

WORK SHEET FOR STEEPSE CALCULATION
(SUBSURFACE) PRESSURE (P₁ & P₂)
(SURFACE) (PERCENTAGE)

Form G-122-B
Adopted 9-1-65

Standard Oil Company

COMPANY of Texas LEASE Bogie Plains Unit WELL NO. 4 DATE 6-8-66

LOCATION: Unit F Section 10 Township 22S Range 23E

L. 7074 H 7074 L/H 1.000 G 546 %CO₂ .54 %N₂ .90 %H₂S .36

d 1.995 F_r .018231 Q_m 1.918 M_{red} (L/H) (F_rQ_m)² .001223 P_{CF} 673 T_{CF} 368

TABLE IX 3 x TABLE IX 3 x

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	3537	7074				Delta P = 3 (37.5 CH)			
2	GH		0	2284.90	4569.80				L _e + 4 T ₁ + 2			
3	37.5GH		0	85,694	171,368				= 3 (171,368)			
4	P _c or P _n		2323.2	2581.2	2840.2				165,389 + 663,044 + 166,146			
5	P _r		3,45	3,84	4,22				314,104			
6	F		536	564	592				595,079			
7	T _r		1.46	1.53	1.61				516.6			
8	Z		.745	.786	.826				=			
9	P/Z P/Z	4:8	3113.4	3284.0	3438.5				=			
10	P/VZ	9:5	5,61.9	5,622.7	5,808.3				=			
11	(P/VZ)2/1000 (0)2/100		.033648	.033904	.033736				P _s = P _e + Delta P			
12	1/(1-(P _s Q _m) ²)		.001223	.001223	.001223				= 2323.2 + 16.6			
13		11 + 12	.035071	.035127	.074959				=			
14	I _n	10:13	165,939	165,761	165,146				=			
15	Md _n - P _{n-1}		248	259	269				= 2830.3			
16	Md _n + I _{n-1}		331,650	331,907					=			
17	M x N	15x16	25,566	25,954					=			
18	2(MxN)	2:17	35,566	171,530					=			