

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildest Formation Dakota County San Juan

Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test May 21, 1960

Company Compass Exploration, Inc. Lease City of Farmington Well No. 1-4

Unit B Sec. 4 Twp. 29N Rge. 13W Purchaser El Paso Natural Gas Company

Casing 4 1/2 Wt. 9.5&11.6 I.D. 4.090 Set at 6304 Perf. 5986 To 6104

Tubing 2 Wt. 4.6 I.D. 1.995 Set at 6083 Perf. 6083 To ---

Gas Pay: From 5986 To 6104 L 6083 xG 0.65 -GL 3954 Bar.Press. 12.0

Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single

Date of Completion: May 13, 1960 Packer \_\_\_\_\_ Reservoir Temp. 146°F

## OBSERVED DATA

Tested Through (~~11000~~) (Choke) (~~11000~~) Type Taps \_\_\_\_\_

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	( <del>11000</del> ) (Line) Size	(Choke) ( <del>11000</del> ) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1777		2037		
1.										
2.										
3.	2	3/4	189					509	88	3 hrs.
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.	12.365		201	0.9741	0.9608	1.016	2364
4.							
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.

Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.

$P_c$  9.402 (1-e<sup>-s</sup>) 0.250

Specific Gravity Separator Gas \_\_\_\_\_

Specific Gravity Flowing Fluid \_\_\_\_\_

$P_c$  2049  $P_c^2$  4198.401

No.	$P_w$ $P_t$ (psia)	$P_t^2$	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2$ (1-e <sup>-s</sup> )	$P_w^2$	$P_c^2 - P_w^2$	Cal. $P_w$	$\frac{P_w}{P_c}$
1.									
2.									
3.	201	40.401	22.226	494.00	123.50	259.081	3939.320		1.066
4.									
5.									

Absolute Potential: 2,480 MCFPD; n 0.75/1.0490

COMPANY Compass Exploration, Inc.

ADDRESS 1645 Court Place, Denver, Colorado

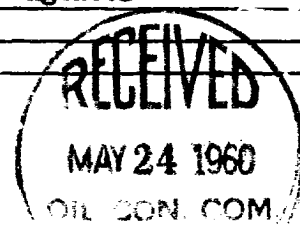
AGENT and TITLE M. B. JONES

Morris B. Jones, 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.
- $F_{pv}$  = 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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