

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date AUG 21 1989	
Company MERIDIAN OIL COMPANY				Connection AIR NEW WELL	
Pool Wildcat <i>Strawn</i>				Formation ARTESIA, OFFICE	
Completion Date 1-21-89		Total Depth 8450		Plug Back TD 8404	
Elevation 3531.5' GR		Farm or Lease Name CANNONBALL FEDERAL			
Casing Size 4.500		Set At 8450		Perforations: From 7756 To 8031	
Tubing Size 2.375		Set At 7617		Perforations: From OPEN To ENDED	
Type Well - Single - Broadhead - G.G. or G.O. Multiple SINGLE				Packer Set At 7617	
Producing thru TUBING		Reservoir Temp. °F 162 @ 7889		Baro. Press. - P _a 13.2	
Mean Annual Temp. °F 60.0		State NEW MEXICO			
L 7889	H 7889	G _g .638	% CO ₂ .21	% N ₂ 1.35	% H ₂ S .00
Prover .00		Meter Run 3.0		Taps FLANGE	

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	of Flow
51							1342	60			72
1.	3.00 X .500			130	4.0	85	1242	60	0	0	1
2.	3.00 X .500			130	8.0	90	1155	60	0	0	1
3.	3.00 X .500			130	19.0	90	1095	61	0	0	1
4.	3.00 X .500			130	43.0	93	1012	61	0	0	1
5.											

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 Compress. Factor, F _{pv}	Rate of Flow Q, Mcd
1	1.18	23.93	143.2	.9768	1.2520	1.0114	35
2	1.18	33.85	143.2	.9723	1.2520	1.0110	49
3	1.18	52.16	143.2	.9723	1.2520	1.0110	76
4	1.18	78.47	143.2	.9697	1.2520	1.0108	114
5							

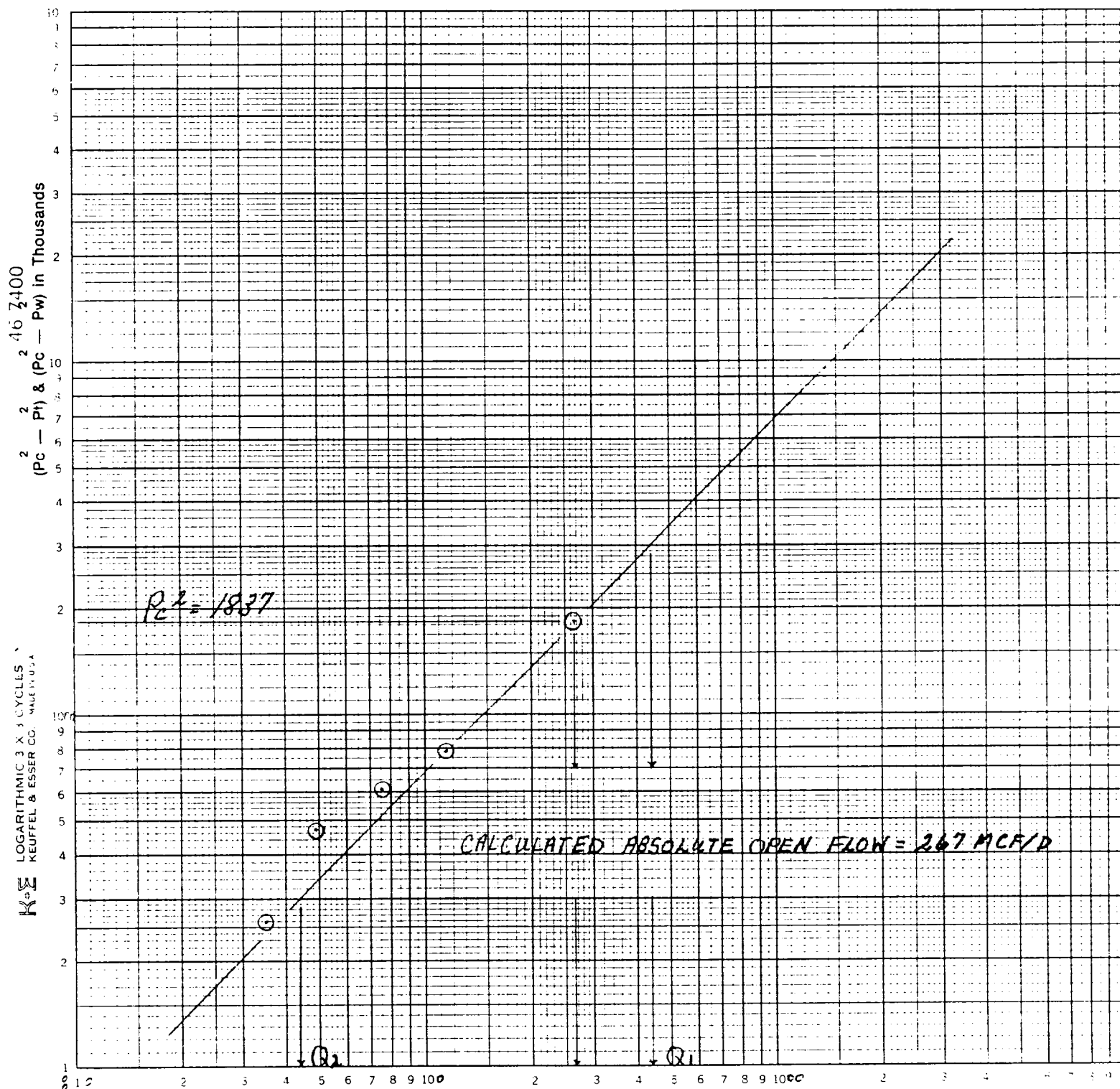
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Ref/bbl.
1	21	545	1.49	.978	0	
2	21	550	1.50	.978		
3	21	550	1.50	.978		
4	21	553	1.51	.979		
5						

NO.	P _r 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	1576	1256	259	2.3406	2.3406
2	1365	1169	470		
3	1228	1109	608		
4	1051	1026	758		
5					

Absolute Open Flow 267 Mcd @ 15.025		Angle of Slope 45.0	Slope, n 1.000
Remarks: CHOKE SIZES: 1ST RATE 1 5/64 2ND RATE 2/64 3RD RATE 3/64 4TH RATE 4/64			
Approved By Division	Conducted By: BENNETT-CATHEY	Calculated By: MONTE J. ANDOLPH	Checked By: Bill Koe Meridian

BENNETT & CAHNEY PRODUCTION TESTING BACK PRESSURE CURVE

Operator MERIDIAN OIL CO. Lease CANNONBALL FED. Well No. 2
 County CHAVES Field _____ Location 7-145-28E
 Date of Test 6-22-89 Slope "n" 1.000 Angle of Slope 45°
 Calc. Abs. Potential 267 MCF/D



$$\overline{\Delta P}_1^2 \quad P_c^2 - P_w^2 = 3000$$

$$\overline{\Delta P}_2^2 \quad P_c^2 - P_w^2 = 300$$

$$Q_1 = 440$$

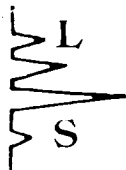
$$Q_2 = 44$$

Q, Mcfd

$$\text{LOG } Q_1 = 2.643$$

$$\text{LOG } Q_2 = 1.643$$

$$n = 1.000$$



LABORATORY SERVICES

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FOR: Bennett & Cathey
P. O. Box 787
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SAMPLE
IDENTIFICATION: Cannon Ball Fed. #1
COMPANY: Meridian Oil Co.
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 6/22/89 1:30PM GAS (X) LIQUID ()
 ANALYSIS DATE: 6/22/89 SAMPLED BY: Keith Norvell
 PRESSURE — PSIG 140 ANALYSIS BY: Rolland Perry
 TEMPERATURE — °F: 80

REMARKS:

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM	LIQ. VOL. PERCENT
Hydrogen Sulfide	(H2S)	-0-		
Nitrogen	(N2)	1.35		
Carbon Dioxide	(CO2)	0.21		
Methane	(C1)	87.37		
Ethane	(C2)	7.22	1.842	
Propane	(C3)	2.22	0.612	
I-Butane	(IC4)	0.28	0.092	
N-Butane	(NC4)	0.65	0.205	
I-Pentane	(IC5)	0.18	0.066	
N-Pentane	(NC5)	0.17	0.062	
Hexane	(C6)	0.14	0.065	
Heptanes Plus	(C7 +)	0.21	0.118	
		100.00	3.062	

BTU/CU. FT.—DRY 1132
AT 14.650 WET 1109

SPECIFIC GRAVITY—CALCULATED 0.638
MEASURED

VAPOR PRESSURE (ABSOLUTE)—CALCULATED

26# GASOLINE— 0.383

CU. FT./GAL. —