

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES ~~(W_w or P_w)~~

Form C-122F
Adopted 9-1-65

FROM KNOWN BOTTOM HOLE PRESSURE ~~(P_b or P_s)~~

COMPANY The Superior Oil Co. LEASE Olson Federal WELL NO. 1 DATE 2-16-83

LOCATION: Unit J Section 35 Township 25s Range 34e

L 14275 H 14275 L/H 1.000 G mix .912 % CO₂ 1.536 % N₂ .914 % H₂S

GH 13019 P_{cr} 662 T_{cr} 461

LINE	1st	Rate	2nd	Rate	3rd	Rate	4th	Rate
1	T _w (W.H. °R)	534	534	534	534	534	534	534
2	T _s (B.H. °R)	677	677	677	677	677	677	677
3	T = $(\frac{T_w + T_s}{2})$	605.5	605.5	605.5	605.5	605.5	605.5	605.5
4	Z (Est.)	.629	.677	.632	.684	.633	.710	.709
5	T Z	380.9	409.9	382.7	414.2	383.3	429.9	429.3
6	GH/T Z	34.183	31.760	34.021	34.075	33.967	30.283	30.326
7	e ^S (Table X(IV))	3.603	3.290	3.582	3.589	3.574	3.113	3.118
8	P _f or P _s	1807.2	1807.2	2297.2	2297.2	2986.2	4105.2	410
9	P _f ² or P _s ²	3266.0	3266.0	5277.1	5277.1	8917.4	16852.7	16852.7
10	P _c ² = P _f ² /e ^S or P _w ² = P _s ² /e ^S	906.4	992.6	1473.4	1470.5	2494.9	5413.5	5404.8
11	P _c or P _w	952.0	996.3*	1213.9	1212.6*	1579.5*	2326.7	2324.8*
12	P = $(\frac{P_w + P_s}{2})$ or $(\frac{P_c + P_f}{2})$	1379.6	1401.7	1755.5	1754.9	2282.9	3215.9	3215.0
13	P _r = (P/P _{cr})	2.08	2.12	2.65	2.65	3.45	4.86	4.86
14	T _r = (T/T _{cr})	1.31	1.31	1.31	1.31	1.31	1.31	1.31
15	Z (Table XI)	677	677	630	630	630	630	630

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O.C.D.
HOBBS OFFICE