

## **APPENDIX C**

### **PREVIOUS SUBSURFACE INFORMATION**



# PRELIMINARY BORING LOG

BORING NO.: **B-T5**  
 SHEET: 1 OF 2  
 PROJECT NO.: 10-0014.2  
 DATE START: 11/1/2012  
 DATE FINISH: 11/1/2012  
 ELEVATION: ±1400'  
 SWC REP.: PJO

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO.: NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	NW	3"	140 LBS	30"
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 WATER IN OPEN BORE HOLE AT 7.5'  
 ON 11/1/2012 AND 10.8' ON 11/6/2012

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
NW									0.3'	FOREST DUFF
	1D	24"	24"	2.0'	1	2	3	10	1.5'	DARK BROWN SANDY SILT WITH ORGANICS ~LOOSE~
									4.4'	LIGHT BROWN GRAVELLY SAND AND SILT (GLACIAL TILL)
										BROWN GRAVELLY SAND AND SILT WITH COBBLES (GLACIAL TILL)
									11.5'	~VERY DENSE~ w=9.0%
	2D	24"	18"	12.0'	20	18	29	50		
									17.3'	WEATHERED BEDROCK (SAPROLITE)
	3D	12"	10"	16.0'	41	63				~VERY DENSE~ w=9.1%
									22.0'	LIGHT GRAY META SANDSTONE; MEDIUM TO MODERATELY HARD; FINE GRAINED; SLIGHTLY WEATHERED, CORE AND FRACTURES STAINED WITH IRON OXIDE. CLOSELY SPACED MODERATE TO STEEP ANGLED FRACTURES AT 35-85 DEGREES. RQD = 11% (VERY POOR)
	R1	4.7'	2.6'	22.0'					25.0'	SAME ROCK DESCRIPTION AS R1; SLIGHTLY WEATHERED, FRACTURES AND EXTERIOR OF CORE STAINED WITH IRON OXIDE. STEEP FRACTURE ANGLES AT 55-85 DEGREES FROM HORIZONTAL. RQD = 68% (FAIR)
	R2	3.0'	3.0'	25.0'					27.0'	HIGHLY FRAGMENTED ZONE. RQD = 0% (VERY POOR)
	R3	2.0'	1.0'	27.0'					30.4'	SAME ROCK DESCRIPTION AS R1; CLOSELY SPACED FRACTURES STAINED WITH IRON OXIDE AT 35-85 DEGREES FROM HORIZONTAL. RQD = 29% (POOR)
	R4	3.4'	3.4'	30.4'					33.8'	SAME ROCK DESCRIPTION AS R1; SLIGHTLY WEATHERED, IRON OXIDE STAINED. SHALLOW TO STEEP FRACTURE ANGLES AT 20-75 DEGREES FROM HORIZONTAL. RQD = 50% (POOR TO FAIR) CONTAINS QUARTZ VEINS.
	R5	3.4'	3.4'	33.8'					37.5'	SAME ROCK DESCRIPTION AS R1; SLIGHTLY WEATHERED, IRON OXIDE STAINED FRACTURES DIP BETWEEN 5 TO 75 DEGREES FROM HORIZONTAL. HEALED CRACKS DIP 20-45 DEGREES FROM HORIZONTAL. CONTAINS QUARTZ VEINS. RQD = 42% (POOR)
	R6	3.7'	3.7'	37.5'					40.0'	

SAMPLES: D = SPLIT SPOON  
 C = 2" SHELBY TUBE  
 S = 3" SHELBY TUBE  
 U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:  
 DRILLER - VISUALLY  
 SOIL TECH. - VISUALLY  
 LABORATORY TEST

REMARKS:  
 STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-T5**



# PRELIMINARY BORING LOG

BORING NO.: **B-T5**  
 SHEET: **2 OF 2**  
 PROJECT NO.: **10-0014.2**  
 DATE START: **11/1/2012**  
 DATE FINISH: **11/1/2012**  
 ELEVATION: **±1400'**  
 SWC REP.: **PJO**

PROJECT / CLIENT: **PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.**  
 LOCATION: **BINGHAM, MAINE**  
 DRILLING CO.: **NORTHERN TEST BORINGS, INC.** DRILLER: **MIKE NADEAU**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	NW	3"	140 LBS	30"
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 WATER IN OPEN BORE HOLE AT 7.5'  
 ON 11/1/2012 AND 10.8' ON 11/6/2012

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
	R7	3.5'	3.5'	41.0'					41.0'	RQD = 36% (POOR)
										GRAY META SANDSTONE; SAME ROCK DESCRIPTION AS R1; CLOSELY SPACED, SHALLOW TO MODERATELY DIPPING FRACTURE ANGLES AT 5 TO 65 DEGREES. EXTERIOR OF CORE AND FRACTURE SURFACES STAINED WITH IRON OXIDE. CONTAINS QUARTZ VEINS.
	R8	5.1'	5.1'	46.1'					46.1'	RQD = 47% (POOR)
										SAME ROCK DESCRIPTION AS R1; SLIGHTLY WEATHERED, CORE AND FRACTURE SURFACES STAINED WITH IRON OXIDE. MODERATE TO CLOSELY SPACED FRACTURES AT 0, 10 AND 90 FROM HORIZONTAL. CONTAINS QUARTZ VEINS.
	R9	5.1'	5.0'	51.2'					51.2'	RQD = 32% (POOR)
										SAME ROCK DESCRIPTION AS R1; SLIGHTLY WEATHERED, IRON OXIDE STAINED. SHALLOW TO STEEP FRACTURE ANGLES AT 5, 45, 65 AND 90 DEGREES.
	R10	3.8'	3.8'	55.0'					55.0'	RQD = 45% (POOR)
										BOTTOM OF EXPLORATION AT 55.0'

SAMPLES: D = SPLIT SPOON  
 C = 2" SHELBY TUBE  
 S = 3" SHELBY TUBE  
 U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

<input type="checkbox"/>	DRILLER - VISUALLY
<input checked="" type="checkbox"/>	SOIL TECH. - VISUALLY
<input checked="" type="checkbox"/>	LABORATORY TEST

REMARKS: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-T5**



B-T5 R1 TO R6 (17.3'-37.5')



B-T5 R7 TO R10 (37.5'-55')



# PRELIMINARY BORING LOG

BORING NO.: **B-T12**  
 SHEET: 1 OF 2  
 PROJECT NO.: 10-0014.2  
 DATE START: 11/1/2012  
 DATE FINISH: 11/1/2012  
 ELEVATION: ±1506'  
 SWC REP.: PJO

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO.: NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	130LB	30"
SAMPLER:	SS	1 3/8"	130LB	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 SOILS APPEARED SATURATED AT 6.0'

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
HW									0.4'	FOREST DUFF
	1D	24"	14"	2.0'	1	7	9	12	1.7'	DARK BROWN SANDY SILT WITH ORGANICS ~LOOSE~
										BROWN GRAVELLY SILTY SAND WITH ROOTLETS TO 24" (GLACIAL TILL)
										~MEDIUM DENSE~ w=14.4%
	2D	24"	24"	7.0'	6	7	8	8	9.0'	
										GRAYISH BROWN GRAVELLY SAND AND SILT (GLACIAL TILL)
										~DENSE BECOMING... w=14.0%
										...VERY DENSE~ w=11.7%
	3D	24"	24"	12.0'	11	20	28	32	20.0'	
										GRAY GRAVELLY SAND AND SILT (GLACIAL TILL) WITH COBBLES AND BOULDERS
										w=9.7%
										~VERY DENSE~ w=10.9%
										w=14.2%
	4D	24"	24"	17.0'	26	36	42	59		
										ROLLER CONE THROUGH BOULDER FROM 34.4' TO 35'
										CORED THROUGH BOULDER FROM 35' TO 36'
										w=14.7%
	5D	5"	5"	20.4'	50/5"				40.0'	
	6D	18"	18"	26.5'	22	27	38			
	7D	10"	10"	30.9'	47	50/4"				
	8D	10"	8"	36.8'	52	50/4"				

SAMPLES: D = SPLIT SPOON  
 C = 2" SHELBY TUBE  
 S = 3" SHELBY TUBE  
 U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:  
 DRILLER - VISUALLY  
 SOIL TECH. - VISUALLY  
 LABORATORY TEST

REMARKS: SOILS SATURATED AT 5'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-T12**



# PRELIMINARY BORING LOG

BORING NO.: **B-T12**  
 SHEET: **2 OF 2**  
 PROJECT NO.: **10-0014.2**  
 DATE START: **11/1/2012**  
 DATE FINISH: **11/1/2012**  
 ELEVATION: **±1506'**  
 SWC REP.: **PJO**

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO.: NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	130LB	30"
SAMPLER:	SS	1 3/8"	130LB	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 SOILS APPEARED SATURATED AT 6.0'

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
									42.4'	GRAY GRAVELLY SAND AND SILT (GLACIAL TILL) WITH COBBLES AND BOULDERS
	9D	5"	5"	42.4'	50/5"					
										GRAYISH BROWN GRAVELLY SAND AND SILT PROBABLE WEATHERED ROCK (SAPROLITE) ~VERY DENSE~
	10D	6"	6"	47.5'	75					
									52.5'	
									54.0'	PROBABLE BEDROCK / ADVANCED BY ROLLER CONE TO 54.0'
	R1	1.5'	0.9'	55.5'					55.5'	GRAY PELITE / META SANDSTONE RQD = 25% (VERY POOR TO POOR)
										BOTTOM OF EXPLORATION AT 55.5'

SAMPLES: D = SPLIT SPOON C = 2" SHELBY TUBE S = 3" SHELBY TUBE U = 3.5" SHELBY TUBE	SOIL CLASSIFIED BY: <input type="checkbox"/> DRILLER - VISUALLY <input checked="" type="checkbox"/> SOIL TECH. - VISUALLY <input checked="" type="checkbox"/> LABORATORY TEST	REMARKS: SOILS SATURATED AT 5.0'  STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.	BORING NO.: <b>B-T12</b>
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**B-T12 R1 (54.0'-55')**



# PRELIMINARY BORING LOG

BORING NO.: **B-T28**  
 SHEET: 1 OF 2  
 PROJECT NO.: 10-0014.2  
 DATE START: 10/29/2012  
 DATE FINISH: 10/29/2012  
 ELEVATION: ±1513'  
 SWC REP.: PJO

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO.: NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	130LB	30"
SAMPLER:	SS	1 3/8"	130LB	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 SOILS APPEAR WET TO SATURATED AT 6.0'

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
HW									0.4'	FOREST DUFF
	1D	24"	24"	2.0'	1	1	3	3	2.0'	BROWN SANDY SILT WITH ORGANICS -LOOSE- w=21.0%
										LIGHT BROWN GRAVELLY SAND AND SILT (GLACIAL TILL)
										-MEDIUM DENSE- w=12.7%
	2D	24"	12"	7.0'	7	8	13	9	9.0'	
	R1	1.0'	1.0'	10.0'					10.0'	RQD = 33% (POOR) GRAY PELITE / META SANDSTONE
	R2	0.7'	0.6'	10.7'					10.7'	RQD = 0% (VERY POOR) HIGHLY FRACTURED ZONE
	R3	0.6'	0.6'	11.3'					11.3'	RQD = 55% (FAIR)
										CLOSELY SPACED FRACTURES STAINED WITH IRON OXIDE.
	R4	2.7'	2.5'	14.0'					14.0'	RQD = 16% (VERY POOR)
										GRAY PELITE; MEDIUM HARD; FINE GRAINED; SLIGHTLY WEATHERED, SHALLOW TO STEEP FRACTURE ANGLES AT 20-75 DEGREES FROM HORIZONTAL. FOLIATION PARALLELS AND CROSS CUTS FRACTURES.
	R5	3.0'	3.0'	17.0'					17.0'	RQD = 61% (FAIR)
										MODERATE TO STEEP FRACTURE ANGLES AT 45-85 DEGREES FROM HORIZONTAL.
	R6	2.0'	2.0'	19.0'					19.0'	RQD = 64% (FAIR)
										CLOSELY SPACED MODERATE TO STEEP FRACTURE ANGLES
	R7	1.7'	1.7'	20.7'					20.7'	RQD = 53% (FAIR)
										STAINED WITH IRON OXIDE.
										SLIGHTLY WEATHERED, FRACTURE SURFACES IRON OXIDE STAINED.
	R8	3.3'	3.3'	24.0'					24.0'	RQD = 76% (GOOD)
										SHALLOW TO MODERATE ANGLED FRACTURES AT 10-50 DEGREES. STEEP ANGLED FOLIATION AT 60-70 DEGREES.
										CLOSELY SPACED VERTICLE FRACTURES.
	R9	2.0'	2.0'	26.0'					26.0'	RQD = 30% (POOR)
										SAME ROCK DESCRIPTION AS R5; FOLIATION GENERALLY PARALLELS STEEP FRACTURE SETS AT 60-70 DEGREES.
	R10	3.0'	3.0'	29.0'					29.0'	RQD = 77% (GOOD)
										SAME AS R10; QUARTZ VEINS CROSS CUTTING FOLIATION.
	R11	2.0'	2.0'	31.0'					31.0'	RQD = 50% (FAIR TO GOOD)
										STEEP FRACTURES GENERALLY PARALLEL FOLIATION AT 60-75 DEGREES. IRON OXIDE STAINED.
	R12	2.0'	2.0'	33.0'					33.0'	RQD = 20% (VERY POOR)
										SEVERAL MECHANICAL FRACTURES.
	R13	1.7'	1.7'	34.7'					34.7'	RQD = 71% (FAIR)
										FOLIATION PARALLELS STEEP ANGLED FRACTURES AT 60-80 DEGREES
	R14	2.0'	2.0'	36.7'					36.7'	RQD = 55% (FAIR)
										FROM HORIZONTAL.
										MODERATELY SPACED, STEEP ANGLED FRACTURES
	R15	2.3'	2.3'	39.0'					39.0'	RQD = 52% (FAIR)
									40.0'	AT 60-80 DEGREES FROM HORIZONTAL.

SAMPLES: D = SPLIT SPOON  
 C = 2" SHELBY TUBE  
 S = 3" SHELBY TUBE  
 U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:  
 DRILLER - VISUALLY  
 SOIL TECH. - VISUALLY  
 LABORATORY TEST

REMARKS:  
 STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-T28**





# PRELIMINARY BORING LOG

BORING NO.: **B-T28**  
 SHEET: **2 OF 2**  
 PROJECT NO.: **10-0014.2**  
 DATE START: **10/29/2012**  
 DATE FINISH: **10/29/2012**  
 ELEVATION: **±1513'**  
 SWC REP.: **PJO**

PROJECT / CLIENT: **PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.**  
 LOCATION: **BINGHAM, MAINE**  
 DRILLING CO.: **NORTHERN TEST BORINGS, INC.** DRILLER: **MIKE NADEAU**

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	130LB	30"
SAMPLER:	SS	1 3/8"	130LB	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 SOILS APPEAR WET TO SATURATED AT 6.0'

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
	R16	2.0'	2.0'	41.0'					41.0'	RQD = 60% (FAIR) GRAY PELITE; SAME ROCK DESCRIPTION AS R3; STEEP, MODERATELY SPACED NATURAL AND MECHANICAL FRACTURES AT 10, 60-80 DEGREES FROM HORIZONTAL.
	R17	3.4'	3.4'	44.4'					44.4'	RQD = 76% (GOOD) MODERATELY SPACED FRACTURES AT 75 DEGREES FROM HORIZONTAL.
	R18	2.5'	2.5'	46.9'					46.9'	RQD = 88% (GOOD) SLIGHTLY WEATHERED, IRON OXIDE STAINED, CLOSELY SPACED FRACTURES AT 5, 45 AND 90 DEGREES FROM HORIZONTAL.
	R19	1.5'	1.5'	48.4'					48.4'	RQD = 40% (POOR) FRACTURES PARALELL FOLIATION.
	R20	1.7'	1.7'	50.1'					50.1'	RQD = 35% (POOR) HIGHLY FRACTURED AND IRON OXIDE STAINED.
	R21	2.4'	2.4'	52.5'					52.5'	RQD = 33% (POOR) FAINTLY WEATHERED, MODERATELY SPACED, STEEP ANGLED FRACTURES AT 10 AND 75 DEGREES FROM HORIZONTAL.
	R22	2.7'	2.7'	55.1'					55.2'	RQD = 99% (EXCELLENT) BOTTOM OF EXPLORATION AT 55.2'

SAMPLES: D = SPLIT SPOON  
 C = 2" SHELBY TUBE  
 S = 3" SHELBY TUBE  
 U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:  
 DRILLER - VISUALLY  
 SOIL TECH. - VISUALLY  
 LABORATORY TEST

REMARKS: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-T28**



B-T28 R1 to R10 (9' to 29.0')



B-T28 R11 to R18 (30'-46.9')



B-T28 R11 to R13 (46.9'-55')



# PRELIMINARY BORING LOG

BORING NO.: **B-T36**  
 SHEET: 1 OF 2  
 PROJECT NO.: 10-0014.2  
 DATE START: 10/29/2012  
 DATE FINISH: 10/29/2012  
 ELEVATION: ±1586'  
 SWC REP.: PJO

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO.: NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	130LB	30"
SAMPLER:	SS	1 3/8"	130LB	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 WATER AT 5.3' AFTER DRILLING  
 BORE HOLE CAVED AT 8' AFTER DRILLING

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
HW									1.0'	BROWN SANDY GRAVEL WITH ORGANICS (FILL) -LOOSE-
	1D	24"	12"	2.0'	2	2	4	5		BROWN SILTY GRAVELLY SAND (GLACIAL TILL) -MEDIUM DENSE-
	2D	4"	3"	5.3'	30/4"				5.3'	GRAY PELITE; MEDIUM HARD; FINE GRAINED; SLIGHTLY WEATHERED, CLOSELY SPACED FRACTURES AT 50-90 DEGREES FROM HORIZONTAL. SILT SEAMS INFILLING FRACTURES.
	R1	5.0'	4.5'	10.3'					10.3'	RQD = 20% (VERY POOR) SAME ROCK DESCRIPTION AS R1; SLIGHTLY WEATHERED, FRACTURE SURFACES STAINED WITH IRON OXIDE. MODERATE TO CLOSELY SPACED FRACTURES AT 10 AND 90 DEGREES FROM HORIZONTAL. STEEP ANGLED FOLIATION. SOFT SEAM AT 11.5', PROBABLE ZONE OF NO RECOVERY.
	R2	5.0'	4.4'	15.3'					15.3'	RQD = 54% (FAIR) SAME ROCK DESCRIPTION; HIGHLY FRACTURED, MODERATELY WEATHERED, ZONE OF CORE LOSS.
	R3	5.0'	2.0'	20.3'					20.3'	RQD = 6% (VERY POOR) SAME ROCK DESCRIPTION; SLIGHTLY WEATHERED, FRACTURE SURFACES IRON OXIDE STAINED, FRACTURE ANGLES AT 45 AND 85 DEGREES. NEAR VERTICAL FOLIATION.
	R4	3.5'	3.5'	24.3'					24.3'	RQD = 85% (GOOD) SAME ROCK DESCRIPTION; STEEP TO NEAR VERTICAL FRACTURES PARALLEL FOLIATION AT 80-90 DEGREES FROM HORIZONTAL. FRACTURE SURFACES STAINED WITH IRON OXIDE.
	R5	5.0'	5.0'	29.3'					29.3'	RQD = 90% (GOOD TO EXCELLENT) SAME ROCK DESCRIPTION; NUMEROUS SHALLOW TO STEEP ANGLED FRACTURES (10-80 DEGREES) STAINED WITH IRON OXIDE.
	R6	5.0'	4.7'	34.3'					34.3'	RQD = 20% (VERY POOR) SAME ROCK DESCRIPTION; HIGHLY WEATHERED, WITH SOFT SEAMS.
	R7	2.5'	1.8'	36.3'					36.8'	RQD = 0% (VERY POOR) SAME ROCK DESCRIPTION; SLIGHTLY WEATHERED, IRON OXIDE STAINED. CLOSELY SPACED, SHALLOW TO STEEP ANGLED FRACTURES
	R8	3.2'	3.2'	40.0'					40.0'	RQD = 16% (VERY POOR) AT 10-90 DEGREES.

SAMPLES: D = SPLIT SPOON  
 C = 2" SHELBY TUBE  
 S = 3" SHELBY TUBE  
 U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:  
 DRILLER - VISUALLY  
 SOIL TECH. - VISUALLY  
 LABORATORY TEST

REMARKS: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-T36**



# PRELIMINARY BORING LOG

BORING NO.: **B-T36**  
 SHEET: 2 OF 2  
 PROJECT NO.: 10-0014.2  
 DATE START: 10/29/2012  
 DATE FINISH: 10/29/2012  
 ELEVATION: ±1586'

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO.: NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	130LB	30"
SAMPLER:	SS	1 3/8"	130LB	30"
CORE BARREL:	NQ2	2"		

SWC REP.: PJO  
 WATER LEVEL INFORMATION  
 WATER AT 5.3' AFTER DRILLING  
 BORE HOLE CAVED AT 8' AFTER DRILLING

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
	R9	2.9'	2.9'	42.9'					42.9'	GRAY PELITE; QUARTZ VEINS 1/4" TO 2 1/2" THICK, HEALED MODERATE TO STEEP ANGLED CRACKS. SHALLOW TO STEEP ANGLED FRACTURES AT 5-90 DEGREES. RQD = 52% (FAIR)
	R10	3.1'	3.1'	46.0'					46.0'	SAME ROCK DESCRIPTION; FOLIATION PARALLELS FRACTURES AT 45-80 DEGREES FROM HORIZONTAL. FRACTURE SURFACES STAINED WITH IRON OXIDE. RQD = 61% (FAIR)
	R11	4.0'	4.0'	50.0'					50.0'	SAME ROCK DESCRIPTION; CLOSELY SPACED FRACTURES AT 35-75 DEGREES FROM HORIZONTAL. RQD = 20% (VERY POOR)
	R12	3.0'	3.0'	53.0'					53.0'	SAME ROCK DESCRIPTION; HIGHLY FRACTURED, IRON OXIDE STAINED. RQD = 0% (VERY POOR)
	R13	2.0'	2.0'	55.0'					55.0'	CLOSELY SPACED FRACTURES STAINED WITH IRON OXIDE. RQD = 0% (VERY POOR)
										BOTTOM OF EXPLORATION AT 55.0'

SAMPLES: D = SPLIT SPOON C = 2" SHELBY TUBE S = 3" SHELBY TUBE U = 3.5" SHELBY TUBE	SOIL CLASSIFIED BY: <input type="checkbox"/> DRILLER - VISUALLY <input checked="" type="checkbox"/> SOIL TECH. - VISUALLY <input checked="" type="checkbox"/> LABORATORY TEST	REMARKS:  STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.	BORING NO.: <b>B-T36</b>
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**B-T36 R1 to R5 (5.3' to 29.3')**



**B-T36 R6 to R10 (29.3'-46')**



**B-T36 R11 to R13 (46'-55')**



# PRELIMINARY BORING LOG

BORING NO.: **B-T47**  
 SHEET: 1 OF 2  
 PROJECT NO.: 10-0014.2  
 DATE START: 10/31/2012  
 DATE FINISH: 10/31/2012  
 ELEVATION: ±1686'  
 SWC REP.: PJO

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO.: NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	NW	3"	140 LBS	30"
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 WATER IN OPEN BORE HOLE AT 7.5'  
 ON 10/31/2012 AND 14.5' ON 11/5/2012

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
									0.3'	FOREST DUFF
	1D	24"	16"	2.0'	1	1	2	3	1.8'	DARK BROWN SANDY SILT WITH ORGANICS TO 2.0' -LOOSE-
									3.0'	LIGHT BROWN GRAVELLY SAND AND SILT (GLACIAL TILL)
									10.0'	WEATHERED BEDROCK (SAPROLITE) ADVANCED BY SOLID STEM AUGER
	R1	1.5'	1.1'	11.5'					11.5'	RQD = 25% (VERY POOR TO POOR)
	R2	1.2'	1.0'	12.7'					12.7'	RQD = 28% (POOR) NEAR VERTICAL FRACTURE ANGLES.
	R3	1.3'	1.3'	14.0'					14.0'	RQD = 38% (POOR) SAME AS R2. NEAR VERTICAL FOLIATION, CRACKS AND FRACTURES.
	R4	2.0'	2.0'	16.0'					16.0'	RQD = 0% (VERY POOR) STAINED WITH IRON OXIDE. GRAY PELITE; MEDIUM HARD; FINE GRAINED; SLIGHTLY WEATHERED, HORIZONTAL TO NEAR VERTICAL FOLIATION, CRACKS AND FRACTURES. CORE AND FRACTURE SURFACES STAINED WITH IRON OXIDE.
	R5	3.3'	3.3'	19.3'					19.3'	RQD = 40% (POOR) SAME ROCK DESCRIPTION; SLIGHTLY WEATHERED, CLOSE TO MODERATELY SPACED FRACTURE ANGLES AT 5, 35 AND 90 DEGREES FROM HORIZONTAL. CORE AND FRACTURE SURFACES STAINED WITH IRON OXIDE.
	R6	3.8'	3.8'	23.1'					23.1'	RQD = 66% (FAIR) SAME ROCK DESCRIPTION; SLIGHTLY WEATHERED, EXTERIOR OF CORE AND FRACTURES STAINED WITH IRON OXIDE. CLOSE TO WIDELY SPACED FRACTURES AT 5, 35 AND 90 DEGREES FROM HORIZONTAL.
	R7	5.1'	5.1'	28.2'					28.2'	RQD = 84% (GOOD) SAME ROCK DESCRIPTION; FRACTURE SURFACES STAINED WITH IRON OXIDE. THIN QUARTZ VEINS APPROX. 1/8" THICK DIPPING AT 30-40 DEGREES FROM HORIZONTAL. SHALLOW FRACTURE ANGLES AT 5-35 DEGREES FROM HORIZONTAL.
	R8	5.0'	5.0'	33.2'					33.2'	RQD = 82% (GOOD) SAME ROCK DESCRIPTION; FRESH TO SLIGHTLY WEATHERED, 2" THICK WEATHERED SEAM AT 36.8', IRON OXIDE STAINED. CLOSE TO WIDELY SPACED FRACTURES AT 5-10 DEGREES FROM HORIZONTAL. WEAKLY FOLIATED.
	R9	5.0'	5.0'	38.2'					38.2'	RQD = 96% (EXCELLENT)
									40.0'	

SAMPLES: D = SPLIT SPOON  
 C = 2" SHELBY TUBE  
 S = 3" SHELBY TUBE  
 U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:  
 DRILLER - VISUALLY  
 SOIL TECH. - VISUALLY  
 LABORATORY TEST

REMARKS: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-T47**



# PRELIMINARY BORING LOG

BORING NO.: **B-T47**  
 SHEET: **2 OF 2**  
 PROJECT NO.: **10-0014.2**  
 DATE START: **10/31/2012**  
 DATE FINISH: **10/31/2012**  
 ELEVATION: **±1686'**  
 SWC REP.: **PJO**

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO. : NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	NW	3"	140 LBS	30"
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 WATER IN OPEN BORE HOLE AT 7.5'  
 ON 10/31/2012 AND 14.5' ON 11/5/2012

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA	
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24			
										GRAY PELITE; SAME ROCK DESCRIPTION; WIDELY SPACED MECHANICAL FRACTURES, VERTICAL NATURALLY OCCURRING FRACTURES. RQD = 96% (EXCELLENT)	
	R10	5.0'	5.0'	43.2'					43.2'		
											SAME ROCK DESCRIPTION; SHALLOW TO STEEP ANGLED FRACTURES AT 5-10, 45 AND 80-90 DEGREES FROM HORIZONTAL. RQD = 76% (GOOD)
	R11	4.5'	4.5'	47.7'					47.7'		
										SAME ROCK DESCRIPTION; SLIGHTLY WEATHERED, CLOSELY SPACED FRACTURES HORIZONTAL AND VERTICAL FRACTURES STAINED WITH IRON OXIDE. RQD = 56% (FAIR)	
	R12	4.8'	4.8'	52.5'					52.5'		
										SAME ROCK DESCRIPTION; NUMEROUS CLOSELY SPACED VERTICAL FRACTURES. RQD = 50% (POOR TO FAIR)	
	R13	3.0'	3.0'	55.5'					55.5'		
										BOTTOM OF EXPLORATION AT 55.5'	

SAMPLES: D = SPLIT SPOON  
 C = 2" SHELBY TUBE  
 S = 3" SHELBY TUBE  
 U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:  
 DRILLER - VISUALLY  
 SOIL TECH. - VISUALLY  
 LABORATORY TEST

REMARKS:  
 STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-T47**





**B-T47 R1 to R7 (10' to 28.2')**



**B-T47 R8 to R10 (28.2'-43.2')**



**B-T47 R11 to R13 (43.2'-55.5')**



# PRELIMINARY BORING LOG

BORING NO.: **B-T56**  
 SHEET: 1 OF 2  
 PROJECT NO.: 10-0014.2  
 DATE START: 10/30/2012  
 DATE FINISH: 10/30/2012  
 ELEVATION: ±1559'  
 SWC REP.: PJO

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO.: NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	140 LBS	30"
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 SOILS APPEARED SATURATED AT 10'

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
									0.3'	FOREST DUFF
	1D	24"	0"	2.0'					2.0'	DARK BROWN SANDY SILT WITH ORGANICS
										LIGHT BROWN GRAVELLY SAND AND SILT (GLACIAL TILL)
	2D	24"	19"	7.0'	10	10	11	12		~MEDIUM DENSE~ w=14.8%
										WEATHERED BEDROCK FRAGMENTS IN SPOON
	3D	24"	19"	12.0'	45	30	18	18	12.4'	~DENSE~ w=9.6%
									15.0'	BEDROCK ADVANCED BY ROLLER CONE FROM 12.4' TO 15'
										GRAY META SANDSTONE; MEDIUM TO MODERATELY HARD; FINE GRAINED; SLIGHTLY WEATHERED, IRON OXIDE STAINS ON SHALLOW TO STEEPLY DIPPING FRACTURE ANGLES (10-80 DEGREES).
	R1	3.1'	3.1'	18.1'					18.1'	RQD = 58% (FAIR)
										SAME ROCK DESCRIPTION; SHALLOW TO STEEP FRACTURE ANGLES AT 10-90 DEGREES FROM HORIZONTAL.
	R2	3.6'	3.6'	21.7'					21.7'	RQD = 56% (FAIR)
										SAME ROCK DESCRIPTION; FRACTURE ANGLES AT 5,45 AND 85 DEGREES FROM HORIZONTAL.
	R3	4.1'	4.1'	25.8'					25.8'	RQD = 71% (FAIR)
										SAME ROCK DESCRIPTION; GLACIAL TILL SEAMS INFILLING FRACTURE SURFACES FROM 28 TO 29.8'. PROBABLE ZONE OF CORE LOSS.
	R4	4.0'	3.1'	29.8'					29.8'	RQD = 43% (POOR)
										SAME ROCK DESCRIPTION; FRESH WEATHERING, WIDELY SPACED FRACTURES AT 45 DEGREES FROM HORIZONTAL.
	R5	5.0'	5.0'	34.8'					34.8'	RQD = 98% (EXCELLENT)
										SAME ROCK DESCRIPTION; FRESHLY WEATHERED, WIDELY SPACED, SHALLOW ANGLED FRACTURES AT 5, 10 AND 25 DEGREES FROM HORIZONTAL. THIN QUARTZ VEINS DIPPING 40-60 DEGREES FROM HORIZONTAL.
	R6	5.0'	5.0'	39.8'					39.8'	RQD = 96% (EXCELLENT)

SAMPLES:  
 D = SPLIT SPOON  
 C = 2" SHELBY TUBE  
 S = 3" SHELBY TUBE  
 U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:  
 DRILLER - VISUALLY  
 SOIL TECH. - VISUALLY  
 LABORATORY TEST

REMARKS: SOILS SATURATED AT 10'  
  
 STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-T56**



# PRELIMINARY BORING LOG

BORING NO.: **B-T56**  
 SHEET: **2 OF 2**  
 PROJECT NO.: **10-0014.2**  
 DATE START: **10/30/2012**  
 DATE FINISH: **10/30/2012**  
 ELEVATION: **±1559'**  
 SWC REP.: **PJO**

PROJECT / CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT / REED & REED, INC.  
 LOCATION: BINGHAM, MAINE  
 DRILLING CO. : NORTHERN TEST BORINGS, INC. DRILLER: MIKE NADEAU

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HW	4"	140 LBS	30"
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:	NQ2	2"		

WATER LEVEL INFORMATION  
 WATER AT 3.5' AFTER DRILLING  
 BORE HOLE CAVED AT 10'

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
										GRAY META SANDSTONE; SAME ROCK DESCRIPTION; VERY SLIGHTLY WEATHERED, SHALLOW ANGLED FRACTURES AT 5-35 DEGREES FROM HORIZONTAL. RQD = 83% (GOOD) ----- SAME ROCK DESCRIPTION; FRESH WEATHERING, WIDELY SPACED SHALLOW ANGLED FRACTURES AT 5-15 DEGREES FROM HORIZONTAL. RQD = 94% (EXCELLENT) ----- SAME ROCK DESCRIPTION; FRESH WEATHERING. RQD = 100% (EXCELLENT) ----- RQD = 36% (POOR) SAME ROCK DESCRIPTION; ----- BOTTOM OF EXPLORATION AT 55.0'
	R7	4.0'	4.0'	43.8'					43.8'	
	R8	5.0'	5.0'	48.8'					48.8'	
	R9	4.8'	4.8'	53.6'					53.6'	
	R10	1.4'	0.5'	55.0'					55.0'	

SAMPLES: D = SPLIT SPOON C = 2" SHELBY TUBE S = 3" SHELBY TUBE U = 3.5" SHELBY TUBE	SOIL CLASSIFIED BY: <input type="checkbox"/> DRILLER - VISUALLY <input checked="" type="checkbox"/> SOIL TECH. - VISUALLY <input checked="" type="checkbox"/> LABORATORY TEST	REMARKS: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.	BORING NO.: <b>B-T56</b>
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**B-T56 R1 to R5 (15'-34.8')**



**B-T56 R6 to R10 (34.8'-55')**



# S.W. COLE ENGINEERING, INC.

## PRELIMINARY TEST PIT LOGS

PROJECT/CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT  
 LOCATION: BINGHAM, MAINE  
 BACKHOE FIRM: SARGENT CORP. EXCAVATOR: HITACHI 135

PROJECT NO.: 10-0014.2  
 SWC REP.: TJH

<b>TEST PIT <u>TP-1</u></b>			
DATE: <u>10/29/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>TURBINE T-28 AREA</u>
SAMPLE NO.	DEPTH	STRATUM DESCRIPTION	TEST RESULTS
	0.3'	FOREST DUFF	w = 16.5%
	2.3'	DARK BROWN SANDY SILT WITH ORGANICS AND ROOTS	
S-1	3.0'	LIGHT BROWN SANDY SILT, SOME GRAVEL WITH COBBLES (GLACIAL TILL)	
	8.3'	PRACTICAL REFUSAL AT 8.3' PROBABLE BEDROCK	
		NOTE: SOILS APPEARED MOIST THROUGHOUT	
COMPLETION DEPTH: <u>8.3'</u>		DEPTH TO WATER: <u>NO SEEPAGE OBSERVED</u>	

<b>TEST PIT <u>TP-2</u></b>			
DATE: <u>10/29/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>SUBSTATION AREA</u>
SAMPLE NO.	DEPTH	STRATUM DESCRIPTION	TEST RESULTS
	0.3'	FOREST DUFF	w = 13.6%
	2.3'	DARK BROWN SANDY SILT WITH ORGANICS AND ROOTS	
S-1	3.0'	LIGHT BROWN SANDY SILT, SOME GRAVEL WITH COBBLES (GLACIAL TILL)	
	5.6'	WEATHERED BEDROCK	
		PRACTICAL REFUSAL AT 5.6' PROBABLE BEDROCK	
		NOTE: SOILS APPEARED MOIST THROUGHOUT	
COMPLETION DEPTH: <u>5.6'</u>		DEPTH TO WATER: <u>NO SEEPAGE OBSERVED</u>	



# S.W. COLE ENGINEERING, INC.

## PRELIMINARY TEST PIT LOGS

PROJECT/CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT  
 LOCATION: BINGHAM, MAINE  
 BACKHOE FIRM: SARGENT CORP. EXCAVATOR: HITACHI 135

PROJECT NO.: 10-0014.2  
 SWC REP.: TJH

<b>TEST PIT <u>TP-3</u></b>			
DATE: <u>10/31/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>SUBSTATION AREA</u>
SAMPLE	DEPTH	STRATUM DESCRIPTION	TEST RESULTS
NO.	DEPTH	(FT)	
	0.4'	FOREST DUFF	
	1.9'	BROWN SANDY SILT WITH ORGANICS AND ROOTS	
	5.4'	GRAY-BROWN GRAVELLY SAND AND SILT SOME COBBLES (GLACIAL TILL)	
		PRACTICAL REFUSAL AT 5.4' PROBABLE BEDROCK	
		NOTE: SOILS APPEARED MOIST THROUGHOUT	
COMPLETION DEPTH: <u>5.4'</u>		DEPTH TO WATER: <u>NO SEEPAGE OBSERVED</u>	

<b>TEST PIT <u>TP-4</u></b>			
DATE: <u>10/31/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>SUBSTATION AREA</u>
SAMPLE	DEPTH	STRATUM DESCRIPTION	TEST RESULTS
NO.	DEPTH	(FT)	
	0.4'	FOREST DUFF	
		BROWN SANDY SILT WITH ORGANICS AND ROOTS	
	2.5'	LIGHT BROWN SANDY SILT	
	3.4'	PRACTICAL REFUSAL AT 3.4' PROBABLE BEDROCK	
		PROBABLE BEDROCK OBSERVED AT 0.7' IN NORTH END OF TEST PIT	
		NOTE: SOILS APPEARED MOIST 0-2.1' AND SATURATED 2.1'- 3.4'	
COMPLETION DEPTH: <u>3.4'</u>		DEPTH TO WATER: <u>SEEPAGE AT 2.1'</u>	



# S.W. COLE ENGINEERING, INC.

## PRELIMINARY TEST PIT LOGS

PROJECT/CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT  
 LOCATION: BINGHAM, MAINE  
 BACKHOE FIRM: SARGENT CORP. EXCAVATOR: HITACHI 135

PROJECT NO.: 10-0014.2  
 SWC REP.: TJH

TEST PIT <u>TP-5</u>			
DATE: <u>10/31/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>SUBSTATION AREA</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.2'	FOREST DUFF	
	2.3'	BROWN SANDY SILT WITH ORGANICS AND ROOTS	
	4.7'	GRAY-BROWN GRAVELLY SANDY SILT WITH COBBLES (GLACIAL TILL)	
		PRACTICAL REFUSAL AT 4.7' PROBABLE BEDROCK	
		NOTE: SOILS APPEARED MOIST 0-1.7' AND SATURATED 1.7'-4.7'	
COMPLETION DEPTH: <u>4.7'</u>		DEPTH TO WATER: <u>SEEPAGE AT 1.7'</u>	

TEST PIT <u>TP-6</u>			
DATE: <u>10/31/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>SUBSTATION AREA</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.3'	FOREST DUFF	w = 9.1%
	3.6'	BROWN SANDY SILT WITH ORGANICS AND ROOTS	
S-1	5.0'	GRAY-BROWN GRAVELLY SAND SOME SILT WITH COBBLES (GLACIAL TILL)	
	8.8'	BOTTOM OF EXCAVATION AT 8.8'	
		NOTE: SOILS APPEARED SATURATED THROUGHOUT	
COMPLETION DEPTH: <u>8.8'</u>		DEPTH TO WATER: <u>HEAVY SEEPAGE AT 8.3'</u>	





# S.W. COLE ENGINEERING, INC.

## PRELIMINARY TEST PIT LOGS

PROJECT/CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT  
 LOCATION: BINGHAM, MAINE  
 BACKHOE FIRM: SARGENT CORP. EXCAVATOR: HITACHI 135

PROJECT NO.: 10-0014.2  
 SWC REP.: TJH

TEST PIT <u>TP-7</u>			
DATE: <u>10/31/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>SUBSTATION AREA</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.2'	FOREST DUFF	
	1.5'	BROWN SANDY SILT WITH ORGANICS AND ROOTS	
	2.5'	LIGHT BROWN SANDY SILT WITH WEATHERED ROCK FRAGMENTS	
		PRACTICAL REFUSAL AT 2.5' PROBABLE BEDROCK	
		NOTE: SOILS APPEARED MOIST THROUGHOUT	
COMPLETION DEPTH: <u>2.5'</u>		DEPTH TO WATER: <u>NO SEEPAGE OBSERVED</u>	

TEST PIT <u>TP-8</u>			
DATE: <u>10/31/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>ACCESS RD BETWEEN T-5 &amp; T-6</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	1.1'	BROWN SANDY SILT WITH ORGANICS AND ROOTS TO 0.9'	
		PRACTICAL REFUSAL AT 1.1' PROBABLE BEDROCK NO FOREST DUFF OBSERVED (PREVIOUS SURFACE DISTURBANCE - LOGGING)	
		NOTE: SOILS APPEARED MOIST THROUGHOUT	
COMPLETION DEPTH: <u>1.1'</u>		DEPTH TO WATER: <u>NO SEEPAGE OBSERVED</u>	



# S.W. COLE ENGINEERING, INC.

## PRELIMINARY TEST PIT LOGS

PROJECT/CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT  
 LOCATION: BINGHAM, MAINE  
 BACKHOE FIRM: SARGENT CORP. EXCAVATOR: HITACHI 135

PROJECT NO.: 10-0014.2  
 SWC REP.: TJH

<b>TEST PIT <u>TP-9</u></b>			
DATE: <u>11/1/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>TURBINE T-14 AREA</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.4'	FOREST DUFF	
	3.6'	BROWN SANDY SILT WITH ORGANICS ROOTS TO 2.0'	
S-1	4.5'	GRAY-BROWN SILT AND SAND, SOME GRAVEL WITH COBBLES (GLACIAL TILL)	
	10.0'	BOTTOM OF EXPLORATION AT 10.0'	
		NOTE: SOILS APPEARED SATURATED THROUGHOUT	
COMPLETION DEPTH: <u>10.0'</u>		DEPTH TO WATER: <u>HEAVY SEEPAGE BELOW 3.4'</u>	

<b>TEST PIT <u>TP-10</u></b>			
DATE: <u>11/1/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>ACCESS RD NEAR TURBINE T-74</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.3'	FOREST DUFF	
	2.3'	BROWN SANDY SILT WITH ORGANICS AND ROOTS	
	3.3'	GRAY-BROWN GRAVELLY SANDY SILT (GLACIAL TILL)	
	5.3'	WEATHERED BEDROCK	
		PRACTICAL REFUSAL AT 5.3' PROBABLE BEDROCK	
		NOTE: SOILS APPEAR MOIST THROUGHOUT	
COMPLETION DEPTH: <u>5.3'</u>		DEPTH TO WATER: <u>NO SEEPAGE OBSERVED</u>	



# S.W. COLE ENGINEERING, INC.

## PRELIMINARY TEST PIT LOGS

PROJECT/CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT  
 LOCATION: BINGHAM, MAINE  
 BACKHOE FIRM: SARGENT CORP.

PROJECT NO.: 10-0014.2  
 SWC REP.: TJH

EXCAVATOR: HITACHI 135

<b>TEST PIT <u>TP-11</u></b>			
DATE: <u>11/1/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>TURBINE T-5 AREA</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.2'	FOREST DUFF	w = 14.6%
	2.3'	BROWN SANDY SILT WITH ORGANICS ROOTS TO 2.8'	
S-1	3.3'	GRAY-BROWN GRAVELLY SAND AND SILT WITH SOME COBBLES (GLACIAL TILL)	
	4.5'	PRACTICAL REFUSAL AT 4.5' PROBABLE BEDROCK	
NOTE: SOILS APPEARED MOIST THROUGHOUT			
COMPLETION DEPTH: <u>4.5'</u>		DEPTH TO WATER: <u>NO SEEPAGE OBSERVED</u>	

<b>TEST PIT <u>TP-12</u></b>			
DATE: <u>11/1/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	LOCATION: <u>TURBINE T-21 AREA</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.2'	FOREST DUFF	w = 16.4%
	2.3'	BROWN SANDY SILT WITH ORGANICS ROOTS TO 1.1'	
S-1	3.5'	GRAY-BROWN GRAVELLY SAND AND SILT WITH SOME COBBLES (GLACIAL TILL)	
	5.9'	WEATHERED BEDROCK	
PRACTICAL REFUSAL AT 5.9' PROBABLE BEDROCK			
NOTE: SOILS APPEARED SATURATED THROUGHOUT			
COMPLETION DEPTH: <u>5.9'</u>		DEPTH TO WATER: <u>SEEPAGE BELOW 2.2'</u>	



# S.W. COLE ENGINEERING, INC.

## PRELIMINARY TEST PIT LOGS

PROJECT/CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT  
 LOCATION: BINGHAM, MAINE  
 BACKHOE FIRM: SARGENT CORP. EXCAVATOR: HITACHI 135

PROJECT NO.: 10-0014.2  
 SWC REP.: TJH

TEST PIT <u>TP-13</u>			
DATE: <u>11/1/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	
		LOCATION: <u>TURBINE T-22 AREA</u>	
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	1.0'	BROWN SANDY SILT WITH ORGANICS - ROOTS TO 0.5'	
		WEATHERED BEDROCK	
	3.3'	PRACTICAL REFUSAL AT 3.3' PROBABLE BEDROCK DISCONTINUOUS FOREST DUFF FROM 0.0' TO 0.1'	
		NOTE: SOILS APPEARED MOIST THROUGHOUT	
COMPLETION DEPTH: <u>3.3'</u>		DEPTH TO WATER: <u>NO SEEPAGE OBSERVED</u>	

TEST PIT <u>TP-14</u>			
DATE: <u>11/2/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	
		LOCATION: <u>TURBINE T-24 AREA</u>	
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.2'	FOREST DUFF	w = 13.0%
	2.6'	BROWN SANDY SILT WITH ORGANICS ROOTS TO 2.4'	
	5.9'	GRAY-BROWN GRAVELLY SILT AND SAND WITH COBBLES (GLACIAL TILL)	
		BROWN-GRAY GRAVELLY SAND AND SILT WITH SOME COBBLES (GLACIAL TILL)	
S-1	11.5'		
	12.6'	BOTTOM OF EXCAVATION AT 12.6'	
		NOTE: SOILS APPEARED SLIGHTLY SATURATED THROUGHOUT	
COMPLETION DEPTH: <u>12.6'</u>		DEPTH TO WATER: <u>LIGHT SEEPAGE BELOW 2.6'</u>	



# S.W. COLE ENGINEERING, INC.

## PRELIMINARY TEST PIT LOGS

PROJECT/CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT  
 LOCATION: BINGHAM, MAINE  
 BACKHOE FIRM: SARGENT CORP. EXCAVATOR: HITACHI 135

PROJECT NO.: 10-0014.2  
 SWC REP.: TJH

TEST PIT <u>TP-15</u>			
DATE: <u>11/2/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	
		LOCATION: <u>TURBINE T-32 AREA</u>	
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.4'	FOREST DUFF	w = 11.5%
	4.0'	BROWN SANDY SILT WITH ORGANICS ROOTS TO 2.9'	
S-1	9.5'	GRAY-BROWN GRAVELLY SAND AND SILT WITH COBBLES (GLACIAL TILL) WITH BROWN SILT SEAMS TO 5.9'	
	11.3'	BOTTOM OF EXPLORATION AT 11.3'	
		NOTE: SOILS APPEARED SLIGHTLY SATURATED THROUGHOUT	
COMPLETION DEPTH: <u>11.3'</u>		DEPTH TO WATER: <u>LIGHT SEEPAGE BELOW 5.9'</u>	

TEST PIT <u>TP-16</u>			
DATE: <u>11/2/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	
		LOCATION: <u>TURBINE T-31 AREA</u>	
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.4'	FOREST DUFF	
	4.0'	BROWN SANDY SILT WITH ORGANICS ROOTS TO 2.9'	
	11.6'	GRAY-BROWN GRAVELLY SAND AND SILT WITH COBBLES (GLACIAL TILL) WITH BROWN SILT SEAMS TO 5.5'	
		BOTTOM OF EXPLORATION AT 11.6'	
		NOTE: SOILS APPEARED SATURATED THROUGHOUT	
COMPLETION DEPTH: <u>11.6'</u>		DEPTH TO WATER: <u>HEAVY SEEPAGE BELOW 2.0'</u>	



# S.W. COLE ENGINEERING, INC.

## PRELIMINARY TEST PIT LOGS

PROJECT/CLIENT: PROPOSED BLUE SKY WEST WIND POWER PROJECT  
 LOCATION: BINGHAM, MAINE  
 BACKHOE FIRM: SARGENT CORP.

PROJECT NO.: 10-0014.2  
 SWC REP.: PJO

EXCAVATOR: HITACHI 135

TEST PIT <u>TP-17</u>			
DATE: <u>11/5/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	
		LOCATION: <u>TURBINE T-45 AREA</u>	
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.4'	FOREST DUFF	
	2.0'	DARK BROWN SANDY SILT WITH ORGANICS AND ROOTS	
S-1	5.0'	LIGHT BROWN SILT AND SAND, TRACE GRAVEL WITH COBBLES AND BOULDERS (GLACIAL TILL)	w = 14.5%
	10.0'		
S-2	14.0'	GRAY-BROWN SILT AND SAND WITH COBBLES AND BOULDERS (GLACIAL TILL)	w = 17.2%
		BOTTOM OF EXCAVATION AT 14.0'	
		NOTE: SOILS APPEARED SATURATED THROUGHOUT	
COMPLETION DEPTH: <u>14.0'</u>		DEPTH TO WATER: <u>HEAVY SEEPAGE AT 3.0'</u>	

TEST PIT <u>TP-18</u>			
DATE: <u>11/5/2012</u>		SURFACE ELEVATION: <u>NOT AVAILABLE</u>	
		LOCATION: <u>TURBINE T-57 AREA</u>	
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.3'	FOREST DUFF	
	1.8'	BROWN SANDY SILT WITH ORGANICS AND ROOTLETS	
	3.0'	BROWN GRAVELLY SAND AND SILT WITH COBBLES AND WEATHERED BEDROCK FRAGMENTS (GLACIAL TILL)	
		PRACTICAL REFUSAL AT 3.0' PROBABLE BEDROCK	
		NOTE: SOILS APPEAR SATURATED THROUGHOUT	
COMPLETION DEPTH: <u>3.0'</u>		DEPTH TO WATER: <u>SEEPAGE AT 3.0'</u>	

