

3-M1000  
1-Redfern  
1-Reese  
1-M (Lou Galloway)  
1-File

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Dakota County San Juan  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 9-3-58  
Company Redfern & Markham Lease Redfern Well No. 4  
Unit I Sec. 16 Twp. 28N Rge. 11W Purchaser \_\_\_\_\_  
Casing 5 1/2 Wt. 15.5 I.D. \_\_\_\_\_ Set at 6266 Perf. 6196 To 6013  
Tubing 2-3/8 Wt. 4.7 I.D. \_\_\_\_\_ Set at \_\_\_\_\_ Perf. \_\_\_\_\_ To \_\_\_\_\_  
Gas Pay: From \_\_\_\_\_ To \_\_\_\_\_ L \_\_\_\_\_ xG 0.650 -GL \_\_\_\_\_ Bar.Press. \_\_\_\_\_  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 8-31-58 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) 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.	Press. psig	Temp. °F.	
SI						<u>1958</u>		<u>2112</u>		
1.		<u>3/4"</u>	<u>366</u>		<u>81</u>			<u>1076</u>		<u>3 hrs</u>
2.										
3.										
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>12.3600</u>		<u>378</u>	<u>.9804</u>	<u>.9608</u>	<u>1.038</u>	<u>4570</u>
4.							
5.							

PRESSURE CALCULATIONS

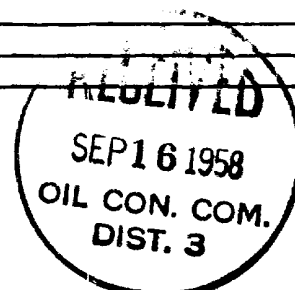
Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
P<sub>c</sub> \_\_\_\_\_ (1-e<sup>-S</sup>)  
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 2124 P<sub>c</sub> 4511

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>1088</u>					<u>1184</u>	<u>3327</u>		<u>1.356</u>
4.									
5.									

Absolute Potential: 5918 MCFPD; n .85 1.295

COMPANY Redfern & Markham  
ADDRESS Box 1747, Midland, Texas  
AGENT and TITLE T. A. Degan, Consulting Engineer  
WITNESSED \_\_\_\_\_  
COMPANY \_\_\_\_\_

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.
- $F_{pv}$  = Supercompressibility 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  $P_t$ .

3-RESCC  
1-Redfern  
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VAL R. REESE & ASSOCIATES, INC.

Company Redfern & Reed

Lease Redfern Well No. 4

Date of Test 9-3-58

Shut in Pressure (PSIG): Tubing 1953 Casing 2112 S.I. Period 8 Days

Size Blow Nipple 3/4" TC Choke

Flow Through Thg Working Pressures From Csg

Time		Choke Pressure	Q (MCFD) 15.025 PSIA & 60 F	Csg Working Pressure (PSIG)	Temp
Hours	Minutes				
10 <sup>00</sup>		448		1422	75
1	15	421		1210	78
1	30	396		1155	78
2		380		1110	79
2	15	372		1088	80
3		366		1076	81

Start At 2:00 P.M.

End Test At \_\_\_\_\_

Remarks: 5 min - heavy slug water & distillate  
1-2 hrs spray of fluid  
2-3 hrs small slugs of fluid.

Tested By: T. A. Dugan

Witness: \_\_\_\_\_

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<b>AZTEC DISTRICT OFFICE</b>		
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