

WORK SHEET FOR STEPWISE CALCULATION

(SUBSURFACE) PRESSURE (P_f & P_s)

~~X~~SURFACE~~X~~ ~~X~~P~~X~~ & ~~X~~H~~X~~ ~~X~~XXX

Form C-122E
Adopted 4-1-65

COMPANY Atlantic Richfield LEASE W. G. Smith Fed. Gas WELL NO. 1 DATE 6-12-72

LOCATION: Unit G Section 13 Township 23S Range 24E

L 10350 H 10350 L/H 1.0 G 0.585 % CO₂ 0.64 % N₂ 0.22 % H₂S

d 1.995 F_r 0.018231 Q_m 2.776 M^2 6 (L/H) ($F_r Q_m$)² 0.002561 P_{cr} 673.9 T_{cr} 349.1

TABLE IX & X

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H			5175		10350				$\Delta P =$	3(227.053)	
2	GH			3027.38		6054.75					1224.827	
3	37.5GH			113.527		227.053				=	556.1	
4	P_g or P_n		1816.2	2093.6	2094.0	2371.7	2372.2			$P_g =$	1816.2 + 556.1	
5	P_f		2.70	3.11	3.11	3.52	3.52					
6	T		532	577.5	577.5	623.0	623.0			=	2372.3	
7	T_f		1.52	1.65	1.65	1.78	1.78					
8	Z		0.796	0.842	0.842	0.884	0.884					
9	P/Z		2281.7	2486.5	2486.9	2682.9	2683.5					
10	P/TZ		4.2889	4.3056	4.3063	4.3064	4.3074					
11	$(P/TZ)^2/1000$		0.018395	0.018538	0.018544	0.018545	0.018554					
12	$L/H(F_r Q_m)^2$		0.002561	0.002561	0.002561	0.002561	0.002561					
13			0.020956	0.021099	0.021105	0.021106	0.021115					
14	I_n		204.662	204.067	204.042	204.037	203.997					
15	$M=P_n-P_{n-1}$		277.4	277.8	277.7	278.2						
16	$N=I_n+I_{n-1}$		408.729	408.704	408.079	408.039						
17	$M \times N$					113.516						
18	$\Sigma (M \times N)$				113.538		227.054					