

## NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Yates-Seven Rivers Queen County LeaInitial \_\_\_\_\_ Annual X Special \_\_\_\_\_ Date of Test 9-30-56Company Stanolind Oil and Gas Company Lease O.J. Gillully "B" Well No. 4Unit D Sec. 22 Twp. 20-S Rge. 37-E Purchaser Permian Basin Pipeline CompanyCasing 5-1/2" Wt. 17.0# I.D. 4.892" Set at 3766' Perf. 2630' To 3550'Tubing 2" Wt. 4.7# I.D. 1.995" Set at \_\_\_\_\_ Perf. \_\_\_\_\_ To \_\_\_\_\_Gas Pay: From 2630' To 3550' L 2630' xG 0.690 TGL 1815' Bar.Press. 13.2Producing Thru: Casing x Tubing \_\_\_\_\_ Type Well G.O. Dual

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

Date of Completion: 3-1-54 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Booster) (Choke) (Meter) Type Taps \_\_\_\_\_ Pipe \_\_\_\_\_

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Booster) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								1047.2		69 S.I.
1.	4.0"	2.0"	467.7	6.5	73			917.1		26-1/2
2.	4.0"	2.0"	480.8	17.4	89			848.2		24
3.	4.0"	2.0"	491.7	30.3	55			787.8		24
4.	4.0"	2.0"	473.7	43.4	54			746.7		24
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.	29.92	55.91		0.9877	0.9325	1.042	1605
2.	29.92	92.64		0.9732	0.9325	1.038	2611
3.	29.92	123.70		1.0048	0.9325	1.052	3648
4.	29.92	145.40		1.0058	0.9325	1.051	4288
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
F<sub>c</sub> 1.812 (1-e<sup>-s</sup>) 0.117  
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 1060.4 P<sub>c</sub> 1124.4

No.	P <sub>w</sub> P <sub>t</sub> (psia)	P <sub>c</sub> <sup>2</sup> P <sub>t</sub>	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.		865.5	2.908	8.456	0.9894	866.5	257.9	930.9	.88
2.		742.0	4.731	22.38	2.618	744.6	379.8	862.9	.81
3.		641.6	6.610	43.69	5.112	646.7	477.7	804.2	.76
4.		577.4	7.770	60.37	7.063	584.5	539.9	764.5	.72
5.									

Absolute Potential: 8932 MCFPD; n 1.0 (Limited)COMPANY Stanolind Oil and Gas CompanyADDRESS Box 68 - Hobbs, New Mexico

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

WITNESSED \_\_\_\_\_

COMPANY \_\_\_\_\_

REMARKS

ELVIS A. UTZ  
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  $P_t$ .