

4-114000
1-Petre-Atlas
1-Christmann & Markham
1-Redfern & Herd
1-File
NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Basin Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test 1-13-61
Company Redfern & Herd, Inc. Lease Cooper Well No. 1
Unit N Sec. 7 Twp. 29N Rge. 11W Purchaser _____
Casing 4 1/2 Wt. 9.5 I.D. _____ Set at 6548 Perf. 6280 To 6504
Tubing 2-3/8 Wt. 4.6 I.D. _____ Set at 6393 Perf. open ended To _____
Gas Pay: From 6280 To 6504 L _____ xG 0.680 -GL _____ Bar.Press. _____
Producing Thru: Casing _____ Tubing X Type Well Single gas
Date of Completion: 12-7-60 Packer 6235 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Prover) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						<u>2121</u>		<u>1731</u>		
1.										
2.										
3.	<u>2"</u>	<u>3/4"</u>	<u>147</u>		<u>68</u>			<u>1782</u>		<u>3 hrs</u>
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.							
2.							
3.	<u>12.3650</u>		<u>159</u>	<u>.9924</u>	<u>.9393</u>	<u>1.017</u>	<u>1845</u>
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.402 (1-e^{-s}) 0.275
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 2133 P_c 4550

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.									
2.									
3.	<u>159</u>	<u>25.3</u>	<u>17.35</u>	<u>301</u>	<u>82.7</u>	<u>108</u>	<u>4442</u>		<u>1.0243</u>
4.									
5.									

Absolute Potential: 1879 MCFPD; n .75 1.0184

COMPANY Redfern & Herd, Inc.
ADDRESS 1007 N. Dustin, Farmington, New Mexico
AGENT and TITLE T. A. Dugan, Engineer Original signed by _____
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} = 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 .