

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw)

C-122D

DATE: 09/22/2001

COMPANY Fasken Oil and Ranch, Ltd. LEASE Neely Com. WELL NO. 1

LOCATION: Unit O Section 29 Township 20S Range 25E

L 9401 H 9401 L / H 1 G 0.625 %CO₂ 0.2 %N₂ 0.83 %H₂S 0

d 1.995 Fr 0.018231 GH 5875.625 Pcr 674 Tcr 365

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	5.302	4.304	2.958	1.506	
2 Tw(W.H.DegR)	540	540	540	540	
3 Ts(B.H.DegR)	628	628	628	628	
4 T = (Tw+Ts) / 2	584	584	584	584	
5 Z (Est.)	0.818	0.817	0.816	0.816	
6 TZ	477.7	477.1	476.5	476.5	
7 GH / TZ	12.300	12.315	12.330	12.330	
8 e ^s (Table XIV)	1.586	1.587	1.588	1.588	
9 1-e ^{-s} (Table XIV)	0.369	0.370	0.370	0.370	
10 Pt	1,963.2	2,038.2	2,113.2	2,188.2	
11 Pt ² / 1000	3,854.2	4,154.3	4,465.6	4,788.2	
12 Fr (Table XV)	0.018231	0.018231	0.018231	0.018231	
13 Fc = FrTZ	8.709	8.699	8.688	8.688	
14 FcQm	46.176	37.438	25.699	13.084	
15 L / H(FcQm) ²	2132.224	1401.636	660.425	171.189	
16 Fw = L / H(FcQm) ² (1-e ^{-s})	787.843	518.394	244.493	63.375	
17 Pw ² = Pt ² +Fw	4,642.0	4,672.7	4,710.1	4,851.6	
18 Ps ² = e ^s Pw ²	7,362.3	7,415.1	7,478.8	7,703.5	
19 Ps	2,713.4	2,723.1	2,734.7	2,775.5	
20 P = (Pt+Ps) / 2	2,338.3	2,380.6	2,424.0	2,481.9	
21 Pr = (P / Pcr)	3.469	3.532	3.596	3.682	
22 Tr = (T / Tcr)	1.600	1.600	1.600	1.600	
23 Z (Table XI)	0.818	0.817	0.816	0.816	