

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

Form C-122
Revised 9-1-65

NOV 6 1975

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 10-28-75				
Company Bentley Richfield Co. L.P.A.				Connection Not Conn.			B.G.B. ARTESIA, OFFICE		
P.O. Undesignated Marrow				Formation Marrow			Unit		
Completion Date 10-21-75		Total Depth 11380		Plug Back TD 11309		Elevation 3152.2 GL		Farm or Lease Name Kurland Federal	
Csg. Size 5 1/2		Wt. 15 1/2 -17		Set At 4.892		Perforations: From 11163 To 11203		Well No. 1	
Csg. Size 2 7/8		Wt. 6.5		Set At 2.441		Perforations: From Open ended To		Unit Sec. Twp. Rge. # 6 21s 27e	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 10817		County Eddy		
Producing Thru Tbz		Reservoir Temp. °F 201 @ 10800		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico	
L 11183		H -		Gg 0.595		% CO ₂ 1.048		% N ₂ 0.248	
						% H ₂ S 0.00		Prover Meter Run x	
								Taps F	

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. DWT	Temp. °F	Press. p.s.i.g.	Temp. °F	
1.	L	16/64	2.0	64.5	14	76	3527		Packer		96.0
2.	L	14/64	2.0	64.5	10	72	2280	70			1.0
3.	L	12/64	2.0	64.5	5	70	2540	72			1.0
4.	L	9/64	2.0	64.5	2	76	2910	76			1.0
5.											

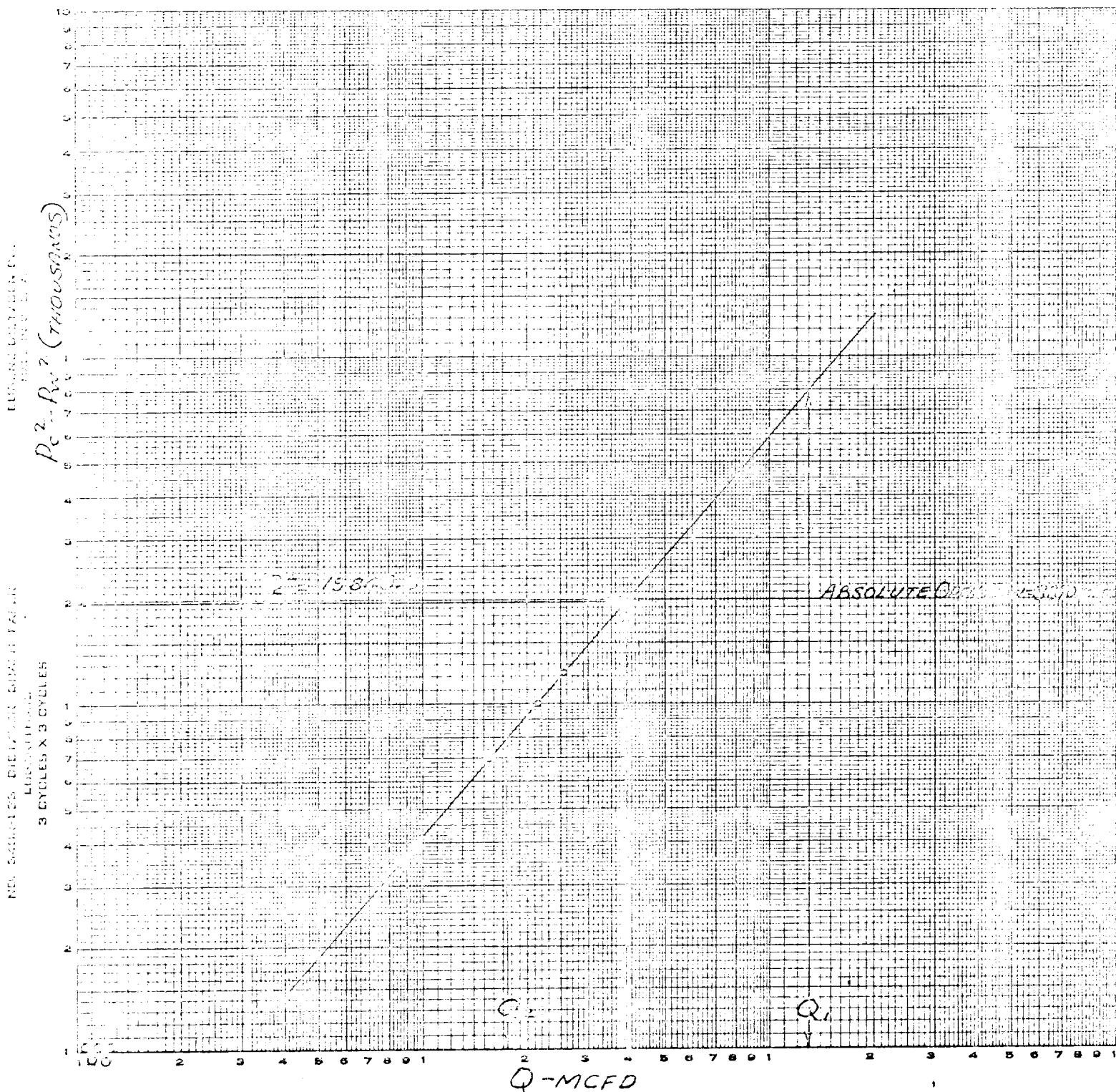
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	19.81	96.00	658.2	0.9850	1.296	1.047	2541.8
2.	19.81	81.12	658.2	0.9887	1.296	1.048	2158.0
3.	19.81	57.36	658.2	0.9905	1.296	1.049	1530.1
4.	19.81	36.28	658.2	0.9850	1.296	1.047	960.6
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcfd/bbl.
1.	0.97	536	1.54	0.912			
2.	0.97	532	1.53	0.910			
3.	0.97	530	1.52	0.908			
4.	0.97	536	1.54	0.912			
5.							

NO.	P _r ²	P _w * ²	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.	2758.2	7607.7	12241.1		1.621	1.522
2.	3138.2	9848.3	10000.5			
3.	3584.2	12846.5	7002.3			
4.	3981.2	15850.0	3998.8			
5.						

Absolute Open Flow 3869 Mcfd @ 15.025				Angle of Slope @ 49° 2'		Slope, n 0.868	
Remarks: * BHP @ (-8031') 11183 used for pressure calculations							
Approved By Commission:		Conducted By:		Calculated By:		Checked By:	
		Coleman Petr. Engr. Co.		Joe A. Coleman		Joe A. Coleman	

COUNTY Kearns
 WELL Kearland Federal, No. 1
 LOCATION Unit X, Sec 6 21s 27e
 COUNTY Eddy, New Mexico
 DATE October 28, 1975



$$Q_1 = 13000 \text{ MCFD}; \text{LOG } Q_1 = 4.11394$$

$$Q_2 = 1760 \text{ MCFD}; \text{LOG } Q_2 = 3.24551$$

$$n = 0.86843 = 0.868$$

COLEMAN PETROLEUM ENGINEERING COMPANY

PHONE 393-3813

3713 W. MARLAND ST.

P. O. BOX 1829

HOBBS, NEW MEXICO 88240

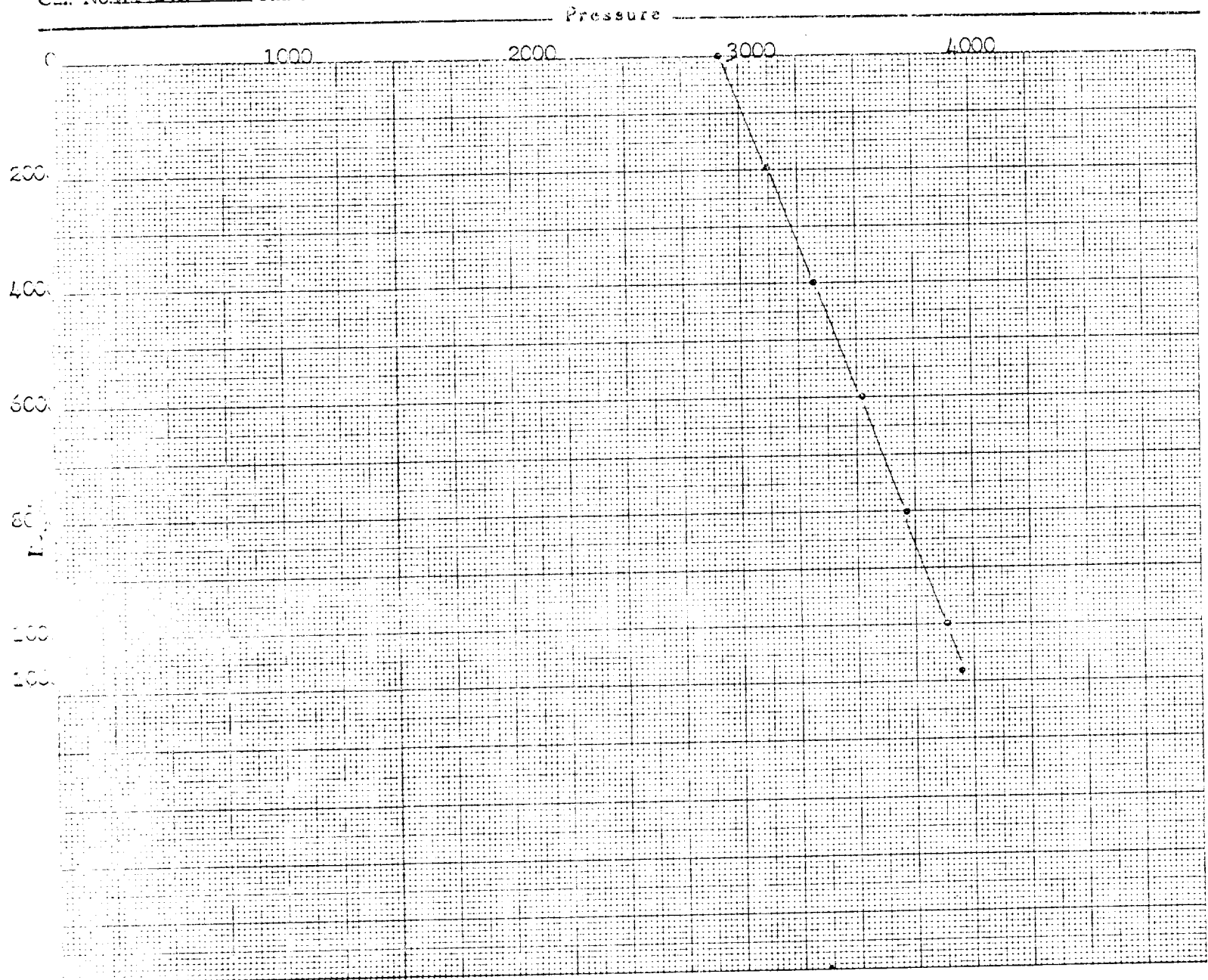
BOTTOM HOLE PRESSURE RECORD

OPERATOR Atlantic Richfield Company
 FIELD Undesignated FORMATION Morrow
 LEASE Marland Federal WELL No. 1
 COUNTY Eddy STATE New Mexico
 DATE 10-28-75 TIME 5:00 Pm
 Spm Flowing 9/64" Test depth 10800
 TUBING CHOKE Last test date -
 TUB PRES 2910EWT BHP last test -
 Casing Pres PR BHP change -
 Elev. 3152 GL Fluid top Flowing
 Datum (-8031)** Water top -
 Temp. @ 201 F Run by Loper
 CIL No. 124194 Chart No. 2

Depth	Pressure	Gradient
0	2910	-
2000	3122	.106
4000	3318	.098
6000	3508	.095
8000	3706	.099
10000	3872	.083
10800	3937	.081
11183 (-8031)	3968 * **	(.081)

* Extrapolated Pressure

** MidPoint of Casing Perforations



COLEMAN PETROLEUM ENGINEERING COMPANY

PHONE 393-3813

3713 W. MARLAND ST.

P. O. BOX 1829

HOBBS, NEW MEXICO 88240

BOTTOM HOLE PRESSURE RECORD

Operator Atlantic Richfield Company
 Field Undesignated FORMATION Morrow
 Lease Kurland Fed WELL No. 1
 County Eddy STATE New Mexico
 DATE 10-28-75 TIME 10:30 Am
 Gauge S/N 100 in Test depth 10800
 Time S. T. 96.0 Hrs Last test date -
 Tub Pres. 3527 DWT BHP last test -
 Gls. Pres. PHE BHP change -
 Elev. 3152 GL Fluid top None
 Datum (-8031)** Water top None
 Temp. @ 201 F Run by Loper
 C.I. No. 12419N Chart No. 1

Depth	Pressure	Gradient
0	3527	-
2000	3688	.081
4000	3852	.082
6000	4016	.082
8000	4180	.082
10000	4344	.082
10800	4410	.083
11183(-8031)	4442 * **	(.083)

* Extrapolated Pressure
 ** MidPoint of Casing Perforations

