

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

Form Co-122
Revised 9-1-79
RECEIVED
file

JUN 30 1982

Type well ☒ Initial ☐ Annual ☐ Special		Test Date 6-16-82		O. C. D.	
Company PERRY R. BASS		Production AIR		ARTESIA, OFFICE	
Well <i>Indian flats morrow</i>		Formation MORROW		Unit K	
Completion Date 6-14-82		Total Depth 12764		Flow Rate, T/D 12710	
Elevation 3196.2 GL		Form or Lease Name BIG EDDY UNIT		Well No. 93	
Csg. Size 5 1/2		Set At 12764		Perforations From 12343 To 12439	
Tub. Size 2 3/8		Set At 12250		Perforations From To	
Type well - Single - Bronthead - G.G. or G.O. Multiple SINGLE GAS		Packer Set At 12250		County EDDY	
Producing Test TBG.		Reservoir Temp. °F 196 a 12250		Mean Annual Temp. °F 60°	
Buro. Press. - P _g 13.2		State NEW MEXICO			
L 12250		R 12250		G _g .5901	
% CO ₂ 1.200		% N ₂ 1.459		% H ₂ S	
Prever		Meter Run 4"		Temp FLG.	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prever Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. in. Hg	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							4000				48 HRS.
1.	4 x 1.750			290	1.5	100	3735				1 HR.
2.	4 x 1.750			290	3.0	102	3625				1 HR.
3.	4 x 1.750			290	5.0	94	3475				1 HR.
4.	4 x 1.750			300	7.0	82	3375				1 HR.
5.	4 x 1.750			280	14.0	60	3020				4 HRS.

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Comp. Factor, F _{pv}	Rate of Flow Q, Mgd
1	14.93	21.33	303.2	.9636	1.302	1.020	407
2	14.93	30.16	303.2	.9619	1.302	1.019	575
3	14.93	38.94	303.2	.9688	1.302	1.021	749
4	14.93	46.82	313.2	.9795	1.302	1.023	912
5	14.93	64.07	293.2	1.000	1.302	1.025	1277

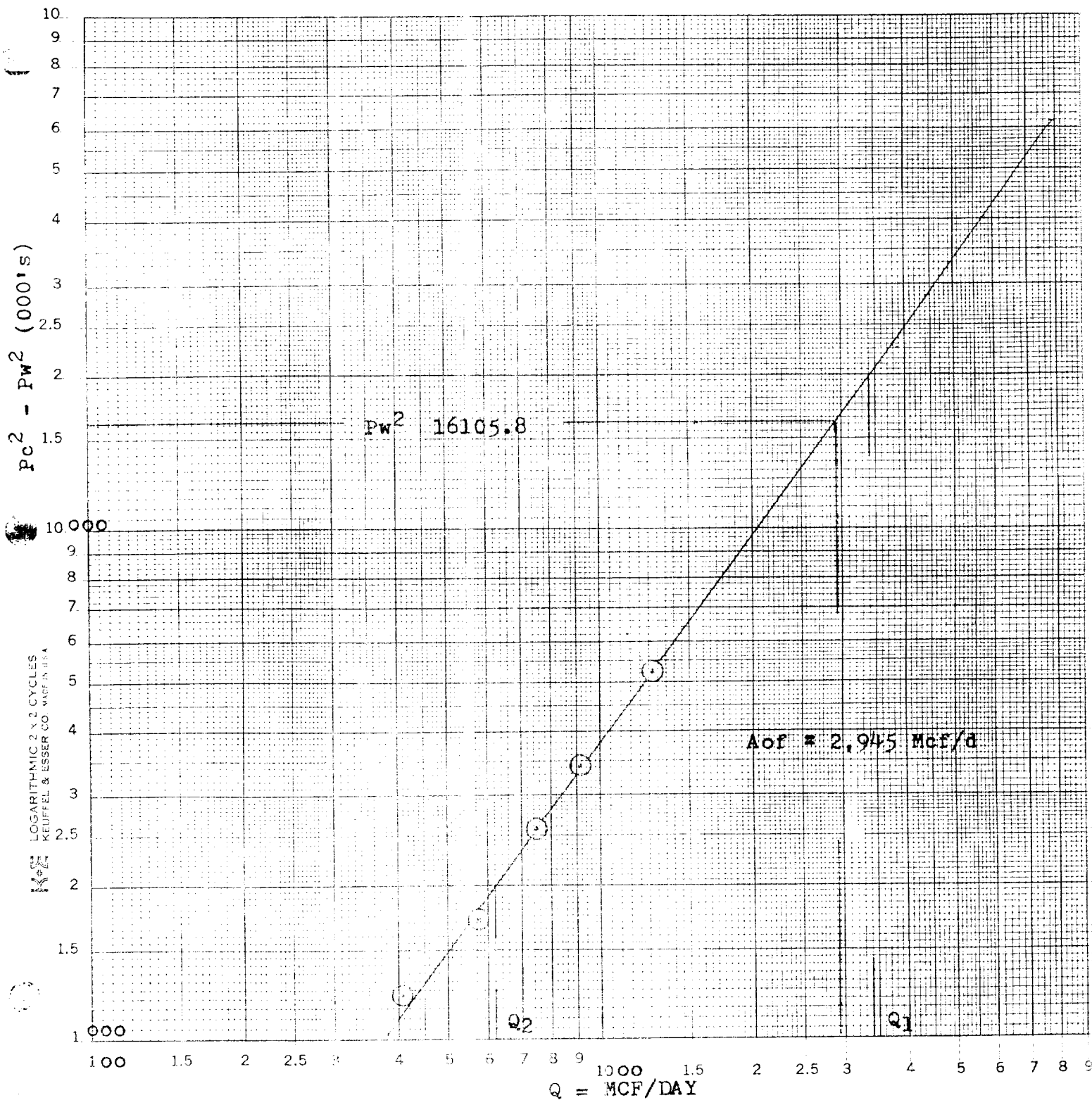
NO.	P _g	Temp. °R	T _g	Z	Gas-Liquid Hydrocarbon Ratio	Met/Lb.
1	.45	560	1.58	.962	DRY	
2	.45	562	1.59	.963	A.P.L. Gravity of Liquid Hydrocarbons	
3	.45	554	1.56	.960	Specific Gravity Separator Gas	.5901
4	.47	542	1.53	.955	Specific Gravity Flowing Fluid	X X X X X X X X
5	.44	520	1.47	.951	Critical Pressure	X X X X X
					Critical Temperature	672
						354

P _g 4013.2		P _w 16105.8		(1) $\frac{P_g^2}{P_g^2 - P_w^2} = 3.097$		(2) $\left[\frac{P_g^2}{P_g^2 - P_w^2} \right]^n = 2.945$	
NO.	BHP	P _w	P _g	P _g - P _w			
1	4913.2	3858.8	14890.2	1215.6			
2	4836.2	3793.3	14389.8	1216.0			
3	4711.2	3687.7	13593.9	2506.9			
4	4564.2	3564.0	12702.3	3403.5			
5	4251.2	3302.4	10905.6	5200.2			

5257.2 S.I.P.		2,945		Angle of Slope 53.5°		Slope, n 739	
Remarks:							
Approved By: _____		Conducted By: DAVIS SERVICES, INC.		Checked By: RICK PAGAN			

*Printed 2306
Camp Bank
7-9-82*

COMPANY: PERRY R. BASS
 LEASE : BIG EDDY UNIT
 WELL NO.: # 93
 UNIT : K - sec. 36/twp. 21s / 28e
 COUNTY : EDDY
 STATE : NEW MEXICO
 DATE : 6-16-82



Q1 LOG 3400 = 3.531479
 Q2 LOG 620 = 2.792392
 N = .739
 θ = 53.50



HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

PERRY R. BASS

APPROVED BY *[Signature]*

COMPANY PERRY R. BASS LEASE BIG EDDY UNIT WELL NO. 93 DATE 6-16-82

LOCATION: Unit K Section 36 Township 21 S Range 28 E

L 12250 H 12250 L/H 1.000 G .5901 % CO₂ 1.200 % N₂ 1.459 % H₂S _____

GH 7229 P_{cr} 672 T_{cr} 354
TABLE C 1 & 2

1st RATE 2nd RATE 3rd RATE 4th RATE

LINE	1	2	3	4	5	6	7	8
1	T _w (W.H. °R)	534	534	534	534	534	534	534
2	T _s (B.H. °R)	656	656	656	656	656	656	656
3	T _w ($\frac{T_w + T_s}{2}$)	595	595	595	595	595	595	595
4	Z (Est.)	.980	.943	.975	.938	.965	.930	.954
5	TZ	583.1	561.1	580.1	558.1	574.2	553.4	567.6
6	GH/TZ	12.398	12.884	12.461	12.953	12.590	13.064	12.735
7	e ^s (Table XIV)	1.592	1.621	1.596	1.625	1.603	1.632	1.612
8	P ₁ or P _s	4913.2	4913.2	4836.2	4711.2	4711.2	4564.2	4564.2
9	P ₁ ² or P _s ²	24139.5	24139.5	23388.8	22195.4	22195.4	20831.9	20831.9
10	P _c ² = P ₁ ² /e ^s or P _w ² = P _s ² /e ^s	15164.0	14890.2	14657.8	14389.8	13842.7	13598.9	12921.9
11	P _c or P _w	3894.1	3858.8	3828.5	3793.3	3720.6	3687.7	3594.7
12	P _c ($\frac{P_w + P_s}{2}$) or ($\frac{P_c + P_1}{2}$)	4403.7	4386.0	4332.4	4314.8	4215.9	4199.4	4079.5
13	P ₁ = (P/P _{cr})	6.55	6.53	6.45	6.42	6.27	6.25	6.07
14	T ₁ = (T/T _{cr})	1.68	1.68	1.68	1.68	1.68	1.68	1.68
15	Z (Table XI)	.943	.942	.938	.937	.930	.930	.921
								.920

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GH 7229 P_{cr} 672 T_{cr} 354
TABLE IX B X TABLE IX B X

5th RATE

LINE	1	2	3	4	5	6	7	8
1	T _w (W.H. °R)	534	534					
2	T _s (B.H. °R)	656	656					
3	T = ($\frac{T_w}{2} + T_s$)	595	595					
4	Z (Est.)	.932	.902					
5	TZ	554.5	536.7					
6	GH/TZ	13.036	13.470					
7	e ^s (Table XIV)	1.630	1.657					
8	P _f or P _s	4251.2	4251.2					
9	P _f ² or P _s ²	18072.7	18072.7					
10	P _c ² = P _f ² /e ^s or P _w ² = P _s ² /e ^s	11084.6	10905.6					
11	P _c or P _w	3329.3	3302.4					
12	P _c ($\frac{P_w + P_s}{2}$) or ($\frac{P_c + P_f}{2}$)	3790.3	3776.8					
13	P _f = (P/P _{cr})	5.64	5.62					
14	T _f = (T/T _{cr})	1.68	1.68					
15	Z (Table XI)	.902	.901					