

## NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE 000

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

HOBBS OFFICE Form C-122  
Revised 12-1-55

1957 NOV 25 AM 9:21

Pool JalnetFormation Seven RiversCounty Lea

1957 NOV 20 AM 10:14

Initial \_\_\_\_\_ Annual \_\_\_\_\_ Special XX Date of Test 11/16/56Company Skelly Oil Company Lease Johnson Well No. 4Unit D Sec. 20 Twp. 23-S Rge. 37-E Purchaser Permian Basin Pipeline CompanyCasing 5 1/2" Wt. 15.5# I.D. 4.967" Set at 3425' Perf. 2925' To 2990'Tubing 2- 3/8" Wt. 4.7# I.D. 1.995" Set at 3625' Perf. \_\_\_\_\_ To \_\_\_\_\_Gas Pay: From 2925' To 2990' L 2925' xG 0.635 -GL 1857 Bar.Press. 13.2Producing Thru: Casing XX Tubing \_\_\_\_\_ Type Well Gas-Oil Dual

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 5-26-54 Packer 3308' Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through ~~(Pressure)(Gauge)~~ (Meter)

Type Taps \_\_\_\_\_

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	( <del>PROBE</del> ) (Line) Size	( <del>PROBE</del> ) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								<u>773.5</u>		<u>71-3/4 Hr SI</u>
1.	<u>4</u>	<u>1.25</u>	<u>476.7</u>	<u>5.7</u>	<u>73</u>			<u>744.4</u>		<u>24 Hrs</u>
2.	<u>4</u>	<u>1.25</u>	<u>481.7</u>	<u>14.1</u>	<u>73</u>			<u>712.9</u>		<u>23 3/4 Hrs</u>
3.	<u>4</u>	<u>1.25</u>	<u>497.9</u>	<u>23.8</u>	<u>72</u>			<u>674.0</u>		<u>24 Hrs</u>
4.	<u>4</u>	<u>1.25</u>	<u>492.1</u>	<u>39.0</u>	<u>75</u>			<u>612.0</u>		<u>24 Hrs</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>10.24</u>	<u>52.84</u>		<u>0.9877</u>	<u>0.9721</u>	<u>1.041</u>	<u>541</u>
2.	<u>10.24</u>	<u>83.53</u>		<u>0.9877</u>	<u>0.9721</u>	<u>1.043</u>	<u>857</u>
3.	<u>10.24</u>	<u>110.3</u>		<u>0.9887</u>	<u>0.9721</u>	<u>1.042</u>	<u>1131</u>
4.	<u>10.24</u>	<u>140.4</u>		<u>0.9859</u>	<u>0.9721</u>	<u>1.041</u>	<u>1434</u>
5.							

## PRESSURE CALCULATIONS

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

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

F<sub>c</sub> 1.758 (1-e<sup>-s</sup>) 0.120

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

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

P<sub>c</sub> \_\_\_\_\_ P<sub>c</sub><sup>2</sup> \_\_\_\_\_

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>574.0</u>	<u>0.9511</u>	<u>0.9046</u>	<u>0.1086</u>		<u>44.8</u>	<u>757.7</u>	<u>0.96</u>
2.		<u>527.2</u>	<u>1.507</u>	<u>2.271</u>	<u>0.2725</u>		<u>91.4</u>	<u>724.3</u>	<u>0.92</u>
3.		<u>472.2</u>	<u>1.988</u>	<u>3.952</u>	<u>0.4742</u>		<u>146.2</u>	<u>687.5</u>	<u>0.87</u>
4.		<u>390.9</u>	<u>2.521</u>	<u>6.355</u>	<u>0.7626</u>		<u>227.2</u>	<u>625.9</u>	<u>0.80</u>
5.									

Absolute Potential: 2.807 MCFPD; n 0.63COMPANY Skelly Oil CompanyADDRESS Box 38, Hobbs, New Mexico

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

WITNESSED \_\_\_\_\_

COMPANY \_\_\_\_\_

REMARKS

HOBBS OFFICE  
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.
- $F_{pv}$  = 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  $P_t$ .