

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw)

C-122D

DATE: 03/26/2002

COMPANY Fasken Oil and Ranch, Ltd. LEASE State "32" Com. WELL NO. 2

LOCATION: Unit B Section 32 Township 20S Range 25E

L 9445 H 9445 L / H 1 G 0.625 %CO₂ 0.2 %N₂ 0.83 %H₂S 0

d 1.995 Fr 0.018231 GH 5903.125 Pcr 674 Tcr 365

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	1.03	2.174	3.031	4.011	
2 Tw(W.H.DegR)	550	550	540	540	
3 Ts(B.H.DegR)	628	628	628	628	
4 T = (Tw+Ts) / 2	589	589	584	584	
5 Z (Est.)	0.820	0.820	0.819	0.819	
6 TZ	483.0	483.0	478.3	478.3	
7 GH / TZ	12.222	12.222	12.342	12.342	
8 e ^s (Table XIV)	1.581	1.581	1.589	1.589	
9 1-e ^s (Table XIV)	0.368	0.368	0.370	0.370	
10 Pt	2,230.2	2,193.2	2,153.2	2,095.2	
11 Pt ² / 1000	4,973.8	4,810.1	4,636.3	4,389.9	
12 Fr (Table XV)	0.018231	0.018231	0.018231	0.018231	
13 Fc = FrTZ	8.805	8.805	8.720	8.720	
14 FcQm	9.069	19.143	26.430	34.975	
15 L / H(FcQm) ²	82.253	366.436	698.532	1223.263	
16 Fw = L / H(FcQm) ² (1-e ^s)	30.242	134.726	258.804	453.215	
17 Pw ² = Pt ² +Fw	5,004.0	4,944.9	4,895.1	4,843.1	
18 Ps ² = e ^s Pw ²	7,913.6	7,820.0	7,776.1	7,693.5	
19 Ps	2,813.1	2,796.4	2,788.6	2,773.7	
20 P = (Pt+Ps) / 2	2,521.7	2,494.8	2,470.9	2,434.5	
21 Pr = (P / Pcr)	3.741	3.702	3.666	3.612	
22 Tr = (T / Tcr)	1.614	1.614	1.600	1.600	
23 Z (Table XI)	0.820	0.820	0.819	0.819	