WELL BORING LOG

Page 1 of2													2				
Boring	g/Well N	Jumber	r: HES-2	.8		Permit 1	Nur	nber:									
CR 835 South of McDaniel Ranch Entrance																	
Projec	t Name:	C-139	9 Regiona	l Study		Borehole Start Date:				10/20/09	Borehole Start	Γime:	3:15	X	am	pm	
						End Date:				10/20/09	End T	ime: 3	3:00	á	am	χ m	
Enviro	onmenta	l Contr	actor:			Geologist's Name:				Environmer			ital Technician's Name:				
			S Corp.			David Schulte						NA					
Drillin	ng Comp	oany: Drill P	Pro		Paveme	ent Thick N	knes Ion		es):	Borehole Diam	Borehole Depth (feet): 100						
Drillin	g Metho	od(s):		Apparen	t Boreho	le DTW (in feet				asured Well DTW	OVA (list model and check type):						
	Son	ic Drill		from so	oil moistu	are content): 3				ater recharges in	NA FID PID						
_			Cuttings [c									Stockpile Other					
(describe if other or multiple items are checked): Samples taken off site for examination Parabela Completion (about page 1): Well Partonite Partonite Other (describe)																	
Borehole Completion (check one): X Well Grout Bentonite Backfill Other (describe) Shallow well pumped at 1 gpm and Doop well pumped at 2 gpm with 3/8 inch dia tubing. Above Ground Protective Casings																	
Shallow well pumped at 1 gpm and Deep well pumped at 2 gpm with 3/8 inch dia tubing - Above Ground Protective Casings																	
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA		Depth (feet)	(inclu	de grain size bas	e Description sed on USCS, odo ther remarks)	rs, staining,	USCS Symbol	Moisture Content		Notes:	
PH	0-2	24	NA	NA	NA	NA	7	0-2		solidated-dark g	-		D		n to Water HES- = 4.0' w/ TOC at		
PH	2-5	36	NA	NA	NA	NA		2-5	Uncons quartz s		ray fine to mediu	m grained		М		2.17' ags n to Water HES- = 6.25' w/ TOC	
							/			•	n medium to fine	•			á	at 2.17' ags	
PH	5-10	60	NA	NA	NA	NA	<u>Λ</u>	5-10	sand	sand with traces as above	s of coarse graine	ed quartz		S			
sc	10-15	60	NA	NA	NA	NA	/	10-15	Same	is above			S				
sc	15-20	60	NA	NA	NA	NA		15-20	Same a	as above			S				
SC	20-25	60	NA	NA	NA	NA		20-25	Uncons quartz s	solidated-tan me sand with some	grained rtz sand		S	wells	eet of 0.02 slot screen set from 20 to 22 feet		
SC	25-30	60	NA	NA	NA	NA		25-30	Same a	as above			S				
SC	30-35	60	NA	NA	NA	NA		30-35	Same as above					S			
SC	35-40	60	NA	NA	NA	NA		35-40	Unconsolidated-tan medium to coarse g quartz sand with some fine grained qua traces of silt					S			
SC	40-41	12	NA	NA	NA	NA		40-41		n layers of gray n to coarse grain			W				
SC	41-43	24	NA	NA	NA	NA		41-43		-	s of tan fine to ve ad shell layers wit	•		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

												ŀ	age 2 o	<u>t</u>	2				
Boring	g/Well N	Jumber	r: HES-2	8		Permit Number:													
CR 83	35 Sout	th of M	1cDaniel I	Ranch I	Entranc	e													
Projec	t Name:	C-139	9 Regiona	ıl Study		Boreho!	le S	tart Dat	te:	10/20/09	Borehole	e Start	Time:	8:15	Х	am	pm		
					ŀ		E	End Date	e:	10/20/09		End 7	Γime:	3:00		am	χm		
Enviro	onmenta	l Contr	actor:			Geolog	ist's	s Name:	:				nental T	ntal Technician's Name:					
			S Corp.			David Schulte						NA							
Drillir	ng Comp		• .	ļ	Paveme	ent Thick		`	es):	` ´				Borehole Depth (feet): 90					
Deillir	ng Metho	Drill P	'ro	Apparen	t Borehol		lone		Measured Well DTW (in feet after				OVA (list model and check type):						
Dilini	_	od(s): ic Drill			oil moistu			3		water recharges in well): 3				t model IA	and che	FID	PID		
Dispo			Cuttings [c				π).	Drur		-					ockpile Other				
-			multiple it																
			n (check o		X We			rout							her (describe)				
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA		Depth (feet)	(includ	USCS Symbol	Moisture Content		Notes:						
SC	43-45	24	NA	NA	NA	NA		43-45	Soft-interbedded layers of tan fine to very fine grained quartz sand and small to medium shell layers with traces of silt and some medium to large cemented sand nodules						S				
SC	45-50	60	NA	NA	NA	NA		45-50	Soft-interbedded layers of tan fine to very fine grained quartz sand, and medium to large shell fragment layers with traces of silt and clay						S				
SC	50-55	60	NA	NA	NA	NA		50-55	Soft-interbedded layers of medium to large shell fragments with medium cemented sand/shell nodules, and tan very fine to fine grained quartz sand with some medium grained quartz sand						S				
SC	55-60	60	NA	NA	NA	NA			gray fin	Hard gray fossiliferous limestone with traces of light gray fine grained quartz sand					S				
SC	60-70	120	NA	NA	NA	NA			gray fin	Hard gray fossiliferous limestone with traces of I gray fine grained quartz sand					S		feet of 0.02 slot Il screen set from 64 to 66 feet		
sc	70-80	120	NA	NA	NA	NA		70-80	gray fin	ray fossiliferous ne grained quartz		nt	S						
sc	80-82	24	NA	NA	NA	NA	/	80-82	Hard thin layers of gray to dark gray fossiliferous limestone interbedded with light gray fine to coars grained quartz sand					•	s	fron	feet of bentonite n 70 to 75 feet on of sand to bottom		
SC	82-90	96	NA	NA	NA	NA			Hard gray fossiliferous limestone with some light gray fine to coarse grained quartz sand						S	Bori	ing Terminated at 90 feet		

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