

2010
10/10

WORK SHEET FOR STEPWISE CALCULATION

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

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

COMPANY Shenandoah Oil Co. LEASE Shenandoah WELL NO. 1 DATE 2-10-67

LOCATION: Unit _____ Section _____ Township _____ Range _____

L 13297 H 13297 L/H 13297 G 16915 % CO₂ 27% % N₂ 1.1% % H₂S 0

d 2141 F_i 0.0003 Q_m 4.122 M² cfd (L/H) (F_i Q_m)² 0.01956 P_{cr} 666 T_{cr} 384

TABLE IX & X

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LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H			6639.5		13297						
2	GH		0	4596.9		9123.8			11' = 1033.113			
3	37.5GH		0	122.95		24129.1			122.95 (1033.113 + 103.745)			
4	P ₀ or P _n		2213.2	3060.2	3060.2	4073.2	4073.2					
5	P _r		4.22	5.23	5.19	6.15	6.12	6.11		818.940		1266.9
6	T		520	588	580	656	656	652				
7	T _r		1.66	1.53	1.53	1.71	1.71	1.7				
8	Z		0.46	0.50	0.50	0.27	0.26	0.25				
9	P/Z P/Z	4-8	3291.0	6100.1	6100.1	4417.9	4398.9	4412.4				
10	P/TZ	9-6	7125.3	30920	4086.2	67343	6.7053	6.7009	70' = 5213.2 + 1266.9			4095.1
11	(P/TZ) ² /1000	(10) 2/1000	10525.92	10502.97	10502.5	104535.1	104496.2	104500.7				
12	L/H(F _i Q _m) ²		1.00926	100190	100190	100190	100190	100190				
13		11 + 12	105456.8	1052213	1052191	1047229	1046908	1047013				
14	I _n	10 + 13	132.898	125.672	135.124	142.293	142.854	142.746				
15	M = P _n - P _{n-1}			6.48	6.41	6.41	6.19	6.18				
16	N = I _n + I _{n-1}			248.570	248.672	278.067	278.628	278.553				
17	M x N	15 x 16			122.519			176.125				
18	Σ (M x N)	Σ 17			122.519			242.304				