

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

C/S
F. 1/2 Form C-122
Revised 9-1-67

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Date 11/13/82		NOV 18 1982	
Company Perry R. Bass ✓		Direction Air		O. C. D.	
Well Dog Town		Formation Morrow		ARTESIA, OFFICE	
Completion Date 11/12/82		Total Depth 14459		Poker Lake	
Perforations 4 1/2" Liner		Set At 14459		Well No. 59	
Perforations 2 3/8"		Set At 13962		Unit ✓ 8 24S 30E	
Type well - Single - Provenhead - G.G. or G.O. Multiple Single Gas				County Eddy	
Producing thru Tbg		Reservoir Temp. °F 214 @ 13962		State New Mexico	
Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		Meter Run 4"	
L 13962		H 13962		Flg.	
Gg .5737		% CO ₂ 1.500		% N ₂ .553	
% H ₂ S		Prover		Reps	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI											
1.	4 X 2.000			500	2.0	114	3032				1 hr
2.	4 X 2.000			500	5.0	106	2882				1 hr
3.	4 X 2.000			500	10.0	90	2682				2 hrs
4.	4 X 2.000			500	19.0	90	2390				1 hr
5.	4 X 2.000			500	30.0	90	2250				4 hrs

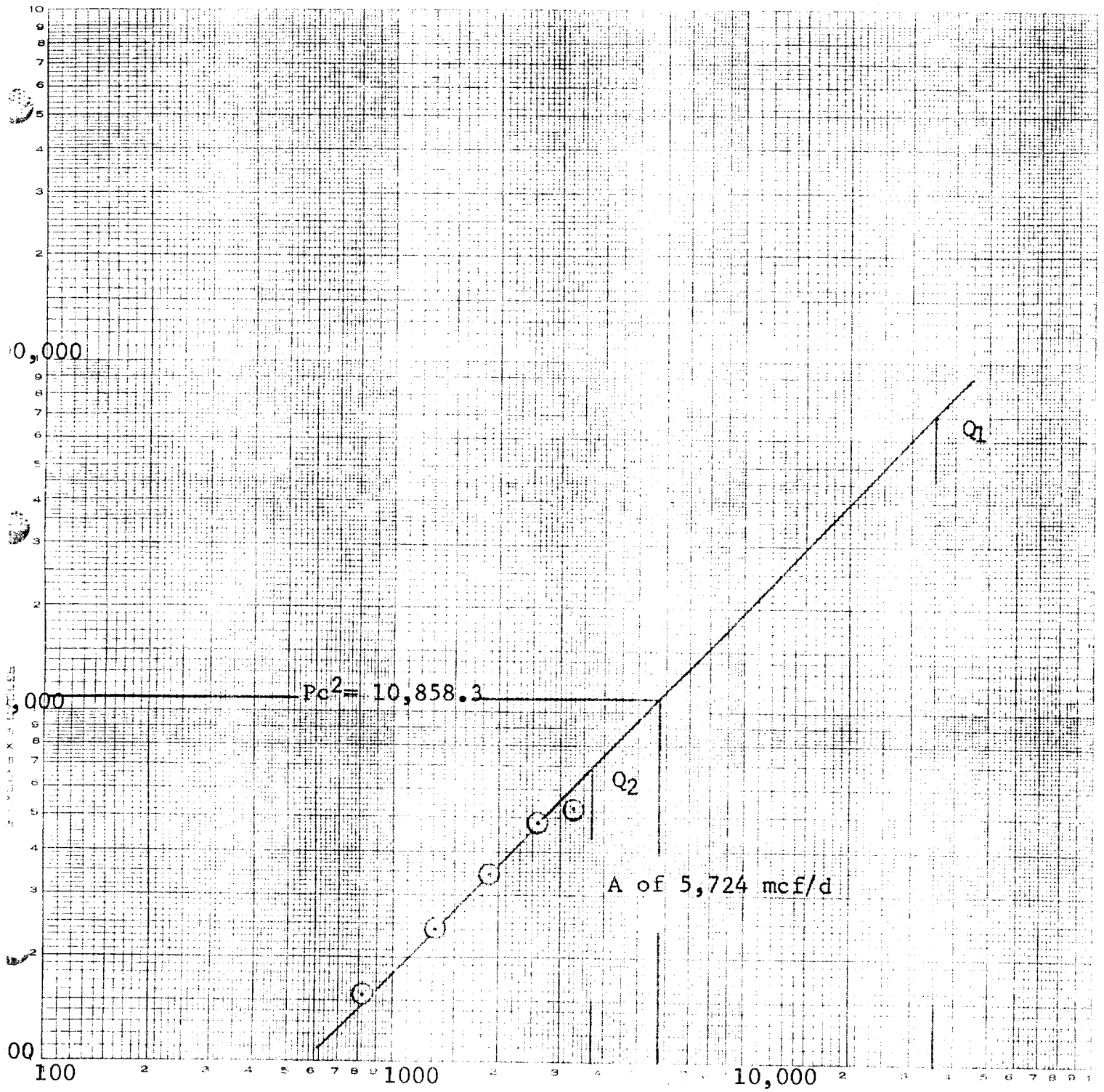
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super. Compres. Factor, F _{sp}	Rate of Flow Q, Mhd
1	19.81	32.04	513.2	.9518	1.320	1.027	819
2	19.81	50.66	513.2	.9585	1.320	1.028	1305
3	19.81	71.64	513.2	.9723	1.320	1.032	1880
4	19.81	98.75	513.2	.9723	1.320	1.032	2591
5	19.81	124.08	513.2	.9723	1.320	1.032	3256

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	dry	Mcf/col.
1	.76	574	1.66	.949			
2	.76	566	1.64	.946			
3	.76	550	1.59	.939			
4	.76	550	1.59	.939			
5	.76	550	1.59	.939			

NO.	P _r	P _w	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} =$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$
1		3050.3	9304.3	1554.0	2.253	2.209
2		2908.0	8456.5	2401.8		
3		2721.4	7406.0	3452.3		
4		2457.3	6038.3	4820.0		
5		2350.8	5526.3	5332.0		

Absolute Open Flow 5,724		Mhd @ 15.025		Angle of Slope @ 45.75°		R _{sp} n .976	
Remarks:							
Approved By Commission:		Conducted By:		Calculated By:		Checked By:	
		Davis Services, Inc.		Rick Pagan			

COMPANY : Perry R. B.
LEASE : POKER LAKE UNIT
WELL # : 59
UNIT : SEC 8/TWP24S/RGE 30E
COUNTY : EDDY
STATE : NEW MEXICO
DATE : 11/13/82


$$\begin{aligned} Q &= \text{MCF/D} \\ Q_1 \text{ LOG } 35,000 &= 4.544068 \\ Q_2 \text{ LOG } 3,700 &= 3.568202 \\ N &= \frac{}{.976} \\ \theta &= 45.75^\circ \end{aligned}$$



P. O. BOX 1161

611 W. SNYDER

HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml (○), 10⁷ cells/ml (□), 10⁸ cells/ml (△), and 10⁹ cells/ml (◇). The error bars represent the standard deviation of three independent experiments.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Perry R. Bass

Figure 1. The effect of the concentration of the H_2O_2 solution on the amount of the H_2O_2 consumed in the reaction of the H_2O_2 solution with the H_2O_2 solution. The concentration of the H_2O_2 solution was 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.0, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 10.0, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.8, 11.9, 12.0, 12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7, 12.8, 12.9, 13.0, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 13.8, 13.9, 14.0, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.7, 14.8, 14.9, 15.0, 15.1, 15.2, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 16.0, 16.1, 16.2, 16.3, 16.4, 16.5, 16.6, 16.7, 16.8, 16.9, 17.0, 17.1, 17.2, 17.3, 17.4, 17.5, 17.6, 17.7, 17.8, 17.9, 18.0, 18.1, 18.2, 18.3, 18.4, 18.5, 18.6, 18.7, 18.8, 18.9, 19.0, 19.1, 19.2, 19.3, 19.4, 19.5, 19.6, 19.7, 19.8, 19.9, 20.0, 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, 20.7, 20.8, 20.9, 21.0, 21.1, 21.2, 21.3, 21.4, 21.5, 21.6, 21.7, 21.8, 21.9, 22.0, 22.1, 22.2, 22.3, 22.4, 22.5, 22.6, 22.7, 22.8, 22.9, 23.0, 23.1, 23.2, 23.3, 23.4, 23.5, 23.6, 23.7, 23.8, 23.9, 24.0, 24.1, 24.2, 24.3, 24.4, 24.5, 24.6, 24.7, 24.8, 24.9, 25.0, 25.1, 25.2, 25.3, 25.4, 25.5, 25.6, 25.7, 25.8, 25.9, 26.0, 26.1, 26.2, 26.3, 26.4, 26.5, 26.6, 26.7, 26.8, 26.9, 27.0, 27.1, 27.2, 27.3, 27.4, 27.5, 27.6, 27.7, 27.8, 27.9, 28.0, 28.1, 28.2, 28.3, 28.4, 28.5, 28.6, 28.7, 28.8, 28.9, 29.0, 29.1, 29.2, 29.3, 29.4, 29.5, 29.6, 29.7, 29.8, 29.9, 30.0, 30.1, 30.2, 30.3, 30.4, 30.5, 30.6, 30.7, 30.8, 30.9, 31.0, 31.1, 31.2, 31.3, 31.4, 31.5, 31.6, 31.7, 31.8, 31.9, 32.0, 32.1, 32.2, 32.3, 32.4, 32.5, 32.6, 32.7, 32.8, 32.9, 33.0, 33.1, 33.2, 33.3, 33.4, 33.5, 33.6, 33.7, 33.8, 33.9, 34.0, 34.1, 34.2, 34.3, 34.4, 34.5, 34.6, 34.7, 34.8, 34.9, 35.0, 35.1, 35.2, 35.3, 35.4, 35.5, 35.6, 35.7, 35.8, 35.9, 36.0, 36.1, 36.2, 36.3, 36.4, 36.5, 36.6, 36.7, 36.8, 36.9, 37.0, 37.1, 37.2, 37.3, 37.4, 37.5, 37.6, 37.7, 37.8, 37.9, 38.0, 38.1, 38.2, 38.3, 38.4, 38.5, 38.6, 38.7, 38.8, 38.9, 39.0, 39.1, 39.2, 39.3, 39.4, 39.5, 39.6, 39.7, 39.8, 39.9, 40.0, 40.1, 40.2, 40.3, 40.4, 40.5, 40.6, 40.7, 40.8, 40.9, 41.0, 41.1, 41.2, 41.3, 41.4, 41.5, 41.6, 41.7, 41.8, 41.9, 42.0, 42.1, 42.2, 42.3, 42.4, 42.5, 42.6, 42.7, 42.8, 42.9, 43.0, 43.1, 43.2, 43.3, 43.4, 43.5, 43.6, 43.7, 43.8, 43.9, 44.0, 44.1, 44.2, 44.3, 44.4, 44.5, 44.6, 44.7, 44.8, 44.9, 45.0, 45.1, 45.2, 45.3, 45.4, 45.5, 45.6, 45.7, 45.8, 45.9, 46.0, 46.1, 46.2, 46.3, 46.4, 46.5, 46.6, 46.7, 46.8, 46.9, 47.0, 47.1, 47.2, 47.3, 47.4, 47.5, 47.6, 47.7, 47.8, 47.9, 48.0, 48.1, 48.2, 48.3, 48.4, 48.5, 48.6, 48.7, 48.8, 48.9, 49.0, 49.1, 49.2, 49.3, 49.4, 49.5, 49.6, 49.7, 49.8, 49.9, 50.0, 50.1, 50.2, 50.3, 50.4, 50.5, 50.6, 50.7, 50.8, 50.9, 51.0, 51.1, 51.2, 51.3, 51.4, 51.5, 51.6, 51.7, 51.8, 51.9, 52.0, 52.1, 52.2, 52.3, 52.4, 52.5, 52.6, 52.7, 52.8, 52.9, 53.0, 53.1, 53.2, 53.3, 53.4, 53.5, 53.6, 53.7, 53.8, 53.9, 54.0, 54.1, 54.2, 54.3, 54.4, 54.5, 54.6, 54.7, 54.8, 54.9, 55.0, 55.1, 55.2, 55.3, 55.4, 55.5, 55.6, 55.7, 55.8, 55.9, 56.0, 56.1, 56.2, 56.3, 56.4, 56.5, 56.6, 56.7, 56.8, 56.9, 57.0, 57.1, 57.2, 57.3, 57.4, 57.5, 57.6, 57.7, 57.8, 57.9, 58.0, 58.1, 58.2, 58.3, 58.4, 58.5, 58.6, 58.7, 58.8, 58.9, 59.0, 59.1, 59.2, 59.3, 59.4, 59.5, 59.6, 59.7, 59.8, 59.9, 60.0, 60.1, 60.2, 60.3, 60.4, 60.5, 60.6, 60.7, 60.8, 60.9, 61.0, 61.1, 61.2, 61.3, 61.4, 61.5, 61.6, 61.7, 61.8, 61.9, 62.0, 62.1, 62.2, 62.3, 62.4, 62.5, 62.6, 62.7, 62.8, 62.9, 63.0, 63.1, 63.2, 63.3, 63.4, 63.5, 63.6, 63.7, 63.8, 63.9, 64.0, 64.1, 64.2, 64.3, 64.4, 64.5, 64.6, 64.7, 64.8, 64.9, 65.0, 65.1, 65.2, 65.3, 65.4, 65.5, 65.6, 65.7, 65.8, 65.9, 66.0, 66.1, 66.2, 66.3, 66.4, 66.5, 66.6, 66.7, 66.8, 66.9, 67.0, 67.1, 67.2, 67.3, 67.4, 67.5, 67.6, 67.7, 67.8, 67.9,

$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$, $\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{y}} \right) = \frac{\partial L}{\partial y}$, $\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{z}} \right) = \frac{\partial L}{\partial z}$

[illegible]

The map shows the northern Adriatic Sea with the Italian coastline to the west and south. Sampling stations are marked with numbers 1 through 10. Station 1 is near the Italian coast, while stations 2-10 are further offshore. A scale bar at the bottom indicates distances in kilometers (0, 50, 100). Latitude and longitude coordinates are marked along the axes.

METHANE	2.512	
ETHANE	1.312	
PROPANE	97.327	
ISOBUTANE	2.551	2.551
NORMAL BUTANE	2.714	2.714
ISOPENTANE	2.772	2.772
NORMAL PENTANE	2.825	2.825
ISOHXHEANE	2.861	2.861
NORMAL HEXANE	2.887	2.887
HEPTANE	2.922	2.922
OCTANE	2.956	2.956
TOTAL	100.000	100.000

[illegible]

HEAV-BUD/00	THICKNESS	TEMP	PR	PR
14.655	0.000	577	577	577
14.657	0.000	577	577	577
14.730	0.000	579	579	579
14.735	0.000	579	579	579

ANALYZED BY: _____

APPROVED BY

Yashwantrao Chavan

COMPANY Perry R. Bass LEASE Poker Lake UNIT WELL NO. 59 DATE 11/13/82

LOCATION: Unit N Section 8 Township 24S Range 30E

13962 H 13962 L/H 1.000 G .5737 % CO₂ 1.500 % N₂ .553 % H₂S

d 1.995F₀01823d_m 0 M²ctd (L/H) (F₀Q_m)² 0 P_{cr} 672 T_{cr} 346

TABLE 10-8

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		13962	6981		0						
	GH		8010	4005		0						
3	37.5GH		300375	150187		0						
4	P ₀ or P _n		4049.7	3583.1	3566.7	3085.4	3046.1	3048.3				PW = 3050.3
5	P _r		6.03	5.33	5.31	4.59	4.53	4.54				
6	T		674	604	604	534	534	534				
7	T _r		1.95	1.75	1.75	1.54	1.54	1.54				
8	Z		.967	.890	.889	.794	.791	.791				
9	P/Z P/Z	4/8	4187.9	4026.0	4012.1	3885.9	3850.9	3853.7				
10	P/TZ	9/6	6.2135	6.6655	6.6425	7.2769	7.2114	7.2167				
11	(P/TZ) ² /1000	(10) ² /1000										
1	L/H(F ₀ Q _m) ²											
13		11 + 12										
14	I _n	10 + 13	160.940	150.026	150.546	137.421	138.670	138.568				
15	M = P _n - P _{n-1}			467	483	481	521	518				
16	N = I _n + I _{n-1}			310.966	311.486	287.967	289.215	289.114				
17	M x N	15 x 16			150438			149885				
18	Σ (M x N)	Σ 17			149937							

COMPANY Perry R. Bass LEASE Poker Lake UNIT WELL NO. 59 DATE 11-13-82

LOCATION: Unit N Section 8 Township 24S Range 30E

13962 H 13962 L/H 1.000 G .5737 %CO₂ 1.500 %N₂ .553 %H₂S _____
d 1.995 F₀₁₈₂₃₀ .819 M₂d₁ (L/H) (F₀Q_m)² .000223 P_{cr} 672 T_{cr} 346

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	.6981		13962						
2	GH		0	4005		8010						
3	37.5GH		0	150187		300375						
4	P ₀ or P _n		3045.2	3588.9	3567.9	4088.7	4053.7					
5	P _r		4.53	5.34	5.31	6.08	6.03			PS = 4049.7		
6	T		534	604	604	674	674					
7	T _r		1.54	1.75	1.75	1.95	1.95					
8	Z		.791	.891	.889	.969	.968					
9	P/Z P/Z	4-8	3849.8	4027.9	4013.4	4219.5	4187.7					
10	P/TZ	9-6	7.2094	6.6688	6.6447	6.2604	6.2133					
11	(P/TZ) ² /1000	(10) ² /1000	.051975	.044473	.044152	.039192	.038605					
12	L/H(F ₀ Q _m) ²		.000223	.000223	.000223	.000223	.000223					
13		I ₁ + I ₂	.052198	.044696	.044375	.039415	.038828					
14	I _n	I ₀ -I ₃	138.116	149.203	149.740	158.832	160.020					
15	M=P _n -P _{n-1}		544	523	521	486						
16	N=I _n +I _{n-1}		287.319	287.856	308.572	309.760						
17	M x N	15 x I ₆			150468	150484						
18	Σ(M x N)	Σ I ₇			149907							

WORK SHEET FOR STEPWISE CALCULATION

(SURFACE)

PRESSURE (P_c & P_w)

2nd

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

COMPANY Perry R. Bass

LEASE Poker Lake

WELL NO. 59

DATE 11/13/82

LOCATION: Unit N

Section 8

Township 24S

Range 30E

13962

H

13962

L/H

1.000

G

.5737

% CO₂

1.500

d

1.995

.01823

0

M²dt

(L/H) (F₁Q_m)²

0

P_{cr}

672

T_{cr}

346

TABLE 10-8

PW = 2908.0

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		13962	6981		0						
	GH		8010	4005		0						
3	37.5GH		300375	150187		0						
4	P _c or P _n		3871.0	3420.3	3405.1	2940.8	2903.6	2906.1				
5	P _r		5.76	5.09	5.07	4.38	4.32	4.32				
6	T		674	604	604	534	534	534				
7	T _r		1.95	1.75	1.75	1.54	1.54	1.54				
8	Z		.957	.882	.881	.786	.784	.784				
9	P/Z P/Z		4044.9	3877.9	3865.1	3741.4	3703.6	3706.7				
10	P/TZ		9.6	6.4204	6.3991	7.0064	6.9356	6.9414				
11	(P/TZ) ² /1000		10.2/1000									
12	L/H(F ₁ Q _m) ²											
13			11 + 12									
14	I _n		10 + 13	166.627	155.754	156.273	142.727	144.184	144.064			
15	M = P _n - P _{n-1}			451	466	464	501	499				
16	N = I _n + I _{n-1}			322.381	322.900	299.000	300.457	300.337				
17	M x N		15 x 16		150429			149886				
18	Σ (M x N)		Σ 17		149946							

COMPANY Perry R. Bass LEASE Poker Lake UNIT WELL NO. 59 DATE 11-13-82

LOCATION: Unit N Section 8 Township 24S Range 30E

13962 H 13962 L/H 1.000 G .5737 % CO₂ 1.500 % N₂ .553 % H₂S
 d 1.995 F₁ 018230 1.305 M₂ d (L/H) (F₁Q_m)² .000566 P_{cr} 672 T_{cr} 346

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	.6981		13962						
	GH		0	4005		8010						
3	37.5GH		0	150187		300375						
4	P ₂ or P _n		2895.2	3420.7	3401.7	3906.4	3874.6					
5	P ₁		4.31	5.09	5.06	5.81	5.77			PS = 3871.0		
6	T		534	604	604	674	674					
7	T _r		1.54	1.75	1.75	1.95	1.95					
8	Z		.784	.882	.880	.959	.958					
9	P/Z P/Z	4-8	3692.9	3878.3	3865.5	4073.5	4044.4					
10	P/TZ	9-6	6.9155	6.4210	6.3999	6.0437	6.0006					
11	(P/TZ) ² /1000	(10) 2/1000	.047824	.041229	.040958	.036526	.036008					
1	L/H(F ₁ Q _m) ²		.000566	.000566	.000566	.000566	.000566					
13		I ₁ + I ₂	.048390	.041795	.041524	.037092	.036574					
14	I _n	I ₀ + I ₃	142.911	153.631	154.125	162.938	164.068					
15	M = P _n - P _{n-1}			525	506	505	473					
16	N = I _n + I _{n-1}			296.542	297.036	317.063	318.193					
17	M x N	15 x 16			150437		150473					
18	Σ (M x N)	Σ I ₇			149938							

COMPANY Perry R. Bass LEASE Poker Lake UNIT WELL NO. 59 DATE 11/13/82

LOCATION: Unit N Section 8 Township 24S Range 30E

13962 H 13962 L/H 1.000 G .5737 % CO₂ 1.500 % N₂ .553 % H₂S

d 1.9955 .018234 m 0 M² cell (L/H) (F_rQ_m)² 0 P_{cr} 672 T_{cr} 346

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		13962	6981		0						
	GH		8010	4005		0						
3	37.5GH		300375	150187		0						
4	P _c or P _n		3634.9	3206.8	3192.2	2751.5	2717.7	2719.9				
5	P _r		5.41	4.77	4.75	4.09	4.04	4.05			PW = 2721.4	
6	T		674	604	604	534	534	534				
7	T _r		1.95	1.75	1.75	1.54	1.54	1.54				
8	Z		.946	.870	.870	.779	.777	.777				
9	P/2 P/2		3842.4	3686.0	3669.2	3532.1	3497.7	3500.5				
10	P/TZ		5.7009	6.1026	6.0749	6.6144	6.5499	6.5553				
11	(P/TZ) ² /1000 (10 ² /1000)											
	L/H(F _r Q _m) ²											
13			I ₁ + I ₂									
14	I _n		I ₀ ÷ I ₃	175.410	163.865	164.611	151.185	152.675	152.549			
15	M = P _n - P _{n-1}			428	443	441	475	472				
16	N = I _n + I _{n-1}			339.275	340.021	315.797	317.287	317.160				
17	M x N		I ₅ x I ₆			150518		149798				
18	Σ(M x N)		Σ I ₇			149857						

COMPANY Perry R. Bass LEASE Poker Lake UNIT WELL NO. 59 DATE 11-13-82

LOCATION: Unit N Section 8 Township 24S Range 30E

13962 H 13962 L/H 1.000 G .5737 % CO₂ 1.500 % N₂ .553 % H₂S

d 1.995 F_r 018230_m 1.880 M² cell (L/H) (F_r Q_m)² .001174 P_{cr} 672 T_{cr} 346

TABLE 12 B 2

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	.6981		13962						
2	GH		0	4005		8010						
3	37.5GH		0	150187		300375						
4	P _s or P _n		2695.2	3197.2	3181.4	3665.3	3637.9					
5	P _f		4.01	4.76	4.73	5.45	5.41			PS = 3634.9		
6	T		534	604	604	674	674					
7	T _r		1.54	1.75	1.75	1.95	1.95					
8	Z		.776	.870	.870	.947	.946					
9	P/Z, P/Z	4-8	3473.2	3674.9	3656.8	3870.4	3845.6					
10	P/TZ	9-6	6.5041	6.0843	6.0543	5.7424	5.7056					
11	(P/TZ) ² /1000	(10) ² /1000	.042303	.037018	.036654	.032975	.032554					
12	L/H(F _r Q _m) ²		.001174	.001174	.001174	.001174	.001174					
13		I ₁ + I ₂	.043477	.038192	.037828	.034149	.033728					
14	I _n	I ₀ -I ₃	149.599	159.308	160.047	168.158	169.164					
15	M=P _n -P _{n-1}		502		486	484	457					
16	N=I _n +I _{n-1}		308.907	309.646	328.205	329.211						
17	M x N	15 x 16			150546	150288						
18	Σ (M x N)	Σ 17			149829							

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

$$\frac{d}{dt} \frac{1.995 F_{\text{m}}}{0.01823 F_{\text{m}}} = \frac{0}{M^2 c^4 d} \frac{(L/H) F_{\text{m}}}{(F_{\text{m}})^2} = \frac{0}{P_{\text{cr}}} \frac{672}{T_{\text{cr}}} = \frac{346}{T_{\text{cr}}}$$

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		13962	6981		0						
	GH		8010	4005		0						
3	37.5GH		300375	150187		0						
4	P_c or P_n		3292.4	2898.8	2886.7	2482.6	2453.8	2455.9		PW = 2457.3		
5	P_r		4.90	4.31	4.30	3.69	3.65	3.65				
6	T		674	604	604	534	534	534				
7	T_r		1.95	1.75	1.75	1.54	1.54	1.54				
8	Z		.932	.861	.861	.772	.771	.771				
9	P/Z P/Z		3532.6	3366.8	3352.7	3215.8	3182.6	3185.4				
10	P/TZ		5.2413	5.5742	5.5509	6.0222	5.9599	5.9651				
11	$(P/TZ)^2/1000$	$(10)^2/1000$										
	$L/H(F_1 Q_m)^2$											
13		$I1 + I2$										
14	I_n	$I0 \div I3$	190.791	179.397	180.150	166.052	167.787	167.642				
15	$M = P_n - P_{n-1}$			394	406	404	433	431				
16	$N = I_n + I_{n-1}$			370.188	370.941	346.202	347.937	347.792				
17	$M \times N$	15×16			150493			149820				
18	$\Sigma(M \times N)$	$\Sigma 17$			149882							

WORK SHEET FOR STEPWISE CALCULATION
(SUBSURFACE) PRESSURE (P_f & P_s)
(SURFACE) PRESSURE (P_f & P_s)

4th
Form C-122-E
Adopted 9-1-65

COMPANY Perry R. Bass LEASE Poker Lake 44/7 WELL NO. 59 DATE 11-13-82

LOCATION: Unit N Section 8 Township 24S Range 30E

13962 H 13962 L/H 1.000 G .5737 % CO₂ 1.500 % N₂ .553 % H₂S

d 1.995 F₀ 018230 2.591 M₂ cid (L/H) (F₀Q_m)² .002231 P_{cr} 672 T_{cr} 346

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	.6981		13962						
2	GH		0	4005		8010						
3	37.5GH		0	150187		300375						
4	P ₀ or P _n		2403.2	2870.2	2859.1	3313.9	3294.3					
5	P _f		3.58	4.27	4.25	4.93	4.90			PS = 3292.4		
6	T		534	604	604	674	674					
7	T _r		1.54	1.75	1.75	1.95	1.95					
8	Z		.771	.860	.859	.933	.932					
9	P/Z P/Z	4-8	3117.0	3337.5	3328.4	3551.8	3534.6					
10	P/TZ	9-6	5.8371	5.5256	5.5106	5.2698	5.2442					
11	(P/TZ) ² /1000	(10) ² /1000	.034071	.030532	.030366	.027771	.027502					
12	L/H(F ₀ Q _m) ²		.002231	.002231	.002231	.002231	.002231					
13		11 + 12	.036302	.032763	.032597	.030002	.029733					
14	I _n	10 + 13	160.792	168.654	169.051	175.648	176.378					
15	M = P _n - P _{n-1}			467	456	455	435					
16	N = I _n + I _{n-1}			329.446	329.843	344.699	345.429					
17	M x N	15 x 16			150368		150325					
18	Σ (M x N)	Σ 17			150007							

COMPANY Perry R. Bass LEASE Poker Lake UNIT WELL NO. 59 DATE 11/13/82

LOCATION: Unit N Section 8 Township 24S Range 30E

13962 H 13962 L/H 1.000 G .5737 % CO₂ 1.500 % N₂ .553 % H₂S

d 1.995F_r018234_m 0 M²cd (L/H) (F_rQ_m)² 0 P_{cr} 672 T_{cr} 346

TABLE 12.2

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		13962	6981		0						
	GH		8010	4005		0						
3	37.5CH		300375	150187		0						
4	P _c or P _n		3153.4	2774.4	2763.0	2374.2	2347.5	2349.8				
5	P _r		4.69	4.13	4.11	3.53	3.49	3.50			PW = 2350.8	
6	T		674	604	604	534	534	534				
7	T _r		1.95	1.75	1.75	1.54	1.54	1.54				
8	Z		.927	.857	.857	.771	.771	.771				
9	P/Z P/Z	4.5	3401.7	3237.3	3224.0	3079.3	3044.8	3047.7				
10	P/TZ	9.6	5.0471	5.3598	5.3378	5.7666	5.7018	5.7073				
11	(P/TZ) ² /1000 (10 ² /1000)											
1	L/H(F _r Q _m) ²											
13		I ₁ + I ₂										
14	I _n	10 ÷ I ₃	198.133	186.575	187.344	173.411	175.384	175.215				
15	M = P _n - P _{n-1}			379	390	389	415	413				
16	N = I _n + I _{n-1}			384.707	385.476	360.755	362.728	362.559				
17	M x N	15 x 16			150487							
18	Σ (M x N)	Σ 17			149888							