

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form C-1.2D
Adopted 9-1-6

COMPANY Atlantic Richfield Company LEASE John P. Combust WELL NO. 2 DATE 7-7-77

LOCATION: Unit 3420 Section 35 Township 23 Range 36

L 3420 H 3420 L/H 1.000 G .677 % CO₂ - % N₂ - % H₂S -

d 1.905 F_r .018231 GH 2315 P_{cr} 669 T_{cr} 385

TABLE IX & X

LINE	1st			2nd			3rd			4th		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
1 Q _m	.093	.093	.163	.163	.243	.243	.334	.334	.334	.334		
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534	534	534		
3 T _s (B.H. °R)	568	568	568	568	568	568	568	568	568	568		
4 T = ($\frac{T_w + T_s}{2}$)	551	551	551	551	551	551	551	551	551	551		
5 Z (Est.)	.964	.963	.966	.964	.969	.966	.972	.971	.972	.971		
6 TZ	531.2	530.6	532.3	531.2	533.9	532.3	535.6	535.0	535.6	535.0		
7 GH/TZ	4.358	4.363	4.349	4.353	4.336	4.349	4.322	4.327	4.322	4.327		
8 e ^s (Table XIV)	1.178	1.178	1.177	1.178	1.177	1.177	1.176	1.176	1.176	1.176		
9 1 - e ^s (Table XIV)	.151	.151	.150	.151	.150	.150	.150	.150	.150	.150		
10 P _t	205.2	205.2	196.2	196.2	183.2	183.2	164.2	164.2	164.2	164.2		
11 P _t ² /1000	42.107	42.107	38.494	38.494	33.562	33.562	26.962	26.962	26.962	26.962		
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
13 F _c = F _r TZ	9.684	9.674	9.704	9.684	9.734	9.704	9.764	9.754	9.764	9.754		
14 F _c Q _m	.901	.900	1.582	1.578	2.365	2.358	3.261	3.258	3.261	3.258		
15 L/H (F _c Q _m) ²	.811	.809	2.502	2.491	5.595	5.560	10.635	10.613	10.635	10.613		
16 F _w = L/H (F _c Q _m) ² (1 - e ^s)	.122	.122	.377	.376	.940	.937	1.591	1.590	1.591	1.590		
17 P _w ² = P _t ² + F _w	42.23	42.23	38.87	38.87	34.40	34.40	28.55	28.55	28.55	28.55		
18 P _s ² = e ^s P _w ²	40.727	40.736	45.757	45.772	40.476	40.493	33.577	33.581	33.577	33.581		
19 P _s	223.0	223.0	213.9	213.9	201.2	201.2	183.242	183.251	183.242	183.251		
20 P = ($\frac{P_t + P_s}{2}$)	214.1	214.1	205.1	205.1	192.2	192.2	173.7	173.7	173.7	173.7		
21 P _r = (P/P _{cr})	.32	.32	.31	.31	.29	.29	.26	.26	.26	.26		
22 T _r = (T/T _{cr})	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43		
23 Z (Table XI)	.963	.963	.964	.964	.966	.966	.971	.971	.971	.971		

TABLE IX & X

4th