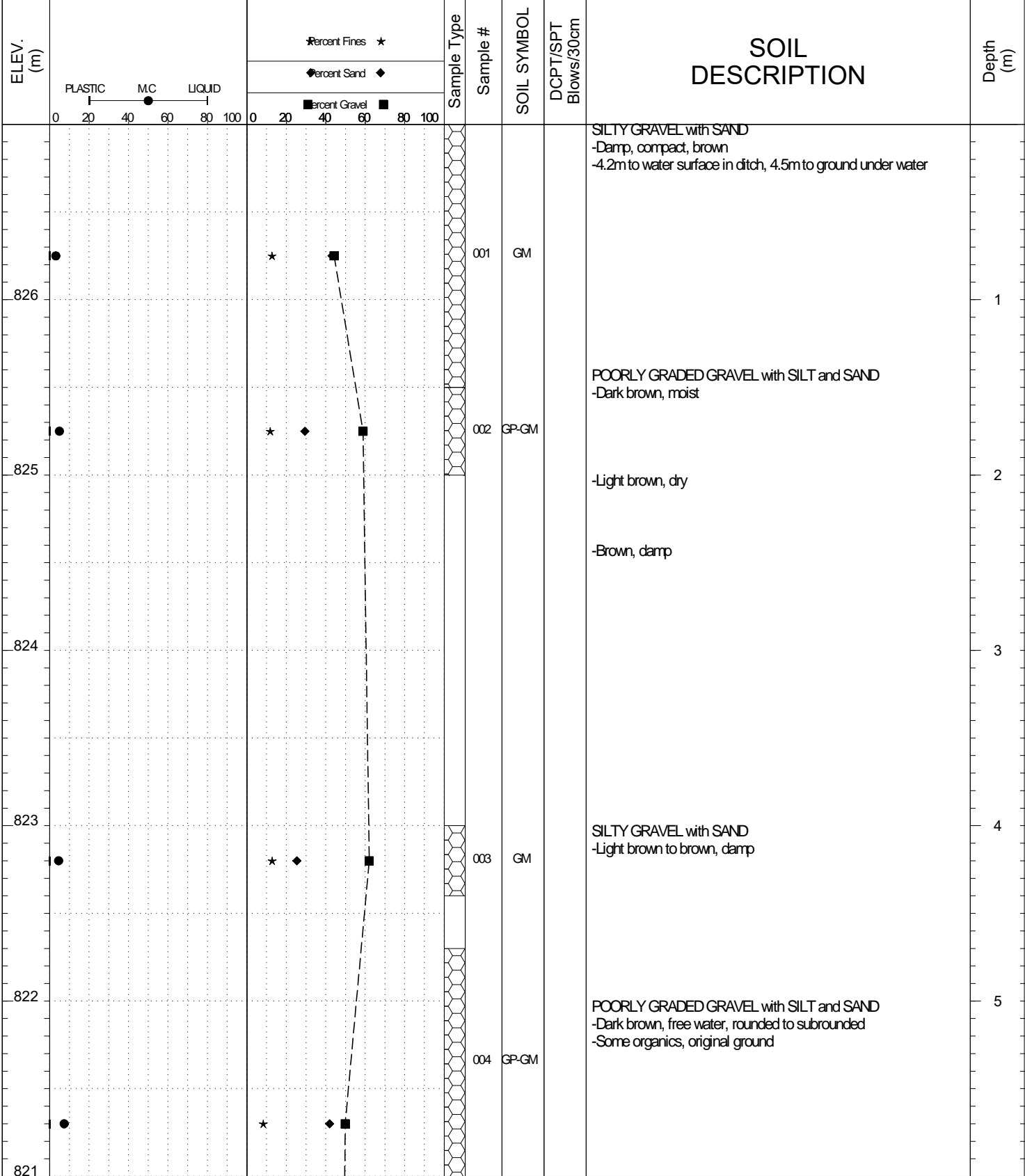


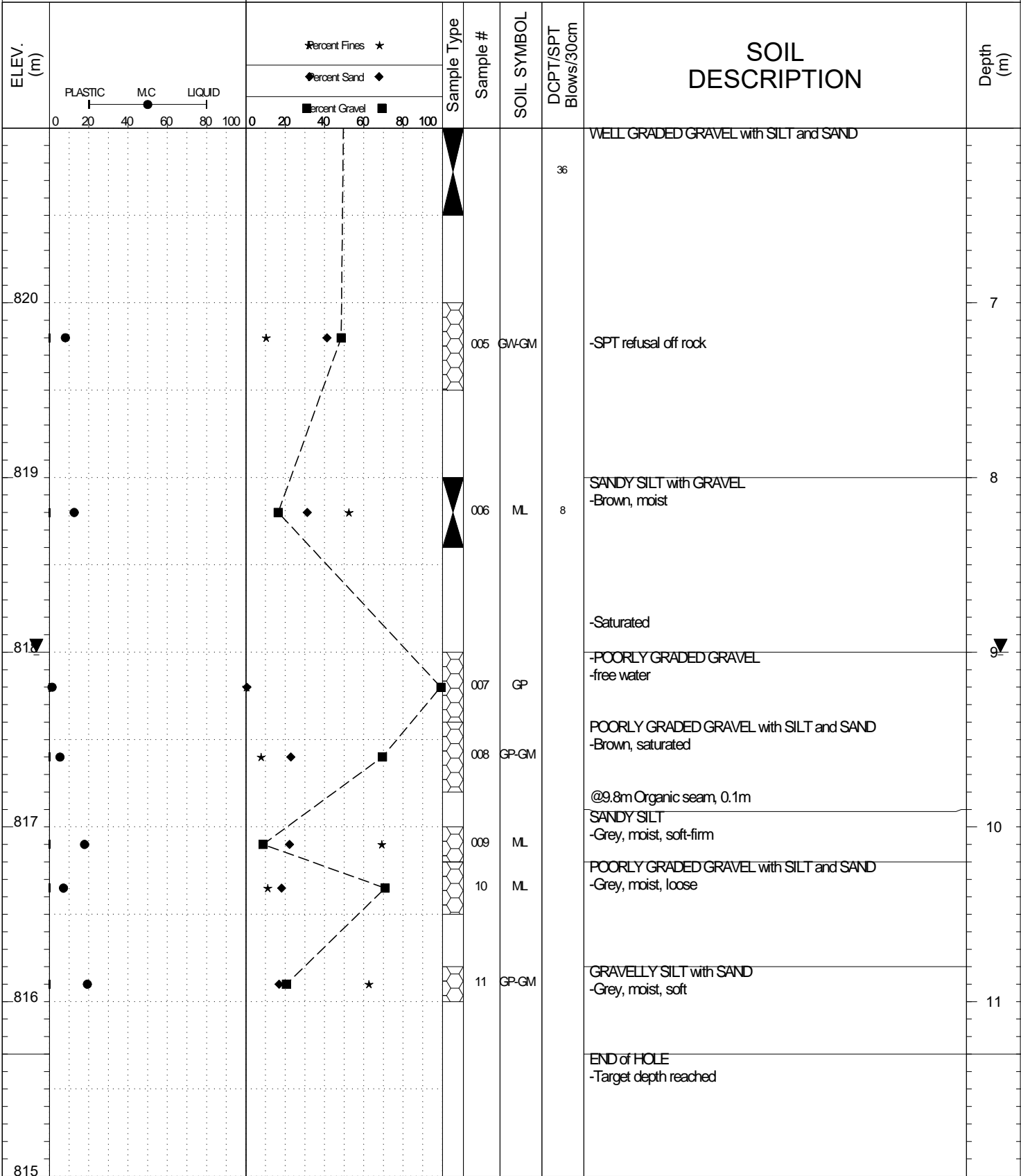
SUBSURFACE EXPLORATION AND TEST REPORT Campbell Highway SOURCE/TP#: 864-5303

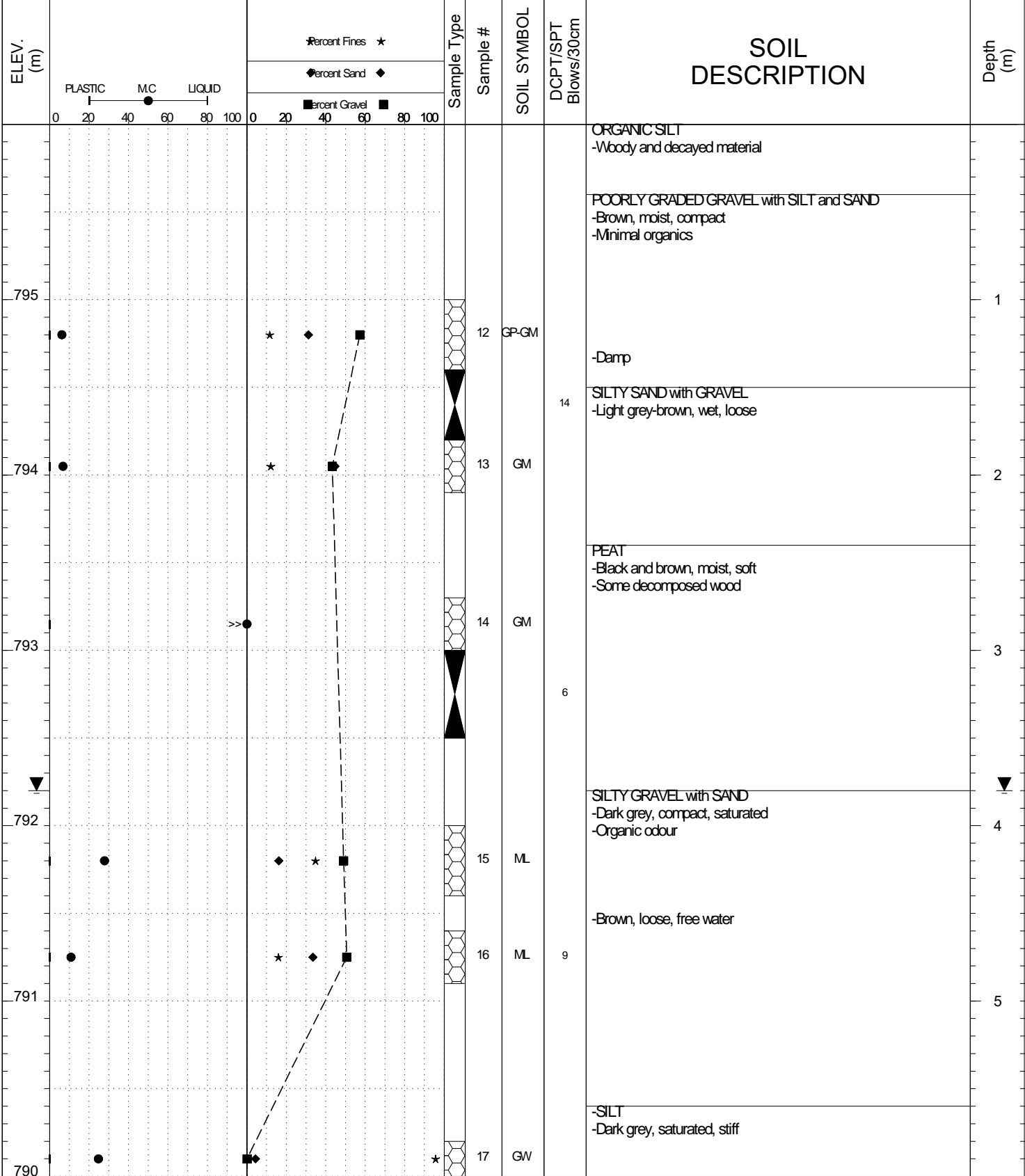
Boart Longyear km 34 Destabilization, km 34 RHS PROJECT NO: 552-202021-0601-01-1

Sonic Drill Coordinates: Z09V N6683998m E499015m ELEVATION: 827m

SAMPLE TYPE UNDISTURBED DCPT AUGER BULK SPT CORE







SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 864-5304									
Boart Longyear		km 34 Destabilization, km 34 LHS ditch		PROJECT NO: 552-202021-0601-01-1									
Sonic Drill		Coordinates: Z09V N6684007m E499002m		ELEVATION: 796m									
SAMPLE TYPE		UNDISTURBED		DCPT		AUGER		BULK		SPT		CORE	
ELEV. (m)	PLASTIC		MC		LIQUID		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION		Depth (m)
	0	20	40	60	80	100							
789										13	-SILT -Dark grey, saturated, stiff -Free water	7	
788									18	GP	13		8
787									19	GW		WELL-GRADED GRAVEL with SAND -Dark grey, saturated -Compact	9
786									20	SM		-Sand matrix with oxidized rock SILTY SAND with GRAVEL -Highly weathered rock with light grey/white rock dust -Dry, hard, suspect bedrock	10
785												END of HOLE -Refusal	11
784													

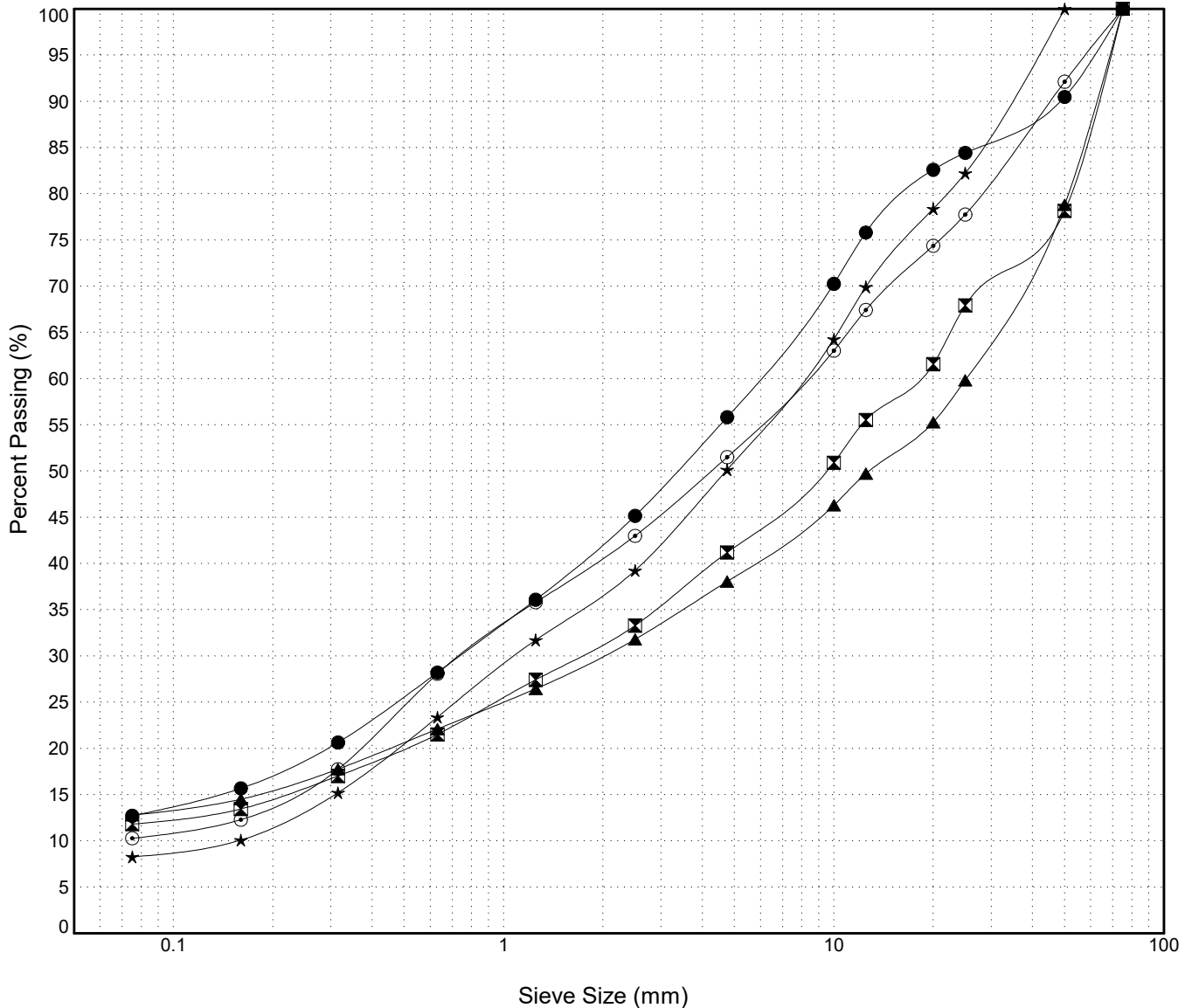
GRAIN SIZE ANALYSIS	km 34 Destabilization	SOURCE/TP#: 864-5303
Boart Longyear	km 34 RHS	PROJECT NO: 552-202021-0601-01-1
Sonic Drill	Coordinates:Z09V N6683998m E499015m	ELEVATION: 827m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 001	371	0.0 to 1.5	SILTY GRAVEL with SAND(GM)	3.1	NP	NP	NP		
☒ 002	372	1.5 to 2.0	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	4.9	NP	NP	NP	5.0	546.7
▲ 003	373	4.0 to 4.4	SILTY GRAVEL with SAND(GM)	4.5	NP	NP	NP		
★	374	5.7 to 6.0	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	7.3	NP	NP	NP	1.0	51.7
⊙	375	7.2 to 7.5	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	8.1	NP	NP	NP	1.0	121.8

Field #	Lab #	%PASSING	Sieve Size (mm)													% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt
● 001	371	100.0	100.0	100.0	90.5	84.4	82.6	75.8	70.3	55.8	45.2	36.1	28.2	20.6	15.7	12.7	44.2	43.1	12.7
☒ 002	372	100.0	100.0	78.1	67.9	61.6	55.5	50.9	41.2	33.3	27.4	21.5	17.0	13.5	11.8	58.8	29.4	11.8	
▲ 003	373	100.0	100.0	78.8	59.8	55.3	49.7	46.3	38.0	31.8	26.4	22.1	17.8	14.5	12.8	62.0	25.3	12.8	
★	374	100.0	100.0	100.0	82.2	78.4	69.9	64.3	50.2	39.2	31.7	23.4	15.2	10.1	8.3	49.8	41.9	8.3	
⊙	375	100.0	100.0	92.1	77.7	74.4	67.4	63.0	51.5	43.0	35.8	28.1	17.7	12.3	10.3	48.5	41.2	10.3	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



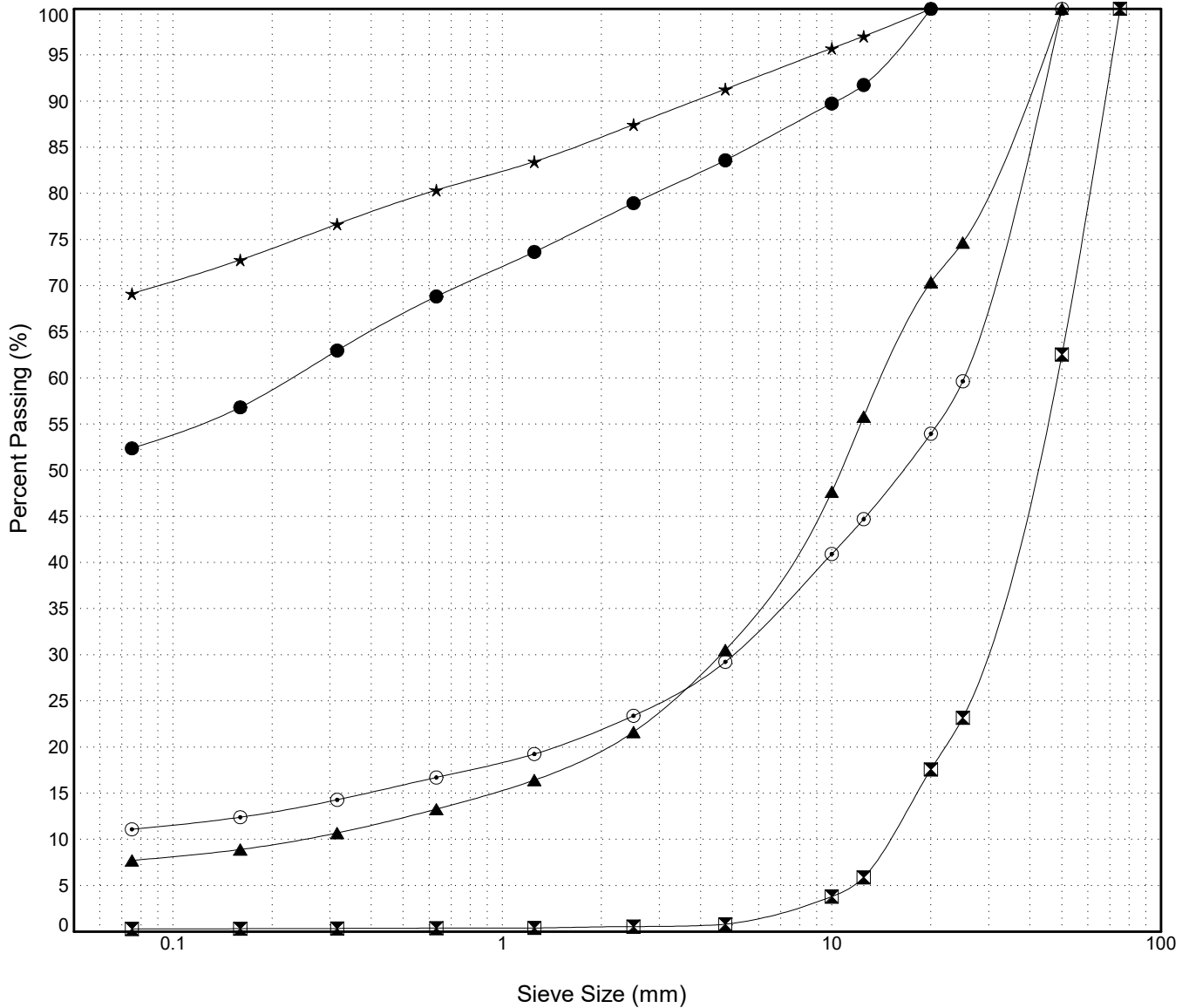
GRAIN SIZE ANALYSIS	km 34 Destabilization	SOURCE/TP#: 864-5303
Boart Longyear	km 34 RHS	PROJECT NO: 552-202021-0601-01-1
Sonic Drill	Coordinates:Z09V N6683998m E499015m	ELEVATION: 827m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
●	376	8.2 to 8.4	SANDY SILT with GRAVEL(ML)	12.5	NP	NP	NP		
☒	007	377	9.0 to 9.4	POORLY GRADED GRAVEL(GP)	1.3	NP	NP	1.1	3.2
▲	008	378	9.4 to 9.8	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	5.3	NP	NP	6.0	59.1
★	009	379	10.0 to 10.2	SANDY SILT(ML)	17.8	NP	NP		
⊙	10	380	10.2 to 10.5	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	7.1	NP	NP	24.8	630.5

Field #	Lab #	% PASSING															% Breakdown			
		100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt	Clay	
●	376	100.0	100.0	100.0	100.0	100.0	91.8	89.7	83.6	78.9	73.7	68.8	63.0	56.8	52.4	16.4	31.2	52.4		
☒	007	100.0	100.0	62.6	23.2	17.6	5.9	3.8	0.8	0.5	0.4	0.4	0.3	0.3	0.3	99.2	0.5	0.3		
▲	008	100.0	100.0	100.0	74.7	70.4	55.8	47.7	30.5	21.6	16.4	13.3	10.7	8.9	7.7	69.5	22.8	7.7		
★	009	100.0	100.0	100.0	100.0	100.0	97.0	95.7	91.3	87.5	83.4	80.4	76.7	72.8	69.1	8.7	22.2	69.1		
⊙	10	100.0	100.0	100.0	59.6	54.0	44.7	40.9	29.2	23.4	19.3	16.7	14.3	12.4	11.1	70.8	18.1	11.1		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

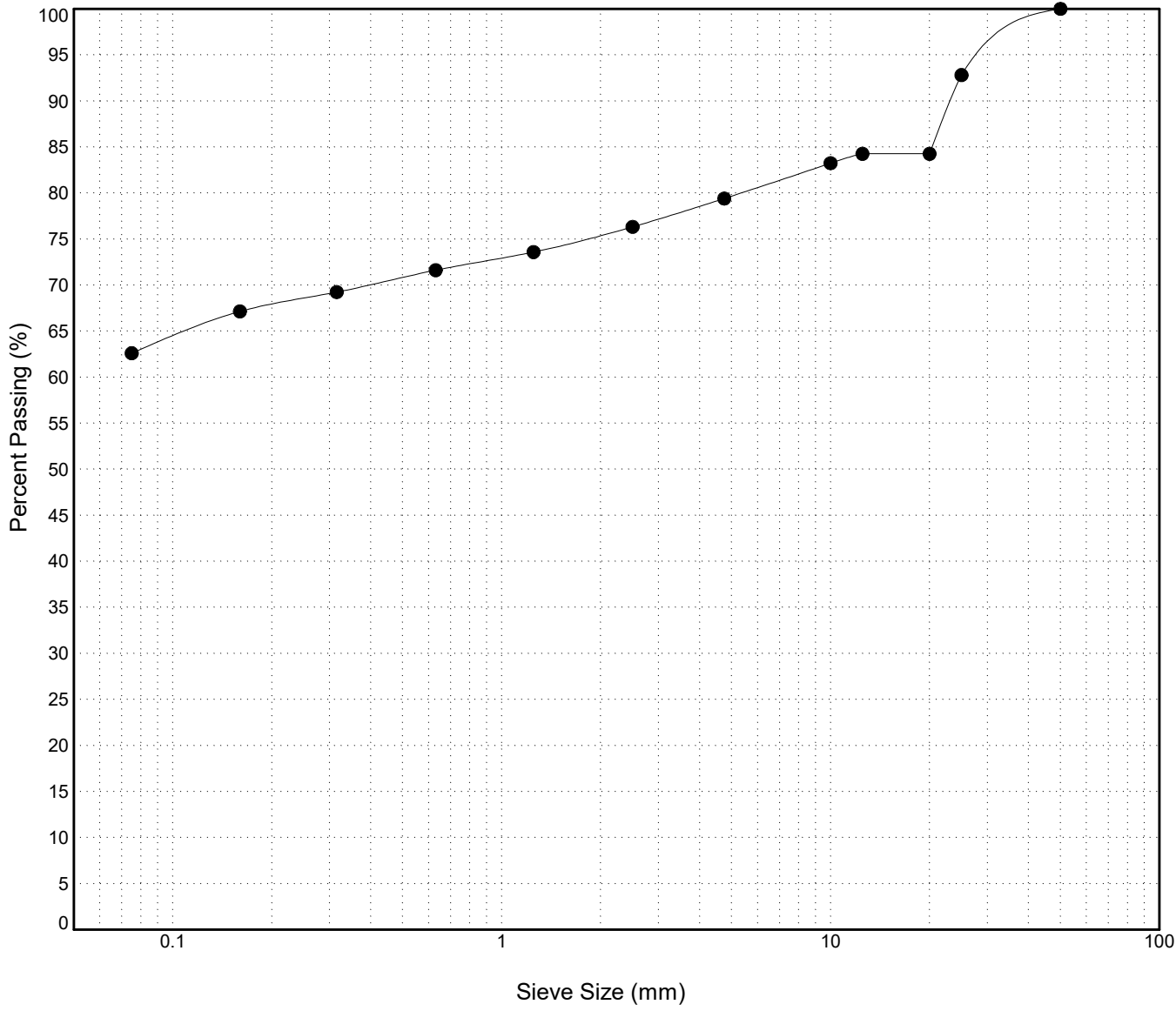


GRAIN SIZE ANALYSIS	km 34 Destabilization	SOURCE/TP#: 864-5303
Boart Longyear	km 34 RHS	PROJECT NO: 552-202021-0601-01-1
Sonic Drill	Coordinates:Z09V N6683998m E499015m	ELEVATION: 827m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu										
● 11	381	10.8 to 11.0	GRAVELLY SILT with SAND(ML)	19.2	NP	NP	NP												
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	% Breakdown			
● 11	381	100.0	100.0	100.0	92.8	84.3	84.3	83.2	79.4	76.3	73.6	71.6	69.2	67.1	62.6	Gravel	Sand	Silt	Clay
																20.6	16.8	62.6	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

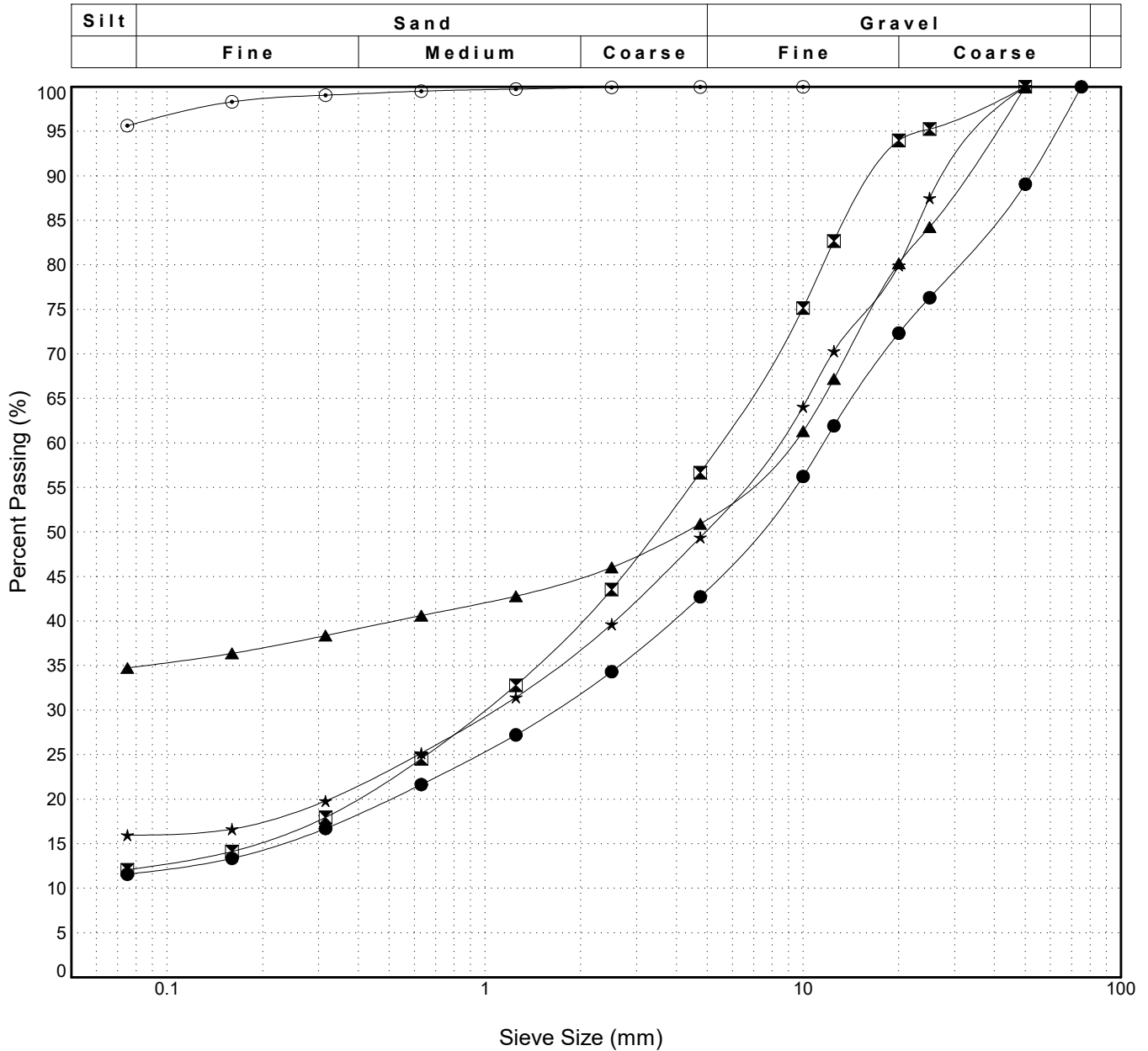


GRAIN SIZE ANALYSIS	km 34 Destabilization	SOURCE/TP#: 864-5304
Boart Longyear	km 34 LHS ditch	PROJECT NO: 552-202021-0601-01-1
Sonic Drill	Coordinates:Z09V N6684007m E499002m	ELEVATION: 796m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
●	382	1.0 to 1.4	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	6.2	NP	NP	NP	6.0	302.1
☒	13	383	SILTY SAND with GRAVEL(SM)	6.7	NP	NP	NP	5.2	155.2
▲	15	385	SILTY GRAVEL with SAND(GM)	27.8	NP	NP	NP		
★	16	386	SILTY GRAVEL with SAND(GM)	10.8	NP	NP	NP		
⊙	17	387	SILT(ML)	24.7	NP	NP	NP		

Field #	Lab #	%PASSING	Sieve Size (mm)													% Breakdown				
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt	Clay
●	382	100.0	100.0	100.0	89.1	76.3	72.3	61.9	56.2	42.7	34.3	27.2	21.6	16.7	13.4	11.6	57.3	31.2	11.6	
☒	13	383	100.0	100.0	100.0	95.3	94.0	82.7	75.2	56.7	43.6	32.8	24.5	18.0	14.1	12.1	43.3	44.6	12.1	
▲	15	385	100.0	100.0	100.0	84.3	80.2	67.2	61.3	50.9	46.0	42.8	40.6	38.4	36.4	34.7	49.1	16.2	34.7	
★	16	386	100.0	100.0	100.0	87.5	80.0	70.3	64.1	49.4	39.7	31.4	25.2	19.8	16.7	16.0	50.6	33.4	16.0	
⊙	17	387	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.7	99.5	99.1	98.3	95.6	0.0	4.3	95.6	

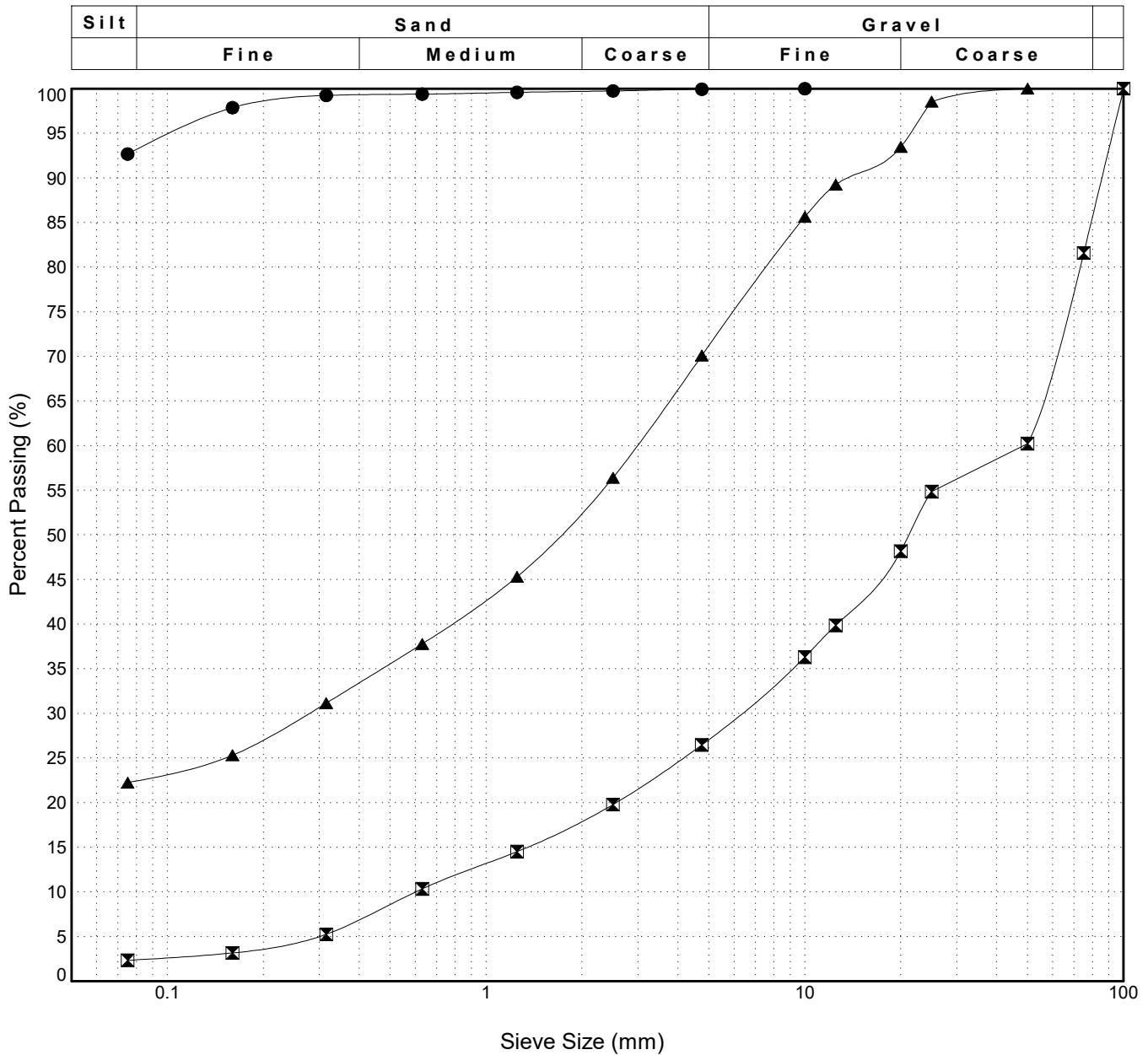


GRAIN SIZE ANALYSIS	km 34 Destabilization	SOURCE/TP#: 864-5304
Boart Longyear	km 34 LHS ditch	PROJECT NO: 552-202021-0601-01-1
Sonic Drill	Coordinates:Z09V N6684007m E499002m	ELEVATION: 796m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 18	388	7.5 to 8.0	SILT(ML)	24.9	NP	NP	NP		
☒ 19	389	8.6 to 9.0	WELL-GRADED GRAVEL with SAND(GW)	5.3	NP	NP	NP	1.3	80.7
▲ 20	390	10.2 to 10.5	SILTY SAND with GRAVEL(SM)	5.9	NP	NP	NP		

Field #	Lab #	% PASSING														% Breakdown			
		100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt	Clay
● 18	388	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.8	99.6	99.4	99.3	97.9	92.7	0.1	7.3	92.7	
☒ 19	389	100.0	81.6	60.2	54.9	48.2	39.9	36.3	26.5	19.8	14.5	10.3	5.3	3.2	2.3	55.1	24.1	2.3	
▲ 20	390	100.0	100.0	100.0	98.6	93.5	89.2	85.6	70.1	56.4	45.3	37.8	31.1	25.3	22.2	29.9	47.8	22.2	





BH-864-5303 Photo 1



BH-864-5303 Photo 2



BH-864-5303 Photo 3



BH-864-5303 Photo 4



BH-864-5303 Photo 5



BH-864-5303 Photo 6



BH-864-5303 Photo 7



BH-864-5303 Photo 8



BH-864-5303 Photo 9



BH-864-5303 Photo 10



BH-864-5303 Photo 11



BH-864-5303 Photo 12



BH-864-5303 Photo 13



BH-864-5304 Photo 1



BH-864-5304 Photo 2



BH-864-5304 Photo 3



BH-864-5304 Photo 4



BH-864-5304 Photo 5



BH-864-5304 Photo 6



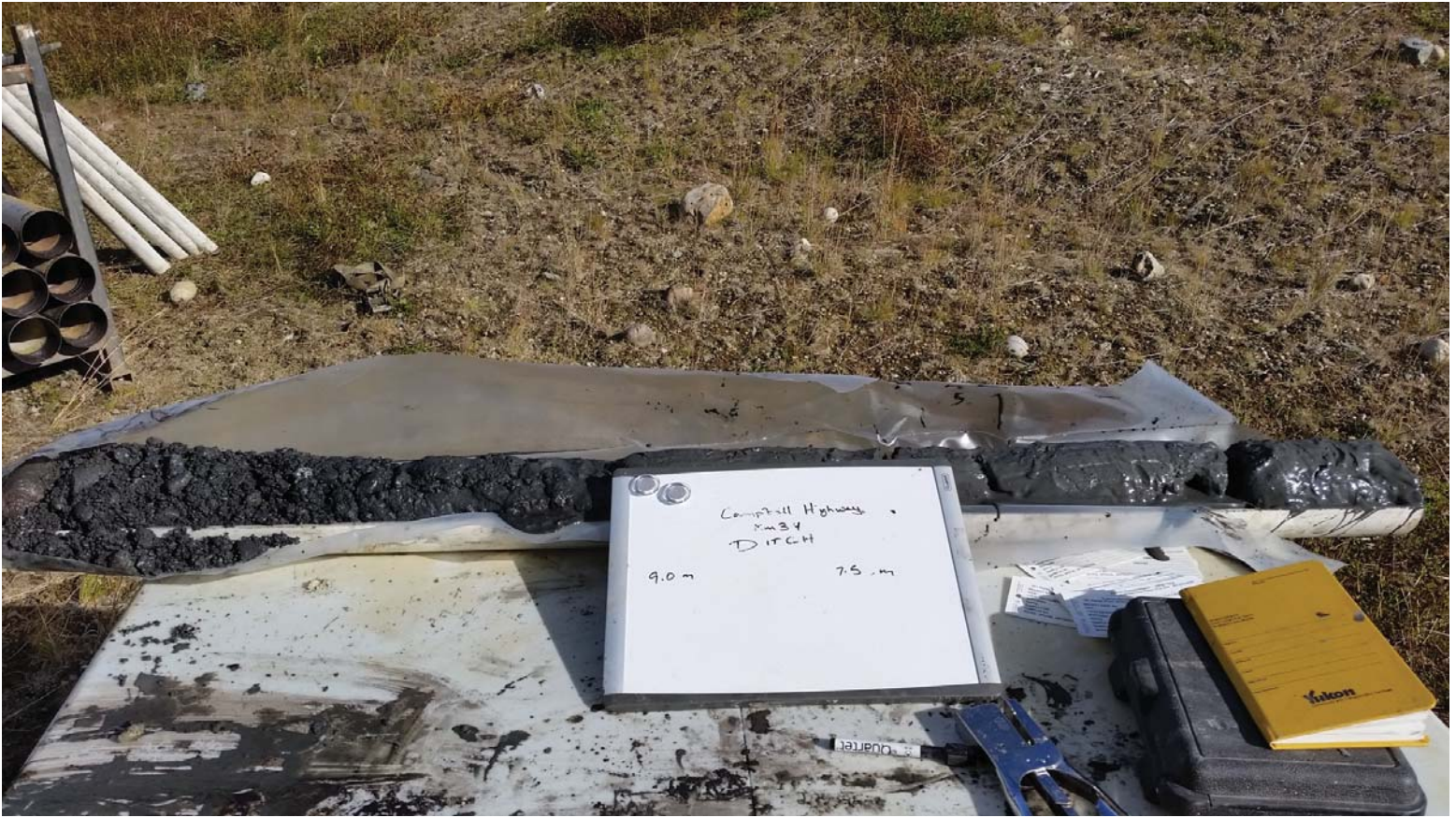
BH-864-5304 Photo 7



BH-864-5304 Photo 8



BH-864-5304 Photo 9



BH-864-5304 Photo 10



BH-864-5304 Photo 11