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Energy, Minerals and Natural Resources Department

Form C-122
 Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
 Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator ARCO PERMIAN						Lease or Unit Name A.B. COATES C GAS COM <i>Com</i>			
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11-28-95		Well No. 1	
Completion Date 11-14-95		Total Depth 8162		Plug Back TD 6800		Elevation		Unit Ltr. - Sec. - TWP - Rge. 24-25S-37E	
Csg. Size 7"	Wt. 23#	d	Set At 8162	Perforations: From: 6220 To: 6443		Country LEA			
Tbg. Size 2-3/8	Wt. 4.7	d 1.995	Set At 6100	Perforations: From: To:		Pool <i>Jules</i>			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple <i>single</i>				Packer Set At 6101		Formation ABBO <i>11/28</i>			
Producing Thru TBG		Reservoir Temp. °F		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2		Connection AIR	
L 6454	H 6454	Gg .691	% CO ₂ 1.24	% N ₂ 1.99	% H ₂ S	Prover -0-	Meter Run 3.826	Taps FLG	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice X 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	1215					1215		PKR.		120 hr.
1.	3.826 X 1.000		90	6	54	1200		"		1 hr.
2.	3.826 X 1.000		110	44	84	1178		"		1 hr.
3.	3.826 X 1.750		150	10	96	1120		"		1 hr.
4.	3.826 X 1.750		180	38	80	1000		"		1 hr.
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)		Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	4.758	24.88	103.2	1.006	1.203	1.011	144
2.	4.758	73.62	123.2	.9779	1.203	1.011	416
3.	15.01	40.39	163.2	.9671	1.203	1.014	715
4.	15.01	85.68	193.2	.9813	1.203	1.018	1545
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	DRY GAS	Mcf/bbl.
1.	.15	534	1.40	.978	A.P. I. Gravity of Liquid Hydrocarbons	DRY	Deg.
2.	.18	544	1.42	.978	Specific Gravity Separator Gas	.691	XXXXXXXXXX
3.	.24	556	1.45	.973	Specific Gravity Flowing Fluid	DRY	XXXXXX
4.	.28	540	1.41	.965	Critical Pressure	670	P.S.I.A. P.S.I.A.
5.					Critical Temperature	381	R R

P _c 1228.2 P _c 1508.5				
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.	1471.9	1213.4	1472.3	36.2
2.	1419.0	1192.7	1422.6	85.9
3.	1281.9	1137.0	1292.7	215.8
4.	1026.6	1038.3	1078.1	430.3
5.				

$$1) \frac{P_c^2}{P_c^2 - P_w^2} = 3.505$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.144$$

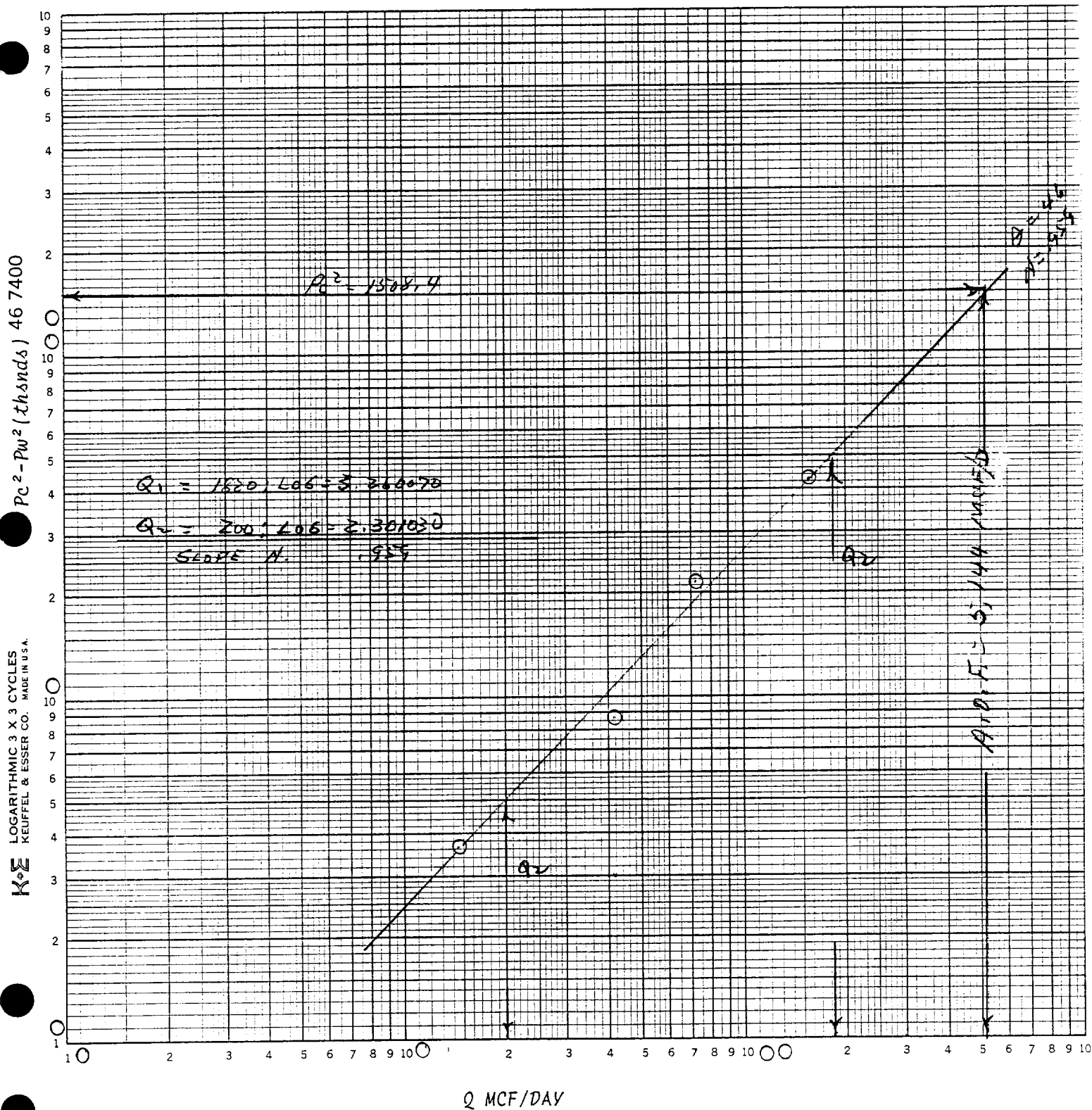
$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.330$$

Absolute Open Flow	5.144	Mcf @ 15.025	Angle of Slope θ	46	Slope, n	.959
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Remarks:

Approved By Division	Conducted By: PRO WELL TESTERS	Calculated By: MB	Checked By: BM
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ARCO OIL & GAS
A.B. COATS C, WELL # 10
24-25S-37E
LEA COUNTY, NEW MEXICO
11-28-95





Laboratory Services, Inc.

1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: ARCO Permian
Attention: Mr. Ray Ables
P. O. Box 791
Hobbs, New Mexico 88241

SAMPLE
IDENTIFICATION: A. B. Coats C-10
COMPANY: ARCO Permian
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 11-28-95 12:30 PM GAS (XX) LIQUID ()
ANALYSIS DATE: 11-28-95 SAMPLED BY: Ray Ables
PRESSURE - PSIG 180.00 ANALYSIS BY: Vickie Walker
SAMPLE TEMP. °F 80.00
ATMOS. TEMP. °F
REMARKS: Sample taken @ the meter run.

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	1.99	
Carbon Dioxide (CO2)	1.24	
Methane (C1)	83.71	
Ethane (C2)	7.05	1.882
Propane (C3)	2.95	0.810
I-Butane (IC4)	0.33	0.106
N-Butane (NC4)	1.18	0.370
I-Pentane (IC5)	0.36	0.131
N-Pentane (NC5)	0.64	0.230
Hexane Plus (C6+)	0.55	0.225
	100.00	3.754

BTU/CU.FT. - DRY 1160
AT 14.650 DRY 1156
AT 14.650 WET 1136
AT 14.73 DRY 1162
AT 14.73 WET 1142

SPECIFIC GRAVITY -
CALCULATED 0.691
MEASURED

MOLECULAR WT. 20.0162

OARC COMPANY : ARCO
 LEASE : A,B.COATES C
 SECTION : 24
 WELL NO. : 1
 TOWNSHIP : 25
 L : 6454 H : 6454 L/H : 1 G/GMIX : 0.691
 CO2 : 1.24 XN2 : 1.99 H2S : DATE : 11/28/95
 d : 1.995 Fr : 0.018231 GH : 4459.7 RANGE : 37
 Pc = 1228.2 Pc2 = 1508.5
 Pt2 = 1471.9 Pw = 1213.4
 1419.0 1192.7
 1281.9 1137.0
 1026.6 1038.3

VOL 1 : 144 PSIA 1 : 1213.2 RESV.TEMP 138.5
 VOL 2 : 416 PSIA 2 : 1191.2
 VOL 3 : 715 PSIA 3 : 1132.2 SHUT-IN PR= 1228.2
 VOL 4 : 1545 PSIA 4 : 1013.2
 Pc2-Pw2= 36.2 Pw2 = 1472.3
 85.9 1422.6
 215.8 1292.7
 430.3 1078.1

PCR : 670
 TCR : 381

n = 0.959
 Pc2/(Pc2-Pw2) = 41.685
 17.563
 6.991
 3.505

LINE	RATE 1		RATE 2		RATE 3		RATE 4	
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1 QM	0.144	0.144	0.416	0.416	0.715	0.715	1.545	1.545
2 TW	534	534	534	534	534	534	534	534
3 Ts	598.5	598.5	598.5	598.5	598.5	598.5	598.5	598.5
4 T	566.3	566.3	566.3	566.3	566.3	566.3	566.3	566.3
PR (est)	1.81		1.78		1.69		1.51	
5 Z(est)	0.808	0.795	0.810	0.797	0.817	0.804	0.831	0.818
6 TZ	457.3	449.9	458.7	451.3	462.6	455.2	470.8	462.9
7 GH/TZ	9.752	9.912	9.722	9.881	9.641	9.798	9.473	9.634
8 eS	1.442	1.450	1.440	1.449	1.436	1.444	1.427	1.435
9 l-e-S	0.306	0.310	0.306	0.310	0.303	0.307	0.299	0.303
10 Pt	1213.2	1213.2	1191.2	1191.2	1132.2	1132.2	1013.2	1013.2
11 Pt2 /1000	1471.9	1471.9	1419.0	1419.0	1281.9	1281.9	1026.6	1026.6
12 Fr	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231
13 Fc=FrTZ	8.337	8.203	8.363	8.228	8.433	8.298	8.583	8.440
14 FcQm	1.20	1.18	3.48	3.42	6.03	5.93	13.26	13.04
15 L/H(FcQm)	1.4	1.4	12.1	11.7	36.4	35.2	175.8	170.0
16 Fw	0.441476	0.433144	3.697669	3.627928	11.03108	10.82471	52.57555	51.552168
17 Pw2	1472.3	1472.3	1422.7	1422.6	1292.9	1292.7	1079.1	1078.1
18 Ps2	2122.4	2135.1	2048.5	2060.7	1856.0	1866.7	1539.4	1547.3
19 Ps	1456.8	1461.2	1431.3	1435.5	1362.4	1366.3	1240.7	1243.9
20 P	1335.0	1337.2	1311.2	1313.4	1247.3	1249.2	1127.0	1128.5
21 Pr	1.99	2.00	1.96	1.96	1.86	1.86	1.68	1.68
22 Tr	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
23 Z	0.795	0.794	0.797	0.797	0.804	0.804	0.818	0.817

[Pc2/Pc2-Pw2]n = 35.773
 15.616
 6.455
 3.330
 ADF= Q 5.151
 6.496
 4.616
 5.144

FORM C122-D