

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Devils Fork Formation Gallup County Rio Arriba  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 7/12/60  
Company Val R. Reese & Associates Lease Mesa Well No. 1-25  
Unit D Sec. 25 Twp. 24N Rge. 7W Purchaser \_\_\_\_\_  
Casing 5½ Wt. 14 I.D. 5.012 Set at 6250 Perf. 5274 To 5524  
Tubing 1½ Wt. 2.30 I.D. 1.380 Set at 5486 Perf. 5484 To \_\_\_\_\_  
Gas Pay: From \_\_\_\_\_ To \_\_\_\_\_ L 5486 xG 0.65 -GL 3566 Bar.Press. 12.00  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well G.G. Dual  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 7/1/60 Packer 6250 Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Orifice)~~ Type Taps \_\_\_\_\_

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	
SI						<u>1358</u>	<u>1363</u>	SI
1.								
2.								
3.		<u>3/4</u>	<u>131</u>				<u>780</u> <u>60</u>	<u>3 hrs.</u>
4.								
5.								

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wPf}}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.							
2.							
3.	<u>12.365</u>		<u>143</u>	<u>1.000</u>	<u>0.9608</u>	<u>1.013</u>	<u>1721</u>
4.							
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
P<sub>c</sub> 16.46 (1-e<sup>-s</sup>) 0.228

Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 1375 P<sub>c</sub><sup>2</sup> 1890.625

No.	P <sub>w</sub> P <sub>t</sub> (psia)	P <sub>t</sub> <sup>2</sup>	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-s</sup> )	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup>	Cal. P <sub>w</sub>	P <sub>w</sub> P <sub>c</sub>
1.									
2.									
3.	<u>143</u>	<u>20.449</u>	<u>28.328</u>	<u>802.48</u>	<u>182.96</u>	<u>627.264</u>	<u>1263.361</u>	-	<u>1.496</u>
4.									
5.									

Absolute Potential: 2328 MCFPD; n 0.75/1.3526  
COMPANY Val R. Reese & Associates, Inc.  
ADDRESS Lobby of Simms Bldg., Albuquerque, N. M.  
AGENT and TITLE Morris B. Jones, Consulting Engr. M. B. JONES  
WITNESSED Jim Jacobs  
COMPANY Val R. Reese & Associates

REMARKS

## INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

## NOMENCLATURE

- $Q$  = Actual rate of flow at end of flow period at W. H. working pressure ( $P_w$ ).  
MCF/da. @ 15.025 psia and 60° F.
- $P_c$  = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.  
psia
- $P_w$  = Static wellhead working pressure as determined at the end of flow period.  
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- $P_t$  = Flowing wellhead pressure (tubing if flowing through tubing, casing if  
flowing through casing.) psia
- $P_f$  = Meter pressure, psia.
- $h_w$  = Differential meter pressure, inches water.
- $F_g$  = Gravity correction factor.
- $F_t$  = Flowing temperature correction factor.
- $F_{pv}$  = Supercompressability factor.
- $n$  = Slope of back pressure curve.

Note: If  $P_w$  cannot be taken because of manner of completion or condition of well, then  $P_w$  must be calculated by adding the pressure drop due to friction within the flow string to  $P_t$ .

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OIL CONSERVATION COMMISSION	
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