



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5262					
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:					
Hitachi Ex200		Coordinates: Z08V N6749503m E348162.3m		ELEVATION: 1030m					
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE		
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■			Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100								
1029	★	◆	■	GW	363-001			ORGANICS	1
1028	★	◆	■	GP	363-002			WELL-GRADED GRAVEL -Grey, dry, loose -15-20% Cobbles	2
1027	★	◆	■	GP	363-002			POORLY GRADED GRAVEL with SAND -Grey, loose, dry -20-25% Cobbles	3
1026	★	◆	■	GW	363-003			WELL-GRADED GRAVEL with SAND -Grey, loose, dry -20-25% Cobbles	4
								END of HOLE -Target depth reached	



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5263				
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:				
Hitachi Ex200		Coordinates: Z08V N6749591.5m E348160.1m		ELEVATION: 1035m				
SAMPLE TYPE	UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE		
ELEV. (m)	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100							
1035							ORGANICS	
							POORLY GRADED GRAVEL with SAND -Grey, loose, dry -15-20% Cobbles	
1034							SILTY SAND -Grey, dry, loose	1
							WELL-GRADED GRAVEL with SAND -Grey, damp, loose -15-20% Cobbles and boulders	
1033								2
1032							POORLY GRADED GRAVEL with SAND -Grey, damp, loose -15-20% Cobbles and boulders	3
1031							END of HOLE -Target depth reached	4
 Highways and Public Works Transportation Engineering Branch				LOGGED BY: G. Kennedy COMPILED BY: M. Jubinville REVIEWED BY: R. Stilwell		Termination Depth: 4m Complete: 8/25/2015 Pit #: 115A-23		Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5264						
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:						
Hitachi Ex200		Coordinates: Z08V N6749650.4m E348098.3m		ELEVATION: 1018m						
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE			
ELEV. (m)	PLASTIC M.C LIQUID 0 20 40 60 80 100		★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0 20 40 60 80 100		0 20 40 60 80 100							
									ORGANICS	
									SILTY SAND with GRAVEL -Grey, dry, compact -15-20% Cobbles	
1017										1
1016									POORLY GRADED GRAVEL with SILT and SAND -Grey, dry, compact -15-20% Cobbles	2
									-Silt or clay seam, 300mm	
1015									POORLY GRADED GRAVEL -Grey, dry, compact -15-20% Cobbles	3
1014									END of HOLE -Target depth reached	4
 Highways and Public Works Transportation Engineering Branch		LOGGED BY: G. Kennedy			Termination Depth: 4m					
		COMPILED BY: M. Jubinville			Complete: 8/25/2015					
		REVIEWED BY: R. Stilwell			Pit #: 115A-23					
						Page 1 of 1				

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5265				
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:				
Hitachi Ex200		Coordinates: Z08V N6749613.1m E347967.9m		ELEVATION: 933m				
SAMPLE TYPE		UNDISTURBED		DCPT				
		AUGER		BULK				
		SPT		CORE				
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100							
932				363-011	GP-GM		ORGANICS	1
931				363-012	SP-SM		POORLY GRADED GRAVEL with SILT and SAND -Greyish brown, dry, compact -10-15% Cobbles	2
930							POORLY GRADED SAND with SILT -Grey, damp, loose -Some cobbles, odd boulder	3
929				363-013	GP-GM		POORLY GRADED GRAVEL with SILT and SAND -Grey, damp, loose -15-20% Cobbles, odd boulder	4
							END of HOLE -Target depth reached	



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5266					
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:					
Hitachi Ex200		Coordinates: Z08V N6749563.3m E347888.3m		ELEVATION: 1006m					
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE		
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■			Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100								
1006								ORGANICS	
1005					363-014	GW		WELL-GRADED GRAVEL with SAND -Grey, dry, compact -15-20% Cobbles	1
1004					363-015	GW			2
1003					363-016	GW			3
1002								END of HOLE -Target depth reached	4



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5267				
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:				
Hitachi Ex200		Coordinates: Z08V N6749473.4m E347770.1m		ELEVATION: 1023m				
SAMPLE TYPE		UNDISTURBED		DCPT				
		AUGER		BULK				
		SPT		CORE				
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100							
1022				363-017	GW		ORGANICS	1
							WELL-GRADED GRAVEL with SAND -Grey, dry, compact -15-20% Cobbles	
							-Brown, damp, loose -5-10% Cobbles	2
1021				363-018				
							SILTY GRAVEL with SAND -Grey, damp, compact -10-15% Cobbles	3
1020				363-019	GM			
1019							END of HOLE -Target depth reached	4





SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5268									
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:									
Hitachi Ex200		Coordinates: Z08V N6749385.6m E347722.8m		ELEVATION: 1032m									
SAMPLE TYPE		UNDISTURBED		DCPT		AUGER		BULK		SPT		CORE	
ELEV. (m)	PLASTIC M.C LIQUID 0 20 40 60 80 100			★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■			Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)	
	0 20 40 60 80 100			0 20 40 60 80 100									
											ORGANICS		
											POORLY GRADED GRAVEL with SILT and SAND -Brown, damp, loose -5-10% Cobbles	1	
1031													
											POORLY GRADED GRAVEL with SAND -Greyish brown, damp, compact -5-10 % Cobbles, odd boulder	2	
1030													
											POORLY GRADED GRAVEL with SILT and SAND -Greyish brown, compact, damp -10-15% Cobbles, odd boulder	3	
1029													
1028											END of HOLE -Target depth reached	4	





SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5269					
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:					
Hitachi Ex200		Coordinates: Z08V N6749297m E347709.6m		ELEVATION: 1038m					
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE		
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■			Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100								
1037					363-023	GW		ORGANICS	1
1036					363-024	GP-GM		WELL-GRADED GRAVEL with SAND -Grey, damp, compact -10-15% Cobbles	2
1035								POORLY GRADED GRAVEL with SILT and SAND -Grey, damp, compact -10-15% Cobbles, odd boulder	3
1034					363-025	GW-GM		WELL-GRADED GRAVEL with SILT and SAND -Grey, damp, compact -10-15% Cobbles, some boulders	4
								END of HOLE -Target depth reached	



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5270					
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:					
Hitachi Ex200		Coordinates: Z08V N6749484.5m E347878.8m		ELEVATION: 1030m					
SAMPLE TYPE	UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE			
ELEV. (m)	PLASTIC M.C. LIQUID 0 20 40 60 80 100	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
		0	20						
1029				363-026	GW			ORGANICS	1
								SANDY SILT -Brown, loose damp, odd cobble	
								WELL-GRADED GRAVEL with SILT and SAND -Grey, damp, compact -15-20% Cobbles	
1028				363-027	GP			POORLY GRADED GRAVEL with SAND -Grey, damp, compact -15-20% Cobbles, some boulders	2
								WELL-GRADED GRAVEL with SAND -Grey, damp, compact -15-20% Cobbles, some boulders	3
1027				363-028	GW				
1026								END of HOLE -Target depth reached	4
		Highways and Public Works Transportation Engineering Branch				LOGGED BY: G. Kennedy		Termination Depth: 4m	
						COMPILED BY: M. Jubinville		Complete: 8/25/2015	
						REVIEWED BY: R. Stilwell		Pit #: 115A-23	
								Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5271				
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:				
Hitachi Ex200		Coordinates: Z08V N6749516.3m E347993.3m		ELEVATION: 1024m				
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE	
ELEV. (m)	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100							
1023				363-029	SM		ORGANICS	
							SILTY SAND with GRAVEL -Greyish brown, dry, loose -5% Cobbles	
1022				363-030	GW-GM		WELL-GRADED GRAVEL with SILT and SAND -Greyish brown, damp, loose -10-15% Cobbles	1
								2
1021							POORLY GRADED SAND with SILT -Brown, damp, loose	3
				363-031	SP-SM			
1020							END of HOLE -Target depth reached	4
		Highways and Public Works Transportation Engineering Branch			LOGGED BY: G. Kennedy		Termination Depth: 4m	
					COMPILED BY: M. Jubinville		Complete: 8/25/2015	
					REVIEWED BY: R. Stilwell		Pit #: 115A-23 Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5272					
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:					
Hitachi Ex200		Coordinates: Z08V N6749512.8m E348071.2m		ELEVATION: 1017m					
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE		
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■			Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100								
1017								ORGANICS	
1016.5					363-032	GP		POORLY GRADED GRAVEL with SAND -Greyish brown, damp, loose -5% Cobbles	1
1016								-Grey, 10-15% Cobbles	
1015.5					363-033	GP			2
1015									
1014.5									
1014									
1013.5					363-034	GP-GM		POORLY GRADED GRAVEL with SILT and SAND -Grey, damp, loose -10-15% Cobbles	3
1013								END of HOLE -Target depth reached	4
 Highways and Public Works Transportation Engineering Branch		LOGGED BY: G. Kennedy			Termination Depth: 4m				
		COMPILED BY: M. Jubinville			Complete: 8/25/2015				
		REVIEWED BY: R. Stilwell			Pit #: 115A-23 Page 1 of 1				

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 863-5273					
Source Motors Ltd.		Bear Creek Pit, km 1598.3 LHS		PROJECT NO:					
Hitachi Ex200		Coordinates: Z08V N6749588.6m E348069.1m		ELEVATION: 1016m					
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE		
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■			Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100								
1015					363-035	GW		ORGANICS	1
								WELL-GRADED GRAVEL with SAND -Greyish brown, damp, loose -5-10% Cobbles	
1014					363-036	GW		-Grey -10-15% Cobbles	2
1013								POORLY GRADED GRAVEL with SAND -Grey, damp, loose -10-15% Cobbles	3
1012					363-037	GP			4
								END of HOLE	
 Highways and Public Works Transportation Engineering Branch		LOGGED BY: G. Kennedy			Termination Depth: 4m				
		COMPILED BY: M. Jubinville			Complete: 8/25/2015				
		REVIEWED BY: R. Stilwell			Pit #: 115A-23				
							Page 1 of 1		

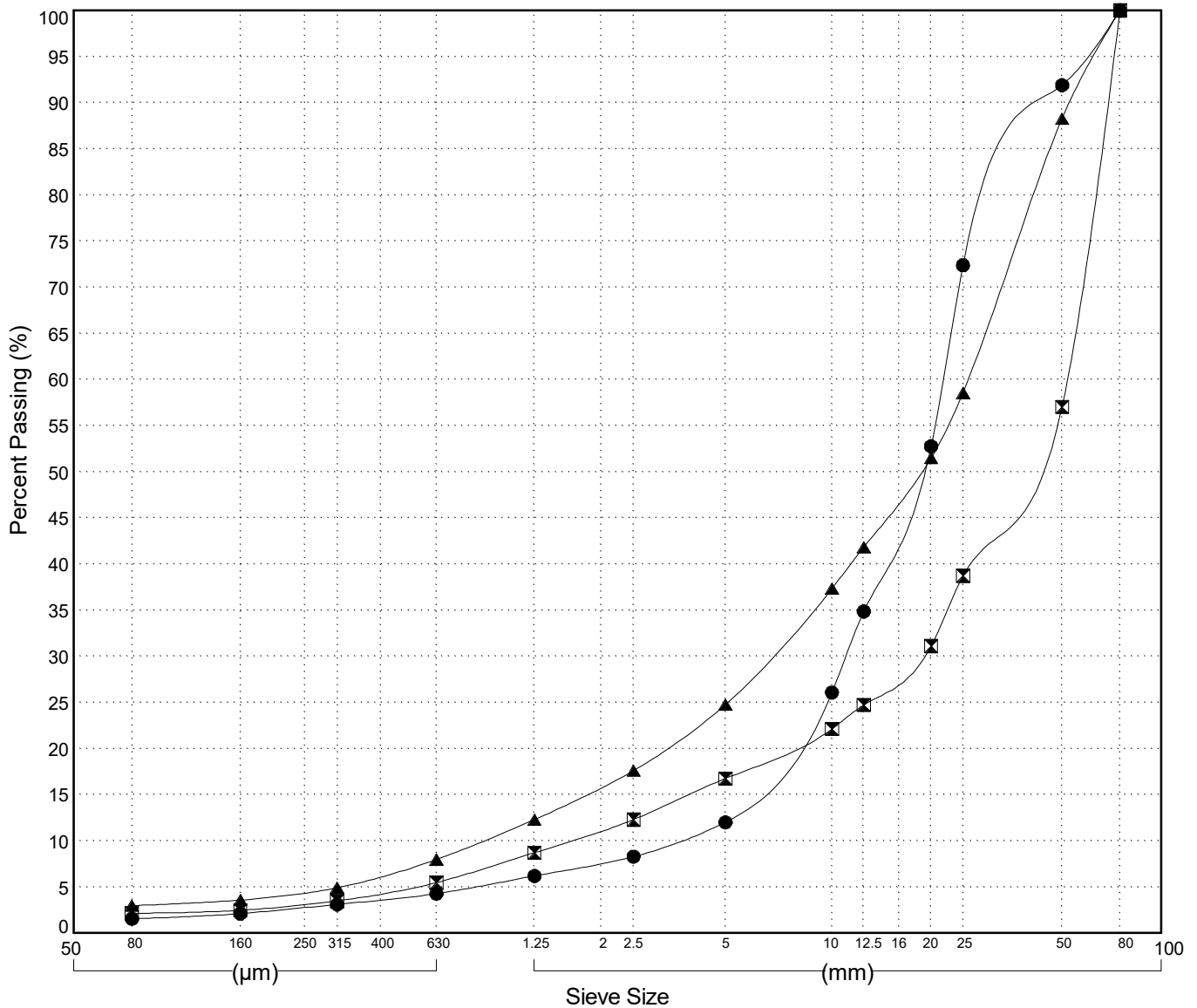
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5262
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates:Z08V N6749503m E348162.3m	ELEVATION: 1030m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-001	2015-0334	0.4 to 0.8	WELL-GRADED GRAVEL(GW)	3.5	NP	NP	NP	1.7	6.5
☒ 863-002	2015-0335	2.0 to 2.4	POORLY GRADED GRAVEL(GP)	2.3	NP	NP	NP	4.1	32.1
▲ 863-003	2015-0336	3.4 to 3.8	WELL-GRADED GRAVEL with SAND(GW)	4.6	NP	NP	NP	1.9	29.8

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/Clay
● 863-001	2015-0334	100.0	100.0	100.0	91.9	72.4	52.8	34.9	26.1	12.0	8.3	6.2	4.3	3.1	2.1	1.6	88.0	10.5	1.6
☒ 863-002	2015-0335	100.0	100.0	57.0	38.7	31.1	24.7	22.1	16.8	12.3	8.7	5.5	3.5	2.5	2.1	83.2	14.6	2.1	
▲ 863-003	2015-0336	100.0	100.0	88.3	58.6	51.5	41.8	37.3	24.8	17.6	12.3	8.0	4.9	3.6	3.0	75.2	21.8	3.0	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



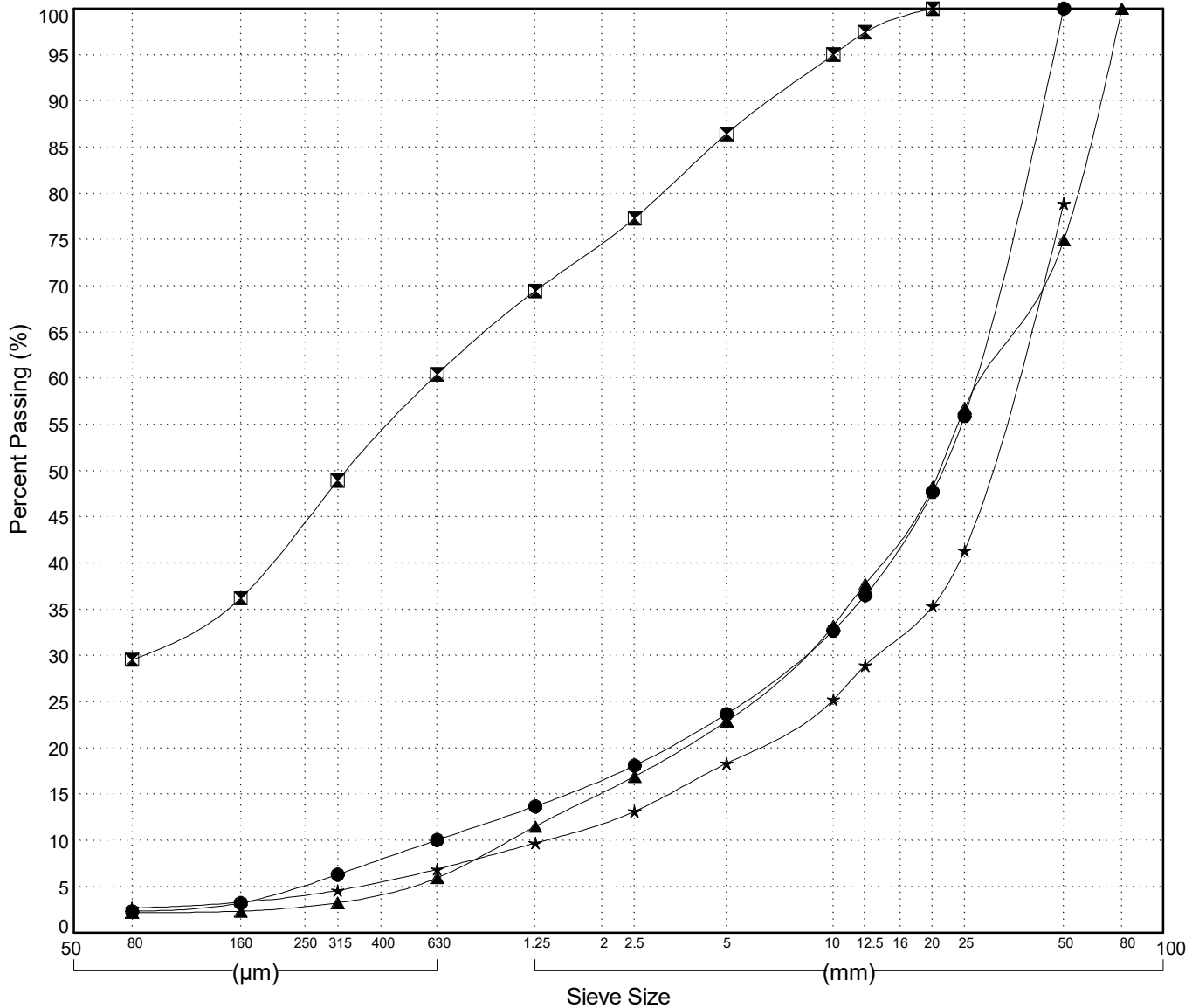
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5263
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates: Z08V N6749591.5m E348160.1m	ELEVATION: 1035m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H ₂ O	LL	PL	PI	C _c	C _u
● 863-004	2015-0337	0.2 to 0.6	POORLY GRADED GRAVEL with SAND(GP)	2.2	NP	NP	NP	3.8	42.8
☒ 863-005	2015-0338	0.8 to 1.2	SILTY SAND(SM)	12.1	NP	NP	NP		
▲ 863-006	2015-0339	1.4 to 1.8	WELL-GRADED GRAVEL with SAND(GW)	4.0	NP	NP	NP	2.1	27.3
★ 863-007	2015-0340	3.4 to 3.8	POORLY GRADED GRAVEL with SAND(GP)	3.2	NP	NP	NP	3.9	26.7

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
● 863-004	2015-0337	100.0	100.0	100.0	100.0	55.9	47.7	36.5	32.7	23.7	18.1	13.7	10.1	6.3	3.2	2.3	76.3	21.3	2.3	
☒ 863-005	2015-0338	100.0	100.0	100.0	100.0	100.0	97.4	95.0	86.5	77.3	69.5	60.4	48.9	36.2	29.6	13.5	56.9	29.6		
▲ 863-006	2015-0339	100.0	100.0	74.9	56.8	48.3	37.7	33.2	22.9	16.9	11.5	6.0	3.3	2.4	2.2	77.1	20.7	2.2		
★ 863-007	2015-0340	100.0	100.0	78.9	41.4	35.4	28.9	25.3	18.3	13.2	9.7	6.9	4.6	3.3	2.7	60.6	15.7	2.7		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



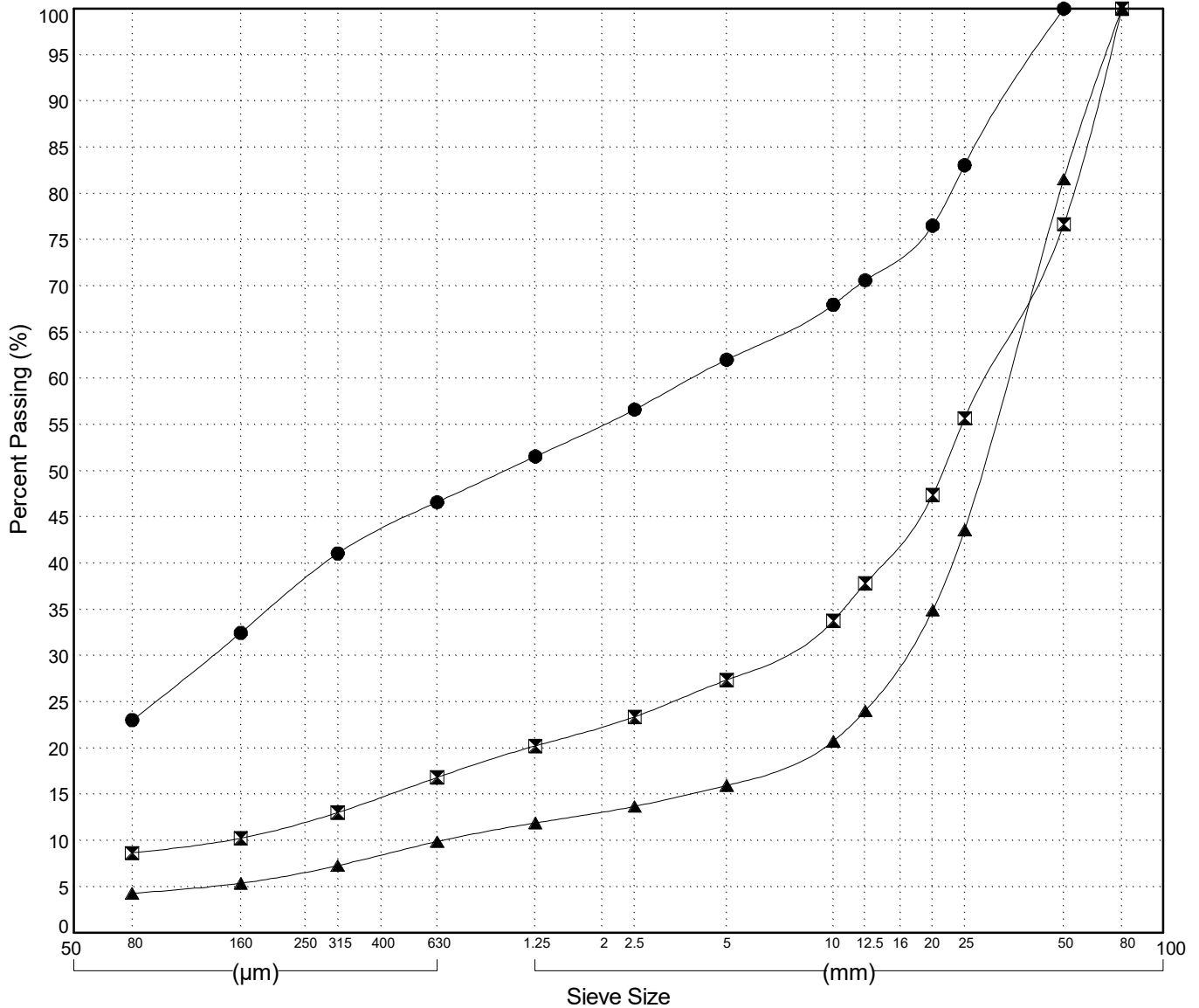
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5264
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates:Z08V N6749650.4m E348098.3m	ELEVATION: 1018m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-008	2015-0341	0.3 to 0.6	SILTY SAND with GRAVEL(SM)	6.6	NP	NP	NP		
☒ 863-009	2015-0342	2.0 to 2.4	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	6.0	NP	NP	NP	10.2	202.8
▲ 863-010	2015-0343	3.4 to 3.8	POORLY GRADED GRAVEL(GP)	4.5	NP	NP	NP	11.9	51.6

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
● 863-008	2015-0341	100.0	100.0	100.0	83.1	76.5	70.6	68.0	62.0	56.6	51.5	46.6	41.1	32.5	23.0	38.0	39.0	23.0	
☒ 863-009	2015-0342	100.0	100.0	76.7	55.7	47.4	37.8	33.8	27.4	23.4	20.2	16.8	13.0	10.2	8.7	72.6	18.7	8.7	
▲ 863-010	2015-0343	100.0	100.0	81.6	43.6	34.9	24.0	20.8	16.0	13.7	11.9	9.9	7.3	5.4	4.3	84.0	11.7	4.3	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



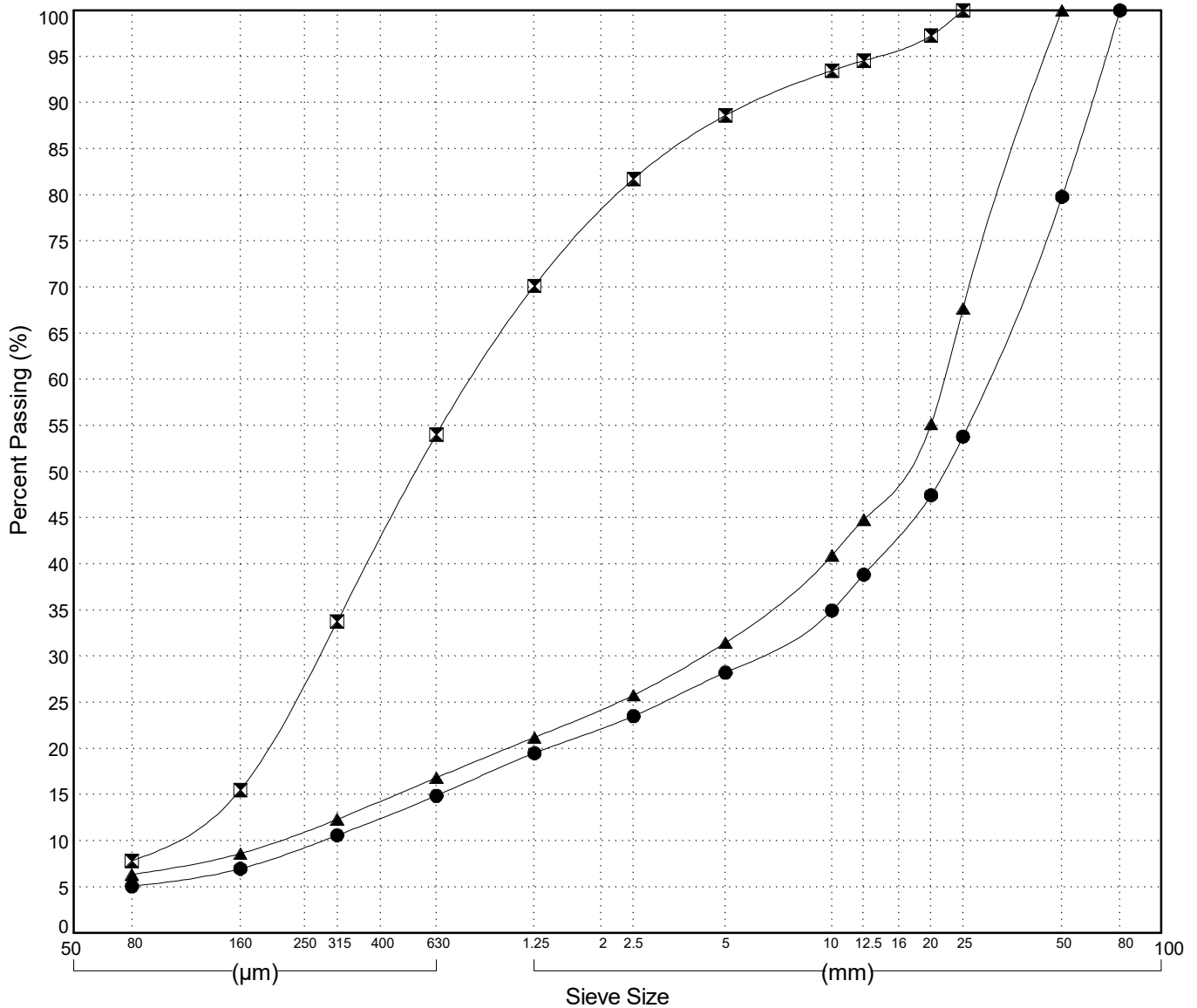
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5265
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates:Z08V N6749613.1m E347967.9m	ELEVATION: 933m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-011	2015-0344	0.3 to 0.6	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	4.1	NP	NP	NP	4.0	104.8
☒ 863-012	2015-0345	1.9 to 2.3	POORLY GRADED SAND with SILT(SP-SM)	5.6	NP	NP	NP	1.0	8.7
▲ 863-013	2015-0346	3.4 to 3.8	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	4.5	NP	NP	NP	3.6	105.8

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
● 863-011	2015-0344	100.0	100.0	79.8	53.8	47.5	38.8	35.0	28.2	23.5	19.5	14.9	10.6	7.0	5.1	71.8	23.2	5.1
☒ 863-012	2015-0345	100.0	100.0	100.0	100.0	97.3	94.6	93.5	88.6	81.7	70.1	54.0	33.8	15.5	7.8	11.4	80.8	7.8
▲ 863-013	2015-0346	100.0	100.0	100.0	67.7	55.2	44.8	40.9	31.5	25.8	21.2	16.8	12.3	8.6	6.4	68.5	25.1	6.4

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



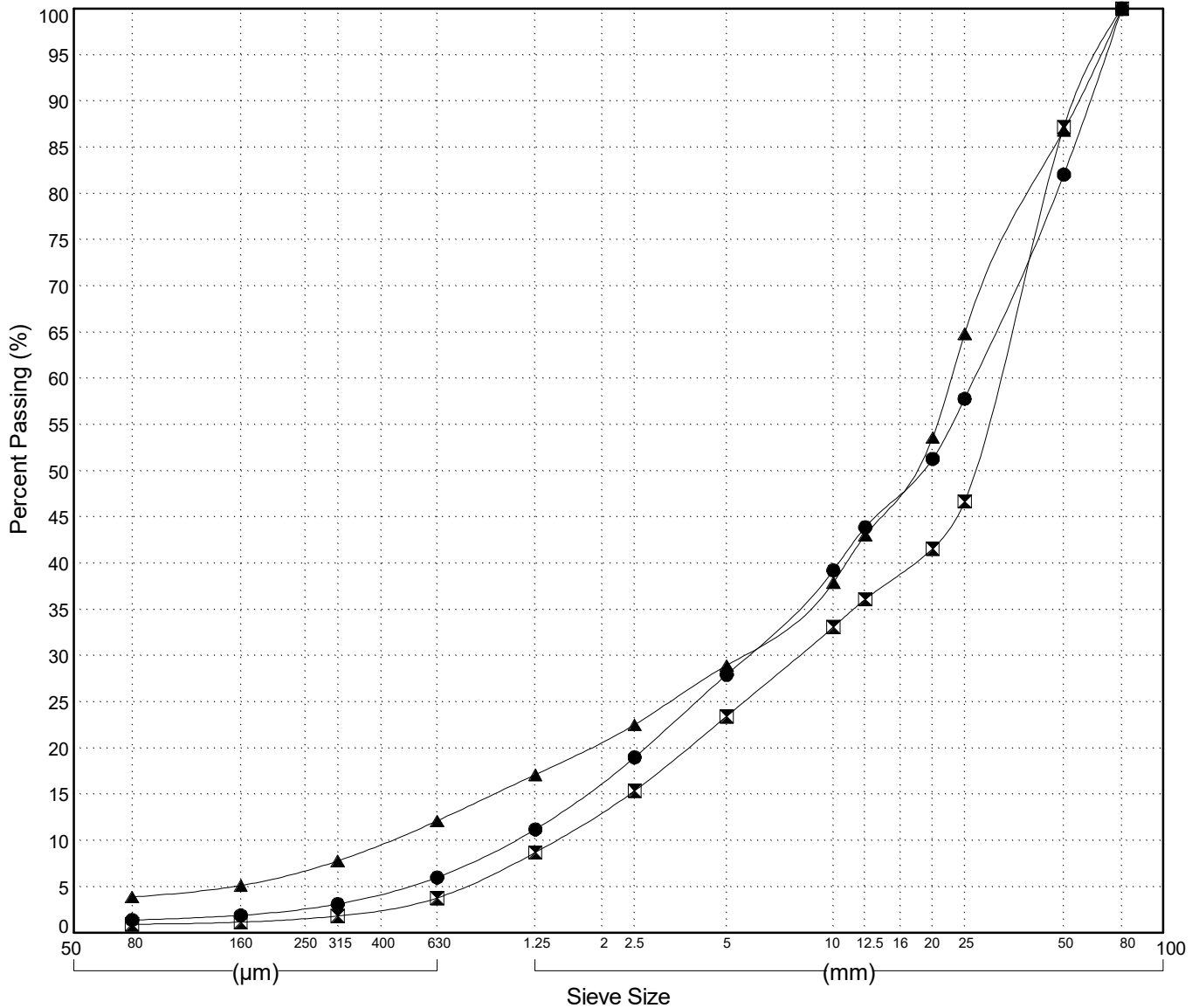
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5266
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates: Z08V N6749563.3m E347888.3m	ELEVATION: 1006m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-014	2015-0347	0.3 to 0.6	WELL-GRADED GRAVEL with SAND(GW)	1.7	NP	NP	NP	1.0	25.0
☒ 863-015	2015-0348	2.0 to 2.4	WELL-GRADED GRAVEL with SAND(GW)	1.0	NP	NP	NP	1.4	22.0
▲ 863-016	2015-0349	3.4 to 3.8	WELL-GRADED GRAVEL with SAND(GW)	2.8	NP	NP	NP	2.6	50.7

Field#	Lab#	% PASSING	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		
			Gravel	Sand	Silt	Clay													
● 863-014	2015-0347	100.0	100.0	82.1	57.8	51.3	43.9	39.2	27.9	19.0	11.2	6.0	3.1	1.9	1.4	72.1	26.5	1.4	
☒ 863-015	2015-0348	100.0	100.0	87.2	46.7	41.6	36.1	33.1	23.4	15.4	8.7	3.8	1.8	1.2	0.9	76.6	22.5	0.9	
▲ 863-016	2015-0349	100.0	100.0	86.8	64.8	53.6	43.0	37.9	28.9	22.5	17.1	12.1	7.8	5.1	3.9	71.1	25.1	3.9	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works
Transportation Engineering Branch

LOGGED BY: G. Kennedy
COMPILED BY: M. Jubinville
REVIEWED BY: R. Stilwell

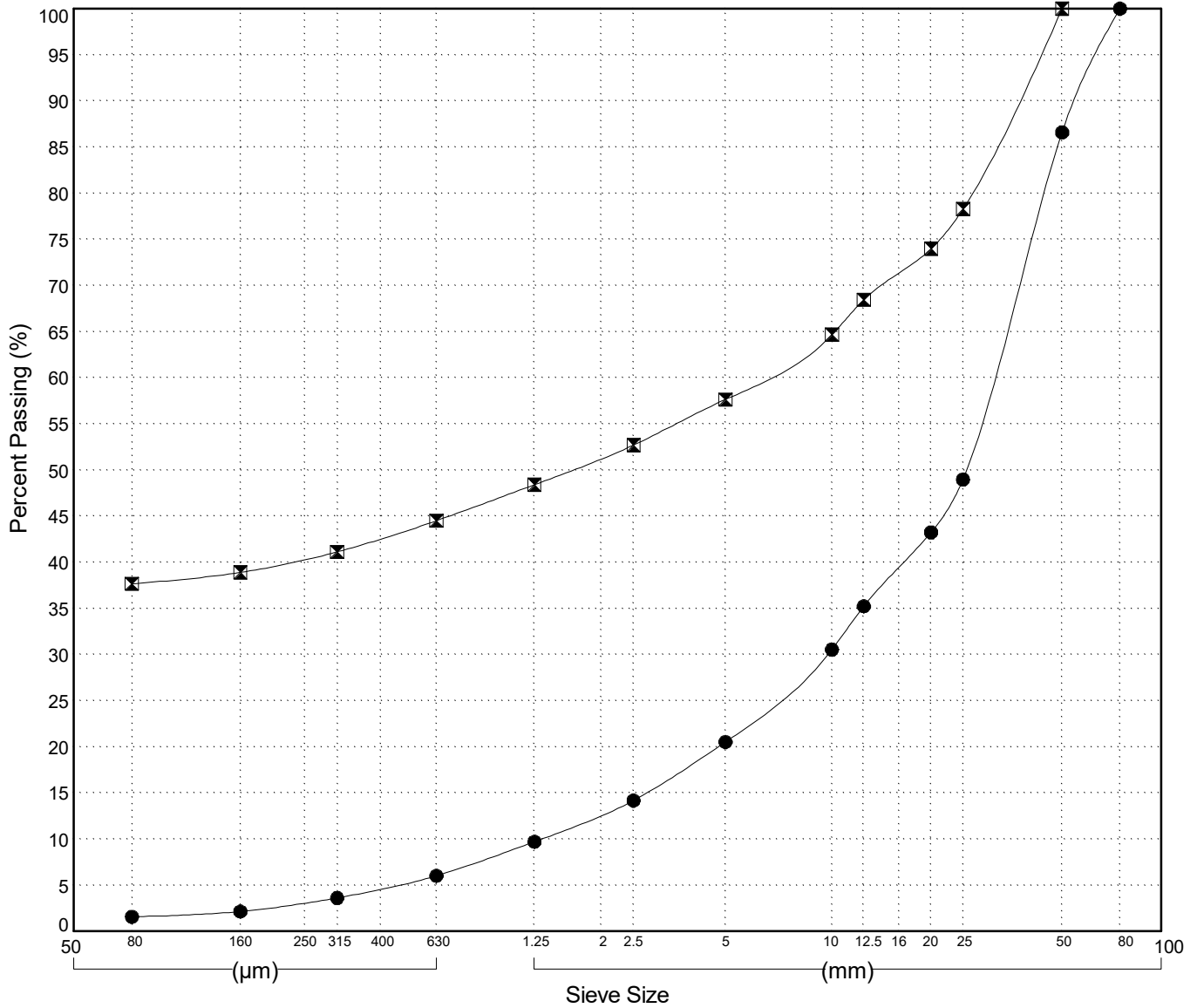
Pit # 115A-23
Complete: 8/25/2015

GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5267
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates:Z08V N6749473.4m E347770.1m	ELEVATION: 1023m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu											
● 863-017	2015-0350	0.3 to 0.6	WELL-GRADED GRAVEL with SAND(GW)	2.1	NP	NP	NP	2.3	23.5											
☒ 863-019	2015-0352	3.3 to 3.6	SILTY GRAVEL with SAND(GM)	2.5	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				
● 863-017	2015-0350	100.0	100.0	86.6	49.0	43.2	35.2	30.5	20.5	14.2	9.7	6.0	3.6	2.2	1.6	Gravel	Sand	Silt	Clay	
☒ 863-019	2015-0352	100.0	100.0	100.0	78.3	74.0	68.4	64.7	57.6	52.7	48.4	44.5	41.1	38.9	37.7	42.4	18.9	37.7	1.6	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



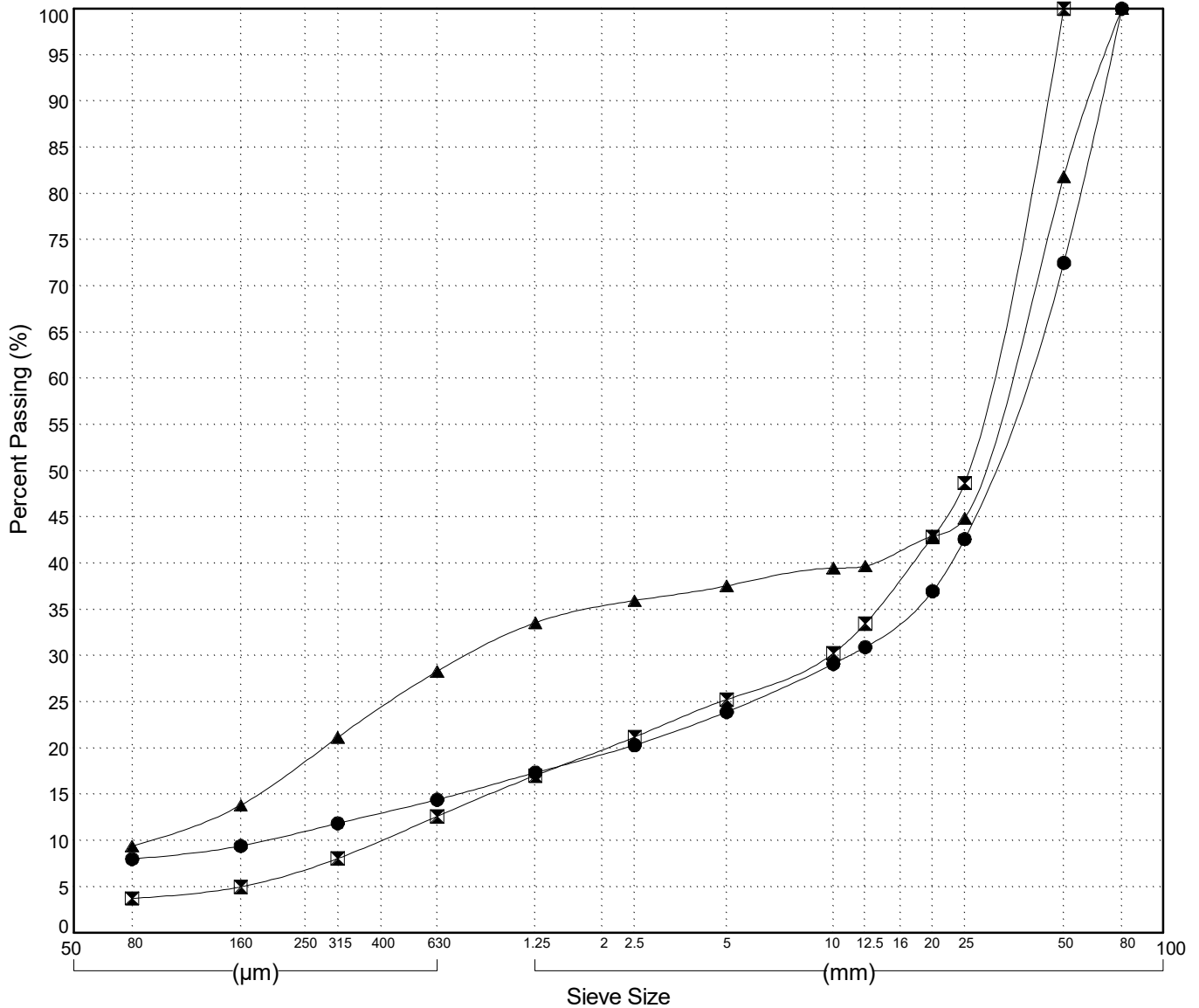
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5268
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates: Z08V N6749385.6m E347722.8m	ELEVATION: 1032m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-020	2015-0353	0.3 to 0.6	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	6.1	NP	NP	NP	17.7	198.9
☒ 863-021	2015-0354	1.6 to 2.0	POORLY GRADED GRAVEL with SAND(GP)	2.7	NP	NP	NP	7.5	68.9
▲ 863-022	2015-0355	3.4 to 3.8	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	6.1	NP	NP	NP	0.2	400.0

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
● 863-020	2015-0353	100.0	100.0	72.5	42.6	37.0	30.9	29.1	23.9	20.3	17.4	14.4	11.9	9.4	8.0	76.1	15.9	8.0
☒ 863-021	2015-0354	100.0	100.0	100.0	48.7	42.9	33.5	30.3	25.3	21.2	17.0	12.6	8.1	5.0	3.7	74.7	21.5	3.7
▲ 863-022	2015-0355	100.0	100.0	81.8	44.9	42.9	39.7	39.5	37.5	36.0	33.6	28.3	21.2	13.8	9.4	62.5	28.1	9.4

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



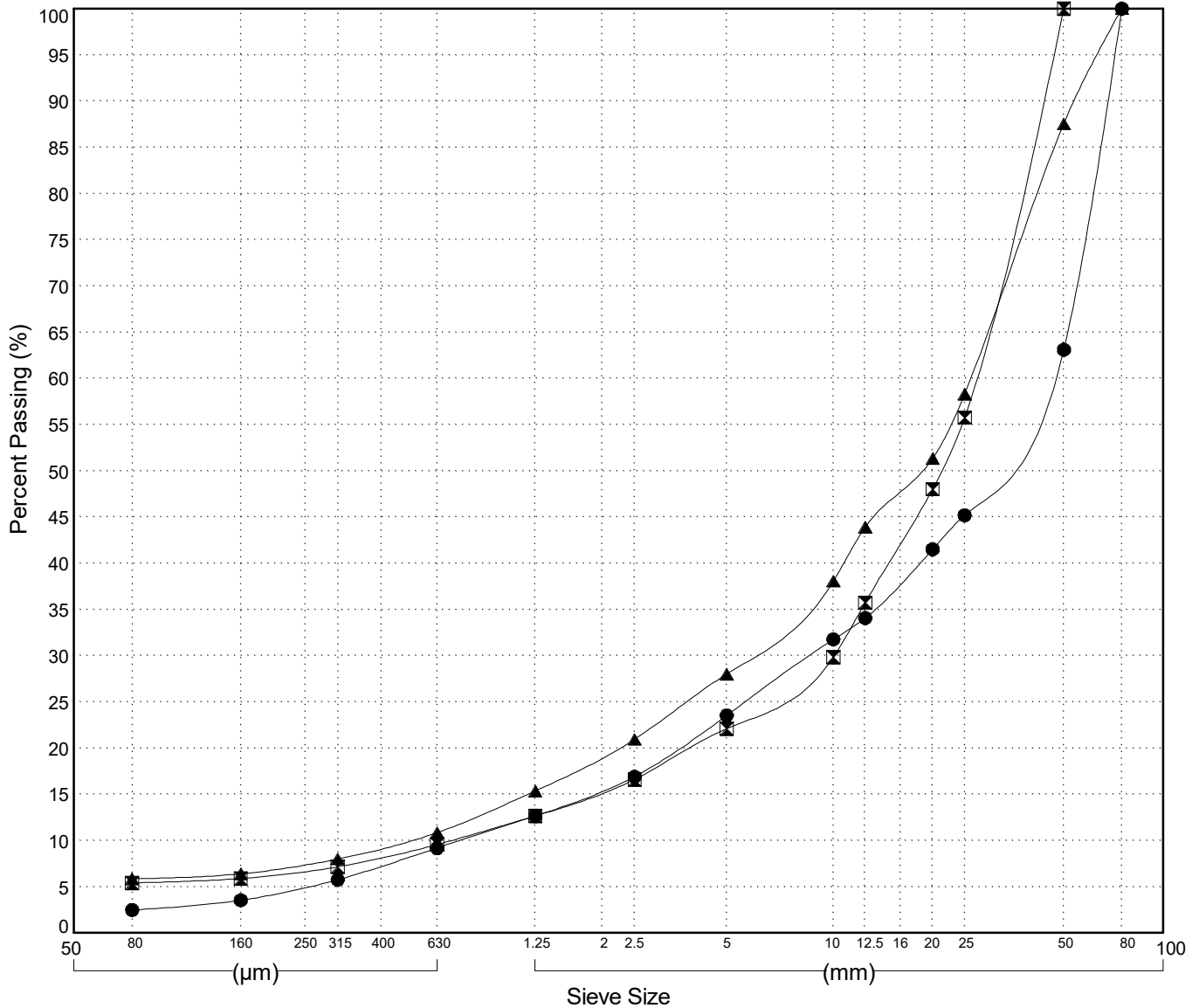
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5269
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates:Z08V N6749297m E347709.6m	ELEVATION: 1038m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-023	2015-0356	0.3 to 0.6	WELL-GRADED GRAVEL with SAND(GW)	2.5	NP	NP	NP	2.2	60.0
☒ 863-024	2015-0357	2.0 to 2.4	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	2.4	NP	NP	NP	5.5	38.6
▲ 863-025	2015-0358	3.6 to 4.0	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	2.6	NP	NP	NP	2.3	50.8

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
● 863-023	2015-0356	100.0	100.0	63.1	45.2	41.5	34.1	31.8	23.5	16.9	12.7	9.2	5.8	3.5	2.5	76.5	21.0	2.5
☒ 863-024	2015-0357	100.0	100.0	100.0	55.8	48.0	35.7	29.8	22.1	16.6	12.7	9.6	7.2	5.9	5.4	77.9	16.7	5.4
▲ 863-025	2015-0358	100.0	100.0	87.6	58.3	51.3	43.9	38.1	28.0	21.0	15.4	10.8	8.0	6.4	5.9	72.0	22.1	5.9

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



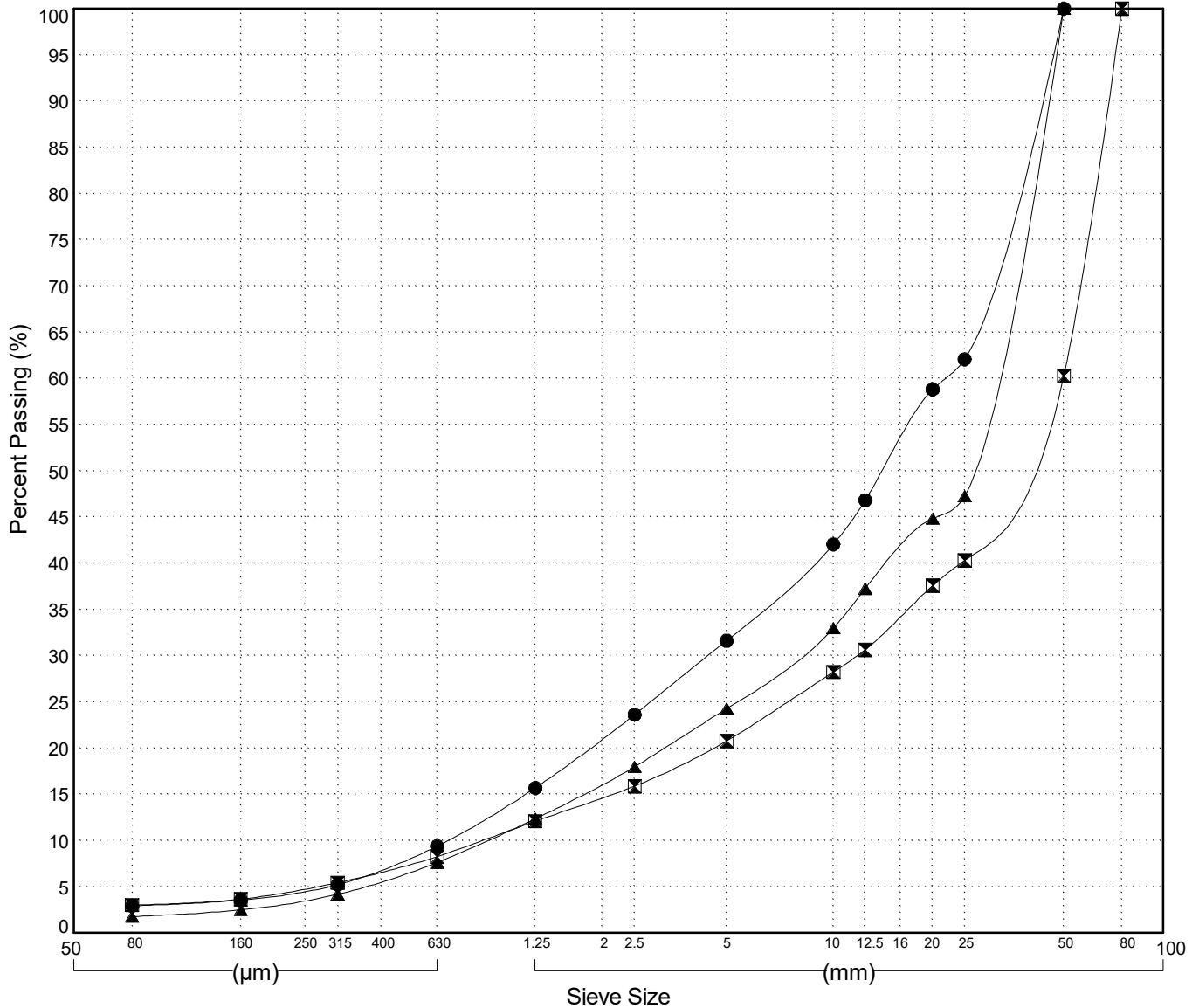
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5270
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates:Z08V N6749484.5m E347878.8m	ELEVATION: 1030m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-026	2015-0359	0.5 to 0.8	WELL-GRADED GRAVEL with SAND(GW)	2.3	NP	NP	NP	1.2	32.2
☒ 863-027	2015-0360	2.0 to 2.4	POORLY GRADED GRAVEL with SAND(GP)	2.2	NP	NP	NP	3.3	57.7
▲ 863-028	2015-0361	3.6 to 4.0	WELL-GRADED GRAVEL with SAND(GW)	2.0	NP	NP	NP	2.3	33.2

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			
		% PASSING														Gravel	Sand	Silt	Clay
● 863-026	2015-0359	100.0	100.0	100.0	62.1	58.8	46.8	42.0	31.6	23.6	15.7	9.4	5.2	3.6	2.9	68.4	28.7	2.9	
☒ 863-027	2015-0360	100.0	100.0	60.3	40.3	37.6	30.6	28.2	20.8	15.9	12.1	8.3	5.4	3.7	3.0	79.2	17.8	3.0	
▲ 863-028	2015-0361	100.0	100.0	100.0	47.3	44.8	37.2	33.0	24.3	18.0	12.4	7.6	4.2	2.5	1.8	75.7	22.5	1.8	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



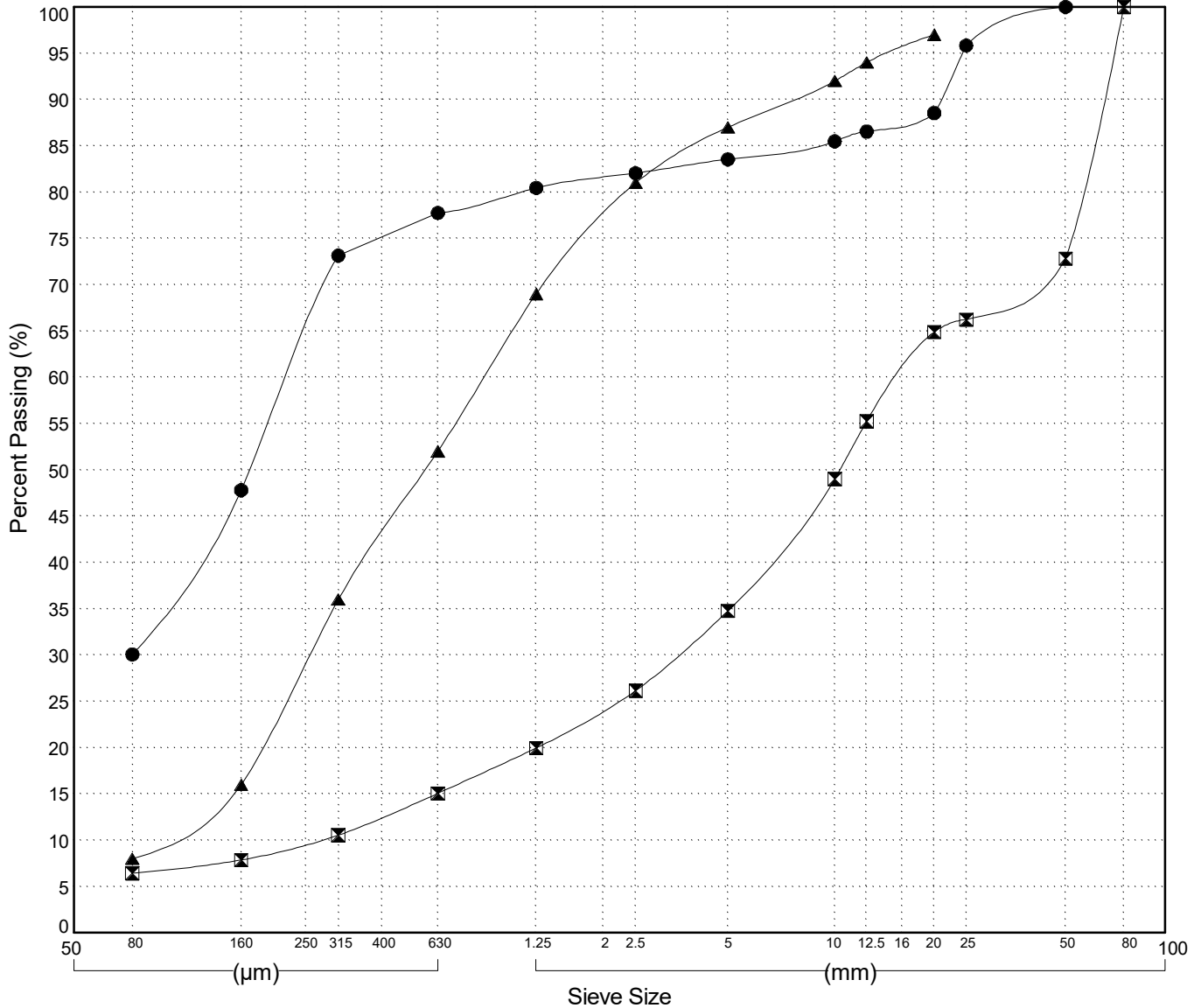
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5271
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates: Z08V N6749516.3m E347993.3m	ELEVATION: 1024m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-029	2015-0362	0.3 to 0.6	SILTY SAND with GRAVEL(SM)	19.5	NP	NP	NP		
☒ 863-030	2015-0363	1.0 to 1.4	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	2.5	NP	NP	NP	2.6	57.5
▲ 863-031	2015-0364	3.4 to 3.8	POORLY GRADED SAND with SILT(SP-SM)	2.2	NP	NP	NP	0.8	9.6

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
● 863-029	2015-0362	100.0	100.0	100.0	100.0	95.8	88.5	86.5	85.5	83.5	82.0	80.4	77.8	73.1	47.8	30.1	16.5	53.5	30.1	
☒ 863-030	2015-0363	100.0	100.0	72.8	66.2	64.9	55.3	49.0	34.8	26.2	20.0	15.1	10.6	7.9	6.4	65.2	28.3	6.4		
▲ 863-031	2015-0364	100.0	100.0	100.0	100.0	97.0	94.0	92.0	87.0	81.0	69.0	52.0	36.0	16.0	8.0	10.0	79.0	8.0		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



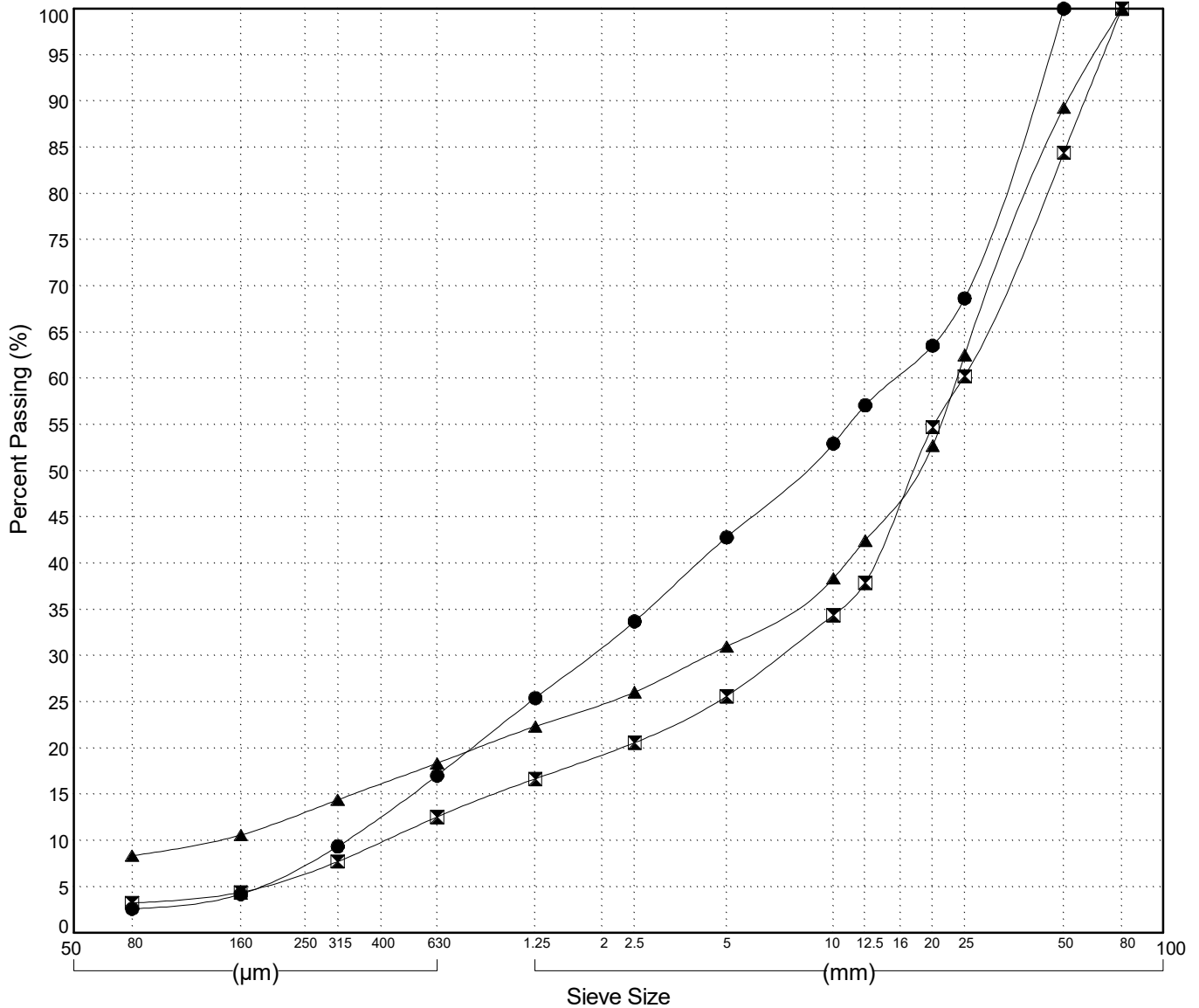
GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5272
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates:Z08V N6749512.8m E348071.2m	ELEVATION: 1017m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-032	2015-0365	0.3 to 0.6	POORLY GRADED GRAVEL with SAND(GP)	4.8	NP	NP	NP	0.7	46.3
☒ 863-033	2015-0366	1.0 to 1.4	POORLY GRADED GRAVEL with SAND(GP)	0.9	NP	NP	NP	4.4	56.7
▲ 863-034	2015-0367	3.4 to 3.8	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	6.3	NP	NP	NP	5.7	181.0

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			
		% PASSING														Gravel	Sand	Silt	Clay
● 863-032	2015-0365	100.0	100.0	100.0	68.7	63.5	57.1	52.9	42.8	33.7	25.4	17.0	9.4	4.2	2.6	57.2	40.2	2.6	
☒ 863-033	2015-0366	100.0	100.0	84.4	60.2	54.7	37.9	34.4	25.6	20.6	16.7	12.6	7.7	4.4	3.3	74.4	22.3	3.3	
▲ 863-034	2015-0367	100.0	100.0	89.3	62.5	52.7	42.5	38.4	31.0	26.1	22.3	18.4	14.4	10.6	8.4	69.0	22.6	8.4	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Bear Creek Pit	SOURCE/TP#: 863-5273
Source Motors Ltd.	km 1598.3 LHS	PROJECT NO:
Hitachi Ex200	Coordinates:Z08V N6749588.6m E348069.1m	ELEVATION: 1016m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 863-035	2015-0368	0.3 to 0.6	WELL-GRADED GRAVEL with SAND(GW)	1.5	NP	NP	NP	1.2	18.8
☒ 863-036	2015-0369	1.4 to 1.8	WELL-GRADED GRAVEL with SAND(GW)	2.4	NP	NP	NP	1.2	56.7
▲ 863-037	2015-0370	3.4 to 3.8	POORLY GRADED GRAVEL with SAND(GP)	2.3	NP	NP	NP	3.1	42.1

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
● 863-035	2015-0368	100.0	100.0	100.0	79.2	69.7	56.0	49.9	35.0	23.0	16.1	7.6	4.2	2.3	2.0	65.0	33.0	2.0
☒ 863-036	2015-0369	100.0	100.0	79.3	52.6	49.0	42.8	39.5	30.6	24.0	17.7	11.2	6.2	4.0	3.1	69.4	27.5	3.1
▲ 863-037	2015-0370	100.0	100.0	82.3	54.6	46.5	37.4	32.6	24.7	19.5	14.7	9.4	5.7	3.6	2.9	75.3	21.8	2.9

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

