

NEW MEXICO OIL CONSERVATION COMMISSION

ELVIS A. UTZ  
GAS ENGINEER

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

1956 OCT 8 PM 2:20

Pool Eumont Formation Vates Seven Rivers Queen County Lea

Initial \_\_\_\_\_ Annual x Special \_\_\_\_\_ Date of Test July 5, 1956

Company Stanolind Oil and Gas Company Lease O.J. Gillyully "A" Well No. 4

Unit B Sec. 24 Twp. 20 Rge. 36 Purchaser Permian Basin Pipeline Company

Casing 7" Wt. 23.0# I.D. 6.366" Set at 3736' Perf. 2620' To 3470'

Tubing 2-1/2" Wt. 6.5# I.D. 2.441" Set at 2270' Perf. \_\_\_\_\_ To \_\_\_\_\_

Gas Pay: From 2620' To 3470' L 2620' xG 0.675 -GL 1769 Bar.Press. 13.2

Producing Thru: Casing x Tubing \_\_\_\_\_ Type Well Single Completion

Date of Completion: 12-3-53 Packer \_\_\_\_\_ Reservoir Temp. 90° F

OBSERVED DATA

Tested Through (Pressure) (Gauge) (Meter) Type Taps Pipe

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.	
	(Pressure) (Line) Size	(Gauge) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.		Press. psig
SI	4.0"	2.0"				935.9		935.5	
1.	4.0"	2.0"	458.2	9.6	71	848.6		841.0	71-1/2
2.	4.0"	2.0"	462.8	13.2	66	816.8		797.0	23-3/4
3.	4.0"	2.0"	462.5	22.8	68	764.1		720.8	24
4.	4.0"	2.0"	465.4	35.5	71	697.3		626.9	23-3/4
5.									

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wp} P_f}$	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	67.3	471.4	.9896	.9427	1.048	1969
2.	29.92	79.2	476.0	.9943	.9427	1.051	2394
3.	29.92	104.2	475.7	.9924	.9427	1.051	3067
4.	29.92	130.5	478.6	.9896	.9427	1.049	3821
5.							

PRESSURE CALCULATIONS

as Liquid Hydrocarbon Ratio Dry Gas cf/bbl.  
 Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
 c. P<sub>w</sub> Measured (1-e<sup>-s</sup>)  
 Specific Gravity Separator Gas \_\_\_\_\_  
 Specific Gravity Flowing Fluid \_\_\_\_\_  
 P<sub>c</sub> 949.1 P<sub>c</sub> 900

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.	861.8					743	157		.907
2.	830.0					689	211		.87
3.	777.3					604	296		.81
4.	710.5					505	395		.79
5.									

Absolute Potential: 7500 MCFPD; n .81  
 COMPANY Stanolind Oil and Gas Company  
 ADDRESS Box 68 - 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.
- $F_{pv}$  = 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  $P_t$ .