

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool \_\_\_\_\_ Basin Duncan Formation Dakota County San Juan

Initial I Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test June 7, 1963

Company Walter Duncan Duncan Oil Properties Lease Skelly Government Well No. 1

Unit E Sec. 22 Twp. 27N Rge. 9W Purchaser \_\_\_\_\_

Casing 4 1/2 Wt. 10.5 I.D. \_\_\_\_\_ Set at 6910 Perf. 6634 To 6902

Tubing 1 1/4 Wt. 2.4 I.D. \_\_\_\_\_ Set at 6851 Perf. Open Ended To \_\_\_\_\_

Gas Pay: From \_\_\_\_\_ To \_\_\_\_\_ L \_\_\_\_\_ xG .0650 -GL \_\_\_\_\_ Bar.Press. \_\_\_\_\_

Producing Thru: Casing \_\_\_\_\_ Tubing I Type Well Single - Gas

Date of Completion: 5-31-63 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through 2070 (Choke) 2066

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2070		2066		
1.										
2.										
3.	2"	3/4"	182		65			1373		3 hours
4.										
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.							
2.							
3.	12.365	194	194	.9952	.9608	1.019	2337
4.							
5.							

## PRESSURE CALCULATIONS

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

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

F<sub>c</sub> \_\_\_\_\_ (1-e<sup>-s</sup>)

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

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

P<sub>c</sub> 2082 P<sub>c</sub><sup>2</sup> 4,334,724

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.									
2.									
3.	1385					1,918,225	2,416,499		1.7938
4.									
5.									

Absolute Potential: 3625 MCFPD; n. .75 1.551COMPANY Duncan Oil PropertiesADDRESS Box 137, Durango, ColoradoAGENT and TITLE Original signed by T. A. Dugan Consulting Engineer

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  $P_t$ .