

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

DATE 1-23/1-27-67

COMPANY Bert Fields, Inc. LEASE Turner State WELL NO. 2

LOCATION: Unit C Section 32 Township 20 Range 37

L 2890 H 2890 L/H 1.000 G .669 % CO₂ 0 % N₂ 0 % H₂S 0d 1.995 F_r .018231 GH 1993 P_{CT} 670 T_{CT} 378

TABLE IX & X

LINE	1st.	2nd.	1st.	2nd.	1st.	2nd.	1st.	2nd.	1st.	2nd.
1 Q _m	955.3	955.3	1.052	1.052	1.180	1.180	964.9	964.9	2nd.	
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534	534	
3 T _s (B.H. °R)	563	563	563	563	563	563	563	563	563	
4 T = ($\frac{T_w + T_s}{2}$)	547	547	547	547	547	547	547	547	547	
5 Z (Est.)	.930	.904	.923	.906	.925	.907	.928	.905	.905	
6 TZ	509	494	505	496	506	496	508	495	495	
7 GH/TZ	3.916	4.034	3.947	4.018	3.939	4.018	3.923	4.026	4.026	
8 e ^s (Table XIV)	1.158	1.163	1.160	1.163	1.159	1.163	1.158	1.163	1.163	
9 1-e ^s (Table XIV)	0.136	0.140	0.138	0.140	0.137	0.140	0.136	0.140	0.140	
10 P _t	550.2	550.2	538.2	538.2	527.2	527.2	544.2	544.2	544.2	
11 P _t ² /1000	302.7	302.7	289.7	289.7	277.9	277.9	296.2	296.2	296.2	
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231	
13 F _c = F _r TZ	9.280	9.006	9.207	9.043	9.225	9.043	9.261	9.024	9.024	
14 F _c Q _m	8.865	8.603	9.686	9.513	10.86	10.67	8.936	8.707	8.707	
15 L/H (F _c Q _m) ²	78.59	74.01	93.82	90.50	117.9	113.8	79.85	75.81	75.81	
16 F _w = L/H (F _c Q _m) ² (1-e ^s)	10.69	10.36	12.95	12.67	14.97	15.93	10.86	10.61	10.61	
17 P _w ² = P _t ² + F _w	314.0	313.1	302.7	302.3	292.8	293.8	307.1	306.8	306.8	
18 P _s ² = e ^s P _w ²	363.6	364.1	351.1	351.6	339.4	341.7	355.6	356.8	356.8	
19 P _s	603.0	603.4	592.5	592.6	582.6	584.6	596.3	597.3	597.3	
20 P = ($\frac{P_t + P_s}{2}$)	576.6	576.8	565.4	565.4	554.9	555.9	570.3	570.8	570.8	
21 P _r = (P/P _{CT})	.86	.86	.84	.84	.83	.83	.85	.85	.85	
22 T _r = (T/T _{CT})	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	
23 Z (Table XI)	.904	.904	.906	.906	.907	.907	.905	.905	.905	