

HOLE NO: X-3 SHEET 1 OF      DATE: 11/7/75 LOGGED BY: D. Stonbruck COLLAR:      TD:     

[illegible]

**COMMENTS:**

HOLE NO: X-3 SHEET 2 OF        DATE: 1-17-75 LOGGED BY: D. STARBUCK COLLAR:        TD:         
1-18-75 E.C. GENTZLER

DEPTH	±MM	FRX	PP	ASSAY 10 20 30 40	GAL TON	REC. EAGD	LITH.	DESCRIPTION
350			.15					MIL SHALE - MEDIUM BED TO 350.40
51					357.90			OIL SAT TUFFAC. SS. (350.40-.48)
52								OIL SHALE LOW GRADE CALCAREOUS
53			.20	.90				
54			.83					
55			.78					
56			.80					
57								
58			.29					SS (358.29-.45)
59	+110		.39					
360			.78					OILY SILTSTONE LENS (360.10-.18)
61			.65					
62			.20					CALCAREOUS TUFF. S.S. (362.05-.35)
63			.83					OIL SAT. TUFF. S.S. (363.42-.46)
64								" " " " (365.42-.47)
65			.40	.64				
66			.59					
67								
68			.94					
69	+100		.70					
370			.86					
71								TUFF. WAVY CALCAREOUS SS BED
72								(371.45-.94)
73								
74			.00					
75			.98					OIL SHALE, gray-brown, v. finely lami. hard -
76								competent with sand thin, intermittent inclusions of tuff
77			.19					DARK SILTSTONE LENS (377.15-.20)
78			.68					
79	+90							
380			.44					SS TUFF. DR GR - brown, unevenly bedded, interfingering
81			.40					with sh. at top & sandstone at bottom - somewhat
82			.18					with horizon. (380.20-.60)
83			.14					
84			.15					SHALE, lt-med. Brn, silty, med. calc., v. hard
385			.97					containing thin, altered, tuff. ss (gen. oil impregnated)
386			.92					v. hard & thickly lami.
387								
388			.77					
389	+80							
390			.01	.98				
391								
392								
393								
394								
395			.28	.32				
396			.56					
397			.67					
398			.96					
399	+70		.28	.97				UPPER WAVY BED (399.00-400.60) Centerted

AS TRIM-H. IT DID NOT GRIND - LEG

COMMENTS: U1, A1, H1, A2, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19, S20, S21, S22, S23, S24, S25, S26, S27, S28, S29, S30, S31, S32, S33, S34, S35, S36, S37, S38, S39, S40, S41, S42, S43, S44, S45, S46, S47, S48, S49, S50, S51, S52, S53, S54, S55, S56, S57, S58, S59, S60, S61, S62, S63, S64, S65, S66, S67, S68, S69, S70, S71, S72, S73, S74, S75, S76, S77, S78, S79, S80, S81, S82, S83, S84, S85, S86, S87, S88, S89, S90, S91, S92, S93, S94, S95, S96, S97, S98, S99, S100, S101, S102, S103, S104, S105, S106, S107, S108, S109, S110, S111, S112, S113, S114, S115, S116, S117, S118, S119, S120, S121, S122, S123, S124, S125, S126, S127, S128, S129, S130, S131, S132, S133, S134, S135, S136, S137, S138, S139, S140, S141, S142, S143, S144, S145, S146, S147, S148, S149, S150, S151, S152, S153, S154, S155, S156, S157, S158, S159, S160, S161, S162, S163, S164, S165, S166, S167, S168, S169, S170, S171, S172, S173, S174, S175, S176, S177, S178, S179, S180, 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S1725, S1726, S1727, S1728, S1729, S1730, S1731, S1732, S1733, S1734, S1735, S173

HOLE NO: X-3 SHEET 3 OF        DATE: 18 JAN '75 LOGGED BY: EC GENTZLER/COLLAR:        TD:       

DEPTH	±MM	FRX	PP	ASSAY 10 20 30 40	GAL/ TON	REC. ERGQ	LITH.	DESCRIPTION
400			.32,60				+	Oil impreg. & mine Gilsbach
401			.34				+	
402			.60					
403			.07,72					
404			.77				+	
405								
406			.46				+	
407							+	
408			.00				+	
409	+60		.61				+	
410							+	
411			.69				+	
412							+	SILTSTONE-MARLSTONE, lt-med Brn, thinly lam.
413			.57				+	to thinly bedded, slightly dipping bedding w/
414			.70				+	some microfracturing, hard, med to v. Calc.
415							+	occ. layers of py-hem. & a few zones of
416			.15				+	low grade oil enrichment. Also. occ. vugs
417			.33				+	of dolomite (?)
418							+	
419	+50						+	
420							+	
421			.33				+	
422			.85				+	
423							+	
424			.26				+	
425			.64				+	
426				.6			+	
427			.92				+	
428			.87	.92			+	
429	+40			.86			+	
430							+	
431							+	
432			.58				+	
433				.56			+	
434			.55				+	
435			.75	.53			+	
436			.67	.95			+	
437			.32	.67			+	
438			.33	.15			+	
439	-30		.07	.62			+	
440			.06	.25			+	
441			.48	.83			+	
442			.14	.50	.86		+	
443			.65				+	
444			.07	.63			+	
445							+	
446			.91				+	
447			.35				+	
448			.23	.84			+	
449	+20						+	

SILTSTONE-MARLSTONE, lt-med Brn, thinly lam.  
to thinly bedded, slightly dipping bedding w/  
some microfracturing, hard, med to v. Calc.  
occ. layers of py-hem. & a few zones of  
low grade oil enrichment. Also. occ. vugs  
of dolomite (?)

CUT 29,74" - REC 30,05" - 18 JAN '75 - 7:20 AM

LOW TO MEDIUM GRADE SHALE  
CREAM TO DARK BROWN - AREA  
OF HIGH GRADE SHALE. "BLACK  
SAND LAYERS" (OIL SATURATED  
ARE FOUND IN RUN.

HIGHER GRADE SHALE DRXERTORL

COMMENTS:

DEPTH	±MM	FRX	PP	ASSAY 10 20 30 40	GAL TON	REC. ERQD	LITH.	DESCRIPTION
450			.12					
51								
52			.21 .93					MEDIUM GRADE SHALE
53			.467 .98					
54			.42 .94					
55								455.00 - 457.00 INNER BEDDED SHALES AND
56								SANDS - PREDOMINANTLY SANDS
57			.66					SOME ZONES OIL SATURATED
58								
59	+10							
460			.94					MEDIUM GRADE SHALE
61								
62			.88					
63								
64			.60					
65								LOW GRADE SHALE
66			.72					TO MEDIUM
67								
68			.74					
69	0							469.52 - .92 MAHOGANY MARKE
470								oil SATURATED SAND
71								
72								
73			.18 .37 .85					MEDIUM TO HIGH GRADE - BROWN
74			.10 .43					TO BLACK MAHOGANY ZONE
75			.88					INCLUDED IN THIS RUN.
76								
77			.61 .99					
78			.13 .25					
79	-10							
480								
81			.83					
82	-13		.34 .40 .48					
83			.21 .62 .87					
84			.89					
85			.22					
86			.24 .92					
87			.42					
88			.76					
89	-20		.55					
490								
91								
92								
93								
94			.50 .82					
95								
96								
97			.03 .10 .12					SANDSTONE - SILTSTONE (497.62 - .72)
98			.40					
99	-30		.94					

COMMENTS:

HOLE NO: X-3 SHEET 5 OF DATE: 1-18-75 LOGGED BY: D. Storbuck COLLAR: TD:  
1-19-75 E. S. GENTLE

DEPTH	±MM	FRX	PP	ASSAY 10 20 30 40	GAL TON	REC ERQD	LITH.	DESCRIPTION
500								OIL SHALE - MEDIUM TO HIGH GRADE
1								"
2								" CALCAROUS
3			.57					"
4			.97					"
5			.20	.93				"
6			.34					"
7								"
8			.38					SS (508.38-.41)
9	-40		.78					OIL SHALE - MEDIUM GRADE
510			.10	.85				"
11			.13					"
12			.10					"
13			.15					"
14								"
15								"
16								"
17			.23					"
18								"
19	-50							"
520								"
21			.12					"
22			.21					OIL SHALE - MED GRD - CALCAROUS
23			.73					"
24			.30					"
25			.29					"
26			.26	.53				"
27			.60					OIL SHALE - LOW GRD CALCAROUS
28			.10	.53	.92			SS - SLATSTONE 528.58-.67
29	-60		.36	.53	.91			
530			.37	.65				
31			.25					
32			.00					
33			.09	.53				SS W/ OILY BANDS (533.53-.9)
534			.30	.92	534.60			SILTSTONE - MARLSTONE, V.H - med Brn, acc Gray
535			.46					thinly lam., hard, med to v. calc., w/ some
536								low grade oil enrichment
537			.70					
538								
539			.15					
540			.81					
541								
542			.09	.29				
543			.73	.91				
544			.26	.57				
545			.69	.81				
546			.48	.85				
547			.30	.55				
548			.11	.80				
549			.02	.32	.93			

COMMENTS:

CUT 30.50' REC 30.10' J STARBUCK  
 8 PM 1-18-75

30.50' CUT - 30.50' REC  
 1:00 PM - 1-19-75 - ECG

TUFF SS (546.72-547.53) Coarse-grd, oil sat. w/ Gibbsite; containing Marlstone lenses.

TUFF SS (548.38-550.00) Coarse-grd, alt., oozing to

HOLE NO: X-3 SHEET 6 OF DATE: 19 JAN '75 LOGGED BY: E.C. GENTLE COLLAR: TD:

DEPTH	±MM	FRX	PP	ASSAY 10 20 30 40	GAL TON	REC. GRQD	LITH.	DESCRIPTION
550								
551			.76					
552								
553			.09					(553.37-40) Tiny Nahcolite(?) aggs in sh.
554		.73	.73					
555		.81	.39					
556			.52					
557			.39					
558			.56					
559			.34					
560		.72	.72					
561		.85	.76					
562								
563								
564			.78.89					
565			.29					Tuff ss. (564.12-.29), oil sat.
566								
567								Slightly distort. bed, & bed. offset <del>at</del> .03' along
568								healed 55° FRX.
569	-100		.82					
570								LIMESTONE, lt Gr. Brn, med grnd, thinly lam.,
571								dolomitic in zones, low grade oil in zone
572			.17					& containing occ. oil bearing tuff. ss. layers.
573			.08					Also pods & lam of py-hem & occ. vugs of
574								earthy nahcolite (?)
575			.00.73					
576			.00.57					Tuff ss (576.98-577.10) & (577.32-.57) v. altered,
577								oil stained, & containing nahcolite (?)
578		.37	.57.72					
579								
580			.44					
581								Intra-formational breccia, (581.92-582.00)
582			.25					Vugs of earthy Nahcolite(?) & oil.
583			.16					thin lam. of py-hem.
584								
585		.51	.08.83					
586			.60.82					
587		.88	.90.96					MASSIVE PY-HEM layer (587.90-.96)
588								arkose tan coated vert. frx.
589	-120		.74					
590								
591								

COMMENTS: