		a division of Eng	lol	be			TE	EST PIT No :	22TP401 PAGE 1 0F 1
	CLIENT	Eastern Irrigation District		PR	OJECI	NAME	ç	Snake Lake Reservoir Ex	nansion
	PROJECT NUMBE							NE 1/4 32-19-16	•
	DATE STARTED	06/23/2022 COMPLETED 06/23/2	2022			ELEVATION	775.36m		
	DRILLING CONTRA		-						
	EXCAVATION MET	HOD Excavator							
Depth (m)	TOBMY S IIOS		Sample Type	Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blow 10 20 100 200 POCKET PEN I 	QUID s/300 mm	REMARKS	Standpipe/ Instrument Elevation
- $ -$	CLAY TILL, medium pla	silty, some sand, trace gravel, dry, stiff, stic, brown, suspect white sulphate inclusions eathered), clay and silt, some sand, highly light brown to dark grey mottling, some aining, damp, high plastic, extremely weak,	5	B1	6.6			1 m - Dispersivity Classification = ND3 % Dispersion = % 1 m - Dry Density = 1766 kg/m3 Optimum Moisture = 16.7% 1 m - LL = 44.1% PL = 14.2% PI = 29.9%	775- 774- 773- 773- 772- 772- 771- 770- 770-
	Notes: North borro	w search. Backfilled with uncompacted cutting	gs.			-		Logged By:	C. Tams
								Reviewed By:	T. Curtis
11/01/202	4							·	

		MP		a division of Eng								ΤE	ST F	PIT No :	22		
				-												PAGE	ιUF
	CLIEN			Eastern Irrigation District			OJECI			_		S		ake Reservoir		sion	
		IECT NUMBER		1560-193-00			OJECI			_				NE 1/4 32-19-1			
		STARTED	06/23/2022	COMPLETED06/23/2	2022	GR	OUND	ELE	ioita/	N _	779.	.89m	N	5612509.400	_ E _	414499	.700
		ING CONTRACT		Eastern Irrigation District													
	EXCA	VATION METHO	D	Excavator													
Depth (m)	SOIL SYMBOL		Desc	Soil pription	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S	PLASTI PT (N) <u>10 2</u> 00 2	IRE COI C - LIQU Blows/3 20 30 00 30 T PEN (I	UID 00 mm 0 40 0 400			REMARKS	;	Standpipe/ Instrument	Elevation
		sand, trace iron rounded bould low to medium staining, gypsu SHALE (Weath	nstone inclus ers up to 470 plastic, greyi um crystals nered), silt an rk grey, moist ely fissured	pravel up to 80 mm, some ons up to 350 mm, trace mm, trace silt, damp, stiff, sh brown, some oxidation d clay, trace sand, highly high plastic, extremely weak whole @4.0 m		B1							Cohes 1.2 m ·	- Phi: 26.9° ion: 12.0 kPa - Gravel = 11 - Sand = 19. Silt = 38.9% Clay = 30.4	.6% 1% %		779 777 777 777 777 777
		Notes:		u													
11/01/2024		North borrow s	earch. Backfi	lled with uncompacted cutting	gs.								Logge Reviev	d By: ved By:		<u>C. Tams</u> T. Curtis	

		MP		a division of Eng	lol	be			Т	EST PIT No :	22TP403 PAGE 1 0F
	CLIEI	NT		Eastern Irrigation District		PR	OJECI	NAME		Snake Lake Reservoir E	Expansion
		IECT NUMBER		1560-193-00				LOCATION		NE 1/4 32-19-1	-
	DATE	STARTED	06/23/2022	COMPLETED06/23/2	2022	GR	OUND	ELEVATION	779.47	m N 5612554.700	E 414640.700
	DRILI	LING CONTRAC	TOR	Eastern Irrigation District							
	EXCA	VATION METHO	D	Excavator							
Depth (m)	SOIL		Desc	oil ription	Sample Type	Sample Number	Moisture Content (%)	 MOISTURI PLASTIC - SPT (N) Bid 10 200 100 200 POCKET F 	- LIQUID ows/300 mm <u>30 40</u> 300 400	REMARKS	Standpipe/ Instrument Elevation
-		up to 300 mm, suspect white weathered mu 1.0m - 500 m 2.0m - oxidiz SHALE (Weat weathered, lig	avelly, silty, so , dry, firm, mec sulphate inclu dstone nm boulder nm boulder ed shale sean hered), clay ar ht brown to da iely weak, bloc	me sand, rounded cobbles lium to high plastic, grey, sions, trace completely		B1	6.6			1.3 m - EC: 6.0 dS/ 1.3 m - SAR: 8.0 1.3 m - pH: 8.2 1.3 m - Dry Density 1761 kg/m3 Optimum Moisture = 17.3%	=
	1	Notes:					<u> </u>			1	
11/01/202	24		search. Backfil	led with uncompacted cutting	gs.					Logged By: Reviewed By:	<u> </u>

		MP		a division of Enç	glo	be					Т	EST	PIT No :	22	PAGE	
	CLIEN			Eastern Irrigation District			OJECI			_			ake Reservoir E		sion	
				1560-193-00	0000				ATION		776 47		NE 1/4 32-19-10 5612389.600		111786	700
		STARTED	06/22/2022	COMPLETED06/22	2022	GR	OUND	ELEV	ATION	N _	//6.1/	<u>m</u> N	5012369.000	Ë _	414700.	100
				Eastern Irrigation District Excavator												
				Excavator	Т			T							L C	
Depth (m)	SOIL		Des	Soil cription	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTIC PT (N) I 10 20 00 20	RE CON C - LIQU Blows/3 0 300 7 PEN (H	IID 00 mm <u>40</u> 0 400	_	REMARKS		Standpipe/ Instrument	Elevation (m)
		silty, some gra medium to high trace root hairs SHALE (Weath concretions, h	me complete vel, boulders n plastic, brow nered), clay a ighly weathe , high plastic	ly weathered shale inclusions up to 750 mm, dry, firm, whish grey, oxide staining, nd silt, some sand, ironstone red, grey with oxidation , extremely weak to hard soil		B1				PEN (*	<u>Pa</u>)	1713 Optim 18.7% 3.6 m Class % Dis 3.6 m 1627	- Dispersivity ification = ND [*] persion = % - Dry Density kg/m3 ium Moisture =	= 1		776-
- - - - - - - - - - - - - - - -		Notes: North borrow s	earch. Backf	illed with uncompacted cuttir	gs.							Logge	ed By:		C. Tams	771-
11/01/202	и											Revie	wed By:		T. Curtis	3

		IPE	a division of En	glol	се				-	ΓES ⁻	T PIT No :	22	TP4 PAGE 1	
	CLIENT		Eastern Irrigation District		PR	OJECT	NAME			Snak	ke Lake Reservoir	Expans	sion	
	PROJECT N		1560-193-00		PR	OJECT	LOCA	TION			NE 1/4 32-19-	16		
	DATE STAR	RTED 06/23/2022	COMPLETED 06/2	3/2022	GR	ROUND	ELEVA	TION	780.9	9m	N 5612529.200	Е	414908.3	300
	DRILLING (Eastern Irrigation District											
	EXCAVATIC		Excavator											
Depth (m)	SOIL SYMBOL		Soil scription	Sample Type	Sample Number	Moisture Content (%)	H PL ■ SP 10	ASTIC - T (N) Blo <u>20</u> 0 200	E CONTENT LIQUID bws/300 mm <u>30 40</u> 300 400 EN (KPa)		REMARKS	6	Standpipe/ Instrument	Elevation (m)
	CLA ^M mm, sulpt	LE, clay and silt, some some oxidation staini weak, blocky, trace q	some sand, cobbles up to 22 im plastic, grey, suspect whi e sand, medium weathered, ng, damp, medium plastic, rehole @5.0 m		B1	13.8				1.2 1.2 1.2 17 0p	2 m - EC: 3.7 dS 2 m - SAR: 2.5 2 m - pH: 7.9 2 m - Dry Density 71 kg/m3 ttimum Moisture .6%	y =		780- 779- 778- 777- 776-
11/01/2024			filled with uncompacted cutt	ings.							gged By: viewed By:		C. Tams T. Curtis	

		MP		a division of Eng	lol	ce				TE	EST PIT No :	22	TP4 PAGE 1	
	CLIE	NT JECT NUMBER		Eastern Irrigation District 1560-193-00				- NAME LOCATION		ŝ	Snake Lake Reservoir I NE 1/4 32-19-1		ion	
		E STARTED	06/22/2022	COMPLETED 06/22/2	2022			ELEVATION		7.61m			415042.0	000
	DRIL	LING CONTRAC	TOR	Eastern Irrigation District										
	EXC	AVATION METHO	D	Excavator										
Depth (m)	SOIL		Desc	Soil rription	Sample Type	Sample Number	Moisture Content (%)	 MOISTU PLASTIC SPT (N) I 10 20 100 20 POCKET 	C - LIQUID Blows/300 m		REMARKS		Standpipe/ Instrument	Elevation (m)
1		silty, some gra up to 340 mm, brown to dark <u>1.5m - no co</u> SHALE (Weat	me completel vel, some cob dry, soft, low grey mottling, bbles hered), clay a ht brown to da igh plastic, ve	y weathered shale inclusions bles up to 300 mm, boulders to medium plastic, light some oxidation staining nd silt, some sand, highly rk grey mottling, oxidation ry weak	,	B1	2.9				1 m - Dispersivity Classification = ND % Dispersion = % 1 m - Organic Cont = 5.8% 1 m - Dry Density = 1740 kg/m3 Optimum Moisture 17.5%	ent :		777- 776- 7775- 7774- 7773- 7773- 7772-
-		Notes:									1			
			search. Backfi	lled with uncompacted cutting	gs.						Logged By:		<u>C. Tams</u>	
11/01/202	4										Reviewed By:		T. Curtis	·

		MP		a division of Eng	lol	be						TE	ST	PIT No) :		TP4 PAGE	
	CLIEN			Eastern Irrigation District			OJECI			-		S		ake Reser			ion	
				1560-193-00						-	770	00		NE 1/4 32 5612493.			415254.	400
			06/22/2022	COMPLETED06/22/2 Eastern Irrigation District	2022	GF	ROUND	ELEV	AHOI	N	//0	.98m	N	5012495.	.000	E _	413234.	.400
		VATION METHOD		Excavator														
Depth (m)	SOIL		Des	Soil cription	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTI	IC - LIC Blows/ 20 3 00 3	300 mm 1 <u>0 40</u> 00 40)	-	REMA	RKS		Standpipe/ Instrument	Elevation (m)
1		cobbles up to 3 plastic, light bro SHALE (Weath weathered, dar moist, high plas ironstone concr	some sand, 00 mm, trac own to brown we to brown ered), clay a k mottled bro stic, extreme etions up to ing orange f s	Ind silt, trace sand, completely wn, some oxidation staining, ly weak to hard soil, blocky, 500 mm rom oxidation staining,		B1	4.9						Cohe 1 m - 1760	Phi: 27.0 sion: 30.0 Dry Dens kg/m3 num Mois 6	0kPa sity =			776- 775- 774- 773- 772-
-		Notes:							i	;			-					
		North borrow se	earch. Backf	illed with uncompacted cutting	js.													
														ed By: wed By:	-		C. Braur T. Curtis	
11/01/202	4												Revie	weu By:	-		. Curds	<u>د</u>

		MP		a division o	of Engl	ok	be				Т	EST	PIT No :	22TP4 PAGE	
(CLIEN	IT		Eastern Irrigation Dis	strict		PR	OJECT	NAME			Snake I	Lake Reservoir Exp	pansion	
1	PROJ	ECT NUMBER		1560-193-00			PR	OJECT	LOCATIO	N _			NE 1/4 32-19-16		
1	DATE	STARTED	06/22/2022		06/22/20	22	GR	OUND	ELEVATIO	N	775.76	<u>m</u> N	5612309.700	415217	.200
I	DRILL	ING CONTRACT	TOR	Eastern Irrigation	n District										
I	EXCA	VATION METHO	D	Excavato	r										
Depth (m)	SOIL SYMBOL		So Descr	bil iption		Sample Type	Sample Number	Moisture Content (%)	 MOIST PLAST SPT (N 10 100 2 POCKE 	TIC - LIQI	UID 300 mm <u>0 40</u> 0 400		REMARKS	Standpipe/ Instrument	Elevation
- - - - - - - - - - - - - - - - - - -		rounded, trace up to 650 mm, brown with oxi inclusions SHALE (Weath ironstone conc weathered, gre	me silt, gravell rounded cobb trace sand, da dation specs, s hered), clay an cretions up to 4 eyish brown wit	y, Gravel is mediur les up to 300 mm, amp, stiff, medium suspect white sulph d silt, some sand, 00 mm, completely th oxidation stainin hely weak to hard s	boulders plastic, hate some y ng, damp,		Β1					Cohe	n - Phi: 27.3° ision: 12.0 kPa n - LL = 43.0% PL = 14.9% PI = 28.1%		775- 774- 773-
- - - - - - - - - - - - - - - - - - -			End of Borel	nole @3.9 m			B2					Class % Dis 3.8 m 3.8 m 3.8 m 3.8 m 3.8 m 1729	n - Dispersivity sification = ND3 spersion = % n - EC: 9.7 dS/m n - SAR: 19.1 n - pH: 4.7 n - Dry Density = kg/m3 num Moisture = %		772- 771- 770-
11/01/2024		Notes: North borrow s	search. Backfill	ed with uncompac	ted cuttings	5.							ed By:	C. Brau T. Curtis	

		AP		a division of En ç	glo	be					Т	ESTI	PIT No :	22	PAGE	
	CLIENT	_		Eastern Irrigation District		PR	OJECT		E			Snake L	ake Reservoir	Expan	sion	
	PROJE	CT NUMBER		1560-193-00		PR	OJECI						NE 1/4 32-19-	-16		
	DATE S	TARTED	06/22/2022	COMPLETED 06/22	/2022	GR	OUND	ELEV		۰ ۱	769.67		5611757.600		416865.	.600
	DRILLIN	NG CONTRACT	OR	Eastern Irrigation District						_						
	EXCAVA	ATION METHO		Excavator												
Depth (m)	SOIL SYMBOL		Desc	Soil ription	Sample Type	Sample Number	Moisture Content (%)	H P ■ SF 10	LASTIC PT (N) 0 2 00 20	RE COM C - LIQU Blows/30 00 300 F PEN (k	IID 00 mm <u>40</u> 0 400		REMARK	S	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - -	C b S g	Frown, suspec SAND and GR Irained, Grave	e sand, dry, s t white sulpha AVEL, trace s I is subangula	tiff, blocky, low plastic, light tes ilt, Sand is medium to coars ar medium grained, well wn with oxidation specs	se	AU1						0.5 m 0.5 m	- EC: 0.6 dS - SAR: 1.6 - pH: 7.3 - Sand = 5.1 Silt = 39.5 Clay = 55.4	1% %		
- - - - - - - - - - - - - - - - - - -						B1							- Gravel = 1 - Sand = 82 Fines = 7.5	.5%		768-
- - - - - - - - - - - - - - - - - - -	Market Contraction of the second seco	Gravel is well r ery loose, bro .3.3m - SEEP 1 GHALE, clay a	ounded, poor wn, some oxi AGE, FREEW nd silt, some p, medium pl	les to boulders, trace fines, ly graded, Rounded, wet, dation staining /ATER, Boulder, 1.3x0.6,x1. sand, medium weathered, astic, extremely weak, finely shole @4.9 m		B2							- Gravel = 1 - Sand = 90 Fines = 8.8	.2%		766
11/01/202	Т	lotes: ēst pit north o	fabandoned	gravel pit. Hole backfilled wi	th un	ncompac	ted cu	uttings				Logge	d By: wed By:		C. Braur	

			division of Eng	lol	ре				TE	EST PIT No :		TP4 PAGE 1	
	CLIENT	Ea	stern Irrigation District		PR	OJECT	NAME		:	Snake Lake Reservoir	Expans	ion	
	PROJECT NUMBER		1560-193-00		PR	OJECT	LOCATIO	N _		NE 1/4 32-19-	16		
	DATE STARTED	07/06/2022	COMPLETED 07/06/2	2022	GR	OUND	ELEVATIO	N	766.28n	n N 5611419.200	_ E _	416524.7	700
	DRILLING CONTRACT		Eastern Irrigation District										
	EXCAVATION METHO	D	Excavator										
Depth (m)	SOIL SYMBOL	Soil Descrip		Sample Type	Sample Number	Moisture Content (%)	 MOIST ⊢ PLAST SPT (N 10 100 ▲ POCKE 	FIC - LIQ) Blows/: <u>20 3</u> 200 30	UID 300 mm <u>0 40</u> 00 400	REMARKS	3	Standpipe/ Instrument	Elevation (m)
- $ -$	medium to hig	h plastic, brown, hered), clay and s	silt, trace sand, highly p, high plastic, very weak	,	B1	14.6	•			4.5 m - Phi: 24.7° Cohesion: 12.0 kP 4.5 m - Dry Density 1622 kg/m3 Optimum Moisture 20.8%	y =		764-
		led with uncompa	icted cuttings							Logged By: Reviewed By:		3.Tataryr	
11/01/202	4									,			

CLIENT	Eastern Irrigation District				NAME	SI	nake Lake Reservoir Ex	pansion
PROJECT NUMBER	1560-193-00						NE 1/4 32-19-16	
	06/22/2022 COMPLETED 06/22/2	2022	GR	OUND	ELEVATION	764.47m	N 5611304.500	E 416861.40
DRILLING CONTRACTO	-							
SOL SYMBOL	Soil Description Y, silty, trace sand, very moist, soft, low to	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - L SPT (N) Blow 10 20 100 200 POCKET PEN 	IQUID s/300 mm <u>30 40</u> 300 400	REMARKS	Standpipe/ Instrument
CLAY, some silt gypsum crystals	dark brown, organic odour, root hairs , very moist, soft, medium plastic, brown, s, root hairs ing no root hairs ered), clay and silt, trace sand, highly c mottled brown, moist, high plastic, to hard soil, blocky, finely fissured, oxide		B1					
Notes:								

		a division of Eng	lol	be					TE	EST F	PIT No :	22	PAGE	
	CLIENT	Eastern Irrigation District		PR	OJECI	NAN	1E		:	Snake La	ke Reservoir	Expans	sion	
	PROJECT NUME	BER1560-193-00		PR	OJECT	LOC	ATION			Ν	IE 1/4 32-19-	16		
	DATE STARTED	07/06/2022 COMPLETED07/06/2	2022	GR		ELE\	/ATION		768.06n	n N	5611183.800	_ E _	416527.	.700
	DRILLING CONT	RACTOR Eastern Irrigation District												
	EXCAVATION ME	ETHOD Excavator												
Depth (m)	SOIL	Soil Description	Sample Type	Sample Number	Moisture Content (%)	H I ■ s	PLASTIC SPT (N) E <u>10 20</u> 100 20	RE CONTI - LIQUID Blows/300) 30 0 300 PEN (kPa	mm 40 400		REMARKS	3	Standpipe/ Instrument	Elevation (m)
	poorly gra	AND COBBLE, sandy, some silt, trace clay, aded, dry to damp, compact, brown	,	B1	21.9					1547 kg Optimu 23.0% 4 m - L	Pry Density = g/m3 m Moisture L = 85.2% PL = 17.9% PI = 67.3%	=		768- 767- 766- 766- 766- 766- 766- 766-
		ackfilled with uncompacted cuttings												
	iest pit ba	ackined with uncompacted cuttings								Logged	l By:	ſ	3.Tataryı	'n
										Review			T. Curtis	
11/01/202	24									I CONCW	Gu Dy.		i. Guide	

0 0 <th></th> <th>TE</th> <th>EST PIT No:</th> <th>22TF</th> <th>'413</th>													TE	EST PIT No:	22TF	' 413
PROJECT NUMBER 1980-199-00 PROJECT LOCATION NE 14 32-19-18 DATE STARTED 07060222 CORPUTED 07050222 ORPUDD ELEVATION TACTOR Elevation Datied EXCONTION METHOD ELEVATION TACTOR NETHOD ELEVATION TACTOR NETHOD ELEVATION METHOD EL				5	a division o	of Eng	lol	oe							PAG	E 1 0F 1
DATE STARTED 07002222 COMPLETED 07002222 GROUND ELEVATION 765 73m N 6511181.100 E 418827.100 DRULING CONTRACTOR Eastern impaired Diricit Excavator Excavator F F 65 73m N 6511181.100 E 418827.100 Excavator Excavator Excavator Excavator F		CLIENT			Eastern Irrigation D	istrict		PR	OJECI		1E		ę	Snake Lake Reservoir Ex	pansion	
DRILING CONTRACTOR Eastern trigation Diand EXCAVATION METHOD Excavator egg g gg g		PROJE	CT NUMBER		1560-193-00			PR	OJECI	LOC	ATION			NE 1/4 32-19-16		
EXCAVATION METHOD Excavator		DATE S	TARTED	07/06/2022	COMPLETED	07/06/2	2022	GF		ELE		1 7	765.73m	N 5611181.100	E 4168	327.100
Sol Sol Sol Big Big <td></td> <td>DRILLIN</td> <td>IG CONTRAC</td> <td>TOR</td> <td>Eastern Irrigatio</td> <td>n District</td> <td></td>		DRILLIN	IG CONTRAC	TOR	Eastern Irrigatio	n District										
C 0 Description 0 <td< td=""><td></td><td>EXCAVA</td><td>ATION METHO</td><td>D</td><td>Excavate</td><td>or</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		EXCAVA	ATION METHO	D	Excavate	or										
Image: Some Some gravel, some cobble, <300mm 1 m- Organic Content 1 1 m- Organic Content m- Organic Content <td< th=""><th>Depth (m)</th><th>SOIL</th><th></th><th>Des</th><th>cription</th><th></th><th>Sample Type</th><th>Sample Number</th><th>Moisture Content (%)</th><th>⊢ । ■ s</th><th>PLASTIC SPT (N) I <u>10 2</u> 100 20</th><th>C - LIQUID Blows/300 0 30 00 300</th><th>mm <u>40</u> 400</th><th>REMARKS</th><th>Standbibe/</th><th>Elevation (m)</th></td<>	Depth (m)	SOIL		Des	cription		Sample Type	Sample Number	Moisture Content (%)	⊢ । ■ s	PLASTIC SPT (N) I <u>10 2</u> 100 20	C - LIQUID Blows/300 0 30 00 300	mm <u>40</u> 400	REMARKS	Standbibe/	Elevation (m)
Test pit backfilled with uncompacted cuttings Logged By: <u>B.Tataryn</u> Reviewed By: T. Curtis		m i i s s	nedium to hig .0.3m - some .0.5m - heavy .1.0m - fine g 	h plastic, bro gravel, some v oxide stainin rained sand p hered), clay a ownish grey, d ed, oxide stai	wn e cobble, <300mm ng bocket 400mm and silt, trace sand, damp, high plastic, ining	highly				•				 = 4.7% 1 m - Dry Density = 1656 kg/m3 Optimum Moisture = 19.7% 2.5 m - Dispersivity Classification = D2 % Dispersion = % 2.5 m - Dry Density = 1516 kg/m3 Optimum Moisture = 		765- - 764- - 763- - 762- - 762- - 761- - - 761- -
11/01/2024 Reviewed By: T. Curtis				led with unco	mpacted cuttings				<u> </u>					Logged By:	B.Tata	aryn
	11/01/202	4												Reviewed By:	T. Cu	ırtis

	MP	a division of Eng	lol	ре			TE	EST PIT No :	22TP414 PAGE 1 0F 1
	CLIENT	Eastern Irrigation District		PR	OJECT	NAME		Snake Lake Reservoir I	Expansion
	PROJECT NUMBER	1560-193-00		PR	OJECT	LOCATION		NE 1/4 32-19-1	6
	DATE STARTED	07/06/2022COMPLETED07/06/2	2022	GR		ELEVATION	766.58m	N 5610901.100	E 416786.800
	DRILLING CONTRAC	TOR Eastern Irrigation District							
	EXCAVATION METHO	D Excavator							
Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 POCKET PEN 	QUID s/300 mm <u>30 40</u> 300 400	REMARKS	Standpipe/ Instrument Elevation
	cobbles, moisi grey, gypsum gold specs, tra CLAY TILL, sil moist, stiff, hi, precipitation s	D GRAVEL, silty, some sand, trace t to very moist, stiff, high plastic, brown, crystals, highly oxide staining, black and ace sand pockets, (conglomerate formation ty, trace gravel, trace sand, moist to very gh plastic, greyish brown, sulphate eams throughout hered), clay and silt, trace sand, highly ey, damp, high plastic, weak, thinly End of Borehole @4.6 m		B1	16.1			 1.1 m - LL = 69.9% PL = 17.9% PI = 52.0% 2.5 m - Phi: 21.0° Cohesion: 20.0kPa 2.5 m - Dry Density 1675 kg/m3 Optimum Moisture 18.6% 4.5 m - Dry Density 1643 kg/m3 Optimum Moisture 20.5% 4.5 m - LL = 66.3% PL = 14.7% PI = 51.6% 	765- 764- = 764- 763- 763- 763-
	Notes:	led with uncompacted cuttings.		I	1	1		1	<u> </u>
11/01/202		iss with anothipacted outlings.						Logged By: Reviewed By:	<u>B.Tataryn</u> T. Curtis

		MP	5	a division of Eng	lol	be					10	EST PIT No :			0F 1
	CLIE	NT		Eastern Irrigation District		PR	OJECT		1E		S	Snake Lake Reservoir E	xpansion		
	PROJ	JECT NUMBER		1560-193-00		PR	OJECI	LOC	ATION			NE 1/4 32-19-16	3		
I	DATE	STARTED	07/06/2022	COMPLETED07/06/	2022	GF	ROUND	ELE	/ATION	765	.50m	N 5610121.400	E _ 4168	824.3	300
I	DRILI	LING CONTRAC	TOR	Eastern Irrigation District											
l	EXCA	AVATION METHO	D	Excavator											
Depth (m)	SOIL SYMBOL		Desc	Soil sription	Sample Type	Sample Number	Moisture Content (%)	⊢ । ■ s	PLASTIC -	ws/300 mm <u>30 40</u> 300 40	1)	REMARKS	Standoine/	linstrument	Elevation (m)
		stiff, medium t staining, sulph 0.5m - highly SHALE (Weat weak, high pla orange oxidati	high plastic, hate crystals v oxidized poc hered), clay a istic, highly we on staining, bi	trace to some gravel, moist, brown, some oxidation kets, some cobble (<200mm) nd silt, trace sand, moist, ver eathered, brown with some ocky)	B1 B2 B3	18.9		•			3.5 m - Dry Density 1623 kg/m3 Optimum Moisture = 21.5% 4 m - Dry Density = 1636 kg/m3 Optimum Moisture = 19.5%	=		765- 764- 763- 762- 761- 760-
	I	Notes:				1		_				1	<u> </u>		
11/01/2024	1	Moved 20m N	to avoid stand	ding water. Test pit backfilled	with	uncom	pacted	d cutt	ings			Logged By:	B.Tata T. Cu		

C	LIEN	IT		Eastern Irrigation Dis	strict	PF	ROJECT	NAME	S	nake Lake Reservoir E	Expansion	
P	ROJ	ECT NUMBER		1560-193-00		PF	ROJECT	LOCATION		NE 1/4 32-19-1	6	
D	ATE	STARTED	07/06/2022	COMPLETED	07/06/202	2 GF	ROUND	ELEVATION	768.69m	N 5610008.000	_ E416	828.50
		ING CONTRAC		Eastern Irrigatior								
E	XCA	VATION METHO	D	Excavato	r			1				
()	SOIL SYMBOL		Desc	oil ription		Sample Number	Moisture Content (%)	 MOISTURE (PLASTIC - L SPT (N) Blow 10 20 100 200 POCKET PE 	IQUID /s/300 mm 30 40 300 400	REMARKS	Ctorologico	Instrument
			, loose, brown	orly graded, fine to , some oxidation si		B 1						;
		oxidized. SILT, clayey, tr plastic, brown, laminated, sar SHALE (Weatl	ace sand, ver orangish som d pockets hered), clay ar	t sand seam (20mr y moist to wet, firm le oxidation staining nd silt, trace sand, l amp, high plastic, e	low g,	B 2						
		weak, thickly l		,,,,,,,,,,,		B 3						
			End of Bore	hole @4.8 m								7
_		Notes:						1				

	MP	a division of	Englo	с			TE	EST PIT No :	22TP417 PAGE 1 0F 1
	CLIENT	Eastern Irrigation Distr	rict	PR	OJECI	NAME	Ś	Snake Lake Reservoir I	Expansion
	PROJECT NUMBER	1560-193-00		PR	OJECI	LOCATION		NE 1/4 32-19-1	16
	DATE STARTED	06/23/2022 COMPLETED	06/23/2022	GR	OUND	ELEVATION	768.34m	N 5609701.600	E 416810.900
	DRILLING CONTRAC	TOR Eastern Irrigation	District						
	EXCAVATION METHO	DD Excavator							
Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blow: 10 20 100 200 POCKET PEN 	QUID s/300 mm <u>30 40</u> 300 400	REMARKS	Standpipe/ Instrument Elevation (m)
	200 mm, dam	avelly, silty, some sand, some cobb p, firm, high plastic, greyish brown hered), clay and silt, trace sand, tr veathered, dark grey with oxidation astic, extremely weak to hard soil, fi	ace specs,	B1				1 m - Dispersivity Classification = ND % Dispersion = % 1 m - Phi: 24.8° Cohesion: 8.0 kPa 1 m - EC: 9.5 dS/m 1 m - SAR: 25.0 1 m - PH: 8.6 1 m - Dry Density = 1820 kg/m3 Optimum Moisture 15.5% 1 m - LL = 59.7% PL = 14.2% PI = 45.5%	
	Notes: SE Borrow sea	arch. Backfilled with uncompacted	fill/cuttings.					Logged By:	C. Tams
11/01/202	4							Reviewed By:	T. Curtis

		a division of Eng								PAG	
	CLIENT	Eastern Irrigation District		PR	OJECT	NAME			Snake Lake Reservoir E	xpansion	
	PROJECT NUMBER	1560-193-00				LOCATI			NE 1/4 32-19-10		
	DATE STARTED	06/23/2022 COMPLETED 06/23/2	2022	GR	OUND	ELEVAT	ION	769.28r	n N 5609489.700	E 4165	83.400
	DRILLING CONTRAC	¥									
	EXCAVATION METHO	DD Excavator			1				1		
Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Moisture Content (%)	H PLA ■ SPT	STIC - LI	/300 mm	REMARKS	Standpipe	Instrument Elevation (m)
	300 mm, dry, medium grain SHALE (Weat weathered, da	hmm avelly, silty, some sand, some cobbles up to stiff, medium plastic, light brown, trace ed sand lenses thered), clay and silt, trace sand, highly ark grey with oxidation staining, moist, high hely weak to hard soil, finely fissured End of Borehole @3.4 m		B1							769- 768- 767- 766- 765- 765-
	Notes:										
		arch. Backfilled with uncompacted fill/cuttin	gs.								
									Logged By:	C. Ta	ns
11/01/2024	4								Reviewed By:	T. Cu	tis

		MPO		a division of E	nglol	ре					Т	EST	PIT No :	22	2TP4 PAGE ²	-
	CLIEN	IT _		Eastern Irrigation District		PR	OJECT	NAM	IE			Snake	Lake Reservoir	Expan	sion	
	PROJ	ECT NUMBER		1560-193-00		PR	OJECT	LOC	ATION	I _			NE 1/4 32-19	-16		
	DATE	STARTED (07/06/2022	COMPLETED 07	7/06/2022	GR		ELEV		1	771.57	m N	5609500.200) Е	416288.	.300
	DRILL	.ING CONTRACTO	R	Eastern Irrigation Distri	ct					_						
	EXCA	VATION METHOD		Excavator												
															e/ nt	
Depth (m)	SOIL SYMBOL			Soil cription	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTI PT (N) 10 2 00 20	IRE CON C - LIQU Blows/30 00 300 7 PEN (k	IID 00 mm <u>40</u> 0 400	_	REMARK	S	Standpipe/ Instrument	Elevation (m)
		plastic, brown, gi CLAY TILL, silty,	rey, root ha trace sand pect white s	, dry, stiff, medium to high sulphate inclusions, block	ר ר ר	B1				PEN(K						771-
- - - - - - - - - - - - - - - - - - -	·	SHALE (Weathe weathered, brow weak, oxide stair	nish grey, c	nd silt, trace sand, extren lamp to dry, high plastic, i laminated	nely very	B2										770-
- - - - - - - - - - - - - - - - - - -						B3										768-
- - - - - - - - - - - - - - - - - - -			End of Bore	ehole @4.5 m												767-
<u> </u>									1	, i	1					
11/01/202		Notes: Test pit backfilled	d with unco	mpacted cuttings									ged By: ewed By:		<u>B.Tataryı</u> <u>T. Curtis</u>	

	MP	a division of Eng	lol	се			TE	ST PIT No :	22	PAGE	
	CLIENT	Eastern Irrigation District		PR	OJECT	NAME	S	Snake Lake Reservoii	Expans	sion	
	PROJECT NUMBER	1560-193-00				LOCATION		NE 1/4 32-19			
	DATE STARTED	07/06/2022 COMPLETED 07/06/2	2022	GR	OUND	ELEVATION	771.48m	N 5609526.000)_E_	416103.	.000
	DRILLING CONTRAC	TOR Eastern Irrigation District									
	EXCAVATION METHO	DD Excavator									
Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - LIC SPT (N) Blows 10 20 100 200 3 POCKET PEN 	QUID /300 mm	REMARK	S	Standpipe/ Instrument	Elevation (m)
	brown to grey 0.7m - 100m 1.8m - becon SHALE (Weat completely we very weak, blo	, silt, some clay, completely weathered, rey, dry, damp, low plastic, extremely weak,		B1							771- 770- 769- 768- 768-
	Notes:									[
11/01/202	Test pit backfi	lled with uncompacted cuttings.						Logged By: Reviewed By:		B.Tatary T. Curtis	

	MP		a division o	f Englol	oe			TE	ST PIT No :		P42 GE 1 0F	
	CLIENT		Eastern Irrigation Dis	-			NAME	ć	Snake Lake Reservoir			. 1
	PROJECT NUMBER		1560-193-00	linci				2	NE 1/4 32-19			
	DATE STARTED	07/07/2022	COMPLETED	07/07/2022			ELEVATION				5792.800	
	DRILLING CONTRAC		Eastern Irrigation				LEEVATION		N			
	EXCAVATION METHO		Excavator									
Depth (m)	CLAY TILL, si	Desc ty, some sand	ioil ription , trace gravel, moist	, stiff,	Sample Number	Moisture Content (%)	 MOISTURE (⊢ PLASTIC - L SPT (N) Blow 10 20 100 200 ▲ POCKET PEI 	IQUID vs/300 mm	REMARK	S	Standpipe/ Instrument Elevation	(m)
	stiff, medium t	hered), clay ar ownish grey, m aminated, oxic	brownish grey, oxid nd silt, trace sand, h edium to high plast	e staining	B1						71 71 71 71 71	772 772 772 771 771 771 770 770 770 770 770
11/01/2024		led with uncon	npacted cuttings						Logged By: Reviewed By:		ataryn Curtis	

		MP		a division of Eng	lol	be					TI	EST F	PIT No :		TP4 PAGE 1	
	CLIEN	IT		Eastern Irrigation District		PR	OJECT	NAM	E	_		Snake La	ake Reservoir	<u>Expan</u> si	ion	
	PROJ	ECT NUMBER		1560-193-00		PR	OJECT	LOC	ATION	ı _			NE 1/4 32-19-	16		
	DATE	STARTED	07/07/2022	COMPLETED07/07/2	2022	GR		ELEV		<u>ا</u> ۱	774.71r	<u>m</u> N_	5609515.000	_ E	415499.3	300
	DRILL	ING CONTRACT		Eastern Irrigation District												
	EXCA	VATION METHO	D	Excavator												
Depth (m)	SOIL SYMBOL		Desc	Soil cription	Sample Type	Sample Number	Moisture Content (%)	H F ■ S 1	PLASTI PT (N) 10 2 00 20	RE CON C - LIQU Blows/30 0 300 F PEN (k	11D 00 mm <u>40</u> 0 400		REMARKS	3	Standpipe/ Instrument	Elevation (m)
		brownish grey, inclusions, trac SHALE (Weath highly weather weak, thickly la pockets 2.6m - wood	ty, some sanc oxide stainin ce root hairs nered), clay a ed, brown, gr aminated, oxid debris (100m	, moist, stiff, medium, g, suspect white sulphate nd silt, trace sand, moist, ey, high plastic, extremely le staining, trace bentonitic		B1	16.5					Cohes 1.2 m 1720 k Optimi 17.6% 1.2 m 3.7 m Cohes 3.8 m 1524 k	- LL = 47.6% PL = 15.7% PI = 31.9% - Phi: 23.0° ion: 25.0kPa - Dry Density (g/m3 um Moisture	/ = = 		774- 773- 772- 771- 770- 769-
		Notes:						_	_	_				_	_	_
11/01/202		Iest pit backfill	ed with unco	npacted cuttings								Logge Reviev	d By: wed By:		.Tataryr Г. Curtis	

		a division of Eng	lol	be			TE	ST PIT No :	22TP423 PAGE 1 0F 1
	CLIENT	Eastern Irrigation District		PR	OJECI	NAME	S	nake Lake Reservoir	Expansion
	PROJECT NUMBER	1560-193-00		PR	OJECI	LOCATION		NE 1/4 32-19-	16
	DATE STARTED	07/07/2022 COMPLETED 07/07/2	2022	GR	OUND	ELEVATION	778.63m	N 5609460.000	E 415187.500
	DRILLING CONTRA	CTOR Eastern Irrigation District							
	EXCAVATION METH	IOD Excavator							
Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 3 POCKET PEN 	QUID 5/300 mm 30 40 300 400	REMARKS	Standpipe/ Instrument Elevation (m)
	SHALE (We soil, brown, s plastic, extre concretions	race sand, dry, soft, low to medium plastic, staining athered), silty, clayey, some gravel, residual some oxidation staining, dry, medium to high mely weak, friable, trace oxidized sandstone		B1					
11/01/2024		filled with uncompacted cuttings.						Logged By: Reviewed By:	B.Tataryn T. Curtis

		MP		a division of En g	lol	be				-	TES	Γ PIT No :		TP4 PAGE 1	
	CLIEI	NT		Eastern Irrigation District		PR	OJECT	NAME			Snak	e Lake Reservoir E	Expansi	on	
	PRO	JECT NUMBER		1560-193-00		PR	OJECT	LOCAT	ION			NE 1/4 32-19-1	6		
	DATE	STARTED	07/07/2022	COMPLETED07/07/	2022	GR	OUND	ELEVAT	ION	777.7	'9m	N 5609628.100	_ E	415175.2	200
	DRIL	LING CONTRACT	TOR	Eastern Irrigation District											
	EXCA	AVATION METHO	D	Excavator											
Depth (m)	SOIL SYMBOL			Soil cription	Sample Type	Sample Number	Moisture Content (%)	H PL4 ■ SPT 10 100	ASTIC - LI (N) Blow	s/300 mm <u>30 40</u> 300 400		REMARKS	;	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - -		blocky, mediur oxidation stain (mudstone res SHALE (Weatl	ty, trace sand n to high plas ing, suspect v idual soil) hered), clay a y weathered,	trace gravel, moist, firm, tic, brownish grey, some white sulphate inclusions, nd silt, trace sand, residual brown, dry, high plastic, ing		B1									- - - - - - 7777- - - - - -
- - - - - - - - - - - - - - - - - - -		- 	nes highly we	y weathered, damp athered, oxidized ironstone		B2 B3	11.5	•			161 Opt 22.4	m - Dry Density I6 kg/m3 timum Moisture 4% m - LL = 51.3% PL = 15.1% PI = 36.2%	=		
-4 - - - - - - - - - - - - - - - - - -		Notes:	End of Bore	shole @4.0 m											773
			led with unco	npacted cuttings											
				. 5							Log	ged By:	В	.Tataryr	<u>۱</u>
11/01/202	24										Rev	viewed By:	T	. Curtis	

	CLIENT	Eastern Irrigation District				NAME		Snake Lake Reservoir Ex	•	
	PROJECT NUMBER	1560-193-00				LOCATION		NE 1/4 32-19-16		
		07/07/2022 COMPLETED 07/07/	2022	GR	OUND	ELEVATION	777.88m	N 5609778.300	E _ 414999	1.900
	DRILLING CONTRAC	X								
Depth (m)	SOIL	Soil Description Ity, trace sand, trace gravel, dry, stiff, high	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE ⊢ PLASTIC - SPT (N) Bid 10 200 100 200 ▲ POCKET P 	LIQUID bws/300 mm <u>30 40</u> 300 400	REMARKS	Standpipe/	Elevation
	plastic, brown oxide staining SHALE (Weat soil to comple extremely weat 1.8m - become	ish grey, suspect white sulphate inclusions hered), clay and silt, trace sand, residual tely weathered, brown, dry, high plastic, ak, oxide staining, blocky		B1	11.4			1 m - EC: 7.9 dS/m 1 m - SAR: 10.7 1 m - pH: 7.6 1 m - Dry Density = 1631 kg/m3 Optimum Moisture = 20.7% 1 m - LL = 51.7% PL = 14.3% PI = 37.4%		777- 776- 775- 774- 773- 772-
	Notes: Test pit backfil	lled with uncompacted cuttings								
								Logged By:	B.Tatary	
1/01/202	4							Reviewed By:	T. Curti	S

		Eastern Irrigation District		PR	OJECT	NAME		5	Snake Lake Reservoir Ex	pansion	
C	PROJECT NUMBER	1560-193-00		PR	OJECT	LOCATIO	N		NE 1/4 32-19-16		
	DATE STARTED	07/07/2022 COMPLETED 07/07/2	022	GR	OUND	ELEVATIO	N _7	77.76m	N 5609864.800	E 414895.1	00
C	DRILLING CONTRAC	OR Eastern Irrigation District									
E	EXCAVATION METHO	D Excavator				1			1		
Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Moisture Content (%)	 ⊢ PLAST ■ SPT (N) 10 	URE CONTE TC - LIQUID) Blows/300 (20 30 200 300 ET PEN (kPa	mm <u>40</u> 400	REMARKS	Standpipe/ Instrument	Elevation (m)
	SHALE (Weat soil, brown, gr high plastic, bl	ty, clayey, trace gravel, damp to moist, stiff, h plastic, greyish brown, suspect white sions, oxide staining, blocky nered), clay and silt, trace sand, residual ey, some oxidation staining, damp to moist,		B1 B2					1 m - Phi: 22.7° Cohesion: 14.0 kPa 1 m - LL = 56.1% PL = 17.5% PI = 38.6%		7777- 7776- 7775- 7774- 7773- 7772-
I	Notes:				1				1	I	

		MP	a division of Eng	lol	be			TES	T PIT No :	22TP427 PAGE 1 0F 1
	CLIEI	NT	Eastern Irrigation District		PR	OJECI	ΓNAME	Snak	e Lake Reservoir I	Expansion
	PRO	JECT NUMBER	1560-193-00		PR	OJECI			NE 1/4 32-19-1	6
	DATE	STARTED	07/07/2022 COMPLETED 07/07/2	2022	GR	OUND	ELEVATION	78.94m	N 5610082.700	E 414842.300
	DRILI	LING CONTRACT	OR Eastern Irrigation District							
	EXCA	VATION METHO	D Excavator							
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE CONTEN PLASTIC - LIQUID SPT (N) Blows/300 m 10 20 30 100 200 300 POCKET PEN (KPa) 		REMARKS	Standpipe/ Instrument Elevation (m)
- - - - - - - - - - - - - - - - -		medium plastic hairs, suspect SHALE (Weath	avelly, some silt, some clay, dry, soft, c, reddish brown, highly oxidized, root white sulphate inclusions nered), clayey, silty, residual soil, reddish medium to high plastic, extremely weak,		B1					778-
- - - - - - - - - - - - - - - - - - -		-	nes completely weathered, damp to moist		B2					777-
-		3.0m - becon	End of Borehole @3.8 m							
- 4 - 4 		Notes:								775-
		Notes: Test pit backfill	ed with uncompacted cuttings							
11/01/202	4								gged By: viewed By:	B.Tataryn T. Curtis

		MP		a division of En	glol	be				TI	EST PIT No :	22TP4	
	CLIEN	NT		Eastern Irrigation District		PR	OJECT	NAME	_		Snake Lake Reservoir	Expansion	
	PROJ	IECT NUMBER		1560-193-00		PR	OJECI	LOCATIO	N _		NE 1/4 32-19-	-16	
	DATE	STARTED	07/07/2022	COMPLETED 07/0	7/2022	GF	ROUND	ELEVATIO	N	777.46r	n N 5610807.800	E 415035.	.600
	DRILL	LING CONTRACT	OR	Eastern Irrigation District									
	EXCA	VATION METHO	D	Excavator			-1				-		
Depth (m)	SOIL SYMBOL		Des	Soil cription	Sample Type	Sample Number	Moisture Content (%)	 MOIST ⊢ PLAS[*] ■ SPT (N 10 100 ▲ POCKI 	TIC - LIG	UID 300 mm <u>0 40</u> 00 400	REMARK	Standpipe/ Instrument	Elevation (m)
		whitish brown, SHALE (Weath soil, brownish extremely wea 2.6m - becon	t, sandy, grav oxide stainin hered), silt an grey, dry to d k, blocky nes less weat	elly, dry, soft, medium plast g, trace root hairs d clay, trace sand, residual amp, medium to high plastic thered completely weathered ehole @3.8 m		B1	11.7				i 1 m - Dry Density 1786 kg/m3 Optimum Moisture 15.5% 1 m - LL = 48.8% PL = 15.29 PI = 33.69	e = 6	777- 776- 7775- 7774- 7773- 7772-
		Notes:					•					ľ	·
11/01/202	4	Test pit backfill	ed with unco	mpacted cuttings							Logged By: Reviewed By:	B.Tataryı T. Curtis	

												Г	EST	PIT N	0:	22	TP4	-29
	V		5	a division o	f Engl	ot	be									ļ	PAGE 1	0F 1
	CLIEN	IT		Eastern Irrigation Dis	strict		PR	OJECT	NAME	Ξ	_		Snake	Lake Rese	ervoir E	xpansi	on	
	PROJ	ECT NUMBER		1560-193-00			PR	OJECT	LOCA	TION	<u> </u>			NE 1/4 3	2-19-16	6		
	DATE	STARTED	07/08/2022		07/08/20)22	GR	OUND	ELEV	ATION	۱.	779.24	4m N	5610703	3.400	E	414460.3	300
	DRILL	ING CONTRACT	FOR	Eastern Irrigation	District													
	EXCA	VATION METHO	D	Excavator	r			_										
Depth (m)	SOIL SYMBOL		Des	Soil cription		Sample Type	Sample Number	Moisture Content (%)	H P ■ SF 10 10	LASTIC PT (N) I 0 20 10 20	C - LIQ Blows/3	300 mm 0 40 10 400		REMA	ARKS		Standpipe/ Instrument	Elevation (m)
- $ -$		medium to higi inclusions, trac SHALE (Weath gravel, residua high plastic, ex ironstone conc 3.8m - becon	ty, trace sand h plastic, brow ce organics hered), clay a al soil, greyish tremely weal cretions (<400 nes complete ckly laminated	, moist to very moist wn, suspect white su nd silt, trace sand, t brown, moist, medi (, blocky, oxide stair mm) ly weathered to high d, cobble content inc ehole @4.2 m	Iphate race um to ing, some		B1	21.4					1 m 1 m 163 Opti 21.6	- EC: 11.9 - SAR: 24 - pH: 8.3 - Dry Den 5 kg/m3 mum Mois % % m - LL = 5 PL = 1 PI = 3	1.7 sity = sture = 0 kPa 5.1% 8.2%			779- 778- 777- 777- 777- 777-
		Notes:																
		Iest pit backfill	led with unco	mpacted cuttings										ged By:		R	.Tataryr	n
														iewed By:	-		. Curtis	
11/01/202	4														-			

	C	MPG	a division of Eng	glol	be					11	201	PIT No :	<i>L1</i>	PAGE	
	CLIEN	NT	Eastern Irrigation District		PR	OJECT	NAM	E			Snake	Lake Reservoir	Expan	sion	
		ECT NUMBER STARTED07/0	1560-193-00 08/2022 COMPLETED 07/08	/2022		OJECT OUND				781.38r	<u>n N</u>	NE 1/4 32-19-		414528	.700
		ING CONTRACTOR	Eastern Irrigation District Excavator												
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	H P ■ SI 1	LASTIC PT (N) E <u>0 20</u> 00 20	RE CON C - LIQU Blows/30 0 300 PEN (k	ID 00 mm <u>40</u> 0 400		REMARKS	3	Standpipe/ Instrument	Elevation
1 2 3 4 5		soft, medium plastic some shale residua 2.0m - becomes d SHALE (Weathered soil, reddish brown, plastic, extremely w 2.5m - oxidized co	(<75mm), some silt, trace sand, dry , whitish brown, trace root hairs, l soil		B1						Clas % Di	- Dispersivity sification = ND ispersion = % - LL = 43.1% PL = 14.5% PI = 28.6%)		781 780 770 770 770 770
-		Notes: Test pit backfilled w	th uncompacted cuttings			<u> </u>					-				
1/01/2024												ged By: ewed By:		B.Tatary T. Curtis	

		MP		a division o	f Eng	lok	ре					ES	ST PIT No :	22	PAGE	
	CLIEI	NT		Eastern Irrigation Dis	trict		PR	OJECT	NAME			Sn	ake Lake Reservoi	r Expans	sion	
I	PRO	JECT NUMBER		1560-193-00			PR	OJECT	LOCATI	ION			NE 1/4 32-19	-16		
I	DATE	STARTED	07/08/2022	COMPLETED	07/08/2	022	GR	OUND	ELEVAT	ION	780.9	3m	N 5611317.000) E	414704	.900
I	DRILI	LING CONTRACT	FOR	Eastern Irrigation	District											
I	EXCA	AVATION METHO	D	Excavator												
Depth (m)	SOIL SYMBOL		Desc	Soil ription		Sample Type	Sample Number	Moisture Content (%)	H PLA ■ SPT 10 100	STIC - LI (N) Blows 20	s/300 mm <u>30 40</u> 300 400		REMARK	S	Standpipe/ Instrument	Elevation (m)
		CLAY TILL, gra medium plastic residual soil 2.0m - becon SHALE (Weath soil, orangish g oxide staining, 3.5m - becon	brown ased clay cont avelly, trace sa c, dark brown, mes moist mes moist hered), clay an greyish brown , extremely we mes completel		rm, e shale		B1 B2					1	m - Sand = 69.9 Silt = 17.6 Clay = 12.	%		780- 779- 777- 7776- 7775-
		Notes: Test pit backfill	led with upcor	npacted cuttings												
		rest pit backill		npacieu cullings								L	ogged By:		B.Tatary	'n
													Reviewed By:		T. Curtis	

		MPE	a division of En	glol	be			TE	ST PIT No :		432 1 OF 1
			-					_			
	CLIE		Eastern Irrigation District				NAME _	S	nake Lake Reservoir I	· ·	
	PROJ	IECT NUMBER	1560-193-00			OJECI			NE 1/4 32-19-1		
	DATE	STARTED 07/08	/2022 COMPLETED 07/0	8/2022	GR	OUND	ELEVATION	783.50m	N 5611557.700	_ E414384	1.900
	DRILI	ING CONTRACTOR	Eastern Irrigation District								
	EXCA	VATION METHOD	Excavator								
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE CC ⊢ PLASTIC - LIC ■ SPT (N) Blows/ 10 20 3 100 200 3 ▲ POCKET PEN 	QUID 300 mm 30 40 00 400	REMARKS	Standpipe/	Elevation (m)
- - - - - - - - - - - - - - - - - - -		SAND, silty, trace cla loose, light brown	ay content from 0.0m to 0.5m y, well graded, fine grained, dry, silty, trace sand, dry, firm, medium		B1						
- - - - - - - - 2 -		1.9m - becomes da			B2						- 782- - - - - - - -
- - - - - - - - - - - - - - - - - - -		soil, greyish brown, s	clay and silt, trace sand, residual ome oxidation staining, damp, hig ak, suspect white sulphate	h	B3						
- - - - - - -			mpletely to highly weathered		В4						
4 		Enc	l of Borehole @4.0 m								779
11/01/2024	4	Notes: Test pit backfilled with	n uncompacted cuttings	<u></u>		·			Logged By: Reviewed By:	B.Tatary	

		MP		a division of En	glol	be				Т	EST PIT No :	23TP433 PAGE 1 0F 1
	CLIEI	NT		Eastern Irrigation District		PR	OJECT	NAME			Snake Lake Reservoi	r Expansion
	PRO	JECT NUMBER		1560-193-00							NE 1/4 32-19	· ·
	DATE	STARTED	05/08/2023	COMPLETED 05/0	8/2023	GR		ELEVA	TION	768.61	1m N 5609924.400	D E 416485.900
	DRIL	LING CONTRAC	TOR	Eastern Irrigation District								
	EXCA	AVATION METHO	D	Excavator								
Depth (m)	SOIL SYMBOL		Dese	Soil cription	Sample Type	Sample Number	Moisture Content (%)	H PL ■ SP1 10 100	ASTIC - T (N) Blo <u>20</u>) 200	ws/300 mm	REMARK	S Standpipe/ Instrument (m)
1		trace to some plastic, brown \.0.2m - 400 n SHALE (Weat dark grey, trac	cobbles up to , some root ha nm boulder hered), clayey te oxidation st ak to hard soil, white precipit	/, silty, completely weathere aining, damp, high plastic, , blocky, trace gypsum	ed,	B1	12.1				0.9 m - LL = 64.49 PL = 17% PI = 47.40	
11/01/202	24	Notes: Test pit progra	m. Backfilled	with bucket packed cutting	S.						Logged By: Reviewed By:	C. Tams C. Braun

		MPC	a division of Eng	lol	с						ΤE	EST PIT No: 2		
	CLIEN		Eastern Irrigation District			OJECT		ЛЕ			S	Snake Lake Reservoir Expar		
	PROJ	ECT NUMBER	1560-193-00		PR	OJECT	LOC	CATIO	N			NE 1/4 32-19-16		
	DATE	STARTED (05/08/2023 COMPLETED 05/08/2	2023	GR	OUND	ELE	VATIO	N	770.	49m	N 5609864.400 E	416188.	.600
		VATION METHOD	Excavator											
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	⊢ ■ :	PLAST SPT (N	TIC - LIC) Blows	/300 mm		REMARKS	Standpipe/ Instrument	Elevation (m)
	S				ů,	Mois		10 100 2	20 3 200 3	<u>30 40</u> 00 400)			
		trace to some co plastic, brown, sc CLAY TILL, silty, plastic, brown, sc crystals, trace wf 0.5m - becomin trace boulders up 1.0m - becomin SHALE (Weather trace oxidation st soil, blocky, thinly	sandy, trace gravel, damp, stiff, medium ome oxidation staining, trace gypsum hite precipitates ng trace to some cobbles up to 300 mm, o to 600 mm		B1	9.2		• • · · ·				1 m - Dispersivity Classification = ND3 % Dispersion = 1% 1 m - LL = 77.4% PL = 22.9% I m - Gravel = 2.3% 1 m - Sand = 22.9% Silt = 34.5% Clay = 40.3% 1.9 m - Dispersivity Classification = D2 % Dispersion = % 1.9 m - LL = 32.6% PL = 15.1% PI = 17.5%		7700 7700 7769 768 768 767 767 766
		Notes:												
		Test pit program.	Backfilled with bucket packed cuttings.									Logged By: Reviewed By:	C. Tams C. Braur	
11/01/2024	4												5. Diadi	<u> </u>

		MPC	a division of E	inglo	be			TE	EST PIT No :	23TP435 PAGE 1 OF 1
		NT	Eastern Irrigation District		P	ROJECT	NAME	5	Snake Lake Reservoir E	xpansion
		ECT NUMBER	1560-193-00						NE 1/4 32-19-16	•
				5/08/2023			ELEVATION			
					<u> </u>	ROUND	ELEVATION	112.001	N_0000020.100	E
			Eastern Irrigation Distr	nci						
		VATION METHOD	Excavator						1	
Depth (m)	SOIL SYMBOL		Soil Description	Samula Tyna	Sample Number	Moisture Content (%)	 MOISTUF PLASTIC SPT (N) B 10 200 POCKET 	5 - LIQUID Blows/300 mm) 30 40	REMARKS	Standpipe/ Instrument Elevation (m)
		trace cobbles up to brown, some root h CLAY TILL, silty, sa weathered shale in brown, some oxida trace coal staining 0.6m - becoming SHALE (Weathered brown to grey motth high plastic, extrem laminated, trace gy	andy, trace gravel, trace complete clusions, damp, stiff, medium plas tion staining, trace gypsum crysta gravelly, some cobbles up to 250 d), clayey, silty, highly weathered, ling, some oxidation staining, dan nely weak to hard soil, blocky, thir	ely stic, als, mm , dark np,	 B1 B2 	11.5	•		0.7 m - Dispersivity Classification = ND1 % Dispersion = % 0.7 m - Sand = 28.6 Fines = 71.4	%
11/01/2024	1	Notes: Test pit program. B	ackfilled with bucket packed cutti	ngs.			<u>J</u>		Logged By:	C. Tams C. Braun

		MP		a division o		oł							ΤE	ST PIT No :			
					-											GE 1	UFI
	CLIEN			Eastern Irrigation D				OJECT			_		S	Snake Lake Reservoir Ex			
	PROJ	IECT NUMBER		1560-193-00			PR	OJECT	LOC	ATION	l _			NE 1/4 32-19-16			
	DATE	STARTED _	05/08/2023	COMPLETED	05/08/20)23	GR	OUND	ELE\	ATION	- ۱	775.0)1m	N 5609900.600	E _ 41	5565.3	00
	DRILI	ING CONTRAC	TOR	Eastern Irrigatio	on District												
	EXCA	VATION METHO	D	Excavate	or												
Depth (m)	SOIL SYMBOL		Des	Soil cription		Sample Type	Sample Number	Moisture Content (%)	⊢ I ■ S	PLASTI PT (N) 10 2 00 20	RE COI C - LIQU Blows/3 0 30 7 PEN (I	UD 00 mm <u>) 40</u> 0 400		REMARKS		Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - -		trace cobbles brown, some r SHALE (Weat brown to dark moist, high pla trace gypsum	up to 200 mm oot hairs hered), clayey grey mottling, istic, extreme crystals	some sand, some g n, damp, stiff, low pl y, silty, completely v , some oxidation st ly weak to hard soil	lastic, weathered, aining,		B1	13.8		• F				1 m - Dispersivity Classification = D2			- - - - - - - - - - - - - - - - - - -
- - - -	SHALE, clayey, silty, highly weathered, dark brown grey mottling, some oxidation staining, moist, high pextremely weak to hard soil, blocky, thinly laminated trace gypsum crystals End of Borehole @1.7 m						AU1	16.7		•				Classification = D2 % Dispersion = % 1 m - LL = 47.7% PL = 17.6% PI = 30.1%			
-2 - - - - - - - - - - -		t <u>race gypsum</u>	crystals End of Bor	ehole @1.7 m]												773
- 																	772
- -4 - - - - -																	-
- 																	- 770 - - - - - - - - - - - - - - - - -
11/01/202	4	Notes: Test pit progra	m. Backfilled	with bucket packed	d cuttings.		<u> </u>							Logged By: _ Reviewed By: _		Tams Braun	

	Q	MP	E	a division o	of Eng	lok	be					I	E2	Γ ΡΙΤ No :		PAGE 1	
	CLIEN	ΝT		Eastern Irrigation D	istrict		PR	OJECT	NAM	E			Snak	e Lake Reservoii	Expansi	on	
	PROJ	ECT NUMBER		1560-193-00			PR	OJECT	LOC	ATION				NE 1/4 32-19	-16		
	DATE	STARTED	05/09/2023		05/09/2	023	GR	OUND	ELEV	ATION	_	768.83	3m	N 5610236.100)_E	416493.	700
	DRILL	ING CONTRACT		Eastern Irrigation	on District												
	EXCA	VATION METHO	D	Excavat	or												
Depth (m)	SOIL SYMBOL		Desc	Soil rription some sand, some g	gravel	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	IOISTUF PLASTIC PT (N) E 00 20 0CKET	C - LIQU Blows/30 0 300 0 300	ID 00 mm 40 400		REMARK	S	Standpipe/ Instrument	Elevation (m)
-		damp, stiff, low CLAY AND SA to medium plat trace white pre 1.0m - becon 1.1m - becon inclusions GRAVEL, sand grained, sub-a 3.4m - SEEP SHALE, clayey	y plastic, brow ND TILL, silty stic, light brow cipitates ning gravelly, ning cobbley ning some cou dy, silty, some ngular, wet, c AGE , some silt, m h plastic, extr	n, some root hairs , trace gravel, dam /n, trace oxidation some cobbles up t mpletely weathered clay infill, well gra	np, stiff, low staining, to 200 mm d shale ded, fine ed, grey,		B1 B2 B3 AU1	4.7 4.0 10.4 16.8	•	•			Cla % [1.3 2 m Cla % [2 m 2 m 3.3	m - Dispersivit ssification = NI Dispersion = % PL = 17% PI = 18.5° n - Dispersivity ssification = NI Dispersion = 10 n - Gravel = 40. n - Gravel = 40. n - Sand = 37.2 Silt = 12.5 Clay = 9.9 m - Gravel = 3 m - Sand = 52 Fines = 15	D1 6 704 7% 4% % % % 2.8% .2%		
		Notes: Test pit progra	m. Backfilled	with bucket packed	d cuttings.			<u> </u>					-	iged By:		C. Tams	
11/01/202	4												Rev	viewed By:	C	C. Braun	<u> </u>

		MPE	a division of Eng	glo	be				-	EST PIT No :	23TP438 PAGE 1 0F 7
	CLIEI	NT	Eastern Irrigation District		PR		NAME	:		Snake Lake Reservoir I	Expansion
		JECT NUMBER	1560-193-00				LOCA			NE 1/4 32-19-1	•
			9/2023 COMPLETED 05/09	/2023			ELEVA		771.6		
		LING CONTRACTOR	Eastern Irrigation District	2020	0					<u> </u>	
			Excavator								
							1				
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	H PL ■ SP ² 10	ASTIC - T (N) Blo <u>20</u> 0 200	E CONTENT • LIQUID pws/300 mm <u>30 40</u> <u>300 400</u> PEN (kPa)	REMARKS	Standpipe/ Standpipe/ Instrument Elevation
-	13 35 .	TOPSOIL, silty, som	e clay, some sand, trace gravel,								
- - - - - - -		4	tic, brown, some root hairs race fine gravel, damp, stiff, low trace root hairs		B1	4.0	•	F		0.5 m - Dispersivity Classification = ND % Dispersion = % 0.5 m - LL = 53.3% PL = 14.6%	771-
- - - -		weathered shale inc	arse grained sandy, some completel lusions, trace coarse gravel, moist, , dark brown, some oxidation stainin ls							PI = 38.7%	
-2 - - - - - -		SHALE (Weathered), clayey, silty, completely weathered	1,	B2	10.2	•	·····		2.1 m - Dispersivity Classification = ND % Dispersion = % 2.1 m - LL = 31.3% PL = 11.3% PI = 20.0%	1
-3		extremely weak to h	n staining, damp, high plastic, ard soil, blocky, trace gypsum								
-		crystals			B3	20.2		•	I	3.2 m - Dispersivity	
- - - - - - -		Er	nd of Borehole @3.3 m							Classification = D2 % Dispersion = % 3.2 m - LL = 55.8% PL = 25.3% PI = 30.5%	768-
- - -											
-											
-											767-
—5 -											
-											
E											
E											766-
Ē										_	
	<u> </u>	Notes: Test pit program. Ba	ckfilled with bucket packed cuttings.		<u> </u>					Logged By:	C. Tams
										Reviewed By:	C. Braun
11/01/202	4									Reviewed by.	O. Draun

				a division a	fEnal	~ k						TE	EST PIT No :			
				a division o	Engi	or)e								PAGE 1	0F 1
	CLIE	NT	. <u> </u>	Eastern Irrigation Dis	trict		PR	OJECT	NAM	E		5	Snake Lake Reservoir	Expansi	ion	
	PRO	JECT NUMBER		1560-193-00			PR	OJECT	LOC	ATION			NE 1/4 32-19-	16		
	DATE	STARTED	05/09/2023		05/09/20)23	GR	OUND	ELEV	ATION	ı	773.09m	N 5610165.300	_ E _	415877.	800
	DRIL	LING CONTRACT	OR	Eastern Irrigation	District											
	EXCA	AVATION METHO	D	Excavator												
Depth (m)			Desc	oil ription	damas	Sample Type	Sample Number	Moisture Content (%)	H F ■ SI 1	PLASTIC PT (N) I 10 20 00 20	RE CONT C - LIQUIE Blows/300 0 30 0 300 . PEN (kPa) mm <u>40</u> 400	REMARKS	}	Standpipe/ Instrument	Elev
- - - - - - - - - - - - - - - - - -		GRAVEL, silty, cobbles up to rounded, damp SHALE (Weath mottling, some	sandy, some 160 mm, well o, compact, gr nered), clayey oxidation stai	e clay, trace gravel, e root hairs clay infill, trace to s graded, coarse grai ey, trace root hairs , silty, dark brown to ning, moist, high pla blocky, trace gypsu	ome ned, sub- o grey astic,		B1	2.4	•				0.6 m - Gravel = 6 0.6 m - Sand = 20. Fines = 18.	4%		773-
- 			End of Bore	hole @2.0 m			Β2	18.0		•			1.9 m - Dispersivit, Classification = NE % Dispersion = %			771-
11/01/202	4	Notes: Test pit program	m. Backfilled v	vith bucket packed	cuttings.]				Logged By: Reviewed By:		C. Tams C. Braun	

		MP		a division d	of Eng l	ok	be					T	ΓES	ST PIT No :		TP4 PAGE 1	
	CLIEI	NT		Eastern Irrigation D	istrict		PR	OJECT	NAM	E			Sn	ake Lake Reservoir	Expansio	on	
		IECT NUMBER		1560-193-00				OJECT			- I			NE 1/4 32-19-			
		STARTED	05/09/2023	COMPLETED	05/09/2	023		OUND				774.1	2m	N 5610174.000		415589.4	400
		LING CONTRACT		Eastern Irrigatio		020											
				Excavato													
Depth (m)	SOIL SYMBOL		S Desc	Soil cription		Sample Type	Sample Number	Moisture Content (%)	H F ■ S 1	PLASTI PT (N) 10 2 00 20	RE COI C - LIQU Blows/3 0 30 0 30 F PEN (H	JID 00 mm) 40 0 400		REMARKS		Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		stiff, low plastic CLAY TILL, silt mm, moist, stif some oxidatior gypsum crysta	c, brown, som y, some sand f, medium to l n staining, trad Is	e clay, trace gravel e root hairs , trace fine gravel i nigh plastic, dark b ce white precipitate ace coal staining	up to 20 rown,		B1	15.4					0 0	9.9 m - Dispersivity Classification = ND 6 Dispersion = 5% 9L = 41.4% PL = 49.3% PI = 22.1% 9.9 m - Gravel = 0. 9.9 m - Sand = 21.	2 1% 5%		
- 2 - - - - - -		inclusions SHALE (Weath grey, some oxi	nered), clayey dation stainin	mpletely weathered r, silty, moderately g, moist, high plast lated, trace gypsur	weathered, ic,	_	AU1	16.7		(— •			0 9	Silt = 31.4% Clay = 46.9 m - Dispersivity Classification = ND 6 Dispersion = % m - LL = 38.6% PL = 10.1% PI = 28.5%	% 3		772-
3 			End of Bore	ehole @3.0 m			B2	17.4					C	29 m - Dispersivity Classification = ND 6 Dispersion = %	3		771
11/01/202	4	Notes: Test pit progra	m. Backfilled	with bucket packed	l cuttings.									ogged By: Reviewed By:		: Tams . Braun	

			a division of	Englo	be				T	EST F	PIT No :	23TP4 PAGE	
	CLIEI		Fastern Irrigation Distric							Spake			
			Eastern Irrigation Distric	1							ake Reservoir Ex	pansion	
			1560-193-00	0.5/00/0000							NE 1/4 32-19-16	- 446475	
		STARTED 05/09/2023	_ COMPLETED	05/09/2023	GF	COUND	ELEVAT	ION	769.73	<u>sm</u> N_	5610519.200	E416475	.600
			Eastern Irrigation Di	strict									
	EXCA		Excavator										
Depth (m)	SOIL SYMBOL	So Descr		Sample Type	Sample Number	Moisture Content (%)	H PLA ■ SPT 10 100	STURE CO STIC - LIO (N) Blows 20 3 200 3 KET PEN	QUID /300 mm <u>30 40</u> 600 400		REMARKS	Standpipe/ Instrument	Elevation (m)
-		TOPSOIL, silty, sandy, some	clay, trace gravel, da	mp,									§ -
- - - - - -	<u>n, n, r</u>	Stiff, low plastic, brown, some CLAY, silty, sandy, trace fine of plastic, light brown, trace root	gravel, damp, stiff, lov	N									- - - - - - 769- - -
1 -		SAND, silty, trace fine gravel,) -
- - - - - -		sub-rounded, moist, compact	, brown, trace oxide s	specks	AU1	8.2	•			1.4 m ·	- Sand = 77.0% Silt = 14.8% Clay = 8.2%	0	
-2	$\overline{\mathbf{X}}$	CLAY TILL, silty, some coarse	e grained sand, some	e gravel) -
-		up to 20 mm, some complete inclusions, moist, stiff, low to	ly weathered siltstone	e vn to) -
L		grey mottling, some oxidation	staining, trace coal)
		staining, trace gypsum crysta	ls		B1	24.3		•		2.6 m	- Sand = 27.5%	6)
L			Seam								Silt = 45.1% Clay = 27.4%		767-
		SHALE (Weathered), clayey, some oxidation staining, mois weak to hard soil, thickly lami	st, high plastic, extren								Clay – 27.4%		
-	· _ ·				AU2	20.9		•					766—
-													× 700-
-4		End of Boreh	nole @3.9 m										-
L													-
L													
L													
L													765-
-5													
L													-
F													-
													-
F													764-
		Notes:											
		Test pit program. Backfilled w	ith bucket packed cu	ttings.						Logge	d By:	C. Tam C. Brau	
11/01/202	4											2. Diau	

									TE	EST PIT No :	23TF	' 442
	V	MP	5	a division of <mark>En</mark>	glo	be					PAG	E 1 0F 1
	CLIEI	NT		Eastern Irrigation District		PR	OJECT	NAME	:	Snake Lake Reservoir E	Expansion	
	PRO	JECT NUMBER		1560-193-00		PR	OJECT			NE 1/4 32-19-1	6	
	DATE	STARTED	05/09/2023	COMPLETED 05/0	9/2023	GR	OUND	ELEVATION _	772.40m	n <u> </u>	E _ 4161	53.200
	DRIL	LING CONTRAC	ror	Eastern Irrigation District								
	EXCA	AVATION METHO	D	Excavator								
Depth (m)	SOIL SYMBOL		Desc	Soil sription	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE COI PLASTIC - LIQL SPT (N) Blows/3 20 30 100 200 30 POCKET PEN (¹) 	JID 00 mm <u>40</u> 0 400	REMARKS	Standbibe/	Elevation (m)
- - - - - - - - - - - - - - - - - - -		CLAY TILL, sil weathered sha damp, stiff, lov	n, stiff, Iow plaa ty, sandy, coa ile inclusions, v plastic, light ning some coa	e clay, some gravel, trace stic, brown, some root hairs rse gravelly, some complet some cobbles up to 170 m grey, some white precipitat arse grained sand, moist, d	ely im, ies	• B1	3.0	•		0.9 m - Dispersivity Classification = ND % Dispersion = % 0.9 m - Gravel = 58 0.9 m - Sand = 28.3 Fines = 13.0	1 9.7% 3%	772-
- - - - - - - - - - - - - - - - - - -		2.5m - becor	ning some gra	avel, trace cobbles		AU1	11.1	• +	1	2.5 m - Dispersivity Classification = ND % Dispersion = % 2.5 m - LL = 38.4% PL = 17.8% PI = 20.6%	3	770-
- - - - - - - - - - - - - - - - - - -		dark brown to moist, high pla thinly laminate 	grey mottling, stic, extremel d, trace gypsu ning some silt	r, silty, completely weathere some oxidation staining, y weak to hard soil, blocky, um crystals stone concretions shole @4.0 m		AU2 AU3	16.0	•		3.5 m - Dispersivity Classification = ND % Dispersion = 6% 3.5 m - Gravel = 3.3 3.5 m - Sand = 9.1% Silt = 32.9% Clay = 54.7 3.9 m - Dispersivity Classification = D2 % Dispersion = %	3 3% % %	769-
11/01/202	4	Notes: Test pit progra	m. Backfilled	with bucket packed cutting	5.					Logged By: Reviewed By:	<u> </u>	

		MP		a division of Eng	glol	be					TE	EST PIT No	: 2	3TP4	
	CLIEI	NT		Eastern Irrigation District		PR	OJECT		F		ç	Snake Lake Reserv	oir Expa	nsion	
		JECT NUMBER		1560-193-00			OJECT					NE 1/4 32-			
		STARTED	05/09/2023	COMPLETED 05/09	2023						'3.86m			415859.	.200
		LING CONTRACT		Eastern Irrigation District								<u> </u>			
		VATION METHO		Excavator											
Depth (m)	SOIL	TOPSOIL, silty	Desc , sandy, some	oil ription clay, trace gravel, damp,	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTI PT (N) 10 2 00 2			REMAR	RKS	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - -		CLAY AND SIL	T, some sand	, trace fine gravel, moist, sti rown, some white	ff,	B1	17.3		•			1.3 m - Sand = :	24.0%		
- - - - - - - - - - - - - - - - - - -		completely we to 150 mm, mo	athered shale bist, stiff, high	e course gravel, some inclusions, some cobbles u plastic, dark grey, some staining, trace gypsum	р —	B2	6.7	•				Silt = 53 Clay = 2 2.1 m - Dispersi	.1% 2.9% vity		- - - - 772- - - -
- - - - - - - - - - - - - - - - - - -		dark brown to	grey mottling, stic, extremely	silty, completely weathered some oxidation staining, weak to hard soil, blocky,	l,						-	Classification = % Dispersion = 2.1 m - LL = 24. PL = 12. PI = 11.	% 3% 8%		- - - - - - - - - - - - - - - - - - -
-															
-	· ·		End of Bore	hole @3.5 m	_	AU1	25.6			•					
-			2.14 01 2010												
F.															770-
-4															
E															
E															
-															
															769-
-															
-															-
-															
-															-
F												-			768-
	1	Notes:				1	1								
			m. Backfilled v	vith bucket packed cuttings.											
												Logged By:		C. Tams	3
11/01/202	4											Reviewed By:		C. Braur	<u>n</u>

		MP		a division o	of Engl	ok	be				٦	FEST P	IT No : 2	3TP4 PAGE	
		NT		Eastern Irrigation Dis	strict		PR	OJECT	NAME			Snake Lak	ke Reservoir Expa	nsion	
	PROJ	IECT NUMBER		1560-193-00			PR	OJECT		ΓΙΟΝ			E 1/4 32-19-16		
		STARTED	05/09/2023	COMPLETED	05/09/20	023			ELEVA		775.0	_	5610517.300 E	415575	.800
		LING CONTRACT		Eastern Irrigation		020		COND				<u></u>	L		
				Excavato											
				Excavalo				1	1					- +	
Depth (m)	SOIL SYMBOL			Soil cription		Sample Type	Sample Number	Moisture Content (%)	H PL ■ SP1 10 100	ASTIC - L T (N) Blov 20	vs/300 mm <u>30 40</u> 300 400	_	REMARKS	Standpipe/ Instrument	Elevation (m)
		stiff, low plastic CLAY TILL, silt 150 mm, damp precipitates, tra 1.0m - becom inclusions, som SHALE (Weath dark brown to g	c, brown, som y, some sand o, stiff, low pla ace root hairs hing sandy, so hing some con ne oxidation si hered), clayey grey mottling, stic, extremely crystals	, gravelly, trace cob stic, light brown, so ome cobbles up to 2 mpletely weathered	200 mm shale		B1 B2 B3	8.4 7.2	•			Classifie % Dispe 0.9 m - 0.9 m - 1.5 m - Classifie % Dispe 1.5 m - 1.5 m - 1.5 m - 3.3 m - Classifie	Dispersivity cation = ND1 ersion = % Gravel = 8.9% Sand = 35.8% Fines = 55.3% Dispersivity cation = ND3 ersion = 9% LL = 34.1% PL = 13.3% PI = 20.8% Gravel = 20.0% Sand = 38.1% Silt = 22.3% Clay = 19.6% Dispersivity cation = D2 ersion = %		
	1	Notes:							<u> </u>			<u> </u>			<u> </u>
11/01/2024	4	Test pit progra	n. Backfilled v	with bucket packed	cuttings.							Logged Review		C. Tams C. Brau	

	Q	MP		a division c	of Engl	ok	be					Т	EST F	PIT No :	23	BTP4	
	CLIEN	т		Eastern Irrigation Dis	strict		PR	OJECT		E			Snake La	ake Reservoir	r Expan	sion	
	PROJE	ECT NUMBER		1560-193-00			PR	OJECT	LOC	ATION	1		1	NE 1/4 32-19	-16		
	DATE	STARTED	05/10/2023	COMPLETED	05/10/20)23	GR	OUND	ELEV		N _	773.64	m N	5610930.400) Е	416025	.500
	DRILLI	ING CONTRACT	FOR	Eastern Irrigatior	District						-						
	EXCA	ATION METHO		Excavato													
Depth (m)		stiff, low plastic CLAY TILL, sil	Desc /, sandy, some c, brown, som ty, sandy, sorr	Soil cription e clay, trace gravel, ne root hairs ne coarse gravel, tra n, damp, stiff, low pl	ace to	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTI PT (N) 10 2 00 2	JRE COI C - LIQI Blows/3 20 30 00 30 T PEN (I	JID 00 mm 0 40 0 400	_	REMARK	S	Standpipe/	Elevation (m)
- - - - - - - - - - - - - - - - -		brown, some v 1.2m - becor	vhite precipita ning some cor		shale		B1	4.7 9.2	•				Classif % Disp 0.8 m · 0.8 m ·	- Dispersivit fication = NI persion = % - Gravel = 4 - Sand = 18 Fines = 37 - Dispersivit fication = NI	D1 3.9% 3.4% 7.7% ty		773-
-2 		completely we gravel, trace c to high plastic, oxidation stain precipitates 4.0m - becor gravel, moist	athered shale obbles up to 1 dark brown to ing, trace coa	y, some sand, some inclusions, trace co 100 mm, moist, stiff, o grey mottling, son I staining, trace whi arse grained sand, s	oarse medium te te		B2	10.4		•			2.5 m - Classif % Disp	- Dispersivit fication = NI persion = NI persion = NI persion = % - LL = 46.09 PL = 13.49 PI = 32.69	ty D3 % %		771-
- - - - - - - - - - - - - - - -		brown to grey high plastic, e) gypsum crysta	mottling, some ctremely weak Is End of Bore	r, silty, highly weath e oxidation staining c, thinly laminated, t shole @4.8 m with bucket packed	, moist, race		AU2									C. Tame	769-
													Logge	-		C. Tams	
11/01/2024	4												Reviev	wed By:		C. Brau	n

		MPG	a division of En	glo	be					ΤE	EST PIT No: 23	BTP4	
	CLIEN	NT	Eastern Irrigation District		PR	OJECI		F		ç	Snake Lake Reservoir Expan	sion	
		IECT NUMBER	1560-193-00					ATION			NE 1/4 32-19-16	3011	
				0/0000						0.00		416470.	600
				0/2023	GR	COND	ELEV	ATION	768	9.92m	N010372.000E	410470.	.000
			Eastern Irrigation District										
	EXCA	VATION METHOD	Excavator				1				1		51
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S	PLASTIC PT (N) E 1 <u>0 20</u> 00 20	0 300 40	n 0	REMARKS	Standpipe/ Instrument	Elevation (m)
	<u>i i i</u>	stiff, low plastic, bro GRAVEL, silty, sand cobbles up to 200 n rounded, damp, cor CLAY TILL, silty, co to gravelly, some co trace cobbles up to dark brown, some o trace gypsum crysta 2.3m - increasing SHALE (Weathered grey, some oxidatio weak, thickly lamina	ly, some clay infill, trace to some nm, well graded, coarse grained, su npact, grey, some white precipitates arse grained sandy, some fine grav mpletely weathered shale inclusior 120 mm, moist, stiff, medium plasti xidation staining, trace coal staining als	el Is, c, g,	B1 B2 AU1 AU2	4.6 6.9 11.6 17.9	•	•]	PEN (kPa)		0.7 m - Gravel = 53.5% 0.7 m - Sand = 33.7% Fines = 12.8% 1.6 m - Dispersivity Classification = ND1 % Dispersion = 1% 1.6 m - Gravel = 49.1% 1.6 m - Sand = 25.1% Silt = 12.4% Clay = 13.4% 3.2 m - Dispersivity Classification = ND3 % Dispersion = % 3.2 m - LL = 37.8% PL = 13.3% PI = 24.5% 3.7 m - Dispersivity Classification = ND3 % Dispersion = %		769- 769- 768- 766- 766- 766- 766-
		Notes:									<u> </u>		
			ackfilled with bucket packed cutting	S.									
			,								Logged By:	C. Tams	S
												C. Braur	
11/01/202	4										, <u> </u>		

		MP	E	a division o	f Engl	ok	be						ΤE	ST PIT No:		P4 GE 1	
	CLIEN	NT		Eastern Irrigation Dis	trict		PR	OJECT	NAM	E			s	Snake Lake Reservoir Ex	pansion		
		IECT NUMBER		1560-193-00				OJECT			-			NE 1/4 32-19-16			
		STARTED	05/10/2023	COMPLETED	05/10/2	023		OUND			-	765	5.64m			6301.0	000
		LING CONTRAC		Eastern Irrigation		020					•						
		VATION METHO		Excavator													
Depth (m)	SOIL SYMBOL		Des	Soil cription		Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	IOISTU PLASTI PT (N) 10 2 00 20 00 20	C - LIQ Blows/ 20 <u>3</u> 00 30	UID 300 mn <u>0 4</u> 00 40	ו 0	REMARKS		Standpipe/ Instrument	Elevation (m)
- $ -$		trace cobbles brown, some r SHALE (Weat completely we extremely wea precipitates, tr 0.9m - becor SHALE, claye grey mottling,	up to 160 mm oot hairs hered), residu athered, dark ik to hard soil ace gypsum o ning very moi y, silty, highly trace oxidatio ik, thinly lamir	, some sand, trace g , damp, stiff, low pla- tal soil, clayey, silty, brown, moist, high p , blocky, some white crystals st weathered, dark brown n staining, moist, hig nated, trace gypsum ehole @2.1 m	stic, olastic, wn to h plastic,		B1	23.3			•			0.8 m - Dry Density = 1617 kg/m3 Optimum Moisture = 20.4%			765-
11/01/2024	4	Notes: Test pit progra	m. Backfilled	with bucket packed o	cuttings.			<u> </u>			-			Logged By: _ Reviewed By: _		Tams Braun	

		MPE	a division of Eng	loł	ре			TE	EST PIT No :	23TP44 PAGE 1 (
	CLIEI	NT	Eastern Irrigation District		PR	OJECT	NAME	S	Snake Lake Reservoir E	xpansion	
	PRO.	JECT NUMBER	1560-193-00		PR	OJECT	LOCATION		NE 1/4 32-19-16	•	
	DATE	STARTED 05/1	0/2023 COMPLETED 05/10/2	2023	 GR		ELEVATION	767.19m	N 5611325.500	E 415856.60	00
	DRILI	LING CONTRACTOR	Eastern Irrigation District								
	EXCA	AVATION METHOD	Excavator								
Depth (m)		TOPSOIL silty sand	Soil Description dy, some clay, trace gravel, damp,	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 20 100 200 PC POCKET PEN I 	QUID 5/300 mm <u>30 40</u> 300 400	REMARKS	Standpipe/ Instrument	Elevation (m)
1 1 1 1 1 1 2 2 		SHALE (Weathered completely weathered high plastic, extreme white precipitates, tr 1.4m - 100 mm set			B1	8.9 14.3 17.8	•		0.8 m - Dispersivity Classification = ND3 % Dispersion = % 0.8 m - LL = 32.9% PL = 11.5% PI = 21.4% 1.7 m - Dispersivity Classification = ND3 % Dispersion = %		767- - 766- - 765- - 764- - 763- - 763- -
11/01/202	4	Notes: Test pit program. Ba	ckfilled with bucket packed cuttings.]		Logged By:	C. Tams C. Braun	

		MPE	a division of Eng	lot	ре						ΤE	ST PIT No :		449
	CLIEI	NT	Eastern Irrigation District		PR	OJECT	NAM	1F			s	nake Lake Reservoir I	Expansion	
		JECT NUMBER	1560-193-00			OJECT			 N			NE 1/4 32-19-1		
		STARTED 05/10/		2023		OUND			_	769	.00m			68.500
		LING CONTRACTOR	Eastern Irrigation District	.020	011	COND				100.				
			Excavator											
Depth (m)	SOIL SYMBOL		Soil Description , some clay, trace gravel, damp,	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLAST 6PT (N) 10 2	URE CO IC - LIQ) Blows/3 200 30 200 30 <u>T PEN (</u>	UID 300 mm <u>0 40</u> 00 400	1	REMARKS	Standbibe/	Elevation (m)
-	\$ \$ \$ \$	stiff, low plastic, brown												-
- - - - - - - - - - -		completely weathered weak to hard soil, bloc precipitates	residual soil, clayey, silty, , brown, medium plastic, extremely ky, thinly laminated, some white ne oxidation staining, some		B1				-					768-
-	·	1 1m becoming do	le brown to grove mottling		AU1	9.0								-
-			k brown to grey mottling			5.0								-
-	··													
2	· <u>·</u> ··	- End	of Borehole @2.0 m	_	AU2	10.5		<u>•</u>						767-
- - - - - - - - - - - - - - - - - - -														766-
		Notes:					_							
11/01/202	4	Test pit program. Bacł	filled with bucket packed cuttings.									Logged By: Reviewed By:	<u> </u>	

		MP		a division a	f En al		•						ΤE	EST PIT No: 2		
	V			a division o	or Engi	0	be								PAGE	1 0F 1
	CLIEN	ΙT		Eastern Irrigation Di	strict		PR	OJECT	NAM	IE			S	Snake Lake Reservoir Exp	ansion	
	PROJ	ECT NUMBER		1560-193-00			PR	OJECT	LOC	ATION	۱.			NE 1/4 32-19-16		
	DATE	STARTED	05/10/2023	COMPLETED	05/10/20	023	GR	OUND	ELE\	/ATIOI	N	769	9.90m	N 5611533.100 E	41616	5.800
	DRILL	ING CONTRACT	OR	Eastern Irrigatio	n District											
	EXCA	VATION METHOD)	Excavato	or											
		TOPSOIL, silty, stiff, low plastic CLAY TILL, silty some cobbles to brown, some w 0.7m - becom crystals SHALE (Weath completely wea high plastic, ext white precipitat SHALE (Weath light grey, mois	sandy, som brown, som brown, som p to 120 mn hite precipita ing some ox ered), residu thered, dark tremely weal es ered), silty, of t, high plastim minated, sor s	Soil cription e clay, trace gravel, ne root hairs ne coarse gravel to n, damp, stiff, low p	damp, gravelly, lastic, light ce gypsum tling, moist, y, some veathered, o hard soil,		B1 B2 AU1	3.2 Woisture Content (%)	⊢ F ■ S 1	PLASTI iPT (N)	IC - LIC Blows 20 3	/300 mm 30 40	n O	REMARKS 0.6 m - Dispersivity Classification = ND1 % Dispersion = 17% 0.6 m - Gravel = 29.3° 0.6 m - Sand = 48.0% Silt = 13.8% Clay = 8.9% 1.3 m - Dispersivity Classification = ND3 % Dispersion = %	//X//	The function of the function o
		Notes:														767-
			n. Backfilled	with bucket packed	l cuttings.											
														Logged By:	C. Tam	IS
11/01/2024	1													Reviewed By:	C. Brau	ın

		MP		a division of Er	nglol	be					TE	EST F	PIT No :		TP4 PAGE 1	
	CLIEI	NT		Eastern Irrigation District		PR	OJECT	NAM	F		ç	Snake I a	ike Reservoir	Fxnansi	on	
		JECT NUMBER		1560-193-00			OJECT				,		NE 1/4 32-19-		011	
		STARTED	05/10/2023		/10/2023		OUND				58.96m		5611796.000		416456.4	400
		LING CONTRAC		Eastern Irrigation Distric												
	EXCA	AVATION METHO	D	Excavator												
Depth (m)		TOPSOIL, silt	Desc	oil ription clay, trace gravel, damp	Sample Type	Sample Number	Moisture Content (%)	H F ■ SI 1	PLASTIC PT (N) E 10 20 00 20	RE CONTE - LIQUID Blows/300 n) 30 0 300 PEN (kPa)	nm <u>40</u> 400	-	REMARKS	3	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		GRAVEL, san graded, coarse brown	c, brown, some dy, silty, some e grained, sub- hered), silty, cl	cobbles up to 160 mm, w rounded, moist, compact	rell t,	B1	5.8	•	•				- Gravel = 5ź - Sand = 31. Fines = 15.	4%		
2 -	·	•	End of Bore	hole @2.1 m			10.4									
																766
- - - -		Notes:										-				-
14/04/00-			m. Backfilled v	vith bucket packed cutting	gs.							Loggeo Review	d By: ved By:		<u>C. Tams</u> C. Braun	
11/01/202	4															

		a divisio	n of Englo	be			TE	EST PIT No :	23TP452 PAGE 1 0F 1
	CLIEI	NT Eastern Irrigati	ion District	PF	OJECT	NAME	5	Snake Lake Reservoir	Expansion
	PRO	JECT NUMBER1560-19	3-00	PF	OJECT	LOCATION		NE 1/4 32-19-7	6
	DATE	E STARTED COMPLETE	D 05/10/2023	GF	ROUND	ELEVATION	768.67m	N 5612134.600	E 416508.300
			igation District						
	EXCA	AVATION METHOD Exc	avator		-T	1		1	
Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blows 10 200 3 POCKET PEN 	QUID 5/300 mm 30 40 300 400	REMARKS	Standpipe/ Instrument Elevation (m)
- - - - - - - - - - - - - - - - - - -		TOPSOIL, silty, sandy, some clay, trace gr stiff, low plastic, brown, some root hairs CLAY TILL, silty, some sand, some coarse stiff, medium plastic, dark brown, some ox some white sulphate inclusions, trace gyp SHALE (Weathered), clayey, silty, highly w brown to grey mottling, moist, high plastic, weak to hard soil, thinly laminated, trace g	e gravel, moist, idation staining, sum crystals /eathered, dark extremely	B1	12.0	•		0.6 m - Dispersivity Classification = ND % Dispersion = %	7 3
		End of Borehole @1.8 m		AU1	22.9	•		1.7 m - Dispersivity Classification = D2 % Dispersion = %	
11/01/202	4	Notes: Test pit program. Backfilled with bucket pa	cked cuttings.					Logged By: Reviewed By:	C. Tams C. Braun

		MP		a division of En	glo	be					TE	EST PIT No :		TP4 PAGE 1	
	CLIEI	NT		Eastern Irrigation District		PR	OJECT	ΓΝΑΜ	IE		5	Snake Lake Reservoir	Expans	ion	
	PRO	IECT NUMBER		1560-193-00		PR	OJECT	LOC	ATION			NE 1/4 32-19-	16		
	DATE	STARTED	05/09/2023	COMPLETED 05/0	9/2023	GR	ROUND	ELEV	ATION	ı	776.52m	n N5610063.400	_ E _	415115.	500
	DRILI	LING CONTRAC	TOR	Eastern Irrigation District											
	EXCA	VATION METHO	D	Excavator											
Depth (m)	SOIL SYMBOL			oil ription	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTIC PT (N) I 10 20 00 20	RE CONTI C - LIQUID Blows/300 0 30 10 300 " PEN (KP2	mm 40 400	REMARKS	3	Standpipe/ Instrument	Elevation (m)
		stiff, low plasti SHALE (Weat brown to grey	c, brown, som hered), clayey mottling, som ktremely weak ce gypsum cry	, silty, highly weathered, da e oxidation staining, damp, to hard soil, thickly	rk	• B1						0.8 m - Dry Densit 1645 kg/m3 Optimum Moisture 19.4%	-		776- 775- 774- 773- 772- 771-
F		Notosi										1			
11/01/2024	4	Notes: Test pit progra	m. Backfilled v	with bucket packed cuttings	3.							Logged By: Reviewed By:		C. Tams C. Braur	

		MP		a division of En	glo	be				Т	EST PIT No :	23TP454
	CLIEN	NT		Eastern Irrigation District		PR	OJECT		IF		Snake Lake Reservoir	Expansion
		IECT NUMBER		1560-193-00			OJECT				NE 1/4 32-19-1	
		STARTED	05/09/2023		9/2023		ROUND					
	DRILL	_ING CONTRAC	TOR	Eastern Irrigation District								
	EXCA	VATION METHO	D	Excavator								
Depth (m)	SOIL SYMBOL		Desc	Soil cription	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S	PLASTIC PT (N) F 10 20 00 20	RE CONTENT C - LIQUID Blows/300 mm 0 30 40 0 300 400 PEN (kPa)	REMARKS	Standpipe/ Standpipe/ Instrument Elevation
		cobbles, damp CLAY TILL, sil gravel, moist, oxidation stair SHALE (Weat brown to grey	b, stiff, low pla ty, residual so stiff, high plas ing, trace gyp hered), clayey mottling, som xtremely weak ce gypsum cry	r, silty, highly weathered, da e oxidation staining, damp, k to hard soil, thickly	ark	B1	16.1		•		 0.7 m - Dispersivity Classification = ND % Dispersion = % 0.7 m - LL = 54.6% PL = 17.9% PI = 36.7% 2 m - Dispersivity Classification = ND % Dispersion = 2% 2 m - Sand = 62.19 Silt = 20.2% Clay = 17.7 	13 775- 7775- 7774- 774-
11/01/2024	1	Notes: Test pit progra	m. Backfilled	with bucket packed cutting	5.	1		<u>J</u>			Logged By: Reviewed By:	<u> </u>

		MPE	a division of Eng	lol	ce			TE	EST PIT No :	23TP455 PAGE 1 OF 1
	CLIEI	NT	Eastern Irrigation District		PR	OJECT	NAME		Snake Lake Reservoir Ex	kpansion
	PRO	JECT NUMBER	1560-193-00		PR	OJECT	LOCATION		NE 1/4 32-19-16	
	DATE	STARTED 05/09	2023 COMPLETED 05/09/2	2023	GR	OUND	ELEVATION	777.78m	N 5610205.100	E414872.000
	DRILI	LING CONTRACTOR	Eastern Irrigation District							
	EXCA	AVATION METHOD	Excavator							
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - LIC SPT (N) Blows 10 200 3 POCKET PEN 	QUID 5/300 mm 30 40 300 400	REMARKS	Standpipe/ Instrument Elevation (m)
		CLAY TILL, silty, resic gravel, moist, stiff, hig oxidation staining, tra SHALE (Weathered), dark brown to grey m moist, high plastic, ex thinly laminated, trace SHALE (Weathered), brown to grey motting high plastic, extremel laminated, trace gyps 2.2m - bentonite sea	clayey, silty, completely weathered, ottling, some oxidation staining, tremely weak to hard soil, blocky, e gypsum crystals clayey, silty, highly weathered, dark g, some oxidation staining, damp, y weak to hard soil, thickly um crystals		B1 AU1 AU2	14.7 22.6 27.9			0.9 m - Dispersivity Classification = ND3 % Dispersion = % 0.9 m - Sand = 25.29 Fines = 74.80 1.8 m - Dispersivity Classification = ND3 % Dispersion = %	%
11/01/2024	4	Notes: Test pit program. Bac	kfilled with bucket packed cuttings.			1			Logged By: Reviewed By:	C. Tams C. Braun

		MP		a division of En	glo	be					TE	EST PIT No :		ГР4 PAGE 1	
	CLIE	NT		Eastern Irrigation District		PR	OJECT		IF		9	Snake Lake Reservoir	Expansio	'n	
		JECT NUMBER		1560-193-00			OJECT			J		NE 1/4 32-19-	·		
		E STARTED	05/09/2023		9/2023		OUND				775.86m			15111.6	 600
		– LING CONTRAC		Eastern Irrigation District						_					
	EXCA	AVATION METHO)D	Excavator											
Depth (m)		TOPSOIL, silt	Desc	oil ription e clay, trace gravel, damp,	Sample Type	Sample Number	Moisture Content (%)	H F ■ S 1	PLASTI PT (N) 10 2 00 2	JRE CON IC - LIQUI Blows/300 20 30 00 300 T PEN (kF	D 0 mm <u>40</u> 400	REMARKS	3	Standpipe/ Instrument	Elevation (m)
- $ -$		SHALE (Weat brown to grey high plastic, d	ic, brown, som Ity, trace sand, ark brown, sor thered), clayey mottling, som xtremely weak ce gypsum cry	e root hairs trace fine gravel, moist, sine white precipitates , silty, highly weathered, date oxidation staining, damp to hard soil, thickly	ark	AU1	23.5		•	•		0.8 m - Dispersivity Classification = NE % Dispersion = % 1.7 m - Dispersivity Classification = NE % Dispersion = %)4 y		775- 774- 7773- 7772- 7771- 7771- 7770-
11/01/202	4	Notes: Test pit progra	am. Backfilled v	with bucket packed cutting	s.			<u>]</u>				Logged By: Reviewed By:		. Tams Braun	

		MP		o division of En		h e					TE	EST PIT No	: 23		
				a division of En	gio	be								PAGE 1	0F 1
	CLIE	NT		Eastern Irrigation District		PF	ROJECT	NAM	Е		5	Snake Lake Reserv	/oir Expar	nsion	
	PROJ	IECT NUMBER		1560-193-00		PF	ROJECT	LOC	ATION	۰		NE 1/4 32-	19-16		
	DATE	STARTED	05/09/2023	COMPLETED 05/0	9/2023	GF	ROUND	ELEV	/ATIOI	N	5.83m	N 5610616.4	100 E	415105.	000
	DRILI	LING CONTRAC	TOR	Eastern Irrigation District											
	EXCA	VATION METHO	D	Excavator											
Depth (m)	SOIL SYMBOL	TOPSOIL silt	Desc	Soil cription	Sample Type	Sample Number	Moisture Content (%)	H F ■ S 1	PLASTI PT (N) 10 2 00 2	JRE CONTEN IC - LIQUID Blows/300 mr 20 30 4 00 300 4(<u>T PEN (kPa)</u>	n 0	REMAF	₹KS	Standpipe/ Instrument	Elevation (m)
		stiff, low plasti CLAY TILL, si mm, damp, st precipitates SHALE (Weat dark brown to moist, high pla	c, brown, som ty, sandy, grav ff, low plastic, hered), clayey grey mottling, astic, extremel crystals, trace	e clay, trace gravel, damp, he root hairs velly, trace cobbles up to 15 light brown, some white , silty, completely weathere some oxidation staining, y weak to hard soil, blocky, white precipitates ehole @1.6 m	d,	B1	10.0					0.6 m - Dispers Classification = % Dispersion = 0.6 m - Gravel = Silt = 17 Clay = 2 1.5 m - Dispers Classification = % Dispersion =	ND3 15% = 34.2% 23.4% 7.2% 25.2% ivity D2		775– 774– 777– 777– 777–
		Notes:												<u> </u>	<u> </u>
			m. Backfilled	with bucket packed cuttings	5.							Logged By:		C. Tams	
11/01/202	4											Reviewed By:		C. Braur	<u> </u>

		MP		a division of Eng	lo	be						TE	ST	PIT No :		TP4 PAGE 1	
	CLIEI	NT		Eastern Irrigation District		PR	OJECT		ЛЕ			S	Snake L	ake Reservoir l	Expansi	ion	
	PRO	JECT NUMBER		1560-193-00		PR	OJECT		CATIO	N _				NE 1/4 32-19-7	16		
	DATE	STARTED	05/09/2023	COMPLETED05/09/2	2023	GR	OUND	ELE	VATIO	N	778	.34m	N_	5610951.700	_ E	415070.	800
	DRILI	LING CONTRAC		Eastern Irrigation District													
	EXCA	AVATION METHO	D	Excavator													
Depth (m)	SOIL SYMBOL		Desc	Soil rription	Sample Type	Sample Number	Moisture Content (%)		PLAST SPT (N) <u>10</u> 100 2	IC - LIC) Blows/	'300 mm 30 40 00 40	1		REMARKS	5	Standpipe/ Instrument	Elevation (m)
1		SHALE (Weatt staining, damp	c, brown, som T, some sanc plastic, light ty, some sanc is, some grav ff, medium pla ing, some wh nered), clayey ompletely we h, high plastic, aminated, trac	e clay, trace gravel, damp, e root hairs I, trace fine gravel, moist, stift prown, some white , some completely weathered el, trace cobbles up to 150 istic, dark brown, some ite precipitates r, silty, some medium grained athered, grey, some oxidation extremely weak to hard soil, se coal staining, trace gypsun ehole @3.8 m	d n	B1	10.8		•			'	Class % Dis	- Dispersivity ification = ND persion = % - LL = 42.9% PL = 19.5% PI = 23.4%	1		778-
<u> </u>	1	Notes:				L	1										<u> </u>
11/01/202	4	Test pit progra	m. Backfilled	with bucket packed cuttings.										ed By: wed By:		C. Tams C. Braun	

		MPE	a division of Eng	glol	oe				TI	EST PIT No:;	23TP459
	CLIEN	NT	Eastern Irrigation District		PR	OJECT		=		Snake Lake Reservoir Ex	coansion
		IECT NUMBER	1560-193-00			OJECT				NE 1/4 32-19-16	•
		STARTED 05/10		2023		OUND					
		-ING CONTRACTOR	Eastern Irrigation District							<u> </u>	
			Excavator								
							1			<u></u>	
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	H PI ■ SF 10 10	LASTIC PT (N) E <u>0 20</u> 10 20	RE CONTENT - LIQUID Blows/300 mm) 30 40 0 300 400 PEN (kPa)	REMARKS	Standpipe/ Instrument Elevation
		stiff, low plastic, brow CLAY AND SILT, som low to medium plastic precipitates CLAY TILL, silty, sand some cobbles up to 1 brown, some white pr CLAY TILL, silty, som shale inclusions, trace 100 mm, moist, stiff, r to grey mottling, som staining, trace white p 2.0m - bedrock cont SHALE (Weathered), brown to grey mottling high plastic, extremel gypsum crystals	e sand, trace fine gravel, moist, sti , light brown, some white dy, some coarse gravel, trace to 50 mm, damp, stiff, low plastic, ligh ecipitates e sand, some completely weathere e coarse gravel, trace cobbles up to medium to high plastic, dark brown e oxidation staining, trace coal	d o	AU1 B1 B2 AU2	17.0 9.4 15.1		•		0.8 m - Dispersivity Classification = ND2 % Dispersion = % 1.6 m - Dispersivity Classification = ND3 % Dispersion = 5% 1.6 m - Dry Density = 1705 kg/m3 Optimum Moisture = 18.6% 1.6 m - Gravel = 27.7 1.6 m - Sand = 20.19 Fines = 52.29 2.6 m - Dispersivity Classification = ND1 % Dispersion = % 2.6 m - LL = 40.4% PL = 22.7% PI = 17.7% 3.9 m - Dispersivity Classification = ND3 % Dispersion = %	= 7% % 777- 777- 777- 777- 777-
		Notes: Test pit program. Bac	kfilled with bucket packed cuttings.		<u> </u>	1	<u>]</u>			Logged By:	C. Tams
11/01/2024	4									Reviewed By:	C. Braun

				o division (f Eng	اما	•••						ΤE	ST PIT No :			
				a division o	or Eng	101	be								P	AGE 1	0F 1
	CLIEN	NT		Eastern Irrigation D	strict		PR	OJECT	NAM	E	-		S	Snake Lake Reservoir E	Expansio	n	
	PROJ	IECT NUMBER		1560-193-00			PR	OJECT	LOC	ATION	۹ ـ			NE 1/4 32-19-1	6		
	DATE	STARTED	05/10/2023	COMPLETED	05/10/2	023	GR	OUND	ELEV	ATIO	N	76	7.43m	N 5611314.900	E_4	15467.	500
	DRILI	LING CONTRACT	OR	Eastern Irrigatio	n District												
	EXCA	VATION METHOD	0	Excavato	or												
Depth (m)	SOIL SYMBOL		Des	Soil cription		Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLAST PT (N) 10 2 00 2	IC - LIC Blows	/300 mr <u>30 4</u> 00 4		REMARKS		Standpipe/ Instrument	Elevation (m)
		cobbles up to 1 some root hairs SHALE (Weath completely wea staining, moist, blocky, thinly la gypsum crystals SHALE (Weath brown to grey n	00 mm, dam ered), residu athered, dark high plastic, minated, sor s ered), silty, o nottling, som , extremely v s	e clay, trace gravel, np, stiff, low plastic, lal soil, clayey, silty brown, trace oxida extremely weak to me white precipitate clayey, highly weath the oxidation staining weak, thickly laminate hole @1.4 m	tion hard soil, es, trace ered, dark g, damp,		B1 AU1 AU2	26.2 14.1 8.0	•	•	•			0.7 m - Dispersivity Classification = ND % Dispersion = %			765- 7664- 7664- 7665- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 7664- 767- 767
	4	Notes: Test pit progran	n. Backfilled	with bucket packed	l cuttings.									Logged By: Reviewed By:		Tams Braun	

		MP		a division of Eng	glol	be					TE	EST P	PIT No :		TP4 PAGE 1	
	DATE DRIL	NT JECT NUMBER E STARTED LING CONTRACT AVATION METHOD		Eastern Irrigation District 1560-193-00 COMPLETED05/11 Eastern Irrigation District Excavator	/2023	PF	OJECT OJECT ROUND	LOC	ATION		773.54n	N	ke Reservoir IE 1/4 32-19- 5611753.300	16	on 415387.9	900
Depth (m)	SOIL SYMBOL		Desc	oil ription	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTIC PT (N) I 10 20 00 20	RE CONTI C - LIQUID Blows/300 0 300 - PEN (KPa	mm 40 400		REMARKS	6	Standpipe/ Instrument	Elevation (m)
1		450 mm, moist brown to dark g suspect white s SHALE (Weath to dark grey mo oxide staining, 2.5m - becom staining	y, some sand , stiff to very grey mottling, sulphate inclu- ers to 650 mm lered), compt bottling, moist, coal staining ing shale, gre	some gravel, boulders to stiff, medium plastic, light oxide staining, coal specks sions		B1	6.8	•				1.7 m - Classifi % Disp 1.7 m - 1.7 m - Classifi % Disp 2.3 m - 2.3 m -	LL = 42.4% PL = 18.9% PI = 23.5% Dispersivity cation = NE ersion = 6% Gravel = 2 Sand = 24. Silt = 30.3% Clay = 24.2	5 7 03 1.9% 5 % 6% 7 1.3% 2% 6		773-
11/01/202	4	Notes: Test pit prograr	n. Backfilled v	vith bucket packed cuttings								Logged Review			J. Boyd . Braun	

		MP		a division of	Englo	be			-	TEST PIT No:;	23TP4 PAGE	
	CLIE	NT		Eastern Irrigation Distric	ct	PF	OJECT	NAME		Snake Lake Reservoir Ex	pansion	
	PRO.	JECT NUMBER		1560-193-00		PF	OJECT	LOCATION	1	NE 1/4 32-19-16	-	
		E STARTED	05/11/2023	COMPLETED	05/11/2023			ELEVATION				.100
		LING CONTRACT		Eastern Irrigation Di						<u> </u>		
		AVATION METHO		Excavator								
Depth (m)		₹TOPSOIL, silty	Des	Soil cription 9. brown	Sample Tvpe	Sample Number	Moisture Content (%)	H PLASTI ■ SPT (N)	Blows/300 mm 20 30 40 00 300 400	REMARKS	Standpipe/ Instrument	Elevation (m)
		very stiff, low t sulphate inclus SHALE (Weath to dark grey m weak, suspect trace cobbles t	ty to and silt, o medium pla sions, oxide s hered), comp ottling, damp white sulpha to 100 mm ning shale, gr k to weak, ox ım and quartz	sandy, trace gravel, da istic, brown, suspect w pecks letely weathered, light , medium plastic, extre te inclusions, oxide sta rey, highly weathered, ide staining	brown mely	 B1 B2 	4.5			1 m - Dispersivity Classification = D2 % Dispersion = % 1 m - Sand = 55.9% Fines = 44.19 2 m - Dispersivity Classification = D2 % Dispersion = % 2 m - Sand = 30.9% Fines = 69.19		772-
	<u> </u>	Notes: Test pit progra	m. Backfilled	with bucket packed cu	ttings.						L Pour	4
										Logged By: _	J. Boyd	
11/01/202	4									Reviewed By:	C. Braur	<u>n</u>

		MP		a division c	of Engl	ok	be					Т	EST	PIT No :		FP4 PAGE 1	
	CLIEN	NT		Eastern Irrigation Dis	strict		PR	OJECT	NAM	F			Snake I	.ake Reservoir E	xnansic	n	
		IECT NUMBER		1560-193-00	Strict			JECT			. –		Onake L	NE 1/4 32-19-10			
		STARTED	05/11/2023	COMPLETED	05/11/2	123					_	783.94	m N	5611221.300		14155.8	800
		LING CONTRACT				525	010	COND		Anoi	• _	703.94	<u></u> N	0011221.000	<u>د</u>		
				Eastern Irrigation													
	EXCA	VATION METHO	D	Excavato	r				r								
Depth (m)	SOIL SYMBOL		Desc	oil ription		Sample Type	Sample Number	Moisture Content (%)	H F ■ SI 1	PLASTI PT (N) 10 2 00 2	IRE CON C - LIQL Blows/3 20 30 00 300 <u>T PEN (k</u>	JID 00 mm 40 0 400		REMARKS		Standpipe/ Instrument	Elevation (m)
F	555	TOPSOIL, silty	, sandy, moist	, loose, brown, org	anics												-
- - - - - - - - - - - - - - - - - - -		very stiff, low to sulphate inclus 0.6m - becom white sulphate SHALE (Weath weathered, ligh medium plastic inclusions, oxic cobbles (<5%) 1.0m - increa increasing oxid	o medium plas sions, oxide sp ning silty to ar <u>content</u> nered), residu nt brown to da c, extremely w de staining, co sing suspect le staining	to sandy, trace gra stic, brown, suspec becks, trace organic ad silt, increasing su al soil to completely rk grey mottling, da eak, suspect white eal pockets to 10 mi white sulphate cont	t white cs uspect / amp, sulphate m, trace eent,		B1 B2 B3	8.4	•	·			0.5 m Class % Dis 0.9 m Class	- LL = 56.7% PL = 14.5% PI = 42.2% - Dispersivity ification = ND4 - Dispersivity ification = D2 :persion = %	l		
- - - - - - - - - - - - - - - -		2.1m - becon extremely to ve sulphate inclus 2.7m - becon weathered, ver oxide staining	ite y												- - - - - - - - - - - - - - - - - - -		
-		-	End of Bore	hole @3.5 m		1											-
- - - - - - - - - - - - - - - - - - -																	780
F													_				778-
11/01/202	4	Notes: Test pit progra	m. Backfilled v	with bucket packed	cuttings.				<u></u>					ed By: wed By:		. Boyd . Braun	

		MP	G	a division c	of Engl	ok	be						TE	ST PIT No:2		464
		NT		Eastern Irrigation Di	strict		PR	OJECT	NAM	IE	_		S	Snake Lake Reservoir Exp	ansion	
	PROJ	IECT NUMBER		1560-193-00			PR	OJECT	LOC	ATION	I _			NE 1/4 32-19-16		
	DATE	STARTED	05/11/20	23 COMPLETED	05/11/20)23	GR		ELE\		١	784	1.02m	N 5611384.200 E	4141	34.800
	DRILI	LING CONTRAC	TOR _	Eastern Irrigation	n District											
	EXCA	VATION METHO	D _	Excavato	r											
Depth (m)	SOIL SYMBOL	TOPSOUL sitt		Soil Description		Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	10ISTU PLASTI PT (N) 10 20 00 20 20 20 20 20 20 20	C - LIQ Blows/: :0 3 :0 30	UID 300 mn <u>0 4</u> 00 40	n O	REMARKS	Standpipe/	Elevation (m)
		CLAY TILL, sil very stiff, low f sulphate inclus 0.7m - becor white sulphate 1.5m - becor 1.8m - shale SHALE (Weat to dark grey m weak, suspect trace cobbles 2.8m - becor weak, oxide st	ty, some s o medium sions, oxio ning silty content ming sand fragment hered), co tottling, da t white sul (<5%) ming shale aining	bose, brown, organics and to sandy, trace gra a plastic, brown, suspec de specks, trace organic to and silt, increasing su y to and sand, low plas s to 20 mm impletely weathered, lig imp, medium plastic, ex phate inclusions, oxide e, grey, medium weathe Borehole @3.2 m	t white cs uspect tic tht brown tremely staining,		B1 B2	10.8		•				1.1 m - Dispersivity Classification = ND3 % Dispersion = 5% 1.1 m - Gravel = 3.1% Nit = 32.8% Clay = 36.5% 1.8 m - Dispersivity Classification = ND3 % Dispersion = %		783-
11/01/2024	-	Notes: Test pit progra	m. Backfi	lled with bucket packed	cuttings.									Logged By:	J. Bo C. Bra	-

		MPE	a division o	f Engl	ok	ре					-	ΤE	ST PIT No :		465
	CLIE		Eastern Irrigation Dis	triot		DD	OJECT		=			6	nake Lake Reservoir E:	voonsion	
		JECT NUMBER	1560-193-00	SUICI			OJECT			-		0	NE 1/4 32-19-16		
				05/44/0						_	704 5	· 0 ·			0 600
		STARTED 05/11/2023		05/11/2	J <u>2</u> 3	GR	OUND	ELEV	ATION	N -	784.5	08m	N	E 41410	9.000
		LING CONTRACTOR	Eastern Irrigation												
	EXC	AVATION METHOD	Excavator	-			1								
Depth (m)	SOIL SYMBOL		Soil escription		Sample Type	Sample Number	Moisture Content (%)	H P ■ SF 1	LASTIC PT (N) 0 2	C - LIQ Blows/3	300 mm 0 40		REMARKS	Standpipe/	Elevation (m)
-		TOPSOIL, silty, moist, loo	se, brown, organics												- 1
- - - - - - - - - -		CLAY TILL, silty, some sat very stiff, low to medium p sulphate inclusions, oxide SHALE (Weathered), com	plastic, brown, suspect specks, trace organic	white s	_	B1	3.9	•	J				0.8 m - LL = 22.6% PL = 12% PI = 10.6% 0.8 m - Dispersivity		784-
- - - - - - -		to dark grey mottling, dam weak, suspect white sulph trace cobbles	p, medium plastic, ext ate inclusions, oxide s	tremely staining,		B2	14.9		•				0.8 m - Dispersivity Classification = ND3 % Dispersion = % 1.4 m - Dispersivity Classification = ND3 % Dispersion = %		783-
-	· · · · · · · · · · · · · · · · · · ·	2.0m - becoming more g extremely weak, gypsum a		,		B3									-
F		2.5m - sand pockets to 2	20 mm												782-
-		End of B	orehole @2.7 m		1										
-3															
-															
-															
-															781-
-															
-4								 							
-															
-															
-															780-
-															
5															
-															
-															
-															779-
-															
-															
	1	Notes: Test pit program. Backfille	d with bucket packed	cuttings.				<u> </u>						l	
													Logged By:	J. Boy	′d
11/01/2024	4												Reviewed By:	C. Bra	un

		MPE	a divisior	n of Englo	be						ΤE	ST F	PIT No :		TP4 PAGE 1	
	CLIEN	NT	Eastern Irrigatio	n District	PF	ROJECT	NAM	IE			S	nake La	ake Reservoir	Expans	ion	
	PROJ	IECT NUMBER	1560-193-		PF	ROJECT	LOC	ATION	1			1	NE 1/4 32-19-	16		
	DATE	STARTED 05/10/	2023 COMPLETED	0 05/10/2023	GF	ROUND	ELEV	/ATIOI	N	764.	45m	N	5611305.900	Е	416720.2	200
	DRILL	ING CONTRACTOR	Eastern Irrig	ation District												
	EXCA	VATION METHOD	Exca	vator												
Depth (m)	SOIL SYMBOL		Soil Description	Samnle Twne	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTI PT (N) 10 2 00 2	IRE COI C - LIQI Blows/3 20 30 00 30 T PEN (I	UID 800 mm <u>0 40</u> 10 400			REMARKS	3	Standpipe/ Instrument	Elevation (m)
- - - - - - -		TOPSOIL, silty, sandy stiff, low plastic, brown SHALE (Weathered), completely weathered extremely weak to hal some white precipitate 0.7m - becoming ver	n, some root hairs residual soil, clayey, s , dark brown, moist, h d soil, blocky, thinly la es, trace gypsum crys	silty, nigh plastic, aminated,	B1	16.7		•				0.8 m ·	- LL = 49.7% PL = 16.5%			764-
- - - - - - - - - - - - - - - - - - -					AU1	23.4			•				PI = 33.2%			763-
- - - - - -		2.5m - becoming hig End	hly to moderately wear of Borehole @2.7 m	athered, moist	AU2	18.9		•			-					762-
- - - -																761-
- 4 - -																-
_ - - - - 5																760-
- - - - -																759-
11/01/202	4	Notes: Test pit program. Bacl	filled with bucket pac	ked cuttings.								Logge Reviev	d By: wed By:		C. Tams C. Braun	

		MP	E)	a division of E	nglo	be							PAGE 1 0F 1
	CLIEN	NT		Eastern Irrigation District		PR	OJECT		1F		ş	Snake Lake Reservoir Ex	rpansion
		IECT NUMBER		1560-193-00			OJECT					NE 1/4 32-19-16	-
	DATE	STARTED	05/11/2023	COMPLETED 05	5/11/2023	GF	ROUND	ELE\	/ATION	1 _	774.92m		
	DRILL	LING CONTRACT	OR	Eastern Irrigation Distri	ct								
	EXCA	VATION METHO	<u></u> د	Excavator									
Depth (m)	SOIL SYMBOL		Desc	Soil cription	Sample Type	Sample Number	Moisture Content (%)	⊢ । ■ s	PLASTIC SPT (N) F 10 20	RE CON C - LIQU Blows/30 0 30 0 300	ID 0 mm <u>40</u> 400	REMARKS	Standpipe/ Instrument Elevation (m)
	55 55 55 55 5	TOPSOIL, silty	, sandy, mois	t, loose, brown, organics									
		gravel, damp, v oxide specks inclusions SAND, some c medium graine specks SHALE (Weath weathered, ligh medium plastic inclusions, oxic	very stiff, low hing sandy, su lay, some silt d, damp, den hered), residu ht brown to da c, extremely w de staining, co some bould	some sand to sandy, trac to medium plastic, brown uspect white sulphate , poorly graded, fine to ise, brown, oxide specks al soil to completely ark grey mottling, damp, veak, suspect white sulph bal pockets, trace cobble ders to 900 mm, sand poor ehole @2.6 m	, coal	B1	17.3		•			1 m - Dispersivity Classification = D2 % Dispersion = % 2 m - Dispersivity Classification = ND3 % Dispersion = 5% 2 m - Gravel = 15.4% 2 m - Sand = 18.7% Silt = 36.7% Clay = 29.2% excavator refusal on boulders	6
		Notes:											
11/01/2024	4	Test pit prograr	n. Backfilled	with bucket packed cuttir	ıgs.							Logged By: Reviewed By:	J. Boyd C. Braun

		MP	E	a division d	of Eng	lok	be					TI	EST PIT No:	23TP4 PAGE	
	CLIEN	NT		Eastern Irrigation Di	istrict		PR	OJECT	NAM	E			Snake Lake Reservoir Exp	ansion	
		IECT NUMBER		1560-193-00				OJECT					NE 1/4 32-19-16		
		STARTED	05/11/2023	COMPLETED	05/11/2	023					_	776.27n		= 415704	.700
		LING CONTRAC		Eastern Irrigatio				55140	V		• -	0.211			
		VATION METHO		Eastern Inigatio											
Depth (m)	SOIL SYMBOL		Des	Soil cription		Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTI PT (N) 10 2 00 20	IRE CON C - LIQU Blows/3 20 300 7 PEN (k	JID 00 mm 0 <u>40</u> 0 400	REMARKS	Standpipe/	Elevation (m)
- - - - - - - - -		organics CLAY TILL, so cobbles, trace coal specks, o	ome silt, some boulders, dan xide staining	e grave, moist, loos sand, some grave mp, hard, low plasti nate inclusions	l, some		B1	14.0		•			0.6 m - Dispersivity Classification = ND3 % Dispersion = %		776-
- - - - - - - - - - - - - - - - - - -		SHALE (Weat weathered, lig medium plasti- inclusions, gyr staining, coal 450 mm 2.0m - becor weathered, ver	amp, e sulphate oxide ulders to		B2	9.8		•			1.7 m - Dispersivity Classification = ND3 .% Dispersion = % 1.7 m - Gravel = 13.0' 1.7 m - Sand = 15.4% Fines = 71.6%	, 🕅	775- - - - - - - - - - - - - - - - - - -		
		Notes:	End of Bor	ehole @2.7 m											7773-
11/01/2024	4		m. Backfilled	with bucket packed	d cuttings.								Logged By:	J. Boyo C. Brau	
L															

		IP		a division of Eng	glo	be				TI	EST PIT No :	23TP470 PAGE 1 0F
	CLIENT			Eastern Irrigation District		PF	OJECT	ΓΝΑΜΕ			Snake Lake Reservoir	Expansion
	PROJEC	T NUMBER		1560-193-00		PF		LOCATI	ION		NE 1/4 32-19-	16
	DATE ST	ARTED	05/11/2023	COMPLETED 05/11	/2023	GF	ROUND	ELEVAT	ION	772.72r	n N 5612156.300	E 415939.900
	DRILLING	G CONTRAC	TOR	Eastern Irrigation District								
	EXCAVA	TION METHO)D	Excavator								
Depth (m)		DPSOIL, silt	Des	Soil cription ne grave, moist, loose, brown	Sample Type	Sample Number	Moisture Content (%)	⊢ PLA ■ SPT 10	STIC - LI	s/300 mm <u>30 40</u> 300 400	REMARKS	0 Standpipe/ Instrument Elevation
1	CL CL	ganics AY TILL, sil v to medium IALE (Weat eathered, lig edium plasti clusions, gy clusions, gy co cobbles 0.5m - 50 mi 1.5m - becon d grey, trace	ty, some san n plastic, brow hered), resid ht brown to d c, extremely osum crystals m sand layer ming highly w to none whi ming shale, h le staining	e grave, moist, loose, brown d, some gravel, damp, hard, vn, oxide specks, coal specks ual soil to completely ark grey mottling, damp, weak, suspect white sulphate s, oxide staining, coal pockets reathered, very weak, brown te sulphate inclusions ighly weathered, very weak, rehole @2.8 m		B1	6.1				0.4 m - LL = 31.5% PL = 10.5% PI = 21.0% 0.4 m - Dispersivity Classification = NE % Dispersion = % 1.2 m - Dispersivity Classification = NE % Dispersion = %	6 6 772- 74 9
	Nc	otes:				I					1	
			ım. Backfilled	with bucket packed cuttings.								
											Logged By:	J. Boyd
11/01/202	14										Reviewed By:	C. Braun

DRILING CONTRACTOR Eastern infiguion District EXCAUNTION METHOD Excavator			MP	E	a division of En g	glol	ре					TE	EST PIT No :	23	TP4	
PROJECT NUMBER						-										
DATE STARTED 0511/2023 COMPLETED 0511/2023 GROUND ELEVATION 70.92m N 6912327.900 E 41 DELLING CONTRACTOR Eatern impainto Datated EXCANATION METHOD Excavator												S			sion	
DRILLING CONTRACTOR Eastern inigation District EXCAUNTION METHOD Excavator • Go G • Go G				05/44/0000											415042	700
EXCAUNTION METHOD Excavator			_			/2023	GR	OUND	ELEVA	HON		.92m	N_5012327.900	<u> </u>	415942.	700
Image: Soli Description Image: Soli Description																
C 3 Description B STI (N) Blows200 mm 10 20 30 40 10 10 20 30 40 10 20 30 40 10 20 30 40 10 20 30 40 20 40 20 40 10 20 30 40 20 40 20 40 10 TOPSOIL, sity, sandy, some garato to sandy, trace gravel, damp, and, low to addum plastc, brown, oxide specks, coal 40 4000CET Pel/Mail 4000EET Pel/Mail 10 mediam plastc, brown, oxide speck with subplate inclusions 11 16.2 11 16.2 11 16.2 11 10 20 30 40 30 40 30 40 30 30 40 30 30 40 30 30 40 30 40 30 40 30 40 30 40 30 40 30 40 30 40 30 30 30 30 30 30 30 30 30				U	Excavator				1				1		1 × t	
Programics	Depth (m)	SOIL		Des	cription		Sample Number		H PLA ■ SPT 10 100	ASTIC - (N) Blo <u>20</u> 200	LIQUID ws/300 mm <u>30 40</u> 300 400		REMARK	S	Standpipe/ Instrument	Elevation (m)
Test pit program. Backfilled with bucket packed cuttings.			organics CLAY TILL, sil hard, low to m specks SHALE (Weat weathered, lig medium plasti- inclusions, gyp 1.1m - decre	ty, some sand edium plastic hered), residu ht brown to da c, extremely v osum crystals asing white s ning shale, hi e staining	to sandy, trace gravel, dam , brown, oxide specks, coal al soil to completely ark grey mottling, damp, veak, suspect white sulphate , oxide staining, coal pocket ulphate inclusions ghly weathered, very weak,	np, ee s	B1	16.2					Classification = N % Dispersion = 7 1 m - Gravel = 0.1 1 m - Sand = 9.8% Silt = 47.3	D3 % !% % %		769- - - - - - - - - - - - - - - - - - -
	11/01/202	4		m. Backfilled	with bucket packed cuttings								Logged By: Reviewed By:		J. Boyd C. Braur	<u> </u>

	MP		a division of	Englo	be			TE	ST PIT No :		472
	CLIENT		Eastern Irrigation Distric	t	PR	OJECT	NAME	s	nake Lake Reservoir	Expansion	
	PROJECT NUMBER		1560-193-00		PR		LOCATION		NE 1/4 32-19-	16	
	DATE STARTED	05/11/2023	COMPLETED	05/11/2023	B GF	ROUND	ELEVATION	773.88m	N 5612390.500	E 41563	38.800
	DRILLING CONTRAC		Eastern Irrigation Dis	strict							
	EXCAVATION METHO	DD	Excavator								
Depth (m)		So Descr y sandy trace	iption		Sample Number	Moisture Content (%)	 MOISTURE C PLASTIC - LI SPT (N) Blow: 10 20 100 200 POCKET PEN I 	QUID s/300 mm <u>30 40</u> 300 400	REMARKS	Standpipe/	Elevation (m)
	CLAY TILL, si hard, low to m specks, suspe 0.7m - poter SHALE (Weat weathered, lig medium plasti inclusions, gy 1.7m - becol brown, high ox	Ity, some sand t redium plastic, l ect white sulpha ntial 100 mm sa thered), residua th brown to dar ht brown to dar ic, extremely we psum crystals, o ming highly wea kide staining	nd layer. grab sample I soil to completely k grey mottling, damp eak, suspect white sul oxide staining, coal po athered, very weak, gr	, damp, coal taken , phate ockets rey and							773- 772- 771- 770- 769-
	Notes: Test pit progra	am. Backfilled w	vith bucket packed cut	tings.					Logged By:	J. Boy	768-
11/04/000									Reviewed By:	C. Bra	
11/01/202	4								-		

		MP		a division of Eng	lol	be			TE	EST PIT No :	23TP4 PAGE	
	CLIEI	NT	_	Eastern Irrigation District		PR	OJECT	NAME	5	Snake Lake Reservoir	Expansion	
	PRO	IECT NUMBER		1560-193-00		PR	OJECT	LOCATION		NE 1/4 32-19-1	16	
	DATE	STARTED	05/08/2023	_ COMPLETED05/08/2	2023	GR	OUND	ELEVATION	771.06m	N 5609650.800	_ E416197	'.900
	DRIL	LING CONTRACT		Eastern Irrigation District								
	EXCA	VATION METHO	D	Excavator								
Depth (m)	SOIL SYMBOL		Desc	oil ription	Sample Type	Sample Number	Moisture Content (%)	 MOISTURE ⊢ PLASTIC - ■ SPT (N) Bid 10 200 ▲ POCKET P 	UQUID bws/300 mm <u>30 40</u> 300 400	REMARKS	Standpipe/ Instrument	Elevi
- - - - - - - - - - - - - - - - - - -		300 mm, damp CLAY TILL, sill medium plastic staining, trace 0.8m - becon SHALE (Weath brown to dark	o, stiff, low pla ty, some sand c, brown to gre gypsum cryst ning high plas nered), clayey grey mottling,			B1	10.3	•		0.8 m - Dispersivity Classification = ND % Dispersion = % 0.8 m - LL = 56.3% PL = 12.1% PI = 44.2%		771-
- 2 - - - - - - - - - - - - - - - - -			End of Bore	hole @1.9 m		B2	16.4			1.8 m - Dispersivity Classification = ND % Dispersion = %	4	769-
11/01/202	4	Notes: Test pit progra	m. Backfilled v	vith bucket packed cuttings.						Logged By: Reviewed By:	<u> </u>	

	MP		a division of Eng	اما	b o						TE	ST P	IT No :	23		
V			a division of Eng	JIOI	be										PAGE [^]	1 0F 1
CLIE	NT		Eastern Irrigation District		PR	OJECT	NAM	IE			S	Snake Lak	e Reservoir	Expan	sion	
PRO	JECT NUMBER		1560-193-00		PR	OJECT	LOC	ATION	ı _			N	E 1/4 32-19-	16		
DATE	STARTED	05/08/2023		2023	GR	OUND	ELEV	ATION	N _	772	.95m	N_5	609648.200	_ E _	415896.	.200
DRIL	LING CONTRACT	OR	Eastern Irrigation District													
EXCA	AVATION METHO)	Excavator													
SOIL SYMBOL		Des	cription		Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTI PT (N) <u>10 2</u> 00 20	C - LIQU Blows/3 20 30 00 30	JID 00 mm <u>0 40</u> 0 40)		REMARK	5	Standpipe/ Instrument	Elevation (m)
	300 mm, damp CLAY TILL, silt medium to high staining, trace staining, trace 1.2m - becom inclusions	, stiff, low pla y, sandy, trac n plastic, dark gypsum crys ning some co ning some co rered), clayey grey mottling stic, extreme	astic, brown, root hairs re gravel, dry, very stiff, < brown, some oxidation tals mpletely weathered shale y, silty, completely weathered , some oxidation staining, ly weak to hard soil, blocky		AU1 B1 AU2 B2	6.3	•	•		•		Classific % Dispe 1.8 m - 3 6 2.4 m - 1 Classific	cation = NE ersion = 5% Sand = 11. Silt = 51.4% Clay = 36.8 Dispersiviti cation = NE	03 % 8% % 3% √		772- 7771- 7770- 769- 768-
	Notes: Test pit program	n. Backfilled	with bucket packed cuttings.												C. Tams	
	PRO DATE DRIL EXC/	EXCAVATION METHOD	PROJECT NUMBER DATE STARTED	PROJECT NUMBER 1560-193-00 DATE STARTED 05/08/2023 COMPLETED 05/08/2023 DRILLING CONTRACTOR Eastern Irrigation District EXCAVATION METHOD Excavator 0000 Soil 0000 Description 0000 Soil 00000 Excavator 00000 Soil 000000 Description 000000 Soil 0000000 Description 00000000000 CLAY TILL, silty, sandy, trace gravel, trace cobbles up to staining, trace gypsum crystals 000000000000000000000000000000000000	PROJECT NUMBER 1560-193-00 DATE STARTED 05/08/2023 COMPLETED 05/08/2023 DRILLING CONTRACTOR Eastern Irrigation District EXCAVATION METHOD Excavator TOPSOIL, silty, clayey, some gravel, trace cobbles up to 300 mm, damp, stiff, low plastic, brown, root hairs CLAY TILL, silty, sandy, trace gravel, dry, very stiff, medium to high plastic, dark brown, some oxidation staining, trace gypsum crystals 1.2m - becoming some completely weathered shale nclusions 1.2m - becoming some completely weathered shale SHALE (Weathered), clayey, silty, completely weathered, dark brown to grey motifing, some oxidation staining, tamp, high plastic, extremely weak to hard soil, blocky End of Borehole @2.6 m Notes: Test pit program. Backfilled with bucket packed cuttings.	PROJECT NUMBER 1580-193-00 PR DATE STARTED 05/08/2023 COMPLETED 05/08/2023 GR DRILLING CONTRACTOR Eastern Irrigation District EXcavator GR EXCAVATION METHOD Excavator GR GR Ogg Description GR GR Ogg Description GR GR AU1 Soil Description GR AU1 Soil CLAY TILL, silty, clayey, some gravel, trace cobbles up to gravel, trace gypsum crystals AU1 Inclusions GR AU1 B1 Inclusions GR GR AU2 SHALE (Weathered), clayey, silty, completely weathered, dark brown to grey mottling, some oxidation staining, damp, high plastic, extremely weak to hard soil, blocky B2 Inclusions End of Borehole @2.6 m GR B2 Notes: Test pit program. Backfilled with bucket packed cuttings. GR	PROJECT NUMBER 1560-193-00 PROJECT DATE STARTED 05/08/2023 COMPLETED 05/08/2023 GROUND DRILLING CONTRACTOR Eastern Irrigation District Excavator Image: Complexity of the state of the stat	PROJECT NUMBER 1560-193-00 PROJECT LOC DATE STARTED 05/08/2023 COMPLETED 05/08/2023 GROUND ELEV DRILLING CONTRACTOR Eastern Irrigation District EXCAVATION METHOD Excavator TOPSOLL, silty, clayey, some gravel, trace cobbles up to 300 mm, damp, stiff, low plasite, brown, root hairs and	PROJECT NUMBER 1500-193-00 PROJECT LOCATION DATE STARTED 05/08/2023 COMPLETED 05/08/2023 GROUND ELEVATION DRILLING CONTRACTOR Eastern Imigation District EXcavator EXCavator Imigation Imigation <td< td=""><td>PROJECT NUMBER 150-193-00 PROJECT LOCATION DATE STARTED 0508/2023 COMPLETED 0508/2023 GROUND ELEVATION DRILING CONTRACTOR Eastern Irrigation District Excavator Excavator TOPSOIL, silty, clayey, some gravel, trace cobbles up to the statistic, dark brown, not hairs Image: statistic dark brown, some oxidation statining, trace gravel, dry, very stift, medium to high plastic, dark brown, some oxidation statining, trace gravel, dry, very stift, and the statistic dark brown to grey mottling, some completely weathered shale B1 AU1 Inclusions AU2 6.3 Image: statistic dark brown, some oxidation statining, trace gravel, dry, very stift, and the statining, trace gravel, dry, very stift, and the statistic dark brown to grey mottling, some completely weathered shale B1 Image: statistic dark brown, some oxidation statining, dark brown to grey mottling, some oxidation statining, trace gravel, dry, erg stift, completely weathered, shale B2 If 6.4 Image: statistic dark brown to grey mottling, some oxidation statining, dark brown to grey mottling. B2 If 6.4 Image: statistic dark brown to grey mottling. Notes: The program. Backfilled with bucket packed cutt</td><td>PROJECT NUMBER </td><td>PROJECT NUMBER 1500-193-00 PROJECT LOCATION </td><td>PROJECT NUMBER 150-133.00 PROJECT LOCATION N DATE STARTED 05082023 COMPLETED 05082023 GROUND ELEVATION 77.2 s/m N. 5 DRILING CONTRACTOR Eastern ingation District Escowator GROUND ELEVATION 77.2 s/m N. 5 EXCOMITION METHOD Excovator GROUND ELEVATION 90</td></td<> <td>PROJECT NUMBER 1590-193-00 PROJECT LOCATION NE 1/4 32-19- DATE STATED 05062023 COMPLETED 05082023 GROUND ELEVATION 772.95m N. 5009643.200 DRILLING CONTRACTOR Eastern Imgation District </td> <td>PROJECT NUMBER ISB0-103-00 PROJECT LOCATION ME 1/4.32-19-16 DATE STARTED ISB02023 COMPLETED ISB02023 GROUND ELEVATION T72.35m N 500949.200 E DRILLING CONTRACTOR Eastern Imgation District EXECUTION T72.35m N 500949.200 E DRULING CONTRACTOR Eastern Imgation District EXECUTION T72.35m N 500949.200 E DOUGD Solid Executor Executor Executor Image: Contract of the PLASTIC - LOUID REMARKS DOUGD Solid Description Employing and trace proved in the PLASTIC - LOUID Image: Contract of the PLASTIC - LOUID Imag</td> <td>PROJECT NUMBER 1580-193-00 PROJECT LOCATION NE 14 32-19-16 DARE STARTED 0.0002023 COMPLETED 0.0002023 GROUND ELEVATION TZ.SSm N. 500948.200 E 415896 DRILING CONTRACTOR Eastern Impalen Diatid </td>	PROJECT NUMBER 150-193-00 PROJECT LOCATION DATE STARTED 0508/2023 COMPLETED 0508/2023 GROUND ELEVATION DRILING CONTRACTOR Eastern Irrigation District Excavator Excavator TOPSOIL, silty, clayey, some gravel, trace cobbles up to the statistic, dark brown, not hairs Image: statistic dark brown, some oxidation statining, trace gravel, dry, very stift, medium to high plastic, dark brown, some oxidation statining, trace gravel, dry, very stift, and the statistic dark brown to grey mottling, some completely weathered shale B1 AU1 Inclusions AU2 6.3 Image: statistic dark brown, some oxidation statining, trace gravel, dry, very stift, and the statining, trace gravel, dry, very stift, and the statistic dark brown to grey mottling, some completely weathered shale B1 Image: statistic dark brown, some oxidation statining, dark brown to grey mottling, some oxidation statining, trace gravel, dry, erg stift, completely weathered, shale B2 If 6.4 Image: statistic dark brown to grey mottling, some oxidation statining, dark brown to grey mottling. B2 If 6.4 Image: statistic dark brown to grey mottling. Notes: The program. Backfilled with bucket packed cutt	PROJECT NUMBER	PROJECT NUMBER 1500-193-00 PROJECT LOCATION	PROJECT NUMBER 150-133.00 PROJECT LOCATION N DATE STARTED 05082023 COMPLETED 05082023 GROUND ELEVATION 77.2 s/m N. 5 DRILING CONTRACTOR Eastern ingation District Escowator GROUND ELEVATION 77.2 s/m N. 5 EXCOMITION METHOD Excovator GROUND ELEVATION 90	PROJECT NUMBER 1590-193-00 PROJECT LOCATION NE 1/4 32-19- DATE STATED 05062023 COMPLETED 05082023 GROUND ELEVATION 772.95m N. 5009643.200 DRILLING CONTRACTOR Eastern Imgation District	PROJECT NUMBER ISB0-103-00 PROJECT LOCATION ME 1/4.32-19-16 DATE STARTED ISB02023 COMPLETED ISB02023 GROUND ELEVATION T72.35m N 500949.200 E DRILLING CONTRACTOR Eastern Imgation District EXECUTION T72.35m N 500949.200 E DRULING CONTRACTOR Eastern Imgation District EXECUTION T72.35m N 500949.200 E DOUGD Solid Executor Executor Executor Image: Contract of the PLASTIC - LOUID REMARKS DOUGD Solid Description Employing and trace proved in the PLASTIC - LOUID Image: Contract of the PLASTIC - LOUID Imag	PROJECT NUMBER 1580-193-00 PROJECT LOCATION NE 14 32-19-16 DARE STARTED 0.0002023 COMPLETED 0.0002023 GROUND ELEVATION TZ.SSm N. 500948.200 E 415896 DRILING CONTRACTOR Eastern Impalen Diatid

	MP		a division c	of Engle	obe	Э			TE	ST PIT No :		TP4 PAGE 1	
	CLIENT		Eastern Irrigation Di	-			JECT	NAME	S	nake Lake Reservoir			
	PROJECT NUMBER		1560-193-00			_ PRC	JECT	LOCATION		NE 1/4 32-19-	-16		
	DATE STARTED	05/10/2023		05/10/202	23	_ GRO	DUND	ELEVATION	768.10m	N 5612521.400	_ E _4	416626.3	300
	DRILLING CONTRACT	TOR	Eastern Irrigatior	n District									
	EXCAVATION METHO	D	Excavato	r		_							
Depth (m)	SOIL SYMBOL SOIL SIMBOL	Desc	soil ription		Sample Type	Sample Number	Moisture Content (%)	 MOISTURE ⊢ PLASTIC - SPT (N) Blo 10 20 100 200 POCKET PL 	LIQUID ws/300 mm <u>30 40</u> 300 400	REMARK	8	Standpipe/ Instrument	Elev
	moist, stiff, me 0.8m - becom staining, trace SHALE (Weath dark brown to weak to hard s	c, brown, som ty, some coars adium to high p ning some oxi gypsum crysta hered), clayey grey mottling, soil, blocky, so ning very mois	e root hairs se grained sand, tra blastic, dark brown dation staining, trad als , silty, completely w moist, high plastic, me white precipitat	ace gravel, ce coal reathered, extremely es		B1 B2 AU1							768– 767– 766– 765– 764–
	Notes: Test pit progra	m Backfilled	with bucket packed	cuttings									
	rest pit progra		ann buoket packed	ouunys.						Logged By:	C	. Tams	
										Reviewed By:		. Braun	
11/01/2024	4									- , -			

		MPO		a division of Eng	glol	ce					TE	EST P	IT No :	23	PAGE 1	
	CLIE	NT		Eastern Irrigation District		PR	OJECT	NAM	E		:	Snake Lak	e Reservoir	Expans	sion	
	PROJ	IECT NUMBER		1560-193-00		PR	OJECT	LOC	ATION			NE	E 1/4 32-19-	16		
	DATE	STARTED	05/10/2023	COMPLETED 05/10)/2023	GF	ROUND	ELEV	ATION	1	767.77m	n N 5	611501.400	_ E _	416869.	000
		LING CONTRACTO	R	Eastern Irrigation District Excavator												
Depth (m)	SOIL SYMBOL		Desc	Soil cription	Sample Type	Sample Number	Moisture Content (%)	H P ■ SI 10	PLASTI PT (N) <u>0 2</u> 00 20	RE CONTI C - LIQUID Blows/300 0 30 00 300 F PEN (kPa	mm <u>40</u> 400	_	REMARKS	6	Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		stiff, low plastic, CLAY TILL, silty, completely weatl medium to high p	brown, som some sand hered shale plastic, dark ypsum cryst	, some coarse gravel, some inclusions, moist, very stiff brown, some oxidation als, trace white precipitates	,	В1	10.3					Classific % Dispe 0.9 m - 0 0.9 m - 9	Dispersivity cation = D2 rrsion = % Gravel = 10 Sand = 48. Fines = 38.	3.8% 0%		
-2 - - - - - - - - - - - - - - - - - -		brown to grey mo	ottling, som emely weak	r, silty, highly weathered, da e oxidation staining, moist, t, thinly laminated, trace shole @3.1 m	rk	AU1	23.3			•		Classific	Dispersivity : <u>ation = D2</u> rrsion = %	/		765-
- 		Notes: Test pit program.	. Backfilled	with bucket packed cuttings	5.							Logged			<u>C. Tams</u> C. Braur	762-

		MP	E	a division of Eng	lol	ре				TE	ST PIT No :		P4 AGE 1	
	CLIEI	NT		Eastern Irrigation District		PR	OJECT	NAME		5	Snake Lake Reservoir E	Expansior	n	
	PRO	JECT NUMBER		1560-193-00		PR	OJECT		ı		NE 1/4 32-19-1	6		
	DATE	STARTED	05/08/2023	COMPLETED05/08/2	2023	GR	OUND	ELEVATION	N771	.26m	N 5609472.600	E41	16293.	000
	DRIL	LING CONTRAC	TOR	Eastern Irrigation District										
	EXCA	AVATION METHO	D	Excavator										
Depth (m)	SOIL		Desc	Soil sription	Sample Type	Sample Number	Moisture Content (%)	H PLASTI	Blows/300 mm 20 30 40 00 300 40	ı D	REMARKS		Standpipe/ Instrument	Elevation (m)
- - - - - - - - - - - - - - - - - - -		300 mm, dam CLAY TILL, sil medium to hig trace gypsum 0.6m - trace SHALE (Weat dark brown to	p, stiff, low pla ty, sandy, trac h plastic, brow crystals cobbles up to hered), clayey grey mottling, astic, extreme	, silty, completely weathered, some oxidation staining, y weak to hard soil, blocky,		AU1 B1 AU2	8.2 15.0 16.0	•		I 	0.6 m - Dispersivity Classification = ND % Dispersion = 209 0.6 m - LL = 40.8% PL = 11.5% PI = 29.3% 0.6 m - Sand = 5.6° Silt = 62.2% Clay = 32.2° 1 m - Dispersivity Classification = ND. % Dispersion = %	3 6 %		771
- - - - - - - - - - - - - - - - - - -		2.5m - becor weak	ning highly to	moderately weathered, very		AU3 AU4					% Dispersion = % 1 m - Sand = 0.6% Silt = 52.9% Clay = 46.5' 1.6 m - Dispersivity Classification = D2 % Dispersion = % 1.6 m - LL = 62.2% PL = 13.9% PI = 48.3%	%		769-
			End of Bore	shole @3.5 m		A04								767
11/01/20	24	Notes: Test pit progra	m. Backfilled	with bucket packed cuttings.							Logged By: Reviewed By:		<u>Tams</u> Braun	

		MPE	a division of Eng	lol	be			٦	TEST PIT No: 2	3TP4	
	CLIE	NT	Eastern Irrigation District		DD		NAME		Snake Lake Reservoir Expa	ancion	
		JECT NUMBER	1560-193-00						NE 1/4 32-19-16		
				2022						415994	100
				2023	GR	COND	ELEVATIO	JN <u>771.9</u>	4 <u>111</u> N <u>5003473.200</u> E		.100
			Eastern Irrigation District								
		AVATION METHOD	Excavator			- <u>-</u>	T				51
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	H PLAS ■ SPT (N 10 100	TURE CONTENT TIC - LIQUID V) Blows/300 mm 20 30 40 200 300 400 ET PEN (kPa)	REMARKS	Standpipe. Instrument	Elevation (m)
		300 mm, damp, stiff CLAY TILL, silty, sor stiff, medium plastic trace gypsum crysta 0.8m - becoming s 200 mm SHALE (Weathered dark brown to grey r damp, high plastic, o thinly laminated, trac 2.5m - becoming h weak	andy, gravelly, some cobbles up to), clayey, silty, completely weathered nottling, some oxidation staining, extremely weak to hard soil, blocky, ce gypsum crystals		B1 B2 B3 AU1	7.5 4.0	•		0.6 m - Dispersivity Classification = ND3 % Dispersion = % 0.6 m - Gravel = 16.8% 0.6 m - Sand = 49.7% Fines = 33.5% 0.9 m - Dispersivity Classification = ND1 % Dispersion = % 0.9 m - Dry Density = 1946 kg/m3 Optimum Moisture = 11.8% 2.1 m - Dispersivity Classification = D2 % Dispersion = % 2.7 m - Dispersivity Classification = D2 % Dispersion = 4% 2.7 m - Sand = 38.5% Silt = 27.9% Clay = 33.6%		771
	<u> </u>	Notes: Test pit program. Ba	ckfilled with bucket packed cuttings.						Logged By:	C. Tams	<u> </u>
11/01/202	4								Reviewed By:	C. Brau	n
11/01/202	-										

		MP		a division of	Engl	ok	be						TE	EST PIT No :	23		
	CLIEN	NT		Eastern Irrigation Distric	xt		PR	OJECT	NAN	1E			ę	Snake Lake Reservoir	Expar	ision	
	PROJ	IECT NUMBER		1560-193-00			PR	OJECT	LOC		۰ ا			NE 1/4 32-19-	.16		
	DATE	STARTED	05/08/2023	COMPLETED	05/08/20	23	GR	ROUND	ELE\	/ATIO	N	77	3.53m			415693.	.000
	DRILL	LING CONTRACT	OR	Eastern Irrigation Di	strict												
	EXCA	VATION METHO	 D	Excavator													
Depth (m)	SOIL SYMBOL	SHALE (Weath	Des	Soil cription y, silty, completely wea		Sample Type	Sample Number	Moisture Content (%)	H I ■ S	PLAST	IC - LIO Blows 20	/300 m 30 4		REMARKS	3	Standpipe/ Instrument	Elevation (m)
-		brown to dark g moist, high pla trace gypsum o SHALE (Weath brown to grey n high plastic, ex laminated, trac	grey mottling stic, extreme crystals nered),, claye mottling, som tremely wea e gypsum cr im continuou	, some oxidation stainin ly weak to hard soil, blo ey, silty, highly weathere le oxidation staining, m k to hard soil, blocky, th	ng, ocky, ed, dark ioist,		B1 AU1 B2	20.9						0.6 m - Dispersivit Classification = NI % Dispersion = % 0.6 m - Dry Densit 1558 kg/m3 Optimum Moisture 23.4% 0.6 m - LL = 65.6% PL = 14.9% PI = 50.7% 2.6 m - Dispersivit Classification = NI % Dispersion = %	y = = 6 6 6 6 6 7 9 03		773- 772- 7771- 770- 769- 768-
	1	Notes:						1	<u> </u>					I			
		Test pit progra	m. Backfilled	with bucket packed cu	ttings.									Logged By:		C. Tams	
11/01/2024	4													Reviewed By:		C. Braur	1

		MPE	a division of Eng	lok	ре				TE	EST PIT No: 2	3TP4	
			Eastern Irrigation District 1560-193-00		PR PR	OJECT				Snake Lake Reservoir Exp NE 1/4 32-19-16		
	DRILL	STARTED05/0	8/2023 COMPLETED 05/08/2 Eastern Irrigation District Excavator	023	GR	OUND	ELEVATIO	ON	775.30m	<u>Ν 5609463.900</u> Ε		
Depth (m)	SOIL SYMBOL		Soil Description	Sample Type	Sample Number	Moisture Content (%)	H PLAS ■ SPT (N 10 100	TURE CONTI TIC - LIQUID N) Blows/300 20 30 200 300 ET PEN (kPa	mm 40 400	REMARKS	Standpipe/ Instrument	Elevation (m)
		300 mm, damp, stiff, SHALE (Weathered brown to dark grey r moist, high plastic, e trace gypsum crysta BENTONITE 100 mi SHALE, clayey, silty grey mottling, some plastic, extremely we laminated, trace gyp 1.4m - concretions	n SEAM , highly weathered, dark brown to oxidation staining, very moist, high eak to hard soil, blocky, thinly		B1 AU1 B2 AU2	24.1 65.3 37.4		<u>●</u>		0.9 m - Dispersivity Classification = ND3 % Dispersion = % 0.9 m - Dry Density = 1628 kg/m3 Optimum Moisture = 19.9% 1.2 m - Dispersivity Classification = D2 % Dispersion = 40% 1.2 m - LL = 121.8% PL = 47.6% PI = 74.2% 1.2 m - Gravel = 2.1% 1.2 m - Gravel = 2.1% Clay = 24.7% 2.6 m - Dispersivity Classification = D2 % Dispersion = %		7775 7774 7774 7774 7773 7773 7773 7773
11/01/2020	4	Notes: Test pit program. Ba	ckfilled with bucket packed cuttings.					<u> i i </u>	:	Logged By:	C. Tams C. Braur	

0 0			MP		a division of Eng	lol	ре					TES	ST PIT No	: 23	BTP4	
DATE STARTED 0.508/2022 COMPLETED 0.508/2023 GROUND ELEVATION T78.86m, N. 5609459.200, g. 415194.200 DRILING CONTRACTOR Extern Impaint Datict EXCAUNTION METHOD Excaustor Image: Starter Impaint Datict EXCAUNTION METHOD Excaustor Image: Starter Impaint Datict Excaustor Image: Starter Impaint Datict Datict Datict Excaustor Image: Starter Impaint Datict Dat		CLIEN	NT		Eastern Irrigation District		PR	OJECT	NAME			Sna	ake Lake Reservo	ir Expan	sion	
DRLING CONTRACTOR Eastern inguition District EXCAUNTION METHOD Exavator		PROJ	JECT NUMBER		1560-193-00		PR	OJECT	LOCA	TION			NE 1/4 32-19	∂-16		
EXCAVATION METHOD Exemator		DATE	STARTED	05/08/2023	COMPLETED05/08/	2023	GF	ROUND	ELEVA	TION	778.	69m	N 5609458.20	<u>0</u> E _	415194.	200
Image: Second		DRILI	LING CONTRACT	OR	Eastern Irrigation District											
C 9 Description 9 9 FT (N) Boxe320 mm 9 9 FT (N) Boxe320 mm 10 10 20 10 20 10 20 10 20 10 20 10 20 10 20 20 10 20 20 10 20 20 10 20 20 10 20 20 10 20 20 10 20 20 10 20 20 10 20 20 10 20 10 20 10 20 10 20 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 20 10 20 10 10 20 10 10 20 10 20 10 20 10 20 10 10 20 10 10 10 10 10 10		EXCA	VATION METHO	D	Excavator											
20 300 mm, damp, stiff, low plastic, brown, root hairs 1 0.8 m - Dispersivity 1 0.9 m - becoming some completely weathered shale 0.9 m - becoming some completely weathered shale 81 1 0.9 m - becoming some completely weathered shale 1 0.9 m - becoming some completely weathered shale 1 0.9 m - becoming some completely weathered shale 1 0.9 m - becoming some completely weathered, dark brown to 1 1.6 m - Dispersivity 2 SHALE, clayey, silty, highly weathered, dark brown to 1 1.6 m - Li = 40.9 % 2 Stratemely weak to hard soil, blocky, thinly 1 1.6 m - Li = 40.9 % 2 Stratemely weak to hard soil, blocky, thinly 1 1.6 m - Spersivity 2.6 m - trace bentonite inclusions 2.5 m - Li = 59.5 % 3 1.6 m - Borehole @3.5 m 3 1.6 m - Borehole @3.5 m 4 1.6 m - Borehole @3.5 m 5 End of Borehole @3.5 m 5 End of Borehole @3.5 m 6 Dispersion = % 2.5 m - Li = 59.5 % PI = 40.8 % 77 77 <td>Depth (m)</td> <td>SOIL</td> <td></td> <td>Des</td> <td>cription</td> <td></td> <td>Sample Number</td> <td></td> <td>H PL ■ SP⁻ 10</td> <td>ASTIC - T (N) Blo 20 0 200</td> <td>LIQUID bws/300 mm <u>30 40</u> 300 400</td> <td></td> <td>REMARK</td> <td>(S</td> <td>Standpipe/ Instrument</td> <td>Elevation (m)</td>	Depth (m)	SOIL		Des	cription		Sample Number		H PL ■ SP ⁻ 10	ASTIC - T (N) Blo 20 0 200	LIQUID bws/300 mm <u>30 40</u> 300 400		REMARK	(S	Standpipe/ Instrument	Elevation (m)
2 Classification = ND3 2 SHALE, clayey, silty, highly weathered, dark brown to grey mottling, some oxidation staining, damp, high plastic, extremely weak to hard soil, blocky, thinly aminated, trace gypsum crystals 1.6 m - LL = 40.8% Pl = 24.4% 2.5 m - Dispersion = % 1.6 m - LL = 40.8% Pl = 16.4% 2.5 m - Dispersivity Classification = ND3 2.5 m - Dispersivity Classification = ND3 77 3 End of Borehole @3.5 m B2 10.2 PL = 18.7% Pl = 14.0% 3 End of Borehole @3.5 m Fl = 40.8% Pl = 40.8% Pl = 40.8% Pl = 40.8% 4 End of Borehole @3.5 m Fl = 40.8% Pl = 18.7% Pl = 14.7% Pl = 14.0% 5 End of Borehole @3.5 m Fl = 40.8% Fl = 40.	- - - - - - - - - - - - - - - -		300 mm, damp CLAY TILL, sill cobbles up to 2 brown, some o 0.9m - becon	o, stiff, low pla y, sandy, son 250 mm, dam xidation stair	astic, brown, root hairs ne gravel, trace rounded p, very stiff, medium plastic, ing, trace gypsum crystals		B1	9.4	•			C	lassification = N	ID3		778-
-4 -4 -4 -77 -4 -4 -4 -77 -5 -5 -77 -5 -5 -77 -5 -77 -77 -6 -77 -77 -77			grey mottling, s plastic, extrem laminated, trac	some oxidation ely weak to h e gypsum cr	on staining, damp, high ard soil, blocky, thinly /stals				•	F		C % 1. 2. C %	lassification = N b Dispersion = $\%$ 6 m - LL = 40.8 PL = 16.4 PI = 24.4 5 m - Dispersivi lassification = N b Dispersion = $\%$ 5 m - LL = 59.5 PL = 18.7	ID3 6 % % % !% ID3 6 % %		777
Test pit program. Backfilled with bucket packed cuttings. Logged By: C. Tams Reviewed By: C. Braun			Notes:	End of Bor	ehole @3.5 m											775- 774- 7773-
Logged By: <u>C. Tams</u> Reviewed By: C. Braun				m. Backfilled	with bucket packed cuttings											
	11/04/000	4														

		MPO		a division d	of Eng l	lok	be						ΤE	ST PIT No :		P4 AGE 1	
	CLIEI	NT		Eastern Irrigation Di	strict		PR	OJECT	NAM	E			S	Snake Lake Reservoir Ex	mansior	n	
		- IECT NUMBER		1560-193-00				OJECT			-			NE 1/4 32-19-16		<u> </u>	
		-	05/08/2023	COMPLETED	05/08/2	023		OUND			-	77/	4.95m			15091.3	300
		LING CONTRACTO		Eastern Irrigatio		020		COND		/ 1101	•		1.00111				
				Excavato													
Depth (m)	SOIL SYMBOL	SHALE (Weathe	Deso red), clayey	Soil cription v, silty, completely v some oxidation sta	veathered,	Sample Type	Sample Number	Moisture Content (%)	⊢ F ■ S 1	PLASTI PT (N)	C - LIC Blows/ 20 3	300 mr 3 <u>0 4</u> 00 40		REMARKS		Standpipe/ Instrument	Elevation (m)
		moist, high plast trace gypsum cr 0.6m - becomir SHALE, clayey, s grey mottling, so plastic, extremel laminated, trace 1.2m - 100 mm 1.9m - becomir	ic, extremel ystals ng very moi silty, highly me oxidatic y weak to h gypsum cry n continuous	y weak to hard soil st weathered, dark br on staining, very mo ard soil, blocky, thin	, blocky, own to bist, high hly		B1 AU1 B2	21.6		•				0.9 m - Dispersivity Classification = ND3 % Dispersion = 13% 0.9 m - Dry Density = 1625 kg/m3 Optimum Moisture = 21.4% 0.9 m - Gravel = 0.2' 0.9 m - Sand = 44.1' Silt = 32.4% Clay = 23.3% 1.1 m - Dispersivity Classification = ND4 % Dispersion = % 2 m - Dispersivity Classification = ND4 % Dispersion = %	= % %		774– 7773– 7772– 7771– 7770–
11/01/2024	4	Notes: Test pit program	. Backfilled	with bucket packed	l cuttings.									Logged By: Reviewed By:		Tams Braun	

		MP	E	a division o	of Eng	lok	ре					TI	EST PIT No :		P4 GE 1	
	CLIEI			Eastern Irrigation D	-			OJECT		1F			Snake Lake Reservoir E	xpansion		
		JECT NUMBER		1560-193-00				OJECT					NE 1/4 32-19-16			
		E STARTED	05/08/2023	COMPLETED	05/08/2	023						775.97r			001.5	
		LING CONTRACT		Eastern Irrigatio		020					· _	115.511		L		
		AVATION METHO	D	Excavato	זו	1		-	1				1		t /	
Depth (m)	SOIL SYMBOL		Des	Soil cription		Sample Type	Sample Number	Moisture Content (%)	H I ∎ s	PLASTI SPT (N)	JRE CON IC - LIQU Blows/30 20 30 00 300 T PEN (kl	D 0 mm	REMARKS	o title of the second se	standpipe/ Instrument	Elevation (m)
		300 mm, damp CLAY TILL, sill shale, moist, fi some oxidatior 0.8m - fine gu SHALE (Weatt brown to dark moist, high pla trace gypsum of SHALE, clayey grey mottling, si plastic, extrem laminated, trac	b, stiff, low pla ty, some sand rm, medium h n staining, tra rained sand a nered), claye grey mottling stic, extreme <u>crystals</u> , silty, highly some oxidation ely weak to h be gypsum cri AGE	e gravel, trace cob astic, brown, root ha d, some completely to high plastic, dark ice white precipitate and gravel seam y, silty, completely v , some oxidation sta ly weak to hard soil weathered, dark br on staining, very mo hard soil, blocky, thin ystals s bentonite seam rehole @3.0 m	airs weathered brown, ss veathered, aining, , blocky, own to bist, high		B1 B2 AU1 B3	9.3 11.4 47.4		•			0.8 m - Dispersivity Classification = ND4 % Dispersion = % 1.8 m - Dispersivity Classification = ND3 % Dispersion = % 2.8 m - LL = 101.2% PL = 37.2% PI = 64.0%	5		775-
		Notes														
		Notes: Test pit progra	m. Backfilled	with bucket packed	l cuttings.								Logged By:	С. Т		
11/01/202	4												Reviewed By:	С. В	raun	

		MP		a division of Eng	lo	be					Т	EST F	PIT No :		P4 AGE 1	
	CLIEI	NT		Eastern Irrigation District		PR	OJECT	NAN	1E	_		Snake La	ake Reservoir E	Expansio	n	
	PROJ	JECT NUMBER		1560-193-00		PR	OJECT	LOC	ATION			1	NE 1/4 32-19-1	6		
	DATE	STARTED	05/10/2023	COMPLETED 05/10/	2023	GF	ROUND	ELE\	/ATIO	N _	771.72	2m N	5611825.500	E 4	16162.	600
	DRILI	LING CONTRACT	FOR	Eastern Irrigation District						-						
	EXCA	VATION METHO	D	Excavator												
(m) (m)	SOIL SYMBOL	TOPSOIL, silty stiff, low plastic GRAVEL, silty, 300 mm cobble rounded, damp CLAY TILL, silt completely we to 150 mm, mc oxidation stain SHALE (Weatt brown to grey	y, sandy, some c, brown, some es, well grade b, compact, br ty, some sand athered shale bist, stiff, medi ing, trace gyp mered), clayey mottling, mois soil, thinly lami	coil pription e clay, trace gravel, damp, e root hairs cobbles up to 150 mm, trace d, coarse grained, sub- own , some coarse gravel, some inclusions, trace cobbles up um plastic, dark brown, som	e	B1 B2 AU1	6.0 6.5 21.0	⊢ । ■ s	PLAST 6PT (N) 10 2	JRE CO IC - LIQI Blows/3 00 30 T PEN (UID 800 mm 0 40 10 400	0.5 m 1.6 m Classif % Disp 1.6 m 1.6 m 2.3 m Classif	REMARKS - Gravel = 48 - Sand = 33.1 Fines = 18.4 - Dispersivity fication = ND: Dersion = 269 - LL = 43.3% PL = 14.1% PI = 29.2% - Gravel = 29 - Sand = 37.6 Silt = 19.5% Clay = 13.6° - Dispersivity fication = ND: Dersion = %	.5% % 4% 3 6 - <u>3%</u> %	Standpipe/	7771- 7771- 7770- 769- 766-
11/01/2024	4	Notes: Test pit progra	m. Backfilled	with bucket packed cuttings.				<u> </u>			i	Logge	d By: ved By:		Tams Braun	