

**SIGNED**

## DITCH SAMPLES

Examined by \_\_\_\_\_ to \_\_\_\_\_  
\_\_\_\_\_ to \_\_\_\_\_Well Shell-Hall #1  
Field or Area Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
260	340	100	<u>Shale</u> , gray.	
340	365	100	<u>Shale</u> , brown - gray.	
365	390	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , white - light gray, fine - very fine, well sorted.	
390	400	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above.	
400	410	100	<u>Shale</u> , brown - gray.	
410	430	50	<u>Shale</u> , green, silty in part, small <u>Sandstone</u> inclusions medium grained.	
		50	<u>Sandstone</u> , green - light gray, fine, with sorted.	
430	450	40	<u>Shale</u> , green - gray.	
		60	<u>Sandstone</u> , white-green, fine-very fine, with sorted, bentonitic.	
450	460	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
460	470	100	<u>Shale</u> , gray.	
470	490	100	Bentonite mud, with loose sand grains, very fine-course.	
490	500	100	<u>Sandstone</u> , loose grains, round-sub round, course.	
500	600	5	<u>Shale</u> , gray.	
		95	<u>Sandstone</u> , white, loose course grains, angular-sub round, in part bentonitic, pyritic.	
600	620	5	<u>Shale</u> , gray.	
		95	<u>Sandstone</u> , white, loose grains, course, angular-sub round, very bentonitic.	
620	630	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above.	
630	640	40	<u>Shale</u> , as above.	
		60	<u>Sandstone</u> , as above.	
640	650	5	<u>Shale</u> , as above.	
		95	<u>Sandstone</u> , as above.	
650	690	90	<u>Shale</u> , white-light gray, very bentonitic.	
		10	<u>Sandstone</u> , white, fine.	

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 Well Shell-Hall #1  
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FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
690	700	70 30	<u>Shale</u> , as above. <u>Sandstone</u> , white, loose grains, very fine-course.	
700	760	100	Mud, white, bentonitic, loose, fine grained <u>Sandstone</u> intermixed.	
760	800	100	<u>Shale</u> , gray-green, trace loose fine grained white <u>Sandstone</u> .	
800	830	90 10	<u>Shale</u> , white-gray, in part bentonitic. <u>Sandstone</u> , white, loose, fine-medium.	
830	840	100	<u>Shale</u> , white-gray, very bentonitic.	
840	850	90 10	<u>Shale</u> , gray, in part bentonitic, carbonaceous. <u>Sandstone</u> , as above.	
850	880	75 25	<u>Shale</u> , gray, carbonaceous. <u>Sandstone</u> , white-light gray, very fine-fine.	
880	900	100	<u>Shale</u> , gray-light green.	
900	910	90 10	<u>Shale</u> , white-gray, in part bentonitic. <u>Sandstone</u> , white, loose, fine-medium.	
910	920	90 10	<u>Shale</u> , as above, more bentonitic. <u>Sandstone</u> , as above.	
920	950	90 10	<u>Shale</u> , white-gray, in part bentonitic. <u>Sandstone</u> , as above.	
950	990	75 25	<u>Shale</u> , gray. <u>Sandstone</u> , white, fine, well sorted.	
990	1000	100	<u>Shale</u> , white-gray, very bentonitic.	
1000	1010	90 10	<u>Shale</u> , white-gray, very bentonitic. <u>Sandstone</u> , gray, very fine.	
1010	1110		Skip.	
1110	1180	100	<u>Sandstone</u> , white, very fine, with sorted, very bentonitic, forms mud ball	
1180	1200	50 50	<u>Shale</u> , gray-white, bentonitic in part. <u>Sandstone</u> , as above.	
1200	1250	100	<u>Sandstone</u> , white, very fine, well sorted, very bentonitic, forms mud ball	
1250	1300	100	<u>Shale</u> , white-gray, bentonitic in part.	
1300	1350	100	<u>Shale</u> , gray, carbonaceous and bentonitic.	
1350	1370	100	<u>Shale</u> , gray, silty, (in part).	

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 Well Shell-Hall #1  
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FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
1400	1430	40 60	<u>Shale</u> , gray, silty in part. <u>Sandstone</u> , gray, very fine, well sorted, carbonaceous.	
1430	1500	15 85	<u>Shale</u> , as above. <u>Sandstone</u> , gray, very fine, well sorted carbonaceous.	
1500	1510	20 80	<u>Shale</u> , gray, silty in part. <u>Sandstone</u> , white-gray, very fine, well sorted, carbonaceous inclu	
1510	1530	50 50	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1530	1540	20 80	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1540	1550	70 30	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1550	1560	80 20	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1560	1580	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1580	1590	20 80	<u>Shale</u> , as above. <u>Sandstone</u> , gray, very fine, silty.	
1590	1600	30 70	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1600	1610	60 40	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1610	1620	10 90	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1620	1630	50 50	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1630	1640	30 70	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1640	1660	70 30	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1660	1690	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
1690	1700	30 70	<u>Shale</u> , as above. <u>Sandstone</u> , white-gray, very fine.	
1700	1710	50 50	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	

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FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
1710	1720	30	<u>Shale</u> , as above.	
		70	<u>Sandstone</u> , white, very fine, well sorted.	
1720	1730	80	<u>Shale</u> , gray brown.	
		20	<u>Sandstone</u> , as above.	
1730	1750	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
1750	1770	85	<u>Shale</u> , as above.	
		15	<u>Sandstone</u> , as above.	
1770	1790	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , white, very fine-fine, well sorted.	
1790	1800	40	<u>Shale</u> , as above.	
		60	<u>Sandstone</u> , as above.	
1800	1880	100	<u>Sandstone</u> , white-light brown gray, very fine-fine, well sorted, appears porous and permeable abundant loose grains.	
1880	1890	20	<u>Shale</u> , light gray, very bentonitic.	
		80	<u>Sandstone</u> , as above.	
			<u>Samples poor.</u>	
1890	1910	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above.	
1910	1920	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above.	
1920	1940	30	<u>Shale</u> , as above.	
		70	<u>Sandstone</u> , as above.	
1940	1970	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above.	
1970	2000	100	<u>Shale</u> , dark brown.	
2000	2070	100	<u>Shale</u> , gray-gray green.	
2070	2090	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , white, fine, loose.	
2090	2100	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
2100	2110		Skip	
2110	2120	90	<u>Shale</u> , gray-gray green.	
		10	<u>Sandstone</u> , as above.	

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FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
2120	2140	30	<u>Shale</u> , as above.	
		70	<u>Sandstone</u> , white, fine, well sorted, friable.	
2140	2150	100	<u>Sandstone</u> , as above.	
2150	2160	40	<u>Shale</u> , gray.	
		60	<u>Sandstone</u> , as above.	
2160	2190	100	<u>Sandstone</u> , as above.	
2190	2200	60	<u>Shale</u> , gray.	
		40	<u>Sandstone</u> , as above.	
2200	2210	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above.	
2210	2220	40	<u>Shale</u> , as above.	
		60	<u>Sandstone</u> , as above.	
2220	2230	20	<u>Shale</u> , as above.	
		80	<u>Sandstone</u> , as above.	
2230	2240	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above.	
2240	2250	60	<u>Shale</u> , gray.	
		40	<u>Sandstone</u> , white, fine, friable.	
2250	2260	75	<u>Shale</u> , as above.	
		25	<u>Sandstone</u> , as above.	
2260	2270	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
2270	2300	65	<u>Shale</u> , as above.	
		35	<u>Sandstone</u> , as above.	
2300	2310	70	<u>Shale</u> , gray.	
		30	<u>Sandstone</u> , white, fine-very fine, well sorted, friable.	
2310	2320	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
2320	2345	100	<u>Shale</u> , as above.	
2345	2360	100	<u>Shale</u> , as above, trace <u>Coal</u> .	
2360	2370	10	<u>Shale</u> , as above.	
		90	<u>Sandstone</u> , white, fine, well sorted, friable.	
2370	2400	90	<u>Shale</u> , gray.	
		10	<u>Sandstone</u> , as above.	

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FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
2400	2410	60	<u>Shale</u> , gray.	
		40	<u>Sandstone</u> , white, fine-very fine, friable.	
2410	2420	75	<u>Shale</u> , as above.	
		25	<u>Sandstone</u> , as above.	
2420	2430	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
2430	2440	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above.	
2440	2460	90	<u>Shale</u> , gray, trace <u>Coal</u> .	
		10	<u>Sandstone</u> , as above.	
2460	2470	85	<u>Shale</u> , as above.	
		5	<u>Coal</u> .	
		10	<u>Sandstone</u> , as above.	
2470	2490	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
2490	2500	75	<u>Shale</u> , as above.	
		5	<u>Coal</u> .	
		20	<u>Sandstone</u> , as above.	
2500	2560	100	<u>Shale</u> , gray-brown.	
2560	2570	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , white, fine, calcareous.	
2570	2590	100	<u>Shale</u> , as above.	
2590	2600	40	<u>Shale</u> , as above.	
		60	<u>Sandstone</u> , gray-white, very fine, calcareous.	
2600	2660	100	<u>Shale</u> , as above.	
2660	2670	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , white-light brown, fine, well sorted, well cemented tight, <u>30% uniform yellow white Fluorescence, Cut Fluorescence when crushed.</u>	
2670	2680	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above, <u>10% Fluorescence &amp; Cut Fluorescence as above.</u>	
2680	2700	100	<u>Shale</u> , as above.	
2700	2710	100	<u>Shale</u> , as above.	
2710	2720	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, no Fluorescence.	

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FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED <u>NOT</u>
2720	2740	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
2740	2760	60 40	<u>Shale</u> , as above. <u>Sandstone</u> , tan, very fine, hard, tight.	
2760	2810	100	<u>Shale</u> , as above.	
2810	2820	100	<u>Shale</u> , brown, gray.	
2820	2830	60 40	<u>Shale</u> , as above. <u>Sandstone</u> , white, fine, finely sorted, well cemented calcareous.	
2830	2840	80 20	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
2840	2850	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
2850	2860	60 40	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
2860	2880	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
2880	2890	100	<u>Shale</u> , as above.	
2890	2900	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
2900	2910	80 20	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
2910	2920	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
2920	2930	70 30	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
2930	2940	100	<u>Shale</u> , as above.	
2940	2950	10 90	<u>Coal</u> . <u>Shale</u> , as above.	
2950	2980	100	<u>Shale</u> , as above.	
2980	2990	85 15	<u>Shale</u> , as above, trace <u>Coal</u> . <u>Sandstone</u> , white, very fine, tight.	
2990	3000	80 20	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3000	3010	90 10	<u>Shale</u> , gray brown. <u>Sandstone</u> , as above.	



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 Well Shell-Hall #1  
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FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
3010	3020	100	<u>Shale</u> , as above, trace <u>Coal</u> .	
3020	3030	95	<u>Shale</u> , as above, no <u>Coal</u> .	
		5	<u>Sandstone</u> , as above.	
3030	3040	75	<u>Shale</u> , as above, trace <u>Coal</u> .	
		25	<u>Sandstone</u> , as above.	
3040	3050	70	<u>Shale</u> , as above, no <u>Coal</u> .	
		30	<u>Sandstone</u> , as above.	
3050	3060	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , gray brown, very fine.	
3060	3070	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , white gray, very fine.	
3070	3080	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
3080	3090	80	<u>Shale</u> , as above, trace <u>Coal</u> .	
		20	<u>Sandstone</u> , as above.	
3090	3100	80	<u>Shale</u> , as above, no <u>Coal</u> .	
		20	<u>Sandstone</u> , gray white, fine-very fine.	
3100	3110	20	<u>Shale</u> , gray.	
		80	<u>Sandstone</u> , white, fine-very fine, tight, angular.	
3110	3120	10	<u>Shale</u> , as above.	
		90	<u>Sandstone</u> , as above.	
3120	3130	20	<u>Shale</u> , as above.	
		80	<u>Sandstone</u> , as above.	
3130	3140	20	<u>Coal</u> .	
		70	<u>Shale</u> , gray.	
		10	<u>Sandstone</u> , as above.	
3140	3150	5	<u>Coal</u> .	
		85	<u>Shale</u> , gray.	
		10	<u>Sandstone</u> , as above.	
3150	3160	80	<u>Shale</u> , gray.	
		20	<u>Sandstone</u> , as above.	
3160	3200	90	<u>Shale</u> , gray.	
		10	<u>Sandstone</u> , as above.	
3200	3215	95	<u>Shale</u> , gray.	
		5	<u>Sandstone</u> , white, fine-very fine.	

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FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
3215	3220	95 5	<u>Shale</u> , gray, trace <u>Coal</u> . <u>Sandstone</u> , as above.	
3220	3250	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3250	3270	30 70	<u>Shale</u> , gray. <u>Sandstone</u> , white-gray, fine-very fine, tight.	
3270	3280	60 40	<u>Shale</u> , gray. <u>Sandstone</u> , as above.	
3280	3300	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , with trace uniform yellow. <u>Fluorescence</u> , pale milky white <u>Cut Fluorescence after crushing in 3290-3300'</u> .	
3300	3310	85 15	<u>Shale</u> , gray, trace <u>Coal</u> . <u>Sandstone</u> , white, fine-very fine, with 10% spot yellow <u>Fluorescence</u> , pale milky white. <u>Cut Fluorescence after crushing</u> .	
3310	3320	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above, with 5% <u>Fluorescence</u> & <u>Cut Fluorescence</u> , as above.	
3320	3330	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above, with trace <u>Fluorescence</u> & <u>Cut Fluorescence</u> , as above.	
3330	3340	85 15	<u>Shale</u> , as above. <u>Sandstone</u> , white-gray, fine-very fine.	
3340	3350	75 25	<u>Shale</u> , as above. <u>Sandstone</u> , gray, brown, fine-very fine, hard, tight.	
3350	3360	80 20	<u>Shale</u> , as above. <u>Sandstone</u> , white, fine-very fine.	
3360	3370	50 50	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3370	3380	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3380	3400	40 60	<u>Shale</u> , as above. <u>Sandstone</u> , as above, hard, tight.	
3400	3410	90 10	<u>Shale</u> , gray. <u>Sandstone</u> , white-gray, fine-very fine.	
3410	3420	85 15	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3420	3430	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	

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FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
3430	3440	80 20	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3440	3460	70 30	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3460	3470	85 15	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3470	3480	95 5	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3480	3500	85 15	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3500	3520	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3520	3560	100	<u>Shale</u> , as above.	
3560	3570	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3570	3590	100	<u>Shale</u> , as above.	
3590	3600	85 15	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3600	3610	100	<u>Shale</u> , as above.	
3610	3640	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3640	3650	100	<u>Shale</u> , as above.	
3650	3670	85 15	<u>Shale</u> , as above. <u>Sandstone</u> , white-gray, very fine, tight.	
3670	3680	80 20	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3680	3700	100	<u>Shale</u> , as above.	
3700	3710	85 15	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3710	3750	100	<u>Shale</u> , as above.	
3750	3800	90 10	<u>Shale</u> , gray. <u>Sandstone</u> , white-gray, fine to very fine.	

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 Well Shell- Hall #1  
 Field or Area Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
3800	3810	90 10	<u>Shale</u> , medium-dark gray, silty. <u>Sandstone</u> , as above.	
3810	3850	100	<u>Shale</u> , as above.	
3850	3860	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3860	3870		Skip.	
3870	3880	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3880	3890	50 50	<u>Shale</u> , as above. <u>Sandstone</u> , medium gray, medium, slightly calcareous.	
3890	3900	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3900	3940	80 20	<u>Shale</u> , medium-dark gray, silty. <u>Sandstone</u> , medium gray, slightly calcareous.	
3940	3970	90 10	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3970	3980	80 20	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
3980	3990	45 55	<u>Shale</u> , as above. <u>Sandstone</u> , gray, fine-medium, slightly pyritic.	
3990	4000	70 30	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
4000	4020	80 20	<u>Shale</u> , medium-dark gray. <u>Sandstone</u> , gray, fine-medium.	
4020	4030	60 40	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
4030	4040	70 30	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
4040	4050	50 50	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
4050	4060	60 40	<u>Shale</u> , as above. <u>Sandstone</u> , as above.	
4060	4070		Skip.	
4070	4080	60 40	<u>Shale</u> , as above. <u>Sandstone</u> , gray, fine-very fine.	

## DITCH SAMPLES

Examined by \_\_\_\_\_ to \_\_\_\_\_  
\_\_\_\_\_ to \_\_\_\_\_Well Shell-Hall #1  
Field or Area Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED <u>Not</u>
4080	4100	100	<u>Shale</u> , as above.	
4100	4120		Skip.	
4120	4150	100	<u>Shale</u> , gray.	
			<u>Samples very poor.</u>	
4150	4160	30	<u>Shale</u> , as above.	
		70	<u>Sandstone</u> , white-gray, very fine-silty, hard, tight, with trace pale yellow, spot - <u>uniform</u> Fluorescence, very pale milky white Cut Fluorescence after crushing.	
4160	4170	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above, with 5% Fluorescence and Cut Fluorescence as above.	
4170	4180	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , as above, 5% Fluorescence and Cut Fluorescence as above.	
4180	4190	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above, with trace Fluorescence and Cut Fluorescence as above	
4190	4200	20	<u>Shale</u> , as above.	
		80	<u>Sandstone</u> , as above, with trace Fluorescence and Cut Fluorescence as above	
4200	4210	50	<u>Shale</u> , gray.	
		50	<u>Sandstone</u> , white-gray, very fine-silty, hard, tight, with trace pale yellow spot - <u>uniform</u> Fluorescence, very pale milky white Cut Fluorescence after crushing.	
4210	4220	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, with trace Fluorescence and Cut Fluorescence as above	
4220	4230	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, with 2% Fluorescence and Cut Fluorescence as above.	
4230	4240	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above, with trace Fluorescence and Cut Fluorescence as above	
4240	4250	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, with trace Fluorescence and Cut Fluorescence as above	
4250	4260	75	<u>Shale</u> , as above.	
		25	<u>Sandstone</u> , as above, with trace Fluorescence and Cut Fluorescence.	
4260	4270	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, with trace Fluorescence and Cut Fluorescence.	
4270	4290	75	<u>Shale</u> , as above.	
		25	<u>Sandstone</u> , as above, with trace Fluorescence and Cut Fluorescence.	
4290	4300	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, with trace Fluorescence and Cut Fluorescence.	

## DITCH SAMPLES

 Examined by \_\_\_\_\_ to \_\_\_\_\_  
 \_\_\_\_\_ to \_\_\_\_\_

 Well Shell- Hall #1  
 Field or Area Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
4300	4310	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , white-light gray, very fine, some fine <u>Shale</u> particles, <u>with 2% spot - uniform pale yellow Fluorescence, milky white Cut Fluorescence after crushing.</u>	
4310	4320	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, <u>with 20% Fluorescence and Cut Fluorescence as above.</u>	
4320	4330	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, <u>with 10% Fluorescence and Cut Fluorescence.</u>	
4330	4340		Skip.	
4340	4350	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, tight, <u>with 5% Fluorescence and Cut Fluorescence as above.</u>	
4350	4360	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, <u>with 2 % Fluorescence and Cut Fluorescence as above.</u>	
4360	4370	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, <u>with trace Fluorescence and Cut Fluorescence as above</u>	
4370	4380	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above, <u>with trace Fluorescence and Cut Fluorescence, as above</u>	
4380	4390	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above, no Fluorescence or Cut Fluorescence.	
4390	4410	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, tight.	
			<u>Samples questionable.</u>	
4410	4420	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
4420	4430	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
4430	4440	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
4440	4450	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , white gray, very fine-fine, tight.	
4450	4460	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
4460	4470	75	<u>Shale</u> , as above.	
		25	<u>Sandstone</u> , as above.	

## DITCH SAMPLES

 Examined by \_\_\_\_\_ to \_\_\_\_\_  
 \_\_\_\_\_ to \_\_\_\_\_

 Well \_\_\_\_\_ Shell- Hall #1  
 Field or Area \_\_\_\_\_ Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
4470	4500	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , white-light gray, very fine, fine <u>Shale</u> particles, some carbonaceous, mottled inclusions, tight, <u>with trace spot pale yellow Fluorescence</u> , very pale milky white Cut <u>Fluorescence after crushing</u> .	
4500	4520	70	<u>Shale</u> , gray.	
		30	<u>Sandstone</u> , white-gray, very fine, in part very dirty with carbonaceous material. <u>4510-20' trace pale spot yellow Fluorescence</u> , pale milky white Cut <u>Flouresence after crushing</u> .	
4520	4530	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above.	
4530	4540	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , as above, <u>trace Fluorescence and Cut Fluorescence as above</u> .	
4540	4550	100	<u>Sandstone</u> , as above, <u>2% Fluorescence and Cut Fluorescence as above</u> .	
4550	4560	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above, <u>trace Fluorescence and Cut Fluorescence as above</u> .	
4560	4565	40	<u>Shale</u> , as above.	
		60	<u>Sandstone</u> , as above, no Fluorescence.	
4565	4580		Skip. Depth correction 7'.	
4580	4590	30	<u>Shale</u> , as above.	
		70	<u>Sandstone</u> , as above, <u>trace Fluorescence and Cut Fluorescence as above</u> .	
4590	4600	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above, trace Fluorescence, as above.	
4600	4610	70	<u>Shale</u> , as above, sandy.	
		30	<u>Sandstone</u> , as above, no Fluorescence.	
4610	4620	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
4620	4630	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
4630	4640	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
4640	4650	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
4650	4670	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above.	
4670	4690	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	

## DITCH SAMPLES

 Examined by \_\_\_\_\_ to \_\_\_\_\_  
 \_\_\_\_\_ to \_\_\_\_\_

 Well Shell-Hall #1  
 Field or Area Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
4690	4700	100	<u>Shale</u> , as above, very sandy.	
4700	4720	100	<u>Shale</u> , as above, sandy.	
4720	4730	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , gray, very dirty.	
4730	4740		Skip.	
4740	4750	90	<u>Shale</u> , as above, silty.	
		10	<u>Sandstone</u> , light gray, very fine.	
4750	4770	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
4770	4800	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
4800	4820	70	<u>Shale</u> , dark gray, silty.	
		30	<u>Sandstone</u> , light gray, very fine-fine.	
4820	4830	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
4830	4840		Skip.	
4840	4850	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
4850	4870	100	<u>Shale</u> , as above.	
4870	4880	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
4880	4900	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
4900	4910		Skip	
4910	4950	90	<u>Shale</u> , as above, silty, with thin <u>Sandstone</u> stringers.	
		10	<u>Sandstone</u> , light gray, very fine-fine.	
4950	4980	95	<u>Shale</u> , as above.	
		5	<u>Sandstone</u> , as above.	
4980	4990	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
4990	5000	95	<u>Shale</u> , as above.	
		5	<u>Sandstone</u> , as above.	



## DITCH SAMPLES

 Examined by \_\_\_\_\_ to \_\_\_\_\_  
 \_\_\_\_\_ to \_\_\_\_\_

 Well Shell-Hall #1  
 Field or Area Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
5000	5010	90	<u>Shale</u> , dark gray-black, calcareous.	
		10	<u>Sandstone</u> , light-medium gray, very fine.	
5010	5020	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
5020	5030	35	<u>Shale</u> , as above.	
		35	<u>Siltstone</u> , light-dark gray, calcareous.	
		30	<u>Sandstone</u> , as above, calcareous, well sorted.	
5030	5050	40	<u>Shale</u> , as above.	
		40	<u>Siltstone</u> , as above.	
		20	<u>Sandstone</u> , as above, <u>silty in part, very fine, calcareous, trace pale yellow-green spot Fluorescence</u> , Cut Fluorescence when crushed.	
5050	5060	40	<u>Shale</u> , as above.	
		40	<u>Siltstone</u> , as above.	
		20	<u>Sandstone</u> , as above, <u>3% uniform brown yellow green Fluorescence</u> , Cut Fluorescence when crushed.	
5060	5070	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , as above, <u>3% spot white yellow green Fluorescence</u> .	
5070	5080	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , as above, <u>trace Fluorescence as above</u> .	
5080	5100	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above, <u>trace Fluorescence as above</u> .	
5100	5110	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , light-medium gray, very fine, calcareous, silty, <u>5% pale yellow brown Fluorescence</u> .	
5110	5120	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , as above, calcareous, very silty, <u>3% Fluorescence as above</u> .	
5120	5140	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, <u>trace Fluorescence as above</u> .	
5140	5150	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, glauconitic, <u>trace Fluorescence as above</u> .	
5150	5160	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, no Fluorescence.	
5160	5180	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above, <u>trace Fluorescence</u> .	
5180	5190	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, <u>trace Fluorescence</u> .	

## DITCH SAMPLES

 Examined by \_\_\_\_\_ to \_\_\_\_\_  
 \_\_\_\_\_ to \_\_\_\_\_

 Well Shell-Hall #1  
 Field or Area Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
5190	5200	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above, <u>trace Fluorescence</u> .	
5200	5210	70	<u>Shale</u> , as above, sandy, carbonaceous.	
		30	<u>Sandstone</u> , light-medium gray, very fine-fine, glauconitic in part.	
5210	5220	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, <u>trace dull yellow brown Fluorescence</u> , pale yellow <u>Cut Fluorescence</u> , when crushed.	
5220	5230	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, <u>4% Fluorescence and Cut Fluorescence as above</u> .	
5230	5240	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, <u>2% Fluorescence and Cut Fluorescence as above</u> .	
5240	5250	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, <u>trace Fluorescence and Cut Fluorescence as above</u> .	
5250	5260	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , as above, <u>trace Fluorescence and Cut Fluorescence</u> .	
5260	5270	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above, <u>2% spot yellow Fluorescence and Cut Fluorescence when crushed</u> .	
5270	5280	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above, no Fluorescence.	
5280	5300	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above.	
5300	5320	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
5320	5330	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above.	
5330	5340	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above.	
5340	5350	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , light-medium gray, very fine-fine, glauconitic in part, hard.	
5350	5360	40	<u>Shale</u> , as above.	
		60	<u>Sandstone</u> , as above.	
5360	5380	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above.	

## DITCH SAMPLES

Examined by \_\_\_\_\_ to \_\_\_\_\_  
 \_\_\_\_\_ to \_\_\_\_\_

Well Shell-Hall #1  
 Field or Area Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED NOT
5380	5390	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , as above.	
5390	5400	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above.	
5400	5410	90	<u>Shale</u> , dark gray.	
		10	<u>Sandstone</u> , as above.	
5410	5420		Skip.	
5420	5430	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
5430	5440	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
5440	5450	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above.	
5450	5460	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
5460	5480	75	<u>Shale</u> , as above.	
		25	<u>Sandstone</u> , as above.	
5480	5490	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
5490	5500	95	<u>Shale</u> , as above.	
		5	<u>Sandstone</u> , as above.	
5500	5510	80	<u>Shale</u> , as above, carbonaceous.	
		20	<u>Sandstone</u> , light-medium gray, very fine.	
5510	5520	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , as above.	
5520	5530	40	<u>Shale</u> , as above.	
		60	<u>Sandstone</u> , gray, very fine-fine, hard, tight.	
5530	5550	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , as above.	
5550	5560	20	<u>Shale</u> , as above.	
		80	<u>Sandstone</u> , as above, occasional medium, slightly friable grains.	
5560	5580	30	<u>Shale</u> , as above.	
		70	<u>Sandstone</u> , as above.	

## DITCH SAMPLES

 Examined by \_\_\_\_\_ to \_\_\_\_\_  
 \_\_\_\_\_ to \_\_\_\_\_

 Well Shell-Hall #1  
 Field or Area Divide

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED <u>NOT</u>
5580	5590	40	<u>Shale</u> , as above.	
		60	<u>Sandstone</u> , as above.	
5590	5600	80	<u>Shale</u> , as above.	
		20	<u>Sandstone</u> , as above.	
5600	5620	50	<u>Shale</u> , dark gray, carbonaceous.	
		50	<u>Sandstone</u> , white-light gray, very fine-fine, in part calcareous.	
5620	5640	60	<u>Shale</u> , as above.	
		40	<u>Sandstone</u> , as above.	
5640	5650	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above.	
5650	5660	50	<u>Shale</u> , as above.	
		50	<u>Sandstone</u> , as above, with abundant loose sub angular-sub round, coarse grains.	
5660	5680	30	<u>Shale</u> , as above.	
		70	<u>Sandstone</u> , as above.	