

EMPIRE OIL & REFG.
Hamm No. 1.

SEC. 24 T. 8 R. 19W.
SW NW NW

15-103-03930

Total Depth. 3598
Comm. 10-7-36 Comp. 12-21-36
Shot or Treated.
Contractor. R.J.Wixson.
Issued. 2-13-37

County Rocks.

CASING.

15 1/8" 715' Pulled.
12 3/8" 1105' UR 1388' pulled 1310'
10" 2400' UR 2835 Pulled.
8 1/4" 3180' UR 3236 Pulled.
6 5/8" 3440' Pulled.



Elevation.

Production. DRY.

Figures Indicate Bottom of Formations.

| | | | | | |
|----------------------|------|----------------------|------|----------------------------|------|
| surface | 10 | red rock & shells | 1620 | shale blue | 2632 |
| lime | 45 | red rock | 1630 | shale | 2648 |
| mud blue | 265 | shale green | 1675 | lime | 2650 |
| mud blk | 340 | red rock | 1680 | shale blue | 2660 |
| lime | 380 | slate dark | 1695 | slate blue | 2662 |
| mud brown | 475 | shale light | 1700 | lime | 2665 |
| sand | 535 | shale brown | 1725 | slate blue | 2670 |
| lime | 550 | shale blue | 1735 | shale & shells | 2695 |
| sand | 565 | shale red | 1740 | shale blue | 2700 |
| sdv shale | 595 | salt | 1820 | red rock | 2715 |
| pink rock | 600 | shale | 1825 | shale blue | 2735 |
| mud blue | 650 | shale red | 1850 | shale brown | 2740 |
| shale blue | 675 | lime | 1855 | sdv lime | 2750 |
| sand | 690 | shale blue | 1860 | slate blue | 2765 |
| mud blue | 695 | slate blue | 1865 | lime (caving) | 2775 |
| iron | 700 | red rock | 1875 | lime | 2785 |
| slate blue & iron | 705 | lime | 1890 | slate blue | 2795 |
| slate blue | 710 | shale blue | 1900 | lime white | 2805 |
| lime | 715 | shale grey | 1920 | lime | 2835 |
| red rock | 725 | lime | 1940 | slate blue | 2840 |
| water sand | 745 | red rock | 1965 | lime | 2845 |
| sand | 750 | lime | 1980 | slate blue | 2855 |
| slate blue | 770 | shale grey | 1985 | shale blue | 2870 |
| sand | 775 | shale brown | 1990 | lime | 2880 |
| shale blue | 785 | red rock | 2010 | slate blue | 2900 |
| mud blue | 800 | lime grey | 2015 | lime | 2905 |
| lime | 810 | lime | 2035 | red rock | 2910 |
| slate blue | 830 | red rock | 2075 | lime and shale | 2940 |
| shale blue | 835 | lime | 2170 | shale blk | 2960 |
| slate white | 860 | red rock | 2175 | lime | 2965 |
| sand | 865 | lime | 2185 | lime broken | 2970 |
| slate white | 880 | red rock | 2190 | lime white | 2975 |
| sand water | 915 | lime | 2250 | shale light | 2980 |
| slate light | 920 | lime broken | 2255 | lime | 3070 |
| sdv shale light | 1005 | red rock (caving) | 2265 | slate blue | 3075 |
| sand | 1030 | lime hole caving | 2285 | lime | 3080 |
| red rock | 1040 | red rock | 2290 | shale Variegated | 3085 |
| sand | 1075 | lime | 2305 | lime | 3150 |
| slate | 1100 | lime broken | 2330 | shale blue green | 3160 |
| slate blue | 1105 | lime grey | 2350 | red rock | 3170 |
| hole caving. | | lime | 2375 | lime | 3175 |
| red rock | 1140 | red rock hole caving | 2395 | sand line corr 3175 = 3180 | |
| shale red | 1230 | lime | 2403 | lime | 3187 |
| sand red | 1260 | Hole caving 2403 | | shale blue | 3192 |
| shale red | 1335 | red rock | 2410 | lime | 3200 |
| red rock | 1345 | lime | 2435 | lime brown | 3205 |
| shale red | 1370 | shale blue | 2440 | lime | 3220 |
| red rock | 1375 | lime | 2485 | slate blue | 3225 |
| GYP | 1378 | red rock | 2500 | lime white | 3230 |
| SIM 1378 equals 1389 | | lime | 2525 | lime | 3240 |
| anhydrite | 1440 | slate | 2535 | 2535 | 2635 |
| red rock | 1455 | lime | 2545 | shale blue | 3245 |
| red rock&lime shells | 1500 | slate | 2550 | lime | 3263 |
| red rock | 1505 | lime | 2570 | shale blue | 3268 |
| shale blue | 1525 | shale blue | 2575 | lime | 3315 |
| red rock | 1575 | lime | 2600 | shale blue | 3320 |
| lime | 1580 | shale light | 2615 | | |
| red rock | 1590 | lime | 2625 | | |

OVER

Empire Oil and Refg. Ham No. 1
24-8-19W
Rocks County.

| | |
|------------------|------|
| lime | 3370 |
| S.O. 3365-70 | |
| shale | 3385 |
| lime | 3393 |
| lime and shale | 3398 |
| shale blk | 3405 |
| lime | 3412 |
| shale red blue | 3440 |
| hole caving 3440 | |
| shale | 3445 |
| lime | 3450 |
| conglomerate | 3522 |
| Erosional Sil | 3575 |
| Solid Sil lime | 3598 |

Total Depth.

| | |
|---------------------|------|
| Top Oswald | 3176 |
| Top cherty cong. | 3452 |
| Top Eros. sil lime | 3522 |
| Top solid Sil. lime | 3575 |
| Total Depth | 3598 |

1500' of water from 3591-3598

WATER RECORD.

| | |
|--------------------|-----------|
| HFW | 475 |
| HFW | 560-65 |
| HFW | 725' |
| 8 BWPHR | 1190-1210 |
| HFW | 1230 |
| 1 BW | 2360-70 |
| 1 $\frac{1}{2}$ BW | 2460-70 |
| 1 BW | 2740-45 |
| 1000' wtr | 2800-05 |
| 1 BWPHR | 2900-05 |
| 1 BWPHR | 2965-70 |
| 1 BWPHR | 3280-85 |
| 1 BWPHR | 3545-49 |
| 1500' wtr | 3591-98 |

3176
1378
1798