## **WELL BORING LOG**

Page 1 of 2													2			
Boring	/Well N	Jumber	r: HES-2	.5		Permit 1	Nur	nber:								
CR 83	35 at K	Γ Grov	/e Road													
Projec	t Name:	C-139	9 Regiona	ıl Study		Boreho	le S	start Dat	te:	10/19/09	Borehole Start	Time:	3:15	X	am	pm
						l	F	End Date	e:	10/19/09	End	Time: 3	3:00	a	am )	<b>(</b> m
Enviro	nmenta	1 Contr	actor:			Geolog	ist's	s Name:	:		Environmental Technician's Name:				e:	
	S Corp.			David Schulte						NA						
Drilling Company: Pavemen								`	es): Bo	orehole Diar	Borehole Depth (feet):					
Drill Pro							None		<u> </u>	1 W 11 DTW	OVA (list model and check type):					
Drilling Method(s): Apparent Borehole						e DTW (	in fe	et	Measu	red Well DTV	V (in feet after	, , , , , , , , , , , , , , , , , , , ,				
Sonic Drill from soil moisture Disposition of Drill Cuttings [check method(s)]:						ıt):	5		water recharges in well): 5			NA FID PID				
Dispos	ition of	Drill (	Cuttings [c	check me	ethod(s)	]:		Drur	m i	Spread	Backfil	l Stoc	kpile		Othe	r
(descri	(describe if other or multiple items are checked):  Samples taken off site for examination  Borehole Completion (check one):   Well Grout Bentonite Backfill Other (describe)															
Boreho	Borehole Completion (check one): X Well Grout Bentonite Backfill Other (describe)															
Shallo	Shallow well pumped at 1 gpm and Deep well pumped at 2 gpm with 3/8 inch dia tubing - Flush finished well manholes															
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA		Depth (feet)	(include gr	Sample Description nclude grain size based on USCS, odors, staining, and other remarks)					]	Notes:
PH	0-2	24	NA	NA	NA	NA	/	0-2		_	ray fine to mediions of limestone fra	-		D		to Water HES- SS = 5.87'
PH	2-4	24	NA	NA	NA	NA		2-4	grained qu	_	ray to black med th traces of lime material			D		to Water HES- 5D = 5.71'
PH	4-5	12	NA	NA	NA	NA		4-5	Unconsolions sand	dated-gray m	ained quartz		М			
SC	5-8	36	NA	NA	NA	NA		5-8	Unconsoli quartz sar	fine grained ial		S				
SC	8-10	24	NA	NA	NA	NA		8-10		Unconsolidated-light gray with gray mottling fine to medium grained quartz sand with traces of silt						
SC	10-15	60	NA	NA	NA	NA		10-15	Unconsolion quartz sar sand, silt a			S				
SC	15-20	60	NA	NA	NA	NA		15-20	quartz sar	nd with traces	ray fine to mediu s of coarse grain y medium phosp	ed quartz		S		
sc	20-25	60	NA	NA	NA	NA		20-25	quartz sar	dated-light tand with some dark gray fine	artz sand and		S	well so	t of 0.02 slot creen set from to 20 feet	
SC	25-30	60	NA	NA	NA	NA		25-30	Same as above S							
sc	30-33	36	NA	NA	NA	NA		30-33		Same as above						
sc	33-35	24	NA	NA	NA	NA		33-35	quartz sar	•	n medium to coa s of fine grained abes	•		s		

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

## WELL BORING LOG

														Г	age 2 of	. <u>Z</u>		
			r: HES-2	.5		Permit Number:												
			e Road															
Projec	t Name:	C-139	9 Regiona	1 Study		Boreho	le S	Start Dat	e:	10/19/09	Borehole S	Borehole Start Tin		8:15	X	am pm		
					ļ	End Date:				10/19/09	,	End Time:			3:00 am <b>x</b> m			
Enviro	onmental					Geolog	ist's	s Name:			•	Environm	ental To	ital Technician's Name:				
~ '11'			S Corp.		T		_			id Schulte				- 11	NA			
Drillın	ig Comp	pany: Drill P	)ro	ŀ	Paveme	ent Thick	knes Vone		es):	Borehole Dian	Borehole Depth (feet): 100							
Drillin	ng Metho		10	Apparen	nt Borehol				Me	asured Well DTW	er	OVA (list	model	and che				
D.11	Ü	ic Drill	I		oil moistu			5		water recharges in well): 5				NA FID PID				
Dispos			Cuttings [c				_	Drun		Spread	ckfill	tockpile		Other				
•			-			•						CKIIII	Storipho Oulei					
(describe if other or multiple items are checked):  Samples taken off site for examination  Borehole Completion (check one): X Well Grout Bentonite Backfill Other (describe)																		
Borenole Completion (check one): X well Grout Bentonite Backfill Other (describe)																		
$\mathbf{s}$	Sau	Sample Recovery (inches)	(pe	Unf	Fi	l '		D	1					US	Moisture Content			
Sample Type	Sample Depth Interval (feet)	ple Reco (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA		Depth (feet)			e Descript			USCS Symbol	ture	Nintage		
е Ту	e De al (fo	Reco	Blov	ed (	0 b			(fee	(include	e grain size based othe	d on USCS, ( er remarks)	odors,	staining, a	nd Sym	00 £	Notes:		
pe	pth eet)	) Ver	vs hes)	AVC	VA			<b>(t</b> )	l					bol	nten			
	<b></b>	y		السنا	igwdapprox	<u> </u>	⊣		Uncons	solidated-grayish	n tan mediu	m to (	narea	+	+	<del> </del>		
20	25.20							1	grained	d quartz sand wit	th traces of	fine g	rained					
SC	35-38	36	NA	NA	NA	NA		35-38	quartz sand, dark gray fine phosphatic sand and cemented sand/shell nodules						S			
		$\longmapsto$	<b></b>	<b></b> '	<b> </b>	<u> </u>	Н	igwdard				m to (	narea	-	$+\!\!-\!\!\!-$	<u> </u>		
20	-3.40		l, '				/	- 7 40		Unconsolidated-grayish tan medium to coarse grained quartz sand and some medium cemented								
SC 38-40 24 NA NA I					NA	NA	/	38-40		hell nodules with	_	ained quart	tz	S				
		$\longmapsto$	<b></b>	<b></b> -	sand, dark gray fine phosphatic sand					<del> </del>								
00	10.15	Unconsolidated-grayish tan medium to coarse grained quartz sand and some medium cemented																
SC	SC 40-45 60 NA NA NA NA NA 40-45 sand/shell nodules with traces of fine grained que sand, dark gray fine phosphatic sand					ained quart	tz	S										
		$\vdash \vdash \vdash$		$\vdash \vdash \vdash$	<del> </del>	<del>                                     </del>	Н	$\vdash\vdash\vdash$		solidated-grayish	•		ine grained	1	+-	+		
50	45 50	60	NA	NIA	NΙΔ	NIA	1/		quartz s	quartz sand and some small to medium ce					<sub>\\\</sub>			
SC	45-50	60	NA	NA	NA	NA	/		sand/sh quartz s	hell nodules with sand	traces of c	oarse	grained		W			
		$\vdash \vdash \vdash$	<b></b>	$\vdash \vdash \vdash$	<del> </del>	<del> </del>	Н				ne gra	ined quart:	7	+-	<del> </del>			
20		20				l '	Unconsolidated-gray medium to fine grained quartz sand and some small to large cemented sand/shell nodules with traces of coarse grained quartz sand						,,,					
SC	50-55	60	NA	NA	NA	NA	/	50-55	nodules	with traces of o	coarse grain	ned qu	artz sand		W			
	<b></b>	$\longmapsto$	<u> </u>	<b></b> '	<b> </b>	<u> </u>	IJ	igwdapprox	Same	an ahova				_	+-	<del> </del>		
SC	55-63	96	NA	NA	NA	NA		55-63		ame as above					W			
SC	63-65	24	NA	NA	NA	NA				n hard gray fossi gray fine graine			e with trace	es	S	Γ		
	00 00				''''		V,	00 00				IIu			<u> </u>	<b>_</b>		
SC	65-70	60	NA	NA	NA	NA		65-70	Same a	as above				S				
					H	T.,,	7		Same a	as above				$\dashv$	+_	+		
SC	70-75	60	NA	NA	NA	NA		70-75	l						S			
sc	75-80	60	NA	NA	NA	NA	7			ray fossiliferous ne grained quartz		vith tra	aces of ligh	nt	S			
30	75-60	60	INA	INC	INC	INC		75-00			2 sanu				J			
sc	80-85	60	NA	NA	NA	NA	/	80-85	Same as above 0-85 S									
			<u> </u>	<u> </u>	لــــــــــــــــــــــــــــــــــــــ	<u> </u>	L		Samo as abaya							<u> </u>		
SC	9E 100	100	NA	NIA	NIA	NA	/	85-	Same a	is above					s	2 feet of 0.02 slot well screen set from		
30	85-100	160	NA	NA	NA	INA	<b>/</b> /	100	1						3	90 to 92 feet		

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings

Moisture Content Codes:  $\mathbf{D} = \text{Dry}$ ;  $\mathbf{M} = \text{Moist}$ ;  $\mathbf{W} = \text{Wet}$ ;  $\mathbf{S} = \text{Saturated}$