SAMPLE LOG

DRILL HOLE: Hiller #28

PROP. OWNER: John Hiller

DRILL CONTRACTOR: Lamampco
DRILL OPERATOR: Jim Miller
DATE STARTED: 1-8-80

CASING LEFT IN HOLE:

LOC:

LOGGED BY: MRG ELEV: 846.52

DATE COMPLETED: 1-10-80

TOTAL DEPTH: 300'

30 - 40 - <u>Limestone</u>, gray, silty 50%; <u>U.V. poor show</u>; shale, black, silty, trace of pyrite 50%

40 - 50 - <u>Limestone</u>, light gray, massive crystaline, fossiliferous, locally carbonaceous 100%; <u>U.V. poor show</u>

50 - 60 - <u>Limestone</u>, gray, silty, fossiliferous 80%; <u>U.V. poor show</u>; shale, black, silty, slightly calcareous 20%

60 - 70 - Shale, dark brown-black, silty, carbonaceous 90%; siltstone, gray, carbonaceous and micaceous 10%

70 - 80 - Siltstone, gray, carbonaceous and micaceous, trace of pyrite 95%; shale, black, silty 10% 5%

black, silty 19% 5% 80 - 90 - Shale, gray, silty, locally carbonaceous material being replaced by pyrite 100%

90 - 120 - Shale, gray, silty, carbonaceous

120 - 130 - Shale, gray, silty, carbonaceous 95%; siltstone, brown 5%

130 - 140 - Shale, black, silty, very calcareous, trace of pyrite 80%; shale, gray, silty 15%; coal fragments 5%

140 - 150 - Limestone, black, silty, fossiliferous 80%; shale, light gray, very silty, locally carbonaceous 20%

150 - 160 - Shale, black, silty 85%; <u>limestone</u>, gray-brown, silty, locally fossiliferous 15%

160 - 164 - Sandstone, brown-gray, fine grained, carbonaceous and micaceous, locally carbonaceous material being replaced by pyrite 80%; U.V. good show; shale, black, silty, very calcareous 20%

CORE #1 - 164 - 184

164.0 - 171.8 - Interlaminated shale, carbonaceous material and <u>sandstone</u>. Oil ooze in sand intervals 164.0 - 164.1, 164.3 - 165.9, 166.4 - 166.6, ½" at 166.9, 167.1 - 167.9, 168.4 - 168.9, 169.1 - 170.9, 171.1 - 171.8.

174.5 - 184.0 - Sandstone, fine grained, brown. Shale break 174.5 - 175.2. Shale rip clast 182.1 3/4" by 1/8", shale break 1" 183.7 - 183.8, ½" at 183.9. Shale rip clasts 183.8 1" by 3/4" and 189.0 2" by ½".

Core loss 171.8 - 174.5) ground in core barrel ≈ 1" loss each foot 174 - 183. Interval cozes oil 175.1 - 184. No evidence of water on freshly broken surfaces. Pit show poor - rainbow-light cover.

CORE # 2 - 184 - 202.6

184.0 - 202.6 - Sandstone, fine grained, brown. Siltstone 184.0 - 185.5. Shaley carbonaceous sand 186.4 - 186.9, 187.5 - 188.4, 189.1 - 190.2, 192.7 - 194.2. All with slight oil ooze. Shale rip clasts 194.8 - 194.9 1" by 3.4". Dark carbonaceous sands 195.1 - 195.4, 196.3 - 197.5, 199.1 - 200.6, 200.1 - 202.6.

No oil ooze present in siltstone. Oil ooze in sand from 185.4 - 195.1. First presence of water on freshly broken surface 192.8. Pit show improved from Core #1, light film on all surface.

- 205 210 Sandstone, fine grained, gray and brown, micaceous and carbonaceous; 100%; U.V. good show
- 210 215 Sandstone, fine grained, gray and brown, micaceous and carbonaceous 100%; U.V. without fluid poor show with good show
- 215 220 Sandstone, fine grained, gray and brown, micaceous and carbonaceous 100%; U.V. without fluid fair show with good show
- 220 225 Sandstone, fine grained, gray and brown, micaceous and carbonaceous 100%; U.V. fair show
- 225 230 Siltstone, gray, micaceous and carbonaceous 95%; sandstone, fine grained, brown, micaceous and carbonaceous 5%; U.V. poor show
- 230 240 Siltstone, gray, micaceous locally very carbonaceous 75%; sandstone, fine grained, brown, micaceous and carbonaceous 25%; U.V. fair show
- 240 250 Shale, gray, very silty, carbonaceous 80%; sandstone, brown, fine grained, micaceous and carbonaceous 20%; <u>U.V. fair show</u>
- 250 260 Shale, gray, very silty, carbonaceous 100%
- 260 270 Shale, black, silty, very calcareous, trace of pyrite 70%; shale, gray, silty, 25%; <u>limestone</u>, buff 5%
- 270 280 Siltstone, greenish, carbonaceous 45%; shale, black, silty, very calcareous 35%; shale, gray, silty 15%; <u>limestone</u>, buff, fossiliferous 5%
- 280 290 Siltstone, greenish, local concentrations of sub-rounded light brown quartz grains (1-2MM) 80%; shale, black, silty, calcareous 15%; chert, brown, locally carbonaceous 5%
- 290 300 Siltstone, light gray-greenish, local concentrations of light brown, sub-rounded quartz grains (1-3MM) 80%; shale, gray, silty 10%; shale, black, silty, calcareous 10%