

Drill Hole No. MDDH-26

Date: 11/14/77

Bearing: N30°E Inclination: 45°N

Drilled By: Boyles Bros. Ralph Jex

Coordinates: North 629 203.20 East 1,449,776.55

Logged By: Lynn A. Burton - Ferryl C. Gale
Rotary 0-109.0'

Elevation: 1197.37

Total Depth: 177.2 Core 109.0-177.2'

DEPTH		%	SAMPLE	SAMPLE	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO	RECOVERY	NUMBER	INTERVAL	Sp. Gr.	BaSO ₄		
0.0	5.0							Case hole. Colluvium, no sample.
5.0	8.0	90%	-8	3.0'				Colluvium. Buff to red buff clays.
8.0	15.0	90%	-15	8.0'				Colluvium. Buff to red buff clays.
15.0	20.0	90%	-20	5.0'				Buff to tan clays.
20.0	25.0	85%	-25	5.0'				Buff to gray clays (altered shale)
25.0	30.0	85%	-30	5.0'				Buff to tan clays
30.0	35.0	80%	-35	5.0'				Buff to tan clays.
35.0	40.0	90%	-40	5.0'				Buff to tan clays w/ gray shale particles.
40.0	45.0	90%	-45	5.0'				Buff to gray clays w/ gray shale
45.0	50.0	90%	-50	5.0'				Buff to tan clays, little shale.
50.0	55.0	90%	-55	5.0'				Buff to tan clay & shale.
55.0	60.0	90%	-60	5.0'				Buff to tan clay, pink tones, little clay.
60.0	65.0	90%	-65	5.0'				Gray and pink clay and shale.
65.0	70.0	90%	-70	5.0'				Gray clay & shale w/ rust colored thin beds.
70.0	75.0	90%	-75	5.0'				Gray to black shale, minor amt. clay.
75.0	80.0	90%	-80	5.0'				Black shale.
80.0	85.0	80%	-85	5.0'				Gray to black shale, possibly thin bed
								barite @ 82'. (some water encountered)
85.0	90.0	85%	-90	5.0'				Gray to black shale, possible thin barite
								beds.

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FROM	TO	RECOVERY	NUMBER	INTERVAL	Sp. Gr.	BaSO ₄		
90.0	95.0	30%	-95					Black shale, large amt. water w/ poor sample.
95.0	100.0	80%	-100					Black to gray shale
100.0	105.0	50%	-105					Black to gray shale
			Switch to core: lost circulation. No sample 105-109					
11/15/77 109.0	119.0	100%	-	10.0				Dense black shale w/ pyrite on bedding
								planes @ 112' turning gray & less
								consolidated w/ black striations.
								109'-bedding dipping at 77°S.
								115'-bedding dipping at 80°S.
								118'-bedding dipping at 83°S.
119.0	127.0	100%	-	8.0'				119-121.6-Gray shale w/sandy appearance,
								some white qtz clastics on bedding & veinlets.
								121.6-127.0-Dense black shale becoming
								striated w/ light gray @ 125'.
								122'-bedding dipping 81°S.
127.0	132.5		-	3.6'				127.0-129.0-Black to gray crumbly shale
								w/ white qtz clastics.
								129-130.5- Black crumbly shale
								130'-bedding dipping 78°S.

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FROM	TO				Sp. Gr.	BaSO ₄	
							130.5-132.5- Black shale w/ nodular barite & white qtz veinlets, appx. 25-35% nodules replaced w/ barite.
132.5	132.8			.1'			Crumbly black shale w/ isolated nodules.
132.8	133.2			.3'			Black shale w/ 60-80% nodules
133.2	133.7	100%		.5'			Black shale w/ isolated nodules.
133.7	137.1	100%		3.4'			Black shale w/ 40-60% barite nodules.
							Striated along bedding planes, isolated qtz. veinlets along fractures.
							135'-bedding dipping 74°S.
137.1	138.7	100%					Qtz. veinlets along fractures.
138.7	141.8	100%					Barite nodules becoming less prevalent (Est. 20-40%) w/ barren interbedded black shales (2-4" in thickness)
141.8	142.5	100%		.7			Dense black shale w/ isolated nodules on bedding planes, sandy texture.
							142.0- bedding dipping 88°S.
142.5	150.5			4.5			Black crumbly shale, highly fractured w/ possible fault @ 144.5 w/ pyrite on bedding plane.

Drill Hole No. MDDH 26 Cont.

Date: _____

Bearing: _____ Inclination: _____

Drilled By: _____

Coordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

DEPTH		% RECOVERY	SAMPLE NUMBER	SAMPLE INTERVAL	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO				Sp. Gr.	BaSO ₄		
150.5	160.5			4.0				Lost probably 1st 4-5' of black crumbly shale. Est. 153.5'- black shale w/ barite nodules, crumbly w/ est. 40%.
								154.0'-154.5- Black shale w/ < 20% nodules)
								154.5-160.5 Nodules decreasing w/ more sandy appearance, massive barite (90% replaced) 157' bedding dipping 72°S.
160.5	162.5			2.0'				Dense black & gray interbedded shales & barite, barite massive (est. 70-90% replaced) w/ qtz. clastics on fractures.
								162' bedding dipping 83°S.
162.5	164.7			2.2'				Dense black shale w/ isolated nodules replaced in upper section partially w/ barite & pyrite, nodules, decreasing at bottom.
164.7	169.3			2.6'				Dense black shale w/ thin barite bed (.5' thick) @ 166', isolated nodules & thin qtz. stringer.
169.3	169.7	100%		.6				Dense black shale
169.7	172.7			2.2				Dense black shale w/ pyrite filled nodules.

DRILL HOLE LOG

Drill Hole No. MDDH-26 cont.

Date: _____

Bearing: _____ Inclination: _____

Drilled By: _____

Coordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

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Samples Sent to Houston

MH-26

<u>Sample</u>	<u>Footage</u>	<u>Sp. Gravity</u>	<u>% Barite</u>
MH-26-2716	130.0-133.0		
26-2717	133.0-136.8		
26-2718	136.8-141.2		
26-2719	141.2-143.2		
26-2720	150.5-157.2		
26-2721-	157.2-162.5		
26-2722	162.5-164.0		
26-2723	168.0-169.0		

INDIVIDUAL CORE ANALYSES BY INTERVALS

SAMPLE	LOG #	DEPTH	INTERVAL	A.P. SPECIFIC GRAVITY	CALCULAT % BaSO ₄
MDDH-26					
#2716	1200	130.0-133.0	3.0	3.493	54.80
2717	1201	133.0-136.8	3.8	3.783	70.65
2718	1202	136.8-141.2	4.4	3.731	67.99
2719	1203	141.2-143.2	2.0	3.704	66.58
-	-	143.2-150.5	7.3	2.761	0.00
2720	1204	150.5-157.2	6.7	3.848	73.88
2721	1205	157.2-162.5	5.3	3.972	79.74
2722	1206	162.5-164.0	1.5	2.857	8.76
-	-	164.0-168.0	4.0	2.761	0.00
2723	1207	168.0-169.0	<u>1.0</u>	3.240	38.65
				—	—
			TOTAL 39.0		
			Weighted Average	3.442	51.74