

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Formation Dakota County San Juan  
Initial x Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 6-27-61  
Company Redfern & Hard, Inc. Lease Shepherd & Kelsey Well No. 1  
Unit L Sec. 29 Twp. 29N Rge. 11W Purchaser \_\_\_\_\_  
Casing 4-1/2 Wt. 9.5 I.D. \_\_\_\_\_ Set at 6166 Perf. 6010 To 6114  
Tubing 2-3/8 Wt. 4.7 I.D. \_\_\_\_\_ Set at 6014 Perf. Open ended To \_\_\_\_\_  
Gas Pay: From 6010 To 6114 L \_\_\_\_\_ xG 0.680 -GL \_\_\_\_\_ Bar.Press. \_\_\_\_\_  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 6-16-61 Packer 5985 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						2079		-		
1.										
2.										
3.	2"	3/4"	402		68			-		3 hours
4.										
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	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.	12.3650		414	.9924	.9393	1.047	4996
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

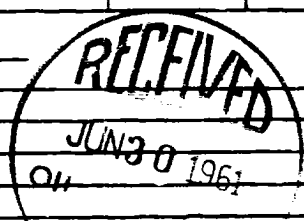
Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
F<sub>c</sub> 9.402 (1-e<sup>-S</sup>) .257  
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 2091 P<sub>c</sub><sup>2</sup> 4372.3

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.	414	171.4	46.97	2206.4	567.0	738.4	3634		1.2031
4.									
5.									

Absolute Potential: 5738 MCFPD; n .75 1.1485

COMPANY Redfern & Hard, Inc.  
ADDRESS 1007 N. Dustin, Farmington, N.M.  
AGENT and TITLE Original signed by T. A. 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  $P_t$ .