

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalnet Formation Yates County Lea  
Initial \_\_\_\_\_ Annual \_\_\_\_\_ Special X Date of Test 10-29-56  
Company The Atlantic Refining Company Lease Selby Well No. 1  
Unit F Sec. 33 Twp. 22-8 Rge. 36-E Purchaser El Paso Natural Gas Company  
Casing 7" Wt. 23# I.D. \_\_\_\_\_ Set at 3075' Perf. \_\_\_\_\_ To \_\_\_\_\_  
Tubing 2" Wt. 4.7# I.D. \_\_\_\_\_ Set at 3394' Perf. \_\_\_\_\_ To \_\_\_\_\_  
Gas Pay: From 3170' To 3395' L 3394' xG 0.660 -GL 2240 Bar.Press. 13.2  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 9-22-49 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Pipe

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	( <u>Prover</u> ) (Line) Size	( <u>Choke</u> ) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						<u>655</u>				<u>72</u>
1.	<u>1</u>	<u>1.00</u>	<u>545</u>	<u>37.2</u>	<u>70</u>	<u>545</u>				<u>24</u>
2.	<u>1</u>	<u>1.00</u>	<u>503</u>	<u>57.8</u>	<u>72</u>	<u>505</u>				<u>24</u>
3.	<u>1</u>	<u>1.00</u>	<u>480</u>	<u>64.0</u>	<u>72</u>	<u>483</u>				<u>24</u>
4.	<u>1</u>	<u>1.00</u>	<u>467</u>	<u>70.6</u>	<u>70</u>	<u>470</u>				<u>24</u>
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.	<u>6.135</u>	<u>114.1</u>	<u>558.2</u>	<u>.9905</u>	<u>.9535</u>	<u>1.054</u>	<u>880</u>
2.	<u>6.135</u>	<u>172.6</u>	<u>516.2</u>	<u>.9887</u>	<u>.9535</u>	<u>1.048</u>	<u>1046</u>
3.	<u>6.135</u>	<u>177.6</u>	<u>493.2</u>	<u>.9887</u>	<u>.9535</u>	<u>1.049</u>	<u>1078</u>
4.	<u>6.135</u>	<u>184.0</u>	<u>480.3</u>	<u>.9905</u>	<u>.9535</u>	<u>1.047</u>	<u>1116</u>
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
F<sub>c</sub> 9.936 (1-e<sup>-s</sup>) 0.113

Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 668.2 P<sub>c</sub> 446.5

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.	<u>558.2</u>	<u>311.6</u>	<u>8.74</u>	<u>76.38</u>	<u>10.9</u>	<u>322.5</u>	<u>124.0</u>	<u>567.9</u>	<u>.85</u>
2.	<u>516.2</u>	<u>266.5</u>	<u>10.4</u>	<u>108.2</u>	<u>15.5</u>	<u>266.0</u>	<u>162.5</u>	<u>532.9</u>	<u>.80</u>
3.	<u>493.2</u>	<u>244.2</u>	<u>10.7</u>	<u>114.5</u>	<u>16.4</u>	<u>244.6</u>	<u>183.9</u>	<u>512.4</u>	<u>.77</u>
4.	<u>480.3</u>	<u>233.5</u>	<u>11.1</u>	<u>123.8</u>	<u>17.6</u>	<u>251.1</u>	<u>195.4</u>	<u>501.1</u>	<u>.75</u>
5.									

Absolute Potential: 1740 MCFPD; n 53  
COMPANY The Atlantic Refining Company  
ADDRESS P.O. Box 1038 Denver City, Texas  
AGENT and TITLE N. A. Carr District Superintendent  
WITNESSED \_\_\_\_\_  
COMPANY \_\_\_\_\_

REMARKS

ELVIS A. ULL  
GAS ENGINEER

## 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  $P_t$ .