015

Cities Service Oil Co. Risley #9
980' N. & 1650' W. of Center (NE SW NW)
Sec. 16-29S-4E, Butler County, Kansas
Elev: 1204' R.T.B. (5' above G.L.) (L. & S.)
Note: All measurements from R.T.B.

Drlg. Comm: 10-12-58
Drlg. Comp: 10-16-58
Drld. By: White & Ellis Drilling Co.
Drill In: White & Ellis Drilling Co.

10' samples were saved from 1000' to 1750'.
5' samples were saved from 1750' to T.D.

1' drilling time log was kept from 1000' to T.D.

10-12-58 10 3/4" surface casing cem. @ 221' w/150 sax.

Circ. for samples:
1832' 45 min.
1878' 45 min.

Steel Line Measurement:	Straight Hole Survey:	
475' = 475'	475'	O.K.
1005' = 1005'	1005'	O.K.
1476' = 1476'	1476'	O.K.
1852' = 1852' (drill pipe strap)		

Cuttings description corrected to drilling time log.

1000-1030	Sh., gy., vy. sdy., mica.
1090	Ls., gy.-tan, med.-fn. xn., med. por., N.S.O.
1188	Sh., gy.
1200	Ls., lt. gy.-tan, med. xn., med. por., shy., N.S.O.
1224	Sh., gy., mica.
1246	Ls., lt. gy., fn. xn., fair por., N.S.O.
1267	Sh., gy.
1277	Ls., lt. gy., fn. xn., med. por., cherty, N.S.O.
1348	Sh., gy.
1354	Ls., lt. gy., fn. xn., low por., cherty, N.S.O.
1372	Sh., gy.
1392	Ls., wh.-lt. gy., fn.-med. xn., med. por., cherty, N.S.O.
1419	Sh., gy. & blk.
1455	Ls., gy.-tan, fn. xn., low por., cherty, N.S.O.
1504	Sh., gy.
1545	Ls., lt. gy., fn.-med. xn., med. por., sl. cherty, N.S.O.
1550	Sh., blk.
1552	Ls., brn., dense, low por., N.S.O.
1574	Sh., gy. & blk.
1588	Ls., lt. gy., fn.-med. xn., med. por., sl. cherty, N.S.O.
1608	Sh., gy., sdy., mica.
1612	Sd., clear-gy., fn. grs., ang., mica., N.S.O.
1630	Sdy. sh., mica.
1690	Sh., gy.
1702	Sd., clear-gy., fn. grs., ang., mica., N.S.O.
1726	Sh., gy.
1764	Sd., gy., fn. grs., ang., loosely cem., mica., N.S.O.
1827	Sh., gy., mica., sl. sdy., pyr.
1833	Ls., tan, fn.-med. xn., low-fair por., some sl. cherty, foss., N.S.O.

Core #1 1833-1873' (40') (Rec. 38.15')

1833-1837 Ls., lt. gy.-tan, fn. xn., low por., N.S.O.
1837-1839 Ls., gy.-tan, fn.-med. xn., med. por., scat. crse. xn., w/sl. odor, foss., S.S. dead oil.
1839-1841½ Ls., gy.-tan, med.-crse. xn., med.-good por., w/scat. vuggy por., vy. foss., fair odor, F.S. dead oil.
1841½-1846 Ls., tan, med.-crse. xn., med.-good por., w/scat. vuggy por., foss., good odor, S.F.O. (Poss. wtr.)
1846-1850 Ls., tan, med.-crse. xn., med.-good por., w/scat. vuggy por., gran., good rhoms, foss., good odor, bleeding core, G.S.F.O.
1850-1853 Ls., gy.-tan, fair-med. xn., low por., silty, V.S.S.O.
1853-1864 Ls., tan, med.-crse. xn., good por., w/scat. vuggy por., gran., good rhoms, vy. foss., good odor, bleeding core, G.S.F.O.
1864-1868 Ls., gy.-tan, med.-crse. xn., med.-good por., w/scat. vuggy por., good rhoms, silty, F.S.O. (Poss. wtr.)
1868-1871.15 Ls., gy.-tan, fn.-med. xn., low por., vy. shy., no odor, N.S.O.
1871.15-1873 Lost core (1.85'), est. sh., gy.
End of Core #1

1873-1878 Sh., gy. (Drilled w/bit.)

R.T.D. 1878'

Interpretation of formations from cuttings, time & Schlumberger logs.

Interpretation of Howard Ls.

Top Howard Ls.	1030' (+174)	
T.	60'	No oil noted.
Base	1090' (+114)	

Interpretation of Topeka Ls.

Top Topeka Ls.	1188' (+16)	
T.	58'	No oil noted.
Base	1246' (-42)	

Interpretation of Deer Creek Ls.

Top Deer Creek Ls.	1267' (-63)	
T.	58'	No oil noted.
Base	1325' (-121)	

Interpretation of Lecompton Ls.

Top Lecompton Ls.	1348' (-144)	
T.	107'	No oil noted.
Base	1455' (-251)	

Interpretation of Oread Ls.

Top Oread Ls.	1504' (-300)	
(Heebner Sh. 1545-1550')		
T.	84'	No oil noted.
Base Oread	1588' (-384)	

Interpretation of Douglas Sd.

Top Douglas Sd.	1608' (-404)	
T.	156'	No oil noted.
Base	1764' (-560)	

Interpretation of Lansing Ls.
Top Lansing Ls. 1827' (-623)
Pen. 51' G.S.F.O.

Core #1 1833-1873' Top show of oil @ 1841½'.
Best Pay Zones: 1846-1850'
1853-1864'
Base show of oil @ 1868'.
See core description above.

R.T.D. 1878'

Ran Schlumberger Induction-Electrical Log & MicroLaterolog.
7" casing cem. @ 1878' w/100 sax. cem. @ 300 gals. cealment.

Drill In:

10-25-58 Drld. float & cement to 1872'.

26 Ran Lane Wells Radioactivity Log. Top of cem. 1220'. Perf. 1846-1850' w/25 shots. Bailed 1 gal. wtr. in 5 min. Bailed 1 gal. muddy wtr. in 13 min. Perf. 1854-1858' w/24 shots. No fluid in 28 min. Perf. 1858-1860' w/11 shots. Bailed 1 gal. muddy wtr. in 20 min. Perf. 1838-1840' w/12 shots. Rec. 1 gal. muddy wtr. in 19 min. 1½ gals. muddy wtr. w/sl. show oil in 10 min. Held vacuum on well 2 hrs. Rec. 5 gals. wtr. & trace oil in 30 min.

27 Bailed 63 gals. wtr. & 5½ gals. oil after setting 8 hrs. Bailer test - ½ gal. oil and 9 gals. wtr. in 1 hr. Ran 2 Lane Wells packers on 2" tubing to selectively az. 3 different zones.

28 Loaded hole w/91 bbls. oil - az. zone 1852 to 1860' w/250 gals. Dowell XH38 15% az. thru 2" tubing. Az. went in on vac. Zone 1842-1851' w/200 gals. Max. press. 400#, min. 100#, no breakdown press. Zone 1836-1847' w/50 gals. Max. press. 400#, min. 300#, no breakdown press. Swabbed back 81 bbls. oil (short 10 bbls.).

29 Swabbed 4 bbls. oil - 14 bbls. wtr. - 3 hrs. Ran tubing & rods. Pumped 12 bbls. oil - 21 bbls. wtr. - 14 hrs. P.O. (6 bbls. new oil)

30 Pumped 4 bbls. oil - 10 bbls. wtr. - 10 hrs. P.O. (from all zones) Pulled tubing & rods. Ran Lane Wells hook wall packer set @ 1852' to test lower zone 1854-1860'.

31 Pumped 0.4 bbls. oil - 8.4 bbls. wtr. - 12 hrs. P.O. (from lower zone)

11- 1-58 Set Baker Ret. cementer at 1852', press. up. Communications between perf. 1854-1860' and 1846-1850', could not squeeze perf. 1854-1860'. Let packer down to 1868', mix 15 sax. reg. cement and spot on bottom at 1872½', raised packer to 1850', washed out extra cement, lost 50% of circ. as cem. was coming out of casing head.

3 Ran S.L.M. 1810'. Top of cement 1810'. Drilled to 1863', cement hard over perf. 1854-1860', hole not making any fluid.

4 Perf. w/48 E. gun shots 1838-1850'. Rec. 7 gals. wtr. Perf. w/48 Kone shots 1838-1850'. Rec. 10 gals. wtr. w/trace oil in 10 min. Loaded hole w/oil and az. w/1500 gals. Max. press. 500#, min. 400#, over-flushed w/12 bbls. No breakdown press. S.I. press. 250#, flowed back, short 87 bbls. Pulled tubing. Total oil used 90 bbls.

5 Swabbed 95.25 bbls. oil - 78.75 bbls. wtr. - 24 hrs. (8¼ bbls. new oil). Last 4 hrs. - 2¼ bbls. oil - 12 bbls. wtr.

6 Pumped 20 bbls. oil - 53 bbls. wtr. - 16 hrs. Pounding.

Drill In: (cont'd.)
11- 9-58 Pumped 15 bbls. oil - 40½ bbls. wtr. - 23 hrs. P.O. Released cable tools.
25 Set pumping unit.
26 Placed on pump.
12- 3-58 Pumped 22 bbls. oil - 17 bbls. wtr. - 24 hrs. P.O.
12 " 20 " " - 10 " " - 23 "
State potential test effective 12-11-58.

Warren L. Morris
Geologist

2-10-59
nm