

EMPIRE OIL & REFG. CO.
Crawford No. 10

SEC. 2 T. 14 R. 15W.
NE NW SW
330' SL 997.9 of W $\frac{1}{2}$ cor.

Total Depth. 3308
Comm. 10-29-36 Comp. 1-13-37
Shot or Treated.
Contractor. Herman Trapp.
Issued 4-10-37

County Russell.

CASING.

20" 21'
15 $\frac{1}{2}$ " 385' UR 597'
12 $\frac{1}{2}$ " 905'
10" 2519' UR 2712
8 $\frac{1}{2}$ " 2985' UR 3059'
7" 3283' UR 3303'



Elevation.

Production. Pot. 728 B.

Figures Indicate Bottom of Formations.

cellar	8	lime	1950	hole caving 2795-2820
post rock	25	red rock	1965	lime 2997
shale blue	100	lime	1985	shale 3001
shale	200	shale blue	1990	lime 3010
shale sdy	220	lime	2020	shale 3015
shale	265	shale blue	2025	lime Dodge 3030
red rock	275	red rock	2030	red rock 3040
shale blue	280	lime	2075	shale blue 3051
sand	345	red rock	2085	lime Oswald 3055
shale blue	390	lime	2155	Top Oswald 3051 SLM
sand	410	red rock	2165	oil & water 3070-75
shale blue	430	lime	2215	water coming from behind
sand	460	shale and shells	2225	pipe. Increase in oil
shale blue	500	red rock	2230	3085-88
sdv shale	510	lime	2260	21/3 B.O. PH at 3090
red sand	535	shale blue	2270	water broke in bailing
red rock	582	lime	2305	lime 3117
sand	593	shale	2310	shale 3120
red rock	635	lime	2315	lime 3180
shale red	695	shale and shells	2330	shale blue 3185
red sand	700	lime	2340	lime 3200
shale red	760	shale and shells	2360	shale 3205
sand red	780	lime	2370	lime 3225
shale red	805	shale blue	2380	red rock 3228
red rock	865	lime	2385	lime caving 3240
shale red	897	shale blue	2395	lime 3255
anhydrite	920	lime	2410	shale 3260
lime	945	shale	2415	lime 3298
red rock	1100	lime	2425	shale 3302
shale brown	1105	shale	2430	lime 3306
shale blue	1135	lime	2450	SLM Corr. 3306 equals 3304
red rock	1195	shale	2460	lime broken 3307
shale blue	1275	shale blue	2515	sand 3308
salt	1575	lime	2540	Total Depth.
shale	1580	shale blue	2570	
lime	1605	lime	2585	Top Gorham sand 3307
shale blue	1615	shale	2590	Penn 1'
lime	1630	lime	2600	T.D. 3308
shale blue	1635	shale	2605	800' of oil 2 3/4 hrs.
shale and shells	1645	lime	2610	1700' of oil 4 3/4 hrs.
lime	1680	shale blue	2620	2350' of oil 6 1/2 hrs.
shale	1685	lime	2630	WATER RECORD.
red rock	1705	shale	2640	5 BWPFR 200'
lime	1725	lime	2650	HFV 290'
shale & shells	1770	shale and shells	2680	8 BW 440'
lime	1785	shale	2705	5 BW 700'
oil 1780		lime	2715	9 BW 760-780
lime	1790	shale	2730	HFV 2975-80
red rock	1810	lime	2760	1/3 3155-60
shale & shells	1840	shale blue	2765	
lime	1850	lime Topcka	2770	
shale and shells	1895	lime	2840	