

WORK SHEET FOR STEPWISE CALCULATION

(SUBSURFACE) PRESSURE (P_f & P_s)
(SURFACE) (P_c & P_w)

Form 2-1-10
April 1964 Edition

COMPANY Grace Petroleum Corp. LEASE Smith Ranch Federal WELL NO. 1 DATE 11-22-80

LOCATION: Unit Section Township Range

L 13391 H 13391 L/H G .7316 % CO₂ 0.16 % N₂ 0.90 % H₂S None

d F_r Q_m M²cld (L/H) (F_rQ_m)² P_{cr} T_{cr}

TABLE IX B X

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9
1	H		13391	6696			0				
2	GH		9797	4898			0				
3	37.5GH		367385	183691			0				
4	P _c or P _n		5333.2	4577.2	4556.2	4538.2	3745.2	3714.2	3680.2	3683.2	
5	P _r		7.98	6.85	6.82	6.79	5.61	5.56	5.51	5.51	
6	T		647	584	584	584	521	521	521	521	
7	T _r		1.61	1.46	1.46	1.46	1.30	1.30	1.30	1.30	
8	Z		1.002	.904	.903	.901	.769	.764	.760	.760	
9	P/Z	4-8	5322.5	5063.2	5045.6	5036.8	4870.2	4861.5	4842.3	4846.3	
10	P/TZ	9-6	8.2265	6.6699	8.6398	8.6247	9.3478	9.3311	9.2944	9.3019	
11	(P/TZ) ² /1000	(10) ² /1000									
12	L/H(F _r Q _m) ²										
13		11 + 12									
14	I _n	10-13	121.158	115.342	115.743	115.945	106.976	107.168	107.592	107.504	
15	M=P _n -P _{n-1}			756	777	795	793	824	858	855	854
16	N=I _n +I _{n-1}			243.116	256.500	231.085	231.688	222.921	214.144	214.760	215.096
17	M x N	15 x 16				183712				183619	
18	Σ (M x N)	Σ 17				183712				357351	

(over)