

## NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC Form C-122

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

20 AM 10:14

Pool Jalmat Formation Yates County Lea  
Initial \_\_\_\_\_ Annual \_\_\_\_\_ Special IX Date of Test 11-12/11-16-56  
Company Skelly Oil Company Lease Mexico "E" Well No. 1  
Unit 0 Sec. 2 Twp. 23 S Rge. 36 E Purchaser El Paso Natural Gas Company  
Casing 7" Wt. 20# I.D. 6.456" Set at 2900' Perf. \_\_\_\_\_ To \_\_\_\_\_  
Tubing None Wt. \_\_\_\_\_ I.D. \_\_\_\_\_ Set at \_\_\_\_\_ Perf. \_\_\_\_\_ To \_\_\_\_\_  
Gas Pay: From 3095 To 3500 L 2900 xG 0.670 -GL 1943 Bar.Press. 13.2  
Producing Thru: Casing IX Tubing \_\_\_\_\_ Type Well Single  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 9-22-50 Packer None Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (~~Pressure~~)(~~Orifice~~)(~~Meter~~) (Meter) Type Taps \_\_\_\_\_

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	
SI								
1.	4	1.500	826	11.56	70		904	72
2.	4	1.500	784	28.09	71		829	24
3.	4	1.500	751	43.56	68		788	24
4.	4	1.500	726	70.56	69		758	24
5.							736 *	24

\* Not enough draw down because of small orifice size.

## 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.	13.99	98.48		0.9905	0.9463	1.091	1,410
2.	13.99	149.6		0.9896	0.9463	1.088	2,132
3.	13.99	182.43		0.9924	0.9463	1.087	2,605
4.	13.99	228.35		0.9915	0.9463	1.082	3,244
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
F<sub>c</sub> 0.4682 (1-e<sup>-s</sup>) 0.125

Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 917.2 P<sub>c</sub><sup>2</sup> 841.3

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> F <sub>c</sub>
1.	842.2	709.3	0.6601	0.436	0.06	709.4	131.9		
2.	801.2	641.9	0.9982	0.996	0.12	642.0	199.3		
3.	771.2	594.7	1.220	1.49	1.9	596.6	244.7		
4.	749.2	561.3	1.519	2.31	2.9	563.2	278.2		
5.									

Absolute Potential: 3,500 MCFPD; n 0.968COMPANY Skelly Oil CompanyADDRESS Box 38, Hobbs, New Mexico

AGENT and TITLE \_\_\_\_\_

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  $P_t$ .