

WORKSHEET FOR CALCULATION OF ST. C COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Assigned 9-1-65

COMPANY Continental Oil Company LEASE Lockhart A-27 WELL NO. 5 DATE 1-21/1-28-66

LOCATION: Unit A Section 27 Township 21 Range 37

L 5800 H 5800 L/H 1.000 G.M.X. .642 % CO₂ 0 % N₂ 0 % H₂S 0

d ----- F_r .004904 GH 3724 P_{cr} 670 T_{cr} 372
1st. Rate 2nd. Rate 3rd. Rate 4th. Rate

LINE	1st Trial	2nd Trial	1st Trial	2nd Trial	1st Trial	2nd Trial	1st Trial	2nd Trial
1 Q _m	2.490	2.490	3.442	3.442	4.679	4.679	5.875	5.875
2 F _w (W.H. °R)	520	520	520	520	520	520	520	520
3 T _s (B.H. °R)	576	576	576	576	576	576	576	576
4 T = (L _w / T _s)	548	548	548	548	548	548	548	548
5 Z (Est.)	.828	.804	.815	.807	.812	.811	.817	.818
6 T _Z	453.7	440.6	446.6	442.2	445.0	444.4	447.7	448.3
7 GH/T _Z	8.208	8.452	8.339	8.422	8.369	8.380	8.318	8.307
8 e ⁻⁵ (Table XIV)	1.360	1.373	1.367	1.371	1.369	1.369	1.366	1.365
9 1-e ⁻⁵ (Table XIV)	.265	.272	.268	.271	.270	.270	.268	.267
10 P _t	1270.2	1270.2	1249.2	1249.2	1207.2	1207.2	1148.2	1148.2
11 P _t 2/1000	1613.4	1613.4	1560.5	1560.5	1457.3	1457.3	1318.4	1318.4
12 F _t (Table XV)	.004904	.004904	.004904	.004904	.004904	.004904	.004904	.004904
13 F _c = F _t T _Z	2.225	2.161	2.190	2.169	2.182	2.179	2.196	2.198
14 F _c Q _m	5.540	5.381	7.538	7.466	10.21	10.20	12.90	12.91
15 1/H (F _c Q _m) ²	30.69	28.96	56.82	55.74	104.2	104.0	166.4	166.7
16 1/H (F _c Q _m) ² (1-e ⁻⁵)	8.133	7.877	15.23	15.11	28.13	28.08	44.60	44.51
17 P _w ² = P _t ² + F _w	1621.5	1621.3	1575.7	1575.6	1485.4	1485.4	1363.0	1362.9
18 P _s ² = e ⁵ P _w ²	2205.2	2226.0	2154.0	2160.1	2033.5	2033.5	1861.9	1860.4
19 P _s	1485	1492	1468	1470	1426	1426	1365	1364
20 P = (P _s / 2)	1378	1381	1359	1360	1317	1317	1257	1256
21 P _{cr} = (P/P _{cr})	2.06	2.06	2.03	2.03	1.97	1.97	1.88	1.87
22 T _r = (T/T _{cr})	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
23 Z (Table XI)	.804	.804	.807	.807	.811	.811	.818	.818