

# Appendix II EXPLORATORY BORING & TEST-PIT LOGS KEY CHART (FOR SOIL CLASSIFICATION)

GN Northern Inc. 11115 E. Montgomery, Suite C Spokane Valley, WA, 99206

## BORING NUMBER B-1 PAGE 1 OF 2

3		Telephone: (50 Fax: (509) 248		3-9798	
CLIEN	IT Swift	, ,		wiftwate	r Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars
PROJI	ECT NU	MBER 217-871			PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA
DATE	STARTE	ED 10/10/17		COMP	LETED 10/10/17 GROUND ELEVATION 2240.5 ft HOLE SIZE 8 inches
DRILL	ING CO	NTRACTOR Holt	Servic	es Inc.	GROUND WATER LEVELS:
					ted Rig AT TIME OF DRILLING
					ED BY KAH AT END OF DRILLING
NOTES	S Appr	ox. GPS Coords.: 4	47.210	147°, -	21.000578° AFTER DRILLING
DEPTH (ft)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
TWATER			SM		FILL: SILTY SAND WITH GRAVEL, (SM) dark gray to gray
CABINS AT SWIF	RC			3000	3.0
71 WINEMAKER'S				00000	- becomes reddish brown, damp to moist
NORTHERMOROPBOXG-ACTIVE PROJECTS/217-571 WINEMAKER'S CABINS AT SWIFTWATER CELLARS/217-671 LOGS, GPU  O DEPTH  (f)	RC		GP- GM		- becomes gray-brown
	RC	MC = 11% Fines = 15%		00 00 00 00 00 00 00 00 00 00 00 00 00	- becomes interbedded wtih Silty Gravel with Sand (GM), moist to wet
GENERAL BH / TP / WELL - GINT STD US LAB GDT - 12/1/17 16:54 - C.USERSIGN 29	RC		GM		SILTY GRAVEL WITH SAND, (GM) moist to wet, some GP-GM, [Outwash]
40 40 41 40		MC = 14% Fines = 33%	sc		CLAYEY SAND, (SC) blue, fine grained, moist to wet, stiff, [Outwash]
JEWERA 45		Filles - 33%	SM		3.0 SILTY SAND, (SM) brown, moist to wet, some rounded gravels, [Outwash]

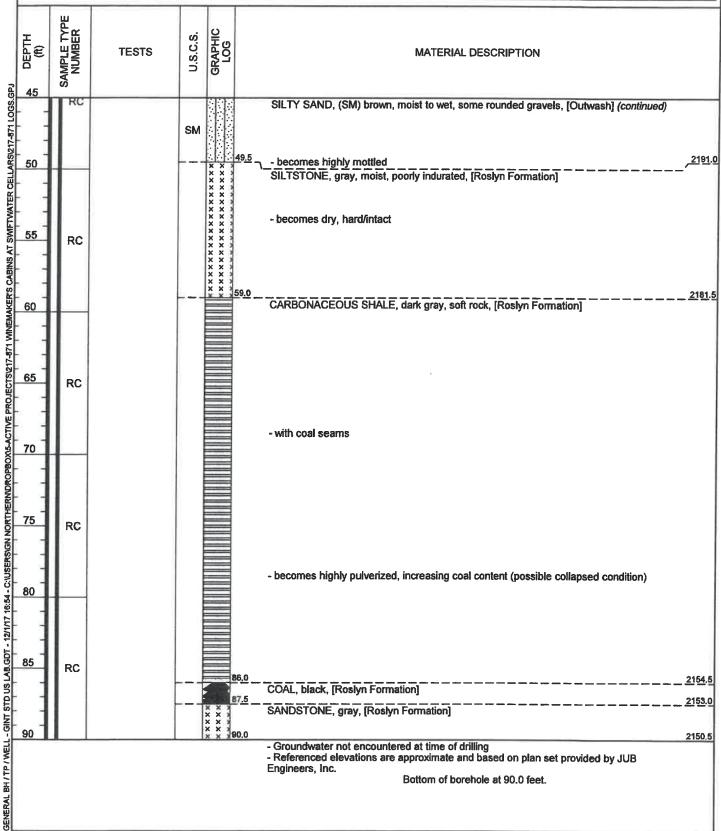


#### **BORING NUMBER B-1**

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CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars

PROJECT NUMBER 217-871 PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA



GN Northern Inc. 11115 E. Montgomery, Suite C

### **BORING NUMBER B-2**

PAGE 1 OF 2

C	70	Spokane Valley Telephone: (50 Fax: (509) 248-	9) 248	99206 -9 <b>7</b> 98	i		7762 7 67 2			
CLIEN	NT Swif			viftwat	er Cellars Properties, LLC	PROJECT NAME Winemaker's Ca	bins at Swiftwater Cellars			
PROJ	ECT NU	MBER 217-871				PROJECT LOCATION 301 Rope R	Rider Dr., Cle Elum, Kittitas Co., WA			
DATE	STARTI	D _10/10/17		COMP	PLETED 10/10/17	GROUND ELEVATION 2227.7 ft	HOLE SIZE 8 inches			
DRILL	LING CO	NTRACTOR Holt	Servic	es Inc		GROUND WATER LEVELS:				
DRILL	ING ME	THOD Terra Sonio	Tracl	k-Mou	nted Rig	AT TIME OF DRILLING				
LOGG	ED BY	KAH/MYM		CHEC	KED BY KAH/MYM	AT END OF DRILLING				
ROTE	S Appr	ox. GPS Coords.: 4	7.209	947°	-121.000051°	AFTER DRILLING				
ELLARS/217-871 LOGS.G DEPTH (ft)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC		MATERIAL DESCRIPTION	DN			
# O			1	PIPE	SILTY SANDY GF	RAVEL, (GP-GM) gray brown, damp to	moist subangular to rounded			
INEMAKER'S CABINS AT SWIFTWATE   G  G	RC		GP- GM		[Outwash]		2217.			
GENERAL BH / TP / WELL - GINT STD US LAB GDT - 12/1/17 18:54 - C. WSERSYGN NORTHERNDROPBOXIS-ACTIVE PROJECTS/217-871 WINEMAKER'S CABINS AT SWIFTWATER CELLARS/217-871 LOGS, GPJ  C DEPTH  C (ft)	RC		GM		20.0	VITH SAND, (GM) brown, rounded, mo	2207.			
4-C.USERSIGN NORTHERNDRO	RC	MC = 10% Fines = 23%	SM		SILTY SAND WIT	H GRAVEL, (SM) blue, fine grained, m	oist, [Outwash]			
30	i I				29.5		2198.2			
35	RC			X	40.0	, moist with some wet layers, [Roslyn f	2187.7			
de la	RC				CARBONACEOUS	S SHALE, gray to gray brown, [Roslyn	Formation)			



#### **BORING NUMBER B-2**

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CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars

PROJECT NUMBER 217-871

PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA

DEPTH (ft)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC	MATERIAL DESCRIPTION	
10					46.0 CARBONACEOUS SHALE, gray to gray brown, [Roslyn Formation] (continued)	218
1					CARBONACEOUS SHALE with COAL seams, dry to damp, pulverized, [Roslyn	
1	RC				Formation]	
-			1		- becomes dry	
50	-					
1			1			
4			1			
55	RC					
1						
1						
60	-					
-					- increasing coal content (possible collapsed condition)	
1						
1	RC					
65					65.0 SANDSTONE, gray, fine grained, hard, [Roslyn Formation]	<u>216</u>
			1 1	7 4 5 5 6		
			_		66.0 SANDSTONE, gray, fine grained, hard, [Roslyn Formation] - Groundwater not encountered at time of drilling	216
			-	1	Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB	2161
_			-	1	- Groundwater not encountered at time of drilling - Referenced elevations are approximate and based on plan set provided by JUB Engineers, Inc.  Bottom of borehole at 66.0 feet.	216
				1	Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	216
					Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	216
	•				Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	216
				<u> </u>	Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	216
_				<u> </u>	Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	216
_					Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	216
					Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	216
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•					Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	216
•					Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	210
					Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	216
•					Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	210
					Groundwater not encountered at time of drilling     Referenced elevations are approximate and based on plan set provided by JUB     Engineers, Inc.	211

<sup>-</sup> Groundwater not encountered at time of drilling - Referenced elevations are approximate and based on plan set provided by JUB Engineers, Inc.

### GN Northern Inc. **BORING NUMBER B-3** 11115 E. Montgomery, Suite C PAGE 1 OF 2 Spokane Valley, WA, 99206 Telephone: (509) 248-9798 Fax: (509) 248-4220 CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars PROJECT NUMBER 217-871 PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA COMPLETED \_10/11/17 DATE STARTED 10/11/17 GROUND ELEVATION 2226 ft HOLE SIZE 8 inches DRILLING CONTRACTOR Holt Services Inc. **GROUND WATER LEVELS:** DRILLING METHOD Terra Sonic Track-Mounted Rig AT TIME OF DRILLING -LOGGED BY KAH/MYM CHECKED BY KAH/MYM AT END OF DRILLING \_\_ NOTES Approx. GPS Coords.: 47,209475°, -120,999164° AFTER DRILLING \_\_\_ BH / TP / WELL - GINT STD US LAB.GDT - 12/1/17 16:54 - C:USERSIGN NORTHERNDROPBOXIS-ACTIVE PROJECTS/217-871 WINEMAKER'S CABINS AT SWIFTWATER CELLARS/217-871 LOGS, GP. SAMPLE TYPE NUMBER GRAPHIC LOG DEPTH (ft) U.S.C.S. MATERIAL DESCRIPTION -6" TOPSOIL SILTY SANDY GRAVEL, (GP-GM) brown, moist, [Outwash] RC GP-GM SILTSTONE, poorly indurated, [Roslyn Formation] 2211.0 RC SANDSTONE/SILTSTONE, gray, fine grained, hard intact fragments, some pulverized, [Roslyn Formation] SILTSTONE/CLAYSTONE, gray, damp to moist, soft, pulverized, [Roslyn Formation] 25 RC 30 SHALE, light gray to gray, [Roslyn Formation] 35 RC

CARBONACEOUS SHALE with thin seams of COAL, [Roslyn Formation]

40

RC

Fax: (509) 248-4220

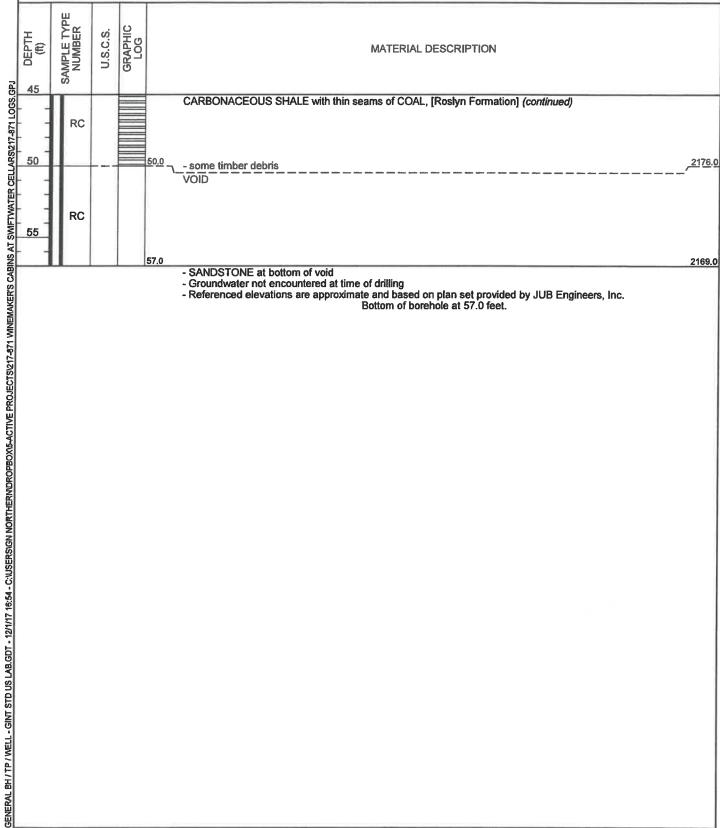
**BORING NUMBER B-3** 

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CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars

PROJECT NUMBER 217-871

PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA



- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on plan set provided by JUB Engineers, Inc.
  Bottom of borehole at 57.0 feet.

### GN Northern Inc. **BORING NUMBER B-4** 11115 E. Montgomery, Suite C PAGE 1 OF 2 Spokane Valley, WA, 99206 Telephone: (509) 248-9798 Fax: (509) 248-4220 CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars PROJECT NUMBER 217-871 PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA DATE STARTED 10/11/17 COMPLETED 10/12/17 GROUND ELEVATION 2223.8 ft HOLE SIZE 8 inches **GROUND WATER LEVELS:** DRILLING CONTRACTOR Holt Services Inc. DRILLING METHOD Terra Sonic Track-Mounted Rig AT TIME OF DRILLING -LOGGED BY KAH/MYM CHECKED BY KAH/MYM AT END OF DRILLING -NOTES Approx. GPS Coords.: 47.209390°, -120.998772° AFTER DRILLING \_-BH / TP / WELL - GINT STD US LAB.GDT - 12/1/17 16:54 - C.; USERSIGN NORTHERNDROPBOXIS-ACTIVE PROJECTS/217-871 WINEMAKER'S CABINS AT SWIFTWATER CELLARS/217-871 LOGS.GP. SAMPLE TYPE NUMBER GRAPHIC LOG DEPTH (ft) U.S.C.S. MATERIAL DESCRIPTION SILTY SANDY GRAVEL, (GP-GM) brown, damp, trace cobbles, [Outwash] RC GP-GM GRAVELLY SILTY SAND, (SM) brown, moist, [Outwash] 15 RC SM 20 SILTSTONE/CLAYSTONE, gray, moist, soft rock, [Roslyn Formation] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 25 RC 30 35 RC CARBONACEOUS SHALE, dark gray, [Roslyn Formation] 40



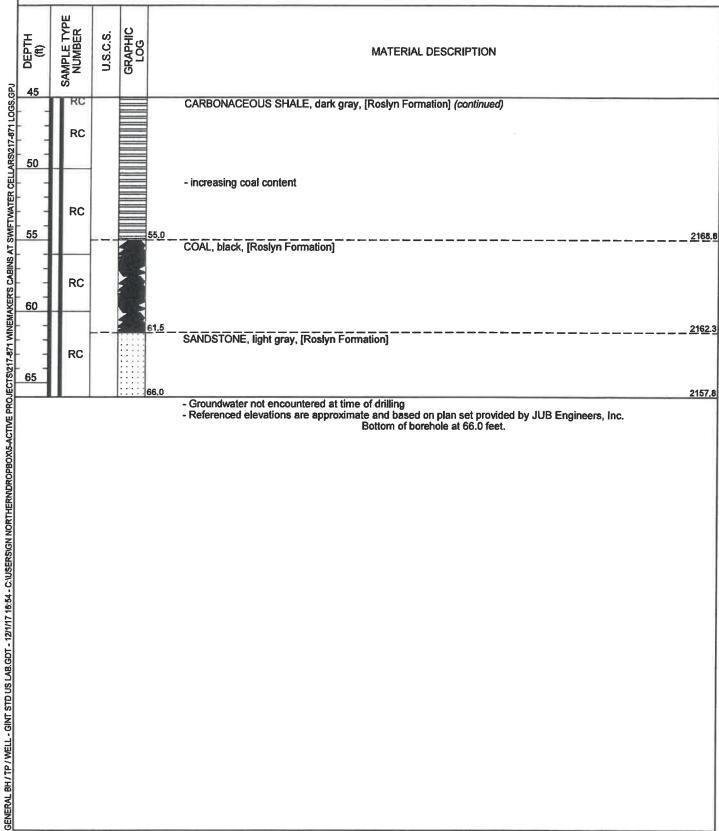
#### **BORING NUMBER B-4**

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CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars

PROJECT NUMBER 217-871

PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA



Referenced elevations are approximate and based on plan set provided by JUB Engineers, Inc.
Bottom of borehole at 66.0 feet.

#### GN Northern Inc. **BORING NUMBER B-5** 11115 E. Montgomery, Suite C PAGE 1 OF 2 Spokane Valley, WA, 99206 Telephone: (509) 248-9798 Fax: (509) 248-4220 CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars PROJECT NUMBER 217-871 PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA DATE STARTED 10/12/17 COMPLETED 10/12/17 GROUND ELEVATION 2178.3 ft HOLE SIZE 8 inches DRILLING CONTRACTOR Holt Services Inc. **GROUND WATER LEVELS:** DRILLING METHOD Terra Sonic Track-Mounted Rig AT TIME OF DRILLING \_\_ LOGGED BY KAH/MYM CHECKED BY KAH/MYM AT END OF DRILLING -NOTES Approx. GPS Coords.: 47,208211°, -120.995458° AFTER DRILLING -C: WERSIGN NORTHERNDROPBOXIS-ACTIVE PROJECTS 217-871 WINEMAKER'S CABINS AT SWIFTWATER CELLARS 217-871 LOGS, GP SAMPLE TYPE NUMBER GRAPHIC LOG DEPTH (ft) U.S.C.S. **TESTS** MATERIAL DESCRIPTION 0 SANDY SILT, (ML) light brown, dry, medium dense, [Outwash] MC = 5%RC Fines = 68% ML 2174.3 SILTY SAND, (SM) light brown, dry, very dense, cemented, [Outwash] RC SM 2170.3 SANDY CLAY, (CL) brown, moist, very stiff, trace gravel, [Outwash] RC 10 CL MC = 19% Fines = 61% 2166.3 SILTY CLAY WITH SAND, (CL-ML) brown to grayish brown, [Outwash] 15 RC CL-MC = 16% ML Fines = 74% 20 SILTSTONE, gray, pulverized, [Roslyn Formation] RC - becomes hard intact rock 25 RC BH / TP / WELL - GINT STD US LAB.GDT - 12/1/17 16:54 RC 30 CARBONACEOUS SHALE, with coal seams, [Roslyn Formation] RC 35 COAL, black, [Roslyn Formation] CARBONACEOUS SHALE, [Roslyn Formation]

becomes interbedded with coal

COAL, black, [Roslyn Formation]

40

RC



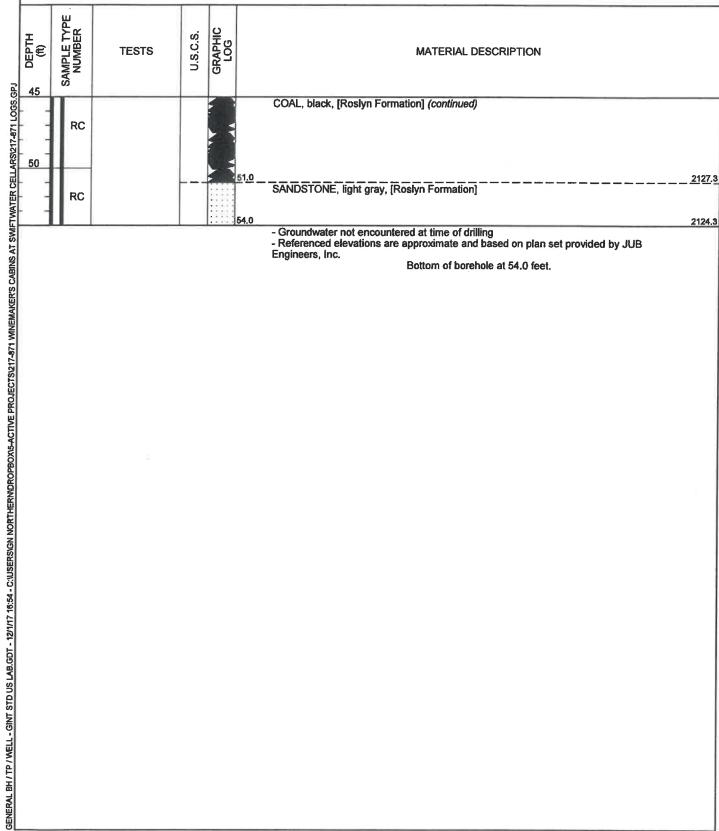
#### **BORING NUMBER B-5**

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CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars

PROJECT NUMBER 217-871

PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA



Bottom of borehole at 54.0 feet.

<sup>-</sup> Groundwater not encountered at time of drilling - Referenced elevations are approximate and based on plan set provided by JUB Engineers, Inc.



### **TEST PIT NUMBER TP-1**

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	CLIEN	T Swift	water	Custor	n Hon	nes/Swiftwater Cellars Properties, LLC	PROJECT NAME Winemaker's Ca	bins at Swiftwater Cellars	
	PROJ	ECT NUI	MBER	217-8	371		PROJECT LOCATION 301 Rope R	ider Dr., Cle Elum, Kittitas Co.,	WA
	DATE	STARTE	ED _10	0/3/17		COMPLETED 10/3/17	GROUND ELEVATION 2234 ft	TEST PIT SIZE 24 X 96	inches
	EXCA	VATION	CONT	RACTO	OR C	lient Provided	GROUND WATER LEVELS:		
	EXCA	VATION	METH	IOD H	itachi	50U Mini-excavator	AT TIME OF EXCAVATION		
	LOGG	ED BY	MYM			CHECKED BY KAH	AT END OF EXCAVATION		
P.	NOTE	S Appr	ox. GF	S Cool	rds.: 4	7.208781°, -120.999104°	AFTER EXCAVATION		
GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 12/1/17 18:54 - C.USERSIGN NORTHERNDROPBOX/S-ACTIVE PROJECTS/217-871 WINEMAKER'S CABINS AT SWIFTWATER CELLARS/217-871 LOGS.GP.	O DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG			MATERIAL DESCRIPTION		
ER (						FILL: SILTY SANDY GRAVEL, dark b	rown, damp to moist, crushed, some o	organics	
SWIFTWA			GP- GM			SILTY SANDY GRAVEL, (GP-GM) bro	own, damp, appears medium dense, v	vith cobbles, subrounded to	<u>2233.3</u> 2232.5
AKER'S CABINS AT	2.5				<u> </u>	SILTY SAND WITH GRAVEL, (SM) bi roots	own to reddish brown, moist, appears	medium dense, trace clay, trac	<u>2292.3</u> ce
71 WINEM	22 92 22 32		SM			- with decomposed organics, black (fro	ım ~3.5'-4')		
8-712	5.0					- becomes reddish brown, tree roots to	) ~5'		
ECTS	0.0				5.5				2228,5
S.	1			HK?		SILTY SANDY GRAVEL, (GP-GM) bro	wn to reddish brown, moist, appears	medium dense to dense, some	
ž	1					cobbles			
S.A.									
ã	7.5		GP-						
SK SK			GM	W.					
ERM									
틹	1			EM.					
N N	-				9.5				2224.5
C:\USERS\G						- Groundwater not encountered at time - Referenced elevations are approxima	of excavation ite and based on plan set provided by Bottom of test pit at 9.5 feet.	JUB Engineers, Inc.	
16:54									
71/12									
1.1									
B.GD									
200									
STD									
EN PER									
<b>%</b>									
됢									
RA									
GEN									

GN Northern Inc. 11115 E. Montgomery, Suite C

# TEST PIT NUMBER TP-2 PAGE 1 OF 1

1	D	Telephone: (50) Fax: (509) 248-	9) 248			
CLIEN	T Swif	` '		wiftwater (	Cellars Properties, LLC	PROJECT NAME Winemaker's Cabins at Swiftwater Cellars
PROJI	ECT NU	MBER 217-871				PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA
DATE	STARTI	ED 10/3/17		COMPLE	TED 10/3/17	GROUND ELEVATION 2229.8 ft TEST PIT SIZE 24 X 96 inches
EXCA	VATION	CONTRACTOR _C	Client F	Provided		GROUND WATER LEVELS:
EXCA	VATION	METHOD Deere	135G			AT TIME OF EXCAVATION
LOGG	ED BY	MYM		CHECKE	D BY KAH	AT END OF EXCAVATION
a NOTES	S Appr	ox. GPS Coords.: 4	17.209	076°, -12	0.998760°	AFTER EXCAVATION
EPTH (ft)	SAMPLE TYPE NUMBER	TESTS	C.S.	GRAPHIC LOG		MATERIAL DESCRIPTION
CELLARS/217-871 O DEPTH O (ft)	SAMPL	12010	U.S.C.S.	GRA		MATERIAL DESCRIPTION
OR HERNOROPBOAS-ACTIVE PROJECTS/217-871 WINEMAKER'S CABINS AT SWIFTWATER 0.0.2	∰ GB	MC = 6% Fines = 5%	GP- GM		- becomes interlay boulders  - becomes dense  - becomes dense	RAVEL, (GP-GM) brown dark brown, appears medium dense to dense, rounded to subangular  vered with Sandy Gravel (GP), gray-brown, appears dense, trace  to very dense, with boulders  ed due to excavator refusal on boulders
GENERAL BH / IP / WELL - GINI S ID US LAB GDI - 12/1/17 15:54 - C:USERS GON OF THE GON O					<ul> <li>Groundwater not</li> </ul>	encountered at time of excavation ations are approximate and based on plan set provided by JUB  Bottom of test pit at 11.0 feet.
GENERAL BH 7 - 17 V W						



# TEST PIT NUMBER TP-3 PAGE 1 OF 1

		Fax	c: (509) 2	48-4220							
CLIEN	NT Swift	water	Custom I	Homes/Swiftwater Cellars Properties, LLC	PROJECT NAME Winem	naker's Cabin	s at Swiftwater Ce	llars			
PROJ	ECT NUI	MBER	217-871	1	PROJECT LOCATION 3	01 Rope Ride	r Dr., Cle Elum, K	ttitas Co., WA			
DATE	STARTE	ED _10	0/3/17	COMPLETED 10/3/17	GROUND ELEVATION 2	224 ft	TEST PIT SIZE	24 X 96 inches			
EXCA	VATION	CONT	RACTOR	Client Provided	GROUND WATER LEVEL	.S:					
1				ere 135G	AT TIME OF EXCAV	VATION					
			2.5	CHECKED BY KAH							
				s.: 47.209377°, -120.998682°	AT END OF EXCAVATION						
	_										
OEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG		MATERIAL DESCRIPTION	ON					
0.0			HIK.	SILTY SANDY GRAVEL, (GP-GM) br to subangular, some roots/rootlets to	own, damp, appears mediur	m dense to de	ense, with cobbles	, subrounded			
0.0 2.5 5.0 7.5		GP- GM		- becomes interlayered with Poorly Gr	aded Gravel (GP)						
7.5			000000000000000000000000000000000000000					221:			
				Test-pit terminated due to excavator     Groundwater not encountered at time     Referenced elevations are approximately	e of excavation	rovided by JU feet.	B Engineers, Inc.				



### TEST PIT NUMBER TP-4 PAGE 1 OF 1

	NET COLER	Fax: (509) 248-			- College Production LLC	BBO IPAT MALE Minorphysics Cobins of Cultivates College
			ies/Sv	wnwate	er Cellars Properties, LLC	PROJECT NAME Winemaker's Cabins at Swiftwater Cellars
- 1		MBER 217-871		20140	PTPD 40/0/47	PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA
		ED 10/3/17			LETED 10/3/17	
		CONTRACTOR _C		rovide	<u>d</u>	
- 1		METHOD Deere 1		01/501	CED DV 1/ALL	AT TIME OF EXCAVATION
					KED BY KAH	
B NOT	ES Appr	ox. GPS Coords.: 4	7.209	780°, -	120.999064	AFTER EXCAVATION
CELLARS/217-871 LOGS O DEPTH O (ft)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC LOG		MATERIAL DESCRIPTION
TER				47 7	TOPSOIL, silty san	nd, with roots/rootlets
SWIFTWA				V	SILTY SAND WITH	H GRAVEL, (SM) brown, damp, appears loose to medium dense, some
SAT	1		SM		rootlets 2.0	
NBY 2.5				EK 9	SILTY SANDY GRA	AVEL, (GP-GM) brown, damp, appears medium dense to dense, with
GENERAL BH / TP / WELL - GINT STD US LAB GDT - 12/1/77 16:54 - C: USERSIGN NORTHERNDROPBOXGS-ACTIVE PROJECTS/217-871 WINEMAKER'S CABINS AT SWIFTWATER CELLARS/217-871 LOGS, GPJ  O DEPTH  O (ft)	GB	MC = 18% Fines = 28%	GP- GM		- trace boulder	2201.0
GENERAL BH / TP / WELL - GINT STD US LAB GDT - 12/1/17 16					<ul> <li>Test-pit terminated</li> <li>Groundwater not e</li> </ul>	d due to excavator refusal on boulders encountered at time of excavation tions are approximate and based on plan set provided by JUB Bottom of test pit at 11.0 feet.



### TEST PIT NUMBER TP-5 PAGE 1 OF 1

			x: (509) 24		LLC PROJECT MARKE Minemaked California Collins					
СП	ENT Swif	twater	Custom H	omes/Swiftwater Cellars Properties, LLC	PROJECT NAME Winemaker's Cabins at Swiftwater Cellars					
PR	OJECT NU	MBER	217-871		PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA					
DA'	TE START	ED _1	0/3/17	COMPLETED 10/3/17	GROUND ELEVATION 2219.6 ft TEST PIT SIZE 24 X 96 inches					
EX	CAVATION	CONT	RACTOR	Client Provided	GROUND WATER LEVELS:					
EX	CAVATION	METH	IOD Deer	e 135G	AT TIME OF EXCAVATION					
LO	GGED BY	MYM		CHECKED BY KAH						
₹ NO.	TES Appr	ox. GF	S Coords.	: 47.210046°, -120.999624°	AFTER EXCAVATION					
OTER CELLARS2217-871 LOGS.G	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC	SILTY SANDY GRAVEL, (GP-GM) gr	MATERIAL DESCRIPTION  Tay brown, damp, appears medium dense to dense, with cobbles, P), subrounded to subangular					
GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 12/1/17 16:54 - C.WJSERSIGN NORTHERNDROPBOXXS-ACTIVE PROJECTSV217-871 WINEMAKERS CABINS AT SWIFTWATER CELLARSV217-871 LOGS. GD.  C. C		GP- GM	50000000000000000000000000000000000000	- becomes moist to wet  - Groundwater not encountered at time	2205.6					
GENE										



GN Northern Inc. 11115 E. Montgomery, Suite C Spokane Valley, WA, 99206

## TEST PIT NUMBER TP-6 PAGE 1 OF 1

	Fax: (509) 248	-4220		
CLIENT Swift	water Custom Hor	mes/S	viftwater	ellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars
1	VIBER 217-871			PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA
1	D 10/3/17			TED 10/3/17 GROUND ELEVATION 2234.2 ft TEST PIT SIZE 24 X 96 inches
1	CONTRACTOR (		rovided	GROUND WATER LEVELS:
ı	METHOD Deere			AT TIME OF EXCAVATION
				BY KAH AT END OF EXCAVATION
NOTES Appro	ox. GPS Coords.:	47.210	092', -12	.000306° AFTER EXCAVATION —
SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
		GP- GM	2.	APPARENT FILL: SILTY SANDY GRAVEL, (GP-GM) gray brown, damp, appears medium dense to dense, with cobbles, interlayered Poorly Graded Gravel (GP), subrounded to subangular
2.5 GB 5.0 10.0 12.5	MC = 3% Fines = 5%	GP- GM		SILTY SANDY GRAVEL, (GP-GM) gray brown, damp, appears medium dense to dense, with cobbles, interlayered Poorty Graded Gravel (GP), subrounded to subangular  - becomes damp to moist
				<ul> <li>Groundwater not encountered at time of excavation</li> <li>Referenced elevations are approximate and based on plan set provided by JUB Engineers, Inc.</li> <li>Bottom of test pit at 14.0 feet.</li> </ul>



### TEST PIT NUMBER TP-7 PAGE 1 OF 1

		Fax: (509) 248-	4220					
CLIEN	T_Swift	water Custom Hon	nes/Sv	viftwate	er Cella	rs Properties, LLC	PROJECT NAME Winemaker's Cabins at Swiftwater Cellars	
PROJE	ECT NUN	IBER 217-871					PROJECT LOCATION _301 Rope Rider Dr., Cle Elum, Kittitas Co., WA	
DATE	STARTE	D 10/3/17		COMP	LETED	10/3/17	GROUND ELEVATION 2240 ft TEST PIT SIZE 24 X 96 inche	<b>3</b> S
EXCA	VATION (	CONTRACTOR C	lient F	rovide	d			
1		METHOD Deere					AT TIME OF EXCAVATION	
LOGGI	ED BY i	MYM		CHECI	KED BY	' KAH	AT END OF EXCAVATION	
NOTES	В Аррго	x. GPS Coords.: 4	7.210	276°, -	121.000	)967°	AFTER EXCAVATION	
O DEPTH	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC			MATERIAL DESCRIPTION	
L			L	34 3	0.5		nd, with roots/rootlets	2239
			CN			SILTY SAND, (SM	) brown, fine grained, damp, appears loose to medium dense	
1	∰ GB	MC = 17% Fines = 37%	SM		1.5		2	2238
HLd∃O 0.0 2.5 5.0 7.5 10.0 12.5			GP- GM		13.0	some roots/rootlets	AVEL, (GP-GM) gray brown, damp, appears medium dense to dense, s to ~7"	227.
							encountered at time of excavation tions are approximate and based on plan set provided by JUB Bottom of test pit at 13.0 feet.	



### TEST PIT NUMBER TP-8 PAGE 1 OF 1

CLIEN	VT Swift	water Custom Ho	mes/Sw	iftwater Cella	rs Properties, LLC	PROJECT NAME Winemaker's Cabins at Swiftwater Cellars	
PROJ	ECT NUM	MBER 217-871				PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA	<b>\</b>
DATE	STARTE	D 10/3/17	(	COMPLETED	10/3/17	GROUND ELEVATION 2186.5 ft TEST PIT SIZE 24 X 96 inch	es
EXCA	VATION	CONTRACTOR	Client P	rovided		GROUND WATER LEVELS:	
EXCA	VATION	METHOD Hitacl	ni 50U M	ini-excavator		AT TIME OF EXCAVATION	
LOGG	ED BY	MYM	(	CHECKED BY	KAH	AT END OF EXCAVATION	
NOTE:	S Appro	x. GPS Coords.:	47.2080	72°, -120.99	5331°	AFTER EXCAVATION	
CELLARS277-871 LOGS.C O DEPTH O (ff)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC LOG		MATERIAL DESCRIPTION	
S O.O				0.5	TOPSOIL		2486 (
TWA!			SM	1.0	SILTY SAND, (SM	) brown, fine grained, dry to damp, appears medium dense	2186.0
CABINS AT SWIF	<b>⊕</b> GB	MC = 6% Fines = 58%		1.0	SANDY SILT, (ML) some slight to mod	brown, dry to damp, appears medium dense to dense, some gravel, derate cementation	<u>2185.5</u>
871 WINEMAKER'S C.			ML	4.0	SILTY SAND WITH	I GRAVEL, (SM) brown, moist, appears medium dense to dense, some	<u>2182.5</u>
ORTHERNDROPBOXS-ACTIVE PROJECTS12.7.			SM	9.0			2177.5
ž Z						encountered at time of excavation tions are approximate and based on plan set provided by JUB	
ERSY					Engineers, Inc.	Bottom of test pit at 9.0 feet.	
GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 12/1/17 16:54 - C:USERSIGN NORTHERNDROPBOXS-ACTIVE PROJECTS/217-571 WINEMAKER'S CABINS AT SWIFTWATER CELLARS/217-671 LOGS.GPJ  C O DEPTH  C O C O C O DEPTH  C O C O C O DEPTH  C O C O C O C O C O C O C O C O C O C						Bottom of less pix at 5.0 lest.	

### TEST PIT NUMBER TP-9 PAGE 1 OF 1

CLIE	NT Swift	water Custom Ho	mes/Sv	viftwate	r Cellars Properties, LLC	LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars			
PRO.	JECT NUI	MBER 217-871				PROJECT LOCATION	301 Rope Rider	Dr., Cle Elum, Kitt	itas Co., WA
DATE	STARTE	D 10/3/17		COMPL	ETED 10/3/17	<b>GROUND ELEVATION</b>	2182.5 ft	TEST PIT SIZE	24 X 96 inches
EXC	AVATION	CONTRACTOR _	Client P	rovided		GROUND WATER LEV	ELS:		
EXC	AVATION	METHOD Hitach	i 50U N	fini-exc	avator	AT TIME OF EXC	AVATION		
LOG	GED BY	MYM		CHECK	ED BY KAH				
NOTE	S Appro	x. GPS Coords.:	47.2082	284°, -1	20.995760°	AFTER EXCAVA			
98.GI	T								
CELLARSI217-871 LOC O DEPTH O (ft)	SAMPLE TYPE NUMBER	TESTS	U.S.C.S.	GRAPHIC LOG		MATERIAL I	DESCRIPTION		
E .				3.7 2	TOPSOIL				2482 (
<b>X</b>	1		SM		SILTY SAND, (SM)	brown, fine grained, dry	to damp, appear	rs medium dense	2182.0
E -	1			<del>                                      </del>	SANDY SILT, (ML)	brown, dry to damp, app			<u>2181.5</u> e gravel.
GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 12/1/17 16:54 - C: USERSIGN NORTHERNDROPBOXIS-ACTIVE PROJECTS/217-471 WINEMAKER'S CABINS AT SWIFTWATER CELLARS/217-871 LOGS. GP.  C. C			ML		some slight to mod				
5.0					i.0				2177.5
EG.				ПП	SILTY SAND WITH	GRAVEL, (SM) brown, slight to moderate ceme	moist, appears n	nedium dense to de	ense, some
SE					cobbles, some day	siigni to moderate cem	entation		
2	GB GB	MC = 9% Fines = 31%	SM						
\(\frac{1}{2}\)	-	Fines = 31%	1						
7.5									0475.0
2 /.J					- Groundwater not e	ncountered at time of ex			2175.0
욅					<ul> <li>Referenced elevat Engineers, Inc.</li> </ul>	ions are approximate an	d based on plan	set provided by JUI	В
					Engineers, the	Bottom of tes	st pit at 7.5 feet.		
<u> </u>									
Sign Sign									
SER									
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25.									
5									
2									
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<u> </u>									
121									
<u>§</u>									
2									
H									
RAI									
GENERAL COLOR									

Engineers, Inc.



### **KEY CHART**

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE						
COARSE-GRAINED SOILS			FINE-GRAINED SOILS			
DENSITY	N (BLOWS/FT)	FIELD TEST	CONSISTENCY	N (BLOWS/FT)	FIELD TEST	
Very Loose	0 – 4	Easily penetrated with ½-inch reinforcing rod pushed by hand	Very Soft	0-2	Easily penetrated several inches by thumb	
Loose	4 – 10	Difficult to penetrate with ½-inch reinforcing rod pushed by hand	Soft	2-4	Easily penetrated one inch by thumb	
Medium -Dense	10 – 30	Easily penetrated with ½-inch rod driven with a 5-lb hammer	Medium-Stiff	4 – 8	Penetrated over ½-inch by thumb with moderate effort	
Dense	30 – 50	Difficult to penetrate with ½-inch rod driven with a 5-lb hammer	Stiff	8 – 15	Indented about ½-inch by thumb but penetrated with great effort	
	> 50	penetrated only a few inches with 1/2-inch	Very Stiff	15 – 30	Readily indented by thumb	
Very Dense	- 50	rod driven with a 5-lb hammer	Hard	> 30	Indented with difficulty by thumbnail	

		USCS SOIL C	LAS	SIFIC	CATION	
	Major Divis	IONS			GROUP DESCRIPTION	
	Gravel and Gravelly Soils	Gravel (with little or no fines)	82	GW GP	Well-graded Gravel Poorly Graded Gravel	1
Coarse- Grained	<50% coarse fraction passes	Gravel		GM	Silty Gravel	1
Soils	#4 sieve	(with >12% fines)	32	GC	Clayey Gravel	ŀ
<50%	Sand and	Sand		sw	Well-graded Sand	
sieve >5	Sandy Soils >50% coarse	(with little or no fines)		SP	Poorly graded Sand	
	fraction passes	Sand		SM	Silty Sand	ŀ
	#4 sieve	(with >12% fines)	11	SC	Clayey Sand	-
Fine-	Cile	d Class	Ш	ML	Silt	
Grained	Silt and Clay Liquid Limit < 50			CL	Lean Clay	Ì
Soils		Exquite Danie 190		OL	Organic Silt and Clay (low plasticity)	ŀ
>50%	Cité	and Clay	MI	MH	Inorganic Silt	
passes #200 sieve		Limit > 50		СН	Inorganic Clay	
Sicvo		inquie inne - 50		OH	Organic Clay and Silt (med. to high plasticity)	H
	Highly Organic	Soils	3	PT	Peat Top Soil	

	Log	SYMBOLS
X	28	2" OD Split Spoon (SPT)
	38	3" OD Split Spoon
	NS	Non-Standard Split Spoon
	ST	Shelby Tube
	CR	Core Run
⊻	BG	Bag Sample
M	TV	Torvane Reading
I	PP	Penetrometer Reading
	NR	No Recovery
Ā	GW	Groundwater Table

MODIFIERS			
DESCRIPTION	RANGE		
Trace	<5%		
Little	5% - 12%		
Some	>12%		

MOISTURE CONTENT			
DESCRIPTION	FIELD OBSERVATION		
Dry	Absence of moisture, dusty, dry to the touch		
Moist	Damp but not visible water		
Wet	Visible free water		

		M.	AJOR DI	VISIONS V	VITH GI	RAIN SIZE			
				SIEVE S	SIZE				
1	2"	3"	3/4"	4	10	40	)	200	
			G	RAIN SIZE	(INCHES	)			
1	2	3	0.75	0.19	0.079	0.01	71	0.0029	
Boulders	Cobbles		Gravel			Sand			Silt and Clay
Doulders	Cobbles	Coarse	Fir	ne Co	arse	Medium	Fine		om and Clay

#### SOIL CLASSIFICATION INCLUDES

- 1. Group Name
- 2. Group Symbol
- 3. Colo
- 4. Moisture content
- 5. Density / consistency
- 6. Cementation
- 7. Particle size (if applicable)
- 8. Odor (if present)
- Comments

Conditions shown on boring and testpit logs represent our observations at the time and location of the fieldwork, modifications based on lab test, analysis, and geological and engineering judgment. These conditions may not exist at other times and locations, even in close proximity thereof. This information was gathered as part of our investigation, and we are not responsible for any use or interpretation of the information by others.



### Appendix III LABORATORY TEST RESULTS

16:56

-11/27/17

**BOREHOLE** 

**B-1** 

**B-1** 

**B-2** 

**B-5** 

**B-5** 

M

\*

0

DEPTH

24.0

42.0

20.0

1.5

11.0

D100

25

12.5

37.5

9.5

9.5

**D60** 

7.569

0.311

0.62

**D30** 

0.437

0.137

**D10** 

48.7

3.9

20.8

1.4

1.2

%Sand

35.9

62,8

55.8

30.7

37.6

GN Northern Inc. 11115 E. Montgomery, Suite C Spokane Valley, WA, 99206 Telephone: (509) 248-9798 Fax: (509) 248-4220

#### **GRAIN SIZE DISTRIBUTION**

%Clay

%Silt

15.4

33.3

23.4

67.9

61.2

CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars

PROJECT NUMBER 217-871 PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA U.S. SIEVE OPENING IN INCHES U.S. SIEVE NUMBERS HYDROMETER 810 14 16 20 30 40 50 60 100 140 200 100 95 100 90 85 80 C:USERSIGN NORTHERNDROPBOX5-ACTIVE PROJECTS1217-871 WINEMAKER'S CABINS AT SWIFTWATER CELLARS1217-871 LOGS, GPJ 75 70 65 PERCENT FINER BY WEIGHT 60 55 50 45 40 35 30 25 20 15 10 5 100 10 0.01 0.001 **GRAIN SIZE IN MILLIMETERS** GRAVEL SAND **COBBLES** SILT OR CLAY fine coarse medium coarse fine **BOREHOLE** DEPTH Classification LL PL PI Cc Cu 24.0 SILTY GRAVEL WITH SAND(GM) **B-1** F4 **B-1** 42.0 **CLAYEY SAND(SC)** A 20.0 **B-2** SILTY SAND WITH GRAVEL(SM) \* 1.5 SANDY SILT(ML) **B-5** 0 **B-5** 11.0 SANDY SILT(ML) %Gravel

### GN Northern Inc.

0

> ∢

\* 0 **B-5** 

TP-2

TP-4

TP-6

TP-7

17.0

2.0

4.0

3.5

1.0

9.5

101.6

25

**75** 

19

28,189

0.29

17.759

0.216

3.759

0.083

2.353

11115 E. Montgomery, Suite C Spokane Valley, WA, 99206 Telephone: (509) 248-9798 Fax: (509) 248-4220

**GRAIN SIZE DISTRIBUTION** 

CLIENT Swiftwater Custom Homes/Swiftwater Cellars Properties, LLC PROJECT NAME Winemaker's Cabins at Swiftwater Cellars PROJECT NUMBER 217-871 PROJECT LOCATION 301 Rope Rider Dr., Cle Elum, Kittitas Co., WA U.S. SIEVE NUMBERS | 810 14 16 20 30 40 50 60 100 140 200 U.S. SIEVE OPENING IN INCHES **HYDROMETER** 2 1.5 1/23/8 100 95 0 90 85 80 G:USERSIGN NORTHERNDROPBOXG-ACTIVE PROJECTS/217-971 WINEMAKER'S CABINS AT SWIFTWATER CELLARS/217-871 LOGS, GPJ 75 70 65 PERCENT FINER BY WEIGHT 60 55 50 45 40 6 35 30 25 20 15 10 5 100 0.01 0.001 **GRAIN SIZE IN MILLIMETERS GRAVEL** SAND **COBBLES** SILT OR CLAY coarse fine coarse medium fine **BOREHOLE** DEPTH Classification LL PL Cc Cu 17.0 SILTY CLAY WITH SAND(CL-ML) **B-5** Ь∢ TP-2 2.0 WELL GRADED GRAVEL(GW) 1.60 89.74 TP-4 4.0 SILTY SAND(SM) TP-6 3.5 POORLY GRADED GRAVEL WITH SILT AND SAND(GP-GM) \* 1.12 63.57 1.0 SILTY SAND(SM) 0 **TP-7** DEPTH **BOREHOLE** D100 D60 **D30 D10** %Gravel %Sand %Silt %Clay

1.8

53.5

13.6

63.0

5.7

0.314

0.279

24.5

27.5

58.1

31.7

57.4

73.7

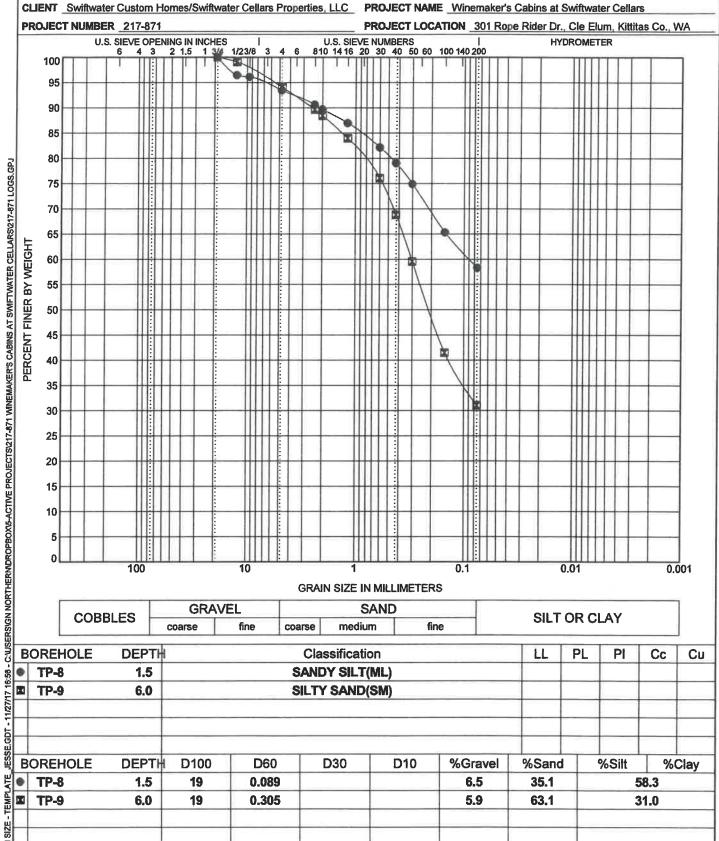
4.6

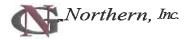
28,2

5.3

37.0

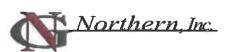
#### **GRAIN SIZE DISTRIBUTION**





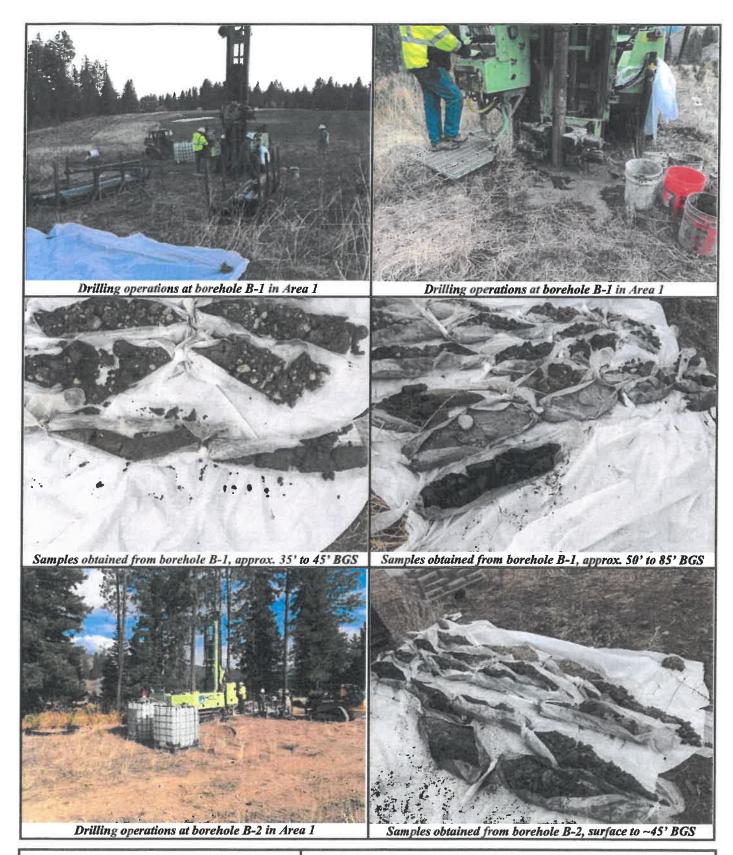
# Appendix IV SITE & EXPLORATION PHOTOGRAPHS

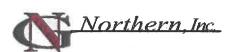




Site & Exploration Photographs
Winemaker's Cabins at Swiftwater Cellars
301 Rope Rider Drive
Cle Elum, Kittitas County, Washington

Date	Mounted By:	Reviewed By:	Plate
12/1/2017	MBB	KAH	1

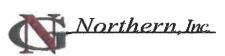




Site & Exploration Photographs
Winemaker's Cabins at Swiftwater Cellars
301 Rope Rider Drive
Cle Elum, Kittitas County, Washington

Date	Mounted By:	Reviewed By:	Plate
12/1/2017	MBB	KAH	2

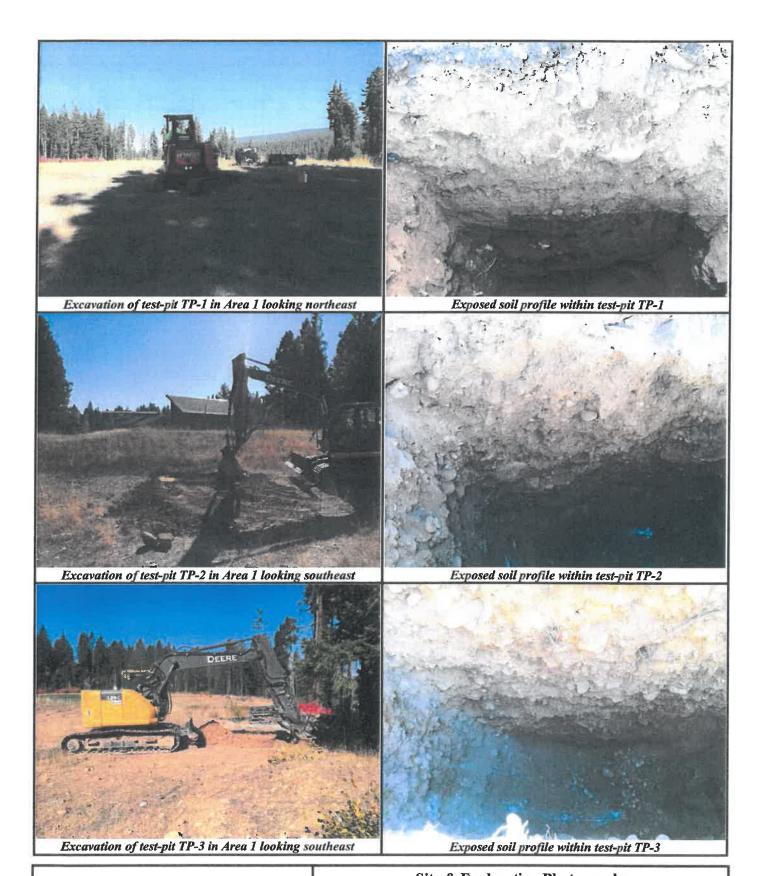


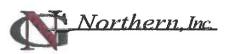


# Site & Exploration Photographs Winemaker's Cabins at Swiftwater Cellars 301 Rope Rider Drive

Cle Elum, Kittitas County, Washington

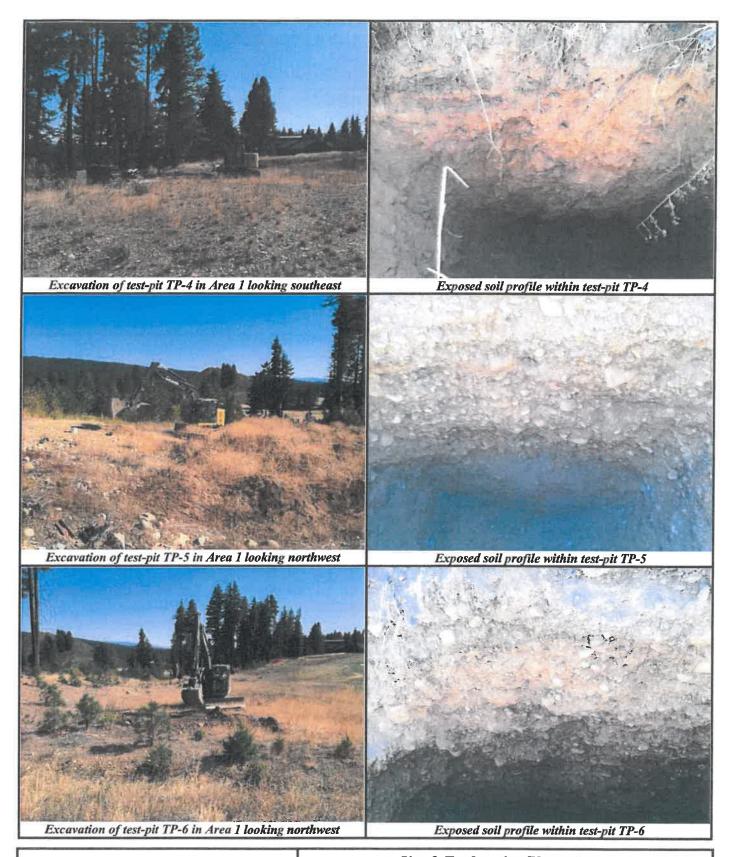
Date	Mounted By:	Reviewed By:	Plate
12/1/2017	MBB	KAH	3

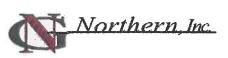




Site & Exploration Photographs
Winemaker's Cabins at Swiftwater Cellars
301 Rope Rider Drive
Cle Elum, Kittitas County, Washington

Date	Mounted By:	Reviewed By:	Plate
12/1/2017	MBB	KAH	4

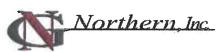




Site & Exploration Photographs
Winemaker's Cabins at Swiftwater Cellars
301 Rope Rider Drive
Cle Elum, Kittitas County, Washington

Date	Mounted By:	Reviewed By:	Plate
12/1/2017	MBB	KAH	5





# Site & Exploration Photographs Winemaker's Cabins at Swiftwater Cellars 301 Rope Rider Drive

301 Rope Rider Drive
Cle Elum, Kittitas County, Washington

Date	Mounted By:	Reviewed By:	Plate
12/1/2017	MBB	KAH	6



### Appendix V SLOPE STABILITY ANALYSES OUTPUTS