

FILE NO.: 970531-1  
DATE: June 2, 1997  
ANALYSTS: WH, DL, SB

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FORMATION :  
FIELD :  
LOCATION :

UMC PETROLEUM CORPORATION  
SHUGART FEDERAL "22" # 1  
EDDY COUNTY, NEW MEXICO

## DEAN STARK EXTRACTION

| SAMPLE NO. | DEPTH<br>ft | GRAIN<br>DENSITY | POROSITY<br>% | PERM<br>mD | SATURATIONS |      | GAS<br>UNITS | FLUORESCENCE<br>% | LITHOLOGY                                             |
|------------|-------------|------------------|---------------|------------|-------------|------|--------------|-------------------|-------------------------------------------------------|
|            |             |                  |               |            | Sw          | So   |              |                   |                                                       |
| 1          | 3,616.0     | 2.68             | 13.5          | 1.18       | 46.9        | 12.7 | 129          | 100               | Brt gld Ss gy vfg sb rnd-ang                          |
| 2          | 3,617.0     | 2.70             | 15.1          | 3.75       | 32.7        | 16.7 | 235          | 100               | Brt gld Ss gy vfg sb rnd                              |
| 3          | 3,618.0     | 2.67             | 16.4          | 6.66       | 36.0        | 15.3 | 283          | 100               | Brt gld Ss gy vfg rnd-sb rnd                          |
| 4          | 3,619.0     | 2.69             | 12.9          | 0.91       | 50.1        | 11.6 | 234          | 80                | Brt gld lam Ss gy vfg sb rnd-ang ssity lam s/p        |
| 5          | 3,620.0     | 2.64             | 15.2          | 3.12       | 37.2        | 20.5 | 460          | 80                | DI gld-gld lam Ss gy vfg sb rnd-ang slty lam s/p carb |
| 6          | 3,621.0     | 2.66             | 12.7          | 1.06       | 48.9        | 10.7 | 339          | 90                | DI gld lam Ss gy vfg sb rnd-ang ssity lam s/p carb    |
| 7          | 3,629.0     | 2.68             | 10.5          | 0.16       | 51.0        | 16.4 | 82           | 60                | Brt yl sp Ss gy vfg sb rnd-ang                        |
| 8          | 3,630.0     | 2.67             | 11.4          | 0.67       | 49.6        | 11.5 | 123          | 90                | Gld Ss gy vfg sb rnd-ang                              |
| 9          | 3,672.0     | 2.67             | 11.8          | 0.72       | 54.3        | 6.5  | 99           | 80                | Brt gld-yl lam Ss gy vfg sb rnd-ang ssity lam s/p     |
| 10         | 3,673.0     | 2.65             | 20.1          | tbfa       | 43.1        | 10.8 | 401          | 100               | Brt gld Ss gy f-vfg rnd-sb rnd                        |
| 11         | 3,674.0     | 2.68             | 9.9           | 0.21       | 51.8        | 13.7 | 62           | 30                | Brt yl sp Ss gy vfg ang                               |
| 12         | 3,729.0     | 2.69             | 9.7           | 0.04       | 64.0        | 0.0  | 8            | 0                 | Ss gy vfg ang dol slty lam s/p                        |
| 13         | 3,730.0     | 2.71             | 8.9           | 0.06       | 54.5        | 6.1  | 15           | 10                | Brt yl lam Ss gy vfg ang dol slty lam s/p             |
| 14         | 3,731.0     | 2.73             | 7.1           | 0.28       | 40.1        | 7.8  | 96           | 100               | Brt yl-gld lam Ss gy vfg sb rnd-ang dol slty s/p      |
| 15         | 3,732.0     | 2.72             | 5.7           | 0.12       | 40.9        | 14.2 | 72           | 80                | Brt yl sp Ss gy vfg ang dol ssity                     |
| 16         | 3,889.0     | 2.68             | 8.7           | 0.24       | 59.0        | 0.0  | 0            | 0                 | Tr dl mf Ss gy-bf vfg ang dol ssity                   |
| 17         | 3,890.0     | 2.70             | 8.6           | 0.27       | 50.4        | 0.0  | 0            | 0                 | Tr dl mf Ss gy-bf vfg ang dol ssity                   |
| 18         | 3,891.0     | 2.69             | 6.7           | 0.07       | 59.7        | 0.0  | 0            | 0                 | Tr dl mf Ss gy-bf vfg ang dol ssity                   |
| 19         | 3,892.0     | 2.68             | 7.6           | 0.13       | 60.5        | 0.0  | 0            | 0                 | Tr dl mf Ss gy-bf vfg ang dol ssity                   |
| 20         | 3,967.0     | 2.66             | 11.7          | 0.49       | 68.9        | 0.0  | 0            | 0                 | Ss gy vfg sb rnd-ang                                  |

