

WORKSHEET FOR CALCULATION OF SIC COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Adopted 9-1-65

COMPANY Nates Petroleum Corp LEASE Ross "Eq" Federal WELL NO. 1 DATE 12-21-76

LOCATION: Unit 1K Section 20 Township 19-S Range 25-E

L 9168 H 9168 L/H 1.0060 G 0.6175 %CO₂ 2.02 %N₂ 0.40 %H₂S N:1

1086' (2 3/4") .018231=165.64986
82' (4 1/2") .002962 = 0.24327
F_i .018094 GH 5661.24 S = 0.0375 GH/TZ
P_{Cr} 678 T_{Cr} 360

LINE	1	2	3	4	1	2	3	4
1 Q _m								
2 T _w (W.H. °R)	51	0.499	0.997	1.426	1.627	51	0.499	0.997
3 I _s (B.H. °R)	508	518	518	516	514			
4 T = (L _w + I _s)	616	614	612	610	608			
5 Z (Est.)	562	566	565	563	561	562	566	565
6 TZ	0.81	.81	.81	.84	.86	0.811	.805	.808
7 GH/TZ	455.22	458.46	457.65	472.92	482.46	455.78	455.63	456.52
8 e ^s (Table XIV) e=2.71828	12.436	12.348	12.370	11.9708	11.734	12.421	12.425	12.421
9 1-e ^s (Table XIV)	1.5939	1.5889	1.5902	1.5666	1.5527	1.5933	1.5935	1.5921
10 P _i	2649.2	2326.2	1871.2	1373.2	1038.2	2649.2	2326.2	1871.2
11 P _i 2/1000	7018.26	5411.21	3501.39	1885.68	1077.86	7018.26	5411.21	3501.39
12 F _i (Table XV)								
13 c = F _i TZ		8.2592	9.0507	8.557	8.7296		8.2442	8.2603
14 F _c Q _m		4.1213	8.2559	12.202	14.203		4.1139	8.2355
15 L/H (F _c Q _m) ²		16.985	68.16	148.9	201.73		16.924	67.82
16 F _w = L/H (F _c Q _m) ² (1-e ^s)		6.29	25.30	53.86	72.62		6.30	25.22
17 P _w ² = P _i ² + F _w		5417.5	3526.69	1939.54	1150.48		5417.51	3526.61
18 P _s ² = e ^s P _w ²	11188.	8667.9	5608.14	3038.5	1786.35	11181.9	8632.8	5614.72
19 P _s	3344.9	2933.9	2368.2	1743.1	1336.5	3343.9	2938.2	2369.5
20 P = (P _i + P _s)	2997.0	2630.1	2119.7	1558.2	1187.4	2996.5	2632.2	2120.4
21 P _r = (P/P _{Cr})	4.420	3.879	3.126	2.298	1.7513	4.420	3.882	3.127
22 T _r = (T/T _{Cr})	1.5611	1.5722	1.5694	1.5639	1.5583	1.5611	1.5722	1.5639
23 Z (Table XI)	0.811	0.805	0.808	0.8325	.860	0.811	0.805	0.808