

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw)

C-122D
Adopted 9-1-65

COMPANY Yates Petroleum Corp. LEASE Box Canyon Unit WELL NO. 2 DATE 5-22-77

LOCATION: Unit F Section 13 Township 21S Range 21E

L 8162 H 8162 L/H G 2016 % CO₂ 0.60 % N₂ 0.30 % H₂S Nil
 1 Qm 8042(5.956)-47848
 2 Tw (W.H. °R) 102(15.51)-1596
 3 Ts (B.H. °R) 180(2.30)-134
 4 T = $(\frac{1}{w} + \frac{1}{s})$ 49633
 5 Z (Est.) 49633
 6 TZ 49633
 7 GH/TZ 49633
 8 e^s (Table XIV) 49633
 9 1-e^s (Table XIV) 49633
 10 P_i 49633
 11 P_i 2/1000 49633
 12 F_i (Table XV) 49633
 13 F_c = F_i TZ 49633
 14 F_c Q_m 49633
 15 L/H (F_c Q_m)² 49633
 16 F_w = L/H (F_c Q_m)² (1-e^s) 49633
 17 P_w² = P_i² + F_w 49633
 18 P_s² = e^s P_w² 49633
 19 P_s 49633
 20 P = $(\frac{P_i + P_s}{2})$ 49633
 21 P_r = (P/P_{cr}) 49633
 22 T_r = (T/T_{cr}) 49633
 23 Z (Table XI) 49633

LINE	1	2	3	4	1	2	3	4
1 Q _m	3.520	4.731	6.218	8.296	58			4
2 T _w (W.H. °R)	541	543	544	545				8.296
3 T _s (B.H. °R)	579	572	576	575				
4 T = $(\frac{1}{w} + \frac{1}{s})$	560	560	560	560				500
5 Z (Est.)	793	794	794	794				500
6 TZ	444.44	444.64	448.00	463.12				462.56
7 GH/TZ	11.313	11.308	11.2232	10.8568				10.870
8 e ^s (Table XIV)	1.5284	1.5281	1.5233	1.5025				1.5032
9 1-e ^s (Table XIV)	0.3460	0.3456	0.3435	0.3344				0.3348
10 P _i	2357.2	1991.2	1748.0	1276.2				1276.2
11 P _i 2/1000	5556.39	3964.9	3056.2	1628.69				1628.69
12 F _i (Table XV)	42459	42405	42087	40713				40713
13 F _c = F _i TZ	4.5394	4.5451	4.5795	4.7340				4.7283
14 F _c Q _m	15.979	21.503	28.933	39.273				39.226
15 L/H (F _c Q _m) ²	255.32	462.38	837.12	1542.40				1538.67
16 F _w = L/H (F _c Q _m) ² (1-e ^s)	88.34	150.80	289.55	515.78				515.15
17 P _w ² = P _i ² + F _w	4647.42	4124.70	3343.75	2144.47				2143.84
18 P _s ² = e ^s P _w ²	8492.66	6302.95	5092.54	3222.06				3222.62
19 P _s	2914.2	2510.6	2256.1	1795.0				1795.2
20 P = $(\frac{P_i + P_s}{2})$	2665.7	2250.9	2002.5	1535.6				1535.9
21 P _r = (P/P _{cr})	3.416	3.367	2.976	2.282				2.282
22 T _r = (T/T _{cr})	1.5463	1.547	1.547	1.547				1.547
23 Z (Table XI)	0.794	0.793	0.794	0.526				0.526

$$1.6329 \cdot 10^4 = 16329$$

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