

## NEW MEXICO OIL CONSERVATION COMMISSION

MAIN OFFICE OCC

HOBBS FIELD

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool EUMONT Formation QUEEN County LEAInitial \_\_\_\_\_ Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 6-11 to 6-15-56Company VEN Oil Company Lease \_\_\_\_\_ State A-20 Well No. 1Unit 01 Sec. 20 Twp. 20-3 Rge. 37-E Purchaser El Paso Natural Gas CoCasing 5 1/2" Wt. 170 I.D. 4.892 Set at 3631 Perf. 3415 To 3510Tubing 2" Wt. 47 I.D. 1.995 Set at 3612 Perf. \_\_\_\_\_ To \_\_\_\_\_Gas Pay: From 3415 To 3510 L 3415 xG 0.680 -GL 2322 Bar.Press. 13.2Producing Thru: Casing A Tubing \_\_\_\_\_ Type Well G. O. DualDate of Completion: 11-17-54 Packer 3612' Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Prover)-(Choke)-(Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	<del>(Prover)</del> (Line) Size	<del>(Choke)</del> (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						Packer		993.00		72-Hr S. I.
1.	4"	1.250	563.0	14.44	60			906.0		24-Hr
2.	4"	1.250	564.0	31.36	60			846.0		24-Hr
3.	4"	1.250	557.0	51.84	60			791.0		24-Hr
4.	4"	1.250	600.0	60.0	60			755.0		24-Hr
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.	9.643	91.21	576.2	1.0000	0.9393	1.068	82
2.	9.643	134.54	577.2	1.0000	0.9393	1.068	1301
3.	9.643	171.93	570.2	1.0000	0.9393	1.068	1663
4.	9.643	191.81	613.2	1.0000	0.9393	1.072	1852
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.

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

F<sub>c</sub> 1.812 (1-e<sup>-s</sup>) 0.148

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

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

P<sub>c</sub> 1000.2 P<sub>c</sub> 1012.4

No.	$\frac{P_w}{P_t}$	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.	919.2	844.9	1.598	2.554	0.38	844.3	167.1	919.4	91.4
2.	859.2	738.2	2.357	5.555	0.82	739.0	273.4	859.7	85.4
3.	804.2	646.7	3.013	9.078	1.34	648.0	364.4	805.0	80.0
4.	768.2	590.1	3.373	11.38	1.68	591.8	420.6	769.3	76.5
5.									

Absolute Potential: 3,793 MCFPD; n 0.81COMPANY VEN Oil CompanyADDRESS Box 3985, Odessa, TexasAGENT and TITLE F. L. Wilson Partner

WITNESSED \_\_\_\_\_

COMPANY \_\_\_\_\_

## REMARKS

Test was supervised by Mr. R. T. Wright, Petroleum Engineer of  
El Paso Natural Gas Company

## 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  $P_t$ .