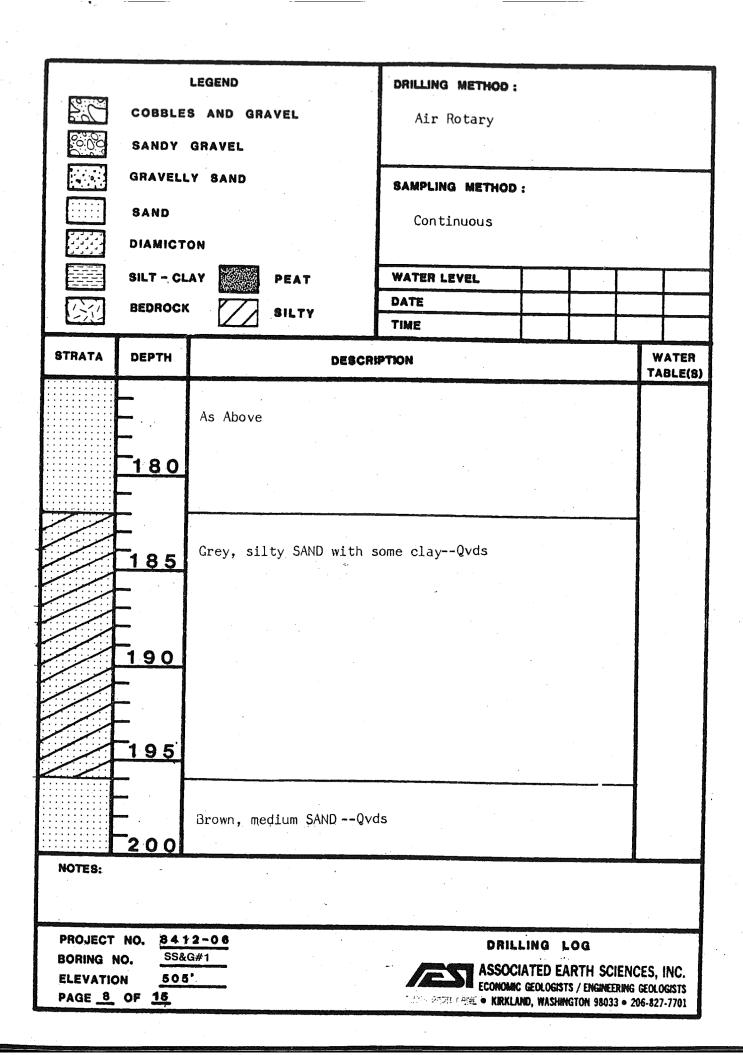
LEC	GEND	DRILLING METHOD	•	
COBBLES	AND GRAVEL	Air Rotary		
SANDY GR	AVEL	-		
GRAVELLY	SAND	SAMPLING METHOD		
SAND		Continuous		
DIAMICTON		·		
SILT - CLAY	PEAT	WATER LEVEL		
BEDROCK	SILTY	DATE TIME		
				WATER
STRATA DEPTH	DESCR	IPTION		TABLE(8)
	As Above:			
				-
155	Brown, medium to coars	e SANDQvds		
-				
160				
-				
165	•			
170				
<u> </u>				
1 7 5 NOTES:				
PROJECT NO. 8412 BORING NO. SS&G#			ILLING LOG OCIATED EARTH SCIE	NCES INC
ELEVATION <u>505'</u> PAGE <u>7'</u> OF <u>15</u>		ECONO	MMC GEOLOGISTS / ENGINEER KLAND, WASHINGTON 98033	ING GEOLOGISTS



	_				
		LEGEND	DRILLING METHOD:		
2,82	COBBLES	S AND GRAVEL	Air Rotary		
50.00 50.00	SANDY	GRAVEL			
	GRAVELL	Y SAND	SAMPLING METHOD		
:::::	SAND		Continuous		
	DIAMICT	ON .			· ·
	SILT - CL	AY PEAT	WATER LEVEL		
以	BEDROCK	SILTY	DATE		
			TIME		
STRATA	DEPTH	DES	CRIPTION		WATER TABLE(8)
				•	
	promiting:	As Above			
	2 0 5				
	2 10				
	215				
		·			
	220				
	225				
NOTES:					·
PROJECT		12-06	DRII	LLING LOG	· · · · · · · · · · · · · · · · · · ·
BORING ELEVATI		5' .	ASSO	CIATED EARTH SCIENCE GEOLOGISTS / ENGINEER	ENCES, INC.
ì	OF 15		U. STORE BEST ● KIKKI	ing geologists / Epiglineek LAMD, Washington 98033	# 206-827-7701

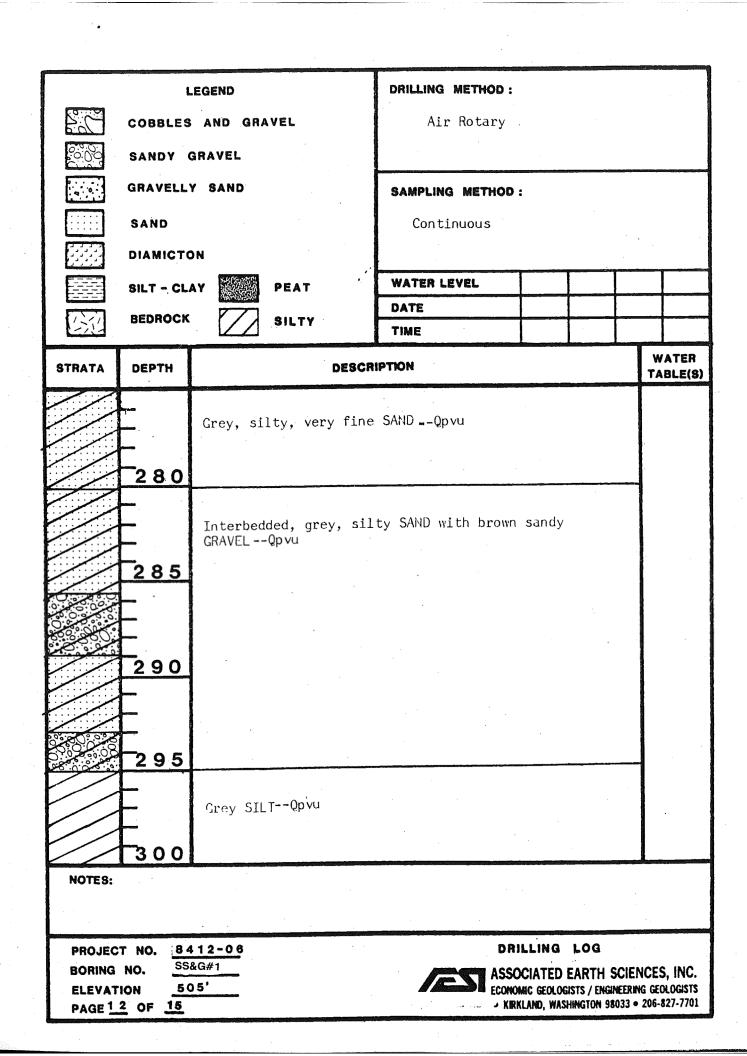
,

		LEGEND	DRILLING METHOD:					
222	COBBLE	S AND GRAVEL	Air Rotary					
5. 0.5	SANDY	GRAVEL						
	GRAVELL	Y SAND	SAMPLING METHOD	•				
	SAND		0					
	DIAMICT	ON	Continuous		,			
	SILT - CL	AY PEAT	WATER LEVEL					
公司	BEDROCK	SILTY	DATE					
			TIME					
STRATA	DEPTH	nescr	IPTION		WATER TABLE(8)			
		An Abour						
	·.	As Above						
	230 Grey, silty very fine SANDQvds							
	235			Ovda				
0000		Grey, silty CLAY with	scattered GRAVEL -	-Qvus				
	240							
		Interbedded grey SILT a	and SANDQpvu					
	2 4 5							
	250							
NOTES:					A			
				:				
PROJECT	Constitution of the Consti	12-06	DRIL	LING LOG				
BORING I		G#1	ASSOC	ATED EARTH SCIEN	ICES, INC.			
PAGE 10	- Contraction	TOTAL CONTROL	ECONOMI	c geologists / engineering and, washington 98033 •	G GEOLOGISTS			

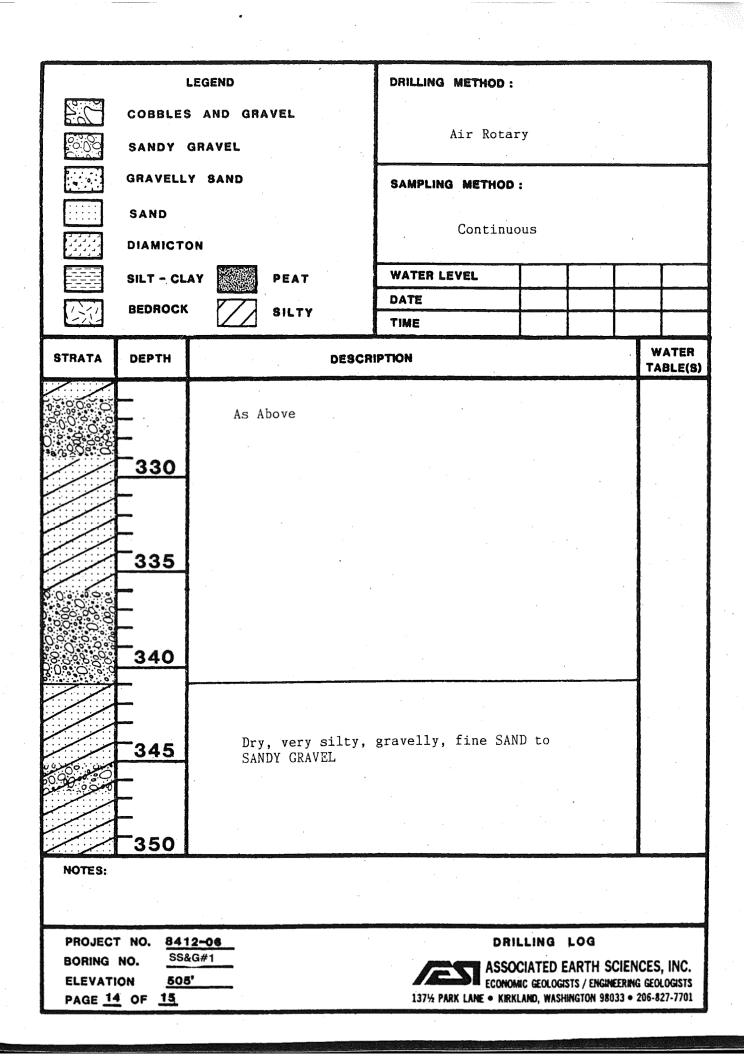
	L.	EGEND	DRILLING METHOD:	
20	COBBLES	AND GRAVEL	Air Rotary	
<u></u>	SANDY G	BRAVEL		
	GRAVELLY	SAND	SAMPLING METHOD:	
[::::]	SAND		Continuous	
	DIAMICTO	N	Concindodo	
	SILT - CL	PEAT	WATER LEVEL	
公江	BEDROCK	SILTY	TIME	
STRATA	DEPTH	DESC	RIPTION	WATER TABLE(S)
		As Above		
		·		
	260			
000000		Grey to brown GRAVEL	with Cobbles Qpvu	
	265	Grey to brome divise		
			•	
	_			
	270			
NOTES	275			
PROJE	CT NO. LE	1412-06	DRILLING LOG	
BORIN	g NO.	SS&G#1	ASSOCIATED EARTH SO	FRING GEOLOGISTS
ELEVA	TION _5	Control of the Contro	A STORY OF THE STATE OF KIRKLAND, WASHINGTON 980	33 • 206-827-7701

Shirt or parker (

Special Control of the Control of th



	L	EGEND.		Control of the Control	DRILLING N	AETHOD :				
2.0	COBBLES	AND GRA	VEL	NO.	Air	Rotary	<i>i</i>			
:0:00 0:00	SANDY (GRAVEL								
	GRAVELL	YSAND			SAMPLING	METHOD	:			
	SAND				Con	tinuous	5			
	DIAMICTO				,				,	
	SILT - CL	AY	PEAT	Section 2	DATE DATE	AET				
一级	BEDROCK		SILTY		TIME					
STRATA	DEPTH		Di	ESCRIP	TION					WATER TABLE(S)
	. ·	Silty, abunda	fine SAND	with chips	scattered s	GRAVEL	and			
		: .		• •						
	310									
								٠		
	315									
						,				
	-									
	320	1								
	F									
	L									
NOTES:	325									
						•				
PROJEC	T NO. 84	12-06	•			DA	ILLING	LOG		
BORING	NO. SS	8&G#1				ASS FCOM	OCIATEI	DEARTH	SCIEN	ICES, INC.
ELEVAT	3 OF 15				137½ PA	IRK LAME • K	RKLAND, W.	ASHINGTON 9	8033 •	206-827-7701



		LEGEND	DRILLING METHOD:		Biograpia	
2		S AND GRAVEL	SHIELING METHOD:			•
6.07	SANDY		Air Rot	ary		
2000 2000						
	GRAVELL	Y SAND	SAMPLING METHOD	•		
	SAND		Contin	nuous		
	DIAMICT	ON			`	10 To
	SILT - CL	AY PEAT	WATER LEVEL			
公社	BEDROCK	SILTY	TIME			
STRATA	DEPTH	2000				WATER
J. J	DEPIN	DESCR	IPTON			TABLE(8)
0.800	_	As Above	•			·
00/10/2000	355					
	_					
						-
0	⁻ 360					
0, 0, 0, 0,					•	
		Gravelly, med	dium to coarse SA	AND		
	365					
0.0	-					
	_		4			
	⁻ 370					
TD	_	•				
1.5	<u></u>					
NOTES:	<u> </u>					
						-
						:
PROJECT BORING	-	12-06 16G#1 SS+16#1		LING LOG CIATED EARTH SO	CIEN	רבל ומר
ELEVATION PAGE 15	OF 15	<u> </u>	ECONOMI 137½ PARK LANE • KIRKL	IC GEOLOGISTS / ENGINE	EERING	GEOLOGISTS

		LEGEND	DRILLING METHOD	·	
22	SANDY	GRAVEL WITH COBBLES	Air Rot	arv	
8.0°C	SANDY	GRAVEL	ATT ROC	 ,	
	POORLY	SORTED SAND			
9			SAMPLING METHOD) :	
2777	•	ORTED SAND	Grab		
4444	DIAMICTO)N			December 1988 december 198
	SILT - CL	PEAT	WATER LEVEL		
经过	BEDROCK	SILTY	TIME .		
STRATA	DEPTH				WATER
SINAIA	DEPTH	DESCRI	r ion		TABLE(S)
	District Section 1				
			-		
	 10				
					l
	_				İ
	20	Brown gravel and coarse	e sand.		
	_				
	_				
	30	Brown gravel with sand,	high % of fractu	red rock chips	3.
	_				
	4 0	Brown gravel with coars	se sand.		
		· · · · · · · · · · · · · · · · · · ·			
		•			
	50	Brown gravel/cobbles wi	th coargo gord r	aak fraamanta	
NOTES:		Brown gravel/cobbles wi			
	pulle	rface casing to 20'; 6" d. Surface seal from 0-	casing surface to 20'.	TD; 8" casing	later
PROJECT BORING		06−15W &G_#3_		LLING LOG	
ELEVATION	ON ~4		ECONOM	CIATED EARTH SCIE IIC GEOLOGISTS / ENGINEER	NG GEOLOGISTS
PAGE $\frac{1}{}$	OF <u>4</u>		● KRK	LAND, WASHINGTON 98033	• 206-827-7701

		LEGEND	DRILLING METHOD:	•					
222	SANDY	GRAVEL WITH COBBLES							
8.00 8.00	SANDY	GRAVEL	Air Rot	ary					
	POORLY	SORTED SAND	SAMPLING METHOD			and the second of the second o			
	WELL SO	ORTED SAND							
13.33	DIAMICTO	n	Grab						
	SILT - CL	AY PEAT	WATER LEVEL						
公司	BEDROCK	SILTY	DATE TIME						
	DEPTH					VATER			
STRATA	DEPIH	DESCRI	PTOR			ABLE(8)			
			•		l				
	60 Brown sandy gravel with cobbles, rock fragments								
	- Chaire								
·	70	Brown gravel with cobbl	les with interbedd	ed coarse sau	nd,				
	80	Gray-brown gravel with	coarse sand, rock	fragments.					
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				į				
	90	Gray gravel with rock	fragments with tra	ace sand.					
	Aud dity								
	100	Gray grayel with rock t	iragments with tra	ce sand					
100 Grav gravel with rock fragments with trace sand.									
PROJECT		06-15W	DRIL	LING LOG					
BORING NO. SS&G #3 ~ 476 ASSOCIATED EARTH SCIENCES, INC.									
	ELEVATION 476 PAGE 2 OF 4 **ECONOMIC GEOLOGISTS / ENGINEERING GEOLOGIST / ENGINEERING / ENGINE								

				•				
. जन्म		LEGEND	DRILLING METHO) :				
262	SANDY	GRAVEL WITH COBBLES	Air R	otary				
:00g	SANDY	GRAVEL						
	POORLY	SORTED SAND	SAMPLING METHO	00:	January (Charles and Arthur State and Ar			
	WELL SO	PRTED SAND	Grab					
333	DIAMICTO) DN	·					
	SILT - CL	AY PEAT	WATER LEVEL					
7/27	BEDROCK	190401990	DATE					
5277		SILTY	TIME					
STRATA	DEPTH	DESCR	PTION		WATER TABLE(S)			
	100	Gray gravel with rock	fragments with t	race sand.	1			
	_		•					
	110 Brown coarse sand and gravel with some rock fragments.							
	_							
	_							
	120	Brown coarse sand with	n some gravel and rock fragments.					
	Pinings							
	_							
	130	Brown coarse sand with	rock fragments	and some grav	e1.			
	_	,						
	140	Grayish-brown gravel w	ith rock fragmen	ts and trace				
		sand.		· · · · · · · · · · · · · · · · · · ·	ŀ			
		•						
	150	Cray aroual with 1	, and made for	to and '	-1-			
NOTES:	130	Gray gravel with sand a	and rock tragmen	is and some s	LLCA			
PROJECT		06-15W	DF	ILLING LOG				
BORING ELEVATION	-	476	ASS From	OCIATED EARTH S	CIENCES, INC.			
PAGE 3	-			RKLAND, WASHINGTON 984				

		LEGEND	DRILLING METHOD	,				
36	SANDY	GRAVEL WITH COBBLES	Air Ro	tarv				
86.00 100		GRAVEL		,				
ومنط		SORTED SAND						
	POUNLT	SORTED SAND	SAMPLING METHOD):				
	WELL SC	ORTED SAND	Grab					
344	DIAMICTO	M		while drill	ling			
	SILT - CL	AY PEAT	WATER LEVEL		163.25			
经过	BEDROCK	SILTY	DATE TIME		6/26/92			
				:30pm				
STRATA	DEPTH	DESCRI	PTION	WATER TABLE(S)				
	_	@155 dark brown fine to	medium sand with	some scattere	ed			
		gravel.						
	160	Dark brown medium sand bedded in gray gravel w						
		0165 3 1 1		v				
		@165 dark brown medium	sand.		<u> </u>			
	170	Dark brown medium sand,	wet.		포			
					WD			
	*******	@175 brown fine to medi	um sand and silt,	saturated.				
}	180	Brown fine to medium sa	nd silt and clas	r woodn				
		fragments, saturated.	id, birt, and cia	, woody				
		@185 brown fine sand an	d silt. saturated.					
ŀ	190	Gray-brown fine to coars	se sand with some	silt.				
		0105.1						
ŀ	_	@195 brown fine to coars	se sand and silt.					
	200	Brown fine to medium san	nd.					
NOTES:	10' of	No 12 screen installed	from 188'-198'.					
·								
PROJECT	000	06-15W	DRIL	TING FOG				
BORING I	and the same	476		CATED EARTH SCIE				
PAGE 4				IC GEOLOGISTS / ENGINEER AND, WASHINGTON 98033				

		EXPLORATION	BO	RI	NO	à L	OG	EB Pa	-1 ge 1 c	of 2
WELL	GRAPH	SEDIMENT DESCRIPTION	DEPTH	SAMPLE	GROUND			ENERAT Blows/F		SISTANCE 40
		Brown, sandy, gravelly silt.	-	Ι		•				
	7.11	Brown, silty sand, some organics to 12'.	5 	Ι		A				
	,	-	10 15	Ι						
			- 13 20	I			4			
The second second			_ _ _ _ _ 25	Ι			•			
			- - - - 30	I			•			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 H E H I I I I S		- - - - - 35	Ι			•			
interr	retation	onditions depicted represent our observations at the time, engineering analysis, and judgment. They are not necess insibility for the use or interpretation by others of information.	arily repre	sentai	tive of c	other tim	hole, mo nes and k	dified b	y geologi . We will	jic Il not
			W922291	A		1	0/92			
		Snoqualmie Shallow Aquifer Evaluation Snoqualmie, Washington	Æ		5	E	AR1	"H	ATE ES,	INC

		EXPLORATION	I BO	RI	NG	L	OG	EB-1 Page	2 of	2
WELL	СВАРН	SEDIMENT DESCRIPTION	рертн	SAMPLE	GROUND	STAN		Blows/Foo	t	ANCE
		Brown, silty sand.	_ _ _ _ 40	I				•		
		Brown, fine sandy silt. BOH @ 44' Note: 2" PVC - casing; 10 slot, 2" PVC - screen; 12" flush monument; sand packed. Surface El.: 421'	- 45 - 45 	I			A			
interpre	tation	onditions depicted represent our observations at the , engineering analysis, and judgment. They are not ne nsibility for the use or interpretation by others of info	cessarily repre	esenta	tive of	other tim	hole, modes and lo	dified by cations.	geologic We will n	ot
				A		10,	/92			
		Snoqualmie Shallow								

		ASSOCIATED
1		EARTH
		SCIENCES, INC

	Ŧ	EXPLORATION	Y						EB-2	SISTANCE
WELL	GRAPH	SEDIMENT DESCRIPTION	ОЕРТН	SAMPLE	GROUND WATER	ı		Blows/I		40
		Medium brown, organic silt with scattered, fine sand.	- -	Ι		A				
		Tan, fine sand with organic silt.	—5 - -	I		A				
	2	Brown, gravelly, fine to medium sand.	- - -10	I				A		
	a		- - -	I		4	•			
	φ. σ.	Heavily oxidized at $17\frac{1}{2}$ '-19'.	—15 - - - -	I	<u>*</u>	A	A			
	a , ,		—20 — — —	I		A	A			
	g B	@26' wood fragment.	—25 - - -	I			•			
		Note: 2" PVC - casing; 10 slot, 2" PVC - screen; 12" flushed monument; sandpacked. Surface El.: 416.5'	-30 - - -							

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by geologic interpretation, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

W92229A

10/92



		EXPLORATION	I BO	RII	N	G L	OG	EB-	5	
WELL COMPL	ЗВАРН	SEDIMENT DESCRIPTION	ОЕРТН	AMPLE	ROUND	STAN		ows/Fo	ot	
WELL STANDS OF THE STANDS OF T	GRAPH	Brown silt and clay, scattered organics. (Fill) Topsoil overlying mottled tan silt widely scattered organics. (Fill) Brown, sandy silt, organic rich. (Fill) Tan to brown, micaceous, sandy silt scattered organics. Gray, micaceous silt, scattered organics. Gray, silty clay, scattered organics.		T T T T SAMPLE	II GROUND GROUND	STAN		ows/Fo		40
		Gray, silty clay, scattered organics. BOH @ 31½' Note: 2" PVC - casing; 10 slot, 2 PVC - screen; 12" flushed m	-30 	Sand	lpac	ked.				
interpre	tation	Surface E1.: 416.30 on distinct states and surface E1.: 516.30 on distinct states are not necessitive for the use or interpretation by others of information in the states of the states	ime and locatessarily repre	ion of t	this e	xploratory f other tim	hole, mod es and loc	fied by ations.	geolog We wil	ic I not
			W9222	9A		10,	/92			



		EXPLORATION	1	ВО	RI	NC	G L	OG	ЕВ-6		
WELL	GRAPH	SEDIMENT DESCRIPTION		DEPTH	SAMPLE	GROUND	STAN	DARD PEN Bk 0 20	ows/Foo	t	ANCE 0
interpre	tation	Medium brown silt, trace fine sand blocky texture. Light brown silt, trace fine sand blocky texture, scattered organics. Brown, very silty, fine sand, micaceous. Brown, slightly silty, fine sand, scattered organics. Dark brown, fine sand, trace silt scattered organics. Dark brown, fine to medium sand, scattered organics. Gray, gravelly, fine to medium sat scattered organics. Gray, gravelly, fine to medium sat scattered organics. BOH @ 26½! Note: 2" PVC - casing; 10 slot, 2" PVC - screen; 12" flushed monument; sand packed. Surface El.: 415.32' Anditions depicted represent our observations at the engineering analysis, and judgment. They are not neasibility for the use or interpretation by others of informatical states.	time a	rily repre	on of senta ted or	▼ =	A A A Contractory other timog.	hole, modi	ified by	geologic	
		Snoqualmie Shallow		W9222	9A		10/	92		en essentian e este el France	



			EXPLORATION	BO	RI	NG	iL	OG	EB-	- 7	
ÆL	COMPL.	ВРАРН	SEDIMENT DESCRIPTION	рертн	SAMPLE	GROUND	STAN		NERATIC Blows/Fo	ON RESIST	ANCE
5	O T	J			S	_ც ≥		0 ;	20	30 4	0
			Topsoil overlying tan silt, blocky texture, scattered organics.	_	_						
//	4										
1	4		Tan silt, blocky texture, scattered organics.	-	I	Ī					
1	7		Mottled tan silt, scattered organics.	-	Ι						
1	7-7		Mottled tan silt, thin sand beds altered to clay, scattered organics.	<u> </u>	Ι	-			<u> </u>		
7 7	7			- -	I	₹					
7			Gray, micaceous, coarse silt, scattered organics.	— 15 – –	Ι	Ī					
			Gray, slightly silty, fine to medium sand, scattered organics.	- - - 20	I		A				
			As above with thin silt interbeds.	_	I		•				
	7.			- - 25	T						
	, ·		Gray, fine to medium sand, widely scattered organics.		<u> </u>						
			Gray, fine to medium sand, abundant	_ 30	1						
			organics. BOH @ 31½'		1		•				
			Note: 2" PVC - casing; 10 slot, 2" PVC - screen; 12" flushed monument;	- sandp	acke	d.					
inte	erpre	tation	Sur. E1.: 418.56 ' onditions depicted represent our observations at the time, engineering analysis, and judgment. They are not necessinsibility for the use or interpretation by others of information	arily repre	senta	tive of c	ther tim	hole, mo	dified by ocations.	geologic We will n	ot

W92229A 10/92



GRAPH GRAPH GRAPH DEPTH	SAMPLE	Q &				
	₹	GROUND WATER	SIANDA		s/Foot	
Tan silt, blocky texture, scattered organics. Tan, very fine sand with thin silt interbeds, scattered organics. Tan to brown fine sand, scattered	IIII	GRC	10	20	30	40
organics. Tan, interbedded silt and oxidized fine to medium sand. Brown, micaceous, fine to medium sand. Brown, fine to coarse sand. Brown, slightly gravelly, fine to coarse sand, oxidized. Brown, fine to coarse sand, oxidized.		▼ -	A .			
Brown, fine to coarse sand with gray silt and fine sand interbeds, scattered organics. Brown, fine to medium sand, some silt. BOH @ 31½' Note: 2" PVC - casing; 10 slot, 2"			A			
PVC - screen; 12" flushed monument; Sandp Sur.El.: 418.42' 35 Subsurface conditions depicted represent our observations at the time and local interpretation, engineering analysis, and judgment. They are not necessarily represent responsibility for the use or interpretation by others of information present accept responsibility for the use or interpretation by others of information present was a substantial sub	tion of esenta nted or	this ex	10/92	le, modified and location	ens. We w	ill not

		EXPLORATION	во	RI	NC	ìL	OG	EB-	-9	
WELL	GRAРН	SEDIMENT DESCRIPTION	рертн	SAMPLE	GROUND	STAN		Blows/Fo		
WELL STATES OF THE STATES OF T		Tan, coarse silt. Tan, very fine sand, scattered organics. Tan, fine sand, micaceous. Brown, fine to medium sand, micaceous. Brown, fine to coarse sand, micaceous. Brown, very silty, sandy gravel. Gray, very fine sand, some silt. BOH @ 31½'	- - - - - - - - - - - - - - - - - - -	SAMIN	I ◀ GROU	A A		Blows/Fe	30 A	40
Subsurf	ace co	Note: 2" PVC - casing; 10 slot, 2" PVC - screen; 12" flushed monument; Sur. El.: 416.76'	and locat	ion of	th i s ex	oloratory	hole, mo	odified by	geologic	
interpre accept	tation, respor	engineering analysis, and judgment. They are not necessal sibility for the use or interpretation by others of information	arily repre	sentar	tive of this lo	other tim g.	es and k	ocations.	We will	not
		Snoqualmie Shallow Aquifer Evaluation Snoqualmie, Washington	V922291		5	- A:	SSC ARI CIE	DCI/	ATE ES, I	D NC

		EXPLORATION	BO	RI	NC	iL	OG	EB1	.0	
WELL COMPL.	GRAРН	SEDIMENT DESCRIPTION	ОЕРТН	SAMPLE	GROUND			Blows/For		ANCE
WELL WITH THE TOTAL TOTA	GRAP	Medium brown, coarse silt to very fine sand, organics. As above. Gray-brown, fine to coarse sand with scattered gravel. Gray-brown, fine to coarse sand and gravel. Gray-brown, gravelly, fine to medium sand. Gray-brown, fine to coarse sand and gravel. As above, heavily oxidized 18.7'-19'. Gray-brown, gravelly, fine to coarse sand. Gray-brown, fine to coarse sand and gravel, trace silt at 23½'-24', oxidized at 24'. Gray-brown, first ½' fine to coarse sand, last 1' fine to coarse sand and gravel with trace silt. Gray, fine to coarse sand and gravel with some silt.	- 5 - 5 - 10 - 15 - 15 - 20 - 25 - 25	SAMF	I ▲ GROU		_			0
_	o.	Gray, fine to coarse sand, interbedded with sandy gravel. BOH @ 31½' Note: 2" PVC - casing; 10 slot; 2" PVC - screen; 8" flushed monument; sandpacked.	- 30 - - -				•			
_	_	onditions depicted represent our observations at the time at engineering analysis, and judgment. They are not necessary								ot

accept responsibility for the use or interpretation by others of information presented on this log.

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		EXPLORATION	BO	RI	NO	3 L	OG	E	3-11	
WELL COMPL.	GRAPH	SEDIMENT DESCRIPTION	рертн	SAMPLE	GROUND	STAN		ENERATION Blows/Fo		ISTANCE 40
		Medium brown silt with trace fine sand. Medium brown fine sand.	- - - - - 5	I I		۵				
		Gray-brown, fine to medium sand.	- - -		<u>¥</u>	•				
		As above, with trace silt.	<u> </u>			A				
		Gray-brown, gravelly, fine to coarse sand.	- - - 15				^			
2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	° °	Gray-brown, fine to coarse sand with scattered gravel. Gray-brown, fine to coarse, sandy	_							
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	gravel, oxidized last 0.2'. As above, with trace silt, heavily	- - - 20				^			
	2 0 2 0 1 0 1 0 0	oxidized. Gray-brown, fine to coarse, sandy gravel with some silt.	- -				•			
	8 0 2 2	Gray-brown, gravelly, fine to coarse sand, woody fragments.	25 			•	•			
	+++++++++++++++++++++++++++++++++++++++	Dark gray, first 0.4', silty, fine to medium sand, next 0.6' silt and clay with woody fragments, last 0.5	_ _ _ _ 30			A				
		Gray, medium sand with trace silt. BOH @ $31\frac{1}{2}$ '				•				
0.1		Note: 2" PVC - casing; 10 slot'; 2" PVC - screen: 8" flushed	L 35				<u></u>		<u> </u>	
interpre	etation	onditions depicted represent San observations at the time, engineering analysis, and judgment. They are not necessinsibility for the use or interpretation by others of information	arily repr	esenta	tive of	other tim				
			W922	29F		8/	93			
		Snoqualmie Shallow Aquifer Evaluation Snoqualmie, Washington		<u> </u>			88C		ATE	

ASSOCIATED EARTH SCIENCES, INC

		EXPLORATION	1	BO	RI	N(3 L	OG	E	EB-12		
WELL COMPL.	ЗВАРН	SEDIMENT DESCRIPTION		ОЕРТН	SAMPLE	GROUND	STAN	STANDARD PENERATION RESISTANCE Blows/Foot				
	6			L)	'S		1	0 2	20	30	40	
		Medium brown silt with trace fine sand, organics. As above.		- - - 5	I		•					
		Medium brown silt, organics.		- - - 10		<u></u>						
		As above, oxidized.		_	1	•						
		As above. First 0.6' medium-brown, oxidized		- - - 15		•						
		Last 0.9' gray, clayey silt, organics.		<u> </u>		•						
		As above.		- - - 20	I	•						
		As above. Gray, fine sand, some organics.		- -	<u> </u>	•	:					
		As above.		- 25 	I		A					
	-	As above, with trace silt.		-	I		•					
'H-		As above.			I		A					
		BOH @ 31½' Note: 2" PVC - casing; 10 slot'; PVC - screen; 8" flushed monument; sandpacked.	2"	- - - 35								
interpre	etation	onditions depicted represent our observations at the , engineering analysis, and judgment. They are not ne nsibility for the use or interpretation by others of info	cess	and locati arily repre	senta	tive of	other tim					
				W9222	29F		8/9)3				



Sandy gr Poorly so Well sorte	ed sand	Bedrock Peat	Project Name: Snoqualmie North Well Field Project Number: W93199K Drilling Method: Air Rotary Sampling Method: Grab Samples Elevation: Boring Diameter: Drilling Contractor: Page 1 of 4 Boring No. OBW-1 Water Level Date Time									
Strata		Silt	Time									
Depth			Description			Well Compl						
	Brown SAND AN											
911 Fifth Kirkland, Phone: 2	ed Earth Scienc Avenue, Suite 1 Washington 98 206-827-7701 3-827-5424	es, Inc. 100 3033		Drilli	ng Log							

Sandy 9	ted sand	Bedrock Peat Silt	Project Name: Snoqualmie North Well Field Project Number: W93199K Drilling Method: Air Rotary Sampling Method: Grab Samples Elevation: Boring Diameter: Drilling Contractor: Page 2 of 4 Boring No. OBW-1 Water Level Date Time									
Strata							Well					
Depth	Brown SAND AI	ND GRAVEL.	Description				Well Compl					
NOTES: Lith	ologic information from	m driller's log.										
911 Fiftl Kirkland Phone:	ted Earth Science of Avenue, Suite of Washington 98 206-827-7701 06-827-5424	ces, Inc. 100 8033		Drilli	ng Log							

	Sandy gra Sandy gra Poorly sor Well sorte	rted sand	Bedrock	Project Number Drilling Method	d: Air Rotary nod: Grab Sample er: ctor:	es	No. OBW	V-1
ŕ	Diamicton		Peat	Water Level				
	Silt-clay		Silt	Date				
Strata	Ont-clay		Oiit	Time				
	Depth			Description				Well Compl
	160	Brown SAND AN	ID GRAVEL.					
	170 							
	180							
	190							
0.00	200							
		ogic information from						
A 9 K	ssociate 11 Fifth Airkland,	ed Earth Science Avenue, Suite 1 Washington 98 206-827-7701	es, Inc. 00 8033		Drilli	ng Log		

Phone: 206-827-770 Fax: 206-827-5424

Sandy gr	rted sand	Bedrock	Project Number Drilling Method	d: Air Rotary nod: Grab Sample er: ctor:	es	No. OBW	<i>1</i> -1
Diamictor	n 🗐	Peat	Water Level				
─ Silt-clay		Silt	Date				
Strata			Time)A/- II
Depth			Description				Well Compl
160 - 170 - 180 - 190	Brown SAND AN	ND GRAVEL.					
	BOH @ 200'						
	logic information fron						
911 Fifth Kirkland,	ed Earth Scienc Avenue, Suite 1 Washington 98	100 3033		Drilli	ng Log		

Phone: 206-827-7701 Fax: 206-827-5424

Sand Poorl Well Diam	<u> </u>	Peat	Project Number Drilling Method	d: Air Rotary nod: Grab Sample er: ctor:	es	No. OBV	V-2
Strata	ay	Silt	Time				
De	oth		Description				Well Compl
	Brown SAND A	AND GRAVEL.					
0.0.0.0	0						
Assoc	ithologic information fro	ces Inc					
911 Fi Kirkla Phone	fth Avenue, Suitend, Washington 9: 206-827-7701	100 98033		Drilli	ng Log		

Sandy	<u></u>	-	Project Number Drilling Method Sampling Method Elevation: Boring Diamet Drilling Contract Page 2 of 4 Water Level Date	d: Air Rotary nod: Grab Sample er: ctor:	es	No. OBV	V-2
StrataDep			Time Description				Well Compl
- 60 - 70		ND GRAVEL.					
10	0						
Associ	thologic information fro ated Earth Science th Avenue, Suite	ces Inc		D 900			
Kirklar Phone Fax: 2	th Avenue, Suite d, Washington 9 206-827-7701 06-827-5424	8033		Drilli	ng Log		

Sar Poo	LEGEND ndy gravel with cobble ndy gravel orly sorted sand Il sorted sand micton -clay		lrock t	Project Number Drilling Method	d: Air Rotary nod: Grab Sample er: ctor:	es	No. OBV	V-2
Strata				Time				
	Depth			Description				Well Compl
	160 Brown SAN 170 180	ND AND GR	RAVEL.					
	200							
NOTES	: Lithologic informatio	n from drille	er's log.					
911 Kirkl Phor	ociated Earth Sc Fifth Avenue, Su and, Washington ne: 206-827-770 206-827-5424	iences, I iite 100 n 98033 01	nc.		Drilli	ng Log		

	Sandy gra Sandy gra Poorly sor	rted sand		Bedrock	Project Number Drilling Method	d: Air Rotary nod: Grab Sample er: ctor:	es	No. OB\	N-2
	Diamicton	ı [Peat	Water Level				
	Silt-clay			Silt	Date				
Strata_	Ont-olay			Oiit	Time				
: (1 · O: (1 ·	Depth				Description				Well Compl
		Water bearing	g S <i>i</i>	AND AND GRAVEL	. at 154'.				
	170 180 190	BOH @ 160'							
	200	BOH @ 200'							
		ed Earth Scie							
9 K	11 Fifth Airkland,	ed Earth Scie Avenue, Suite Washington	e 1 98	00 033		Drilli	ng Log		

Phone: 206-827-7701 Fax: 206-827-5424

levation (Top of Well (Vater Level Elevation brilling/Equipment lammer Weight/Drop	equalmie Ridge North Casing) Hayes Dirlling / Mud Rotary CONSTRUCTION		0.000.000.000.000.000.000.000.000.000.	DESCF	EL.
Vater Level Elevation rilling/Equipment lammer Weight/Drop WELL Mater Level Elevation willing/Equipment lammer Weight/Drop WELL 5 10 25 30 35 40 45 50 55	Hayes Dirlling / Mud Rotary	S T Blows/	0.000.000.000.000.000.000.000.000.000.	Date Start/Finish Hole Diameter (in) DESCF Vashon Recessic "Tokul Of the stand gravel." Brown, SILTY fine to medium SA and gravel. Black-gray, fine to coarse GRAV	RIPTION Creek Deltair AND with occasional coarse sand
5 10 15 20 25 30 35 40 45 50 55	CONSTRUCTION	T	0.000.000.000.000.000.000.000.000.000.	Vashon Recession "Tokul (Brown, SILTY fine to medium SA and gravel. Black-gray, fine to coarse GRAV	onal Deltaic Deposits Creek Delta" AND with occasional coarse sand
10 15 20 25 30 35 40 45 50				Brown, SILTY fine to medium SA and gravel. Black-gray, fine to coarse GRAV	ND with occasional coarse sand
20 25 30 35 40 40 55					
5 0 5 0 5 0				Black-gray, fine to coarse GRAV	EL.
5 0 5 0				Black-gray, fine to coarse GRAV	EL.
5				Black-gray, fine to coarse GRAV	EL.
5			000	black-gray, line to coalse Grav	LL.
5		- 1			
			00.000		
5			00.000		
0			0.0000		
Sampler Type (ST)		707	0000		

	ted Earth Sciences, Inc.		IC & IVI	onitoring Well Cons Well Number	
	Spagualpria Didge	KH00005C		OBW-3	2 of 10
	(Top of Well Casing)	NOTER VVEILEIG		Location Surface Elevation (ft)	Snoqualmie, WA
rilling/Eq	rel Elevation Hayes Di	rlling / Gefco Speed	dstor 30K	Date Start/Finish Hole Diameter (in)	09/12/00,9/21/2000 6"
	Weight/Drop Mud Rota	ary			
Depth (ft) Water Level		/SN	Graphic Symbol		
De (1	WELL CONSTRUCT	ION RIOWS/	Gra	DESCE	RIPTION
	WEEL CONCINCOL				
		No.	0.0		
85		<u></u>	0.00	Black-gray, medium to coarse SA	AND.
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90		6 7			
		1			
95		©			
		-			
100		₩.			
105		-			
		- 1			
110				Black-gray, fine to coarse GRAVI	EL .
			8.8		
115		<u></u>	000		
		-			
120		•	0000	Black-gray, fine to coarse GRAVI	≣L.
		-			
125			0000		
130		-	0000		
100			000		
135		- - -			
		-	0.00		
140			000		
145		<u></u>	0,0,		
1.50		1	000		
150		- don-			
155		-	20.00		
Samp			500		
			8:8:		
Samp	ler Type (ST): 2" OD Split Spoon Sampler (SP	T) No Recovery	,	M - Moisture	Logged by:
	3" OD Split Spoon Sampler (D &				Approved by:
0	Grab Sample	Shelby Tube	Sample	▼ Water Level at time of dril	ling (ATD)

		Æ K⊦	100005C		nitoring Well Con Well Number OBW-3	3 of 10
roject Nam	ne <u>Snoqualmie</u> op of Well Casing)	Ridge North W	ell Field		Location Surface Elevation (ft)	Snoqualmie, WA
/ater Level rilling/Equi	l Elevation Ha	nyes Dirlling / G ud Rotary	efco Spee	dstor 30K	Date Start/Finish Hole Diameter (in)	09/12/00,9/21/2000 6"
Depth (ft) Water Level	WELL CONST	RUCTION	∃ Slows/ 6"	Graphic Symbol	DESCF	RIPTION
			63	10000	Black-gray, fine to coarse GRAV	EL.
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70						
75						
80			-	000000000000000000000000000000000000000		
85				0.000		
90				000		
95			-	0000		
00					Black-gray, fine to coarse GRAV	EL.
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:15				0000		
20						
25				00.00		
30				000000000000000000000000000000000000000		
35						

Project			KH00005C		OBW-3	Sheet 4 of 10
	Name	Snoqualmie Rido	ge North Well Field		Location	Snoqualmie, WA
/ater l	Level E	p of Well Casing)	Diellie et / O-f	- d-t-: 00	Surface Elevation (ft) Date Start/Finish	09/12/00,9/21/2000
rilling. amme	/Equipi er Weig	ment <u>Hayes</u> ght/Drop <u>Mud R</u> o	Dirlling / Gefco Spe otary	eastor 30	K Hole Diameter (in)	6"
₽ .	evel			ic lo		
Depth (ft)	Water Level		S S NOTE	6" Graphic Symbol		
	W	WELL CONSTRUC	T		DESC	RIPTION
			<u> </u>	000		
245				0.0.	Black-gray, medium to coarse S	AND with gravel.
250						
]			
255			172			
			1			
260			- P			
265			-		0 011777	
			- 1		Gray, SILTY fine to medium SA	ND with gravel.
270			- - -			
275						
280			<u> </u>			
285					Black-gray, medium to coarse S	AND with gravel.
290			- 1			
295			100			
300			-			
,,,,			<u> </u>			
305			1605			
310			1975			
\$15 Sa			- POPS			
			-			
Sa		Type (ST): OD Split Spoon Sampler (SPT) No Recove	arv	M - Moisture	Logged by:

Asso	ciat	ed Earth	Scie	nces	s, Inc.			Geo	logi	c &	M	onito	oring Well Con	struction Log	
	C.			P	0			ject Nui H0000					Well Number OBW-3	Sheet 5 of 10	
Projec		me :	Snoqi	ualm	nie Ric	dge No							Location Surface Elevation (ft)	Snoqualmie, WA	
Water	Leve	el Elevation				D: II:		N-6 0	N	[-4	201		Date Start/Finish	09/12/00,9/21/2000	
		uipment Veight/Dro	ор		Haye: Mud f	s Dirllin Rotary	g/G	erco s	peea	ISTO	3Ur		Hole Diameter (in)	<u>6"</u>	
£	evel								/5	je je	5				
Depth (ft)	Water Level							s	Blows/ 6"	Graphic	Syllik				
	Wa	WE	ELL C	ON:	STRU	ICTION		Ť	_				DESCI	RIPTION	
-								403					· · · · · · · · · · · · · · · · · · ·		
225								-							
-325 - -								603				Gray S	SILT with occasional fine to	o medium sand.	
330								1							
-								-							
335								602							
340															
								-							
345								500							
<u> </u>								-							
350								- COT							
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355								em.							
200								-							
-360 -								- 6m2				Un	differentiated Olympia/pr De	e-Olympia Lacustrine and Flue posits	uvial
365								-Ne							
												Gray S	SILT with occasional fine t	o medium sand.	
- -370								- KINZ							
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375								- Ping						Note box	the state of the s
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YENG.															
NWWELL 00005, GPJ BOKING, GDJ 718/04															
9.5000 9.5000 9.5000	ampl ∏	er Type (2" OD S		oon S	ampler	(SPT)	П	No Re	coverv			М -	· Moisture	Logged by:	
ELL OC		3" OD S						Ring S	-				Water Level ()	Approved by:	
S S S S S S S S S S S S S S S S S S S	•	Grab Sa	mple				1	Shelby	Tube	Sampl	le	Ā	Water Level at time of dr	rilling (ATD)	

	C		Project Number KH00005C	Monitoring Well Cor Well Number OBW-3	6 of 10
rojec		me <u>Snoqualmie Ridge</u> Top of Well Casing)	North Well Field	Location Surface Elevation (ft)	Snoqualmie, WA
ater	Leve	el Elevation	rlling / Gefco Speedstor 3	Date Start/Finish	09/12/00,9/21/2000 6"
mm	er W	Veight/Drop Mud Rota	ary		
(£)	Water Level	WELL CONSTRUCT	L S Blows/ 6" Graphic Symbol	DESC	RIPTION
	3	WELL CONSTRUCT			
05				Gray SILT with occasional fine t	o medium sand.
10			<u> </u>		
15					
0					
.5			<u>.</u> 2		
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35			- 1005 - 1		
10			- - - -	Gray SILT with occasional fine t	o medium SAND.
4 5	-				
50					
55			- - - -		
60					
55			- - - -		
70				Black-gray, medium to coarse S	SAND.
'5				Gray SILT with occasional fine t	
		er Type (ST): 2" OD Split Spoon Sampler (SP	T) No Recovery	M - Moisture	Logged by:

	TO S		Project Number KH00005C	onitoring Well Cons Well Number OBW-3	7 of 10				
	t Nam	ne <u>Snoqualmie Ridg</u> Top of Well Casing)	e North Well Field	Location Surface Elevation (ft)	Snoqualmie, WA				
Vater Orilling	Level g/Equi	l Elevation	Dirlling / Gefco Speedstor 30K tary	Date Start/Finish	09/12/00,9/21/2000 6"				
Depth (ft)	Water Level	WELL CONSTRUC	L S Blows/ 6" Graphic Symbol	DESCR	DESCRIPTION				
85									
90			- - - -						
95									
00									
05									
510									
515			- -						
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525 530			<u>***</u>						
535									
540									
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rolee	Name		ŀ	KH00005C		well Number OBW-3 Location	Sheet 8 of 10 Snoqualmie, WA
levation Vater Ingling	Level /Equip	op of Well Casing) Elevation	Dirlling /	Gefco Speed	stor 30K	Surface Elevation (ft) Date Start/Finish	09/12/00,9/21/2000 6"
Depth (ft)	Water Level	WELL CONSTRU	CTION	H S Blows/	Graphic Symbol	DESCF	RIPTION
65 70 75							
80						Gray SILT with occasional fine to	o medium SAND.
90							
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)5	-			- 005 - 005			
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Sa	_	Type (ST): " OD Split Spoon Sampler " OD Split Spoon Sampler	(SPT)	No Recovery		M - Moisture	Logged by:

	TO S		Y			ject Num H00005			onitoring Well Co Well Number OBW-3		9 of 10	
roject	Nam	e Sno	oqualmi	e Ridge	North W	/ell Fie	ld		Location Surface Elevation	(£1)	Snoqualmie, WA	
/ater	Level	op of Well (Elevation							Date Start/Finish	` ,	09/12/00,9/21/2000	
		oment eight/Drop	<u> </u>	layes Dir lud Rota	lling / G rv	Sefco S	peed	stor 30k	Hole Diameter (in)	6"	
Uepth (ff)	Water Level						Blows/ 6"	Graphic Symbol				
ا څ	ater	\//FLI	CONS	TRUCTI	ON	S	Blo	Gre	DES	SCE	RIPTION	
	>	***	- 00110	1110011	OIV	T			DEC	JOI 1	an Hor	
						dis.						
.5						(M)						
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50						100						
55						7 75		<u> </u>	Undifferentiated Olympia	Inro	-Olympia Coarse-Grained Fluvia	
									Black-gray, medium to coars	De	posits	
60						- COM			black gray, modium to ocare	,0 0,	War observer graver.	
						-						
35						- Ann						
						1						
70						- Cong						
75						- King						
80						- 407						
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90						- 603						
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95						3						
]						
00						100						
05						50%			Te Black-gray basalt with occas	rtiar iona	y Bedrock I red and white rock pieces (Bas	
						-			Flow Top).			
10						em,						
						-						
15 Sa [em.						
						11						
Sa	-	r Type (ST)		mpler (SP1	. 🗆	No Rec			M - Moisture		Logged by:	

Asso	ciat	ted Earth Sciences, Inc.	Ge	ologi	c & IV	lonit	oring Well Con	struction Log
			Project KH00	Number 005C			Well Number OBW-3	Sheet 10 of 10
Projec							Location	Snoqualmie, WA
Elevat	ion ((Top of Well Casing)					Surface Elevation (ft)	
		rel Elevation uipment Hayes D	irlling / Gefc	o Speed	stor 30	K	Date Start/Finish Hole Diameter (in)	09/12/00,9/21/2000 6"
Hamm	ner V	Veight/Drop <u>Mud Rot</u>	ary				, ,	
_	vel				으드			
Depth (ft)	Water Level			Slows/ 6"	Graphic Symbol			
	Vate	WELL CONSTRUCT	ION	s ă	છે છે		DESCF	RIPTION
	>							
-				3		Black	gray basalt (Basalt Flow)	
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7 25			-	103		}		
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730			-	7	V///X/,	Boring	terminated at 730 feet on 9	9/21/2000
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Sa		ler Type (ST):				,		
		2" OD Split Spoon Sampler (SF	PT) No	Recovery			- Moisture	Logged by:
795 Sa		3" OD Split Spoon Sampler (D	& M) 📗 Rin	g Sample		$\overline{\Delta}$	Water Level ()	Approved by:
	3	Grab Sample	√ Sh∈	elby Tube S	Sample	Ā	Water Level at time of dri	lling (ATD)

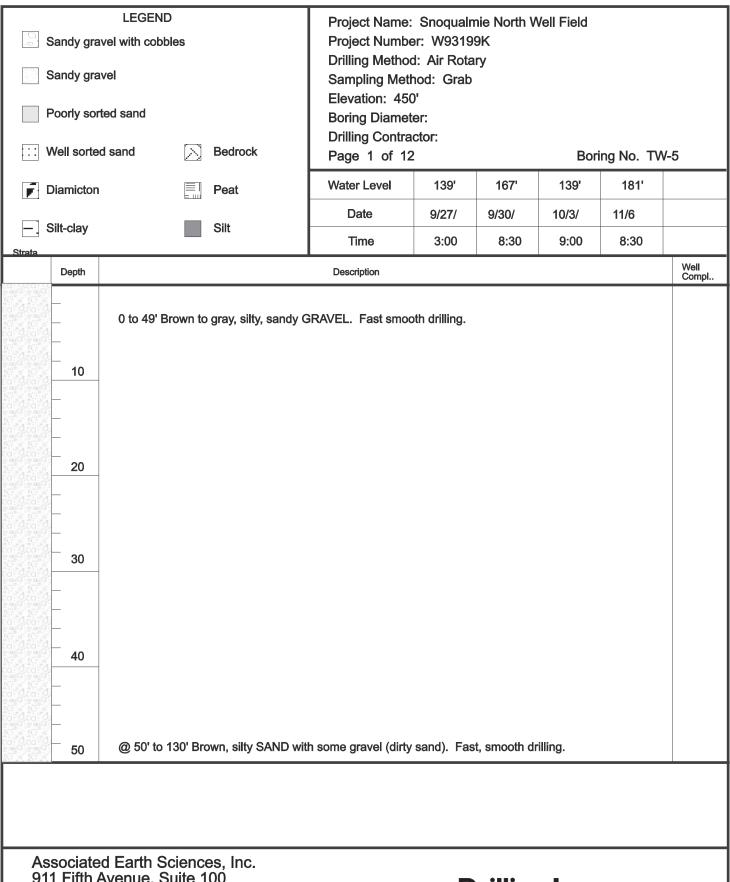
Asso	ciate	d Earth Sciences, Inc.	Geo	logic	: & M	onitorir	ng Well Con	structio	n Log			
			Project Nu KH0200				ell Number S&G-2		Sheet 1 of 5			
Projec	t Nam	ne <u>Snoqualmie Ridge Nor</u> op of Well Casing) ~474'	th Well Fi	eld		L	ocation Surface Elevation (ft)	Snoqualm				
Water	Level	Elevation 310'					Date Start/Finish Hole Diameter (in)		38,April 1988			
		pment Air Rotary eight/Drop N/A					ole Diameter (III)	0				
₽_	evel			/s	hic							
Depth (ft)	Water Level	WELL CONCEDUCTION	s	Blows/ 6"	Graphic Symbol		DECO	DIDTION				
	M	WELL CONSTRUCTION	T				DESCI	DESCRIPTION				
-		8" diameter well casing 0-332'	-		000		Vashon Recession "Tokul C	onal Deltaic D Creek Delta"	eposits			
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7	_	er Type (ST): 2" OD Split Spoon Sampler (SPT)	☐ No Re	ecovery		M - Moi	sture		Logged by:			
	_	3" OD Split Spoon Sampler (D & M)		Sample			er Level ()		Approved by:			
5		Grab Sample		y Tube S	Sample	▼ Wat	er Level at time of dr	illing (ATD)				

		KH02005C	nitoring Well Con Well Number SS&G-2	2 of 5				
roject Nam	e Snogualmie Ridge N	North Well Field	th Well Field Location Snoqualmie, WA Surface Elevation (ft) 474'					
levation (T Vater Level	op of Well Casing) ~474' Elevation 310'		Surface Elevation (ft) Date Start/Finish	474' March 1988,April 1988				
rilling/Equi lammer We	pment <u>Air Rotary</u> eight/Drop N/A		Hole Diameter (in)	8"				
	<u>1477 (</u>							
Depth (ft) ter Lev		Blows/ 6" Graphic Symbol						
Depth (ft) Water Level	WELL CONSTRUCTION	ON S S S S S	DESCF	RIPTION				
	1							
- 85								
90								
95								
100								
105								
110								
115								
120	8" diameter well casing							
	0-332'							
125								
130								
135								
140								
145								
150								
155								
Sample	r Type (ST):	11 0001						
	2" OD Split Spoon Sampler (SPT	No Recovery	M - Moisture	Logged by:				
	B" OD Split Spoon Sampler (D &		 ✓ Water Level () ✓ Water Level at time of dri 	Approved by:				

Asso	ciat	ed Ear	rth Sciences, I	nc.	Ge	ologi	c & IV	lonit	oring Well Con	struction	on Log			
			8 N E		Project I KH02	Number 005C			Well Number SS&G-2		Sheet 3 of 5			
Projec	t Na	me	Snogualmie	Ridge Nor					Location	Snoqual				
Water	Lev	el Eleva		0'					Surface Elevation (ft) Date Start/Finish	March 19	988,April 1988			
		uipmen [.] Veight/[t <u>Air</u> Drop N//	Rotary					Hole Diameter (in)	8"				
Depth (ff)	Water Level		VELL CONST			Blows/	Graphic		DESCRIPTION					
- -165					-	-		Brown	, SILTY SAND with gravel.					
170					-	-								
-175					-									
180 -					-									
- -185 -					-									
190					-	- - - -								
1 95					-									
200			8" diameter we 0-332'	ell casing	-									
-205 - - -					-									
210					-	-								
215					-	-								
- 2 20					-			Blue,	SILTY SAND, occasional g	gravel.				
- 2 25						-								
230 -235 - - - - - - -														
-						1								
S		ler Type			П	_		• •						
	Ш		Split Spoon Sam			Recovery		M ∑	- Moisture		Logged by:			
	<u></u>		Split Spoon Sam	pier (D & M)	■	g Sample elby Tube :	Sample	<u></u>	Water Level () Water Level at time of dr	illing (ATD)	Approved by:			
<u> </u>	Grab Sample				_ ∑ one	siby I ube	Jample		vvaler Level at tille of di	ming (AID)				

Asso	ciate	ed Ear	th Sciences, Inc.	 Geo	logic	. & M	lonite	oring Well Con	structi	on Log
	To the second			ject Nur -10200				SS&G-2		4 of 5
Projec	t Nar	me	Snoqualmie Ridge Nor					Location	Snoqual	
		Top of V el Elevat	Vell Casing) ~474' tion 310'					Surface Elevation (ft) Date Start/Finish	474'	988,April 1988
Drilling	g/Equ	uipment	Air Rotary	 				Hole Diameter (in)	8"	700,April 1300
Hamm	1	/eight/D	rop <u>N/A</u>							
£ (;	Water Level				/S/	Graphic Symbol				
Depth (ft)	ter			s	Blows/ 6"	Grap Sym				
	Wa	W	ELL CONSTRUCTION	T				DESCF	RIPTION	
				-						
-				-						
245				-						
_				-						
_ -250				-						
-				-						
255										
				4						
- -260				-						
200 - -				-						
-				-						
265										
[-						
-2 70 -				-			As abo	ove.		
]						
-275 -				-						
-				1						
280			8" diameter well casing	-						
-			0-332'	-						
285				1						
Ē]						
290				4						
-				1						
-295				1						
F				-						
300]						
-				-						
205				=						
305							Gray	SAND with gravel.		
-				-						
-310 -										
3 15				4						
]						
	amni	ler Type	(ST):	 		<u> </u>	1			
315 			Split Spoon Sampler (SPT)	No Re	covery			- Moisture		Logged by:
		3" OD	Split Spoon Sampler (D & M)	Ring S	Sample		$\bar{\triangle}$	Water Level ()		Approved by:
	87	Grab S	ample	Shelby	/ Tube :	Sample	Ī	Water Level at time of dr	illing (ATD)	

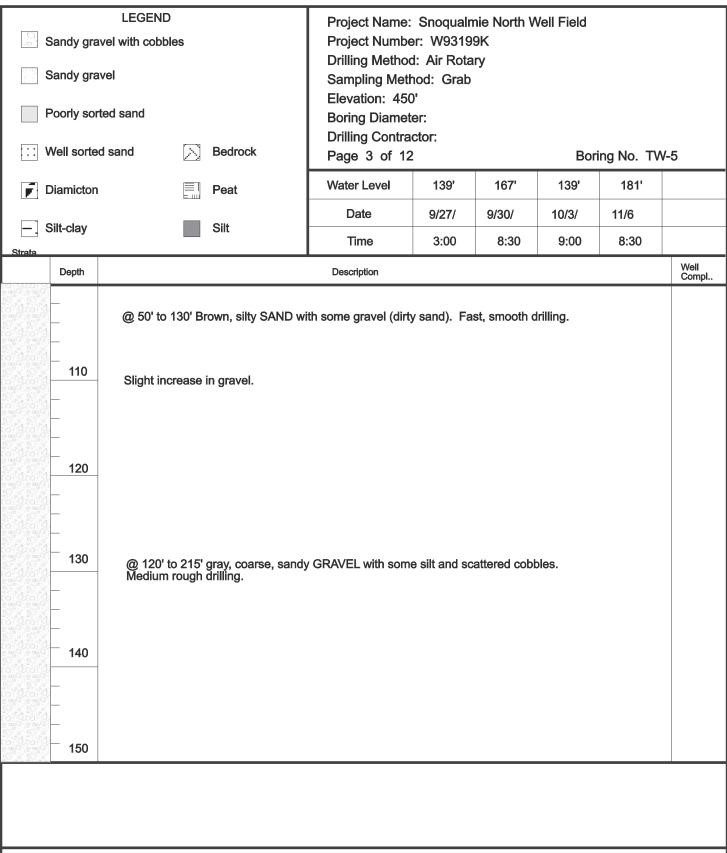
Asso	ciat		th Sciences, Inc.	Geo	ologi	c & IV	Ionitoring Well Cons	truction Log
				Project N KH020	umber 05C		Well Number SS&G-2	Sheet 5 of 5
Projec	t Na	me	Snogualmie Ridge Nort				Location	Snoqualmie, WA
Water	Leve	el Eleva					Surface Elevation (ft) Date Start/Finish	March 1988, April 1988
Drilling Hamm	g/Equ ter V	uipment Veight/D	Air Rotary Prop N/A				Hole Diameter (in)	8"
_	ke					0 -		
Depth (ft)	Water Level				Blows/ 6"	Graphic Symbol		
	Wate	W	/ELL CONSTRUCTION		S 🗃 T	0 0	DESCRI	PTION
-				-				
325			8" diameter well casing	-				
-			0-332'	-				
330				-]				
			8" diameter 10-slot well	4				
335			screen 332'-344'	-				
F				-				
340				-				
				.]				
345			8" diameter 80-slot well	-				
			screen 344'-354'	-				
350				-				
E				-				
355				-			Boring terminated at 354 feet on A	pril 1988
				-				
360				_				
]				
365				-				
-				1				
- -370				-				
-				1				
- 375				-				•
-]				
-380				-				
E				-				
- -385				_				
-				1				
390				-				
				-				
395				-				
- - -				-				
		<u> </u>	(07)	-				
)	ampl	ler Type 2" OD	e (ST): Split Spoon Sampler (SPT)	No F	ecovery		M - Moisture	Logged by:
1			Split Spoon Sampler (D & M)	_	Sample		 ✓ Water Level () 	Approved by:
> !		Grab S			by Tube	Sample	▼ Water Level at time of drill	



911 Fifth Avenue, Suite 100 Kirkland, Washington 98033

Phone: 206-827-7701 Fax: 206-827-5424

Sandy gra Sandy gra Poorly sor Well sorted	ted sand	Bedrock	Project Name: Snoqualmie North Well Field Project Number: W93199K Drilling Method: Air Rotary Sampling Method: Grab Elevation: 450' Boring Diameter: Drilling Contractor: Page 2 of 12 Boring No. TW-5							
Diamicton		Peat	Water Level	139'	167'	139'	181'			
─ Silt-clay		Silt	Date	9/27/	9/30/	10/3/	11/6			
Strata		J 5	Time	3:00	8:30	9:00	8:30			
Depth			Description					Well Compl		
- 60 - 70 - 80 - 90 - 100	@ 50' to 130' E	Brown, silty SAND wi	th some gravel (dirty	r sand). Fa	st, smooth d	Irilling.				
Associate	d Earth Sciend	ces, Inc.			A					



Associated Earth Sciences, Inc. 911 Fifth Avenue, Suite 100 Kirkland, Washington 98033

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Sandy gravel with Sandy gravel Poorly sorted sand Well sorted sand	and	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 450 Boring Diamete Drilling Contract Page 4 of 12	er: W93199d: Air Rota nod: Grab o' er: ctor:	9K		ring No. TW	<i>l</i> -5
Diamicton		Peat	Water Level	139'	167'	139'	181'	
─ Silt-clay		Silt	Date	9/27/	9/30/	10/3/	11/6	
Strata		Siit	Time	3:00	8:30	9:00	8:30	
Depth			Description					Well Compl
160 170 180 190	2120' to 215' g	gray, coarse, sandy (GRAVEL with some	silt and sca	itered cobbl	es.		While Drilling
Associated Ea 911 Fifth Aver	arth Scienc	es, Inc.			villina			

Sand	LEGEND by gravel with cobble by gravel by sorted sand by sorted sand	es	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 450 Boring Diameth Drilling Contract Page 5 of 12	er: W9319 d: Air Rota nod: Grab o' er: ctor:	9K		ing No. TW	<i>1</i> -5
Diam	icton		Peat	Water Level	139'	167'	139'	181'	
_ Silt-o	lay		Silt	Date	9/27/	9/30/	10/3/	11/6	
Strata				Time	3:00	8:30	9:00	8:30	Well
De	pth			Description					Compl
	210			GRAVEL with some					100 gpm V While Drilling

		LEGEND			Project Name:			Vell Field		
	Sandy gra	avel with cobbles			Project Number Drilling Method					
9.00	Sandy gra	avel			Sampling Method		ıy			
					Elevation: 450					
	Poorly sor	rted sand			Boring Diamet	er:				
	Well sorte	od cond		Bedrock	Drilling Contra			_		
	Well Soile	tu sanu		Bedlock	Page 6 of 12	2	ı	Bor	ing No. TW	-5
	Diamicton	1		Peat	Water Level	139'	167'	139'	181'	
	Silt-clay	ı		Silt	Date	9/27/	9/30/	10/3/	11/6	
Strata	One olay	l		O.I.C	Time	3:00	8:30	9:00	8:30	
	Depth				Description					Well Compl
		@ 250' to 42 blue silt/clay.	5' gra Hea	ay, silty SAND with aving conditions.	some gravel. Slow	to medium	rough drillin	g. Some cl	asts of	
6 0.0 200 200	260									
	200									
	_									
	270									
o dra	1									
	1									
a dia	_									
	280									
	1									
	_									
	290									
		-								
	2									
0.010	300	@ 300 no gra	avel.	. Fast smooth drilli	ng.					
l										

			_								
		LEGEND			Project N	Name:	Snoqualm	nie North V	Vell Field		
[.0]	Sandy gra	avel with cobbles					er: W93199				
2.23	Sandy gra	wel			_		l: Air Rota	ry			
2.3	Candy gra	avei			Sampling Elevation	_	od: Grab				
	Poorly sor	rted sand			Boring D						
	•				Drilling C						
:::	Well sorte	ed sand	\sum_{i}	Bedrock	Page 7				Bor	ing No. TW-	-5
F	Diamicton			Peat	Water Le	vel	139'	167'	139'	181'	
	011	_		0.11	Date		9/27/	9/30/	10/3/	11/6	
Strata	Silt-clay			Silt	Time		3:00	8:30	9:00	8:30	
SET STREET	Depth				Description	n					Well Compl
	_	@ 250' to 425	' gr He	ay, silty SAND with aving conditions. @	some gravel	. Slow	to medium	rough drillin	g. Some cla	asts of	
	d -	bido ondordy.		aving conditions.	, ooo no grat	roi, ido	. omooti an	9.			
	310										\Box
											While
											Drilling
	_										
	320										
	1 . (2	_									
	d.										
a dia											
	1_										
	330										
	-										
	340										
	Y .										
	<u> </u>										
	350										
A:	ssociate	ed Earth Scier	106	es, Inc.							

© 07 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Sandy gra Sandy gra Poorly sort	ted sand	s	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 450 Boring Diamete Drilling Contract Page 8 of 12	er: W9319 d: Air Rota nod: Grab o' er: ctor:	9K		ing No. TV	<i>l-</i> 5
	Diamicton			Peat	Water Level	139'	167'	139'	181'	
	Silt-clay			Silt	Date	9/27/	9/30/	10/3/	11/6	
Strata	Ont-olay			Oiit	Time	3:00	8:30	9:00	8:30	
	Depth				Description					Well Compl
	360 - 370 - 380 - 390 - 400			ray, silty SAND with eaving conditions. @	some gravel. Slow) 300' no gravel; fast	to medium t smooth dri	rough drillin	g. Some cla	asts of	While Drilling
As	sociate	d Earth Sci	ence	es, Inc.						

Sandy g	orted sand	s	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 450 Boring Diametod Drilling Contract Page 9 of 12	er: W93199 d: Air Rota nod: Grab o' er: ctor:	9K		ng No. TW	'- 5
Diamicto	n		Peat	Water Level	139'	167'	139'	181'	
─ Silt-clay			Silt	Date	9/27/	9/30/	10/3/	11/6	
Strata		_		Time	3:00	8:30	9:00	8:30	
Depth				Description					Well Compl
410		00' gra	av. gravellv. siltv. fin	some gravel. Slow 300' no gravel; fast					75 gpm ———————————————————————————————————
Acces!=4	ed Earth Scie		20 100						

5 00 6 0 5 1	Sandy gra Sandy gra Poorly sor Well sorte	ted sand	s	Bedrock	Project Name: Project Numbe Drilling Method Sampling Meth Elevation: 450 Boring Diamete Drilling Contract Page 10 of 1	er: W9319 d: Air Rota nod: Grab o' er: ctor:	9K		ing No. TW	<i>1</i> -5
	Diamicton			Peat	Water Level	139'	167'	139'	181'	
│ │	Silt-clay			Silt	Date	9/27/	9/30/	10/3/	11/6	
Strata					Time	3:00	8:30	9:00	8:30	
	Depth				Description					Well Compl
	460 - 470 - 480 - 490	@ 425' to 50 needed to dri	0' gradive ca	ay, gravelly, silty, fine	e to coarse SAND w	ith some sili	clay clasts.	. No hamme	er	
	500									
As	sociate	d Earth Sci	enc	es Inc.						

	Sandy grav Sandy grav Poorly sort Well sorted	ed sand	es	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 450 Boring Diamete Drilling Contract Page 11 of 1	er: W93199d: Air Rota nod: Grab o' er: ctor:	9K ry		ing No. TW	√ -5
	Diamicton			Peat	Water Level	139'	167'	139'	181'	
 	Silt-clay			Silt	Date	9/27/	9/30/	10/3/	11/6	
Strata	· · · · ·			U	Time	3:00	8:30	9:00	8:30	
	Depth				Description					Well Compl
	510			ay, silty, fine SAND ay, gravelly SAND v	with trace gravel. with some silt. Alter	nating hard	and easy di	rilling.		
	530	@ 540' to 5	60 ' gra	ay GRAVEL with so	ome silt.					
Direction of the control of the cont	330									
As	ssociate	d Earth Sci	ence	 es, Inc.						

	Sandy grav Sandy grav Poorly sort Well sorted	ed sand	s 🖂	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 450 Boring Diamete Drilling Contract Page 12 of 1	er: W9319 d: Air Rota nod: Grab o' er: ctor:	9K		ing No. TV	√-5
F	Diamicton			Peat	Water Level	139'	167'	139'	181'	
	Cilt alov			Silt	Date	9/27/	9/30/	10/3/	11/6	
Strata	Silt-clay			SIIL	Time	3:00	8:30	9:00	8:30	
	Depth				Description					Well Compl
	560		80' B	ray GRAVEL with so	salt and purple ande	esite.				
	590 									
A 9	ssociate	d Earth Sci Avenue, Su Washingtor	enc	es, Inc.			rillin	g Log		

Phone: 206-827-7701 Fax: 206-827-5424

Sandy gra Sandy gra Poorly so Well sorte	rted sand ed sand	Bedrock Peat	Project Name: Project Number Drilling Method Sampling Method Elevation: 428 Boring Diamete Drilling Contract Page 1 of 12	er: W9319 d: Cable To nod: 8' er: ctor:	9K	ing No. TW-	-6
— Silt-clay		Silt	Date Time				
Strata Depth			Description				Well Compl
10 20 30 40			rse SAND with some				

ravel with cobbles ravel orted sand ted sand	_	Project Number Drilling Method Sampling Method Elevation: 428 Boring Diameth Drilling Contract Page 2 of 12 Water Level	er: W93199d: Cable To nod: 8' er: ctor:	9K		ing No. TV	V-6
	Silt						
		Description					Well Compl
		rse SAND with some		ss cobbles	and gravel.		Сопри
ed Earth Science	 ces, Inc.						
r c to	@ 35' to 90' bro Casing falling as	ravel with cobbles ravel orted sand ded sand Peat Silt @ 35' to 90' brown, slightly silty, coar Casing falling as drilling.	ravel with cobbles ravel ravel ravel ravel ravel project Number Sampling Methor Sampling Methor Sampling Description Peat Peat Date Time Description @ 35' to 90' brown, slightly silty, coarse SAND with some Casing falling as drilling. @ 90' gray, silty, well sorted, fine SAND. Smooth drilling	ravel with cobbles ravel ravel ravel project Number: W9319; Drilling Method: Cable To Sampling Method: Elevation: 428' Boring Diameter: Drilling Contractor: Page 2 of 12 Water Level Date Time Description Description @ 35' to 90' brown, slightly silty, coarse SAND with some gravel. Le Casing falling as drilling.	ravel with cobbles ravel Rave	ravel with cobbles ravel ravel ravel ravel ravel project Number: W93199K Drilling Method: Cable Tool Sampling Method: Elevation: 428' Boring Diameter: Drilling Contractor: Page 2 of 12 Boring Date Date Date Date Date Date Date Time Description Description Description @ 35' to 90' brown, slightly silty, coarse SAND with some gravel. Less cobbles and gravel. Casing falling as drilling.	ravel with cobbles ravel ravel Project Number: W93199K Drilling Method: Cable Tool Sampling Method: Elevation: 428' Boring Diameter: Drilling Contractor: Page 2 of 12 Boring No. TV Water Level Date Time Description @ 35' to 90' brown, slightly silty, coarse SAND with some gravel. Less cobbles and gravel. Casing falling as drilling.

	Sandy gra Sandy gra Poorly sor Well sorte	ted sand	es 🔼	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 428 Boring Diametor Drilling Contract Page 3 of 12	er: W93199d: Cable Tonod: 8' er: ctor:	9K		ing No. TW	V-6
F	Diamicton	l		Peat	Water Level					
	Silt-clay			Silt	Date					
Strata					Time					
	Depth				Description					Well Compl
	150	Brownish- taking lots	gray, of wa	fine to coarse SANI rater. Hammer need	D AND GRAVEL with ded.	າ some cobl	oles with tra	ce silt to 211	I'. Unit	
9 K	ssociate 11 Fifth / irkland,	ed Earth Sc Avenue, Su Washingtor	ienc ıite 1 n 98	es, Inc. 100 3033		D	rilling	g Log		

Phone: 206-827-7701 Fax: 206-827-5424

		LEGEND			Project Name:	Snoqualn	nie North V	Vell Field		
.0	Sandy gra	avel with cobbles	S		Project Numbe	er: W9319	9K			
					Drilling Method	d: Cable To	ool			
0.5	Sandy gra	avel			Sampling Meth	nod:				
l _					Elevation: 428	3'				
	Poorly so	rted sand			Boring Diamet	er:				
l _					Drilling Contra	ctor:				
	Well sorte	ed sand		Bedrock	Page 4 of 12	2		Bor	ing No. TW-	-6
	D: : .			5 .	Water Level					
	Diamicton	1		Peat	Date					
<u> </u>	Silt-clay			Silt						
Strata					Time					
	Depth				Description					Well Compl
0 0 0 0	3	Brownish and	av fin	e to coarea SAND	AND GRAVEL with s	some cobble	as with trace	eilt to 244	Unit	
	71	taking lots of	wate	er. Hammer neede	d.	SOTTIE CODDIC	55 WILLI LIACE	5 SIIL LO Z I I .	Offic	
10 G 10	-									
	160									
a dra										
	-									
	V									
	170									
a dra	9									
ia dia	d.									
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	190									
000000										
	\$									
	200									
911 6 911	200									
A	ssociate	ed Earth Scie	ence	es, Inc.						

<u></u>	LI Sandy gravel wit Sandy gravel Poorly sorted sand	and	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 428 Boring Diamet Drilling Contra Page 5 of 12	er: W9319 d: Cable To hod: B' er: ctor:	9K		ing No. TV	V-6
F	Diamicton		Peat	Water Level					
 	Silt-clay		Silt	Date					
Strata	J			Time					
.u. 9.; u. 9.	Depth			Description					Well Compl
	220	211' dark b ay silt. Able	olue to gray SAND ANI e to drill some open ho	O GRAVEL with som le.	e cobbles a	nd some cla	asts of blue t	0	
	240								
As 91 Kir	sociated Ea 1 Fifth Aven	orth Scie	nces, Inc. e 100		D	rilling	g Log		

Sandy grav Sandy grav Poorly sort Well sorted	ed sand	∑ Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 428 Boring Diameth Drilling Contra	er: W93199d: Cable Tonod: B' er: ctor:	9K		ing No. TV	V-6
Diamicton		Peat	Water Level					
─] Silt-clay		Silt	Date					
Strata		Siit	Time					
Depth			Description					Well Compl
	Dark gray, si with silt adhe	ilty, fine to coarse SAND ering to them. (Lodgeme	with scattered gravent Till)	rel and cobb	les. Cobble	es up to 8"-1	0"	
Associate 911 Fifth A Kirkland	d Earth Scie venue, Suit Vashington	ences, Inc. te 100 98033		D	rilling	g Log		

Phone: 206-827-7701 Fax: 206-827-5424

	Sandy grades Sandy	ted sand		Bedrock Peat	Project Name: Project Number Drilling Method Sampling Metr Elevation: 428 Boring Diametr Drilling Contract Page 7 of 12	er: W93199d: Cable Tonod: B' er: ctor:	9K		ing No. TW	-6
<u> </u>	Silt-clay			Silt	Date Time					
Strata	Depth				Description					Well Compl
	310 - 310 - 320 - 330 - 340 - 350	@ 315' gray, si	ilty, 1	fine SAND with son	with scattered gravel int Till) ne scattered gravel. e scattered gravel.		es. Cobbles u	ip to 8"-10		

(2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	Sandy gra Sandy gra Poorly sor Well sorte	ted sand	es	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 428 Boring Diamet Drilling Contra	er: W93199d: Cable To nod: B' er: ctor:	9K		ing No. TV	V-6
F	Diamicton	l		Peat	Water Level					
	Silt-clay			Silt	Date					
Strata	J				Time					
	Depth				Description					Well Compl
	 _ _ _ _ 360	Greenish-g	ray, cl	layey SILT with som	e scattered gravel.					
	370									
	380									
	390	Unit becor	ming s	siltier.						
	400									
Δ	ssociate	nd Farth Sc	ienc	es Inc						
9	11 Fifth	d Earth Sc Avenue, Su	iite 1	100		В	willing	a I oa		

LEGEND		Project Name:	Snoqualm	nie North V	Vell Field		
Sandy gravel with cobbles		Project Number					
Sandy gravel		Drilling Method		ool			
Sandy gravor		Sampling Meth Elevation: 428					
Poorly sorted sand		Boring Diameter					
		Drilling Contra					
:: Well sorted sand	Bedrock	Page 9 of 12			Bori	ng No. TW	-6
Diamicton	Peat	Water Level					
─ Silt-clay	Silt	Date					
Strata		Time					
Depth		Description					Well Compl
Gray, clayey fragments.	SILT with trace very fin	e sand and occasion	al scattered	gravel. Tra	ace wood		
420 Gray, silty, vo	ery fine SAND with trac	ce wood fragments.					
430							
440							
450							
490							
Associated Earth Scie 911 Fifth Avenue, Suit	ences, Inc.			••••			

Sandy grades Sandy grades Sandy grades Poorly sorted Well sorted	ted sand	Bedrock	4	Project Name: Project Number Drilling Method Sampling Method Elevation: 428 Boring Diameter Drilling Contract Page 10 of 1	er: W93199d: Cable To nod: b' er: ctor:	9K		ing No. TW	<i>1</i> -6
Diamicton		Peat		Water Level					
─] Silt-clay		Silt		Date					
Strata				Time					
Depth				Description					Well Compl
480	Gray, sandy much water.	GRAVEL with	ı some silt	and cobbles. Roug	h drilling. S	trata is not	producing		
Associate 911 Fifth A	d Earth Scie	ences, Inc. te 100				willin	a I oa		

	Sandy gra Sandy gra Poorly sor Well sorte	ted sand	s	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 428 Boring Diameth Drilling Contract	er: W93199d: Cable To nod: B' er: ctor:	9K		ing No. TW	V-6
	Diamicton			Peat	Water Level					
	Cilt alass			Cilt	Date					
Strata	Silt-clay			Silt	Time					
	Depth				Description					Well Compl
	510 520 530 540 550	@ 530' incre	əase	in gravels.	scattered gravel.					
A 9	ssociate	ed Earth Sci Avenue, Sui	enc	es, Inc. 00			rilling	z Log		

or minig Log

S	Sandy grav Sandy grav Poorly sort	ted sand	es 🖂	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 428 Boring Diametorilling Contract Page 12 of 1	er: W9319 d: Cable To nod: 8' er: ctor:	9K		ing No. TW	/-6
	Diamicton			Peat	Water Level					
 -]:	Silt-clay			Silt	Date					
Strata			_		Time					II
	Depth				Description					Well Compl
	560 	Gray GRA	₩EL 1	ty SAND with scatter	d trace silt.					
		Gray, silty drill open	SAN hole.	ND with some scatter	red gravel and cobb	les. (Lodge	ment Till) A	ble to		
	590	Purple, an	ıdesit	tic TILL and weather	ed BEDROCK. Blac	ck BASALT	(BEDROCK	i).		
		BOH @ 59	90'							
	600									
As		ed Earth Sci	—— ienc	es, Inc.						

Sandy gi	orted sand ed sand	es 🖂	Bedrock	Project Number Drilling Method Sampling Method Elevation: 436 Boring Diameth Drilling Contract Page 1 of 12	Project Name: Snoqualmie North Well Field Project Number: W93199K Drilling Method: Cable Tool Sampling Method: Bailer Grab and Split Elevation: 436.55' Boring Diameter: 20" 0'-415'; 16" 415'-564' Drilling Contractor: Armstrong Drilling, Inc. Page 1 of 12 Boring No. TW-7 Water Level 150.11 149.60 149.63						
F Diamicto	n		Peat	Date	5/13/94	5/26/94	6/7/94				
Silt-clay			Silt	Time	7:10 AM	11:30 AM	1:13 PM				
Strata				Description					Well Compl		
10	Yellow-brov	wn, gr	ravelly SAND with co	ace silt and some coobbles and some silt and trace co	t. me silt.			Surface Seal			
30	_ Yellow-brov	vn, fir	ne to coarse SAND v	with gravel and som	e silt.				20" Steel Casing		
50	Yellow-brow	vn, gr	avelly SAND with tra	ace of silt.							

ි S	andy gra andy gra Poorly sor Vell sorte	ted sand		Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 43 Boring Diamet Drilling Contra Page 2 of 12	er: W9319 d: Cable nod: Baile 6.55' er: 20" 0'-4 ctor: Arms	9K Tool r Grab and 415'; 16" 4	I Split 15'-564' ng, Inc.	ng No. TW-	-7
F D	iamicton			Peat	Water Level	150.11	149.60	149.63		
 	Silt-clay			Silt	Date	5/13/94	5/26/94	6/7/94		
Strata					Time	7:10 AM	11:30 AM	1:13 PM		
	Depth				Description					Well Compl
	60 - 70 - 80 - 90 - 100	Yellow-brov	wn, gr wn, gr wn, gr	ravelly SAND with so		me silt. ilt.				20" Steel Casing

LEGEND Project Name: Snoqualmi Project Number: W93199l Drilling Method: Cable To Sampling Method: Bailer Elevation: 436.55' Boring Diameter: 20" 0'-4' Drilling Contractor: Armstr Page 3 of 12	K ool Grab and Split 15'; 16" 415'-564' rong Drilling, Inc.	ing No. TW-7
Diamicton Peat Water Level 150.11	149.60 149.63	
Date 5/13/94	5/26/94 6/7/94	
	11:30 AM 1:13 PM	
Depth Description		Well Compl
Yellow-brown, sandy GRAVEL with some cobbles and trace silt. Yellow-brown, sandy GRAVEL with some silt and some cobbles. 110 Gray-brown, gravelly SAND. Gray, gravelly SAND with trace silt and some cobbles. Yellow-brown and gray, gravelly SAND with some cobbles and some silt. Gray-brown, gravelly SAND with some silt and a few cobbles. Gray-brown, gravelly SAND with some silt and a few cobbles.	silt.	20" Steel Casing
150 		

Sandy gra Sandy gra Poorly sort	ted sand	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 4: Boring Diameter Drilling Contract Page 4 of 12	er: W9319 d: Cable I nod: Baild 36.55' er: 20" 0'-4 ctor: Arms	9K Fool er Grab an 415'; 16" 4	d Split .15'-564' ng, Inc.	ing No. TW	-7
Diamicton		Peat	Water Level	150.11	149.60	149.63		
─] Silt-clay		Silt	Date	5/13/94	5/26/94	6/7/94		
Strata		•	Time	7:10 AM	11:30 AM	1:13 PM		
Depth			Description					Well Compl
160 170 180 190	Gravelly SAND Dark gray, sand Gray-brown, grave Dark gray, grave	avelly SAND with son with some cobbles g by GRAVEL with cobb avelly SAND with some elly SAND with some	prading into sandy Goods. The silt and trace cobbles is silt and trace cobbles.	obles.	cobbles.			20" Steel Casing
200								

Sa Po	andy gravel wandy gravel oorly sorted s ell sorted san	and		Project Name: Project Number Drilling Method Sampling Method Elevation: 43 Boring Diamet Drilling Contra Page 5 of 12	er: W9319 d: Cable To nod: Baile 6.55' er: 20" 0'-4 ctor: Arms	9K pol er Grab and 415'; 16" 4' trong Drilli	d Split 15'-564' ng, Inc. Borin	g No. TW-	7
 ੵ Dia	amicton	<u>= </u>	Peat	Water Level Date	150.11 5/13/94	149.60 5/26/94	149.63 6/7/94		
Strata	t-clay		Silt	Time	7:10 AM	11:30 AM	1:13 PM		
	Depth			Description					Well Compl
	G	ray-brown, gra	avelly SAND with son	ne silt.					
	Si	iltier lenses pr	esent.						
0000	210								
0.00									
	-								
	-								
	220								20"
	-								20" Steel Casing
	-								Casing
	230								
0 0 0 0 0 0 0 0	-								
0.0000	-								
	240 G	rav-brown gra	avelly, silty SAND.						
		.a, 5.0, g.c	arony, only or a le						
	_ B	rown, sandy G	GRAVEL to silty SANI	O with gravel.					
	250								

Sandy gra Sandy gra Poorly soi Well sorte	rted sand	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 430 Boring Diameto Drilling Contract Page 6 of 12	er: W93199 d: Cable To nod: Baile 6.55' er: 20" 0'-4 ctor: Arms	9K ool er Grab and 415'; 16" 4'	d Split 15'-564' ng, Inc.	ng No. TW	-7
Diamicton		Peat	Water Level	150.11	149.60	149.63		
─ Silt-clay		Silt	Date Time	5/13/94 7:10 AM	5/26/94 11:30 AM	6/7/94 1:13 PM		
Strata Depth			Description					Well Compl
260 270 280 290	Some heaving 26	velly, very silty SANI	and trace silt D (till-like); hard drilli					20" Steel Casing

	Sandy gra Sandy gra Poorly sor Well sorte	ted sand] Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 43 Boring Diameter Drilling Contract Page 7 of 12	er: W9319 d: Cable nod: Baile 36.55' er: 20" 0'- ctor: Arms	9K Tool r Grab and 415'; 16" 4	I Split 15'-564' ng, Inc.	ng No. TV	V-7
	Diamicton		Peat	Water Level	150.11	149.60	149.63		
	Oilt alou		0:14	Date	5/13/94	5/26/94	6/7/94		
Strata	Silt-clay		Silt	Time	7:10 AM	11:30 AM	1:13 PM		
	Depth			Description					Well Compl
	310		SAND with silt. Able to			ke."		Top 16" Casing 328'-4"	20" Steel Casing
	340						Top Ceme 16" to 20"	ent Grout @ 340'	16" Steel Casing
A	ssociate	ed Earth Science Avenue, Suite	ces, Inc.			rilling	7 l og		

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or minig Log

	Sandy gra Sandy gra Poorly sor Well sorte	ted sand	.] Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 43 Boring Diameter Drilling Contract Page 8 of 12	er: W9319 d: Cable nod: Baile 6.55' er: 20" 0'- ctor: Arms	9K Tool r Grab and 415'; 16"	Split 115'-564' ng, Inc.	ng No. TW	-7
F	Diamicton		Peat	Water Level	150.11	149.60	149.63		
 -]	Silt-clay		Silt	Date	5/13/94	5/26/94	6/7/94		
Strata	<u> </u>			Time	7:10 AM	11:30 AM	1:13 PM		
A, WA, 1	Depth			Description					Well Compl
	380	Gray, very silty Gray, cobbly, s	SAND. andy, silty GRAVEL.			ke."			16" Steel Casing
		d Family Oak							
A	ssociate	d Earth Scien	ces, inc.						

911 Fifth Avenue, Suite 100 Kirkland, Washington 98033 Phone: 206-827-7701 Fax: 206-827-5424

	Sandy gra Sandy gra Poorly son Well sorte	rted sand	es	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 430 Boring Diamete Drilling Contract Page 9 of 12	er: W9319 d: Cable nod: Baile 6.55' er: 20" 0'- ctor: Arms	9K Tool r Grab and 415'; 16"	I Split 415'-564' ng, Inc.	ng No. TV	<i>I-</i> 7
F	Diamicton	1		Peat	Water Level	150.11	149.60	149.63		
	Silt-clay			Silt	Date	5/13/94	5/26/94	6/7/94		
Strata	Ont-clay			Ont	Time	7:10 AM	11:30 AM	1:13 PM		
	Depth				Description					Well Compl
	410	Gray, silty, @ 405'-409 Gray, sandy	9' larg	ge cobbles.	ses of fine sand.			Bottv Casi	om 20" ing @ 415'	
	440									16" Steel Casing
A	ssociate	ed Earth Sc	ienc	es, Inc.						

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(2) (3) (3) (3) (3) (3) (3) (3) (3) (3) (3	Sandy gra Sandy gra Poorly sor Well sorte	ted sand		Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 43 Boring Diamete Drilling Contract Page 10 of 1	er: W93199d: Cable Tenod: Baile 86.55' er: 20" 0	9K ōool r Grab and '-415'; 16"	Split 415'-564' ing, Inc.	ng No. TV	<i>I-</i> 7
F	Diamicton			Peat	Water Level	150.11	149.60	149.63		
	Silt-clay			Silt	Date	5/13/94	5/26/94	6/7/94		
Strata	- Jane Glay				Time	7:10 AM	11:30 AM	1:13 PM		
<u> </u>	Depth				Description					Well Compl
	480			T with scattered lens	ses of fine sand, trad	ce peat, loca	al gravelly z	ones.		16" Steel Casing
A:	ssociate	d Earth Scie	ence	es, Inc.						

911 Fifth Avenue, Suite 100 Kirkland, Washington 98033 Phone: 206-827-7701 Fax: 206-827-5424

© 62 0 15 0 15 2 1	Sandy gra Sandy gra Poorly sor Well sorte	ted sand	s	Bedrock	Project Name: Project Number Drilling Method Sampling Method Elevation: 43 Boring Diametod Drilling Contract Page 11 of 1	er: W93199 d: Cable nod: Baile 66.55' er: 20" 0' ctor: Arms	9K Tool r Grab and -415'; 16"	l Split 415'-564' ng, Inc.	ng No. TW	<i>!</i> -7	
F	Diamicton			Peat	Water Level	150.11	149.60	149.63			
<u>-</u>]	Silt-clay			Silt	Date	5/13/94	5/26/94	6/7/94			
Strata					Time	7:10 AM	11:30 AM	1:13 PM			/ell
 	Depth	0	. 011.7	F	Description ses of fine sand, trac					Ċ	ompl
	510		,				g. u. v y		op 10" Riser langed to 12"		10" Riser
	520	Gray, cobbly	y GR.	AVEL with silt/clay r	natrix.			Top S	creen 516'-7"		
	530	Gray, grave	lly, fin	ne SAND with silt; co	parsens with depth.			Bo Ca	ttom 16" Ising @ 527'-7"		10" Pipe Size
	540	Gray, cobbly	y, sar	ndy GRAVEL with th	in lenses of silty, find	e sand.				8-12 Colorado Sand	Size, 50 Slot, Stainless Steel Screen
		od Familia Sai									

Sandy g	orted sand		drock	Project Name: Project Number Drilling Method Sampling Method Elevation: 430 Boring Diameter Drilling Contract Page 12 of 1	er: W93199 d: Cable nod: Baile 6.55' er: 20" 0'- ctor: Arms	9K Tool r Grab and 415'; 16"	l Split 415'-564' ng, Inc.	ng No. TW	<i>l-</i> 7
Diamict	on [Pea	at	Water Level	150.11	149.60	149.63		
─]Silt-clay	Г	Silt		Date	5/13/94	5/26/94	6/7/94		
Strata		Siit	`	Time	7:10 AM	11:30 AM	1:13 PM		
Depth				Description					Well Compl
570	"Till-like", gra Very hard, gra Maroon, gray BOH @ 564"	ravelly, si ravelly Sa y-green,	ilty SAND (hard	,		CK.		Top Tailpipe 556'-5" Cement Plug 558'-564'	
Associa	ted Earth Scie	ences,	Inc.						

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Elevation (Top of Well Casing) 502.19 Surface Elevation (ft) ~500	roject	Nam		Snoqualmie Rid		KH0100	5C			oring Well Con Well Number PW-8 Location	1 of 9 Snoqualmie, WA
Vashon Recessional Deltaic Deposits "Tokul Creek Delta" Tokul Cre	levation Vater I Frilling	on (T Level Æqui	op of Eleva	Well Casing) 502.19 ation 244' b t Hokka	9' as			al Rota	У	Surface Elevation (ft) Date Start/Finish	~500' November 2000, July 200 Variable
Brown, fine to coarse SAND with fine to coarse gravel and silt. With cobbles (very hard drilling). Brown gravel and cobbles with sand and silt. Brown fine to coarse SAND with gravel and occasional cobbles (drilling easier). With cobbles and boulders at 36°. With silt. With cobbles and cobbles with fine to coarse sand. Brown, fine to coarse SAND with gravel and occasional cobbles with cobbles and silt. Brown, fine to coarse SAND with gravel and occasional cobbles with fine to coarse sand. Brown, fine to coarse SAND and GRAVEL with cobbles and silt. Brown, fine to coarse SAND with gravel, cobbles, and silt.	Depth (ft)	Water Level	٧	VELL CONSTRU	CTION	S	Blows/ 6"	Graphic Symbol		DESCF	RIPTION
Brown, fine to coarse SAND with fine to coarse gravel and silt. With cobbles (very hard drilling). Brown gravel and cobbles with sand and silt. Brown, fine to coarse SAND with gravel and occasional cobbles (drilling easier). With silt. With cobbles and boulders at 36'. Cobble zone at 42' (hard drilling). Cravel and cobbles with fine to coarse sand. Brown, fine to coarse SAND and GRAVEL with cobbles and silt. Brown, fine to coarse SAND with gravel, cobbles, and silt.				casing inside 20" d						Vashon Recession "Tokul C	onal Deltaic Deposits Creek Delta"
Brown, fine to coarse SAND with gravel and occasional cobbles (drilling easier). With cobbles and boulders at 36'. Cobble zone at 42' (hard drilling). Gravel and cobbles with fine to coarse sand. Brown, fine to coarse SAND and GRAVEL with cobbles and silt. Brown, fine to coarse SAND and GRAVEL with cobbles and silt.	5			casing 0-409' bgs		- -			Brown	, fine to coarse SAND with	fine to coarse gravel and silt.
Brown, fine to coarse SAND with gravel and occasional cobbles (drilling easier). With silt. With cobbles and boulders at 36'. Cobble zone at 42' (hard drilling). Gravel and cobbles with fine to coarse sand. Brown, fine to coarse SAND and GRAVEL with cobbles and silt.	0								With o	obbles (very hard drilling).	
Brown, fine to coarse SAND with gravel and occasional cobbles (drilling easier). With silt. With cobbles and boulders at 36'. Cobble zone at 42' (hard drilling). Gravel and cobbles with fine to coarse sand. Brown, fine to coarse SAND and GRAVEL with cobbles and silt. Brown, fine to coarse SAND with gravel, cobbles, and silt.								0 0 0	Brown	gravel and cobbles with sa	and and silt.
(drilling easier). With silt. With cobbles and boulders at 36'. Cobble zone at 42' (hard drilling). Gravel and cobbles with fine to coarse sand. Brown, fine to coarse SAND and GRAVEL with cobbles and silt.								0 0 0	Dua	fine to occure CAND. The	groupl and coordinate tracks
With cobbles and boulders at 36'. Cobble zone at 42' (hard drilling). Gravel and cobbles with fine to coarse sand. Brown, fine to coarse SAND and GRAVEL with cobbles and silt. Brown, fine to coarse SAND with gravel, cobbles, and silt.	0					-			(drillin	g easier).	gravei and occasional coobles
Cobble zone at 42' (hard drilling). Gravel and cobbles with fine to coarse sand. Brown, fine to coarse SAND and GRAVEL with cobbles and silt. Brown, fine to coarse SAND with gravel, cobbles, and silt.	5								With c	obbles and boulders at 36°	
Gravel and cobbles with fine to coarse sand. Brown, fine to coarse SAND and GRAVEL with cobbles and silt. Brown, fine to coarse SAND with gravel, cobbles, and silt.	0							1 7	Cobble	e zone at 42' (hard drilling)	
Brown, fine to coarse SAND and GRAVEL with copbles and slit Brown, fine to coarse SAND with gravel, cobbles, and silt.	5					- - - -		0 0 0	Grave	and cobbles with fine to c	oarse sand.
Brown, fine to coarse SAND with gravel, cobbles, and silt.	0					400.			Brown	, fine to coarse SAND and	GRAVEL with cobbles and silt.
						(0) -			Brown	, fine to coarse SAND with	gravel, cobbles, and silt.
	5										
Becoming brown-gray.			NA TOTAL CONTRACTOR OF THE PERSON OF THE PER								
	5					-			Becon	ning brown-gray.	

			Project Nu KH0100			PW-8	Sheet 2 of 9		
Project Na	me Sno	oqualmie Ridge Casing) 502.19'				Location Surface Elevation (ft)	Snoqualmie, WA		
Vater Lev Drilling/Eq	el Elevation	244' bas	/Cable Tool a	nd Dua	al Rota	Date Start/Finish	November 2000, July 2001 Variable		
Depth (ft) Water Level	WELL	_ CONSTRUCT	1	Blows/ 6"	Graphic Symbol	DESC	RIPTION		
85 90 95 100 115 120 125 130 135 140	cas	" and 16" diameter s sing inside 20" diam sing 0-409' bgs				and silt. Becoming brown. Increase in silt content at 114'. Brown, fine to coarse SAND with	n silt, gravel, and cobbles. ND with fine to coarse gravel and		
55									

Asso	ciat	ed Ea	rth Sciences, Inc.		Geologi	c & M	lonit	oring Well Con	structi	on Log
					roject Number KH01005C			Well Number PW-8		Sheet 3 of 9
Projec			Snoqualmie Rid					Location	Snogual	mie, WA
Eleva	tion (Top of	Well Casing) 502.19)'	Won Tiola			Surface Elevation (ft)	~500'	
Drilling	g/Equ	el Eleva uipmen /eight/[t Hokka	gs ido/Cable	Tool and Du	al Rota	ry	Date Start/Finish Hole Diameter (in)	Novemb <u>Variable</u>	er 2000,July 2001
Depth (ft)	Water Level	V	WELL CONSTRUC	CTION	L S Blows/ 6"	Graphic Symbol		DESCF	RIPTION	
					W. 2		Brown	, SILTY fine to coarse SAN	ND with grav	el.
165 170					1000 1000 1000 1000 1000 1000 1000 100					
		000]		Becon	ning gray at 173'.		
-175 - - -					. 03			SILTY fine to coarse SANE) with fine to	coarse gravel and
-180 -					- <u>@</u>		Gray-b cobble	rown, fine to coarse SANEs.) with fine to	coarse gravel and
185		AND THE PROPERTY OF THE PROPER			-		Becon	ning brown with silt.		
190					- <u>***</u>		Gray-t	rown, fine to coarse SANE onal cobbles and trace silt) with fine to	coarse gravel,
- 195							Becon	ning brown.		
200		77.000	12" and 16" diamet		3		Becon	ning gray-brown. Less silt	content.	
205			casing 0-409' bgs		**** <u>*********************************</u>		Increa	se in silt content at 204'.		
210					- 709		Becon	ning coarser at 208'.		
215					- 03					
220					- 07					
225					- One					
230							Brown Brown	unsorted, SILTY fine to c fine to coarse SAND with	oarse SANE gravel and) with gravel. cobbles.
-235 					(M)					
S	ampl	er Type	e (ST):			<u> </u>				
			Split Spoon Sampler (SPT)	No Recovery			Moisture		Logged by: DJB
		3" OD	Split Spoon Sampler (D&M)	Ring Sample		$\overline{\Delta}$	Water Level (08/14/01)		Approved by:
	T.	Grab S	Sample	11,000	Shelby Tube	Sample	Ā	Water Level at time of dri	lling (ATD)	

Asso	ciat	ed Ea	rth Science	es, Inc.	C	ieologie	c & IV	lonit	oring Well Con	structi	on Loa	
				2	Proje	ct Number 01005C			Well Number PW-8		Sheet	
Projec			Spoqualr	mie Ridge Nor					Location	Snogual	4 of 9 Imie, WA	
Elevat	ion (Top of	Well Casing)	502.19	tii vvc	JII I ICIG			Surface Elevation (ft)	~500'		
Drilling	g/Eq	el Elev uipmer	nt	244' bgs Hokkaido/Ca	ble To	ool and Du	al Rota	ry	Date Start/Finish Hole Diameter (in)	Novemb Variable	per 2000, July 2	2001
Hamm	er V	Veight/	Drop	N/A			T		. ,			
£	evel						از او او					
Depth (ft)	Water Level					Blows/ 6"	Graphic Symbol					
	Wat	١	WELL CON	NSTRUCTION		S m	000		DESCF	RIPTION		
			1			T.		Grav-	brown, fine to medium SAN	ID with grav	el and cobbles	
	Ţ							City	brown, mie to medium es av	vo viai grav	ror arra dobbles.	
- -245						-			014	44 040	N. I.	
-								Consc	olidated peat layer; C ¹⁴ datii	ng > 41,240	pp.	
250						©						
230						- 5						
-						-						
255						100 2						
	Ā											
260						1003						
-						1		Cobbi	e zone at 261' and 265'.			
265						5003						
[1						
270						-80						
-						-						
275						1		Becor	ming gray at 274'.			
2/3						7			e zone at 276'.			
-						en						
280				6" diameter steel		60%						
Ē		:	casing ins	side 20" diameter 109' bgs]						
285						503						
-						-						
290												
_]						
295						3						
-33						100 M		Gray,	SILTY fine to medium SAN	ID with trace	e gravel.	
200												
300						103						
-						1						
305						3		Gradi	ng into SILTY fine SAND w	ith trace gra	avel.	
]						
310						- 3		Occas	sional cobbles at 310'.			
- - -						-						
						- <u>- </u>						
315 Sa												
						-						
Sa			e (ST):	Committee (CDT)	п.	le Desser			Majakus		Laurenda - 1	D ID
	Ш			Sampler (SPT)	_	No Recovery		M <u>∑</u>	- Moisture			DJB
				Sampler (D & M)		Ring Sample	Samala	<u></u>	Water Level (08/14/01)	lling (ATD)	Approved by:	
ĺ	[®]	GIAD	Sample		<i>y</i> 3	Shelby Tube S	ample	-	Water Level at time of dri	iiiig (ATD)		

			rth Sciences, Inc.		oject Number	c & M	lonito	ring Well Con	structi	Sheet
	W.				(H01005C			PW-8		5 of 9
Project N			Snoqualmie Rid Well Casing) 502.19	ge North \	Nell Field			Location Surface Elevation (ft)	Snoqual ~500'	mie, WA
Water Le	eve	l Éleva	ation 244' b	as				Date Start/Finish	Novemb	er 2000,July 2001
Drilling/E Hammer				ido/Cable	Tool and Du	al Rota	<u>ry</u>	Hole Diameter (in)	Variable	
	Water Level		VELL CONSTRU	CTION	Blows/	Graphic Symbol		DESCF	RIPTION	
325		MACHINET DATE OF THE PROPERTY								
335	:									
340					_62					
345					302					
350					<u> </u>					
355					-		Und	Hifferentiated Olympia/pr	e-Olvmnia I	acustrina Danosits
360			12" and 16" diamed casing inside 20" d casing 0-409' bgs				Gray, C	differentiated Olympia/pr LAYEY SILT to CLAYEY	fine SAND.	acusti ne Deposits
365					- - -					
370					- - -		l l d	dell'e a balance 0701		
375		BOOMS OF THE PERSON OF THE PER			- - - -		narder (drilling below 373'.		
380										
385					- 100 H					
390					- 0.5					
395							Wood fr	agment at 395'. C ¹⁴ datir	ng > 40,380	bp.
Sam			e (ST):							
Ш			Split Spoon Sampler	_	No Recovery		$\overline{}$	Moisture		Logged by: DJB
ector .			Split Spoon Sampler	(D & M) [Ring Sample Shelby Tube S	Sample	_	Water Level (08/14/01) Water Level at time of dri	lling (ATD)	Approved by:
•]	GIAD S	Sample		Silelpy Tube S	sample		vvater Lever at time of dri	iiilig (ATD)	

					roject Number KH01005C			Well Number PW-8	Struction Log Sheet 6 of 9
roject	Nam	 ne	Snoqualmie Ridg	ge North				Location	Snoqualmie, WA
evati ater	on (T	op of \ Eleva	Well Casing) 502.19	7				Surface Elevation (ft) Date Start/Finish	~500'
illing	/Equi	pment	t Hokkai	do/Cable	e Tool and Du	al Rota	ry	Hole Diameter (in)	November 2000, July 200 Variable
mm		eight/[Orop <u>N/A</u>						
Ē	Water Level				/s	bol			
(#)	ter L				S Blows/	Graphic Symbol			
	×	V۱	VELL CONSTRUC	TION	S m T			DESCR	RIPTION
					3		Containing	g trace gravel and coars	se sand.
			12" and 16" diamete casing inside 20" dia	er steel]				
5			casing 0-409' bgs	arrieter	- 3				
					1				
0			12" diameter steel of inside 16" diameter		3				
			casing 409'-557' bg		-				
5					3				
					-				
0					-				
5					-				
							,		
o					- 1903				
					-				
5									
					-				
0									
					-				
5					300				
					- 172				
0					7				
-							As above.		
5									
-					-				
0					-				
					-		Gray, SIL depth, trac	TY fine SAND. Coarse ce gravel.	ning to fine to medium SAND wit
5									
-					- 1		Boulder at	t 465'.	
0					-				
					- 3		Gray, SIL [*] layers.	TY SAND and GRAVEL	with cobbles and interbedded s
_					-		-		
5									
Sa	-	r Type							
] 2	2" OD	Split Spoon Sampler (SPT)	No Recovery		M - M	loisture	Logged by: DJB

Asso	ciat	ed Ear	rth Sciences, Inc.		Ge Project	ologi Number	c & N	/lonit	toring Well Con Well Number	structi	on Log Sheet	
	C				KH01				PW-8		7 of 9	
Projec	ct Na	me	Snoqualmie Rid	ge Nort	th Well	Field			Location	Snoqual	mie, WA	
Water	Leve	el Eleva	Well Casing) 502.19 ation 244' be	as					Surface Elevation (ft) Date Start/Finish	~500' Novemb	er 2000,July	2001
		uipmen Veight/[ido/Cal	ole Too	and Du	ual Rota	ary	Hole Diameter (in)	<u>Variable</u>		
Tiaimi	_	Volgitu	14/A					T				
Depth (ft)	Water Level					/SM	Graphic Symbol					
ا م	ater	\ \	VELL CONSTRU	CTION		H & Blows/	Gra		DESCE	RIPTION		
	>	V	VELL CONSTRU	STION		T			DESCR	KIF I ION		
-						®		Gray	SILTY fine SAND with trac	e gravel and	cobbles.	
_												
4 85					-	6 73		•				
-						-						
490					-	***						
-						1		-	Jndifferentiated Olympia/pr	e-Olympia F	ine-Grained Fl	uvial
4 95					-	1		Grav	De fine SAND with silt, trace <u>c</u>	posits ravel		
[-		: Situly	, 5. a	,		
- -500					-							
-												
-505								-				
- 303						103						
-						-						
510					-	3						
515			12" diameter steel	casing	-	**		1				
-			inside 16" diameter casing 409'-557' bg			-						
520					-	· ·						
-						-						
- 525					-	4005						
Ė						1						
-530						- 400		1				
-						- 1						
-						-						
535					-	103						
-						-						
540					-	₹ <u>₩</u>		As al	oove.			
]						
545					-	3		1				
-						1						
550						1						
1/8/1						-						
555						400						
2 -			12" diameter steel	casina		1						
2			0-627' bgs			-						
NWWELL OTOUS, GF7 1004	ampl	ler Type		(ODT)	П	Б						D.15
2	Ш		Split Spoon Sampler			Recovery		M ∑	- Moisture		Logged by:	DJB
ME			Split Spoon Sampler	(D & M)		g Sample		Ţ.	Water Level (08/14/01)	Ilina (ATD)	Approved by:	
2	•	Grab S	Sample		∥ Sne	lby Tube	sample	<u></u> -	Water Level at time of dri	iling (ATD)		

Asso	ciat	ed Ear	th Sciences, Inc.		Geolog	ic & N	lonit	oring Well Con	structi	on Log	
					roject Number KH01005C			Well Number PW-8		Sheet 8 of 9	
Projec	t Na	me	Snoqualmie Rid	ge North		L		Location	Snogual	mie, WA	
Elevat	ion (Top of \	Well Casing) <u>502.19</u>	9'				Surface Elevation (ft) Date Start/Finish	~500'		2004
Drilling	g/Eqi	uipment	Hokka	ys iido/Cable	Tool and D	ual Rota	ry	Hole Diameter (in)	Variable	er 2000,July 2	2001
Hamm	ner V	Veight/D	Prop N/A								
₽_	Water Level				/6	hic					
Depth (ft)	erL				S Blows/	Graphic Symbol					
	Wat	W	/ELL CONSTRU	CTION	S -	000		DESCF	RIPTION		
					403		Gray	SILTY fine to medium SAN	ID with inter	hedded SII T	
					-		Olay,	OLE I TIMO TO MICUIANI OAN	ib with lines	bedded OIL1.	
565											
-											
F70					-						
570					day.						
-					-						
-5 75					3		Gray,	SILTY fine SAND.			
E											
580					3						
-					-						
585					- KMZ						
-											
-590											
			12" diameter steel 0-627' bgs	casing							
-					-						
595					3						
					1995						
600					**			ndifferentiated Olympia/pre	Olemania C	Ci (FI	
-					3		UI.	De	posits	barse-Grained Fil	uviai
605					***		Grav	SAND and GRAVEL with co	obbles and t	race silt.	
-					-						
610			8" diameter 30-slot		-						
F			steel well screen 6	09'-631'	- The state of the						
615											
-					602						
-					-						
620											
					103						
625					2		- 1				
E			No filter pack		3		At 72	7.5', cable tool refusal; char	nge to dual i	otary drill rig.	
630			-		-		As at	pove.			
=			8" diameter 50-slot steel well screen 6		-						
635					1						
]						
<u></u>											
635 Sa	ampl ⊞	ler Type		(ODT)	N- D			Marketon			D. IC
	Ш m		Split Spoon Sampler	_	No Recover	-	M ∑	- Moisture			DJB
	Ш		Split Spoon Sampler		Ring Sample		<u>¥</u>	Water Level (08/14/01)	III (ATD)	Approved by:	
E	•	Grab S	ampie	/	Shelby Tube	e Sample	<u></u>	Water Level at time of dri	iiing (ATD)		

	(W					ect Nur 0100				oring Well Con Well Number PW-8		9 of 9
roject	Nam	ie op of V	Snoqualn Vell Casing)	nie Ridge No 502.19'	rth W	ell Fie	ld			Location Surface Elevation (ft)	~500'	mie, WA
rilling	/Equi	Eleva pment eight/D		244' bgs Hokkaido/Ca N/A	able T	ool ar	nd Du	al Rota	ry	Date Start/Finish Hole Diameter (in)	Novemb Variable	er 2000,July 200
Depth (ft)	Water Level	W	ELL CON	STRUCTION	1	S	Blows/ 6"	Graphic Symbol		DESCF	RIPTION	
45						-						
50						-						
55				r 50-slot stainle: screen 631'-694'		-						
50						-						
65												
70 75			No filter pa	ick		-			Commit	For to occur CAND with		
80						-			Glay,	fine to coarse SAND with ς	graver and G	obbies, trace siit.
35						-						
90						-						
95			Tailpipe 69	94'-700'		<u> </u>			Black	Tertiar BASALT.	y Bedrock	
0	-											
05									Boring	terminated at 710 feet on	July 2001	
5 Sa										tailed well completion sche		igure 10.
Sa	_	r Type 2" OD \$		Sampler (SPT)	П	No Red	overv		M	- Moisture		Logged by: DJB
L				Sampler (D & M)		Ring S			Δ	Water Level (08/14/01)		Approved by:

Number BH-1

SEDIMENT DESCRIPTION	DEPTH	SAMPLE	GROUND		ARD PE RESIST Blows/F	ANCE	ATION
ELEVATION 423'		<u> </u>		10	20	30	40
1" Gravels (Fill) Wet, dark brown, silty, fine to medium SAND. (Fill)	_ _ _ _ _ 5			V			
Moist, brown to gray SILT. (Qa)	_ _ _ _ _ 10					37 ▲	**************************************
Moist to wet, gray SILT. (Qa)		Vincial money supply		18			
Moist, gray, fine SAND. (Qvrs)	 	Ι			29 🛕		
Moist, gray, stratified, coarse SILT to very fine SAND. (Qvrs) BOH @ 21-1/2' I Dames & Moore California Modified Ring Sampler (140 lb. hammer)	20 25	Ι					47 ▲ ①
	_ _ _ _ _ 30						
	- - -						

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by geologic interpretations, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

Reviewed By

C2K

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Fax: 206-827-5424

Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. G94236A March 1995

Number BH-3

SEDIMENT DESCRIPTION	DEPTH	SAMPLE GROUND WATER	STANDARD PENETRATION RESISTANCE Blows/Foot
ELEVATION 423'			10 20 30 40
1/4" to 1" Gravels (Fill)	F		
Moist, dark brown, silty, fine to coarse SAND with gravel. (Fill) Limited sample return. Increase in gravel content below 9'.	 5 		65/
Moist, tan and brown, mottled, silty, gravelly, fine to coarse SAND. (Fill)	- - 10 - -		▲ 31
Moist, brown, fine to medium SAND, minor gravel upper 6" of sample. (Qvrs)	_ 15 _ _	Ĭ *	19 🛕
Moist, brown, fine to medium SAND. (Qvrs)	_ 20 	I	18 🛕
BOH @ 21-1/2' Split spoon sampler	_ _ 25 _		
Dames & Moore California Modified Ring Sampler (140 lb. hammer)	-		
★ No sample return with split spoon 15' to 16-1/2'; rock in driveshoe. Re-sampled with Dames & Moore Ring Sampler.	30 _ _ _ _		

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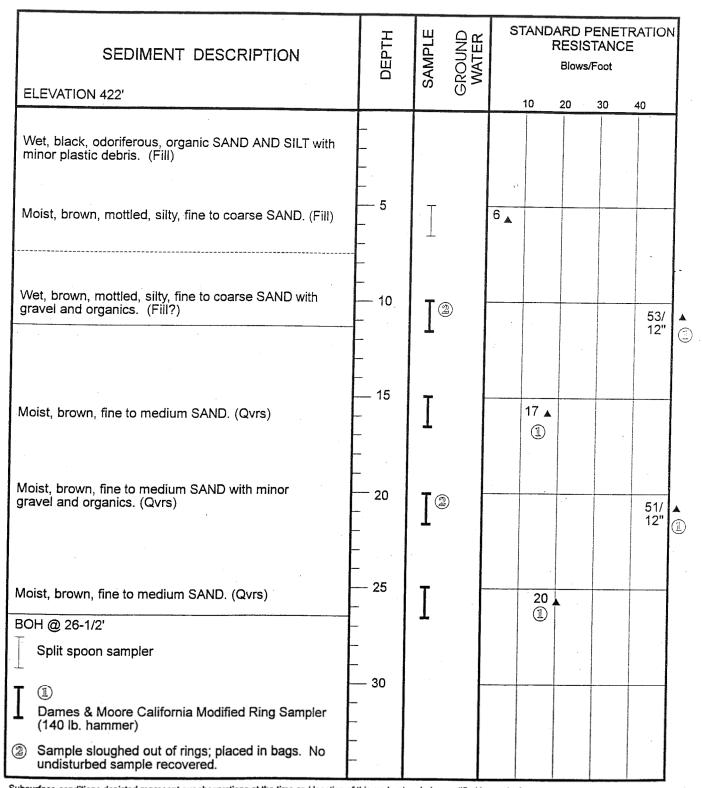
Reviewed By Cork

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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. G94236A March 1995

Number BH-4



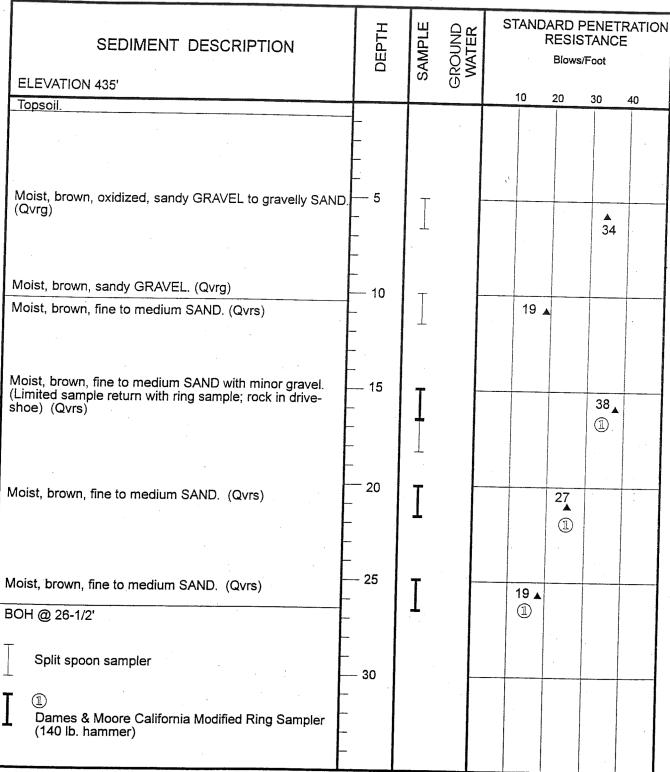
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Pnone: 206-827-770 Fax: 206-827-5424 Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. G94236A March 1995

Number BH-5



Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by geologic interpretations, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

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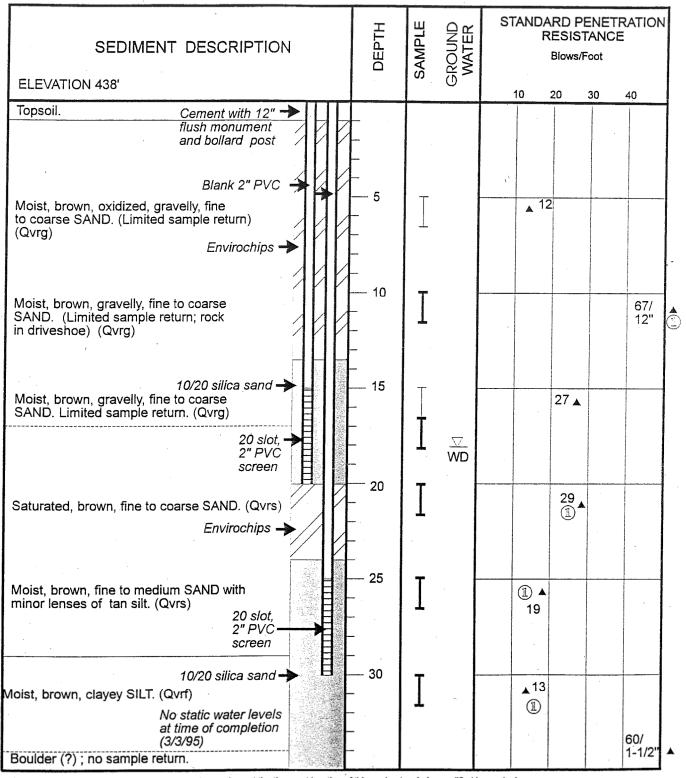
OSK

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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. G94236A March 1995

Number OBW-4 (BH-6) Page 1 of 2



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Snoqualmie, Washington
Project No. G94236A
March 1995

Snoqualmie Waste Water Treatment Plant

Number OBW-4 (BH-6) Page 2 of 2

SEDIMENT DESCRIPTION	DEPTH	SAMPLE	GROUND	S	FAND.	ARD F RESIS	STANC	FRATION E
					10.	20	30	40
BOH @ 35' Refusal	-							
Split spoon sampler	- 40			1,1				-
T ®	- 40							
Dames & Moore California Modified Ring Sampler (140 lb. hammer)	_							
WD Ground water encountered while drilling								-
DOE Well ID #ABN-114	— 45 –							
	_	·						
	-				-		i Newson was another a said	
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	-							
Subsurface conditions depicted represent our observations at the time and location of								

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Reviewed By

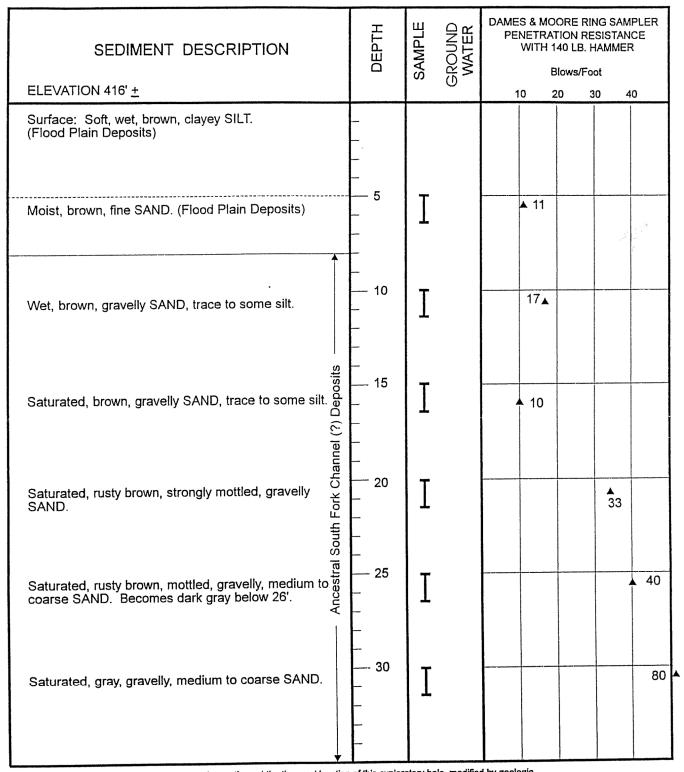
CJK

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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. G94236A March 1995

Number BH-7 Page 1 of 2



Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by geologic interpretations, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

Reviewed By

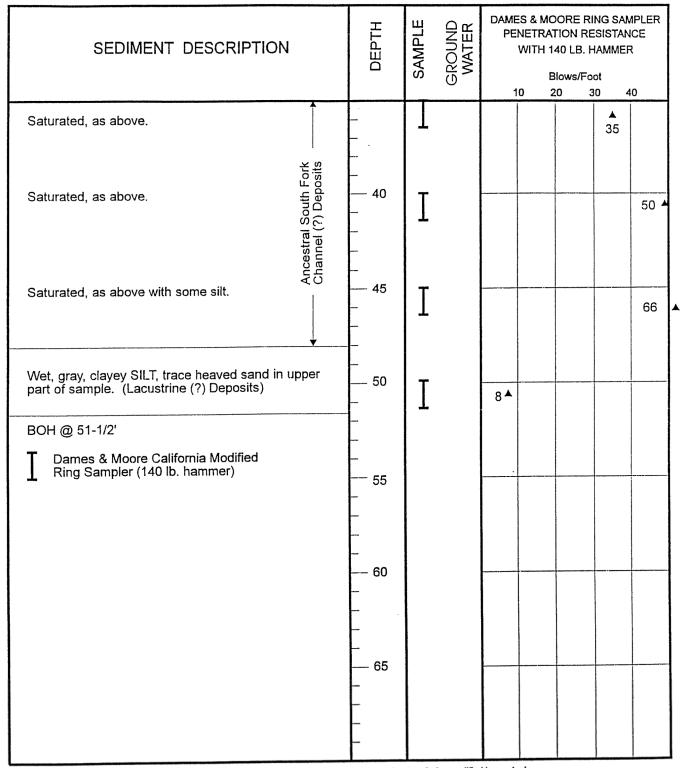
Associated Earth Sciences, Inc. 911 Fifth Avenue, Suite 100 Kirkland, Washington 98033 Phone: 206-827-7701

Fax: 206-827-5424

Snoqualmie Waste Water Treatment Plant - Pump Station Snoqualmie, Washington Project No. G94263B March 1995

CJK

Number BH-7 Page 2 of 2



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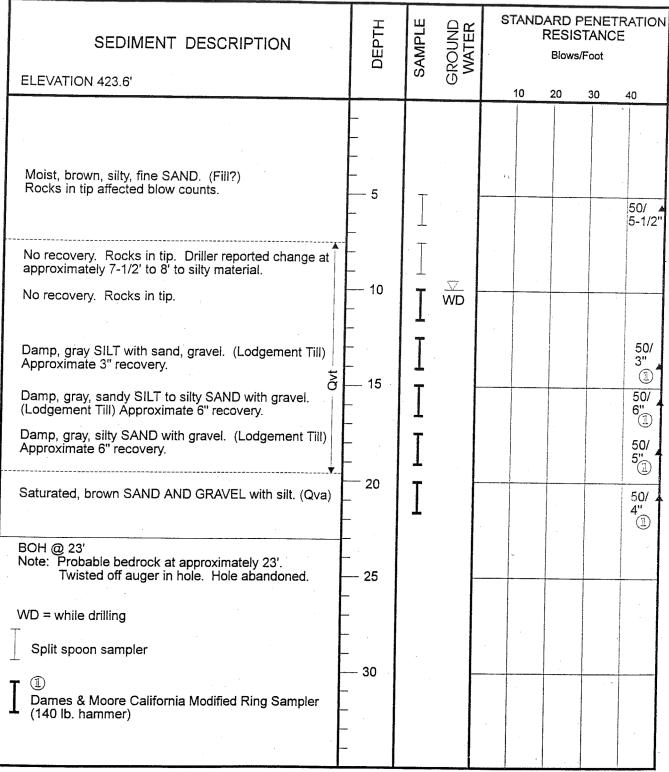
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Snoqualmie Waste Water Treatment Plant - Pump Station Snoqualmie, Washington Project No. G94263B March 1995

Number OBW-1



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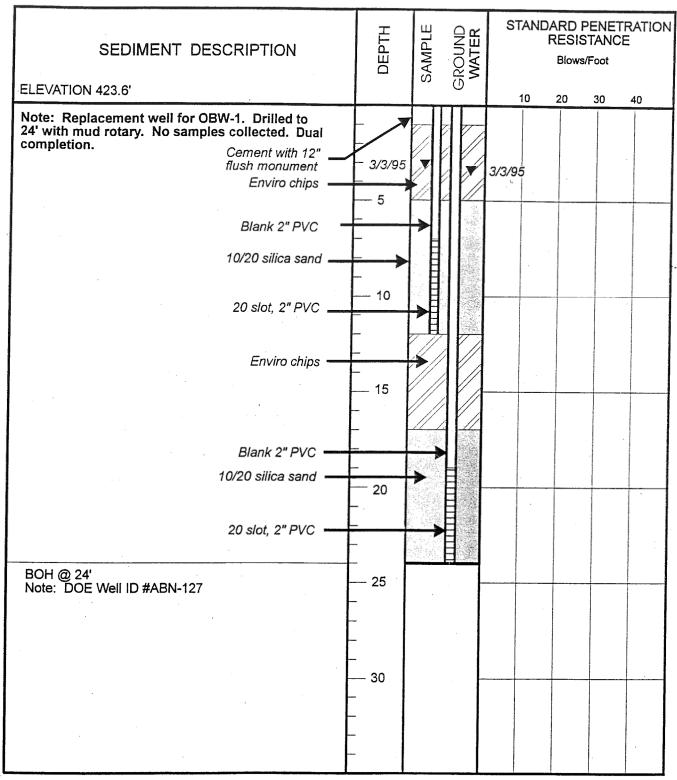
CTK.

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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94236A February 1995

Number OBW-1B



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CXK

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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94236A February 1995

Number OBW-2A Page 1 of 2

SEDIMENT DESCRIPTION	DEPTH	SAMPLE	GROUND	R	RD PENI ESISTAN Blows/Foot	
ELEVATION Approximately 430'			U	10	20 30	40
Moist, brown, gravelly, fine to medium SAND. (Fill) Traffic rated flush mounted monument	- - -					
Moist, brown, fine to medium SAND with gravel. (Fill) Schedule 40 blank PVC Bentonite	5 - - -	I				▲ 41
Moist, brown, medium to fine SAND with gravel, trace silt. (Fill)	_ 10 _ _	I				67
Moist, dark brown, fine to medium SAND. (Qvrs)	_ 15 _	I		8_		
Moist, dark brown, medium to fine SAND. (Qvrs)	_ _ 20 _ _	I		10		
Moist, dark brown, medium to fine SAND, trace silt. (Qvrs)	_ 25 - -	I		10		
Moist, dark brown, medium to fine SAND, trace gray silt. (Qvrs)	- 30 - -	I		▲ 11		

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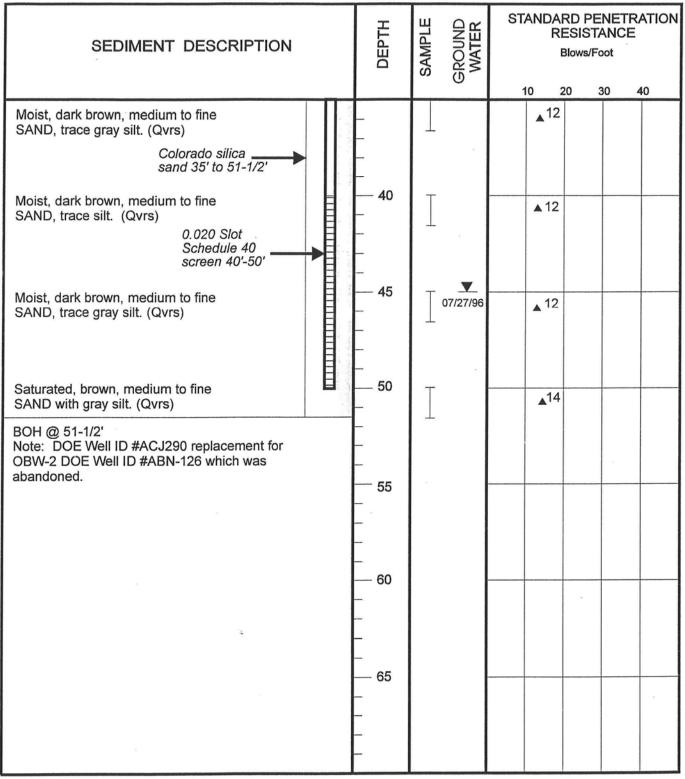
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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94263C **July 1996**

Number OBW-2A Page 2 of 2



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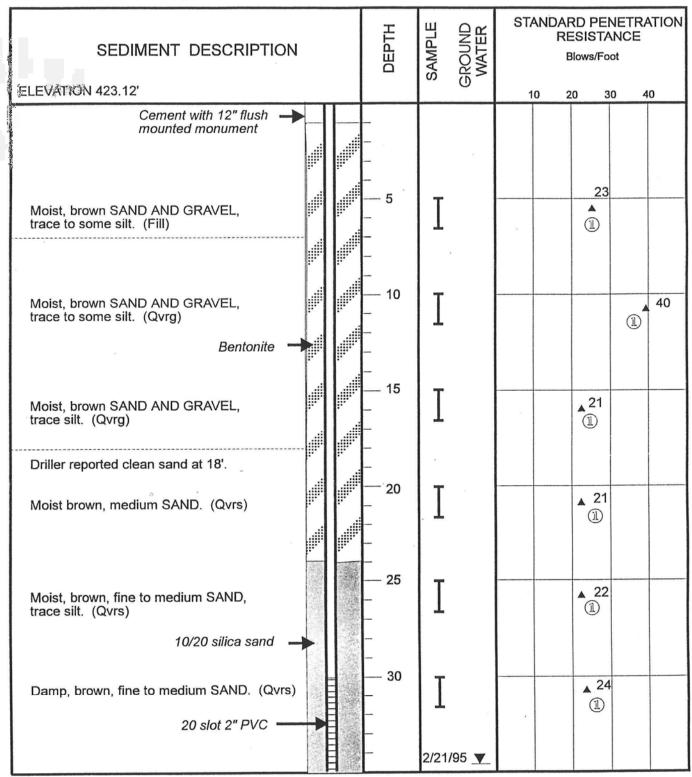
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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94263C **July 1996**

Number OBW-2 Page 1 of 2



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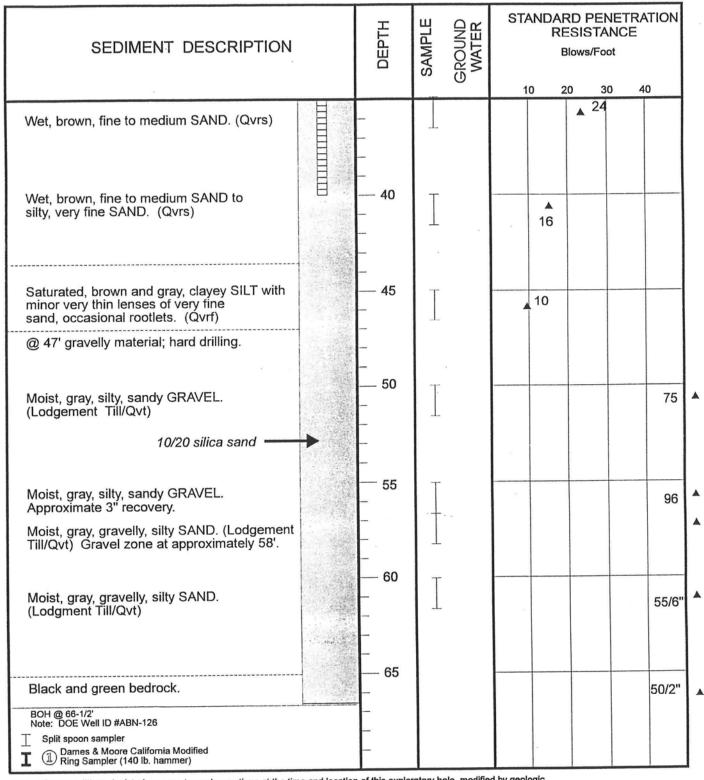
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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94236A February 1995

Number OBW-2 Page 2 of 2



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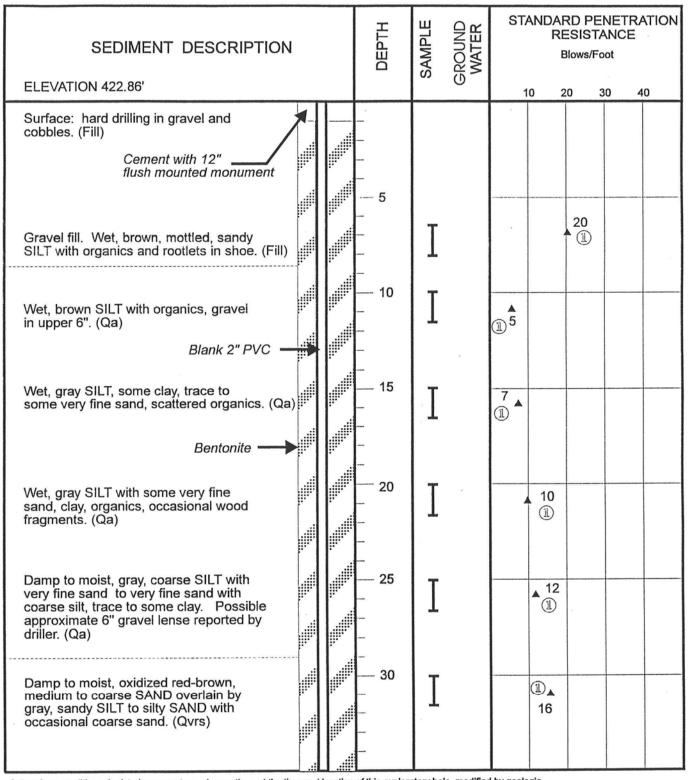
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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94236A February 1995

CJK

Number OBW-3 Page 1 of 3



Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by geologic interpretations, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

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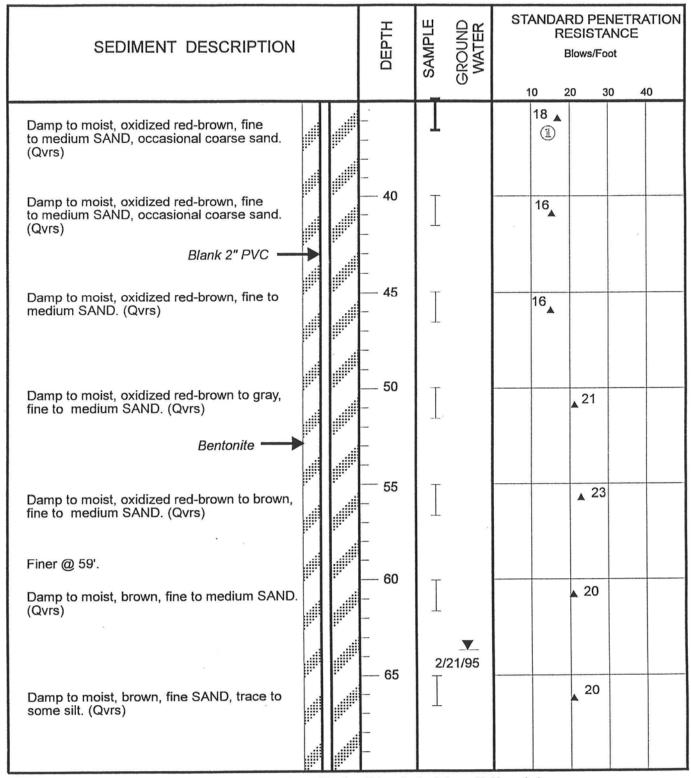
CJK

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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94236A February 1995

Number OBW-3 Page 2 of 3



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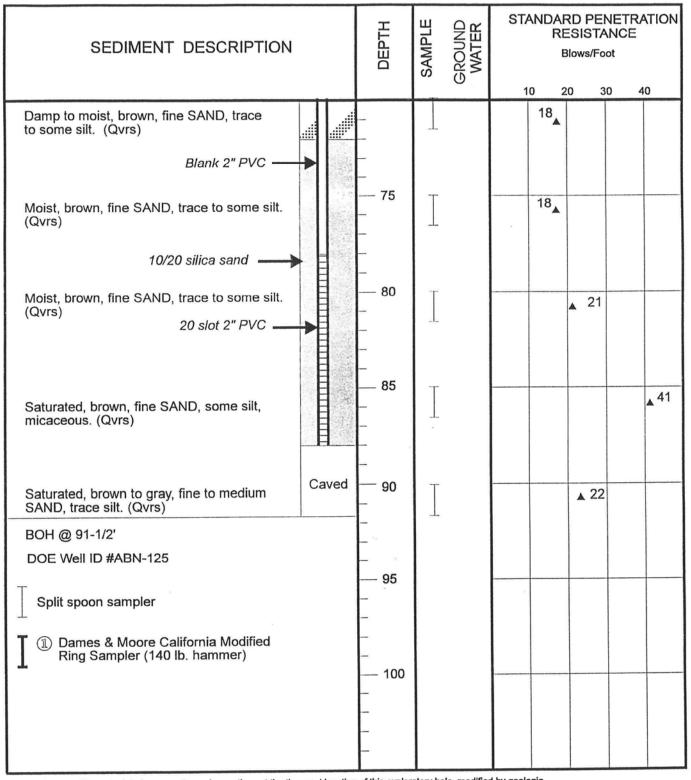
Reviewed By

CIK

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Phone: 206-827-7701 Fax: 206-827-5424 Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94236A February 1995

Number OBW-3 Page 3 of 3



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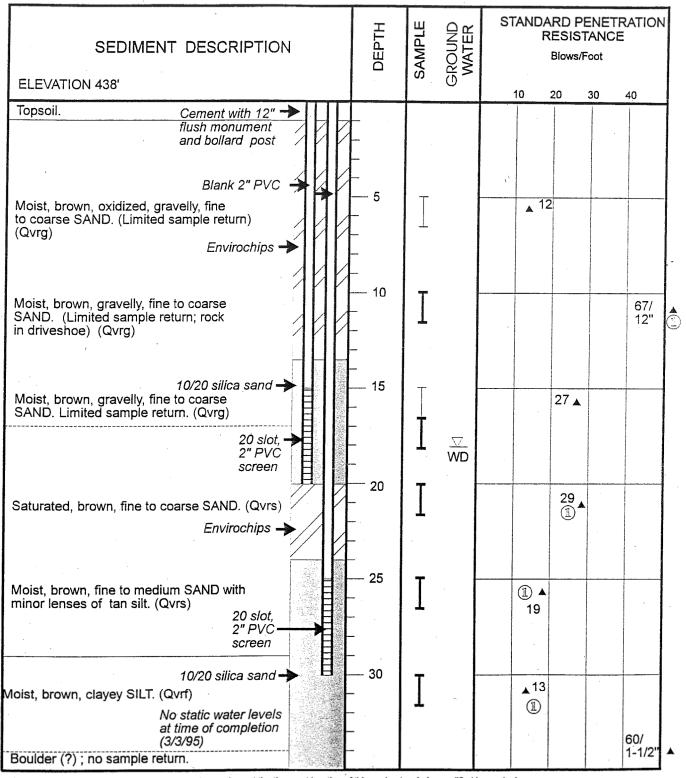
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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94236A February 1995

Number OBW-4 (BH-6) Page 1 of 2



Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by geologic interpretations, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

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Snoqualmie, Washington
Project No. G94236A
March 1995

Snoqualmie Waste Water Treatment Plant

Number OBW-4 (BH-6) Page 2 of 2

SEDIMENT DESCRIPTION	DEPTH	SAMPLE	GROUND	S	FAND.	ARD F RESIS	STANC	FRATION E
					10.	20	30	40
BOH @ 35' Refusal	-							
Split spoon sampler	- 40			1,1				-
T ®	- 40							
Dames & Moore California Modified Ring Sampler (140 lb. hammer)	_							
WD Ground water encountered while drilling								-
DOE Well ID #ABN-114	— 45 –							
	_	·						
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Subsurface conditions depicted represent our observations at the time and location of								

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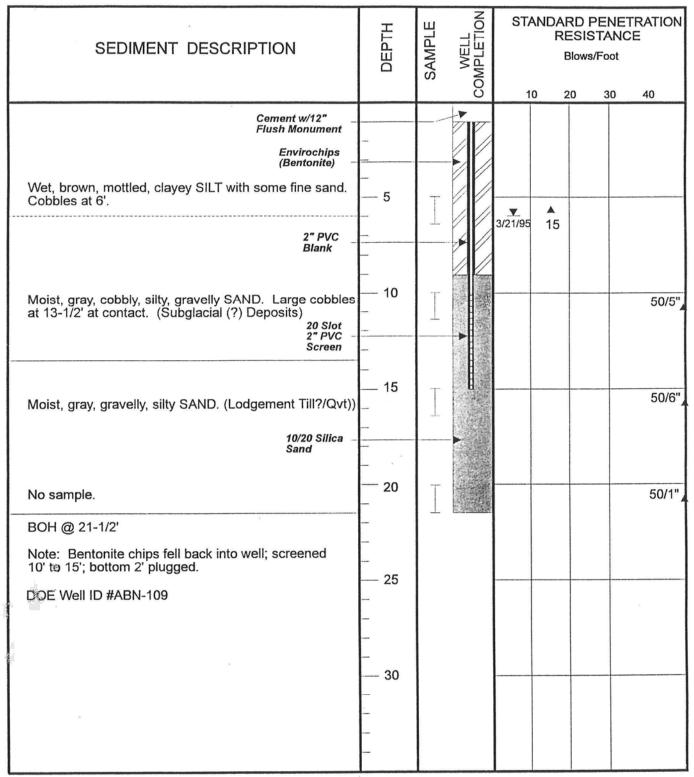
CJK

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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. G94236A March 1995

Number OBW-5



Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by geologic interpretations, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

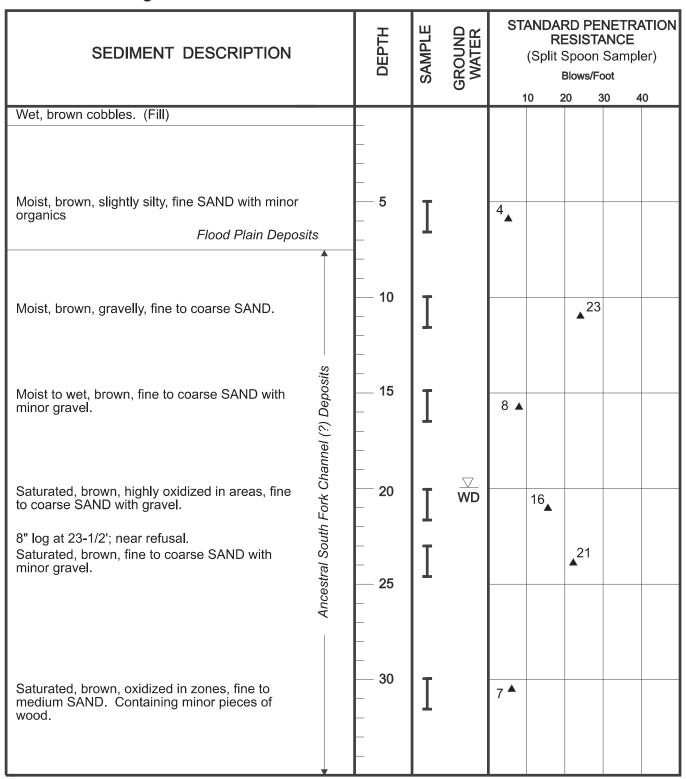
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Snoqualmie Waste Water Treatment Plant Snoqualmie, Washington Project No. W94263A March 1995

Number B-1 Page 1 of 2



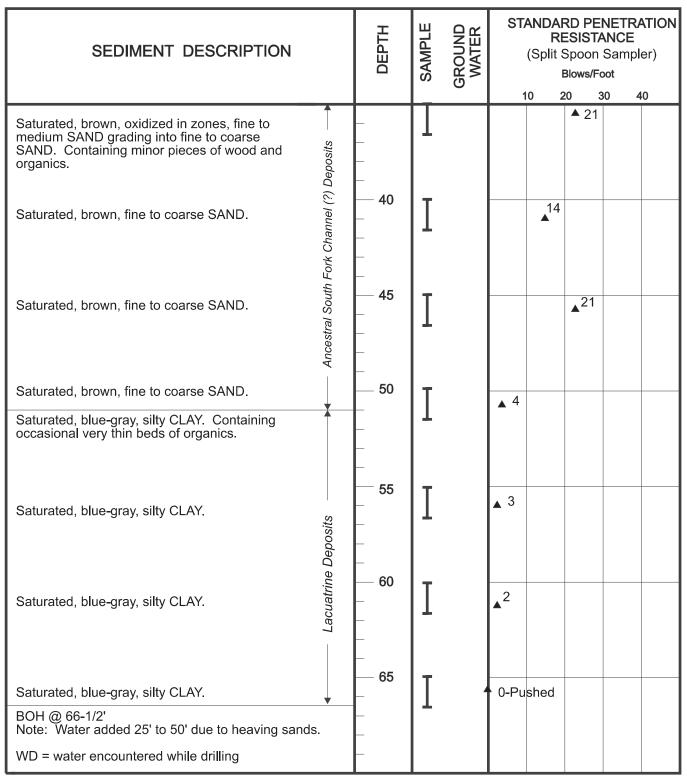
Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by geologic interpretations, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

Reviewed By

Associated Earth Sciences, Inc. 911 Fifth Avenue, Suite 100 Kirkland, Washington 98033 Phone: 206-827-7701

Phone: 206-827-770 Fax: 206-827-5424

Number B-1 Page 2 of 2



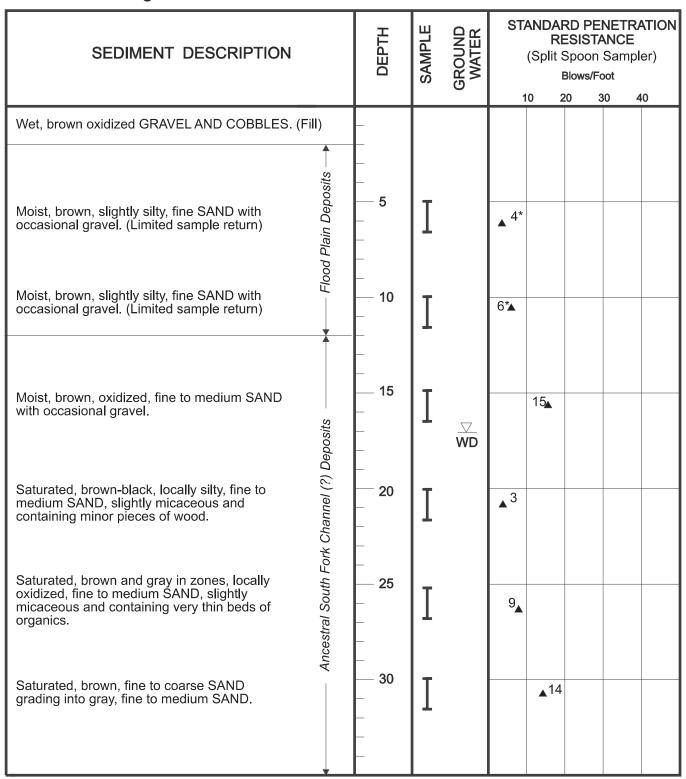
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Number B-2 Page 1 of 2



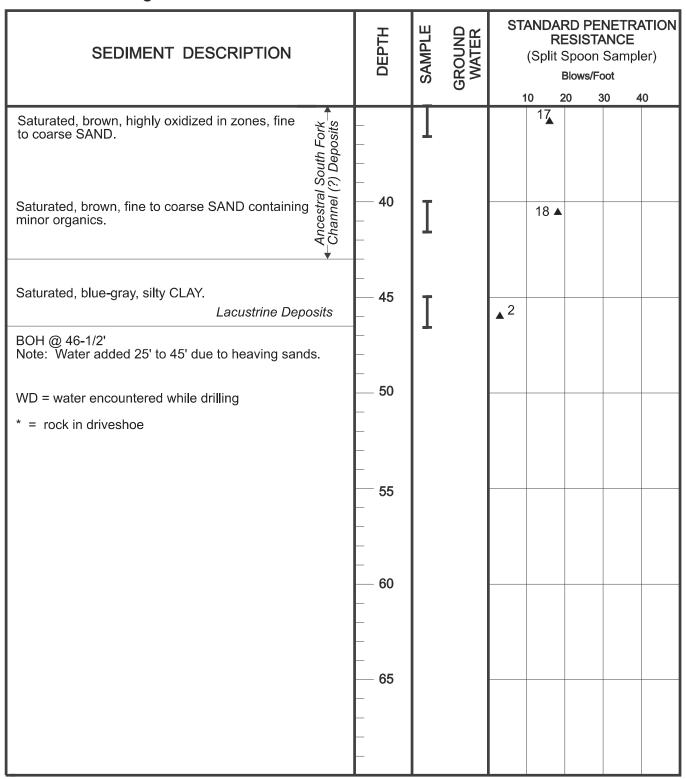
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Number B-2 Page 2 of 2



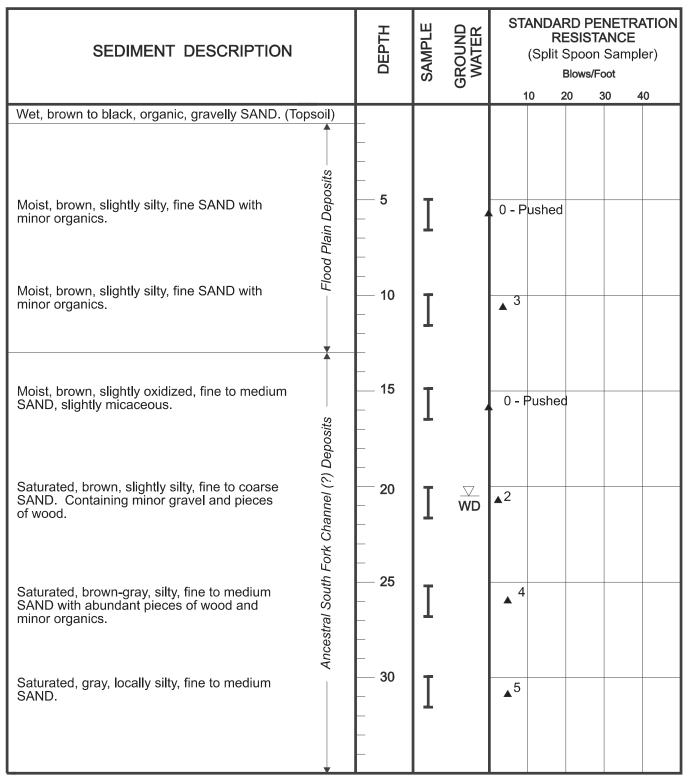
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Associated Earth Sciences, Inc. 911 Fifth Avenue, Suite 100 Kirkland, Washington 98033 Phone: 206-827-7701

Phone: 206-827-770 Fax: 206-827-5424

Number B-3 Page 1 of 2



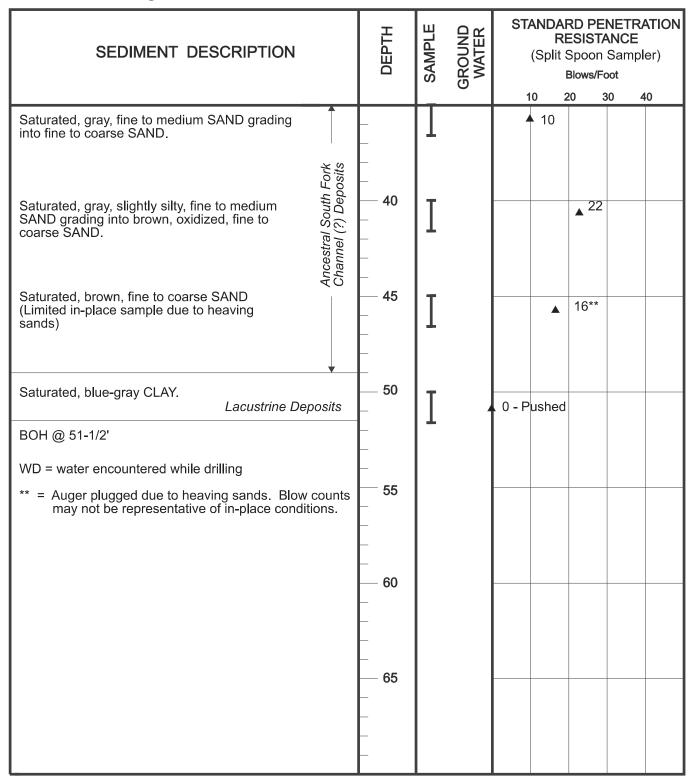
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Number B-3 Page 2 of 2



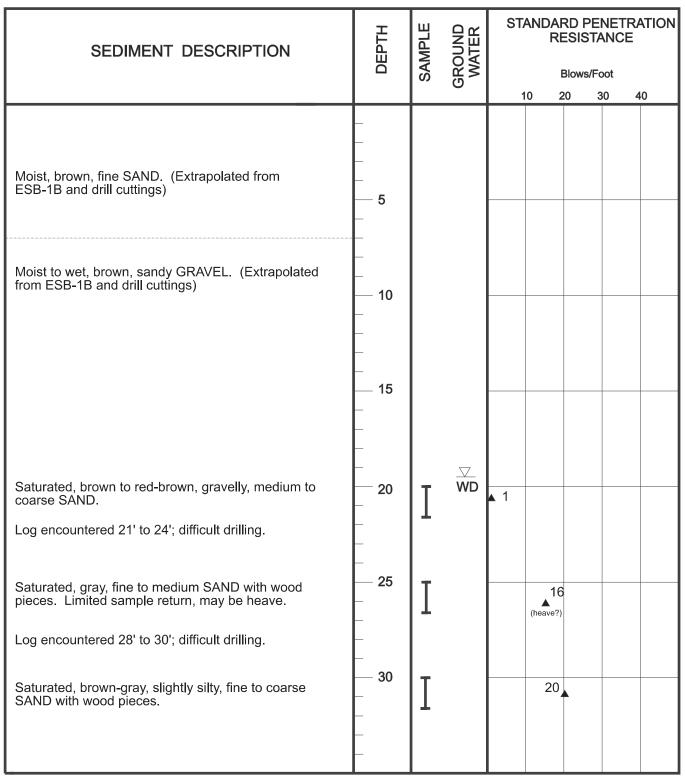
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Reviewed By

Associated Earth Sciences, Inc. 911 Fifth Avenue, Suite 100 Kirkland, Washington 98033

Phone: 206-827-7701 Fax: 206-827-5424

Number ESB-1C Page 1 of 3



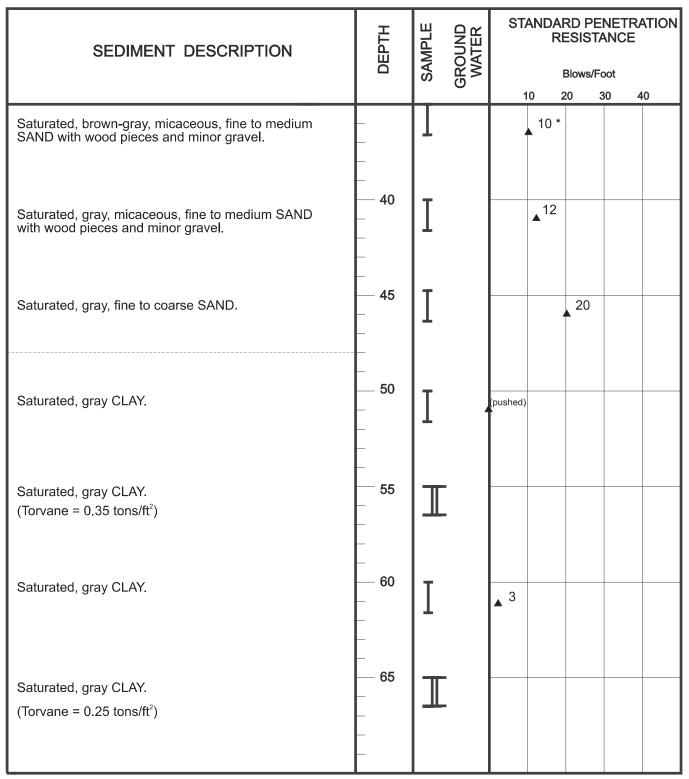
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Reviewed By

Associated Earth Sciences, Inc. 911 Fifth Avenue, Suite 100 Kirkland, Washington 98033 Phone: 206-827-7701

Phone: 206-827-7701 Fax: 206-827-5424 Snoqualmie Lift Station Snoqualmie, Washington Project No. H95125A September 1995

Number ESB-1C Page 2 of 3



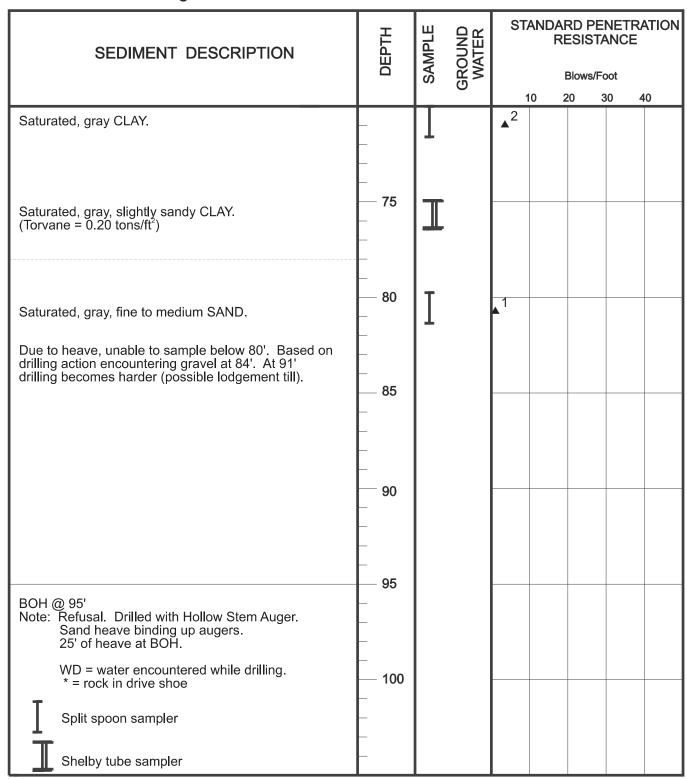
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Reviewed By

Associated Earth Sciences, Inc. 911 Fifth Avenue, Suite 100 Kirkland, Washington 98033

Phone: 206-827-7701 Fax: 206-827-5424 Snoqualmie Lift Station Snoqualmie, Washington Project No. H95125A September 1995

Number ESB-1C Page 3 of 3



Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by geologic interpretations, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

Reviewed By

Associated Earth Sciences, Inc. 911 Fifth Avenue, Suite 100 Kirkland, Washington 98033

Phone: 206-827-7701 Fax: 206-827-5424

Snoqualmie Lift Station Snoqualmie, Washington Project No. H95125A September 1995

Asso	cia	ated E	Earth Sciences, Inc.	G	Seolog	ic & I	Monitoring Well Con	struction Log
		Œ.		Proje	ct Number 99312A		Well Number MW-1	Sheet 1 of 2
Projec			Snoqualmie Bedro	ck Mining			Location	King County, WA
Water	Le	vel Ele	evation	\\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\			Surface Elevation (ft) Date Start/Finish	07/08/02,07/08/02
Drilling			t/Drop Aquatect	1 Well Dril	ling and	Pumps /	Air RotaryHole Diameter (in)	6
₽_	laye	5			70	ic o		
Depth (ft)	Water Level				S Blows/	Graphic		
	×		WELL CONSTRUCT		T			RIPTION
			10" diameter bentonite surface seal (bentonite]		Surface materials: Dark brown, Vashon Recess	fine SAND. ional Delta Deposits
- 5			pellets) 0-18'		-		Loose gravels with cobbles. Driller notes losing air into forma	tion
- 10					-	9		
15					185		Driller adding small amount of w. Dark brown, SANDY GRAVEL, a	ater. abundant cuttings.
			6" diameter steel casir	g]			
20			+2'-69'		- 607			
25					1		Dry, brown, fine to medium SAN	D trace gravel
					- 5		2.3, a.o.m., mio to modiam c. a.	D, dado gravor.
30					-		5	
							Driller notes softer, possible sma sample.	Ill amount water not noted in
35					-		Dry, brown, fine to coarse SAND	trace gravel
							Bry, brown, fine to coarse GAND	, trace graver.
40					- 2		Damp, brown, fine to medium SA	AND, trace gravel.
					1			
45					du.		Damp, brown, fine to medium SA Minor increase in silt content.	ND, little gravel, trace silt.
F0]		Williof increase in silt content.	
50			6" diameter steel casin +2'-69'	g	10%		Moist, brown, GRAVELLY fine to	medium SAND with trace to some
55	_				-		Color change at ~ 52' to gray. Driller adding water.	
	V V						Gray, SILTY, GRAVELLY, fine to	medium SAND.
60					- 6%			
65					- 105			
			K-packer 66.5'-67' 6" diameter telescoping	ı	1		Becoming interbedded gray SAN	D/SILT with trace gravel.
70			stainless steel screen 0 slot width 67'-72'	.012"	17 5		Gray, fine to medium SAND with	trace silt.
7.5			6" diameter telescoping stainless steel screen 0]		Gray SILT.	
75			slot width 72'-77'		- 65		Color change at ~74' to gray-brow Saturated, gray-brown GRAVEL	wh, increase in gravel. with minor sand, abundant cuttings.
80			Gravel fill 77'-78'		-		Cobble at 78'.	
			Abandoned 6" diameter casing backfilled with bentonite 78'-87'	steel			Gray GRAVEL (cuttings) with mir andesite with minor intrusive volc	nor brown to white gravel (mainly anic [diorite?] gravels).
-	7		e (ST):					
Ш]		Split Spoon Sampler (SPT		Recovery		M - Moisture	Logged by: JAH
T.]) Split Spoon Sampler (D & Sample		ng Sample nelby Tube	Sample	-	Approved by:
	1	GIAD		/ SI	lelby Tube	Jample	Water Level at time of dril	iing (ATD)

Asso	ocia	ted Ea	arth S	Science	es, Inc.			Geo	logi	ic & N	/loni	toring Well Co	nstruct	ion Log	
				V	0			oject Nu	mber 12A			Well Number MW-1		Sheet 2 of 2	
Proje	ct Na	ame	Sn	oqual	mie Be	edrock N						Location	King Co	ounty, WA	
		(Top of rel Elev			625.6	88						Surface Elevation (f Date Start/Finish	t) N/A	2,07/08/02	
Drillin	g/Ed	quipmer	nt		Aqua	tech We	ell D	rilling	and F	oumps /	Air R	otaryHole Diameter (in)	6	2,07/00/02	
Hamn	_	Weight/	Drop		N/A				T						
ŧ.	Water Level								≥ 0	p jc					
Depth (ft)	terL								Blows/ 6"	Graphic Symbol					
	Wa	۱ ۷	NEL	L COI	NSTRU	JCTION		S	"	00		DESC	RIPTION		
	+		1						,	-	Grav	GRAVEL (cuttings) with r	ninor clasts o	of quartz diorite	
-			Ве	entonite	pellets a	as backfill	l					Mt. Per	sis Formation		
90			87	''-94'				-			Gray	ANDESITE.			
E								=	1						
95								3			Boring	g terminated at 94 feet on	07/08/02		
-								1			Well	completed on 07/09/02.			
100								3							
								-							
105								=							
105								=							
-								=							
110								=							
-]							
115								4							
E]							
120								-							
-								4							
125								-]							
-								-							
130								4							
[-							
135															
								1							
140								3							
-								4							
-145								-							
-								-							
150								-							
150 [7							
-]							
1 55								4							
- 1]							
160								-							
Ė								=							
165				,				-]							
-								=							
		or T	(CT)												
	ampi 	er Type 2" OD			Sampler	(SPT)	П	No Re	coverv		М	- Moisture		Logged by:	JAH
	П				Sampler			Ring S			Ā	Water Level (3/17/03)		Approved by:	JAH
	₽ TI	Grab S			campier	(D & IVI)				Sample	Ā	Water Level at time of d	rilling (ATD)	Approved by:	
		5.45	- Lipit	_				Chelby	i abe	Janpie	_	Trater Level at tille of 0	ming (ATD)		

Asso	ciat	ed Eart	h Scienc	ces, Inc.			Geo	logi	c & N	/lonit	oring Well Co	nstruct	ion Log	
				0			oject Nu G9931	mber			Well Number MW-2a		Sheet	
Projec			Snogua	Imie Be	drock N			ZA			Location	King Co	1 of 2 ounty, WA	
Eleva	tion (Top of W	ell Casing	g) <u>625.7</u>	1		.9				Surface Elevation (ft) <u>N/A</u>	•	
Drilling	g/Eq	uipment		Aquat	ech W	ell D	rilling	and P	umps /	Air Ro	Date Start/Finish otaryHole Diameter (in)	07/09/0 6	2,07/11/02	
Hamn	T	Veight/Dr	ор	N/A										
£ (Water Level							/s	hic bol					
Depth (ft)	ater l						s	Blows/ 6"	Graphic Symbol					
	×	W	ELL CO	NSTRU	CTION	l	Ť				DESC	RIPTION		
-				andoned w	rith					Surfa	ce material: dark brown S	AND.		
Ē			bentonite	e 0-139']				Vashon Reces	sional Delta	Deposits	
- 5							-							
E							3							
- 10							6 5			_Light	brown, fine to medium SA	ND, little gra	vel, little coarse	sand
-							-			Drillin Dark	g adding small amount of brown, SANDY GRAVEL.	water.		
- 15							103				gray and green GRAVEL		wn sand.	
-							-							
20							1975			Brown	n to gray GRAVEL with tra	ce sand, abi	undant cuttings.	
ļ.							-				es to SAND.			
25							- 65			Damo	, brown, fine to medium S	AND.		
-											,,			
- 30							- 65							
-							-				- 1200 1 - 1 1 - 1 - 7			
- 35							- 105				er drilling - losing air into fonts, fine to medium SAND w		_	
-										Biowi	i, inic to inculant oalvo vi	iti iew coare	oc sand, iew gra	voi.
40							- 65			Brown	n, fine to coarse SAND, litt	le gravel		
-										Biowi	i, into to coarse ozivo, in	ie graver.		
45							- 65			Brown	n, SANDY GRAVEL, trace			
-							=			Biowi	i, onivor orvice, lace	Siit.		
- 50							- 6%			As ab	OVA			
-							1				ase in silt content.			
- - 55	Ţ						- 6%			Brown	n, SANDY GRAVEL with s	omo silt		
E							Ĭ			Color	change to gray, increase	n silt conten	t.	
60							400			Color	change to brownish gray.			
E										Gray	to brown-gray, SILTY, GR	AVELLY SA	ND.	
- - 65							- 400			Descue	CILTY fine to modition C	AND with an	1	
E										At 66'	n, SILTY fine to medium S , thin layers of gray SILT i	nterbedded v	avei. with brown, fine t	to
- 70							-			At 68'	m SAND, trace gravel. , layer of brown-gray, med	ium to coars	e SAND with tra	ice
E							-			gravel	er-andesite ~72'-73'			
759/03							-			Color	change to green-gray.	- 0415	194	
							- 17				GRAVEL with fine to coars 7', gray-brown color, abune			
180 			147-11- 1				-			At ~79	9', color change to brown.		graver clasis.	
BORI			Well abai bentonite	ndoned wi 0-139'	th		- 12			Brown	n-gray, SANDY GRAVEL, change to gray.	trace silt.		
GP.										Increa	se in silt content 82'-83'.			
(4)	_	er Type ((OD=)									
	_			Sampler (No Red	,			- Moisture		Logged by:	JAH/LBK
S .	_			Sampler ((D & M)		Ring S			Ā	Water Level ()		Approved by:	
\$	*	Grab Sar	пріе				Shelby	Tube S	sample	Ā	Water Level at time of d	rilling (ATD)		

Asso	ociate	ed Ear	rth Science	es, Inc.		Geo	logi	c & N	/loni	toring Well Cor	structi	ion Log	
			**			oject Nur				Well Number MW-2a		Sheet 2 of 2	
Projec	ct Nar	ne	Snoquali	mie Bedrocl						Location	Kina Co	ounty, WA	
Elevat	tion (T	Top of \ I Eleva	Well Casing)	625.71						Surface Elevation (ft) Date Start/Finish	N/A		
Drilling	g/Equ	ipment	t	Aquatech \	Well D	Orilling a	and P	umps /	Air R	otaryHole Diameter (in)	6	2,07/11/02	
Hamm	T T	eight/D	гор	N/A				T	T				
Depth (ft)	Water Level						/S/	Graphic Symbol					
De	ater		/ELL 001			s	Blows/ 6"	Grap Sym					
	Š	V	ELL CON	ISTRUCTIO	N	S				DESC	RIPTION		
-						400			Gray	, SANDY GRAVEL with few	/ silt.		
Ē						1			A+ 07	Mt. Pers	is Formatio	n	
- 90						· 100				", driller notes edge of bedr ANDESITE (cuttings).	OCK.		
F									-	, , ,			
95						1973							
-						-							
100						-			Grav	to green ANDESITE.			
-									Olay	to groon ANDLOTTE.			
105						- 63			Drille	r noted a bit softer at ~104.	5'; hard agai	in at ~105'.	
-													
110						- 675							
						Ĭ			Drille	r notes looser at ~111'.			
- -115						-							
									Slowe	er drilling, smaller cuttings a	at ~117'		
- -120			Mall above	dd706		-							
			bentonite (doned with 0-139'		-			Gray	to green ANDESITE.			
-125						-							
-						- 17							
130						1							
-						- 103							
135						-							
.						- 65							
140		被暴倒				1			Rorino	terminated at 139 feet on	07/44/09/	· o.	
-]			Domig	terrimated at 100 leer of	Quart 1202:		
145						1							
145]							
						4							
150]							
.													
155]							
						1							
160]							
]							
165						7							
			~			3							
160 165 Sar	mpler	Type ((ST):										
	_			Sampler (SPT)		No Rec				- Moisture		Logged by:	JAH/LBI
I	3" OD Split Spoon Sampler (D & M)			1)	Ring Sa			Ā	Water Level ()		Approved by:		
6	y G	Grab Sa	mple		**************************************	Shelby	Tube S	ample	Ā	Water Level at time of dri	lling (ATD)		

Asso	ociate	ed Ear	rth Science	es, Inc.		Geo	logi	c & N	/lonit	toring Well Co	nstruct	ion Log	
			**			oject Nur G9931	nber			Well Number MW-2b		Sheet 1 of 4	
Projec			Snoquali	mie Bedrock						Location	King Co	ounty, WA	
		op of \ I Eleva	Well Casing) ation	625.71						Surface Elevation (ft Date Start/Finish		2,07/23/02	
Drilling Hamm				Aquatech W N/A	/ell D	rilling a	and P	umps /	Air Ro	otaryHole Diameter (in)		2,01120102	
									Т				
Depth (ft)	Water Level						Blows/ 6"	Graphic Symbol					
	Vate	V	VELL CON	ISTRUCTIO	N	S	Bio	S S		DESC	RIPTION		
	>					'							
Ė				ter bentonite eal (bentonite qu	iick	4			Surfa	ce material: Dark brown, Vashon Reces		Donosite	
- 5				o' and bentonite 197.5') 0-97.5'		3			Driller	r adding water throughout.		Deposits	
				, , , , , , , , , , , ,		1			No Re	ecovery			
- 10						-							
- 10			6" diamete +2'-97.5'	er steel casing		- 7			Brown	n-gray, GRAVELLY mediu	m to coarse	SAND, little cob	bles.
15						1							
- 10						- 5			B <u>row</u> r Driller	n <u>, GRAVELLY fine to coar</u> r notes material is softer a	se SAND. t 16', possib	ly finer sand.	
20						3						•	
25						100				n, GRAVELLY fine to coar		ace cuttings.	
-						100			Brown	n, fine to medium SAND, I	ittle gravel.		
30						1							
- 00						- 152			Brown	n, fine to medium SAND, t	race gravel.		
35						1							
- 00						- 1							
-40						3							
- 10						-			Poor	recovery - brown, fine to m	nedium SAN	D, trace gravel,	silt.
- - 45						100%			Brown	n, fine to medium SAND, t	race silt.		
- 45						- 675			Brown	n, fine to medium SAND, t	race gravel,	silt.	
50						-							
- 50						- 605				n, fine to medium SAND w	•		
- - 55						-			Color	change to gray, silt conter	nt increases.		
- 55						- 65			Gray,	SILTY fine SAND with littl	e gravel.		
	Ā					4							
- 60						***							
-						4							
65						67 5							
-						-							
70						62			Gray,	SILTY fine SAND/SANDY silt in cuttings).	SILT with li	ttle gravel (clasts	s of gray,
-						-			At ~71	1', slow drilling - increase i	n gravel con	tent.	/
- 75						**			Gray,	SILTY, SANDY GRAVEL. b', color change to gray-brown	OWD		
									Water	discharge at casing switch	:h - gray-bro	wn.	
- 80				er bentonite al (bentonite qui	ck	©			Gray t	drilling. to gray-brown, SANDY GF	RAVEL with o	cobbles.	
				and bentonite qui	CK				At 82',	, becoming gray.			
Sai	mpler	Туре	(ST):										
	2	" OD S	Split Spoon S	Sampler (SPT)		No Rec	overy			- Moisture		Logged by:	JAH/RNS
	_			Sampler (D & M)		Ring Sa	mple		Ā	Water Level (3/17/03)		Approved by:	
- 75 - 80 San	<u>у</u> С	rab Sa	ample			Shelby	Tube S	ample	Ā	Water Level at time of di	rilling (ATD)		

Asso	cia	ted Ear	rth Sciences, Inc.	Geologic	c & N	Ionitoring Well Con	struction Log
	C			Project Number KG99312A		Well Number MW-2b	Sheet 2 of 4
Projec	t Na	me	Snoqualmie Bedrock M			Location	King County, WA
		(Top of Vel Eleva	Well Casing) 625.71			Surface Elevation (ft) Date Start/Finish	N/A 07/18/02,07/23/02
Drilling	/Eq	uipment Veight/E	Aquatech We	ell Drilling and Pu	ımps /	Air RotaryHole Diameter (in)	U1716/02,01723/02
паппп		Veigniz	orop <u>IN/A</u>				
Depth (ft)	Water Level			/SN	Graphic Symbol		
De	ater	١,,	VELL CONSTRUCTION	S Blows/	Gra Syn	DECCE	NOTION
	>	V	VELL CONSTRUCTION	T		DESCR	RIPTION
-			chips 95'-97.5') 0-97.5'	•		Gray GRAVEL with little medium	to coarse sand (mainly andesite,
E]		trace conglomerate, plutonic, san Mt. Persi	s Formation
- 90	_		6" diameter steel casing	5		Driller notes bedrock at ~88'. Gray to green ANDESITE, trace	orange, white clasts.
E	$\bar{\Delta}$		+2'-97.5']			
- 95				405			
E			Drilling openhole into]			
100			bedrock 97.5'-310'				
-				6 5		Gray to green ANDESITE.	
105				185			
-							
110				75			
-							
115				- - -			
-				-			
120							
				ī		5	
125				- 62		Driller notes slightly harder at ~12	23' for thin zone.
130				- -		Driller notes slightly harder from -	~129' to ~135'.
E							
- -135				-			
E						Driller notes softer from 135' to 13	39'.
- -140	•					Driller notes slightly harder.	
	=			Š		At 141', driller notes fractures; sm (estimated <1 gpm by driller).	nall amount of water encountered
- -145	-			-			
				-		As above, but wet.	
150				-		Driller notes harder at ~148'.	
- 50				- 102		As above, but damp.	at ~150's naccible fractions
155				1		Driller notes soft spot - thin zone	at = 132 , possible fracture.
- 50				- 15			
160				1			
-			Drilling openhole into bedrock 97.5'-310'	- 75		Gray to green ANDESITE.	
165				4			
-165 - -				- 175		At ~166', driller adding water.	
-							
_	_	er Type		_			
			Split Spoon Sampler (SPT)	No Recovery		M - Moisture	Logged by: JAH/RNS
			Split Spoon Sampler (D & M)	Ring Sample			Approved by:
	7	Grab S	ample	Shelby Tube S	ample	Water Level at time of dril	ling (ATD)

Light gray to dark gray ANDESITE - substantial decrease in clay content. Sampler Type (ST):	Asso	cia	ted Ea	rth Science	es, Inc.		Geo	ogi	c & N	/lonit	orina Well Co	onstruct	ion Loa	
Project Name Snoqualmie Bedrock Mining Leasabor Elevation (To you Will Clasmy) 625.71 Surface Bevolton (the Will C					2		oject Nun	nber 2 A						
Well construction Aguatech Well Drilling and Pumps / Air RotaryHole Diameter (in) OZ/18/02_07/23/02		t Na	ame	Snoqual	mie Bedrock I							King Co		
Drilling Deutsche Weight Drop Aguatech Weil Drilling and Pumps / Air RotaryHole Diameter (n) N/A WELL CONSTRUCTION Signature Driller notes looser from -173' to 180'. Harder drilling from 180'-205'. Greenish gray ANDESITE, minor sulfides. Creenish gray ANDESITE, minor sulfides. As above; minor calcite. Greenish gray ANDESITE. As above - minor pyrite (disseminated). Greenish gray ANDESITE. Drilling openhole into bedrock 87.3'-310' Drilling openhole into bedrock 87.3'-310' Sampler Type (ST): Sampler Type (ST) 625.71								2 07/23/02	
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Sampler Type (ST): 230 Sampler Type (ST): 231 Sampler Type (ST): 232 Sampler Type (ST): 233 Sampler Type (ST): 244 Sampler Type (ST): 254 Sampler Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/RNS Sampler Spoon Sampler (D & M) Ring Sample Water Level (3/17/03) Approved by:	-						-							
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Drilling openhole into bedrock 97.5'-310' 245 250 Drilling openhole into bedrock 97.5'-310' Sampler Type (ST): Drilling openhole into bedrock 97.5'-310' Drilling openhole into bedrock 97.5'-310' Sampler Type (ST): Drilling openhole into bedrock 97.5'-310' Drilling openhole into bedrock 97.5'-310' Sampler Type (ST): Drilling openhole into bedrock 97.	F									easier	than above. Chlorite of	n microfracture	es, trace sulfides	s on
245	240						- 25			236'-2 clays.	40' - softer drilling, grou			
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Light gray to dark gray ANDESITE - substantial decrease in clay content. Sampler Type (ST): 2" OD Split Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/RNS 3" OD Split Spoon Sampler (D & M) Ring Sample Water Level (3/17/03) Approved by:							· 625			At 243 Green	r, alteration - clays. ish gray ANDESITE with	h clays; subro	unded andesitic	grains.
[] 3" OD Split Spoon Sampler (D & M)	250						1							
[] 3" OD Split Spoon Sampler (D & M)	250						- 675			Light o	gray to dark gray ANDE	SITE - substar	ntial decrease in	clay
[] 3" OD Split Spoon Sampler (D & M)							-							
[] 3" OD Split Spoon Sampler (D & M)	Sa				Complex (CDT)		No Dec				Maintenan			
The state of the s		_								-				
	[L	_			Jampier (D & IVI)	7			ample	_		drilling (ATD)	Approved by:	

Ass	ocia	ted Ea	rth Scie	nces, Inc.			Geo	ologi	ic & I	/loni	toring Well Con	struct	ion Log	
						Pro	oject Nu G993	ımber			Well Number MW-2b		Sheet 4 of 4	· ·
Proje			Snoqu Well Cas	ualmie Be	drock I					L	Location Surface Elevation (ft)	King Co	ounty, WA	
Wate	r Le	vel Eleva quipmen	ation			ell D	rilling	and F	Dumne	Δir R	Date Start/Finish otaryHole Diameter (in)		2,07/23/02	
	mer '	Weight/[N/A			Tilling	T T	т трз		Ctary lole Diameter (III)			
Depth	Water Level							/S/	phic					
Del	ater	\ \ \ _V	VELL C	ONSTRU	CTION		5	Blows/ 6"	Graphic Symbol		DESCI	ואסדוסגו		
	>	V	VLLL C	ONSTRU	CHON		1				DESCI	RIPTION		
-							- 2			At 25 altered	55', clay content increases a ed to light gray. Clay is ligh s also present (andesite).	gain; zone t gray. Una	of alteration - vo altered greenish	lcanics gray
-2 60							-			At 26	60', zone of light gray CLAY unics, which range in color for	with fragmerom light ble	ents of highly alt	ered enish
265	_						-			gray. At 26 Drille	Clasts subrounded. 63', dark greenish gray AND or notes small amount of wa to dark gray ANDESITE.			
270							- 60			Dorle	brown (bonnetitie interfless (h((O)		
-							-			Dark	brown (hematitic interflow [gray tuff. '2', dark gray-brown ANDES			
275							-				gray-brown ANDESITIC tuf			
- -280							1							
200							- 100			Dark	brown to gray (andesitic?)	uff with gre	en phenocrysts.	
285							- 63			Dark	greenish gray ANDESITE.			
-							1	`			g			
-290 -							- 0							
- 295							-				er driller at 292'.			
							1				gray (slightly greenish) AN[er drilling	DESITE.		
300							- 5			Dark	blackish gray ANDESITE w	ith minor lig	ght blue, soft, fria	able vein
305							-			Hard	nents (talc?). drilling.			
- 303							- 65							
310							- 67			Boring	g terminated at 310 feet on	07/23/02		
,										Domi	, torrimated at 0 10 root on	01120102		
-315 -							-							
- 320							-							
325							-							
-														
330							-							
335							-							
-		,]							
Sa	ampl	er Type	(ST):											
				on Sampler (_	No Re				- Moisture		Logged by:	JAH/RNS
	 	3" OD S Grab Sa		on Sampler (D & M)		Ring S		Sample	Ā	Water Level (3/17/03) Water Level at time of dri	lling (ATD)	Approved by:	
335 Sá		Jian 3	ample			1	Sileiby	i ube s	Jample	-	water Level at time of dri	iiilig (ATD)		

Associa	ated Earth Sciences, Inc.	Ged	ologi	c & N	Ionitoring Well Con	
		Project No KG993			Well Number MW-3	Sheet 1 of 4
Project Na					Location	King County, WA
	(Top of Well Casing) 565.02 vel Elevation				Surface Elevation (ft) Date Start/Finish	N/A
Drilling/Eq		h Well Drilling	and P	umps /	Air RotaryHole Diameter (in)	07/12/02,07/17/02 6
h				흔등		
Depth (ft) Water Level			Blows/ 6"	Graphic Symbol		
Wat	WELL CONSTRUC			0 0	DESCF	RIPTION
	10" diameter bentonii surface seal (perma	e -			Surface material: Brown SAND,	GRAVEL, and COBBLES (Fill). ional Delta Deposits
- 5	plug/bentonite pellets 0-17.5')				
		<u>*</u> 7.	<u>\$</u>		Damp, brown, fine to medium SA trace silt. Driller adding water.	AND with gravel and coarse sand,
- 10		+	1		Brown, SANDY GRAVEL with co	obbles, difficult drilling.
- 15		-	5		Cobble zone from 10.5'-14'. At ~11', 10" casing jammed betweet drill open hole with 10" drill bit to Brown GRAVEL with cobbles, ab	veen cobbles; cutting casing - will 18' for surface seal. bundant cuttings.
	6" diameter steel cas	ing -				
20	+2'-301.5'	-			Brown, GRAVELLY fine to coars	e SAND with little cobbles.
- 25			5		Brown, fine to coarse SAND with	trace gravel
		Ī			Slight increase in gravel content.	
30		 en			Driller adding water.	
		1			Gray-brown, medium to coarse S Only occasional cobbles below 3	•
35		-				
					Brown, fine to coarse SAND with losing air into formation).	gravel (poor recovery of gravel -
40		10			Gray-brown, medium to coarse S	SAND with little gravel.
45		-			Gray-brown, GRAVELLY mediun	n to coarse SAND.
50		- - -				
EE		1				
55						
_		-				
60		- 20			Brown, medium to coarse SAND	with little gravel.
]			Increase in gravel from ~63'-64'.	
65		-				
]				
70		-0				
		1				
75		<u> </u>			Brown, fine to coarse SAND with	little gravel.
		1				-
80		700			Brown, GRAVELLY fine to coarse	e SAND.
		-			Difficult drilling from 81'-90'.	
Sample	ler Type (ST):	1				
-	2" OD Split Spoon Sampler (SF	PT) No Re	covery		M - Moisture	Logged by: JAH/S
	3" OD Split Spoon Sampler (D	& M) Ring S	ample			Approved by:
~	Grab Sample	Shelby	/ Tube S	ample	▼ Water Level at time of dril	ling (ATD)

Project Number KG99312A MW-3 King County, WA 2 of 4 King County, WA	Asso	ciat	ed Ea	arth S	ciences, Ir	nc.	(Geo	logi	c & N	/loni	toring Well (Construct	ion Log	
Project Name Snagualmis Bedrock Mining Society S			©		₹ E		Proj	ect Nur	mber			Well Number		Sheet	
Water Level Elevation Data Start/Finish Aquatech Well Drilling and Pumps/Air RotaryHole Diameter (in) Aquatech Well Pumps/Air RotaryHole Diameter (in) Aquatech				Sno	oqualmie	Bedrock I									
Adjusted Well Drilling and Pumps / Air RotaryHole Diameter (in) 6	Water	Lev	el Elev	ation								Date Start/Finis	h 07/12/0	2.07/17/02	
No Recovery - Iosing air/water into formation. No Recovery - Iosing air/water into formation. Solution of the standard of th					<u>Aq</u> N//	uatech W A	ell Dr	illing a	and P	umps /	Air Ro	otaryHole Diameter ((in) <u>6</u>	,	
No Recovery - Iosing air/water into formation. No Recovery - Iosing air/water into formation. Solution of the standard of th	£	evel							>	<u>ة</u> ا					
No Recovery - Iosing air/water into formation. No Recovery - Iosing air/water into formation. Solution of the standard of th	Dep(ter L							llows 6"	srapt symb					
6" diameter steel casing +2"-301.5" Gray-brown, medium to coarse SAND with little gravel. Gray-brown, GRAVELLY fine to coarse SAND. As above with few silt. Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.		Wa	١	NELL	CONST	RUCTION	,	T	Ш	000		DE	ESCRIPTION		
o diameter steet casing +2'-301.5' 15 16 17 17 17 18 18 19 19 19 19 19 19 19 19	-										No R	ecovery - losing air/wa	ater into formatio	n.	
o diameter steet casing +2'-301.5' 15 16 17 17 17 18 18 19 19 19 19 19 19 19 19	90							3							
Gray-brown, GRAVELLY fine to coarse SAND. As above with few silt. Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL.	- 90					eel casing		- Inc			Crav	harring and distant to an	one CAND with	little energi	
Gray-brown, GRAVELLY fine to coarse SAND. As above with few silt. Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL.	95														
As above with few silt. Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.	-							- 5			Gray-	-brown, GRAVELLY fi	ne to coarse SAI	ND.	
Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL.	100							-			A h	14 - 14			
Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.								1			As at	bove with few siit.			
Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.	105							-							
Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.	-							-			Boug	b alou drilling drilla	r notos sobble ses	no from 100! 11	21
Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Increase in fine to medium sand content.	110							- 675						ne from 108-11.	3.
Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	Ė							3						ole standing one	n hetter
Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	115							· **			l .			ole standing ope	ii bellei.
Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.								3							
Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVEL/GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	-120 -							***			Gray-	-brown GRAVEL with	medium to coars	e sand.	
Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	-							3			Poor	recovery.			
Gray-brown, SANDY GRAVEL/GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	H25							- en-			Drille	r adding foam to impro	ove recovery.		
Gray-brown, SANDY GRAVEL/GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	120							- 11			From	~128' to ~137', no red	covery.		
Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	-]							
Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	- -135							4							
Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	- 100							- (%)			Grav-	brown SANDY GRAV	/EL/GDAV/ELLV	SAND	
145 150 Increase in fine to medium sand content.	- -140							-						OAND.	
150 Increase in fine to medium sand content.											Gray-	brown, SANDY GRAV	/EL.		
Increase in fine to medium sand content.	145							- ene							
Increase in fine to medium sand content.	-														
455	150							- 65							
											Increa	ase in fine to medium	sand content.		
Gray-brown, GRAVELLY medium to coarse SAND. Gray-brown, GRAVELLY medium to coarse SAND.	155							**							
Gray-brown, GRAVELLY medium to coarse SAND. Gray-brown, GRAVELLY medium to coarse SAND. Gray-brown, GRAVELLY medium to coarse SAND. Sampler Type (ST): OD Split Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/SS To D Split Spoon Sampler (D & M) Ring Sample Water Level (3/17/03) Approved by: Water Level (3/17/03) Water Level (3/17/03)								1							
Gray-brown, GRAVELLY medium to coarse SAND. Sampler Type (ST): 2" OD Split Spoon Sampler (SPT) No Recovery 3" OD Split Spoon Sampler (D & M) Ring Sample Grab Sample Water Level (3/17/03) Approved by: Water Level (3/17/03) Approved by:	160 							**			Gray-	brown, GRAVELLY m	nedium to coarse	SAND.	
Sampler Type (ST): 2" OD Split Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/SS Jah/SS Jah/SS Water Level (3/17/03) Approved by: Modern Level (3/17/03) Modern Le	405]							
Sampler Type (ST): 2" OD Split Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/SS 3" OD Split Spoon Sampler (D & M) Ring Sample Water Level (3/17/03) Approved by: Water Level (3/17/03)	165							477			Gray-	brown, GRAVELLY m	edium to coarse	SAND.	
Sampler Type (ST): U 2" OD Split Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/SS The Sample Water Level (3/17/03) Approved by: Water Level (3/17/03) Approved by: Water Level (3/17/03)	-							-							
U 2" OD Split Spoon Sampler (SPT)	Sa	-	-		_			. –							
Grab Sample		_					_						0)		
	[[amnle	Ā			Approved by:	

Assoc	ciate	d Ea	arth Scienc	es, Inc.		Geo	logi	c & N	/loni	toring Well Con	structi	ion Log	
				2		oject Nui	mber			Well Number MW-3		Sheet 3 of 4	
Project	Nan	ne	Snoqua	lmie Bedrock I						Location		ounty, WA	
Elevation Water L			Well Casing) 565.02						Surface Elevation (ft) Date Start/Finish	N/A 07/12/0	2,07/17/02	
Drilling/ Hamme				Aquatech W N/A	ell D	rilling a	and P	umps /	Air R	otaryHole Diameter (in)	6		
-			-										
Depth (ft)	Water Level						Blows/ 6"	Graphic Symbol					
	Wat	١	WELL CO	NSTRUCTION	1	S T	Ф	9 %		DESCF	RIPTION		
-			6" diame +2'-301.5	ter steel casing		_ _							
175						-							
									Incre	ease in fine to medium sand	content from	m 177'-179'.	
180						-							
									Poor	recovery - slow drilling at ~1	82'.		
185						***							
						1							
190						***							
405						-							
195						- 65			Gray	-brown, GRAVELLY fine to o	coarse SAN	ID/SANDY GRA	VEL.
200						-							
-						- 5				recovery. inued slow drilling.			
205						-			Com	anded slow drilling.			
						-			Bette	er recovery and drilling speed	I faster.		
210						- -				r-brown, fine to coarse SAND		(few cuttings).	
										,		- (
215						雯			Gray	er noted sand from 214'-216'. r-brown, GRAVELLY fine to o	oarse SAN		
						1			Drille	content lost due to added wa er noted silt from ~216'-217'.	ter; possibl	e interbeds of si	ilt).
220						- P. C.			Drille	drilling - poor recovery. er noted entering clean grave y-brown, fine to coarse SAND	l at 219'.	(abundant sutt	:\
225						-			Drilli	ng very slow from 220' - ~224 ased sand, drilling/recovery	4'.	- (abundani culi	ings).
- 223						- 8			Gray	-brown, fine to coarse SAND	with grave	I (fewer cuttings	s).
230						-			Drillin	ng slower.			
						-			Gray	r-brown, fine to coarse SAND	, little grave	el (fewer cuttings	s).
235						-			Grav	-brown, fine to coarse SAND	little grave	al little eilt (nose	sible
										beds of silt).	, mue grave	on, maio one (poss	,,DIC
240						- P. P.			As al	bove, but brown.			
E						1			Drillin	ng very slow, increase in gra	vel content.		
245						- 65			Gray	-brown, GRAVELLY fine to c	oarse SAN	D (abundant cut	ttings).
050						1			Thin	layer of fine SAND and SILT			
250			6" diamet +2'-301.5'	er steel casing		- P.			Gray	-brown, GRAVELLY fine to o	oarse SAN	D, little silt (fewe	er
						- 1				ng faster, good recovery.			
Sam □			Split Spoon	Campler (CDT)	П	No De-	01/07:			Majakur			1411/00
				Sampler (SPT) Sampler (D & M)		No Rec	•		Δ	- Moisture Water Level (3/17/03)		Logged by: Approved by:	JAH/SS
250 Sam			Sample	(= 0 (11)	***************************************	Shelby		ample	Ā		ling (ATD)	Approved by.	

Asso	cia	ted E	arth S	ciences,	, Inc.		Ge	ologi	c & N	Monitoring Well Cons	struction Log
		E		()	2		roject N KG993			Well Number MW-3	Sheet 4 of 4
Projec	t Na	ame	Sno	oqualmi	ie Bedr	ock Mini		J12/\		Location	King County, WA
Elevat			f Well (Casing) <u>5</u>	65.02					Surface Elevation (ft) Date Start/Finish	N/A
Drilling	g/Eq	uipme	nt	Ā	Aguate	ch Well [Drilling	and P	umps /	Air RotaryHole Diameter (in)	07/12/02,07/17/02 6
Hamm		//eight	/Drop	<u> </u>	N/A						
£ (Water Level							\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	hic		
Depth (ft)	terL							Blows/ 6"	Graphic Symbol		
	Wa		WELL	. CONS	TRUC	TION		S M T	0 0,	DESCR	RIPTION
	-	\vdash						7	-	Interbedding of fine SAND and SI	LT.
-							-			Driller notes possibly (perched?)	water over silt from ~250' to ~255'. I to coarse SAND with interbeds of
260	Ţ						-	喪		fine sand with silt. At ~259', brown silt clasts. No wa	
							-			Brown, coarse SAND with brown	silt and gray-brown gravel.
265							_	No.		Cray brown CDAVELLY modium	to seems CAND with fire and
E							-			Gray-brown, GRAVELLY medium and silt.	to coarse sand with fine sand
- -270							_	ato:		Brown, fine to medium SAND layer	,
							-	Ů.		silt.	gray-brown gravel and little brown
- 275							-			Interbeds of fine SAND with some	e silt and GRAVEL.
							-	<u>&</u>		Gray-brown, fine to coarse SAND	
200							-			Driller notes within water table. B	
280							-	們		Gray-brown, fine to coarse SAND	hole, possibly at top of water table. , trace gravel.
-							-				
285							-	* **		Gray-brown, fine to coarse SAND	, trace gravel, trace silt.
[▼]				
290	_						-	₹5		Measured water depth at 291.5' b ground surface.	
-	∇						-			Gray-brown, fine to coarse SAND Interbeds of fine SAND with trace	with gray-brown gravel, little silt.
295	_						-	₹ 5		As above.	
-							-				
300			К-р	acker 299	9.5'-300'		-	₹			
				diameter t inless ste]			Drilling slow - cobble zone, very li	ttle recovery from 302' - ~307'.
305			slot	width 30	0'-305'		4	ल्ह		Cray brown CBAVELLY modium	to coarse SAND/SANDY GRAVEL
				diameter to nless ste]			with some fine sand, trace gray-bi	
310				width 30			-	का		gray (abundant cuttings).	
		***	HOI	e caved 3	310-318		1			Gray-brown, fine to coarse SAND Interbeds of fine SAND and SILT	from ~310'-315'.
315		\widetilde{z}	1.(-1				3	-			
		XX.					-	T)		Gray-brown, fine to coarse SAND clasts noted. Cobble zone at 315	'.
320		~.~					1			At 318', stop drilling, pulled up cas	
- 520							-			Boring terminated at 318 feet on 0	7/17/02
205							1			Well completed on 07/18/02.	
325							-			,	
-											
330							7				
[=				
335							-				
[=				
Sa	mpl	er Tvn	e (ST):				1				
	- '		. ,	poon Sar	mpler (S	PT)	No R	ecovery		M - Moisture	Logged by: JAH/SS
	_			Spoon Sar				Sample			Approved by:
6		Grab	Sample	•		N		by Tube S	Sample	▼ Water Level at time of drill	

Associa	ated Earth Sciences, Inc.	Ged	ologi	c & N	Ionitoring Well Con	
		Project No KG993			Well Number MW-3	Sheet 1 of 4
Project Na					Location	King County, WA
	(Top of Well Casing) 565.02 vel Elevation				Surface Elevation (ft) Date Start/Finish	N/A
Drilling/Eq		h Well Drilling	and P	umps /	Air RotaryHole Diameter (in)	07/12/02,07/17/02 6
h				흔등		
Depth (ft) Water Level			Blows/ 6"	Graphic Symbol		
Wat	WELL CONSTRUC			0 0	DESCF	RIPTION
	10" diameter bentonii surface seal (perma	e -			Surface material: Brown SAND,	GRAVEL, and COBBLES (Fill). ional Delta Deposits
- 5	plug/bentonite pellets 0-17.5')				
		<u>*</u> 7.	<u>\$</u>		Damp, brown, fine to medium SA trace silt. Driller adding water.	AND with gravel and coarse sand,
- 10		+	1		Brown, SANDY GRAVEL with co	obbles, difficult drilling.
- 15		-	5		Cobble zone from 10.5'-14'. At ~11', 10" casing jammed betweet drill open hole with 10" drill bit to Brown GRAVEL with cobbles, ab	veen cobbles; cutting casing - will 18' for surface seal. bundant cuttings.
	6" diameter steel cas	ing -				
20	+2'-301.5'	-			Brown, GRAVELLY fine to coars	e SAND with little cobbles.
- 25			5		Brown, fine to coarse SAND with	trace gravel
		Ī			Slight increase in gravel content.	
30		 en			Driller adding water.	
		1			Gray-brown, medium to coarse S Only occasional cobbles below 3	•
35		-				
					Brown, fine to coarse SAND with losing air into formation).	gravel (poor recovery of gravel -
40		10			Gray-brown, medium to coarse S	SAND with little gravel.
45		-			Gray-brown, GRAVELLY mediun	n to coarse SAND.
50		- - -				
EE		1				
55						
_		-				
60		- 20			Brown, medium to coarse SAND	with little gravel.
]			Increase in gravel from ~63'-64'.	
65		-				
]				
70		-0				
		1				
75		<u> </u>			Brown, fine to coarse SAND with	little gravel.
		1				-
80		700			Brown, GRAVELLY fine to coarse	e SAND.
		-			Difficult drilling from 81'-90'.	
Sample	ler Type (ST):	1				
-	2" OD Split Spoon Sampler (SF	PT) No Re	covery		M - Moisture	Logged by: JAH/S
	3" OD Split Spoon Sampler (D	& M) Ring S	ample			Approved by:
~	Grab Sample	Shelby	/ Tube S	ample	▼ Water Level at time of dril	ling (ATD)

Project Number KG99312A MW-3 King County, WA 2 of 4 King County, WA	Asso	ciat	ed Ea	arth S	ciences, Ir	nc.	(Geo	logi	c & N	/loni	toring Well (Construct	ion Log	
Project Name Snagualmis Bedrock Mining Society S			©		₹ E		Proj	ect Nur	mber			Well Number		Sheet	
Water Level Elevation Data Start/Finish Aquatech Well Drilling and Pumps/Air RotaryHole Diameter (in) Aquatech Well Pumps/Air RotaryHole Diameter (in) Aquatech				Sno	oqualmie	Bedrock I									
Adjusted Well Drilling and Pumps / Air RotaryHole Diameter (in) 6	Water	Lev	el Elev	ation								Date Start/Finis	h 07/12/0	2.07/17/02	
No Recovery - Iosing air/water into formation. No Recovery - Iosing air/water into formation. Solution of the standard of th					<u>Aq</u> N//	uatech W A	ell Dr	illing a	and P	umps /	Air Ro	otaryHole Diameter ((in) <u>6</u>	,	
No Recovery - Iosing air/water into formation. No Recovery - Iosing air/water into formation. Solution of the standard of th	£	evel							>	<u>ة</u> ا					
No Recovery - Iosing air/water into formation. No Recovery - Iosing air/water into formation. Solution of the standard of th	Dep(ter L							llows 6"	srapt symb					
6" diameter steel casing +2"-301.5" Gray-brown, medium to coarse SAND with little gravel. Gray-brown, GRAVELLY fine to coarse SAND. As above with few silt. Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.		Wa	١	NELL	CONST	RUCTION	,	T	Ш	000		DE	ESCRIPTION		
o diameter steet casing +2'-301.5' 15 16 17 17 17 18 18 19 19 19 19 19 19 19 19	-										No R	ecovery - losing air/wa	ater into formatio	n.	
o diameter steet casing +2'-301.5' 15 16 17 17 17 18 18 19 19 19 19 19 19 19 19	90							3							
Gray-brown, GRAVELLY fine to coarse SAND. As above with few silt. Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL.	- 90					eel casing		- Inc			Crav	harring and distant to an	one CAND with	little energi	
Gray-brown, GRAVELLY fine to coarse SAND. As above with few silt. Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL.	95														
As above with few silt. Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.	-							- 5			Gray-	-brown, GRAVELLY fi	ne to coarse SAI	ND.	
Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL.	100							-			A b	14 - 14			
Rough, slow drilling - driller notes cobble zone from 108'-113'. Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.											As at	bove with few siit.			
Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.	105							-							
Gray-brown, SANDY GRAVEL. Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELL. Increase in fine to medium sand content.	-							-			Boug	b alou drilling drilla	r notos sobble ses	no from 100! 11	21
Driller noted increase in fines below 113', hole standing open better. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Increase in fine to medium sand content.	110							- 675						ne from 108-11.	3.
Gray-brown GRAVEL with sand. Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	Ė							3						ole standing one	n hetter
Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	115							· **			l .			ole standing ope	ii bellei.
Gray-brown GRAVEL with medium to coarse sand. Poor recovery. Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.								3							
Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVEL/GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	-120 -							***			Gray-	-brown GRAVEL with	medium to coars	e sand.	
Driller adding foam to improve recovery. From ~128' to ~137', no recovery. Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	-							3			Poor	recovery.			
Gray-brown, SANDY GRAVEL/GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	H25							- en-			Drille	r adding foam to impro	ove recovery.		
Gray-brown, SANDY GRAVEL/GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	120							- 11			From	~128' to ~137', no red	covery.		
Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	-]							
Gray-brown, SANDY GRAVELLY SAND. Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	- -135							4							
Gray-brown, SANDY GRAVEL. Gray-brown, SANDY GRAVEL. Increase in fine to medium sand content.	- 100							- (%)			Grav-	brown SANDY GRAV	/EL/GDAV/ELLV	SAND	
145 150 Increase in fine to medium sand content.	- -140							-						OAND.	
150 Increase in fine to medium sand content.											Gray-	brown, SANDY GRAV	/EL.		
Increase in fine to medium sand content.	145							- ene							
Increase in fine to medium sand content.	-														
455	150							- 65							
											Increa	ase in fine to medium	sand content.		
Gray-brown, GRAVELLY medium to coarse SAND. Gray-brown, GRAVELLY medium to coarse SAND.	155							**							
Gray-brown, GRAVELLY medium to coarse SAND. Gray-brown, GRAVELLY medium to coarse SAND. Gray-brown, GRAVELLY medium to coarse SAND. Sampler Type (ST): OD Split Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/SS To D Split Spoon Sampler (D & M) Ring Sample Water Level (3/17/03) Approved by: Water Level (3/17/03) Water Level (3/17/03)								1							
Gray-brown, GRAVELLY medium to coarse SAND. Sampler Type (ST): 2" OD Split Spoon Sampler (SPT) No Recovery 3" OD Split Spoon Sampler (D & M) Ring Sample Grab Sample Water Level (3/17/03) Approved by: Water Level (3/17/03) Approved by:	160 							**			Gray-	brown, GRAVELLY m	nedium to coarse	SAND.	
Sampler Type (ST): 2" OD Split Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/SS Jah/SS Jah/SS Water Level (3/17/03) Approved by: Modern Level (3/17/03) Modern Le	405]							
Sampler Type (ST): 2" OD Split Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/SS 3" OD Split Spoon Sampler (D & M) Ring Sample Water Level (3/17/03) Approved by: Water Level (3/17/03)	165							477			Gray-	brown, GRAVELLY m	edium to coarse	SAND.	
Sampler Type (ST): U 2" OD Split Spoon Sampler (SPT) No Recovery M - Moisture Logged by: JAH/SS The Sample Water Level (3/17/03) Approved by: Water Level (3/17/03) Approved by: Water Level (3/17/03)	-							-							
U 2" OD Split Spoon Sampler (SPT)	Sa	-	-		_			. –							
Grab Sample		_					_						0)		
	[[iler (D & M)				amnle	Ā			Approved by:	

Assoc	ciate	d Ea	arth Scienc	es, Inc.		Geo	logi	c & N	/loni	toring Well Con	structi	ion Log	
				2		oject Nui	mber			Well Number MW-3		Sheet 3 of 4	
Project	Nan	ne	Snoqua	lmie Bedrock I						Location		ounty, WA	
Elevation Water L			Well Casing) 565.02						Surface Elevation (ft) Date Start/Finish	N/A 07/12/0	2,07/17/02	
Drilling/ Hamme				Aquatech W N/A	ell D	rilling a	and P	umps /	Air R	otaryHole Diameter (in)	6		
-			-										
Depth (ft)	Water Level						Blows/ 6"	Graphic Symbol					
	Wat	١	WELL CO	NSTRUCTION	1	S T	Ф	9 %		DESCF	RIPTION		
-			6" diame +2'-301.5	ter steel casing		_ _							
175						-							
									Incre	ease in fine to medium sand	content from	m 177'-179'.	
180						-							
									Poor	recovery - slow drilling at ~1	82'.		
185						***							
						1							
190						**							
405						-							
195						- 65			Gray	-brown, GRAVELLY fine to o	coarse SAN	ID/SANDY GRA	VEL.
200						-							
-						- 5				recovery. inued slow drilling.			
205						-			Com	anded slow drilling.			
						-			Bette	er recovery and drilling speed	I faster.		
210						- -				r-brown, fine to coarse SAND		(few cuttings).	
										,		- (
215						雯			Gray	er noted sand from 214'-216'. r-brown, GRAVELLY fine to o	oarse SAN		
						1			Drille	content lost due to added wa er noted silt from ~216'-217'.	ter; possibl	e interbeds of si	ilt).
220						- FEET			Drille	drilling - poor recovery. er noted entering clean grave y-brown, fine to coarse SAND	l at 219'.	(abundant sutt	:\
225						-			Drilli	ng very slow from 220' - ~224 ased sand, drilling/recovery	4'.	- (abundani culi	ings).
- 223						- 8			Gray	-brown, fine to coarse SAND	with grave	I (fewer cuttings	s).
230						-			Drillin	ng slower.			
						-			Gray	r-brown, fine to coarse SAND	, little grave	el (fewer cuttings	s).
235						-			Grav	-brown, fine to coarse SAND	little grave	al little eilt (nose	sible
										beds of silt).	, mue grave	on, maio one (poss	,,DIC
240						- P. P.			As al	bove, but brown.			
E						1			Drillin	ng very slow, increase in gra	vel content.		
245						- 65			Gray	-brown, GRAVELLY fine to c	oarse SAN	D (abundant cut	ttings).
050						1			Thin	layer of fine SAND and SILT			
250			6" diamet +2'-301.5'	er steel casing		- P.			Gray	-brown, GRAVELLY fine to o	oarse SAN	D, little silt (fewe	er
						- 1				ng faster, good recovery.			
Sam □			Split Spoon	Campler (CDT)	П	No De-	01/07:			Majakur			1411/00
				Sampler (SPT) Sampler (D & M)		No Rec	•		Δ	- Moisture Water Level (3/17/03)		Logged by: Approved by:	JAH/SS
250 Sam			Sample	(= 0 (11)	***************************************	Shelby		ample	Ā		ling (ATD)	Approved by.	

Asso	cia	ted E	arth S	ciences,	, Inc.		Ge	ologi	c & N	Monitoring Well Cons	struction Log
		E		()	2		roject N KG993			Well Number MW-3	Sheet 4 of 4
Projec	t Na	ame	Sno	oqualmi	ie Bedr	ock Mini		J12/\		Location	King County, WA
Elevat			f Well (Casing) <u>5</u>	65.02					Surface Elevation (ft) Date Start/Finish	N/A
Drilling	g/Eq	uipme	nt	Ā	Aguate	ch Well [Drilling	and P	umps /	Air RotaryHole Diameter (in)	07/12/02,07/17/02 6
Hamm		//eight	/Drop	<u> </u>	N/A						
£ (Water Level							\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	hic		
Depth (ft)	terL							Blows/ 6"	Graphic Symbol		
	Wa		WELL	. CONS	TRUC	TION		S M T	0 0,	DESCR	RIPTION
	-	\vdash						7	-	Interbedding of fine SAND and SI	LT.
-							-			Driller notes possibly (perched?)	water over silt from ~250' to ~255'. I to coarse SAND with interbeds of
260	Ţ						-	喪		fine sand with silt. At ~259', brown silt clasts. No wa	
							-			Brown, coarse SAND with brown	silt and gray-brown gravel.
265							_	No.		Cray brown CDAVELLY modium	to seems CAND with fire and
E							-			Gray-brown, GRAVELLY medium and silt.	to coarse sand with fine sand
- -270							_	ato:		Brown, fine to medium SAND layer	,
							-	Ů.		silt.	gray-brown gravel and little brown
- 275							-			Interbeds of fine SAND with some	e silt and GRAVEL.
							-	<u>&</u>		Gray-brown, fine to coarse SAND	
200							-			Driller notes within water table. B	
280							-	們		Gray-brown, fine to coarse SAND	hole, possibly at top of water table. , trace gravel.
-							-				
285							-	* **		Gray-brown, fine to coarse SAND	, trace gravel, trace silt.
[▼]				
290	_						-	₹5		Measured water depth at 291.5' b ground surface.	
-	∇						-			Gray-brown, fine to coarse SAND Interbeds of fine SAND with trace	with gray-brown gravel, little silt.
295	_						-	₹ 5		As above.	
-							-				
300			K-p	acker 299	9.5'-300'		-	₹			
				diameter t inless ste]			Drilling slow - cobble zone, very li	ttle recovery from 302' - ~307'.
305			slot	width 30	0'-305'		4	ल्ह		Cray brown CBAVELLY modium	to coarse SAND/SANDY GRAVEL
				diameter to nless ste]			with some fine sand, trace gray-bi	
310				width 30			-	का		gray (abundant cuttings).	
		***	HOI	e caved 3	310-318		1			Gray-brown, fine to coarse SAND Interbeds of fine SAND and SILT	from ~310'-315'.
315		\widetilde{z}	1.(-1				3	-			
		XX.					-	T)		Gray-brown, fine to coarse SAND clasts noted. Cobble zone at 315	'.
320		~.~					1			At 318', stop drilling, pulled up cas	
- 520							-			Boring terminated at 318 feet on 0	7/17/02
205							1			Well completed on 07/18/02.	
325							-			,	
-											
330							7				
[=				
335							-				
[=				
Sa	mpl	er Tvn	e (ST):				1				
	- '		. ,	poon Sar	mpler (S	PT)	No R	ecovery		M - Moisture	Logged by: JAH/SS
	_			Spoon Sar				Sample			Approved by:
6		Grab	Sample	•		N		by Tube S	Sample	▼ Water Level at time of drill	

Asso	ciat		arth Sciences, Inc.		Geol	ogic	& IV	lonitoring Well Con	struction Log
	. C	©			oject Num (H02005			Well Number -City of Snoqualmie No. 1	Sheet 1 of 7
Project	t Na	me	Snogualmie Ridg					Location	Snogualmie, WA
			of Well Casing) 421.82 evation 374'					Surface Elevation (ft) Date Start/Finish	420'
rilling	/Eq	uipme	ent Cable T	ool				Hole Diameter (in)	April 1973,April 1973 Variable
amm		veign	t/Drop Adapted	d from Dr	iller's L	og			
Depth (ft)	Water Level					/s/	Graphic Symbol		
De (f	ater		WELL CONSTRUC	TION	s	Blows/ 6"	Grag Syn	DECC	DIDTION
	>		WELL CONSTRUC	HON	T			DESCR	RIPTION
			16" diameter well cas 0-98'	sing				Recent Snoqua Brown CLAY.	lmie River Deposits
			0-96					BIOWII OLAT.	
5									
10					-				
					-				
15									
					1				
20					-			Vashon Recessional L	ake Snoqualmie Deposits
					-			Blue SAND with silt.	
25					-]				
					-				
30									
					1				
35					-				
					-				
40					1				
]				
45									
	Ā								
50					4	ŀ		Blue, SILTY fine SAND.	
					1			=.30, 0.2. 7 mio 07 mio.	
55					-				
					1				
60					41				
					1				
65					4				
					1				
70					-				
					1				
75					4				
					1				
	impl		pe (ST): D Split Spoon Sampler (S	:DT\	No Rec	0,105,		M - Moisture	l agged b
l I	П		D Split Spoon Sampler (S D Split Spoon Sampler (D		Ring Sa	_		\overline{Y} Water Level (08/14/01)	Logged by: Approved by:
Ĺ	<u>"</u>		Sample		Shelby		Sample	■ Water Level at time of dri	

Associ	iate	ed Ea	rth Sciences, Inc.	Geologic &	Monitoring Well Con	struction Log
				Project Number KH02005C	Well Number -City of Snoqualmie No. 1	Sheet 2 of 7
Project I			Snoqualmie Ridge Nor		Location	Snoqualmie, WA
Elevatio	n (T	Top of	Well Casing) 421.82'	THE VIOLET TO IG	Surface Elevation (ft)	420'
Water L Drilling/E					Date Start/Finish Hole Diameter (in)	April 1973,April 1973 Variable
Hamme			Orop Adapted from	Driller's Log	Tiole Diameter (iii)	Variable
	<u>e</u>			0.5		
Depth (ft)	Water Level			Blows/6" Graphic Symbol		
	Vate	٧	VELL CONSTRUCTION	S B S	DESCR	RIPTION
	>					
	ŀ					
85						
90			401 diameter well assists		Blue, SILTY fine SAND.	
-			16" diameter well casing 0-98'		Blue, SILTY line SAND.	
-					1	
95						
		11	12" diameter well casing			
100			98'-435'		Blue SILT.	
ļ				-		
105				_		
F						
110						
110						
115						
<u> </u>				-		
120				-		
125						
123				-		
				-	NAME OF THE PARTY	
130				-	1	
135		and department of the second				
140				<u> </u>	<u> </u>	
170					Blue, SILTY CLAY.	
145				7 /////		
150				-]		
155				-		
155 155 San	mple	er Type	e (ST):	1/1///	NATION AND ADDRESS OF THE PARTY	
	-		Split Spoon Sampler (SPT)	No Recovery	M - Moisture	Logged by:
		3" OD	Split Spoon Sampler (D & M)	Ring Sample		Approved by:
	}	Grab S	Sample	Shelby Tube Sample	Water Level at time of dri	lling (ATD)

Asso	ciate	ed Ear	rth Sciences, Inc.		G	ieo	logi	c & IV	lonita	oring Well Con	struction	on Loa
733	-									oring Well Con Well Number		
					KH0				-City	of Snoqualmie No. 1	0	3 of 7
Projec Elevat	t Nai ion (me Top of '	Snoqualmie Rid Well Casing) 421.82	ge Norti	n vve	<u> </u>	eia			Location Surface Elevation (ft)	Snoqual 420'	
Water	Leve	el Éleva	ation 374'							Date Start/Finish Hole Diameter (in)	April 197	73,April 1973
		ipment eight/E	Drop Adapte	ed from	Drille	r's L	.og			Hole Diameter (iii)	variable	
	<u>@</u>							0 =			****	
Depth (ft)	Lev Lev						Blows/ 6"	Graphic Symbol				
۵	Water Level	V	VELL CONSTRUC	CTION		S	Big	Sy		DESCE	RIPTION	
	5	•		.,								
-						1						
-165 -						7						
Ē						1			}			
170						-						
-						1			}			
175						1			}			
F]						
- -180						4			Dlug	SILTY CLAY.		
-						-			blue,	SILTY CLAT.		
[-185]						
- 103												
-						-			<u> </u>			
190												
						-						
195						+						
-						1						
200			12" diameter well c	asing		-						
-			98'-435'	J		-						
205						_						
-						=	1					
2 10						-						
						=			1			
045						=			}			
215												
-						-						
220						-						
[]						
225						-						
-						-			1			
230						-			}			
[-						
235						_			1			
-												
									1			
s	ampl	er Type										
	Ш		Split Spoon Sampler		_		covery		M ∑	- Moisture		Logged by:
235 -235 S			Split Spoon Sampler	(D & M)			Sample		<u></u>	Water Level (08/14/01)	illing (ATD)	Approved by:
<u> </u>	6	Grab S	Sample			nelb	y rube	Sample	<u></u>	Water Level at time of dr	IIIIng (ATD)	

Asso	ciat	ed Ea	rth Science	s, Inc.		G	eo	logi	c & IV	lonit	oring Well Cor	structi	on Log
	as					Projec KH0					Well Number of Snoqualmie No. 1		Sheet 4 of 7
During				noie Did	as Nort					-City	Location	Cheanal	mie, WA
Elevat	ion (me Top of	Snoqualr Well Casing)	421.82	ge mon	tri vvei	I FIE	eiu			Surface Elevation (ft)	420'	
Water	Leve	el Eleva	ation	374'							Date Start/Finish	April 197	73,April 1973
Drilling	g/Equ	uipmen Veight/I	t Oron	Cable Adapte	1001 ed from	Drille	r'e	00			Hole Diameter (in)	variable	
		· orgina	310p	<u>/ taapt</u>	<u> </u>	Dimo		<u> </u>	T				
Depth (ft)	Water Level	V	VELL CON	ISTRU	CTION		S	Blows/ 6"	Graphic Symbol		DESC	RIPTION	
- - - -245		77.77.77.77.77.77.77.77.77.77.77.77.77.											
- -250 -							-						
255													
- -260 - -							-						
-265 -													
2 70							-			Blue,	SILTY fine SAND.		
-2 75 - - -							-			Blue (CLAY.		
-2 80 - - -			12" diame 98'-435'	ter well c	asing		-			U Blue,	ndifferentiated Olympia/p SANDY CLAY.	re-Olympia I	Lacustrine Deposits
-285 -							-						
- 290 -							1						
- -295 -							1						
-300							1 1 1						
- -305 - -							-						
310													
-315 													
S	ampl	ler Typ							<i>V///////</i>	1			
	Ш		Split Spoon S			_		covery			- Moisture		Logged by:
			Split Spoon S	Sampler	(D & M)			ample	Sample	Ţ Ţ	Water Level (08/14/01)	cilling (ATD)	Approved by:
	*	Grab (Sample			SI	еюу	r rube :	Sample		Water Level at time of d	rilling (ATD)	

Asso		ed Ea	rth Sciences, Inc.		Geo ject Nur H0200		c & M		oring Well Con Well Number of Snoqualmie No. 1	Sheet 5 of 7
Water Drilling	t Na ion (Leve	me Top of el Eleva uipmen	t Cable Tool	orth W	/ell Fie	eld		-Oity	Location Surface Elevation (ft) Date Start/Finish Hole Diameter (in)	Snoqualmie, WA
Hamm (#)	Water Level	Veight/[ller's L	Blows/ 6"	Graphic Symbol			
	Wa	V	VELL CONSTRUCTIO	N	T	ш			DESCF	RIPTION
325										
-330 					-					
: -335 -					-					
- -340 - -					1 1 1 1					
345 -										
350					-					
-355 - - - -360					-					
365			12" diameter well casing 98'-435'							
370					1 1 1 1 1					
- - -375					-					
- - -380 -					-			Uı	ndifferentiated Olympia/pr De	re-Olympia Fine-Grained Fluvial posits
385					- - - -			Blue, \$	SILTY fine SAND, occasion	nal gravel.
390 395										
- -					-					
		er Type	e (ST): Split Spoon Sampler (SPT)		No Re	covery	1. 1. 1. 1.		- Moisture	Logged by:
			Split Spoon Sampler (D & N Sample	1)	Ring S Shelby		Sample	Ĩ.	Water Level (08/14/01) Water Level at time of dri	Approved by: illing (ATD)

	TO S	ed Earth Sciences, Inc.	Project Number KH02005C		onitoring Well Cons Well Number City of Spagualmia No. 1	Sheet 6 of 7
Projec	t Nam				-City of Snoqualmie No. 1 Location	Snoqualmie, WA
levat	ion (To	op of Well Casing) 421.82' I Elevation 374'				420'
rilling	/Equip	ipment Cable Too			Hole Diameter (in)	April 1973, April 1973 Variable
lamm	·	eight/Drop Adapted fr	om Driller's Log			
Depth (ft)	Water Level	WELL CONSTRUCTION	DN SL Blows/	Symbol	DESCR	RIPTION
05						
10		12" diameter well casing 98'-435'				
115						
120						
25						
30						
135		8" diameter well casing 435'-515'				
140						
45					Blue, fine to coarse SAND with g	ravel and silt.
50						
55						
60						
65						
70						
175 Sa						
					Blue, coarse SAND with gravel a	nd silt.
S	_	er Type (ST):	No Dec		M. Malatan	
		2" OD Split Spoon Sampler (SPT			M - Moisture $\frac{\nabla}{}$ Water Level (08/14/01)	Logged by:
	ш	3" OD Split Spoon Sampler (D & Grab Sample	M)	mple	✓ Water Level (08/14/01)✓ Water Level at time of dril	Approved by:

Asso	ciate	d Ear	th Sciences, Inc.		Geo	logi	. & M	lonit	oring Well Con	structio	on Log
	000				•						
	22	9 D	Consequencies Dide		(H0200			-City	of Snoqualmie No. 1	Snoqual	7 of 7
Projec Elevat			Snoqualmie Rido Well Casing) 421.82	e North	weii Fi	eia			Location Surface Elevation (ft)	420'	
Water	Level	Eleva	tion 374'						Date Start/Finish	April 197	3,April 1973
Drilling Hamm			Cable Cable Adapte	d from D	riller's l	_oq			Hole Diameter (in)	variable	
Depth (ft)	Water Level					/S/	Graphic Symbol				
D D	ater	1.4	/ELL CONCEDUO	TION	s	Blows/ 6"	Gra		DESCE	DIDTION	
	👸	٧١	ELL CONSTRUC	TION	T	•			DESCR	RIPTION	
-			8" diameter well cas	ing							
-			435'-515'		-						
485					-						
-					-						
490]						
490					-						
-					-						
495					-						
F											
500					-		: 1 A. 1 A	Rlue	SILTY fine to coarse SAND) with gravel	(till-like)
-]			Diac,	ore i inicito dodroc or iive	viai giavoi	(un mo).
505					_						
					-						
-					4						
510					-						
-					-						
515		H	8" diameter 60-slot v	well	1			Un	differentiated Olympia/pre	-Olympia Co	parse-Grained Fluvial
		Ē	screen 515'-528']				De fine to coarse SAND with g	posits	
- 520					-			Diue,	ine to coarse ozino with g	iavei, irace	Sirt.
- 02.0					-						
					-						
-525 -					7						
-			8" diameter 50-slot v	vell	1						
530			screen 528'-538'		-}						
-		Ħ			-						
- -535					4						
					-						
<u> </u>		Ħ	Tailpipe 538'-545'		-						
540					7			Light	Tertiar green, gray ANDESITE.	y Bedrock	
]			Ligiti-	giosii, giay ANDESITE.		
545	1 -		•		-]		//X////	Boring	terminated at 545 feet on	April 1973	
-					-						
550					4						
<u></u>					+						
5 555											
555					=						
					1						
	amole	r Type	(ST):			1	ļ	l			
3			Split Spoon Sampler (SPT)	No Re	ecovery		М	- Moisture		Logged by:
	_		Split Spoon Sampler (l	-	Ring S	Sample		$\bar{\Delta}$	Water Level (08/14/01)		Approved by:
> l		Grab S	Sample		Shelb	y Tube	Sample		Water Level at time of dr	illing (ATD)	

Δοςο	ciat	ed Earth Sciences, Inc.	Geologic & N	Monitoring Well Con	struction Log
7.000	_			flonitoring Well Con Well Number	
			KH02005C	-City of Snoqualmie No. 2	1 of 8
Project Elevat		Top of Well Casing)	rtn vveii Field	Location Surface Elevation (ft)	Snoqualmie, WA 420'
Drilling	յ/Eqւ	el Elevation uipment Veight/Drop a50' Cable Tool Grab		Date Start/Finish Hole Diameter (in)	June-22-1995,July-12-1995 Variable
		<u>Orab</u>			
Depth (ft)	Water Level	WELL CONSTRUCTION	Blows/ 6" Graphic Symbol		RIPTION
- 5		12" diameter steel well casing 0-475'		Recent Snoqual Brown to gray, SILTY SAND, occ	Imie River Deposits casional gravel and organics (roots).
- 10 - -					
- 15 -					
20		10" diameter steel well casing 0-521' (NOTE: 10"			
- - 25		casing extend inside 12" casing from 0-475')			
- 30					
35				Vashon Recessional L Gray, SANDY SILT, occasional g	ake Snoqualmie Deposits
- - 40					
- - 45			-		
- - 50	Ā		- - -		
- - 55					
- 60					
- 65					
- - 70					
- 70 - 75 - 75					
S	_	ler Type (ST):			
		2" OD Split Spoon Sampler (SPT)	No Recovery	M - Moisture	Logged by:
		3" OD Split Spoon Sampler (D & M)		✓ Water Level (08/14/01)✓ Water Level at time of dri	Approved by:
	677	Grab Sample	Shelby Tube Sample	Water Level at time of dri	iling (ATD)

Δεεο	ciat	ad Fai	rth Sciences, Inc.		Goologi	c 2 N	lonit	oring Wall Can	etructio	n I og
7330	_		Till Sciences, inc.			COLIV		oring Well Con Well Number	Structio	
					H02005C		-City	of Snoqualmie No. 2		2 of 8
Projec			Snoqualmie Ridg Well Casing)	e North V	Vell Field			Location Surface Elevation (ft)	Snoqualm 420'	ie, WA
Water	Leve	el Éleva	ation 350'					Date Start/Finish	June-22-1	995,July-12-1995
		uipmen /eight/[ool				Hole Diameter (in)	Variable	
Tianni	ТТ	reignir	отор Стар							
l € €	Water Level				/s/	Graphic Symbol				
Depth (ft)	ter				S Blows/ 6"	3rag Syrr				
	Wa	V	VELL CONSTRUC	TION	T			DESCF	RIPTION	
	-									
[]		Gray,	SANDY SILT, occasional of	gravel and orga	anics (wood).
- 85					_					
					-					
					-					
90					-					
-					-					
- - 95					-		\\\ \\ \	-1.051	L.	
-					-		vvood	at 95' - C ¹⁴ = 5,720 years	op.	
-					-					
100			12" diameter steel w	ell	7		Gray (CLAY with varying amounts al (wood), and concentrate	s of silt; occas	onal sand, organic
F			casing 0-475'		1		mater	ar (wood), and concentrate	ons.	
105					-					
					1		}			
110					-		}			
110] [}			
							}			
115					-					
_										
120					_					
			10" diameter steel w casing 0-521' (NOTE		-					
-			casing extend inside		-					
125			casing from 0-475')		-					
-										
130										
F					1					
125					-					
135]					
]					
140					-]					
-										
- -145										
ļ					1					
					1					
150					7					
<u> </u>					1		1			
155					-					
<u> </u>]		1			
5							1			
455 S	ampl	er Type								
3	Ш		Split Spoon Sampler (S	-	No Recovery			- Moisture		_ogged by:
1		3" OD	Split Spoon Sampler (I	0 & M)	Ring Sample		Ā	Water Level (08/14/01)		Approved by:
^^	Grab Sample				Shelby Tube Sample			Water Level at time of dr	illing (ATD)	

Asso	ciat	ed Ea	arth Sciences, Inc.		Geolog	ic & N	lonit	oring Well Con	structi	on Log
	80				oject Number			Well Number		Sheet
			OAN LEG LA		H02005C		-City	of Snoqualmie No. 2	0	3 of 8
Projec			Snoqualmie Ridge No Well Casing)	vortn v	Vell Field			Location Surface Elevation (ft)	Snoqual 420'	mie, WA
Water	Leve	el Elev	ration 350'					Date Start/Finish	June-22	-1995,July-12-1995
Drilling Hamm								Hole Diameter (in)	Variable	
Панн	Т	veigniv	Drop <u>Grab</u>			1	T			
£	Water Level					i i				
Depth (ft)	۲				S Blows/	Graphic Symbol				
_	Vate	١	WELL CONSTRUCTION	NC	S m	0 0		DESCF	RIPTION	
	>									
					-					
					}					
165										
170					-					
170					7		1			
					1					
1 75					4		1			
					1					
					1					
180			12" diameter steel well		7					
			casing 0-475'		1					
185							}			
					-					
					-					
190					-		1			
					-					
405					7					
195					7					
					7					
200			10" diameter steel well		4		C	01 AV with war in a re-	-£ -: 4	
			casing 0-521' (NOTE: 1	0"	1		mater	CLAY with varying amounts ial (wood), and concentration	ons.	isional sand, organic
			casing extend inside 12'	1	1					
205			casing from 0-475')		7		1			
					1					
210					_		}			
					1		}			
					1	<i>\\\\\\\</i>	1			
215					-		}			
					1		}			
220					1					
220					-					
							1			
225					-]					
]		3			
220							1			
230					7					
					11		}			
235					41					
					1					
					1					
S	ampl	er Typ	e (ST):			<i>X </i>	,			
			Split Spoon Sampler (SPT)	No Recover	У	М	- Moisture		Logged by:
			Split Spoon Sampler (D &	_	Ring Sampl		$\bar{\nabla}$	Water Level (08/14/01)		Approved by:
			Sample	7	Shelby Tube		Ţ	Water Level at time of dri	lling (ATD)	•
				£		2 p .o				

Asso	ciate	ed Earth Sciences, Inc.	Geologic	& Monit	coring Well Con	struction Log
			Project Number KH02005C		of Snoqualmie No. 2	Sheet 4 of 8
Projec	t Nan	me Snogualmie Ridge Nort			Location	Snogualmie, WA
		Top of Well Casing) el Elevation 350'			Surface Elevation (ft) Date Start/Finish	420' luno 22 1995 luly 12 1995
Drilling	/Equ	ipment <u>Cable Tool</u> /eight/Drop Grab			Hole Diameter (in)	June-22-1995, July-12-1995 Variable
панн		reigniv Drop Grab				
Depth (ft)	Water Level		NS/	Graphic		
De (f	ater		S Blows/	Syn	5-00-	NETION
	×	WELL CONSTRUCTION	-		DESCR	RIPTION
-						
245						
- -250			41			
]			
255						
			11			
2 60]			
200		12" diameter steel well casing 0-475']	Gray	CLAY with varying amounts rial (wood), and concretions	of silt; occasional sand, organic
					(,	
265						
]			
270						
275			-			
]			
280						
		10" diameter steel well casing 0-521' (NOTE: 10"				
285		casing extend inside 12" casing from 0-475')				
200]			
			-			
290					Indifferentiated Olympia/pr	e-Olympia Lacustrine Deposits
]	Gray	SILT.	e-Orympia Lacusti ine Deposits
295			-			
300			-]			
]			
305			_			
310						- <u>-</u>
- · -				Gray,	fine to medium SAND, trac	e siit.
245						
315				Gray	CLAY.	
			1			
Sa	mple	er Type (ST):		/////		
	_	2" OD Split Spoon Sampler (SPT)	No Recovery		- Moisture	Logged by:
[] :	3" OD Split Spoon Sampler (D & M)	Ring Sample	$\bar{\nabla}$	Water Level (08/14/01)	Approved by:
1	m,	Grab Sample	Shelby Tube Sar	mple <u> </u>	Water Level at time of dri	lling (ATD)

		Project Number KH02005C		Well Number -City of Snoqualmie No. 2	Sheet 5 of 8	
oject Na	ame <u>Snoqualmie Ridge</u> (Top of Well Casing)	North Well Field		Location Surface Elevation (ft)	Snoqualmie, WA	
ater Lev illing/Eq	vel Elevation 350' quipment Cable To Weight/Drop Grab	pol		Date Start/Finish Hole Diameter (in)	June-22-1995,July-12-199 Variable	
(ft) Water Level	WELL CONSTRUCT	TION ST	Graphic Symbol	DESCF	RIPTION	
:5		-				
0						
				Gray CLAY.		
5		1				
0	12" diameter steel well casing 0-475'	- - -				
5						
0						
5						
0	10" diameter steel wel					
5	casing 0-521' (NOTE: casing extend inside 1 casing from 0-475')	2"				
0				Undifferentiated Olympia/pr	e-Olympia Fine-Grained Fluvial posits	
5				Gray, SILTY fine SAND, occasio	posits nal organics (wood).	
0		1	and the second s			
5		- - - -				
0						
5				Gray, fine SAND with silt, occasi	onal gravel and organics (wood).	
Samp	oler Type (ST): 2" OD Split Spoon Sampler (SF	PT) No Recovery		M - Moisture	Logged by:	

Asso	ciat	ed Ea	orth Sciences, Inc.		Geologi	c & N	lonite	oring Well Con	structi	on Log
	e e				oject Number H02005C		-City	Well Number of Snoqualmie No. 2		Sheet 6 of 8
Projec			Snoqualmie Ridge N				Oity .	Location	Snogual	mie, WA
Elevat	tion ((Top of	Well Casing)					Surface Elevation (ft)	420'	
		el Elev uipmer						Date Start/Finish Hole Diameter (in)	June-22 Variable	-1995,July-12-1995
Hamn	ner V	Veight/	Drop <u>Grab</u>			T				
Depth (ft)	Water Level	\	WELL CONSTRUCTION	ON	H & Blows/	Graphic Symbol		DESCF	RIPTION	
- - -405					-					
-410 							Gray,	ine SAND with silt, occasion	onal gravel a	and organics (wood).
- -4 15 - -					-		and department of the second o			
420			12" diameter steel well casing 0-475'							
-425 - - -							Gray,	SILTY fine SAND with orga	anics (wood)	
-430 - - - - -435										
- - -440			10" diameter steel well		4					
- -445			casing 0-521' (NOTE: 1 casing extend inside 12' casing from 0-475')	0"	-					
- 4 50							nicka makana			
455 -							HELDOCOCCUPACION OF THE SECOND CONTROL OF TH			
460					-					
465							Gray,	fine SAND with silt, occasi	onal organic	s (wood).
470 -475 -S							Wood	at 474' - C ¹⁴ > 41,940 year	s bp.	
S	amp	ler Typ	e (ST):							
		2" OD	Split Spoon Sampler (SPT)	No Recovery			Moisture		Logged by:
			Split Spoon Sampler (D &	M) [Ring Sample		Ā	Water Level (08/14/01)		Approved by:
	em.	Grab	Sample	11,144,11	Shelby Tube	Sample	Ţ	Water Level at time of dri	lling (ATD)	

Asso	ciate	ed Ear	rth Sciences, Inc.		Geolo	ogic & N	Ionitoring Well Con	struction Log
	0/4				roject Numb	per	Well Number	Sheet
				l	KH02005		-City of Snoqualmie No. 2	7 of 8
Project Elevati			Snoqualmie Ric Well Casing)	ige North	vveli Fleid	2	Location Surface Elevation (ft)	Snoqualmie, WA 420'
Water	Leve	el Éleva	ation 350'				Date Start/Finish	June-22-1995, July-12-1995 Variable
Orilling Jamm	/Equ	iipmen 'eight/[t <u>Cable</u> Drop Grab	Tool	•		Hole Diameter (in)	Variable
lanini		Cigitot	Jiop <u>Grab</u>				T	
æ (Water Level					Blows/ 6" Graphic Symbol		
Depth (ft)	erL					Blows/ 6" Graphic Symbo		
	Wat	٧	VELL CONSTRU	CTION	S		DESCR	RIPTION
								
			10" diameter steel		-			
			casing 0-521' (NO casing extend insi				. ‡	
185			casing from 0-475		-		.	
				•				
490					_		1	
+90					4		Gray, fine SAND with silt, occasion	onal organics (wood).
]			
195							1	
					1		;	
					1		;	
00					7			
					-			
505								
.00					-			
							1	
510					7 1		Undifferentiated Olympia/pre	Olympia Coarse-Grained Fluvial
]		De	posits
					1		Gray, fine to coarse SAND with fi	ne to coarse gravel, trace silt.
515					-			
					1			
520					1			
		Ħ	9.5" diameter 20-s	lot well			.]	
		Ħ	screen 521'-524'		1		1	
525			9.5" diameter 40-s screen 524'-529'	lot well	-			
		Ħ	3010011024 020					
530		Ħ	9.5" diameter 60-s	lot well			<u>-</u>	
300			screen 529'-535'		-	0 0 0	copples	h fine to coarse sand, occasional
		Ħ]	0 0 0	¢	
535			9.5" diameter stee	المسا	4	000	[
			casing 535'-548'	i weii	1	0 0 0	4	
						000	· É	
540					7		Gray, fine to medium SAND with	silt, occasional gravel.
					-		1	
545							1	
					-		Gray, fine to coarse SAND and G	SKAVEL with cobbles.
		H	9.5" diameter 100-	-slot well	-			
50		Ħ	screen 548'-556'		-]			
		Ħ]			
EF		Ħ			1		:	
000		Ħ	Tailpipe 556'-564'		7		•	
			1 anpipe 550 -504					
						[·.··.	1	
	_		e (ST):	(apr				
	_		Split Spoon Sampler	_	No Reco	-	M - Moisture	Logged by:
		3" OD	Split Spoon Sampler	(D & M)	Ring Sai	mple		Approved by:
}	69 .	Grab S	Sample	7	Shelby T	ube Sample	Water Level at time of dri	lling (ATD)

Asso	ciat	ted Ear	th Science	es, Inc.		Geo	ologi	c & N	Ionitoring Well Co	nstruction	Log
	C	@ {	X V			KH020	ımber 05C		-City of Snoqualmie No.	2	8 of 8
Projec	t Na	me	Snoqual	mie Rid	ge Nort	h Well F	ield		Location	Snogualmie	, WA
Water Orilling	Lev /Eq	(Top of V el Eleva uipment Veight/D		350' Cable Grab	Tool				Surface Elevation (Date Start/Finish Hole Diameter (in)	June-22-199 Variable	95,July-12-1995
Depth (ft)	Water Level		ELL COI		CTION		Blows/ 6"	Graphic Symbol	DES	CRIPTION	
			Tailpipe 5	556'-564'		_			Gray, fine to coarse SAND with	h silt and gravel.	
565		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Gravel ba	ackfill 564'	-574'						
570						-			Teri BEDROCK	iary Bedrock	
575		12.						\\//X\	Boring terminated at 574 feet of	on July-12-1995	
80						1					
85						1					
90						-					
95						-					
00						-					
05						-					
10						-					
15						-					
20						1					
25											
30						1					
35 Sa											
S	l amp	ler Type	(ST):			1		<u> </u>	<u> </u>		
0.		2" OD	Split Spoon Split Spoon			_	ecovery Sample		M - Moisture $\overline{\Sigma}$ Water Level (08/14/01		gged by: proved by:
		Grab S				■	y Tube	Sample	▼ Water Level at time of		

**		1				oject Number H070569A		lonitoring Well Cor Well Number OBW-4	1 of 14
	t Nar			Tokul Creek Wa	ter Right			Location	Snoqualmie, WA
ater	Leve	el Éle	evati	/ell Casing) <u>~550'</u> on				Surface Elevation (ft) Date Start/Finish	11/11/09.12/21/09
	g/Equ ner W			<u>Hayes</u> op N/A	Drilling/A	ir & Mud Ro	otary	Hole Diameter (in)	6"
	[e]						0 =		***************************************
Depth (ft)	Water Level					S Blows/	Graphic Symbol		
L)	Wate		W	ELL CONSTRUC	CTION	S m	ල ගු	DESC	RIPTION
	-	ZI -		0 to 554 1/2 feet, 6	inchee		9,9,	Vashon Recessional Outwa	sh - Tokul Creek Deltaic Deposits
				stainless steel well		· 103		Brown, silty fine to coarse GRA	
		\S		10-inch-diameter be	orehole 0		9,9,		
						1003	0 . 0 .	Brown, fine to coarse GRAVEL, occasional cobble and boulder;	little silt, few fine to coarse sand, using drilling foam.
5				8-inch-diameter bor to 28 feet	renole 14		0000		
				Concrete and bento	onite	-	000		
		\mathbb{X}		surface seal 0 to 18	3 feet	607	8.80	Brown, fine to coarse GRAVEL, cobble and boulder; abundant co	few fine to coarse sand, occasiona
		$\langle \langle$					DOC	cobble and boulder, abundant of	uttings.
0						41	8,80		
							5.5.		
						100	0000	Gray-brown, fine to coarse GRA occasional cobble and boulder;	VEL, few fine to coarse sand,
		\S					0000	occasional cobble and boulder;	abundant cuttings.
5							5.00	Cray brown fine to see see CAN	D little fine to seems send
								Gray-brown, fine to coarse SAN abundant cuttings.	D, little fine to coarse sand;
						-			
	0	Š	Ř						
20	1 000	22222	STATE STATES	10 to 00 foot matice	alaveb			Come so above	
	22.8	(C)	W 33	18 to 28 feet native fills annular space I	oetween			Same as above.	
	200	9		8-inch-diameter bor and 6-inch-diamete		1			
	2000								
25	502	SASASASASASASASASASASASASASASASASASASA				1		0	\(\bar{\bar{\bar{\bar{\bar{\bar{\bar{
	200	88	K			103		Gray-brown, fine to coarse GRA abundant cuttings.	VEL, few fine to coarse sand;
	000	Ä				-	8,8,		
			××			11	0.00		
30						1	0,00	0	
						103		Gray-brown, fine to coarse SAN	D; abundant cuttings.
						11			
35						1			.
						100		Gray-brown, fine to coarse SAN abundant cuttings.	D, little fine to coarse gravel;
						-			

	ample	-							
	ш			plit Spoon Sampler (plit Spoon Sampler (No Recover Ring Sampl	•	M - Moisture $\overline{\underline{\lor}}$ Water Level ()	Logged by: LBK/

Asso	cia	ted Ea	rth Sciences, Inc.		G	ìeol	logic	c & M	onite	oring Well Cor	nstructi	ion Log	
25.32		*			Project KH0					Well Number OBW-4		Sheet 2 of 14	
Projec	t Na	me	Tokul Creek Wa	ater Righ		, 000				Location	Snoqua	lmie, WA	
Elevat	ion (Lev	Top of el Eleva	Well Casing) ~550'							Surface Elevation (ft) Date Start/Finish	~550 ¹	9 12/21/09	
Drilling	g/Eq	uipmen Veight/[t Hayes	: Drilling	/Air 8	k Muc	d Rota	ary		Hole Diameter (in)	6"	9,12/21/09	
	_	Veignor	<u>М</u>										
Depth (ft)	Water Level						Blows/ 6"	Graphic Symbol					
۵	/ater	l v	VELL CONSTRU	CTION		S	Blo	Syl		DESC	RIPTION		
	>					Т							
-						8			Gray-b continu	rown, fine to coarse SAN ue to use drilling foam (as	ID, few grave s on previous	el; abundant cutti s page).	ngs;
-						+							
						11							
- 45													
- 43						·603			Same	as above.			
-						+							
-						1							
- 50						1							
- 50						9			Gray-b abund	rown, fine to coarse SAN ant cuttings.	ID, little fine	to coarse gravel;	
-													
-						+							
						+							
- 55						**		0000	Gray-b	rown, fine to coarse GRA	AVEL, trace s	sand; abundant d	cuttings.
						П		8.8.					
-								000					
-						+		8,8,					
- 60						.m.		000	Gray-b	rown, fine to coarse GRA	AVEL, few sa	and; abundant cu	ttings.
								8,80					
-								000					
-						-		8,8,					
65						en,		0,00	Gray-b	rown, fine to coarse GRA	AVEL, little c	oarse sand, trace	e fine to
-									mediu	m sand; abundant cutting	IS.		
-]		2000					
-						-							
70						m ₂		8,89	Same	as above.			
-						Ħ		D 00 0					
								0000					
2								0,00					
S – 75						- 193		000	Grav-h	prown, fine to coarse GRA	AVEL, trace :	sand; abundant o	cuttings.
- G5-						1		2000		,		,	- 3
SP-													
NWWELL- B 0709594.GPJ BUHING.GDJ 8/27/13								0000					
, 69A.G			- (CT):					200					w
so/o	amp ∭	ler Type 2" OD	e (ST): · Split Spoon Sampler	(SPT)		lo Red	covery		M	- Moisture		Logged by:	LBK/FSM
FI-1			Split Spoon Sampler				ample		∇	Water Level ()		Approved by:	
MMZ			Sample		BL.			Sample	$\bar{\Delta}$	Water Level at time of d	rilling (ATD)	•••	

Asso	cia	ted Ea	arth Sciences, Inc.		(зео	logi	c & IV	lonit	oring Well Con	struction Log	
		7				oct Nun 07056				Well Number OBW-4	Sheet 3 of 14	
Project	t Na	me	Tokul Creek Wa	ater Rig						Location	Snoqualmie, WA	
Elevati Water			f Well Casing) ~550'							Surface Elevation (ft) Date Start/Finish	~550 [°] 11/11/09,12/21/09	
Drilling	/Eq	uipme	nt Hayes	Drilling	g/Air 8	& Mu	d Rota	ary		Hole Diameter (in)	6"	
Hamm		Veight	/Drop <u>N/Á</u>				***************************************					
f (Water Level						/s	hic				
Depth (ft)	ter L					s	Blows/ 6"	Graphic Symbol				
	Wa	'	WELL CONSTRU	CTION		T	ш			DESC	RIPTION	
		TI			hands de serve de de serve de	193		0000	Grav-	brown, fine to coarse GRA	VEL, little fine to coarse sand;	
-								000	abunc page)	lant cuttings; continue to u	se drilling foam (as on previous	
-						11		0000	, ,			
						11						
- 85								ŎĵŎĵ				
_ 00						3		200	Same	as above.		
-								000				
-						41		000				
-						+1		000				
- 90						eno.			Gray-l	brown, fine to coarse SANI	D; abundant cuttings.	
-						Ħ						
] [
] [
- 95						\perp			0	() O.D.A		
-						100			Gray-l	prown, fine to coarse GRA	VEL, trace sand; abundant cutting	S.
-								0000				
-								000				
-						+		8,8,				
-100						·m.		000	Gray-l	prown, fine to coarse GRA	VEL, little medium to coarse sand	;
						\Box		0,00	abuno	lant cuttings.		
] [200				
-						11		8,8,				_
105						-		200	Samo	as above.		
-								8,8,	Same	as above.		
-						+1						
-						+1		000				
-						11		200			<u>-</u>	
-1 10						m.		$ \widehat{\ldots} $	Gray-l	brown, fine to coarse SANI	D; abundant cuttings.	
						П						
-						11						
-						-						
-115						-502			Same	as above.		
-									20.110			
-						+						
-115 - - - - - Sa						11						
Sa	ımpl		pe (ST):									
			Split Spoon Sampler			No Red	-			- Moisture	Logged by: LBK/	FSI
	Ш		Split Spoon Sampler	(D & M)		Ring Sa		_	Ā	Water Level ()	Approved by:	
	0	Grab	Sample		// 5	Shelby	Tube 9	Sample	$\bar{\mathbb{A}}$	Water Level at time of dr	illing (ATD)	

Water I Drilling/	Name		2-3	1/1/0705004				struction Log Sheet
Elevatio Water L Drilling/	Name	Talani Ona	als Matau Dial	KH070569A		OBV		4 of 14
Drilling/		p of Well Casing) _	ek Water Righ -550'	11			ce Elevation (ft)	
-lamme	'Equipr	Elevation ment <u>F</u>	Hayes Drilling	/Air & Mud Rot	tary	manuscript and the second seco	Start/Finish Diameter (in)	11/11/09,12/21/09 6"
T		ght/Drop <u>ľ</u>	V/Á			Translation Strain States		
Depth (ft)	Water Level			l /s/	ohic obol			
Del	ater I	MELL COM	TOLICTION	S Blows/	Graphic Symbol		DECC	DIDTION
	>	WELL CONS	STRUCTION	T			DESCR	RIPTION
				2	0000	Gray-brown, fine	to coarse GRA	VEL; abundant cuttings.
				-	0,00			
				-				
				-	8,8,			
125				693		Same as above.		
				-	8,80			
				-	0,00			
				-	000			
130				1992	0.0.	Gray-brown, fine abundant cutting	to coarse GRA	VEL, few medium to coarse sand;
					000	azamaam vatung		
				-	8,80			
				-	200			
135				<u> </u>		Gray-brown, med	dium to coarse	SAND, few fine to coarse gravel;
						abundan cutting	Jo.	
				-				
				-				
140				37		Gray-brown, fine cuttings.	to coarse GRA	VEL; little coarse sand; abundant
				П	0,0,0	cuttings.		
					000			
					8.8.			
145				100	000	Same as above.		
				П	8,8,			
					000			
				4	0000			
150				1003	0,00	Same as above.		
					000			
					8,8,			
				-	500			
155				100	0,00	Same as above.		
					5.00			
					0000			
				-				
Sa	mpler -	Type (ST):			ا ما ما			
	-	OD Split Spoon Sa	ampler (SPT)	No Recovery	,	M - Moisture	•	Logged by: LBK/F
	3"	OD Split Spoon Sa	ampler (D & M)	Ring Sample)	✓ Water Le✓ Water Le	evel ()	Approved by: