - 6.00	2	39 100 57	3											763
		5.8 m - vertica 6.0 m - mecha 6.2 m - trace	red run t		RC3 UD1A	6.00 - 7.52	3	44 93 72	2											761	
7 8 8		8.2 m - 66° fr			RC4	7.52 - 9.04	4	46 82 57	2											760	
9	9						9.04 - 10.56	5	79 93	2											758
- - - -	UD2A																				
	I	Notes:			Mon	itorir	na Ins	talla	tion Pi	ipe W	ork]									
Target depth of 20 m achieved. Borehole backfilled v bentonite chips									epth To	op	Dept	h Bo	ottom	Pipe	е Туре	Logge	d By:	C	<u>. Tar</u>	ns	
11/01/2024	101/2024															Reviev	ved By:	C	. Bra	un	



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OLILINI	Eastern Ir	rigati	ion Distri	ct		P	PROJ	ECT I	NAM	E	_		Snake	e Lake Re	servoir E	xpans	ion	
PROJECT NUMBER	156	0-19	3-00			P	PROJ	ECT I	LOC	ATION	_			NE 1/4	32-19-1	6		
DATE STARTED	06/22/2023 COMPL	ETE.	D	06/23/	2023	<u> </u>	RO	JND E	ELEV	ATION	_	767.10r	n	N_56107	91.200	Ε_	41678	3.000
DRILLING CONTRAC	TOR	Val's	Drilling			0	RO	JND V	NATE	ER ELE	VATIO	ON / DEP	гн _					
CORING TYPE	HQ3 DIAMET	ER (r	mm)	61		C	DATE	GRO	UNE	WATE	R RE	CORDED						
Depth (m) SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKI	URE C IC - LIC I) Blow 20 100 ET PEN	CONTENT QUID s/300 mm <u>30 40</u> 150 200 V (kPa)		RE	MARKS	3	Standpipe/	Elevation (m)
10.2 m - 69°	fracture	H																757
-11 	fracture		RC6	10.56 - 12.08	6	49 100 91	2											756
11./ m - 60° 12.1 m - 200 12.2 m - bec 12.4 m - 83°	fracture ne crumbled core) mm core loss coming weak to medium fracture		RC7	12.08 - 13.60	7	77 87 74	2											755
	fracture) mm crumbled and fractured core fracture, shell fragments fracture	6	RC8	13.60 - 15.12	8	99 99 94	3											754
	fracture		RC9	15.12 - 16.64	9	95 95 93	2											752
	fracture, followed by 80 fracture		RC10	16.64 - 18.16	10	99 99 97	2											751
¹⁸ 18.0 m - 89° 18.1 m - 20 r 18.3 m - pote 18.55 m	fracture mm core loss ential siltstone layer to		RC11	18.16 - 19.68	11	98 98 98	0				-							749
Notes:																		
Target depth c bentonite chip	of 20 m achieved. Boreho s	oackfille	d with	D	Moni epth To	itorir op	ng Ins Dept	stalla th B	ation P ottom	'ipe V Pip	Vork e Type	Log	gged By: viewed B	y:	<u>C.</u>	<u>Tams</u> Braun		



COREHOLE No : 23TH14

	CLIE	NT		Eastern Irr	igati	ion Distri	ict		P	'ROJ	IECT I	NAME	Sr	nake Lake Res	servoir Expa	nsion	<u>i </u>	
	PRO,	JECT NUMBER		1560)-19:	3-00			P	'ROJ	IECT I	OCATION		NE 1/4 3	32-19-16			
	DATE	STARTED	06/22/2023		ETE	.D	06/22/	2023	<u>ج</u> و	BROI	JND E	LEVATION	768.17m	N561056	39.000 E	41	6781.7	/00
	DRIL	LING CONTRACT	OR	<u> </u>	/al's	Drilling			G	BROI	JND V	VATER ELE	EVATION / DEPTH	I				
	COR	ING TYPE	HQ3		ER (n	nm)	61	1	D)ATE	GRO	UND WATE	R RECORDED					
Depth (m)	SOIL SYMBOL	D	Soil)escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	 MOIST ⊢ PLAST ■ SPT (N 10 50 ▶ POCK 	TURE CONTENT TC - LIQUID I) Blows/300 mm 20 30 40 100 150 200 ET PEN (kPa)	REN	MARKS		Standpipe/ Instrument	Elevation (m)
	\$\$ \$} \$ 	TOPSOIL, sand firm, low plastic hairs	dy, some silt, d c, brown, trace	Jamp, ≽ root		AU1												768-
- 	///	grained, some si grained, sub-ro compact, brown CLAY, some sil stiff, low plastic	IIt, poorly grad ounded, damp, <u>n</u> It, some sand, c, light brown	damp,	=	AU2 SPT1								-				767—
2 2 		0.8 m - becon grained sand, m staining SAND, silty, tra medium graine	ning some coa noist, trace oxi ace clay, poorly ed, sub-rounde	arse idation y graded, ed, moist,		AU3 AU4					12.5		•	2.1 m - Gra 0.1% 2.1 m - San 84.7%	vel = nd =			766
		compact, brown staining, trace of 2.3 m - becon 2.5 m - SEEF SHALE, silty, c	n, trace oxidati coal staining ning very mois AGE lavev, unweatl	ion st hered,	X	SPT2 AU5								Silt Clay	= 6.6% y = 8.6%			765
- 		grey, damp, hig weak, moderate fractures, thinly trace oxide stat 3.5 m - becor	h plastic, extre ely widely spa γ laminated, ble ining ming slightly w	emely ced ocky, veathered,	-=	AU6 RC1	4.60 - 6.12	1	18 80	4								764
		unoxodized 4.6 m - 300 m 4.9 m - 80 mr and gravel 5.2 m - some	וm of core loss ח of sloughed crumbled core	s in sand e					59									763
- - - - - - - - - - - - - - - - - - -		6.0 m - 69° fra 6.1 m - 60 mr 6.2 m - becon fractures	acture n of crumbled ning widely sp	core aced		RC2	6.12 - 7.64	2	96 100 96	0				-				762
- - - - - - - - - - - - - - - - - - -		- 7.6 m - 70 mr	n of crumbled	core		RC3	7.64 - 9.16	3	90 100 95	1								761-
			acture ning very weal acture	k		RC4	9.16 - 10.68	4	99 100 99	1								759
		Notes:				<u> </u>	<u> </u>			<u> </u>	<u> </u>							L
		Target depth of after coring. Cc	i 19 m achieve orehole backfil	d. Packer led with be	tes ento	st comp onite ch	leted ips	D	Moni epth To	itorir op	ng Ins Dept	tallation P h Bottom	Pipe Work Pipe Type	Logged By:	(C. Ta	ms	
11/01/2024	4												F	Reviewed By	/: <u> </u>). Bra	aun	



23TH14 COREHOLE No :

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	CLIE	NT	E	Eastern Irrig	ation	Distri	ct		F	PROJ	ECT	NAME	Ξ	_		Sna	ake L	ake Res	ervoir E	Expan	sion		
	PRO.	JECT NUMBER		1560-1	93-0	00			P	۶ROJ	ECT I	LOCA	TION	_				NE 1/4 3	32-19-1	6			
	DATE	STARTED	06/22/2023		ED		06/22/2	2023	<u> </u>	GROL	JND E	ELEV	ATION	_	768.2	17m	_ N _	561056	9.000	Ε.	416	781.7	00
	DRILI	LING CONTRACT	ror	Val	l's Dr	rilling			0	GROL	JND V	VATE	RELE	VATIC)N / DE	PTH							
	CORI	ING TYPE	HQ3	DIAMETER	(mm))	61	I	C	DATE	GRO	UND	WATE	R RE	CORDI	ED							
Depth (m)	SOIL SYMBOL		Soil Description	C. T. M.	Sample Iype	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 POCK	URE C IC - LIC I) Blows 20 : 100 1 ET PEN	ONTEN 2UID 3/300 m 30 4 50 2(1 (kPa)	IT m 0 00		REM	IARKS	3	Otoradarian)	otanopiper Instrument	Elevation (m)
Ē		-													Ī		_	_	_	_			758-
- - - - - - - - - - - - - - - - - - -		10.8 m - 80° 1 11.2 m - 75° 1	fracture fracture		R	۲C5	10.68 - 12.20	5	90 100 97	2													757-
- 		12.0 m - beda 12.6 m - 60°	ding fracture fracture		R	۶C6	12.20 - 13.72	6	88 100 93	2													756
		13.0 m - 71° 1 13.5 m - 74° 1 13.7 m - mec 14.3 m - 63°	fracture fracture chanically fractu fracture	red run	F	२C7	13.72 - 15.24	7	80 100 92	2					-								755
- 15			fracture oming weak			D1A RC8 D1B D1C	15.24 - 16.76	8	49 73 50	2													753
		16.9 m - 50°	mm of crumble mm of core los: fracture	d core s	F	۲C9	16.76 - 18.28	9	59 88 78	2		 											752
		17.8 m - 72° f some crumbled 18.1 m - 180 18.4 m - 71°	fracture follower 1 core mm of core los: fracture	d by s	R	:C10	18.28 - 19.80	10	94 100 97	1													750
		Notes:											tion										-
		Target depth of	f 19 m achieved	J. Packer te	əst c	compl	eted		enth T	non	Dept	h Bo	tion r		Pork e Typ	A							
		after coring. Co	orehole backfille	∍d with ben	itonit	te chi	ips				<u> </u>				<u> </u>	Lo	ogge eviev	d By: wed By	<u> </u>	<u> </u>	<u>. Tarr</u> . <u>Bra</u> i	<u>ıs</u> u <u>n</u>	
11/01/202	+																						



23TH15 COREHOLE No :

	CLIE	NT		Eastern Irrig	gati	on Distri	ict		F	PROJ	ECTI	NAM	E		S	nake Lak	e Reservoir	Expan	ision		
	PRO	JECT NUMBER		1560-	-193	3-00			F	PROJ	ECT I		ATION			N	E 1/4 32-19-	16			
	DATE	STARTED	06/20/2023	_ COMPLE	TE	D	06/20/	2023	80	GROU	JND E	ELEV	ATION	_	769.69m	N5	610308.300	_ E .	416	777.3	00
	DRIL	LING CONTRACT	OR	V	al's	Drilling			0	GROI	JND V	VATE	ER ELE	EVATIO	N / DEPTH						
	COR	ING TYPE	HQ3		R (n	nm)	61	1	C		GRO	UND) WATE	R REC	ORDED						
Depth (m)	SOIL SYMBOL	C	Soil escription		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)	● ⊥ ■	MOIST PLAST SPT (N 10 50 POCK	TURE C(TIC - LIC I) Blows 20 3 100 1 ET PEN	DNTENT UID /300 mm 0 40 50 200 (kPa)	-	REMARK	S	Ċ	otariupiper Instrument	Elevation (m)
		CLAY TILL, silt	dy, some silt, tr / plastic, browr id, dry, firm, lov ice fine gravel, id, medium gra- lamp, compact staining .T, some clay, [ained, sub-rour y loose, brown y loose, brown y, some sand, ist, firm, high p	race clay, h, trace w plastic, trace ained, t, brown, poorly nded, trace plastic,		AU1 AU2 SPT1 AU3 AU4 SPT2 AU5 AU5 AU6 SPT3 AU7					2.8 5.6 23.1					1.2 m 0.0% 1.2 m 78.7% 2.1 m 70.6% 3.7 m .32.6%	- Gravel = - Sand = Silt = 8.3 Clay = 13 - Sand = Silt = 17.8 Clay = 11 - Sand = Silt = 51.3 Clay = 16	% .0% 3% .6% 3%			769 7767 7767 7767 7767 7767 7767 7767
	 -6 -6 -6 -30 mm, SEEPAGE SHALE, silty, clayey, moderately weathered, grey, damp, high plastic, extremely weak, closely spaced fractures, thinly laminated -7 -7 -7 -8 -8 -9 -8.8 m - 260 mm of slough -9 -8.8 m - 260 mm of core loss -9 -8.8 m - 260 mm of slough -9 -9 -8.8 m - 260 mm of slough -9 -9 -9 -9 -9 -1.8.8 m - 260 mm of slough -9 -1.9.0 m - 290 mm of core loss -9 -9 -9 -1.9.1 m - mechanically fractured and chewed up run 							1 2 3	0 43 16 0 41 9 0 81 66	10						6.5 m 50 blo 7.5 m circula	- SPT Refu ws for 5" - Losing ttion.	usal -			764 763 763 763 762 762 761 761 761 761 761 761 761 761 761 761
11/01/2024	Notes: Target depth of 15 m achieved. Borehole backfilled with bentonite chips									itorir op	ng Ins Dept	stalla th Bo	ation F ottom	Pipe W Pipe	ork e Type	Logged Reviewe	By:	C.	<u>. Tan</u> . Brai	<u>ıs</u>	



23TH15 PAGE 2 OF 2

	CLIEN	ΝT		Eastern Irri	gati	on Distri	ct		P	ROJ	ECTI	NAM	E			Sna	ake Lak	e Reserv	oir E	xpans	sion		
	PROJ	ECT NUMBER		1560	-19	3-00			P	ROJ	ECT I	LOC	ATION				N	E 1/4 32-′	19-16	3			
	DATE	STARTED	06/20/2023		ETE	D	06/20/2	2023	9 G	ROL	JND E	ELEV	ATION	_	769.6	9m	N_5	610308.3	00	Ε_	416	777.3	00
	DRILL	ING CONTRACT	TOR	١	/al's	Drilling			G	ROL	JND V	VATE	ER ELE	VATIO	N / DE	PTH							
	CORII	NG TYPE	HQ3		R (r	nm)	61		D	ATE	GRO	UND	WATE	R REC	CORDE	D							
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKE	URE C IC - LIG) Blows 20 3 00 1 5 T PEN	ONTEN QUID 5/300 mm 30 40 50 200 ((kPa)	Г]		REMAR	٦KS		Ctoriotory	otanopiper Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		11.0 m - becc widely spaced	oming unweath fractures, very e shell fragmer	nered, weak		RC4	10.56 - 12.08	4	78 100 82	1													759
12		12.1 m - mec	hanically fract	ured run		RC5	12.08 - 13.60	5	15 100 92	1													757
 14		13.2 m - 60° [.]	fracture			RC6	13.60 - 15.12	6	7 100 100	1													756
15 15 																							755
16 16 																							754
- - 																							753
- - 																							752
- - - - - - 19 -																							751
- - - - -																							750-
		Notes:	f 15 m ashier	d Dorah		ooken -	d with		Moni	torir	ng Ins	stalla	ation P	ipe W	/ork								
		bentonite chips	i io in achieve S	u. Boreno	ie t	Jackfille	a with	D	epth To	op	Dept	th Bo	ottom	Pipe	е Туре	Lo	ogged	By:		<u> </u>	Tan	<u>15</u>	
11/01/2024	4															R	eviewe	ed By: _		C.	Brau	JN	



23TH16 COREHOLE No :

(CLIEI	NT		Eastern Irri	gati	on Distr	ict		P	ROJ	ECT	NAME				Snak	ke Lak	e Reservoir	Expan	sion		
	PRO	IECT NUMBER		1560	-193	3-00			P	ROJ	ECT I		TION				NE	E 1/4 32-19- ⁻	16			
	DATE	STARTED	06/20/2023		TE	D _	06/20/	2023		ROL	JND E	ELEVA	ATION		768.75r	m	N_5	610031.500	_ E _	416	778.5	00
	DRILI	LING CONTRACT	OR	V	al's	Drilling			0	ROL	JND V	VATEI	R ELE	VATION	I / DEP	тн _						
	CORI	NG TYPE	HQ3	DIAMETE	R (n	nm)	61	I	D	ATE	GRO	UND	WATE	R RECO	ORDED) _						
Depth (m)	SOIL SYMBOL	D	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLAST SPT (N 10 50 1 POCKE	URE CO IC - LIQU) Blows/3 20 30 100 150 ET PEN (NTENT JID 300 mm 0 40 0 200 kPa)			REMARK	S	Oton daine	otariupiper Instrument	Elevation (m)
-1		TOPSOIL, sand damp, firm, low toot hairs SAND, silty, tra clay, poorly gra sub-rounded, d brown 2.5 m - becom oxidation stainii CLAY TILL, silt stiff, medium pl oxidation stainii SHALE, clayey weathered, gre extremely weat fractures, thinly 4.1 m - becom weathered, gre staining 4.2 m - 70 mr 5.3 m - 200 mr 5.3 m - 200 mr 5.7 m - becom moderately wid 6.5 m - 59° fra 6.8 m - some 7.0 m - 250 m 7.2 m - 120 m 7.4 m - 90 mr shale 8.3 m - 76° fra 8.9 m - becom 9.3 m - 78° fra 9.6 m - 79° fra	dy, some silt, tr / plastic, brown ice fine gravel, ided, medium g lamp, compact ining moist ning some clay ng y, some sand, lastic, brown, s ng y, some sand, lastic, brown, s ng v, classi nof core loss no f core los	race clay, , trace trace grained, t, light y, some moist, some plastic, ed ly on ered, ctures red area s cified		AU1 AU2 SPT1 AU3 AU4 SPT2 AU5 RC1 AU6 SPT3 RC2 RC2 RC3	4.20 - 5.72 - 7.24 - 8.76 - 10.28	1 2 3 4	0 95 72 7 84 72 44 92 82 41 100 92	10 3 2 3	5.5					1 0 1 8 2 7 7	.2 m - .1% .2 m - 11.6% 2.7 m - 7.3%	- Gravel = - Sand = Silt = 7.69 Clay = 10 - Sand = Silt = 10.6 Clay = 12 - SPT Refu ws for 5"	% .7% 1% sal -			768 766 766 765 764 763 762 762 761 760
-		9.9 m - 70° fra																/ 59				
11/01/2024	I	Notes: Target depth of bentonite chips	backfille	d with	D	Moni epth To	itorin op	ig Ins Dept	tallat th Bo	tion P ttom	ipe Wo Pipe	ork Type	Log	gged eviewe	By:	C.	<u>. Tarr</u>	<u>1s</u> un				



23TH16 COREHOLE No :

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	CLIE	NT		Eastern Irri	igati	ion Distri	ict		P	'ROJ	ECT	NAM	E		Sr	iake La	ake Reserv	voir E	xpan	sion		
1	PRO	JECT NUMBER		1560)-19	3-00			P	'ROJ	ECT I		ATION				NE 1/4 32-	<u>19-16</u>	δ			
	DATE	STARTED	06/20/2023		ETE	.D	06/20/	2023	3 G	ROL	JND E	ELEV	ATION	_	768.75m	_ N _	5610031.5	500	Ε_	416	778.5	00
l I	DRILI	LING CONTRACT	ГOR	<u> </u>	√al's	Drilling			G	ROL	JND V	VATE	ER ELE	VATIO	N / DEPTH							
(CORI	NG TYPE	HQ3		ER (r	nm)	61	1	D	ATE	GRO	UND	WATE	R REC								
Depth (m)	SOIL SYMBOL	C	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOISTI PLASTI SPT (N 10 2 50 1 POCKE	URE CC IC - LIQ) Blows/ 20 3 00 15 ET PEN	ONTENT UID /300 mm 0 40 50 200 (KPa)	-	REMA	RKS	;	Ct-advino/	otariupuper Instrument	Elevation (m)
- - - - - - - - -		10.3 m - mec	hanically fractu	ured run		RC5	10.28 - 11.80	5	24 100 85	2												758-
		110.9 m - 40	mm of core lo:	ec.		RC6	11.80	6	18	1												757-
		11.9 m - mec 12.5 m - 64°	hanically fractu	ured run			- 13.32		93 84													756-
		13.5 m - 40 r core	nm of extreme	RC7	13.32 - 14.84	7	47 99 82	2												755-		
 15		13.7 m - som 14.3 m - 61°	re crumbled co fracture	re		RC8	14.84	8	76 97	1												754
- - - - - - - - - - - - - - - - - - -		15.4 m - 33° 15.9 m - bec	fracture oming weak				16.36		90													753
 17		<u>∿.16.3 m - 50 n</u>	nm of core loss	<u>\$</u>																		752
 18 																						751
 19 																						750-
- - - - - -		Notes:											-						749			
		Target depth of bentonite chips	f 15 m achieve s	d with:	D	Moni epth To	itorin op	ig Ins Dept	stalla th Bo	ation P ottom	ipe W Pipe	ork • Type L	_ogge Revie [,]	ed By: _ wed By:		<u> </u>	<u>. Tan</u> Brai	<u>ıs</u>				
11/01/2024	+																					



			10.56	94 89						_			
	Notes:			Moni	toring	g Inst	allation P	ipe W	ork				
	Target depth of 24 m achieved. Packer	test com	pleted	Depth To	p [Deptł	n Bottom	Pipe	е Туре				
	alter coring. Corenole backfilled with be	ntonite c	nips.							Logged By:	C. Ta	ims	
11/01/2024										Reviewed By:	C. Br	aun	



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	CLIEI	NT	E	Eastern Irrig	atio	n Distri	ct		F	PROJ	ECT	NAM	E			Snak	ke Lak	e Reser	voir E	xpan	sion		
	PRO	IECT NUMBER		1560-1	193-	00			F	PROJ	ECT I	LOC	ATION				N	E 1/4 32	-19-10	6			
	DATE	STARTED	06/15/2023	COMPLET	ΓED		06/15/	2023		BROL	JND E	ELEV	ATION	_	773.98	<u>m</u>	N_5	609506.	.400	Ε_	41557	7.70	0
	DRILI	LING CONTRACT	OR	Va	l's E	Drilling			0	BROL	JND V	VATE	ER ELE	VATIO	N / DEP	тн _							
	CORI	NG TYPE	HQ3	DIAMETER	(mr	n)	61		C	DATE	GRO	UND	WATE	R REC	CORDED	- 1							
Depth (m)	SOIL SYMBOL	C	Soil Description	L C	sample lype	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLASTI SPT (N 10 2 50 1 POCKE	URE C IC - LIC) Blows 20 3 00 1 5 T PEN	ONTENT QUID 5/300 mm 30 40 50 200 ((kPa)			REMA	ARKS	5	Standpipe/	Elovation	Elevation (m)
11		10.5 m - 90 n 10.7 m - 260 11.0 m - bedo 11.3 m - beco	nm of core loss mm of bentonit ling fracture pming very silty,	ic clay weak,		RC4	10.56 - 12.08	4	84 100 97	1												7	763
12 12 		widely spaced 1 11.8 m - bedc extremely weak 12.1 m - becc cemented layer 12.2 m - 80° 1	rractures ling fracture wit c clay infill coming some thir 's fracture	h n weakly		RC5	12.08 - 13.60	5	100 100 100	1												7	762
13 14 14		14.0 m - 83° 1	fracture			RC6	13.60 - 15.12	6	100 100 100	1												7	'61 760
						RC7	15.12 - 16.64	7	95 99 97	1												7	759
—16 		16.2 m - 77° 1 17.1 m - 37° 1	fracture fracture	te		RC8	16.64 - 18.16	8	100 100 97	1												-	758 757
- 			s anen nagmelli	10		RC9	18.16 - 19.68	9	96 107 103	1												7	756
- - - - - - -		19.5 m - 69° 1	fracture		F	RC10	19.68	10	89	1													
	-	Notes:				Mon	itorin	ng Ins	stalla	ation P	ipe W	/ork]										
		Target depth of after coring. Co	f 24 m achieved orehole backfille	l. Packer te ed with ber	est ntor	compl nite ch	eted ips.	D	epth T	op	Dept	th Bo	ottom	Pipe	е Туре	Lo	gged view	By: ed Bv [.]		<u> </u>	<u>Tams</u> Braun		
11/01/2024	4						L										Dy.			<u></u> un			
		MPE	a divis	ioi	n of	Eng	lope								RE	EHOLE No :	23TH17 PAGE 3 0F						
---	-------------	----------------------------	------------------------	-------------	---------------	---------------------	------------	-------------------	----------------------	----------------------	--------	--	--	---	---------------------------	---------------	--------------------------	-----------------	--				
	CLIEN	т	Eastern Irr	igatic	on Distr	ict		P	ROJ	ECTI	NAM	Ξ	_		Sr	xpansion							
	PROJE	CT NUMBER	93-00 PROJECT LOCATION																				
	DATE S	STARTED 06/15/2023		ETEC	D	06/15/	2023		BROL	JND E	ELEV	ATION	_	773.9	98m	N 5609506.400	E 415577.	700					
	DRILLI	NG CONTRACTOR	١	/al's	Drilling			0	BROL	JND V	VATE	RELE	VATIO)N / DE	PTH	I							
	CORIN	G TYPE HQ3	DIAMETE	ER (m	im)	61	I	C	ATE	GRO	UND	WATE	R RE	CORDI	ED								
Depth (m)	SOIL SYMBOL	Soil Description		Sample Type	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		MOIST PLASTI SPT (N 10 2 50 1 POCKE	URE C C - LIC) Blows 20 100 1 51 PEN	CONTEN QUID 5/300 m 30 4 50 20 ↓ (kPa)	IT m <u>0</u> 00	REMARKS	Standpipe/ Instrument	Elevation					
		20.2 m - 61° fracture				- 21.20		97 97															
-21					RC11	21.20	11	100	0									753					
-22						22.72		100										752					
23					RC12	22.72 - 24.24	12	93 100 95	1									75 ⁻					
-24		23.8 m - 57° fracture																75					
-25																		74					
-26																		74					
27																-		74					
28																		74					
29																		74					
		Notes:													· 								
	יז ר	Target depth of 24 m achie	ved. Packer	test	t comp	leted		Moni	itorir	ng Ins	stalla	tion P	ipe V	/ork									
after coring. Corehole backfilled with bentonite chips.								ehii i	oh	Бері	.11 D(ποπ	Γıp	етур	- 	ogged By:	C Tams						
																	C Droup						

11/01/2024	



COREHOLE No : 23TH18

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	CLIENT	gati	on Distri	ct	F	PROJ	ECTI	NAME	Ξ	_	Snake Lake Reservoir Expansion											
	PROJECT N	NUMBER		1560	-19	3-00			F	PROJECT LOCATION						NE 1/4 32-19-16						
	DATE STAR	RTED	06/16/2023		TE	D	06/16/	80	BROL	JND E	ELEV	ATION	_	775.1	5m	N_5609	497.800	_ E _	4153	05.40	00	
	DRILLING C	CONTRACT	OR	V	/al's	Drilling		0	GROL	JND V	VATE	R ELE	VATIC	N / DEI	PTH							
	CORING TYPE HQ3 DIAMETE						61	1	C	DATE	GRO	UND	WATE	WATER RECORDED								
Depth (m)	SOIL SYMBOL	D	Soil Description			Sample Type Sample Number Run Depth (m) (m) (m) Moisture Lacture Index (#/m) Add data and and and and and and and and and an				MOIST PLAST SPT (N 10 50 1 POCKE	URE C IC - LIC I) Blows 20 3 100 1 ET PEN	ONTENT QUID 5/300 mm 30 40 50 200 I (kPa)	- 1	REMARKS			Standpipe/	Instrument	Elevation (m)			
1 1 2	TOPS trace plasti CLAY grave dark 0.9 graine SHAI	SOIL, clay gravel, m ic, brown, j Y TILL, silty al, moist, s brown, tra m - becon ed sand in LE (Weath y weathere	ey, sandy, son oist, stiff, med trace root hair y, trace sand, tiff, medium p ce white preci ning trace coa clusions ered), clayey, ed, dark browr	ne silt, ium 's trace fine lastic, pitates rse silty, n to grey		ST1 AU1 ST2 AU2 ST3 AU3											1 m - Cor Index: 0.1 Expansio 0.04	nsolidatio I6 n Index:	on			775
	some	ang, moist, to hard so ated, som gypsum c LE, clayey, hered, gre mely weak ed fracture e oxidation	bil, blocky, thir e oxidation starystals , silty, highly y, damp, high c, moderately es, thinly lamin staining, trace		AU4 RC1	2.90 - 4.42	1	61 71 63	2							2.9 m - 44 loss	40 mm c	ore			772	
	crysta 3.5 weath 3.7 4.2 4.4 4.5	als m - becon hered m - 35° fra m - beddir m - 120 m m - 180 m	ning moderate acture ng fracture im of core loss im of core loss		RC2	4.42 - 5.94	2	57 92 72	3				-								770	
	5.0 5.2 some 5.4 5.9 6.5	m - 53° fra m - 180 m gypsum c m - some m - mecha m - 77° fra	acture im brown laye crystals crumbled core anically fracture		RC3	5.94 - 7.46	3	36 102 93	3				-								769	
	6.6 trace 7.3 7.5 7.8 7.8	m - becon oxidation : m - 78° fra m - mecha m - 72° fra m - becon	ning slightly w staining acture anically fractur acture ning unweathe		RC4	7.46 - 8.98	4	30 100 81	3				-								768	
	8.0 8.0 	m - becon ented layer m - 85° fra m - 71° fra m - 260 m m - 180 m	ed ning some thir s acture acture im of bentoniti im of very stro	n weakly ic clay ong		RC5	8.98 - 10.50	5	73 100 93	2				-								766
	Notes	s:				1	L		Mon	itorir	ng Ins	stalla	tion P	ipe W	/ork							
11/01/2024	Targe bento	et depth of onite chips	25 m achieve	ed. Boreho	le b	backfille	d with	D	epth T	op	Dept	th Bo	ottom	Pip	е Туре	L	ogged By: eviewed E	: By:	<u>С.</u> С.	Tam: Brau	<u>s</u>	



23TH18 COREHOLE No :

PAGE 2 0F 3

	CLIENT	ation Distr	ict		P	ROJ	ECT	NAME			Snake Lake Reservoir Expansion								
	PROJECT NUMBER	1560-1	93-00			P	ROJ	ECT	LOCA	TION		NE 1/4 3			-19-16				
	DATE STARTED	06/16/2023		ED		ROL	JND E	ELEVA	TION		775.15r	<u>n</u> N	5609497.	800	E	415305.4	400		
	DRILLING CONTRACTOR						0	ROL	JND \	WATE		VATIO	N / DEP	тн					
	CORING TYPE	(mm)	61	1	D	DATE GROUND WATER					ORDED								
			- 															le ∼	
Depth (m)	SOIL SYMBOL	Soil Description	Comp.C	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%		MOISTU PLASTI SPT (N) 10 2 50 10	URE CC C - LIQ) Blows/ 20 30 00 15	DNTENT UID 300 mm 0 40 50 200 (kPa)		REMA	RKS		Standpipe Instrumer	Elevation (m)
-	calcified shale	9		I															765-
- - - - - - - - - - - - - - - - - - -	9.7 m - 26° f 9.8 m - beco widely spaced 11.0 m - bed	fracture oming very silty, I fractures Iding fracture	weak,	RC6	10.50 - 12.02	6	93 100 95	1											764
-	11.5 m - 66°	fracture																	
-12				RC7	12.02	7	100	0											700
Ē					- 13.54		100												/63
Ē					10.04		100												
-13																			760
Ē	13.3 m - 57°	fracture																	/02-
Ē				RC8	13.54	8	95 99	1											-
-14					15.06		97												704
-																			761—
-																			
15				RC9	15.06	9	75	1											700
Ē					-		92												/00
Ē	15.6 m - 73°	fracture			10.58		84												
-16																			750
Ē		fracture																	/ 59 -
Ē) mm 0f core los	s	RC10	16.58	10	99 107	1											
-17		ding fracture			18.10		107												750
Ē																			/ 30
Ē																			
-18				RC11	18 10	11	91	1											757
Ē					-		100												131
-	19.7 m	na machanical r	ubblo		19.62		94												
-19		fracture																	756
Ē																			, 30
E		fracture with ex	tremely	RC12	19.62	12	76	1											-
F	weak clay infil	I	 		- 21.14		93	L			<u> </u>	<u> </u>							
	Notes:						Mon	itorir	ng Ins	stallat	ion Pi	pe W	ork]					
	Target depth o	backfille	ed with	D	epth To	ор	Depth Bottom			Pipe	е Туре								
	Somorine only										Logg	jed By:		<u>C.</u>	īams				
11/01/2024	4													Revi	ewed By:		<u>C. E</u>	Sraun	



23TH18 COREHOLE No :

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(1 IIIC	NT	Eastern Irrig	atic	on Distri	ict		F	PRO.	JECT	NA	ME		_	Snake Lake Reservoir Expansion								
F	PROJ	JECT NUMBER		1560-1	193	-00		F	PRO	JECT	LO	CAT	ΓΙΟΝ	_	NE 1/4 32-19-16								
[JATE	STARTED	06/16/2023	_ COMPLE7	ГЕС	<u> </u>	3(GRO	UND	ELE	EVA	TION	_	775.	15m	N_560949)5.40	0					
ſ	JRILI	LING CONTRACT	TOR	Va	ıl's [Drilling		(GRO	UND	WA	TEF	۶ELE	VATIO	N / DE	EPTH							
(CORI	NG TYPE	t (m	. (mm) <u>61</u>			r	DATE	E GR(OUN	1D V	NATER	R REC	ORD	ED								
Depth (m)	SOIL SYMBOL	[Soil Description	() 	Sample 1ype	Sample Number	Run Depth (m)	Run Number	RQD TCR SCR	Fracture Index (#/m)	Moisture Content (%)		► F	MOISTU PLASTI SPT (N) 10 2 50 1 P <u>OCKE</u>	URE C(C - LIQ) Blows 20 3 00 1: ET <u>PEN</u>	2NTEN !UID /300 m 30 4 50 2i (<u>kPa)</u>	IT m .0 D0	REN	/ARKS	;	Standpipe/	Instrument Flavation	(m)
	Ē	-					<u>ا</u>			Τ	Τ											7	55-
-21		21.0 m - 79°	fracture			RC13	21.14 - 22.66	13	77 82 82	0												7	54
		22.4 m - 280	mm of core los	;s		RC14	22.66 - 24.18	14	61 95 67	1												7	/52-
-24		23.4 m - bedo 23.7 m - verti of core run 24.1 m - 80 r 24.2 m - vert for 200 mm	ding fracture ical fracture thro mm of core loss tical fracture cor	ough rest ; ntinuing		RC15	24.18 - 25.70	15	79 100 86	1												7	51
-25]																		7	50-
26 																						7	49
27																						7	48
28 																						7	47
-29 																						7	46
	<u> </u>	Notes:			┵		<u> </u>	느		<u> </u>			N - 4				<u> </u>	<u>.</u>					
11/01/2024	1	Target depth of bentonite chips	ıf 25 m achieved s	d. Borehole	; ba	ackfille	d with	D	Mon epth T	itorii op	ng In Dep	oth I	Bot	tom Pi	pe vv Pipe	ork • Typ	e Lu R	ogged By: eviewed By	/:	<u> </u>	<u>Tams</u> Braur	<u> </u>	