

WORKSHEET FOR CALCULATION OF ST₁ & C COLUMN WELLHEAD PRESSURE (P_w)

COMPANY Yates Petroleum Corp LEASE Margaret RP St WELL NO. 1 DATE 5-7-82

LOCATION: Unit K Section 36 Township 4 S Range 24 E

L 3658 H 3658 L/H 1 G 0.668 % CO₂ 0.79 % N₂ 5.73 % H₂S 0

d 1.195" F₁ 0.018231 GH 2443.5 P_{cr} 662 T_{cr} 364
 / ST RATE / 2ND RATE / ST RATE / 2ND RATE / ST RATE / 2ND RATE / ST RATE / 2ND RATE

LINE	1 ST TRIAL	2 ND TRIAL	1 ST TRIAL	2 ND TRIAL	1 ST TRIAL	2 ND TRIAL	1 ST TRIAL	2 ND TRIAL	1 ST TRIAL	2 ND TRIAL
1 Q _m	0.307	0.307	0.476	0.476	0.740	0.740	1.068	1.068		
2 T ₁ (W.H. 98)	524	524	524	524	526	526	526	526		
3 T ₂ (B.H. 98)	553	553	553	553	553	553	553	553		
4 T ₃ (W.H. 98)	538.5	538.5	538.5	538.5	539.5	539.5	539.5	539.5		
5 T ₄ (W.H. 98)	0.875	0.857	0.861		0.865	0.871	0.891	0.877		
6 T ₅	471.2	461.5	463.1		466.7	469.9	480.7	473.1		
7 GH/TZ	5186	5245	5276	NOT RECD.	5236	5200	5083	5164		
8 e ^s (Table XIV)	1.215	1.220	1.211		1.217	1.215	1.210	1.214		
9 1-e ^s (Table XIV)	0.177	0.18	0.180		0.178	0.177	0.174	0.176		
10 F ₁	9152	9152	8632		8682	8682	7602	7602		
11 F ₂ 2/1000	837.6	837.6	745.1		645.1	645.1	577.9	577.1		
12 F ₁ (Table XV)	0.18231	0.3231	0.18231		0.8231	0.18231	0.18231	0.18231		
13 F ₂ = F ₁ T ₅	8.510	11.414	8.443		8.553	8.567	8.764	8.625		
14 F ₂ Q _m	2.637	2.563	4.019		6.216	6.331	9.360	9.218		
15 L/H (F ₂ Q _m) ²	6.954	6.672	16.150		39.442	46.184	87.603	84.853		
16 F _w = L/H (F ₂ Q _m) ² (1-e ^s)	1.231	1.263	2.907		7.056	7.115	15.243	14.934		
17 P _w ² = P ₁ ² + F _w	838.8	838.8	748.1		658.2	652.2	575.1	575.1		
18 P _s ² = e ^s P _w ²	1019.2	1019.2	911.8		723.7	712.4	717.7	717.7		
19 P _s	1009.5	1011.6	954.9		847.6	846.7	847.2	847.4		
20 P = (P ₁ + P _s)	962.4	965.4	901.0		847.6	846.7	803.7	804.3		
21 P ₁ = (P/P _{cr})	1.4537	1.455	1.373		1.2795	1.2710	1.2140	1.2141		
22 T ₁ = (T/T _{cr})	1.471	1.4714	1.4714		1.4714	1.4714	1.4714	1.4714		
23 C (Table XI)	0.857	0.857	0.861		0.871	0.871	0.877	0.877		