

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special										5-28-82		NM-12438	
Company Western Reserves					Connection To Air					SEP 28 1982			
Pool Pecos Slope					Formation ABO					O. C. D.		Unit P	
Completion Date N/A			Total Depth		Plug Back TD 3950		ARTESIA OFFICE Elevation N/A		Farm or Lease Name Bravo Fed.				
Coq. Size 4.5	Wt. 12.7	d 3.958	Set At 3950	Perforations: From 3472 To 3750		Well No. 4							
Trq. Size 2 3/8	Wt. 4.7	d	Set At 3432	Perforations: From Open To End		Unit P		Sec. 30	Twp. 6S	Rge. 25E			
Type Well - Single - Brdenhead - G.G. or G.O. Multiple Single								Packer Set At None		County Chavis			
Producing Thru Tbg		Reservoir Temp. °F 110		Mean Annual Temp. °F 60		Baro. Press. - P ₀ 13.2		State NM					
L 3432	H 3432	Gg .8009	% CO ₂ 16.878	% N ₂ 7.162	% H ₂ S NIL	Prover 2.0	Meter Run	Taps					

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	
SI							855		750		72+hr.
1.	2.0	x	.500	50	---	65°	830		735		45min
2.	2.0	x	.750	50	---	68°	812		730		45min
3.	2.0	x	1.00	50	---	69°	801		725		45min
4.	2.0	x	1.250	50	---	70°	743		710		45min
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, F _{pv}	Rate of Flow Q, Mcfd
1	4.279	---	63.2	.9952	1.117	NIL	301
2	9.453	---	63.2	.9924	1.117	NIL	662
3	17.09	---	63.2	.9915	1.117	NIL	1196
4	27.63	---	63.2	.9905	1.117	NIL	1932
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	.09	525	1.40	NIL	NONE	
2	.09	528	1.41	NIL		
3	.09	529	1.41	NIL		
4	.09	530	1.41	NIL		
5						

P _r 868.2 P _c 2753.8				A.P.I. Gravity of Liquid Hydrocarbons		Dec.	
				Specific Gravity Separator Gas .801		XXXXXXX	
				Specific Gravity Flowing Fluid XXXXX			
				Critical Pressure 727 P.S.I.A.		P.S.I.A.	
				Critical Temperature 375 R		R	

NO.	P _r ²	P _w ²	P _r ² - P _w ²	(1) $\frac{P_c^2}{P_r^2 - P_w^2} = 5.973$	(2) $\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 5.973$
1	843.9	712.3	41.5		
2	829.1	687.4	66.4		
3	827.1	684.1	69.7		
4	792.2	672.6	126.2		
5					

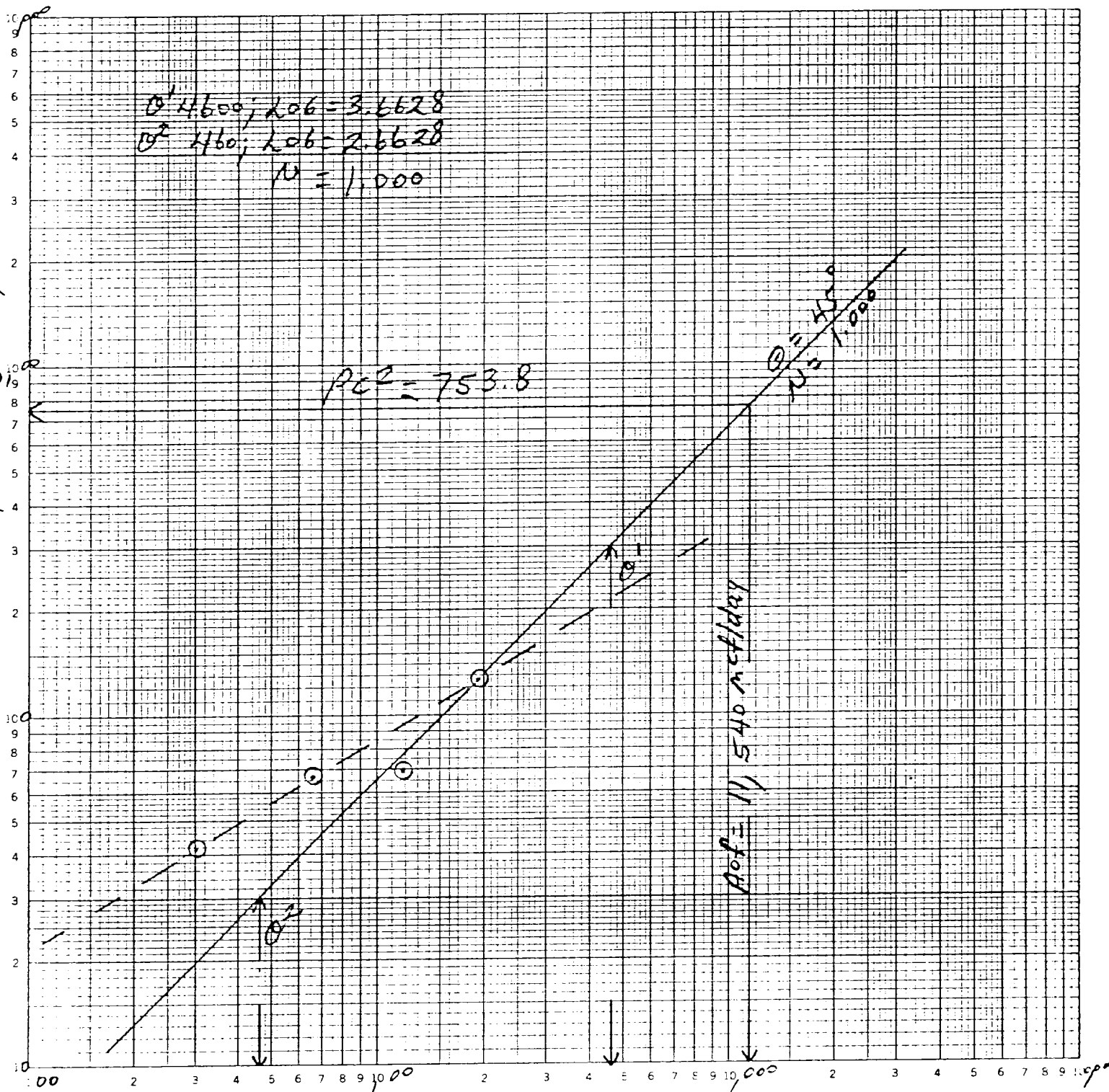
AOF = 0 $\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 11.540$

Absolute Open Flow	11,540	Mcf/d @ 15.025	Angle of Slope °	45°	Slope, n	1.000
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Remarks: Made No Fluid During Test.

Approved By Division	Conducted By: Baber Well Service	Calculated By: B.R.	Checked By: Mark Rowland
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$p_{c2} - p_{w2} (0.0013)$



$Q = \text{mcf/day}$

NEW-TEX LAB

PHONE 505/393-3561

P. O. BOX 1161

611 W. SNYDER

HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT: BABER WELL SERVICING
ADDRESS: BOX 1772
CITY, STATE: HOBBS NM 88240

ANALYSIS NUMBER : 7529
DATE OF RUN : 5 29 82
DATE SECURED : 5 28 82

SAMPLE IDENT: WESTERN RESERVES - BRAVO #4
SAMPLING PRESS. SAMPLING TEMP:

***** GAS ANALYSIS *****

	MOLE PERCENT	GAL/ MCF
NI ROGEN	7.161	
CARBON DIOXIDE	16.873	
METHANE	69.514	
ETHANE	3.644	0.972
PROFANE	1.545	0.424
ISO-BUTANE	0.256	0.084
NORMAL BUTANE	0.509	0.160
ISO-PENTANE	0.144	0.053
NORMAL PENTANE	0.160	0.058
HEXANES	0.112	0.046
HEPTANES PLUS	0.276	0.035
TOTAL	120.000	1.832

PROPANE GPM: 0.41 BUTANES GPM: 0.24
ETHANE GPM: 0.97 PENTANES PLUS GPM: 0.19

SPECIFIC GRAV (CALC): 0.8809
MOLE WEIGHT: 23.20

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
14,696		937	850
14,650		935	850
14,732		939	854
14,721		940	855

ANALYZED BY:

DEANE L. CAMPBELL

APPROVED BY

Robert Simpson

SEP 27 1982

~~O. C. P.~~

ARTESIA, OFFICE

Type Test ☒ Initial ☐ Annual ☐ Special	Test Date 5-28-82		Lease No. or Serial No. NM-12438	
Company Western Reserves	Connection To Air		Allottee	
Field Pecos Slope	Reservoir	Location 660 FSL + 660 FEL		Unit
Completion Date 5-22-82	Total Depth 3950	Plug Back TD 3913	Elevation 3808.6R	Farm or Lease Name Bravo
Csg. Size 4 1/2	Wt. 10.5	Set At 3950	Perforations: From To	Well No. #4
Tbg. Size 2 3/8	Wt. 4.7	Set At 3432	Perforations: From 3472 - 3750	To 38 shots
Type Completion (Describe) Single			Packer Set At	Jr. Sec. -wp. Rge. P. 30 6-S 25-E
Producing Interval Tubing	Reservoir Temp. F	Mean Annual Temp. F	Baro. Press. - P _a	County or Parish Chaves
	H	G _g	% CO ₂	State NM
			% N ₂	Provs: 2
			% H ₂ S	Water, Rec. Taps

[illegible]