

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

Form C-1
Revised 1965

RECEIVED BY

FEB 19 1987

O. C. D.
ARTESIA, OFFICE

Type Test <input type="checkbox"/> Initial <input type="checkbox"/> Annual <input checked="" type="checkbox"/> Special				Test Date 2-10-87	
Company ARCO Oil and Gas				Connection El Paso #58-807-01	
Pool Undesignated N. Ill. (Camp Morrow)				Formation Morrow	
Completion Date 6-10-85		Total Depth 10,400		Plug Back 1. Elevation 10,294 3612.5 GR	
Casing Size 5 1/2		Wt. 15.5		Set At 10,400	
Thg. Size 2 3/8		Wt. 4.7		Set At 10,044	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10,044	
Producing Thru Tbg		Reservoir Temp. °F 158.4 10,120		Mean Annual Temp. °F 60	
Baro. Press. - P _a 13.2		State New Mexico		County Eddy	
L 10,044		H 10,044		G _g .670	
% CO ₂ .874		% N ₂ .554		% H ₂ S -0-	
Prover 4.026		Meter Run Flg		Taps	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							2375				24 Hrs
1.	4 X 1.500			525	2.25	70	2080	64.5	Pkr		1 Hr
2.	4 X 1.500			525	4	70	1925	69	Pkr		1 Hr
3.	4 X 1.500			529	6.25	70	1845	73	Pkr		1 Hr
4.	4 X 1.500			533	11.9	70	1652	72	Pkr		1 Hr
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	10.842	34.80	538.2	.9905	1.2217	1.056	482
2	10.842	46.40	538.2	.9905	1.2217	1.056	643
3	10.842	58.21	542.2	.9905	1.2217	1.057	807
4	10.842	80.62	546.2	.9905	1.2217	1.058	1119
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	.80	530	1.39	.896	29.3	60 @ 64 °	.670	XXXXXXX	669	382
2	.80	530	1.39	.896				XXXXX		
3	.81	530	1.39	.895						
4	.82	530	1.39	.894						
5										

NO.	P _r ²	P _w ²	P _w ²	P _r ² - P _w ²
1	3409.2	11622.6	9139.7	2482.9
2			7959.2	3663.4
3			7269.5	4351.1
4			5679.6	5943
5				

(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 1.96$ (2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.905$

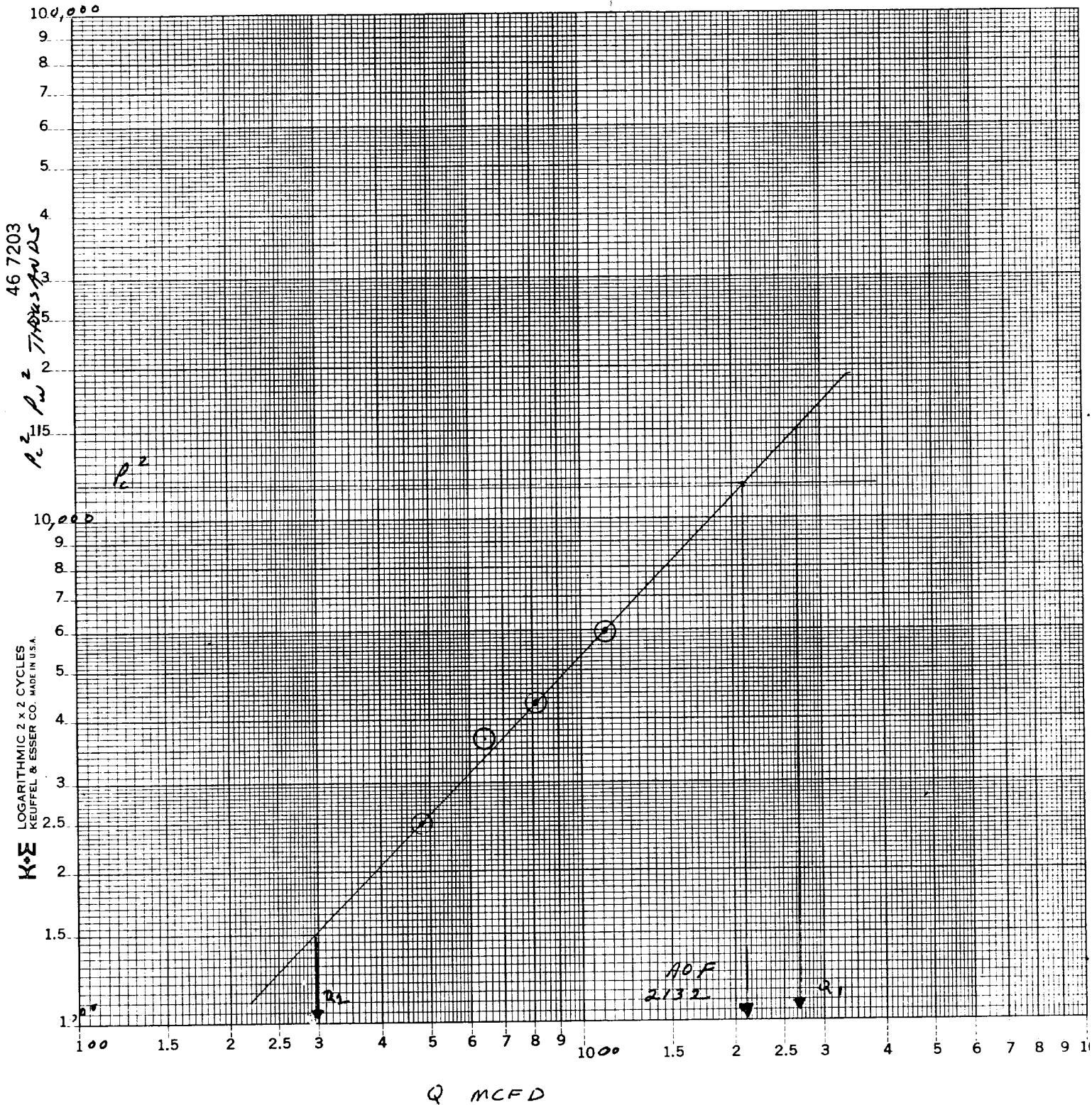
AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2131.6$

Absolute Open Flow 2131.6 Mcfd @ 15.025 Angle of Slope @ 46° 13' Slope, n = .958

Remarks: Fluid produced during test 4.34 bbls. cond. and 0 bbls water

Approved By Commission	Conducted By Lon Briley	Calculated By Lon Briley	Checked By Doug Conklin
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STATE BY No 1
UNIT F 7-185-28E
Eddy County, N.M.
February 10, 1987



$$Q_1 = 2675 \text{ MCFD}, \quad \log 3.427323786$$

$$Q_2 = 295 \text{ MCFD}, \quad \log 2.469822016$$

$$n = \frac{.95750177}{.958}$$



PRECISION SERVICE INC.
Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

Run No. 215-4
Date Run 02/15/87
Date Sampled 02/10/87

Analysis For: ARCO OIL & GAS COMPANY

Lease: <u>STATE BY #1</u>	Producer: <u>ARCO OIL & GAS</u>
Location: <u>STA# 58-807-01</u>	County: <u>EDDY</u> State: <u>NEW MEXICO</u>
Purpose: <u>FOUR POINT</u>	Sampled By: <u>D. CONKLIN</u>
Sampling Temp.: <u>70</u> °F	Atmos Temp.: <u>75</u> °F
Volume/day: <u>1100 MCF</u>	Formation: <u>MORROW</u>
Pressure on Bomb: <u>530</u>	PSIG: Line Pressure <u>543.2</u> PSIA PSIG

Gas Component Analysis Press. Base: 14.65

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.874		
Oxygen O ₂			
Nitrogen N ₂	.554		
Hydrogen Sulfide H ₂ S			
Methane C ₁	86.550		
Ethane C ₂	7.699		2.048
Propane C ₃	2.922		.801
Iso-Butane IC ₄	.361		.117
Nor-Butane NC ₄	.609		.191
Iso-Pentane IC ₅	.164		.060
Nor-Pentane NC ₅	.115		.042
Hexanes plus	.151		.069
Hexanes C ₆			
Heptanes			
Heptanes Plus C ₇ +			
Total	100.000		3.328
Pentane + G.P.M.			.171
Propane + GPM			1.280
6-lb Gasoline			.254

BTU Dry 1135
BTU Wet 1115
Calc. Specific Gravity .656

@ Std. Press. 14.696

BTU Dry 1138
BTU Wet 1118

Calc. Vap. Press. #/Sq.In. _____
Reid Vap. Press. #/Sq.In. _____

Z Factor .9973
N Value 1.2906
Ave Mol Wt 18.9456
Ave Cu Ft/Gal _____

Run by JEFFREY A. PROPP

Calculated By JEFFREY A. PROPP

Remarks: FIELD GRAV.: 0.670

Distribution: _____

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DISTRIBUTION		
SANTA FE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
FILE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
U.S.G.S.		
LAND OFFICE		
TRANSPORTER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
OPERATOR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PRODUCTION OFFICE		

NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS
RECEIVED BY
JUN 27 1985
O. C. D.
ARTESIA, OFFICE

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-85

Operator ARCO Oil and Gas Company
Division of Atlantic Richfield Company
Address P. O. Box 1710, Hobbs, New Mexico 88240

Reason(s) for filing (Check proper box)

New Well <input checked="" type="checkbox"/>	Change in Transporter of: Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/> Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/>	Other (Please explain) This well has been placed in the pool designated below. Please notify the Commission within 10 days if you are NOT in agreement with this action.
Recompletion <input type="checkbox"/>		
Change in Ownership <input type="checkbox"/>		

If change of ownership give name and address of previous owner

DESCRIPTION OF WELL AND LEASE

Lease Name State BY	Well No. 1	Pool Name, Including Formation Wildcat Morrow Gas	Kind of Lease State, Federal or Fee	State	Lease No. V-328
Location Unit Letter F : 1980 Feet From The North Line and 1980 Feet From The West Line of Section 7 Township 18S Range 28E, NMPM, Eddy County					

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/> Pride Pipeline Company	Address (Give address to which approved copy of this form is to be sent) Box 2436 ARILENE, TEXAS 79604					
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/> EL Paso Natural Gas Company	Address (Give address to which approved copy of this form is to be sent) Box 1492 EL PASO, TEXAS 79978					
If well produces oil or liquids, give location of tanks.	Unit F	Sec. 7	Twp. 18S	Rge. 28E	Is gas actually connected? No YES	When 7/22/86

If this production is commingled with that from any other lease or pool, give commingling order number:

COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
		X	X					
Date Spudded 4/12/85	Date Compl. Ready to Prod. 6/10/85	Total Depth 10,400'	P.B.T.D. 10,294'					
Elevations (DF, RKB, RT, GR, etc.) 3612.5' GR	Name of Producing Formation Morrow Gas	Top Oil/Gas Pay 10,116'	Tubing Depth 10,010'					
Perforations 10,116, 117, 118, 119, 120, 121, 122, 123, 124'		Depth Casing Shoe						

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
17 1/2"	13-3/8" OD	418'	500
11"	8-5/8" OD	2600'	1150
7-7/8"	5 1/2" OD	10400'	
	2-3/8" OD	10010'	

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas - MCF

GAS WELL

Actual Prod. Test-MCF/D CAOF 3,600	Length of Test 4-pt	Bbls. Condensate/MMCF 167	Gravity of Condensate 59.2°
Testing Method (pilot, back pr.) back pr.	Tubing Pressure (shut-in) 2882#	Casing Pressure (shut-in) Pkr	Choke Size Various

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Elizabeth S. Bush
(Signature)
Drig. Engr.
6/18/85
(Date)

OIL CONSERVATION COMMISSION
NOV 24 1986

APPROVED _____, 19____
BY Les A. Clements
TITLE Supervisor District II

This form is to be filed in compliance with RULE 1104.
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.
All sections of this form must be filled out completely for allowable on new and recompleted wells.
Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.
Separate Forms C-104 must be filed for each pool in multiply completed wells.