

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

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Form C-122
Revised 9-1-65

MAY 31 1965

O. C. D.

ARTESIA, OFFICE

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5-28-85	
Company TRANSWESTERN				Connection PIPELINE			
Pool UD Und. Albo				Formation ABO			
Completion Date 1-7-85		Total Depth 3400		Plug Back TD 3119		Elevation 4512 GR	
Csg. Size 4.5		Wt. 10.5		Set At 3202.03		Perforations: From 2975 To 2983	
Trq. Size 2.375		Wt. 4.7		Set At 2925.07		Perforations: From OPEN To	
Type Well - Single - Prdenhead - G.G. or G.O. Multiple SINGLE						Packer Set At	
Producing Thru TUBING						Baro. Press. - P _a 13.2	
Reservoir Temp. °F 109 @ 2979		Mean Annual Temp. °F 60		State NEW MEXICO		County CHAVES	
L 2979	H 2979	G _g .729	% CO ₂ .798	% N ₂ 36.051	% H ₂ S 0	Prover 0	Meter Run 2.067
						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.	CHOKE	Duration of Flow
SI							304	80	304		48.0
1.	2.07	X	1.000	50	0.5	80	272	80	272	4/64	1.0
2.	2.07	X	0.625	47	6.5	80	252	80	252	6/67	1.0
3.	2.07	X	0.625	49	7.0	80	190	80	225	7/64	1.0
4.	2.07	X	0.625	48	8.0	80	40	80	212	12/64	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 F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	4.95	5.62	63.2	0.9813	1.1712	1.0026	32
2	1.87	19.78	60.2	0.9813	1.1712	1.0025	43
3	1.87	20.87	62.2	0.9813	1.1712	1.0026	45
4	1.87	22.13	61.2	0.9813	1.1712	1.0025	48
5							

NO.	P _t	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.	0.10	540	1.80	0.995	0	0.729	XXXXXXX	0.729	607	299
2.	0.10	540	1.80	0.995			XXXXX			
3.	0.10	540	1.80	0.995						
4.	0.10	540	1.80	0.995						
5.										

P _c 316.7	P _c ² 100	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.0165$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.4225$
NO.	P _t ²	P _w ²	P _c ² - P _w ²
1		285	81
2		265	70
3		238	57
4		225	50
5			

AOI = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 68$

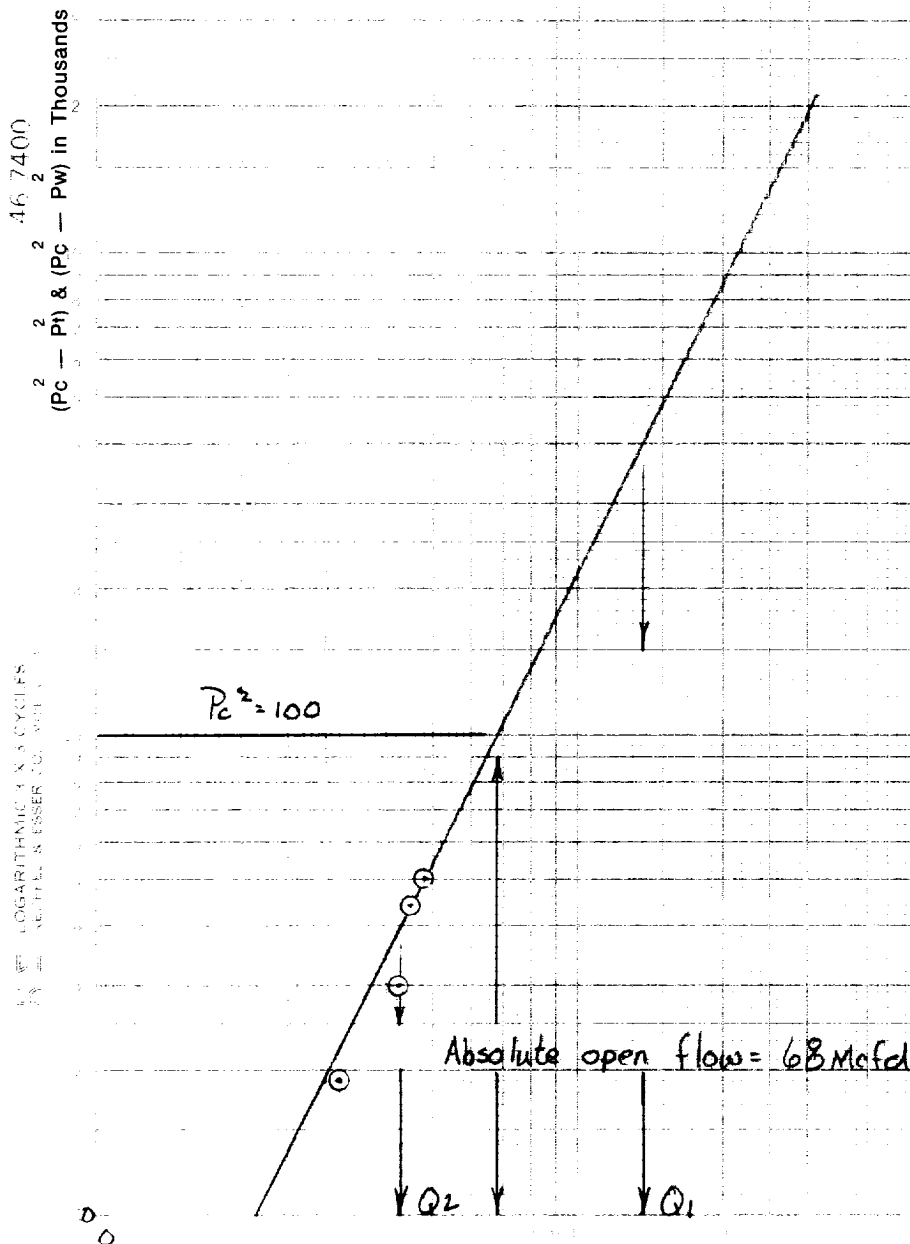
Absolute Open Flow	68	Mcf @ 15.025	Angle of Slope @	63.3	Slope, n	0.503
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Remarks:

Approved by Commission:	Conducted By: BENNETT & CATHEY	Calculated By: RICHARD TOWNLEY	Checked By:
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BENNETT & CATHEY PRODUCTION TESTING BACK PRESSURE CUR

Operator Transwestern Gas Supply Lease Terry Don fed Well No. 1
 County Chaves Field Pecos Slope Location 24 45 21E
 Date of Test 5-28-85 Slope "n" .503 Angle of Slope 63.3
 Calc. Abs. Potential 68 MCF/D

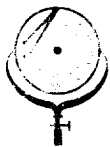


$$\begin{aligned} \overline{\Delta P}_1^2 \quad P_c^2 - P_w^2 &= 400 \\ \overline{\Delta P}_2^2 \quad P_c^2 - P_w^2 &= 40 \\ Q_1 &= 137 \\ Q_2 &= 43 \end{aligned}$$

Q in MCF/Day

$$\begin{aligned} \text{LOG } Q_1 &= 2.1367 \\ \text{LOG } Q_2 &= 1.6335 \end{aligned}$$

$$n = 0.5032 = .503$$



PRECISION SERVICE INC.

Flow Measurement Engineers

Analysis Results Summary

Casper, WY 82601

Run No. 117-4
Date Run 01/17/85
Date Sampled 01/15/85

Analysis For: TRANSWESTERN GAS SUPP.
Lease: Jerry Don Federal #1 Producer: Transwestern Gas Supp.
Location: Antelope Ridge County: Chaves State: New Mexico
Purpose: New Well Sampled By: J. Dougherty
Sampling Temp: 45 °F Atmos Temp: 40 °F
Volume/day: _____ Formation: _____
Pressure on Bomb: 47 PSIG; Line Pressure: 60.2 PSIA PSIG

Gas Component

Analysis

Press. Base: 14.73

Mol. %

Liq. %

GPM
Per MCF

Carbon Dioxide CO₂
Oxygen O₂
Nitrogen N₂
Hydrogen Sulfide H₂S

.798

.074

36.051

BTU Dry

667

BTU Wet

655

Calc. Specific Gravity

.729

@ Std. Press. 14.696

Methane C₁
Ethane C₂
Propane C₃
Iso-Butane iC₄
Nor-Butane nC₄

41.438

.494

.318

.877

.220

19.447

.132

.098

.025

.069

BTU Dry

665

BTU Wet

655

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

Reid Vap. Press. #/Sq. In.

Iso-Pentane iC₅
Nor-Pentane nC₅
Hexanes plus
Hexanes C₆
Hexanes Plus C₇

.066

.134

.130

.024

.048

.060

Z Factor

.9987

N Value

1.3379

Ave Mol Wt

21.0986

Ave Cu Ft/Gal

Run by Jeffrey A. Propp

Calculated By Jeffrey A. Propp

Total 100.000

10.894

Butane GPM

.133

Propane GPM

.315

Isobutane GPM

.374

Ethane + GPM

.447

Calculated FIELD GRAV 0.722