

WORK SHEET FOR STEPWISE CALCULATION
(SURFACE) PRESSURE (P_c & P_w)

Form C-122-E
Adopted 9-1-65

COMPANY Cortina Grace LEASE Humble-Grace WELL NO. 1 DATE 7/26/71

LOCATION: Unit P Section 2 Township 23 S Range 26 E

L 10,616 H 10,616 L/H 1.000 G .580 % CO₂ - % N₂ - % H₂S -

$$P = \frac{692.694}{828.227} = 836.4 \quad P_g = 4126.0 - 836.4 = 3289.6$$

$$d = \frac{1.995}{F_r} \cdot \frac{0.018231}{Q_m} \cdot 6.836 \cdot M^2 \text{ cfd} \cdot (L/H) (F_r Q_m)^2 \cdot .015533 \cdot P_{cr} \cdot T_{cr}$$

TABLE IX & X TABLE IX & X

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		10616	5308		0						
2	GH		6157.28	3078.64		0						
3	37.5GH		230,898	115,449		0						
4	P _c or P _n		4126.0	3725.7	3717.2	3308.9	3287.1	3288.2				
5	P _r		6.14	5.54	5.53	4.92	4.89	4.89				
6	T		627	580.5	580.5	530	530	530				
7	T _r		1.79	1.66	1.66	1.51	1.51	1.51				
8	Z		.949	.887	.886	.811	.810	.810				
9	P/Z P/Z		4347.7	4200.3	4195.5	4080.0	4058.1	4059.5				
10	P/TZ		6.9341	7.2357	7.2274	7.6981	7.6568	7.6594				
11	(P/TZ) ² /1000	(10) ² /1000										
12	L/H(F _r Q _m) ²											
13		$\frac{11 + 12}{2}$										
14	I _n	$\frac{10 + 13}{2}$	144.215	138.204	138.362	129.902	130.603	130.559				
15	M=P _n -P _{n-1}			400.3	408.8	408.3	430.1	429.0				
16	N=I _n +I _{n-1}			282.419	282.577	268.264	268.965	268.921				
17	M x N	$\frac{15 \times 16}{2}$			115,517			115,367				
18	$\Sigma (M \times N)$	$\Sigma 17$	230,898		115,381							