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BOREHOLE No : **22VWP-01**

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CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion		
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16		
DATE STARTED	09/13/2022	COMPLETED	09/13/2022	GROUND ELEVATION	766.01m N 5613369.444 E 416860.710
DRILLING CONTRACTOR	Val's Drilling	GROUND WATER ELEVATION / DEPTH			
DRILLING METHOD	6" SSA	DATE GROUND WATER RECORDED			

Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	REMARKS	Standpipe/ Instrument Elevation (m)
						● MOISTURE CONTENT ┤ PLASTIC - LIQUID ■ SPT (N) Blows/300 mm 10 20 30 40 ▲ POCKET PEN (kPa)		
1		CLAY TILL, silty, trace sand, trace fine gravel, damp, stiff, medium plastic, brown, trace root hairs	■	AU1	11.0	●	0.6 m - LL = 44.8% PL = 14.7% PI = 30.1%	765
		...1 m - becoming hard, dark brown, suspect white sulphate inclusions	■	AU2	16.4	●		
2		SHALE (Weathered), clayey, silty, completely weathered, brown to dark grey mottling, some oxidation staining, damp, high plastic, extremely weak to hard soil, blocky, suspect white sulphate inclusions	■	AU3	17.9	●	2.1 m - LL = 58.9% PL = 15.0% PI = 43.9%	764
		...3 m - becoming dry	■	AU4	18.8	●	2.1 m - Sand = 1.0% Silt = 55.1% Clay = 43.9%	763
4			■	AU5	17.5	●	3.7 m - LL = 60.4% PL = 14.5% PI = 45.9%	762
		...4.6 m - becoming darker grey, ground up	■	AU6	17.9	●		
6			■	AU7	18.0	●	5.2 m - LL = 60.7% PL = 16.7% PI = 44.0%	761
			■	AU8	17.1	●		760
7		SHALE, clayey, silty, highly weathered, grey, dry, high plastic, extremely weak, thinly laminated, unoxidized	■	AU9	18.6	●		759
			■	AU10	17.5	●	7.3 m - Sand = 3.3% Silt = 52.8% Clay = 43.9%	758
8		End of Borehole @7.6 m						757

Notes:

VWP install. 1: 143470, 2: 143453. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis

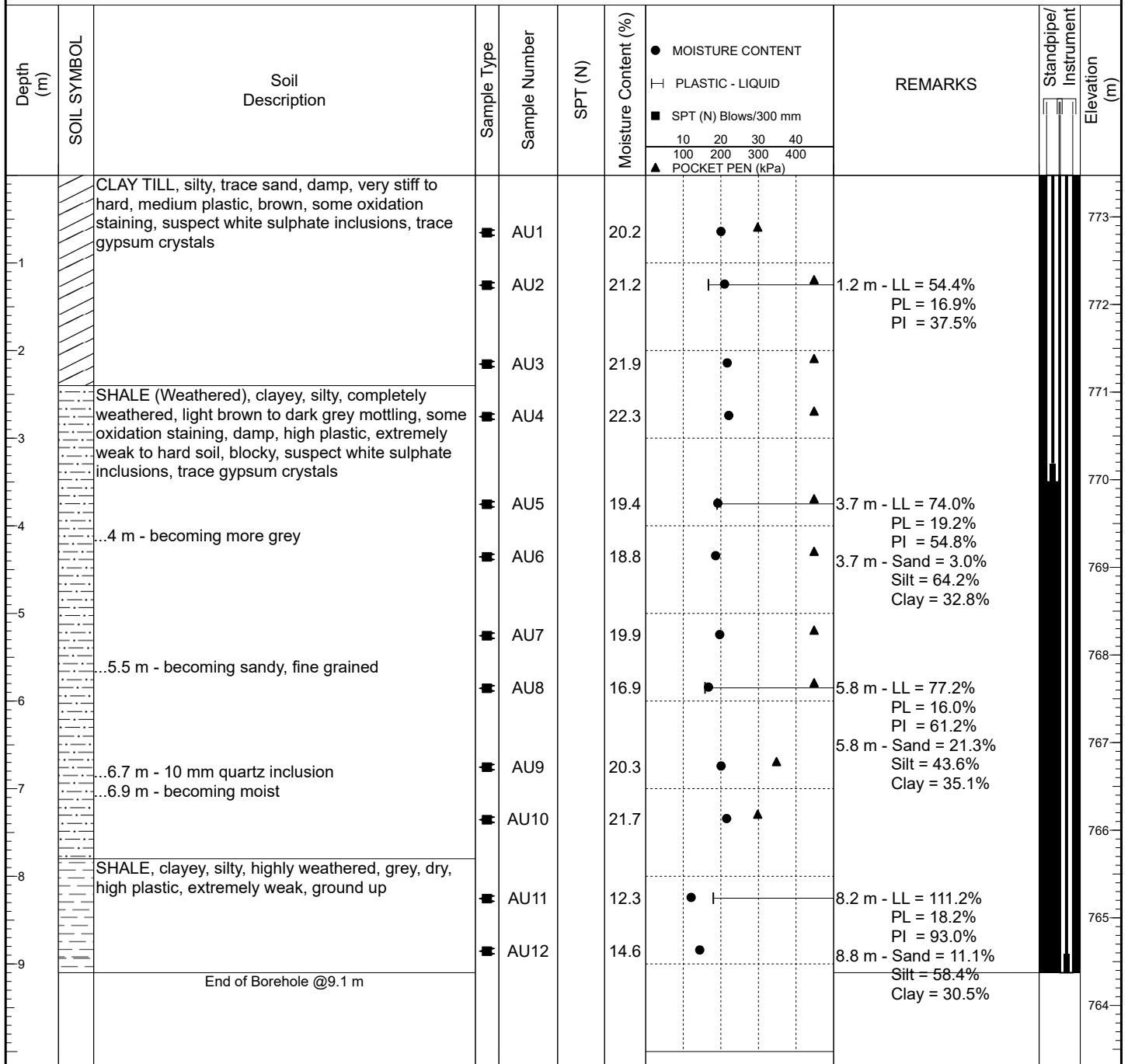


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BOREHOLE No : **22VWP-02**

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CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion		
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16		
DATE STARTED	09/13/2022	COMPLETED	09/13/2022	GROUND ELEVATION	773.47m N 5612617.004 E 415348.642
DRILLING CONTRACTOR	Val's Drilling	GROUND WATER ELEVATION / DEPTH			
DRILLING METHOD	6" SSA	DATE GROUND WATER RECORDED			



Notes:

VWP install. 1: 138672, 2: 131529. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis

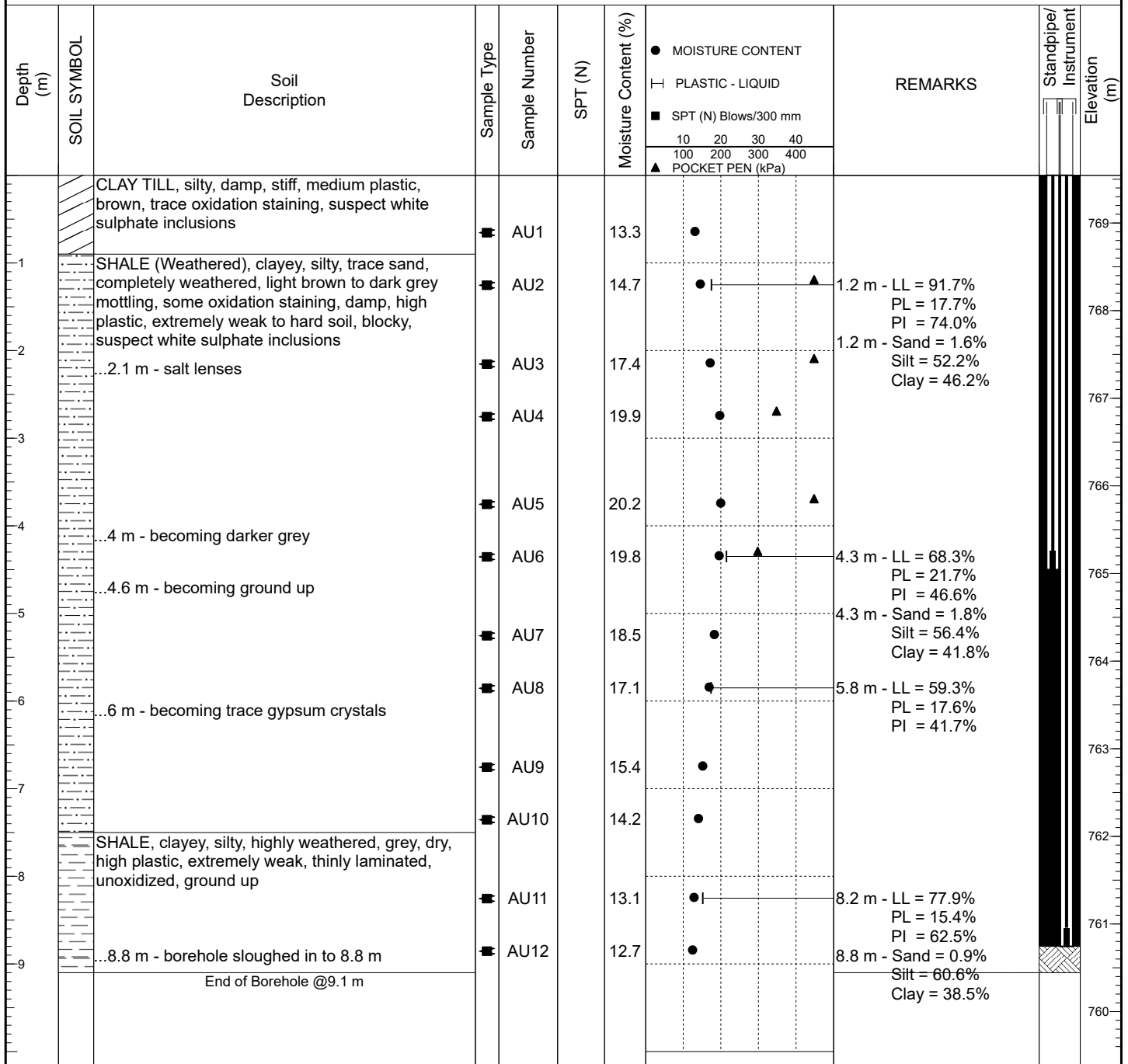


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BOREHOLE No : **22VWP-03**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion	
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16	
DATE STARTED	09/13/2022	COMPLETED	09/13/2022	
DRILLING CONTRACTOR	Val's Drilling	GROUND ELEVATION	769.54m	N 5612606.201 E 416335.085
DRILLING METHOD	6" SSA	GROUND WATER ELEVATION / DEPTH		
		DATE GROUND WATER RECORDED		



Notes:

VWP install. 1: 138664, 2: 140200. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis

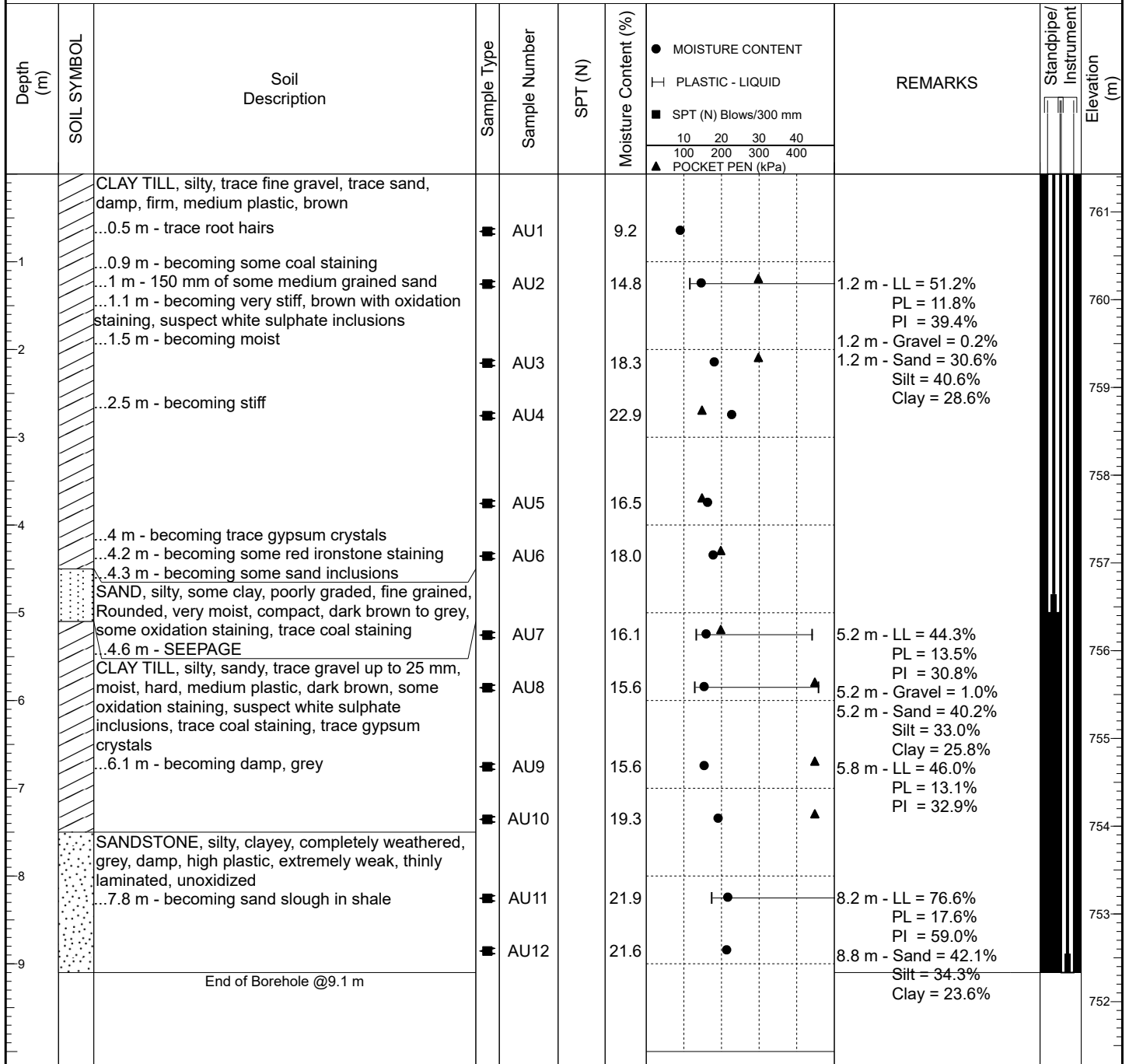


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BOREHOLE No : **22VWP-04**

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CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion		
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16		
DATE STARTED	09/14/2022	COMPLETED	09/14/2022	GROUND ELEVATION	761.43m N 5612580.555 E 418634.151
DRILLING CONTRACTOR	Val's Drilling	GROUND WATER ELEVATION / DEPTH			
DRILLING METHOD	6" SSA	DATE GROUND WATER RECORDED			



Notes:

VWP install. 1: 143496, 2: 143469. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis

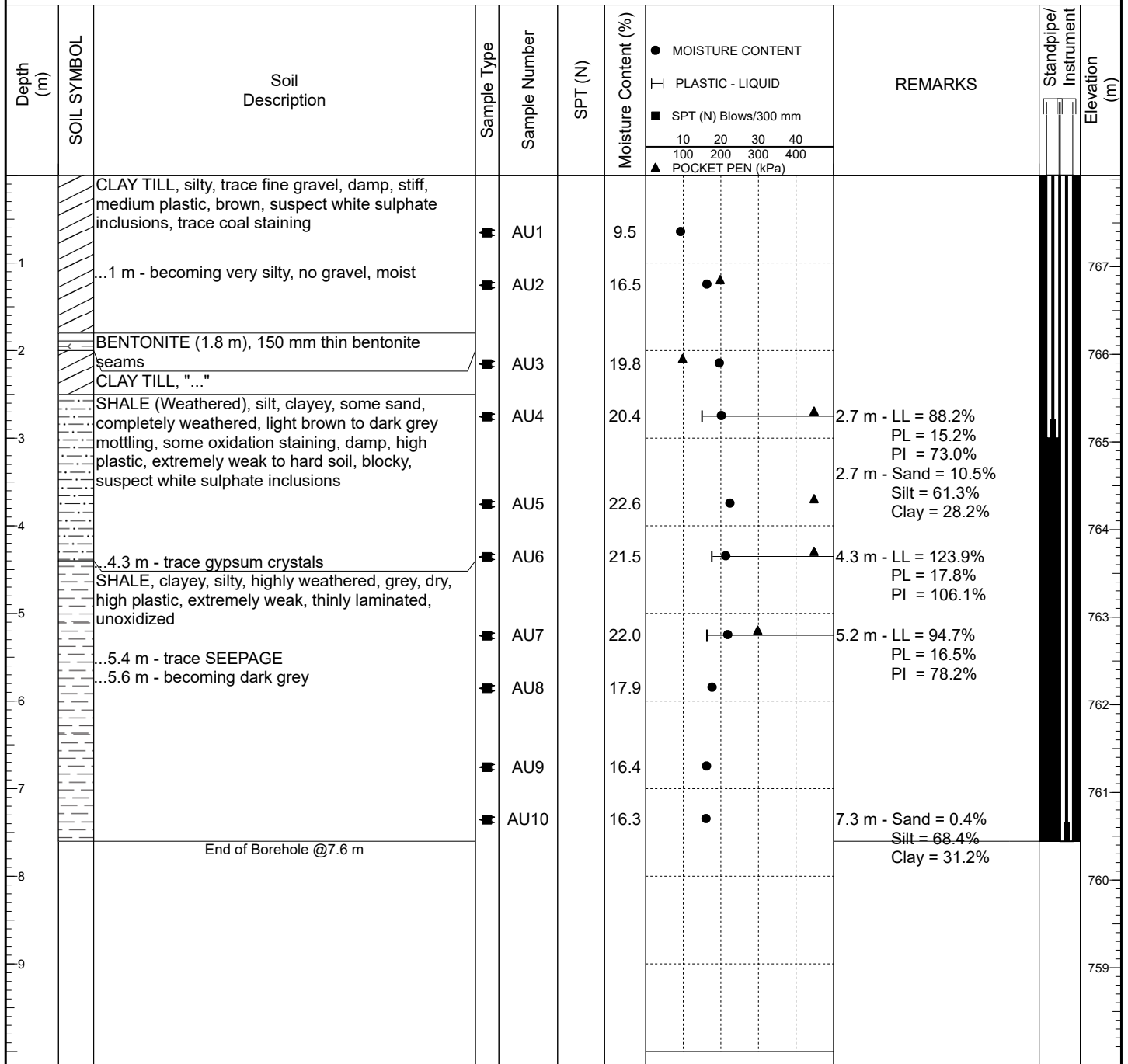


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BOREHOLE No : **22VWP-05**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion		
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16		
DATE STARTED	09/13/2022	COMPLETED	09/13/2022	GROUND ELEVATION	768.04m N 5611825.380 E 414849.962
DRILLING CONTRACTOR	Val's Drilling	GROUND WATER ELEVATION / DEPTH			
DRILLING METHOD	6" SSA	DATE GROUND WATER RECORDED			



Notes:

VWP install. 1: 143531, 2: 143385

Logged By: C. Tams

Reviewed By: T. Curtis

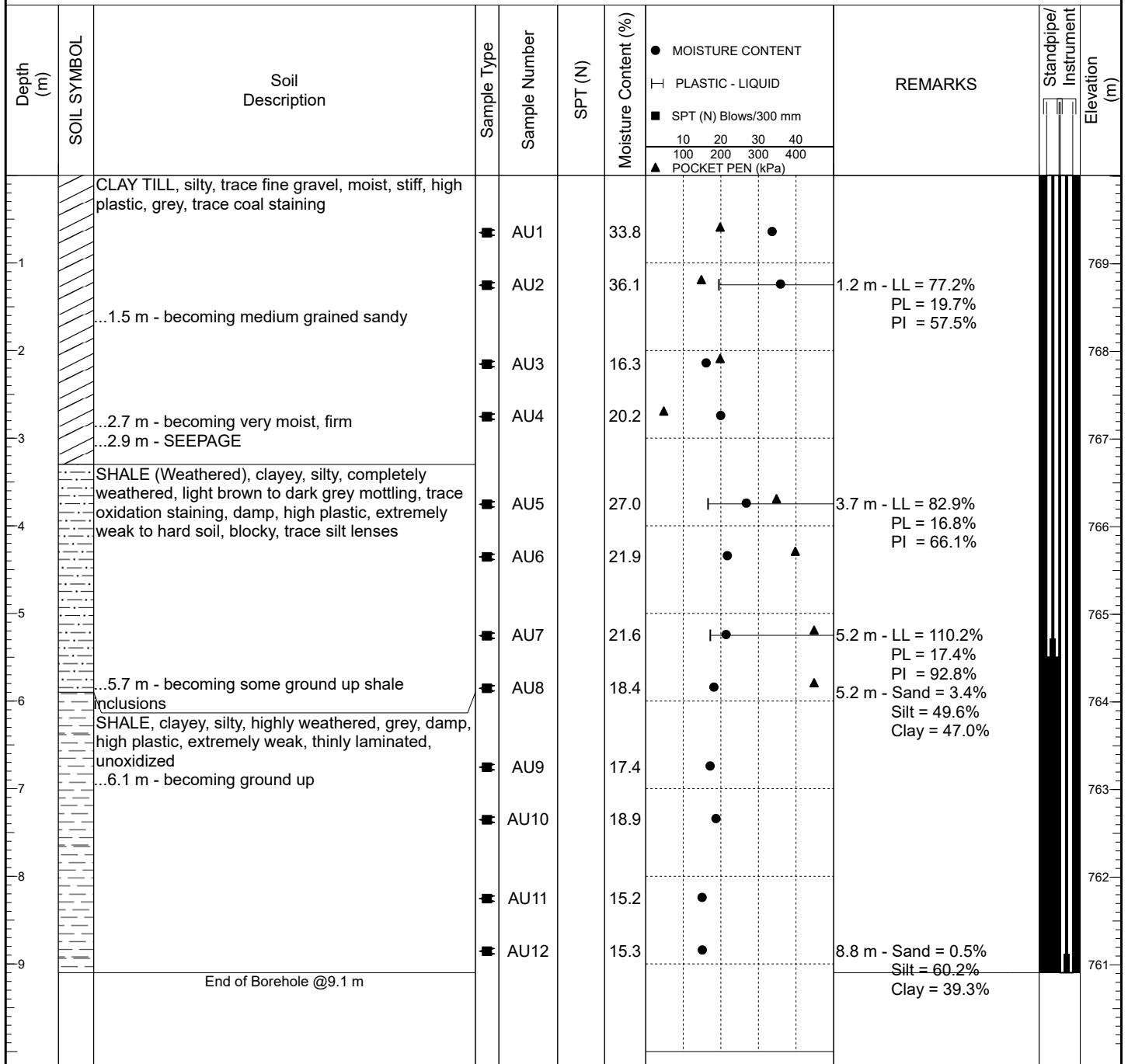


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BOREHOLE No : **22VWP-06**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion	
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16	
DATE STARTED	09/13/2022	COMPLETED	09/13/2022	
DRILLING CONTRACTOR	Val's Drilling	GROUND ELEVATION	770.01m	N 5611031.960 E 415591.725
DRILLING METHOD	6" SSA	GROUND WATER ELEVATION / DEPTH		
		DATE GROUND WATER RECORDED		



Notes:

VWP install. 1: 143535, 2: 143547. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis



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BOREHOLE No : **22VWP-07**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion		
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16		
DATE STARTED	09/12/2022	COMPLETED	09/12/2022	GROUND ELEVATION	767.85m N 5611505.339 E 416950.101
DRILLING CONTRACTOR	Val's Drilling	GROUND WATER ELEVATION / DEPTH			
DRILLING METHOD	6" SSA	DATE GROUND WATER RECORDED			

Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	REMARKS	Standpipe/Instrument	Elevation (m)
						● MOISTURE CONTENT ┤ PLASTIC - LIQUID ■ SPT (N) Blows/300 mm 10 20 30 40 100 200 300 400 ▲ POCKET PEN (kPa)			
1		CLAY TILL, silty, gravelly up to 45 mm, dry, stiff, medium plastic, brown, suspect white sulphate inclusions	■	AU1	4.7	●			767
1		...1 m - becoming some gravel	■	AU2	6.8	●	1.2 m - LL = 39.9% PL = 14.0% PI = 25.9%		766
2		...1.5 m - 150 mm of medium grained sand inclusions	■	AU3	24.7	●	2.1 m - LL = 89.9% PL = 15.0% PI = 74.9%		765
2		...1.6 m - becoming some completely weathered mudstone inclusions	■	AU4	23.4	●	2.7 m - LL = 83.8% PL = 17.7% PI = 66.1%		764
3		SHALE (Weathered), clayey, silty, completely weathered, brown to dark grey mottling, some oxidation staining, damp, high plastic, extremely weak to hard soil, blocky	■	AU5	17.8	●	2.7 m - Sand = 1.6% Silt = 57.6% Clay = 40.8%		763
3		2.8 m - becoming grey	■	AU6	18.1	●	3.7 m - LL = 83.9% PL = 18.7% PI = 65.2%		762
4		SHALE, clayey, silty, highly weathered, grey, damp, high plastic, extremely weak, thinly laminated, unoxidized	■	AU7	18.0	●			761
4			■	AU8	17.6	●	5.8 m - Sand = 0.3% Silt = 62.5% Clay = 37.2%		760
6		End of Borehole @6.1 m							759
7									758
8									
9									

Notes:

VWP install. 1: 140199, 2: 140191. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis

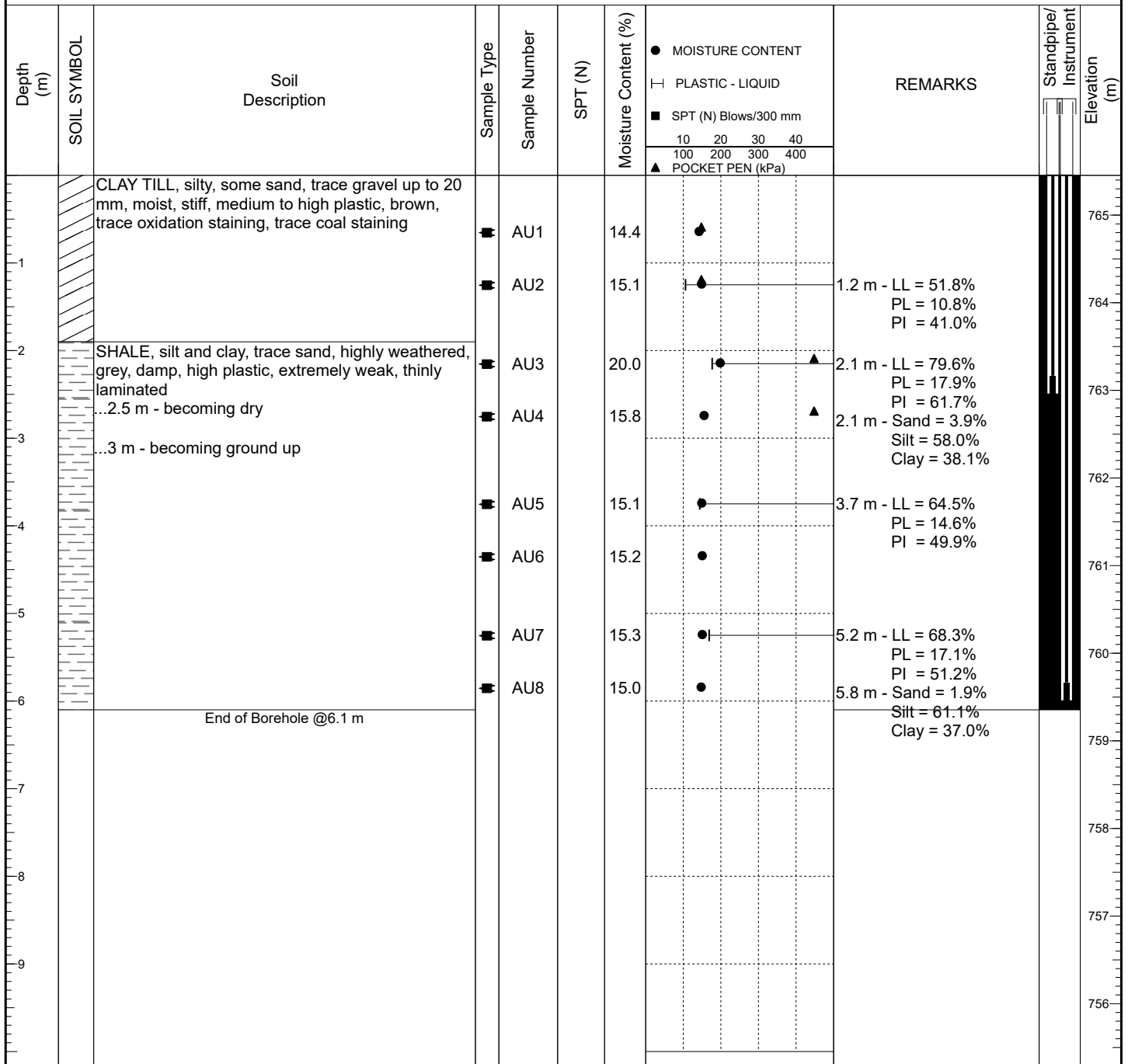


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BOREHOLE No : **22VWP-08**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion		
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16		
DATE STARTED	09/12/2022	COMPLETED	09/12/2022	GROUND ELEVATION	765.45m N 5610405.761 E 416925.489
DRILLING CONTRACTOR	Val's Drilling	GROUND WATER ELEVATION / DEPTH			
DRILLING METHOD	6" SSA	DATE GROUND WATER RECORDED			



Notes:

VWP install. 1: 140186, 2: 138652. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis

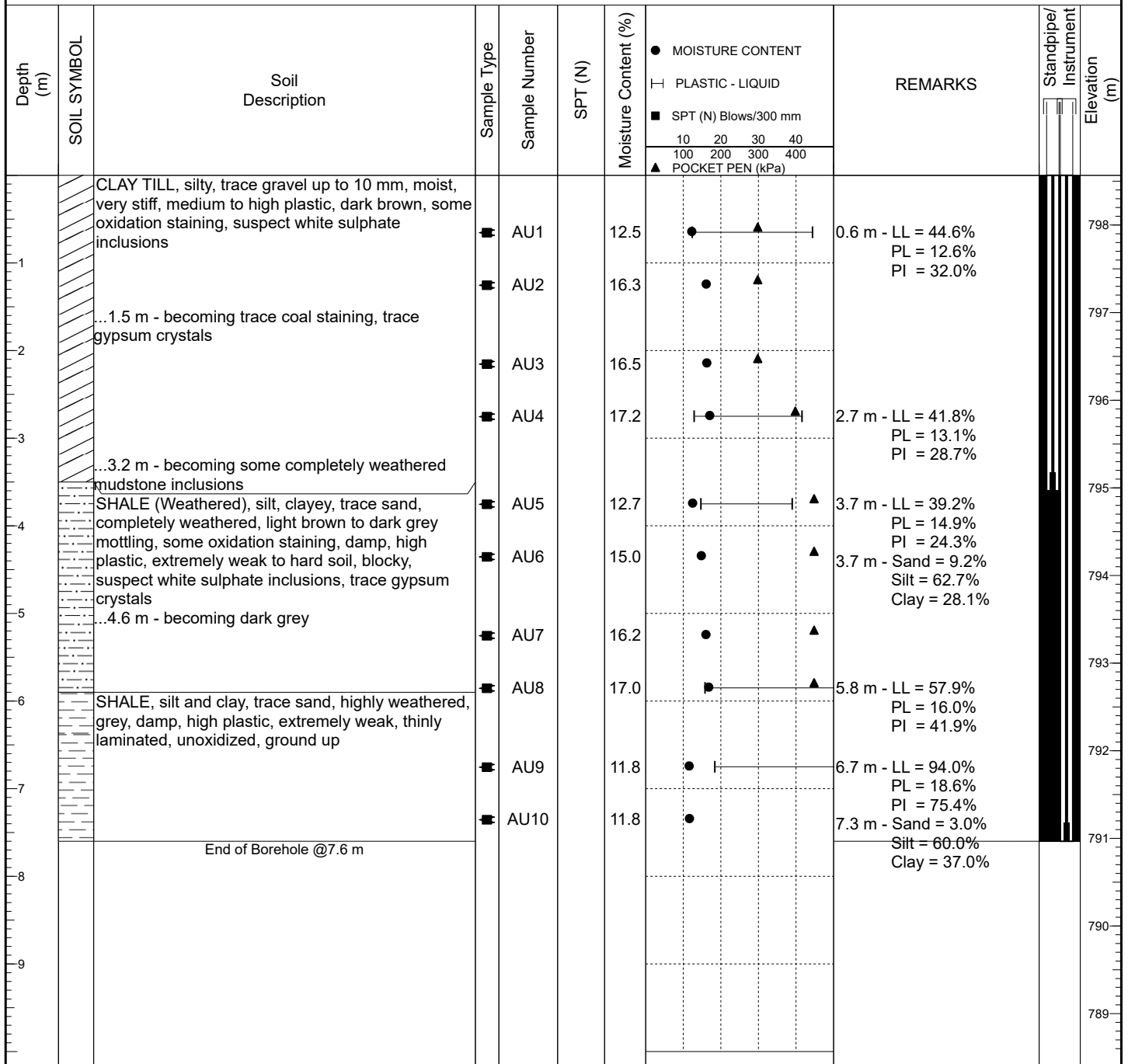


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BOREHOLE No : **22VWP-09**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion		
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16		
DATE STARTED	09/14/2022	COMPLETED	09/14/2022	GROUND ELEVATION	798.57m N 5609453.115 E 412582.263
DRILLING CONTRACTOR	Val's Drilling	GROUND WATER ELEVATION / DEPTH			
DRILLING METHOD	6" SSA	DATE GROUND WATER RECORDED			



Notes:

VWP install. 1: 143509, 2: 143577. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis



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BOREHOLE No : **22VWP-10**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion		
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16		
DATE STARTED	09/14/2022	COMPLETED	09/14/2022	GROUND ELEVATION	787.72m N 5609400.606 E 414480.056
DRILLING CONTRACTOR	Val's Drilling	GROUND WATER ELEVATION / DEPTH			
DRILLING METHOD	6" SSA	DATE GROUND WATER RECORDED			

Depth (m)	SOIL SYMBOL	Soil Description	Sample Type	Sample Number	SPT (N)	Moisture Content (%)	REMARKS	Standpipe/ Instrument Elevation (m)
						● MOISTURE CONTENT — PLASTIC - LIQUID ■ SPT (N) Blows/300 mm 10 20 30 40 ▲ POCKET PEN (kPa)		
1		CLAY TILL, silty, trace fine gravel, dry, very stiff, medium plastic, brown, some oxidation staining, suspect white sulphate inclusions, trace coal staining	■	AU1	8.2	●		787
		...0.1 m - ground up for first 1 m						
		...1 m - becoming damp, hard	■	AU2	9.9	● — ▲	1.2 m - LL = 38.9% PL = 11.4% PI = 27.5%	786
2			■	AU3	13.5	● — ▲	2.1 m - LL = 39.1% PL = 12.3% PI = 26.8%	785
		...2.8 m - becoming some completely weathered mudstone inclusions	■	AU4	18.8	●		784
3		SHALE (Weathered), clay, silty, sandy, completely weathered, light brown to dark grey mottling, some oxidation staining, damp, medium plastic, extremely weak to hard soil, blocky, suspect white sulphate inclusions, trace gypsum crystals	■	AU5	14.5	● — ▲	3.7 m - LL = 45.8% PL = 13.4% PI = 32.4%	783
4			■	AU6	13.3	●	3.7 m - Sand = 31.4% Silt = 30.5% Clay = 38.1%	782
5			■	AU7	15.4	●		781
		...5.5 m - becoming some ground up ironstone inclusions	■	AU8	16.4	● — ▲	5.8 m - LL = 48.9% PL = 17.3% PI = 31.6%	780
6		SHALE, clayey, silty, highly weathered, grey, dry, high plastic, extremely weak, thinly laminated, trace gypsum crystals, unoxidized, ground up	■	AU9	14.6	●	6.7 m - Sand = 0.6% Silt = 56.4% Clay = 43.0%	779
7			■	AU10	13.7	●		778
8			■	AU11	13.5	●		
9		...8.4 m - borehole sloughed in to 8.4 m	■	AU12	14.4	●		
		End of Borehole @9.1 m						

Notes:

VWP install. 1: 143392, 2: 143562. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis

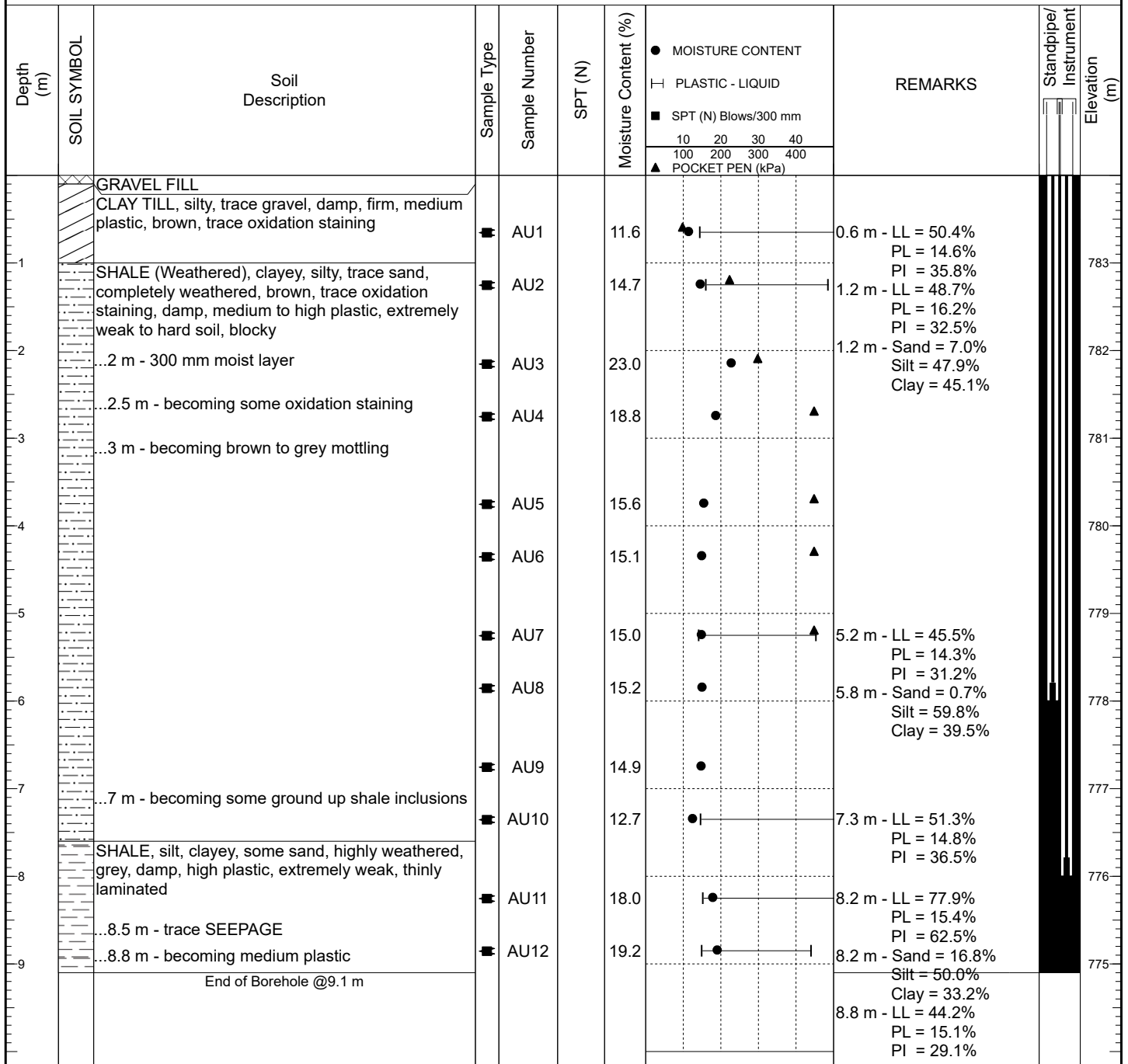


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BOREHOLE No : **22VWP-11**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion	
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16	
DATE STARTED	09/07/2022	COMPLETED	09/07/2022	
DRILLING CONTRACTOR	Val's Drilling	GROUND ELEVATION	784.00m	N 5609446.208 E 414719.197
DRILLING METHOD	6" SSA	GROUND WATER ELEVATION / DEPTH		
		DATE GROUND WATER RECORDED		



Notes:

VWP install. 1:134536, 2: 143533, Logger #14254

Logged By: C. Tams

Reviewed By: T. Curtis

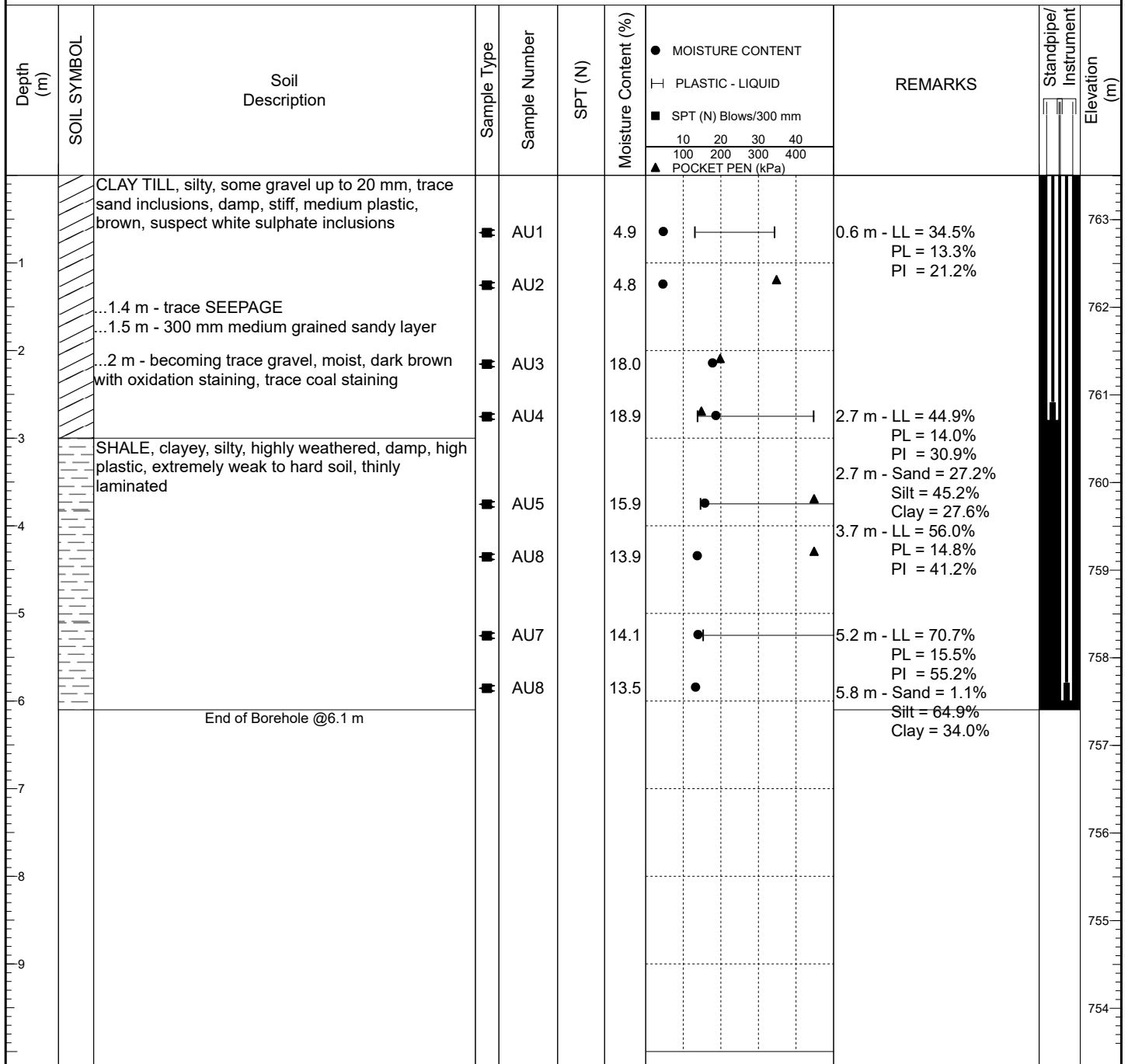


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BOREHOLE No : **22VWP-12**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion		
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16		
DATE STARTED	09/12/2022	COMPLETED	09/12/2022	GROUND ELEVATION	763.51m N 5609363.923 E 417764.521
DRILLING CONTRACTOR	Val's Drilling	GROUND WATER ELEVATION / DEPTH			
DRILLING METHOD	6" SSA	DATE GROUND WATER RECORDED			



Notes:

VWP install. 1: 143451, 2: 143483. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis

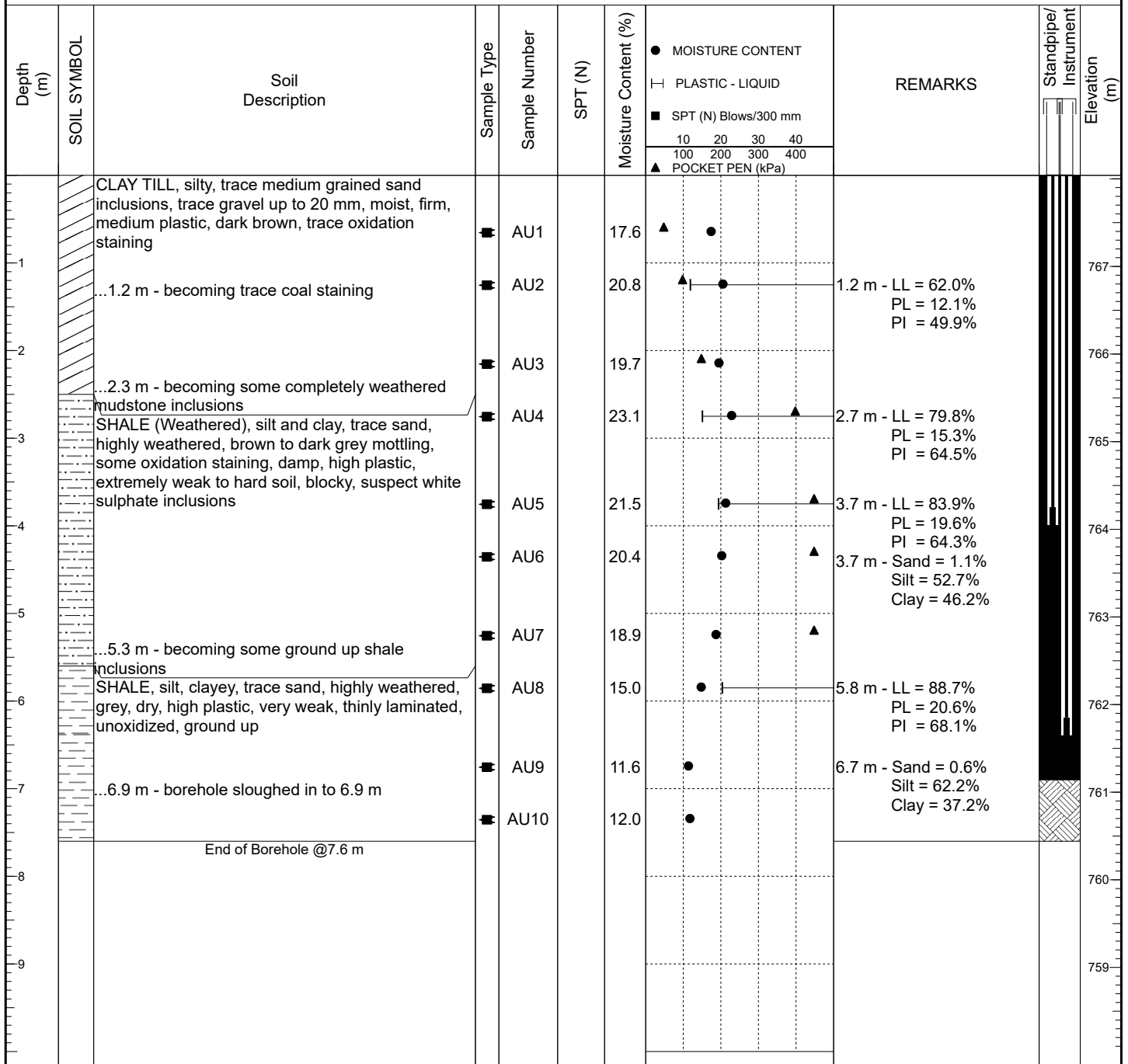


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BOREHOLE No : **22VWP-13**

PAGE 1 OF 1

CLIENT	Eastern Irrigation District	PROJECT NAME	Snake Lake Reservoir Expansion	
PROJECT NUMBER	1560-193-00	PROJECT LOCATION	NE 1/4 32-19-16	
DATE STARTED	09/09/2022	COMPLETED	09/09/2022	
DRILLING CONTRACTOR	Val's Drilling	GROUND ELEVATION	768.04m	N 5607753.598 E 416792.227
DRILLING METHOD	6" SSA	GROUND WATER ELEVATION / DEPTH		
		DATE GROUND WATER RECORDED		



Notes:

VWP install. 1: 143538, 2: 143498. Backfilled with cement grout.

Logged By: C. Tams

Reviewed By: T. Curtis

VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-01

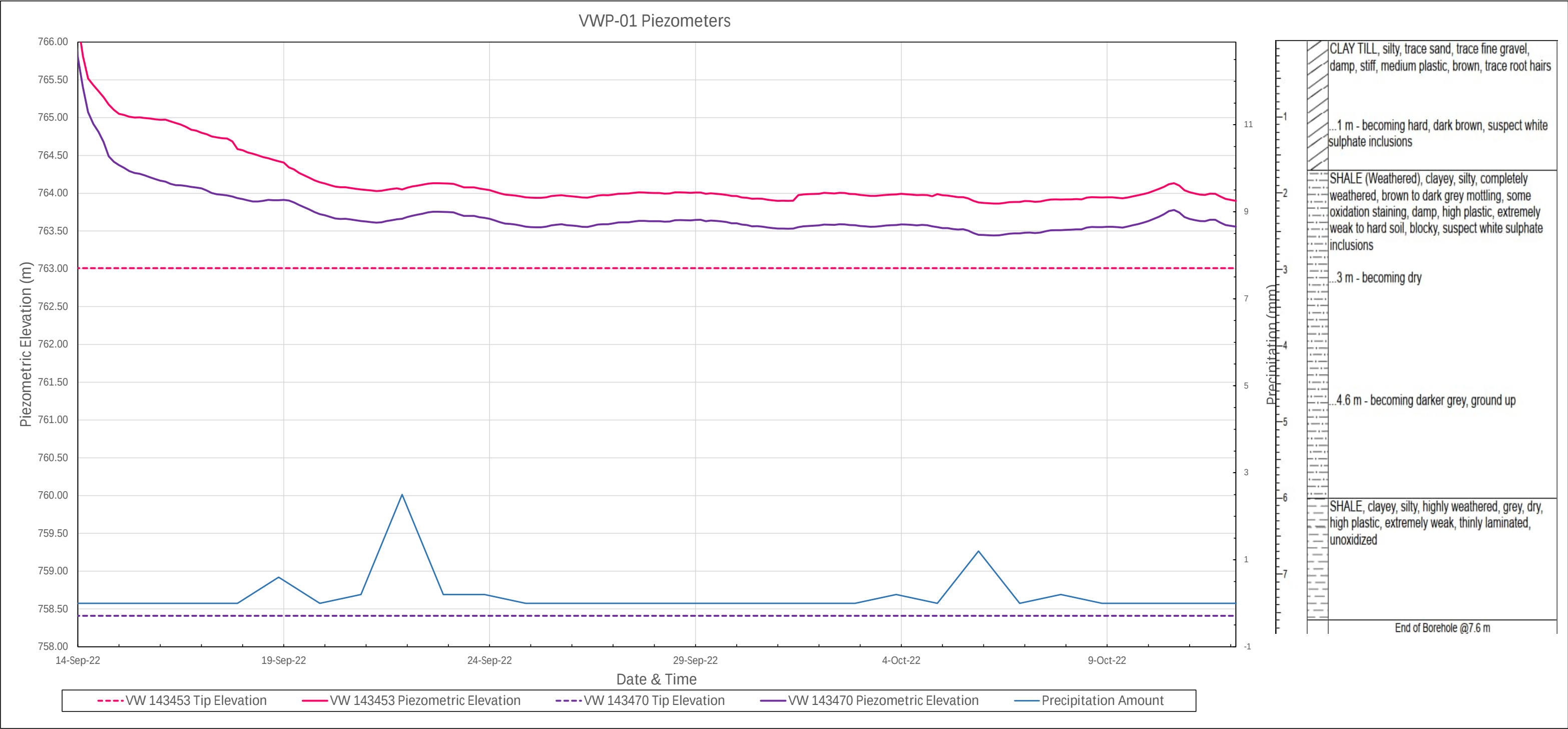
Client: EID

Ground Elevation: 766.01

Tip Elevation 143470: 758.41

Tip Elevation 143453: 763.01

Date of Last Reading: 12/Oct/22



VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-02

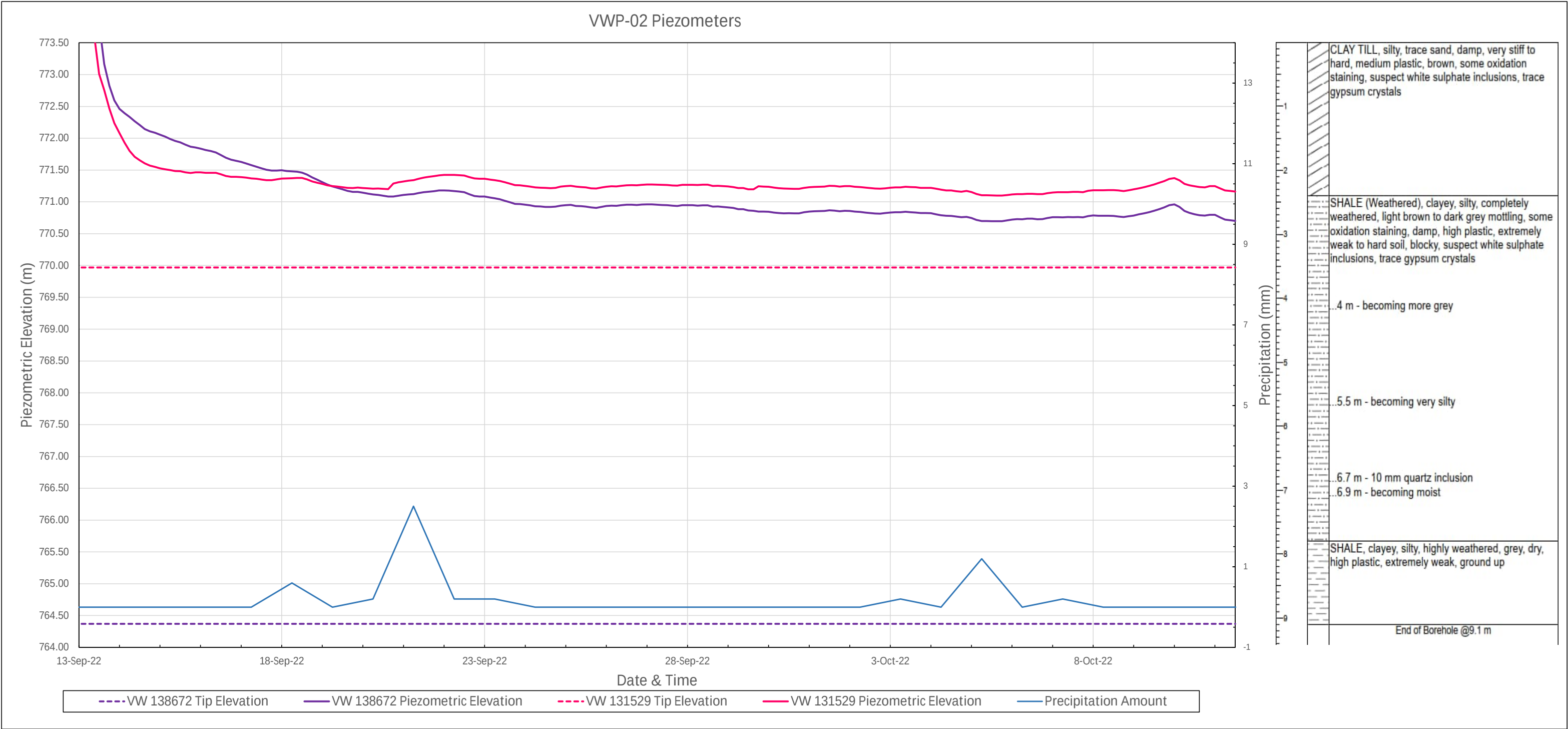
Client: EID

Ground Elevation: 773.47

Tip Elevation 131529: 769.97

Tip Elevation 138672: 764.37

Date of Last Reading: 12/Oct/22



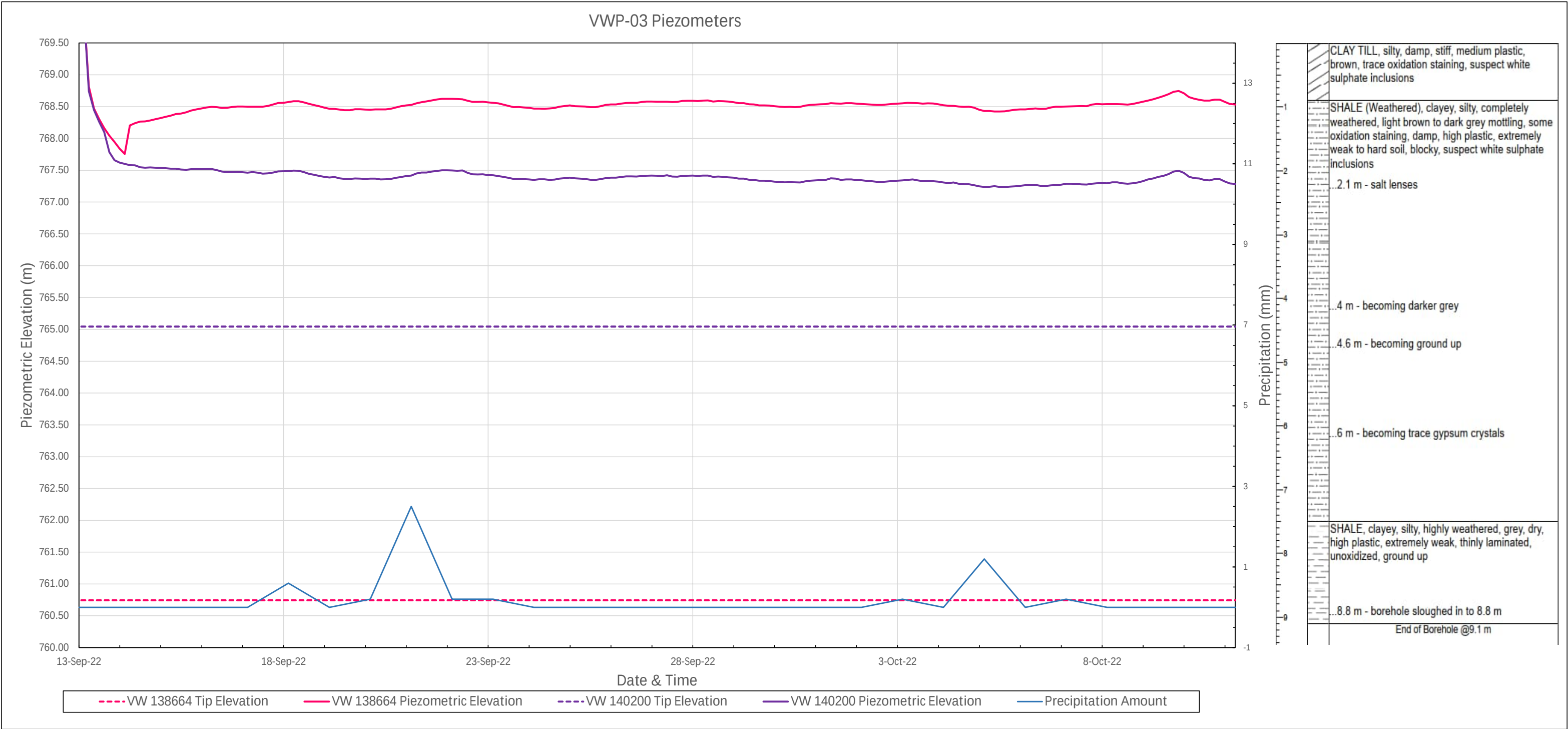
VWP PLOT

Project: Snake Lake Reservoir Expansion
Ground Elevation: 769.54

Project No.: 1560-193-00
Tip Elevation 140200: 765.04

Location ID: 22VWP-03
Tip Elevation 138664: 760.74

Client: EID
Date of Last Reading: 12/Oct/22



VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-04

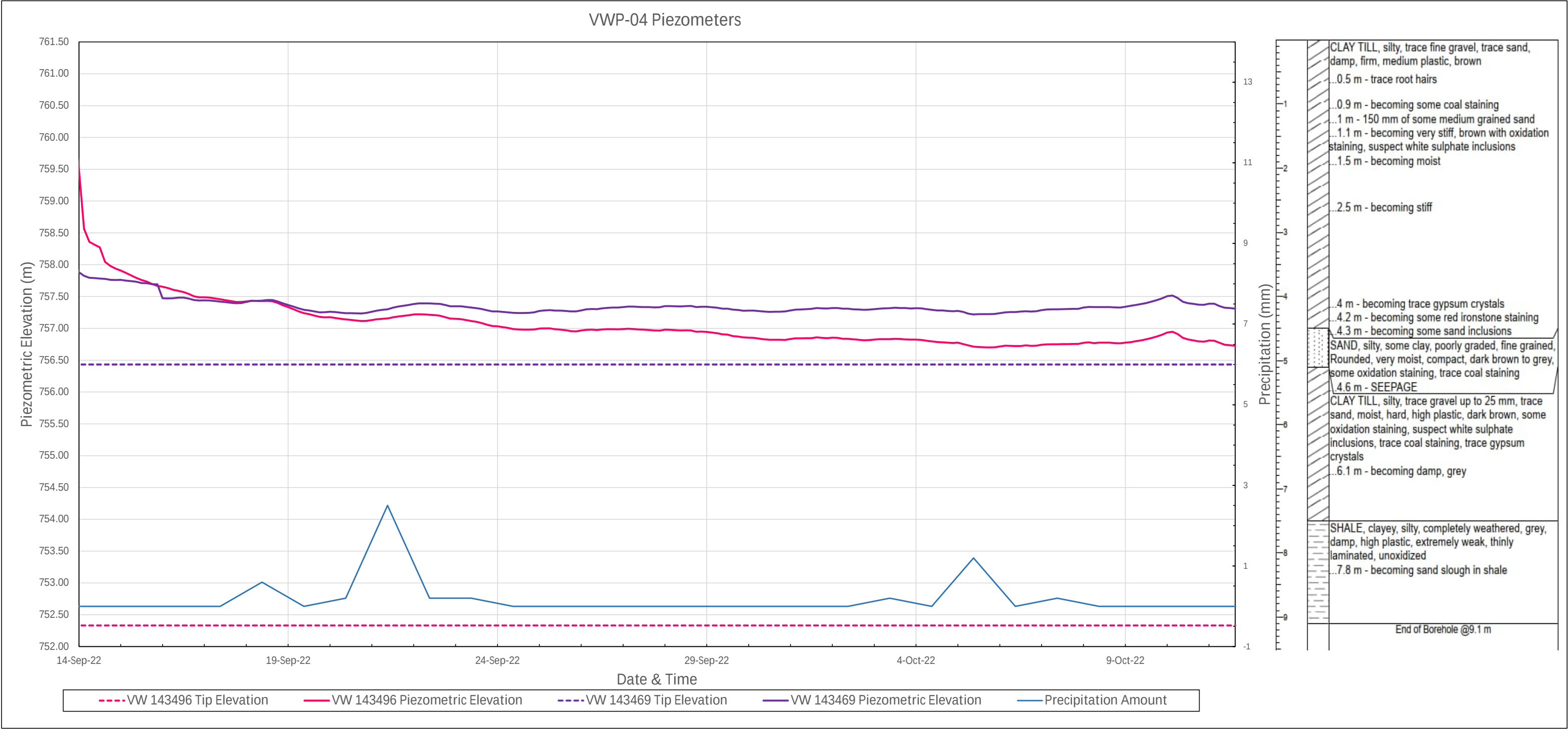
Client: EID

Ground Elevation: 761.43

Tip Elevation 143469: 756.43

Tip Elevation 143496: 752.33

Date of Last Reading: 12/Oct/22



VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-05

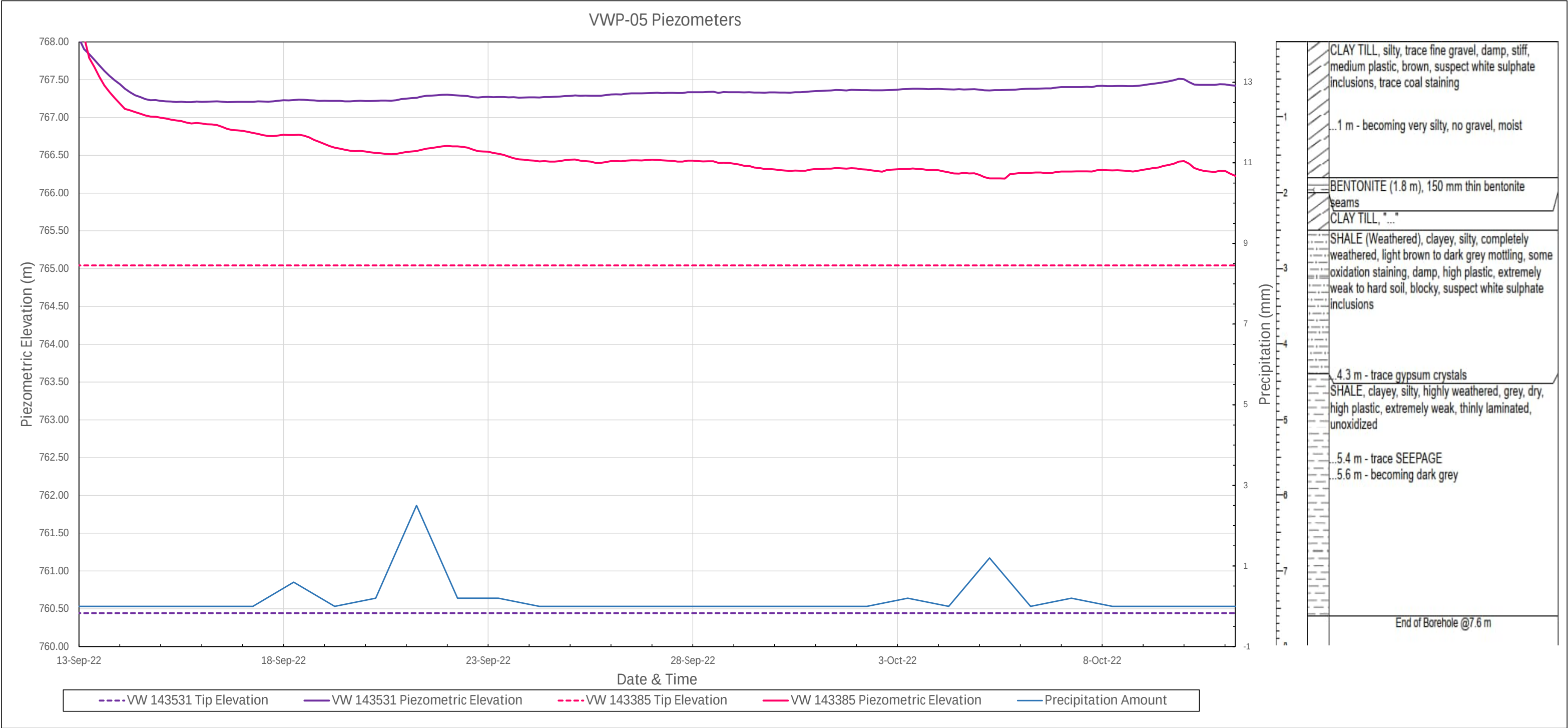
Client: EID

Ground Elevation: 768.04

Tip Elevation 143385: 765.04

Tip Elevation 143531: 760.44

Date of Last Reading: 17/Oct/22



VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-06

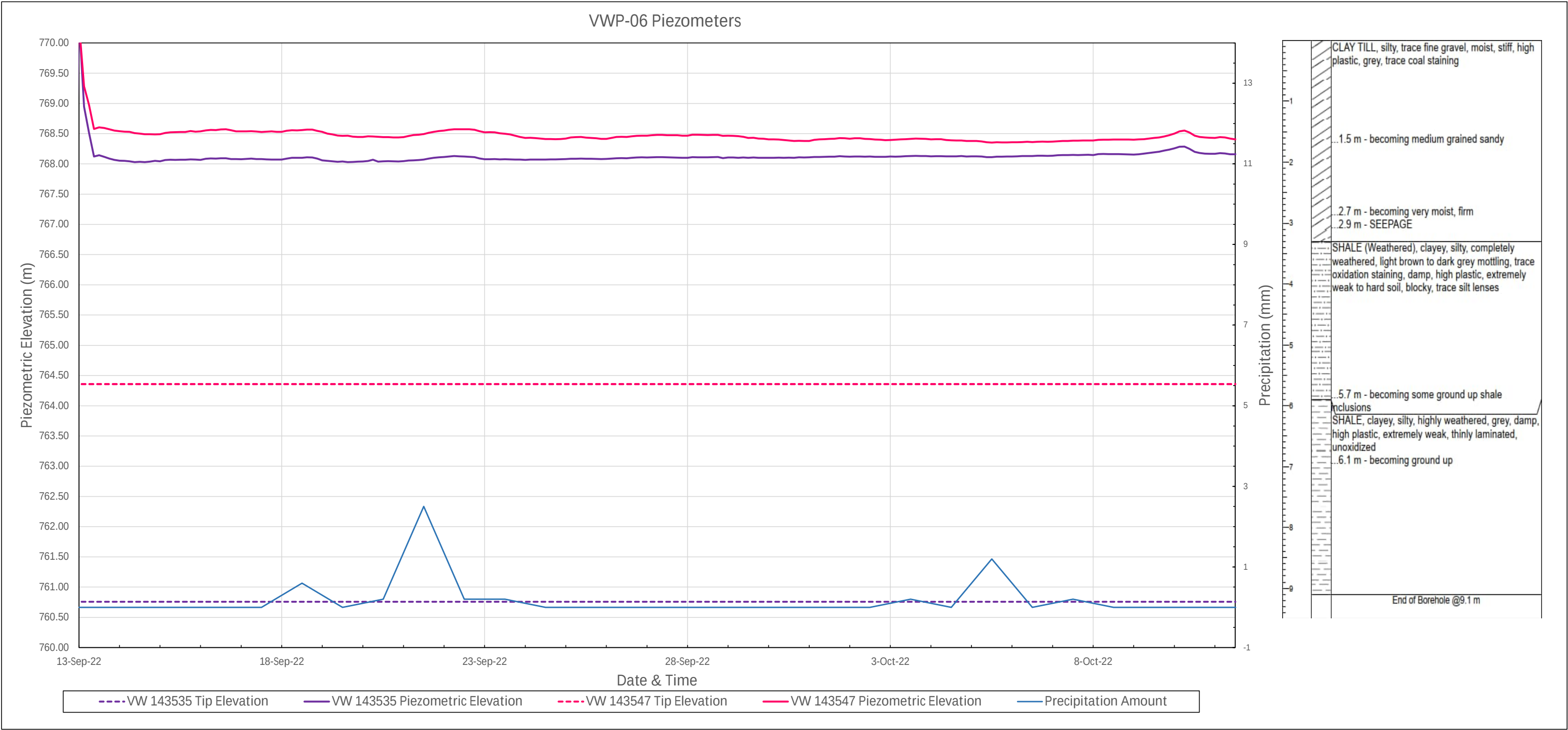
Client: EID

Ground Elevation: 769.86

Tip Elevation 143547: 764.36

Tip Elevation 143535: 760.76

Date of Last Reading: 17/Oct/22



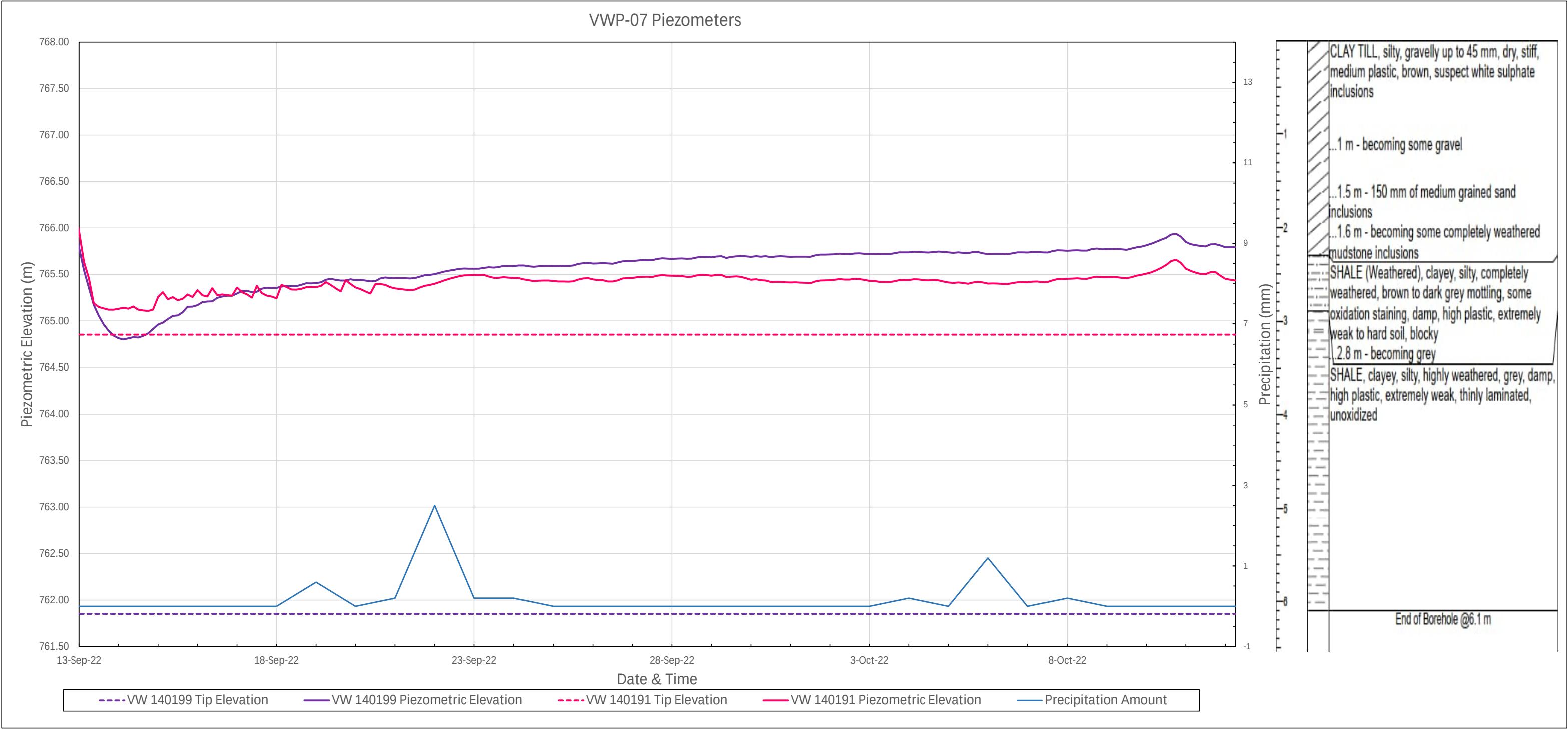
VWP PLOT

Project: Snake Lake Reservoir Expansion
Ground Elevation: 767.85

Project No.: 1560-193-00
Tip Elevation 140191: 764.85

Location ID: 22VWP-07
Tip Elevation 140199: 761.85

Client: EID
Date of Last Reading: 12/Oct/22



VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-08

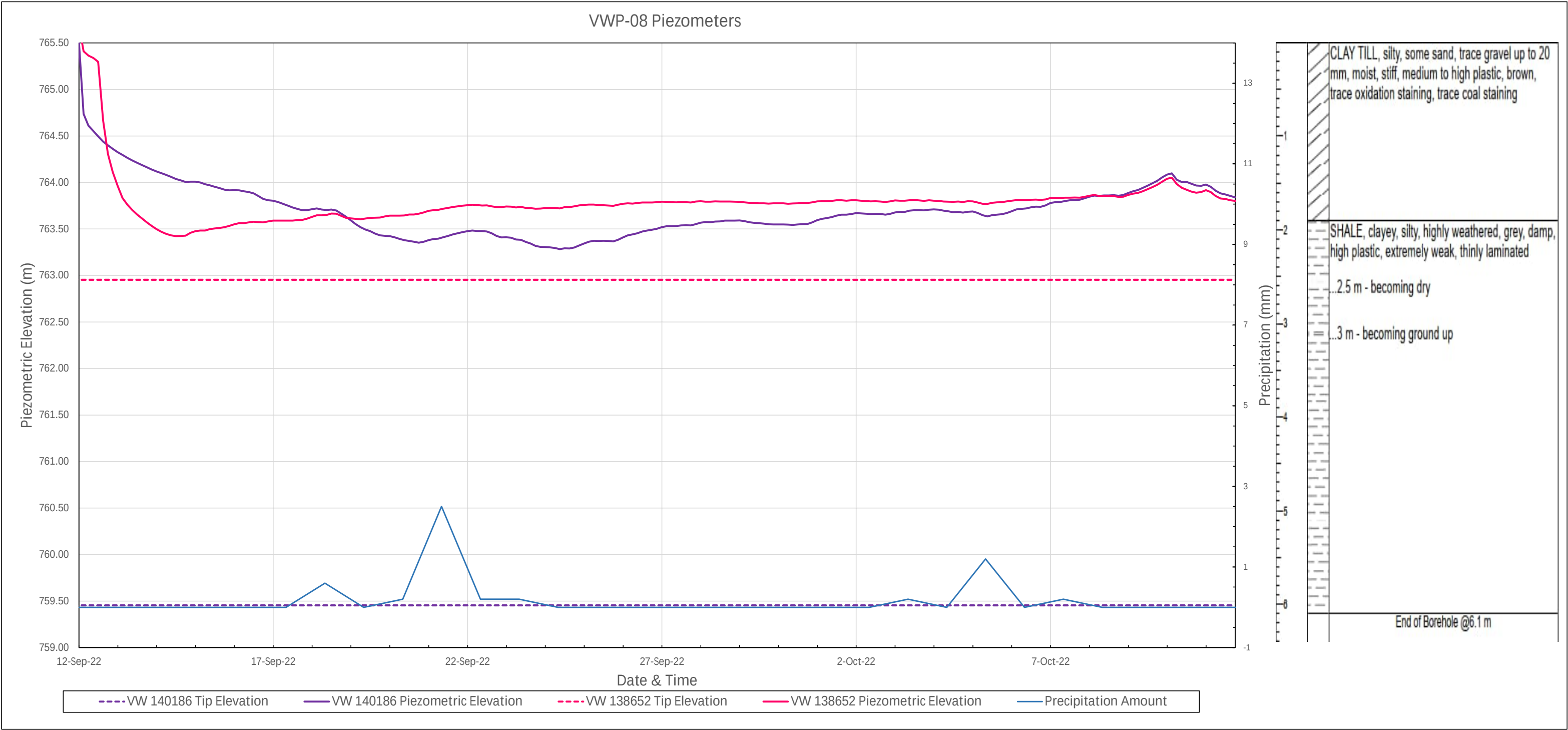
Client: EID

Ground Elevation: 765.454

Tip Elevation 138652: 762.95

Tip Elevation 140186: 759.45

Date of Last Reading: 12/Oct/22



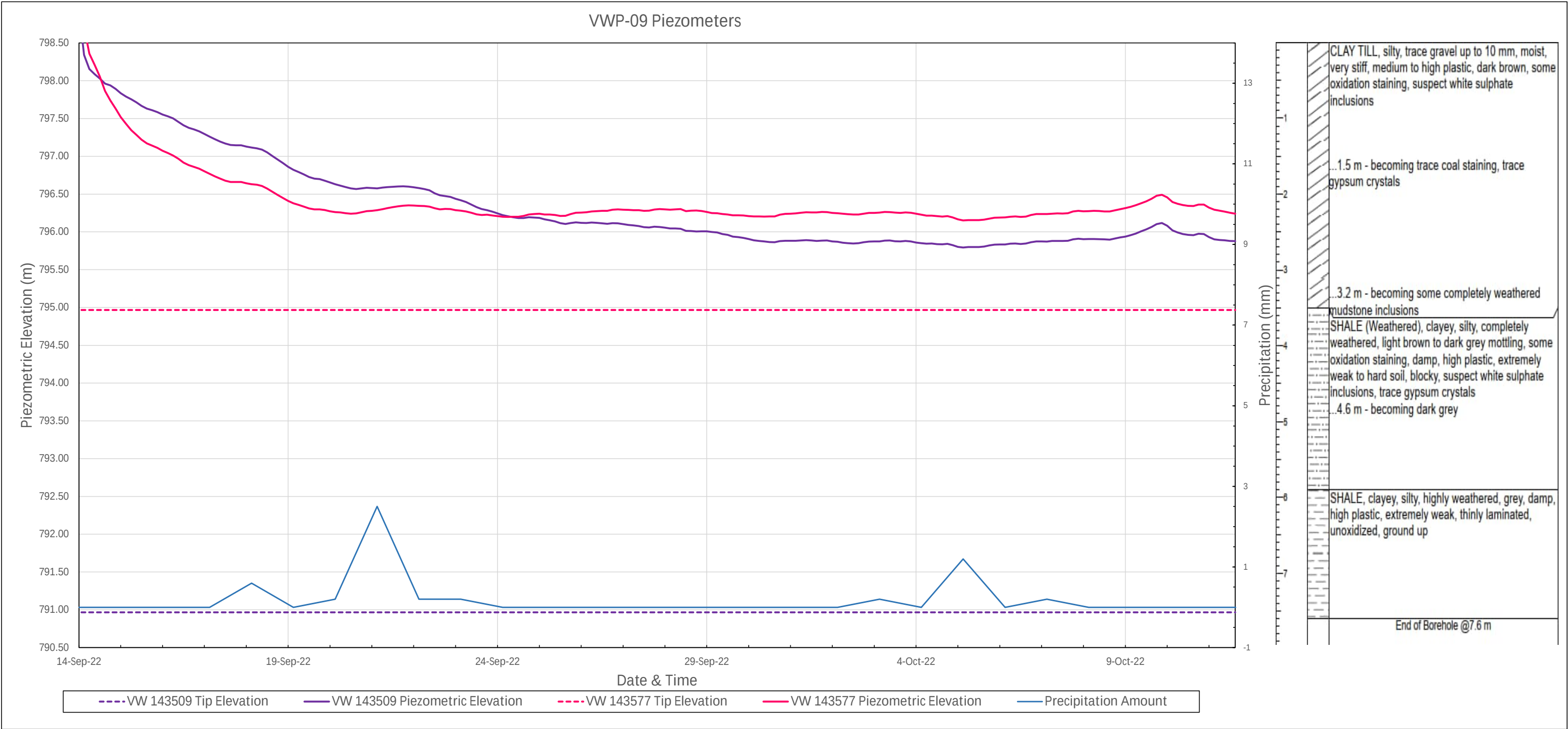
VWP PLOT

Project: Snake Lake Reservoir Expansion
Ground Elevation: 798.57

Project No.: 1560-193-00
Tip Elevation 143577: 794.97

Location ID: 22VWP-09
Tip Elevation 143509: 790.97

Client: EID
Date of Last Reading: 12/Oct/22



VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-10

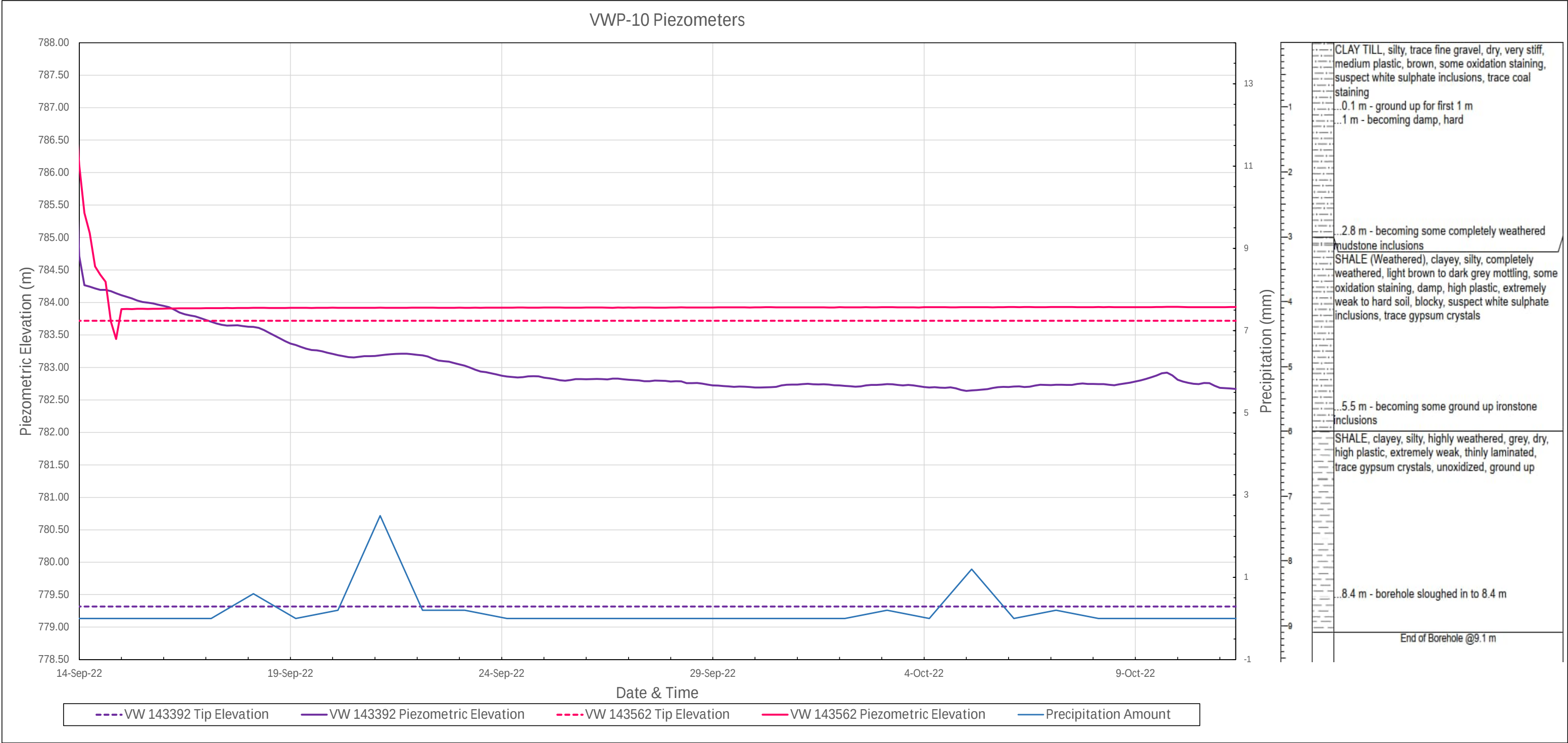
Client: EID

Ground Elevation: 787.72

Tip Elevation 143562: 783.72

Tip Elevation 143392: 779.32

Date of Last Reading 12/Oct/22



VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-11

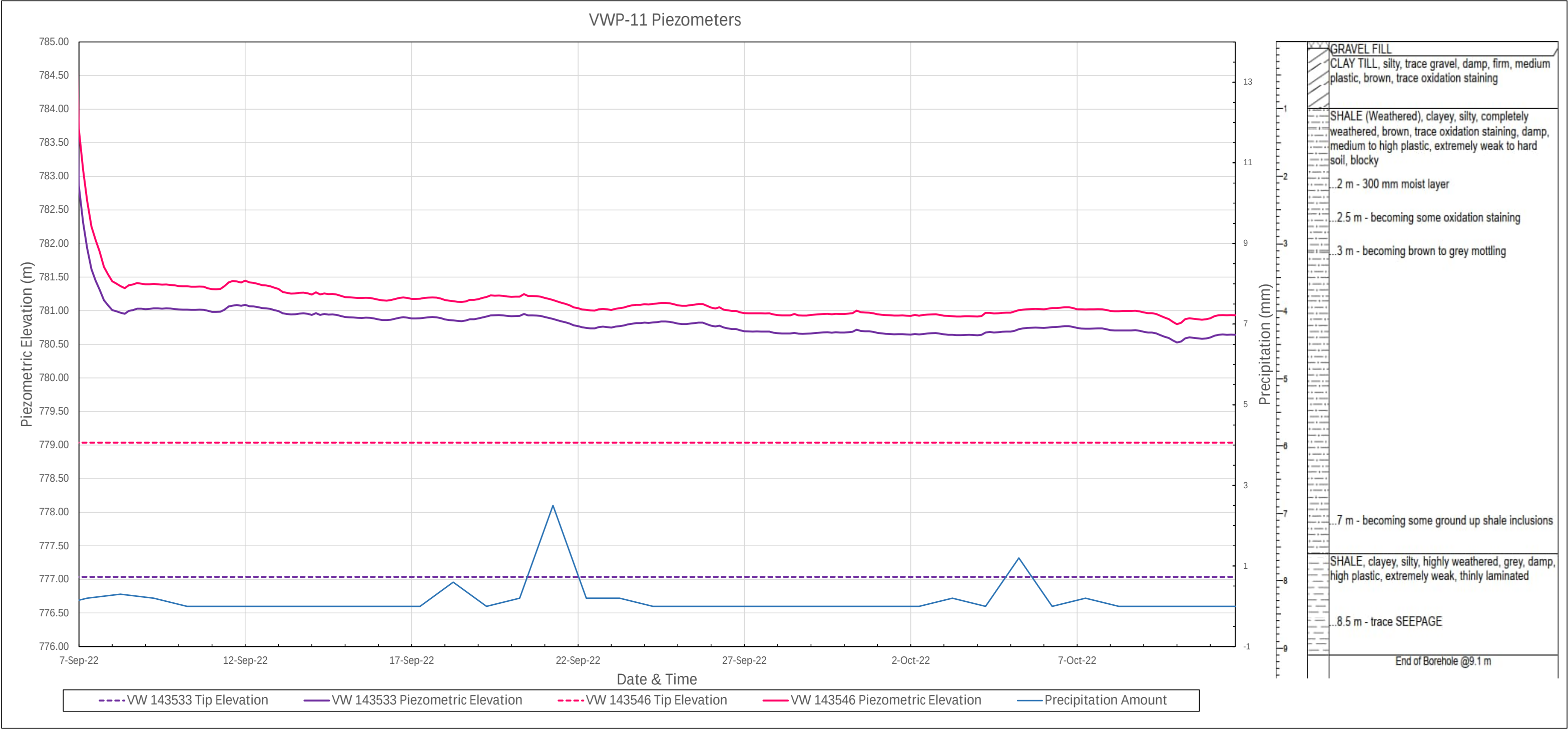
Client: EID

Ground Elevation: 785.037

Tip Elevation 143546: 779.04

Tip Elevation 143533: 777.04

Date of Last Reading: 12/Oct/22



VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-12

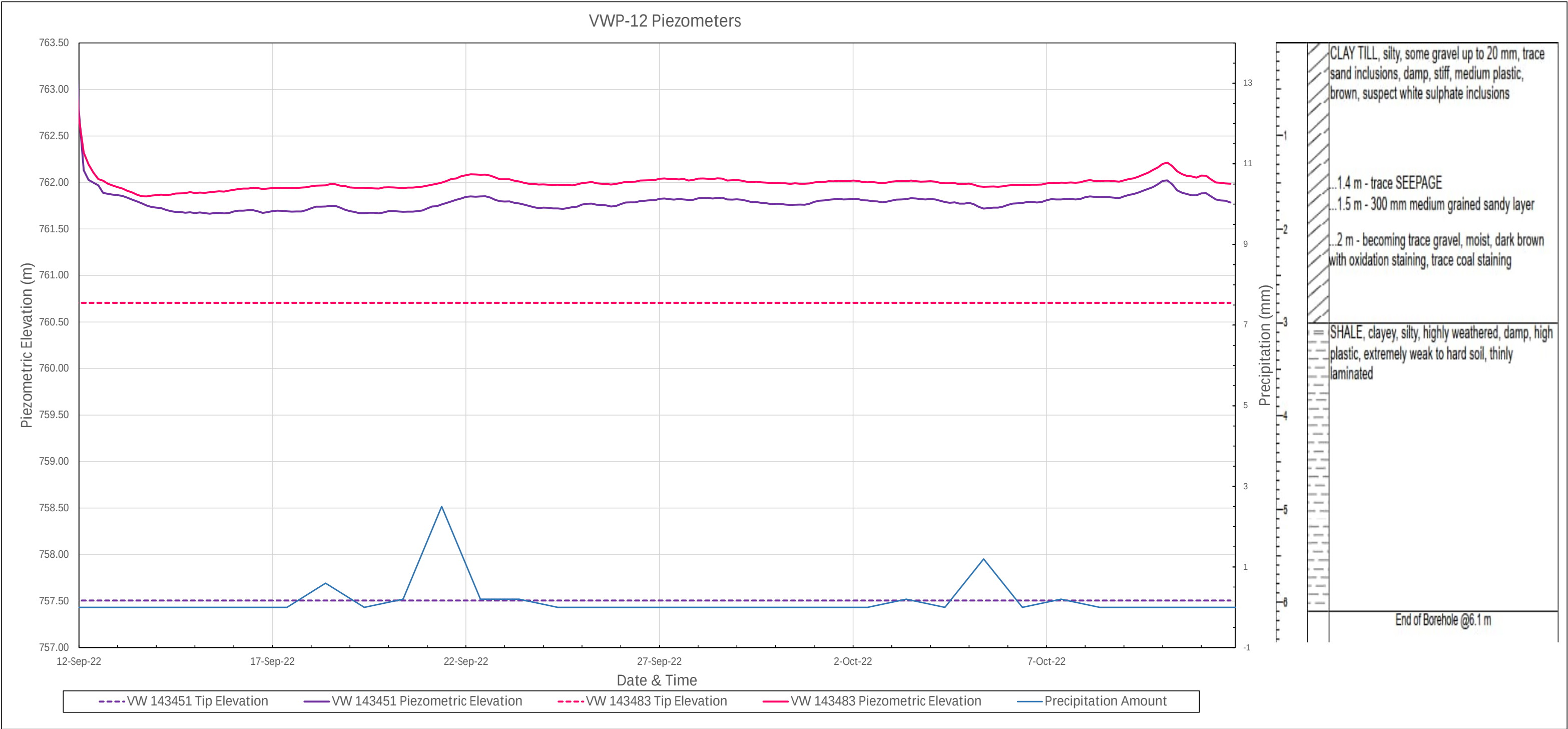
Client: EID

Ground Elevation: 763.51

Tip Elevation 143483: 760.71

Tip Elevation 143451: 757.51

Date of Last Reading: 12/Oct/22



VWP PLOT

Project: Snake Lake Reservoir Expansion

Project No.: 1560-193-00

Location ID: 22VWP-13

Client: EID

Ground Elevation: 768.04

Tip Elevation 143498: 764.04

Tip Elevation 143538: 761.64

Date of Last Reading: 12/Oct/22

