

Drill Hole No. MDDH-20

Date: 10-22-77

Bearing: N. 20° E. Inclination: 66° N.

Drilled By: Boyles Bros. : Ralph Jex

Coordinates: North 629,521.96 East 1,449,131.61

Logged By: Lynn Burton

Elevation: 1154.07

Total Depth: 146.0'

| DEPTH | | % | SAMPLE | SAMPLE | ANALYSES | | DESCRIPTION OF MATERIAL DRILLED |
|-------|------|----------|--------|---------------------------|----------|-------------------|--|
| FROM | TO | RECOVERY | NUMBER | INTERVAL | Sp. Gr. | BaSO ₄ | |
| 0.0 | 10.0 | - | - | - | | | Colluvium, no sample |
| 10.0 | 15.0 | 95% | -15 | 5.0' | | | Buff clay and shale w/ minor clastics |
| 15.0 | 20.0 | 95% | -20 | 5.0' | | | Buff shale w/ minor clastics |
| 20.0 | 25.0 | 95% | -25 | 5.0' | | | Buff shale turning gray-black @ 22' |
| 25.0 | 30.0 | 95% | -30 | 5.0' | | | Gray-black shale |
| 30.0 | 35.0 | 95% | -35 | 5.0' | | | Black shale |
| 35.0 | 40.0 | 95% | -40 | 5.0' | | | " " |
| 40.0 | 45.0 | 90% | -45 | 5.0' | | | " " |
| 45.0 | 50.0 | 90% | -50 | 5.0' | | | Black shale w/ trace white quartz |
| 50.0 | 55.0 | 90% | -55 | 5.0' | | | Dense black shale |
| 55.0 | 60.0 | 80% | -60 | 5.0' | | | " " " (water encountered) |
| 60.0 | 65.0 | 60% | -65 | 5.0' | | | " " " |
| 65.0 | 70.0 | 50% | -70 | 5.0' | | | " " " w/ sand fraction |
| 70.0 | 75.0 | 40% | -75 | 5.0' | | | " " " trace white quartz |
| 75.0 | 80.0 | 30% | -80 | 5.0' | | | " " " |
| | | | | (switch to core drilling) | | | |
| 80.0 | 86.0 | 55% | | 3.3' | | | Dense black shale w/ gray oolitic-like striations, crumbly w/sandy appearance on bedding planes, minor amt. pyrite |

DRILL HOLE LOG

Drill Hole No. MDDH-20

Date: 10/26/77

Bearing: _____ Inclination: 66° (N 20°E)

Drilled By: Boyles Bros: Ralph Jex

Coordinates: North _____ East _____

Logged By: Lynn Burton

Elevation: _____

Total Depth: 146.0

| DEPTH | | % | SAMPLE | SAMPLE | ANALYSES | | DESCRIPTION OF MATERIAL DRILLED |
|---------------|-------|----------|---------|----------|----------|-------------------|--|
| FROM | TO | RECOVERY | NUMBER | INTERVAL | Sp. Gr. | BaSO ₄ | |
| 86.0 | 88.0 | | 86-88 | .9' | | | Black to gray shale, dense w/ lighter interbedded striations. |
| 88.0 | 93.0 | | 88-93 | 4.8' | | | Black shale w/ interbedded gray sandy shale (gray forming striations) |
| 93.0 | 95.5 | | 93-95.5 | 2.0' | | | Black shale w/ interbedded gray |
| 95.5 | 97.0 | | 95-97 | 1.2' | | | Black shale until 76.2' then gray S.S. w/ white quartz veinlets along bedding. |
| 10/27/77 97.0 | 104.0 | | 97-104 | 5.2' | | | Black shale, crumbly w/ some quartz & sandy material on bedding seams, dense shale @ 102.5' w/ isolated nodules (appx. < 5%) then 102.5' back to crumbly shale w/ no clastics. |
| 104.0 | 111.0 | | 104-111 | 3.8' | | | 104.0'-105.5' Gray & black interbedded shale, well indurated w/ sandy texture on bedding planes. |
| | | | | | | | 105.5 -109.5' Crumbly black shale |
| | | | | | | | 109.5-111.0' Gray shale-silt stone, massively bedded. |
| 111.0 | 116.0 | | 111-116 | 3.9' | | | 111.0'-115.0' Black crumbly shale w/ sandy bedding planes @ base. |

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Drilled By: Boyles Bros: Ralph Jex

Coordinates: North _____ East _____

Logged By: Lynn Burton

Elevation: _____

Total Depth: 146.0

| DEPTH | | % RECOVERY | SAMPLE NUMBER | SAMPLE INTERVAL | ANALYSES | | DESCRIPTION OF MATERIAL DRILLED |
|-------|-------|---------------|------------------|--------------------|----------|-------------------|---|
| FROM | TO | | | | Sp. Gr. | BaSO ₄ | |
| 111.0 | 116.0 | | 111-116 | 3.9' | | | 115.0'-116.0' Well indurated gray shale oolitic appearance on bedding planes w/ pyrite accumulations, nodules appearing in last .2' but clay or shale filled w/ fine pyrite disseminated in them. |
| 116.0 | 120.0 | 100% | 116-120 | 4.0' | | | 116.0'-117.5' Gray shale w/ interbedded thin black shale seams, clay filled oolitic-like nodules. |
| | | | | | | | 117.5-118.5 Crumbly black shale w/ cleavage along bedding. |
| | | | | | | | 118.5-119.5 Thick bedded gray shale w/ pyrite in bedding seams & in isolated nodules (<10%) |
| 120.0 | 122.0 | | | 1.8' | | | Gray clayey shale blacky @ end. |
| 122.0 | 129.0 | 100% | | 7.0 | | | Well indurated gray-black shale, bedding planes well defined w/ smooth breakage. |
| 129.0 | 134.0 | 100% | | 5.0 | | | Well indurated gray shale w/ black stringers beginning @ 129.5 to 131.5. Darker gray shale massive w/ little bedding. |
| | | | | | | | |
| | | | | | | | |

DRILL HOLE LOG

Drill Hole No. MDDH-20

Date: 10/28/77

Bearing: N 20°E Inclination: 66°

Drilled By: Boyles Bros. Ralph Jex

Coordinates: North _____ East _____

Logged By: Lynn Burton

Elevation: _____

Total Depth: 146.0

[illegible]

Samples sent to Houston

MH-20

| <u>Samples</u> | <u>Footage</u> | <u>Sp. Gravity</u> | <u>% Barite</u> |
|----------------|----------------|--------------------|-----------------|
| MH-20-2715 | 115.5-119.0 | | |

FANCY HILL - DIAMOND DRILL HOLES
INDIVIDUAL CORE ANALYSES BY INTERVALS

| SAMPLE | LOG # | DEPTH | INTERVAL | CALCULATED SPECIFIC GRAVITY | X-RAY % BaSO ₄ |
|---------|----------|-------------|----------|-----------------------------------|------------------------------|
| MDDH 20 | | | | | |
| 2715 | 1600 | 115.5-119.0 | 3.5 | 2.801 | 3.7 |