

3-OCC

1-EPNG Bill Parrish

NEW MEXICO OIL CONSERVATION COMMISSION

1-WD

1-D

1-F

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan

Initial X Annual _____ Special _____ Date of Test 6/16/61

Company Southwest Production Company Lease Mudge Federal Well No. 4

Unit D Sec. 33 Twp. 27N Rge. 11W Purchaser El Paso Natural Gas Co.

Casing 4 1/2" Wt. 10.50 I.D. 4.040 Set at 6465 Perf. 6350 To 6431

Tubing 1 1/2" Wt. 2.9 I.D. 1.610 Set at 6419 Perf. _____ To 6419

Gas Pay: From 6350 To 6421 L 6419 xG .67 -GL 5813 Bar.Press. 12.0

Producing Thru: Casing _____ Tubing X Type Well Single-Gas

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

Date of Completion: 6/4/61 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (~~BEFORE~~) (Choke) (~~BEFORE~~) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1964		1970		7-day
1.		3/4"	350		76	350	76	1465		3-hr
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	12.3650		362	.9850	.9463	1.037	4.327
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c _____ (1-e^{-s})

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c **1982** P_c² **3928.3**
P_w **1477** P_w² **2181.5**

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.						2181.5	1746.8		.745
2.									
3.									
4.									
5.									

Absolute Potential: 7,944 MCFPD; n .75

COMPANY Southwest Production Company

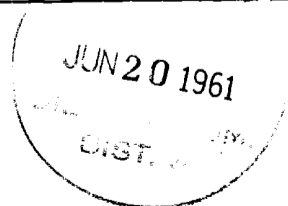
ADDRESS 162 Petr. Center Bldg., Farmington, New Mexico

AGENT and TITLE George L. Hoffman, Jr., Production Foreman

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. @ 14.7 psia and 60° F.
- P_c = 72 hour well head shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static well head working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- P_t = Flowing well head 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 .