

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

C-122D
Revised 9-1-65

COMPANY EXXON LEASE Red Lake, Com WELL NO. 1 DATE 4-11-77

LOCATION: Unit L Section 6 Township 18 Range 27

9295 H 9295 L/H 1.000 G/M 1.618 % CO₂ % N₂ % H₂S

d 1.995 F_i 0.08331 GH 5744 P_{cf} 671 T_{cf} 362

LINE	RATE I	RATE II	RATE III	RATE IV		
1 Q _m	1.350	1.571	1.571	1.972	1.972	2.306
2 T _w (W.H. °R)	534	534	534	534	534	534
3 T _s (B.H. °R)	626	626	626	626	626	626
4 T = ($\frac{T_w + T_s}{2}$)	580	580	580	580	580	580
5 Z (Est.)	1.832	1.832	1.832	1.832	1.832	1.832
6 TZ	483	477	479	491	484	500
7 GH/TZ	11.903	15.047	11.846	11.692	11.860	11.489
8 e ^s (Table XIV)	1.5763	1.571	1.568	1.550	1.560	1.539
9 1-e ^s (Table XIV)	1.3601	1.3335	1.3621	1.3550	1.3540	1.3500
10 P _t	1.853.2	1.553.2	1.765.2	1.565.2	1.565.2	1.335.2
11 P _t ² /1000	3434.4	3434.4	3115.9	2449.9	2449.9	1782.8
12 F _t (Table XV)	0.08231	0.08231	0.08231	0.08231	0.08231	0.08231
13 F _c = F _t TZ	8.797	2.192	8.840	8.734	8.956	8.829
14 F _c Q _m	11.877	11.734	13.887	13.721	17.662	17.411
15 L/H (F _c Q _m) ²	141.056	137.685	192.860	188.274	311.930	303.154
16 F _w = L/H (F _c Q _m) ² (1-e ^s)	50.788	50.051	69.176	68.178	110.727	108.840
17 P _w ² = P _t ² + F _w	3485.1	3434.4	3185.1	3184.1	2560.6	2558.7
18 P _s ² = e ^s P _w ²	5446.0	5474.5	4966.5	4931.7	3969.7	3991.9
19 P _s	2333.7	2339.8	2228.6	2234.2	1992.4	1998.0
20 P = ($\frac{P_t + P_s}{2}$)	2093.4	2096.5	1996.9	1999.7	1778.8	1781.6
21 P _t = (P/P _{cf})	3.12	3.12	2.98	2.98	2.65	2.66
22 T _r = (T/T _{cf})	1.60	1.60	1.60	1.60	1.60	1.60
23 Z (Table XI)	1.822	1.822	1.82	1.826	1.835	1.835