

PERMIT:

Local ID: DGSDH-7

Selbyville Watertreat Page # of 9 17 (Roxana Rd to Polly Branch to Location Description: Water Dilant Rd (N of Selbyville)
(Rd is labeld Town Dump Rd on map)

Dates Drilled	08/06/07-08/08/07	Described by	JLT, PPM, AB	Total Depth	840 ft
Drilling Method	Hydoulic Rotary	Sampling Method	Cuttings	Surface Elevation	
Drilled By	Uni-Tech	Bit/Hole Size	6'3/4"	Borehole Completion	Fill and abandon

<u> </u>			Size	pietion		
Depth (ft)	GEOPHYSICAL LOGS	LITHOLOGIC LOG	MATERIAL DESCRIPTION	SAMPLE NO.	WELL DETAILS AND FIELD NOTES	, Depth (ft)
0			SAND, silty & clayey sand is fine to vf with small % of coarse chunks of brown, tan & gray sandy, silty clay abundant, sandy clay, tannish color, medium brownish gray	103315	* Butch adds quick troll * seems to be some kind of hard pan on first 10'- collar hun on it at first when tried to add	0 - - - 10
- - - 20-			SAND, fine to coarse with small % of vc grains & few granules, silty, clayey with chunks of brown, tan & gray sandy silty clay, gray (*munsell) clay turns dark gray (at least drill mud does)- thinks he is thru clay, sandier near bottom (has to run "pull down")	103316	* cuttings are mostly sand throughout, w/ chunks of dark gray, light/whitish gray & rare brown sandy mud, esp from 10-20'	- - - - 20
- - -			SAND, muddy med to ve quartz grains with some granules chunks of gray silty clay & black to purple chert pebbles, sand wylight gray sandy mud dhunks; lower spl has more granules & small grave/inch black chert, gray (*munsell)	1033/7	add collar, switch to tricone roller bit	-
30			A.A., with increased number of granules & small pebbles, sand w/tight gray sandy mud chunks gray (*munsell)	103318	losing water, so mix & add more mud	-30 - - - -
40 — - - - 50 — -			SAND, f to vc (avg is coarse) peobles up to 2cm of chert & quartzite, some weathered feldspar grains (white) & some whitish gray muddy sand, few % heavy minerals, sand was sub-rounded to sub-angular, drilled same sand, light gray, fairly loose overall but a fair amount of fine sand in susp, incl blackish chert granules &	103319		40 - - - 50 -
60 –		2) ₇₁	pebbles, white grains abd (some wx feldspar) gray SAND, med with some coarse to granule			- 60
70 – - - - - -			(Quartz), few heavy minerals, some chert & quartz gravel & few chunks of sandy mud, 60-70': light gray sand finer than above; 70-80': A.A., maybe slightly finer; both are median med gr. sand w/ some fg-cg, a few granules & pebbles, sand sbrndsbang; pebbles qtzites, chert (most), lots of white grains (incl. punky feldspar), 2-3% ohm? gray	103320		- - -70 - - -
80 - - - -			A.A., no granules or mud chunks, still sand- losing granules, basically, sand A.A. but less crs material gray	103321	ran quickly	80 - - - -
90			SAND, fine to granule, (Quartz) muddy with 3-4% heavy minerals, a mix of fine to granule size but w/o pebbles- composition & color A.A. gray			-90 - - - - 100



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Drilling Method	Hydraulic Rotary	Sampling Method	Cuttings	Surface Elevation	
Drilled By	Uni-Tech	Bit/Hole Size	6'3/4"	Borehole Completion	Fill and abandon

Ву	OHI-Tech		Size 0 3/ 4	Completion		
Depth (ft)	GEOPHYSICAL LOGS	LITHOLOGIC LOG	MATERIAL DESCRIPTION	SAMPLE NO.	WELL DETAILS AND FIELD NOTES	Depth (ft)
100			SAND, med to vc (median is coarse in up & med in lower) with granules & few gra	pper		100 - - - -
110-			& silty clay chunks (gray & tan), move gray granuley sand- upper part w/ more & crs sand, siner in lower part but w/ more grayel gray	velly		- - 110 - -
120			SAND, fine to coarse (ave med) quartz & muddy 2-3% heavy minerals & chunks of med brown cl	with ay,		- 120
130			some brown clay thins, light gray coarse sandw granules & a.little-grayer A.A.! Pile 'o' sand, gray A.A., with some granules & few	103	* drillers mix in another 2 bags of QuickGel &	130
140		<	gravels & NO clay, light gray coarse sand w/ granules & a liftle gravel A.A.1 Pile o' sand, gray	103325	circulate *Butch has been stop- ping to circ. bottoms up mid-rod	- - - -140
-			SAND, med to gravel (median ~ granules), quartz & chert, quartz & quartzite gravels, few mud chur sandy gravel/gravelly sand, w/ abd chert & qtz/q gravel up to 2cm & same sand/granule mix A.A. (white grains/punky feldspar), gray	nks, 837 Itzite 80	*a little chatter @ start, but drilling @ reasonable rate *~153' slows a bit, maybe clay *with thickened drilling mud, the finer sand is now	- - -
150- - - -			MIX, above & dark office brown silty clay, dark olive brown (*munsell) a mix of that gravel plus (most chunks of brown mud (silty clay, chocolate)		staying suspended in the drilling mud. *Broke through ~2' above base rod.	- 130
160	3		SAND, f to coarse (ave med) w/ few grav & mud (sand) chunks, & 5% lignite, olive brown (*munsell) brownish med (?) sa	328	drilling fast w/ a few slow spots- in & out repeatedly	160 - - -
17 0			w/ a little coarse-stuff A.A., with more mud chunks & bigger chunks of lignite, dark olive brown brownish med sand w/ abo	03329		-170 - - - -
18 0			brown mud chunks & lignite material SAND, fine to coarse (median - medium clean quartz sand with few clay chunks,)	drilled fast, like sand	- 180 -
190			nice aquifer, gray med sand w/ a few small b mud chunks A.A., with (ave - coarse) more mud			190
200			chunks & few gravel, gray med-crs sand wa common vcrs & granules; lots of white grains	103331		200



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Dates Drilled	08/06/07-08/08/07	Described by	JLT, PPM, AB	Total Depth	840 ft
Drilling Method	Hydoulic Rotary	Sampling Method	Cuttings	Surface Elevation	
Drilled By	Uni-Tech	Bit/Hole Size	6'3/4"	Borehole Completion	Fill and abandon

Ву			Size Cor	npletion		
Depth (ft)	GEOPHYSICAL LOGS	LITHOLOGIC LOG	MATERIAL DESCRIPTION	SAMPLE NO.	WELL DETAILS AND FIELD NOTES	Depth (ft)
210-			SAND, med to (quartz) granules with few chunks of silt, gray silty clay (coarsens downward to more granules), olive gray (*munsell) basically same-granule sand in upper & lower halfmore granules (majority?) in 2 10-220. A few light gray sandy mud chunks in 200-210, rare 210-220.	103332	* Butch notes pH change, adds soda ash (Pocomoke) * stopped mid-rod to circulate - drilled fast	-200 - - - - - -210 - - -
230			SAND, medium to coarse quartz with chunks of It gray & tan clay (mud) - more mud chunks in upper than lower, olive gray 220-230 sand like 200-210, w/ cg qtz, white grains, some wcg inchblack chert (no real granules of pebbli (gravel, with common It gray & tan) & some darker gray mud chunks; 230-240 the game, perhaps fewer mud chunks; It tan & It gray chunks are silty clay (poss sandy, though looks like all on outside)	333	Chattery Mud Drilling @ 227' slowed in mud ~227'	-220 - - - -230 - - - -
250-			SAND, medium quartz with few silty clay chunks (lt_gray) very clean: 1-2% heavies, light brownish gray (*munsell) both halves of rod are same lith as above-nice sand	103334	* drills fast, but some chatter in lower 10 ft. * Brad & I did water refill, backdrilling	- - - -250 - - -
270			A.A. basically A.A., perhaps more cg-vcg sand	103335	*half rod, then circulate- losing lots of fluid- mudded up, then continued to drill- but last 6-7' of rod drilled slow, hard- something	- -
			A.A., with abundant lt. gray, brown & tan silty clay (denser than above) clay chunks & some gravel, olive gray same perhaps more with a little gravel & common chunks of stiff brown mud	103336	different * the last 5' took >15 mins to drill perhaps more *2nd rod, lost a little more fluid, then it stabilized	-270 - - - -
280	and the second s		SAND, med to vc with granules with abundant dark brown stiff sandy clay, dark grayish brown (*munsell) clay, a thin sand lens, cuttings coming up are mud chips (small-some stiff, some not-hydrating on way up?) mixed in with sand (ir place? caved?) that is very much like the sand above.	103337	* had to add a bag of Quick Gel (note: Quick Gel ~\$100/bag, hole plug \$20/bag) * begining of rod still	-280 - - - -
300			MUD, dark brown dense silty mud with fair amount of sand as described above mixed around it, Color - dark brown???	103338	drilling slow * last 10' (290-300') drilled slow until very end and then breaking thru in last foot or so	- - - - - - - -300



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Drilling Method	Hydoulic Rotary	Sampling Method	Cuttings	Surface Elevation	
Drilled By	Uni-Tech	Bit/Hole Size	6′ 3/4″	Borehole Completion	Fill and abandon

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	GEOPHYSICAL LOGS	LITHOLOGIC LOG	MATERIAL DESCRIPTION	E NO.	WELL DETAILS	
Depth (ft)			MATERIAL DESCRIPTION	SAMPLE	AND FIELD NOTES	Depth (ft)
30 0 - - -			SAND, quartz (med = med), fine to coarse (few vc), silty with chunks of brown silty	\rightarrow	drillers de-sand for a bit	 300 - -
310-			clay 2-3% heavies, light brownish gray almost same stuff throughout run medium sand w/ some grains crs & rare vcrs- common (~25-35%) mud clasts, small, brownish silty-clay, note: upper 10' is	668801		- - -310 -
-			coarser, notable crs gr. fraction			-
32 0 - - - -			SAND, fine to med with some coarse & few chunks of silty clay (or silt), light brownish gray basically, same A.A mostly	0	*says drilling like sand, washing out as you go * Butch adds more	 3 20 - - -
330-			mg sand with some (10-20% vol?) clasts of mud (some are more like clayey silt than silty clay)- lower 10' seems a shade finer than upper	103340	quicktrol & quickmud (seems to be losing some fluid- to hole? de-sanding?) * QuickTrol = \$100 -	- -330 - - -
340			SAND, fine to med with few granules &		QuickGel = \$20 * hit a very lignite layer * Putch potes they 500	340
- - -	}		pebbles, large chunks of lignite (up to 1.5cm) abundant, light brownish gray mg, some fg & cg a few mud chunks	103341	* Butch notes- they 500 (520?) ft hole they drilled in Gumboro- domestic by a poleshed- Freck wanted to impress the guy, a budd	
350- - - - -		2) ((SAND, med to coarse sand with few pebbles & 1-7 frags of lignite & few pebbles & chunks of med (tan), It brownish gray coarsens to cg, some vcg, grans & pebbles- also common lignite, incl large woody chunks; a few clay clasts	103342	but never paid *Sand *sam as Seaford" - were *clay stringers" in it, so had a hard time getting turbidity * "Big stuff" (gravel, pebble in this zone so circulated	- - out
36 0 - - - -			SAND, med to granule (ave=vc) with pebbles & few chunks of sandy silt, light brownish gray coarse, vcrs sand w/ fine-granule size mixed in- not much in way of pebbles	103343	-5 min more	+360 - - - -
37 0 - - - -			SAND, med to coarse sand with few granules & frags of lignite also few chunks of clayey silt, It brownish gray back into med sand w/ common (5-10%) clay chunks of brown clayey silt	103344		-370 - - - -
38 0 - - -		t	SAND, meduium to coarse quartz with few small chunks clayey silt & frags of lignite, It brownish gray mg sand, somewhat crs, a few mud chunks	103345	* continue drilling quickly * Butch thinks sand & sandy clay	-380 - - - -
39 0 - - -			SAND, fine to med with more mud chunks than above & many small lignite frags, It brownish gray mg sand, finer, more abd mud	103346	* Butch adds more mud & circulates	-390 - - -
400	}		chunks	-		400



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Drilling Method	Hydraulic Rotary	Sampling Method	Cuttings	Surface Elevation	
Drilled By	Uni-Tech	Bit/Hole Size	6′3/4″	Borehole Completion	Fill and abandon

			Size	pietion		
	GEOPHYSICAL LOGS	LITHOLOGIC LOG		NO.	WELL DETAILS	
Depth (ft)			MATERIAL DESCRIPTION	SAMPLE	WELL DETAILS AND FIELD NOTES	Depth (ft)
40 0 - - - - -			SAND, fine to med with some coarse & very abundant, dark olive gray silty clay, dark olive gray (*munsell) crs sand w/a signif number of mud chunks	103347	Butch notes drilling slower, into clay ~410' (6' into this rod)	-400 - - - -
410-		gg	CLAY, silty with some med to ve sand in matrix (not insilt chunks), 1-2% glauconite?, dark olive gray (St. Mary's?) greenish gray silty clay/clayey silt w/ a signiffraction of mg c-fg sand, a few % of dark grains, some	103348		4 10 - - - -
42 0 - - - -		9 g	poss glauc (mostly ohm) CLAY, silty with med to coarse sand in matrix & abundant glauconite grains, dark olive gray	103349	* drills slow * both rods brought up mostly greenish gray silty clay w/ a modest fraction of med sand	-4 20 - - - -
430-		ğ (g)	CLAY, silty with some shell, glauconite & coarse sand, dark olive gray less of the uncommon crs grains present in upper (420-430) & the first conspicuous fraction of shell frags (thin, sand size)	103350	that incl. consic. glauc;	-4 30 - - - -
440-			CLAY, slightly silty with abundant glaucon- ite sand & some fine quartz sand, dark olive gray greenish olive gray, clay, a little qtz, abd glauc	103351	drills slow	-440 - - - -
450		9 g g	CLAY, waxy consistency with abundant glauconite sand, dark olive gray greenish waxy clay; some shell frags	103352		450 - - - -
460-		0 0	A.A., dark greenish gray (*munsell) green clay	103353	*shells @ 470', *still drills slow 460-470 -Butch says sticky stuff green (almost waxy) clay	-
470-	A VOLAN V	9 g g	A.A., with increased glauconite (all sand) >50% sand & few chunks dark brown clay, dark greenish gray green clay, a few brown clay frags, & a conspicuous sand fraction (~10%?) that is >50% glauc	103354	* a little rod chatter @ bottom	-4 70 - - - -
480-		g g g g g	A.A., with increased glauconite, dark greenish gray slightly more glauc & shell	103355	drills slow overall lith is still glauc -bearing clay bagged seperately	-480 - - - -
490	Parado de la companya	_gg g	A.A., but with slightly less glauconite sand, dark greenish gray less, more clayy	103356		-490 - - - - - -500
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Drilling Method	Hydraulic Rotary	Sampling Method	Cuttings	Surface Elevation	
Drilled By	Uni-Tech	Bit/Hole Size	6'3/4"	Borehole Completion	Fill and abandon

Ву	OIII-Tecit		Size 0 3/4	ompletion		
	GEOPHYSICAL LOGS	LITHOLOGIC LOG		ON		
Op Depth (ft)			MATERIAL DESCRIPTION	SAMPLE	WELL DETAILS AND FIELD NOTES	00 Depth (ft)
- - -		_9	CLAY, dark gray & dark greenish gray only 10-15% glauconite (much less than above dark gray (*munsell) more brown day clasts	1 1 2	some chatter 2' into run quickly stopped & cont- inued slow drilling	- - - -
510 - - - -		9 9 9 9	CLAY, 50% dark gray clay, 50% dark greenish gray cla >50% glauc. for sand fraction (same quartz) & abd bivalve frags, dark gray & dark greenish gray mix of brown clay, green clay & glauc shell	103358		-510 - - - -
52 0 - - - -		a	A.A., with >70% glauconite; a few shell frags, dark greenish gray still mud, some glauc rich top & bottom of run very similar, so bagged together	59	drilling slow, still	-520 - - - -
530- - - -		g g g		103359		-530 - - - -
54 0			SAMD, shelly sand, med to coarse grained w/ glauc (~20% & brown mud chunks, dark greenish gray (*munsell) mix of shelly crs sand & must class (St. M) sand is f-vcrs, avg crs, mostly qtz but w/ abd (25%?) glauc; shell frags abd (>10%)	103360	a couple feet into the run, rods begin to chatter- top chop? lets up for a bit, then	-540 - - - -
550- - - -			some small chunks of cemented vf sand/silt; some shell dl A.A., with coarser fraction sand & few mud chunks & phosphate, dark greenish gray S.A.A., but rare mud chunks, sand is slightly fine, mg-cg avg; a few pieces/grains of black phosphate to ~3mm; common shell frags & some small cemented chunk	103361	off & on 555' or so, fast & slow, alternating	- -
560-		0 d d	SAND, vf to fine (25-30%) glauconite with shell fragments, dark greenish gray vf-f sand shell frags, 25-30% glauc	7	*chatter @ top, next rod drills a lot faster- so probably more sand than shell * spent fair time	-560 - - - -
570-		g g p	SAND, fine to coarse (ave=med) w/ 15% glauc frags shell frags, phosphate & few sandy (10% of volume) silt chunks, dark greenish gray mg sd, some fg in it, abd (>10%) frags of whitish thin shells, 10-15% glau sd, ~10% chunks of sandy bluish silt, & rare phosph	103363	circulating after rod	-570 - - - -
580		р	SAND, vf (ave=fine) to med quartz 10% glauconite, 2-3% small phosphate frags, some shell frags, & mud chunks (very fine mollusks), dark greenish gray f-m sand, up to		some chatter @ start of rod & thru it, but it moves	-580 - - - -
590			10% glauc, ~10% frags of thin shell- plus, a signif fraction (?25%) of chunks of sandy, slightly clayey silt	103364		-590 - - - -
600_	<u> </u>		1		l	1600



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Drilled By	Uni-Tech	Bit/Hole Size	6'3/4"	Borehole Completion	Fill and abandon

ВУ			Size Cor	npletion		
S Depth (ft)	GEOPHYSICAL LOGS	LITHOLOGIC LOG	MATERIAL DESCRIPTION	SAMPLE NO.	WELL DETAILS AND FIELD NOTES	Depth (ft)
600		9	A.A., small % coarse sand, dark green- ish gray fine sand, ~5% shell, 5-10% glauc, a few frags of sandy mud	103365		600 - - - -
610-			A.A., with increased sandy silt (mud) clasts & increased % of shell & ~5% glauc, dark greenish gray slightly coarser sand, med-fine, ~5% shell, 5, \$10% glauc (less), more chunks of olivish sandy mud	103366		1610 - - - -
620-		<u>g</u>	A.A., dark greenish gray	103367	Choppy drilling @ 630' brief hard zone ~630'- chatter off & on rest of	+620 - - - -
630-		g	SAND, shelly quartz sand, fine to med w/ 5% glauconite, chunks of hard silt & chunks of softer sandy mud (as seen above) dark greenish gray	103368	rod, esp lower 5'	-630 - - - -
640		6 6	SAND, shelly, fine-med ~ 10% shell (mostly med), 5% dark grains (some glauc), cemented sand, < 10% mud-slightly clayey sandy silt, dark gray - grayish green shelly mg sand w/ ~10% mud chunks	103369	rods are chattering & drillng kind of slow-rate increases after ~3'-another hard zone ~12 into the run, then in &	ΓI
650-			A.A., less shell, more mud (sandy silt), slightly more cemented sand, sandy silt chunks - stiff & dry, dark gray)- grayish green less shelly, mg sand w/ ~40% mud chunks (which are sandy, clayey silt), some very stiff, dry silt chunks	103370	out of hard zones the lower ~3' drilled fast	650 - - - -
660			CLAY, sandy & silty mud chunks of olive green/grayish shell frag- chunks, 10% loose sand f-m (ave fine), dark gray- grayish green chunks of soft very sandy, silty grayish-olive clay & some loose sand		@ 670', Butch says drills like in clay	- - -
670-		\$	SILTY CLAY, mostly mud chunks of silty clay, very little sand, fine-vf <10%, few shell frag ~5%, matrix has fine to vf sand, 5% glauc, dark gray - grayish green mostly chunks of greenish silty clay w/ a slurry of vf-f sand w/ ~5% glauc & ~2% shell frags (thin shelled)	103372		-670 - - - -
680		g	CLAYEY SILT, ~25% sand vf-m, ~5-10% glauconite, dark gray - grayish green greenish mud chunks & fg sand, loose	103373	slow drilling entire run fairly muddy	-680 - /- - -
690		g g	SILT, sandy & slightly clayey 40% glauc, less losse sand vf-m, small amount of shell frags, dark gray - grayish green slightly clayey sandy silt, w/ sand being fg-mg, much of fg is glauc (~40% glauc in sand?)	103374		-690 - - - -
700_	<u> </u>		<u> </u>	<u> </u>	<u> </u>	 7 00



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Drilled By	Uni-Tech	Bit/Hole Size	6'3/4"	Borehole Completion	Fill and abandon

SANDY CLAYEY SIL, more day than prev. larger, says the shell says conditions condition	<u> </u>		Size	ipielion		
### WELL DETAILS AND FIELD NOTES ### WE				O		
SANDY CLAYEY SILT more day than preclayey care 10% shell lens 10% common the proclay that policy 10% common the proclay that preclay to gray the green 10% common the proclay that preclay to gray the green 10% common the proclay that preclay the preclay that preclay the proclay that preclay the preclay that preclay the proclay that preclay the preclay that preclay that preclay the preclay that preclay that preclay that preclay the preclay that pr			MATERIAL DESCRIPTION	SAMPLE		
SAND.Fm. 10% glauc.core 10% shell, mid-sandy silty of the provided of the pr	/0 0		mud chunks (more green & brownish) gray, sand f-m, glauc <or=10%, amt="" cemented="" dark="" gray="" grayish="" green<br="" sand-="" sm="" to="">more green than brown chunks, chunks of clayey silt, some</or=10%,>	1 10		 700 - - - -
MIX SAND/AUD Sand (unive timp nevious) — in a lower half of run chatters but moving at a decent rate survey of the chatters and the chatters in the chatter in the part of medium of the chatters in the chatter in the part of medium of the chatters in the chatter in the part of medium of the chatters in the chatters in the chatter in the part of medium of the chatters in the chatter in the part of medium of the chatters in the c	710- - - -	9 &	SAND, f-m, 10% glauc, <or=10% &="" (green="" brown="" brown),="" brown,="" chunk="" chunks="" chunks,="" clay,="" dark="" gray="" grayish="" green="" lay="" like="" loose="" more="" mud="" mud-sandy="" previous="" sand="" shell,="" silty="" silty<="" td="" than="" to=""><td>103376</td><td></td><td>-710 - - -</td></or=10%>	103376		-7 10 - - -
SAND, F. mostly med, more shell frag, less mud, shell frag sare layer mud-sandy slity clay shell 30%, sand has glauk 5-10%, dark grafy to grafysf green ~25% shell frags, many thick & mg but 2 sand/some cg) w/-5% Sauth mixed in any thick & mg bu	- - -	g	MIX SAND/MUD, sand (more than previous), f-m (ave=med), glauc=5-10%, mud chunks - sandy mud, some chunks sandy silty clay, some chunks sandy clayey silt, shell frags (15% small 40% mud chunk; 60% sandy dark gray to grayish green mix	03377	chatters but moving	-7 20 - - - -
AND, f-m, 5% glauc, 2s-30% shell, sand-mostly med, lots of fine though, very few mud chunks, dark gray or grayish gleen shelly sand, 70% qtz m-f sand, 5% dark srmostly glaucin, 25% shell (some thick) w/ a few (1,0% vo)l)chunks of sandy clayey silt (some thick) w/ a few (1,0% vo)l)chunks of sandy clayey silt (some thick) w/ a few (1,0% vo)l)chunks of sandy clayey silt (some thick) w/ a few (1,0% vo)l)chunks of sandy clayey silt (some thick) w/ a few (1,0% vo)l)chunks of sandy clayey silt (some thick) w/ a few (1,0% vo)l)chunks of sandy clayey silt (some thick) w/ a few (1,0% vo)l)chunks of sandy clayey silt (some thick) w/ a few (1,0% vo)l)chunks of sandy clayey silt, sand-glauc f-m (mostly med), abundant shell frag, greenish gray a mix of m (-f) sand, abd shell frags, some clasts of sandy clayey silt (some thick) w/ clayey silt, greenish gray like above sample 3AND, f-m, mostly med, abundant shell frag, greenish (some thick) w/ clayey silt, greenish gray like above sample 3ANDY CLAYEY SILT, sand f-m, glauc f-vf, very little amount of shell frag, greenish gray silt in no brown clay (vf) f-vf fraction in glauc.	- - -	9 26	SAND, f-c, mostly med, more shell frag, less mud, shell frags are low, mud-sandy silty clay, shell 30%, sand has glauc 5-10%, dark gray to grayish green ~25% shell frags, many thick & mg atz sand (some cg) w/<5%	103378		-730 - - - -
SILTY CLAY, with scattered shell frag, greenish/olive silty clay SILTY CLAY, with scattered shell frag, sand f-m with quartz & glauc, greenish gray silty clay w/f-m sand cs slurry MIX SAND/SANDY CLAYEY SILT more sand than previous, mud-sandy clayey silt, sand-glauc f-m (mostly med), abundant shell frag, greenish gray a mix of m (-f) sand, abd shell frags, some clasts of sandy clayey silt SAND, f-m, mostly med, abundant shell frag, greenish gray a mix of m (-f) sand, abd shell frags, some clasts of sandy clayey silt, greenish gray like above sample SANDY CLAYEY SILT, sand f-m, glauc f-vf, very little amount of shell frag, greenish gray greenish gray much less shell, much of mud frags are sandy (vf) f-vf fraction in glauc.	- - -		SAND, f-m, 5% glauc, 25-30% shell, sand-mostly med, lots of fine though, very few mud chunks, dark gray to grayish green shelly sand, 70% qtz m-f sand, 5% darks (mostly glauc?), 25% shell (some thick) w/ a few	3379	of rod & drills a bit slow	- - -
SILTY CLAY, with scattered shell frag, sand f-m with quartz & glauc, greenish gray silty clay w/ f-m sand cs slurry MIX SAND/SANDY CLAYEY SILT more sand than previous, mud- sandy clayey silt, sand-glauc f-m (mostly med), abundant shell frag, greenish gray a mix of m (-f) sand, abd shell frags, some clasts of sandy clayey silt SAND, f-m, mostly med, abundant shell frag, mud- mostly silt, few mud chunks w/ clayey silt, greenish gray like above sample SANDY CLAYEY SILT, sand f-m, glauc f-vf, very little amount of shell frag, greenish gray much less shell, much of mud frags are sandy (vf) f-vf fraction in glauc.	- - -		greenish gray back to muds- greenish/olive silty	103380		- - -
MIX SAND/SANDY CLAYEY SILI more sand than previous, mud- sandy clayey silt, sand-glauc f-m (mostly med), abundant shell frag, greenish gray a mix of m (-f) sand, abd shell frags, some clasts of sandy clayey silt SAND, f-m, mostly med, abundant shell frag, mud- mostly silt, few mud chunks w/ clayey silt, greenish gray like above sample SANDY CLAYEY SILT, sand f-m, glauc f-vf, very little amount of shell frag, greenish gray much less shell, much of mud frags are sandy (vf) f-vf fraction in glauc.	- - -	9	f-m with quartz & glauc, greenish gray silty	\sim	but ran hard in bottom ~1' of rod	- 1
SAND, f-m, mostly med, abundant shell frag, mud- mostly silt, few mud chunks w/ clayey silt, greenish gray like above sample SANDY CLAYEY SILT, sand f-m, glauc f-vf, very little amount of shell frag, greenish gray much less shell, much of mud frags are sandy (vf) f-vf fraction in glauc.	- - -		previous, mud- sandy clayey silt, sand-glauc f-m (mostly med), abundant shell frag, greenish gray a mix of m (-f) sand, abd shell frags, some clasts of sandy	103382		-770 - - - -
SANDY CLAYEY SILI, sand 1-m, glauc 1-vr, very little amount of shell frag, greenish gray much less shell, much of mud frags are sandy (vf) f-vf fraction in glauc.	- - -	d d	SAND, f-m, mostly med, abundant shell frag, mud- mostly silt, few mud chunks w/	103383	@ bottom of rod,	-780 - - - -
	- - -	9	very little amount of shell frag, greenish gray much less shell, much of mud frags are sandy	103384		-790 - - - - -800



PERMIT:

Local ID: DGSDH-7

Selbyville Watertreat Page 9 of 9 17 (Roxana Rd to Polly Branch to Location Description: Water Plant Rd (N of Selbyville)
(Rd is labeld Town Dump Rd on map)

Dates Drilled	08/06/07-08/08/07	Described by	JLT, PPM, AB	Total Depth	840 ft
Drilling Method	Hydaulic Rotary	Sampling Method	Cuttings	Surface Elevation	
Drilled By	Uni-Tech	Bit/Hole Size	6'3/4"	Borehole Completion	Fill and abandon

	GEOPHYSICAL LOGS	LITHOLOGIC LOG		O		
Oepth (ft)			MATERIAL DESCRIPTION	SAMPLE NO.	WELL DETAILS AND FIELD NOTES	S Depth (ft)
- - - -		<u>g</u>	SANDY SILT/CLAYEY SILT, some large shell frags, glaud small amount, sand f-m, mostly fine upper, some smal shell frag, greenish gray-basically as above, sandy silt w/ sand slurry	103385	* in search of Calvert brown clay * Butch starts run, but then adds more QuickG (2 bags) & QuickTrol	ΓI
810- - - - -		g å	SAND, vf-m-c, ave=vf-f grained, glauc present, small shell frag present, greenish gray vf-f sand w common(8%2) shell frags & a few silt chunks, very little returns on both half of rods (vf sd-silf being pulverized	103386	(2 bags) * Rod runs resonably fast, slowing a little in 2nd part of rod (thumped a little in upper 10')	-810 - - - - -
82 0 - - - -		8	SANDY CLAYEY SILT, sand vf-c (mostly f w/ some coarse & med), few shell frag present, grayish color chunks of sandy (vf) silt, a few % shells some loose vf-f sand, greenish	103387	drilling starts steady & even- slowed @ end of rod, like clay	-820 - - - -
830- - -			S.A.A., grayish color	103388		-830 - - - -
840			SAMRLE OFF DRILL BIT-not described (840')	103389		-840 - - -
- 850- - - -						- -850 - - -
86 0 -						- -860 - - -
87 0 -						- -870 - - -
- 88 0 -						- -880 - -
89 0 - -						- - -890 - -
900						900