3-OCC
1-EPNG Bill Parrish
1-WD
1-D
1-F

NEW MEXICO OIL CONSERVATION COMMISSION

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 **4½"** Wt. **10.50** I.D. **4.040** Set at **6465** Perf. **6350** To **6431**

Tubing **1½"** 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 ~~(Bxxxxxx)~~ (Choke) ~~(xxxxxxx)~~ Type Taps _____

No.	Flow Data: (Prover) (Line) Size	Flow Data: (Choke) (Orifice) Size	Flow Data: Press. psig	Flow Data: Diff. h_w	Flow Data: Temp. °F.	Tubing Data: Press. psig	Tubing Data: Temp. °F.	Casing Data: Press. psig	Casing Data: Temp. °F.	Duration of Flow Hr.
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_c^2 **3928.3**
P_w **1477** P_w^2 **2181.5**

No.	P_w / P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
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. Haffman, Jr., Production Foreman**

WITNESSED _____

COMPANY _____

REMARKS

JUN 20 1961
OIL CONSERVATION COM.
DIST. 3

INSTRUCTIONS

This form .s to be used for reporting multi-point back pressure tests on gas wells in the S ıte, except those on which special orders are applicable. Three copies of this 'orm and the back pressure curve shall be filed with the Commission at Box 871, Sa .a Fe.

The log l ; paper used for plotting the back pressure curve shall be of at least three in ı cycles.

NOMENCLATURE

Q = Actual rat of flow at end of flow period at W. H. working pressure (P_w). MCF/da. @ .025 psia and 60° F.

P_c = 72 hour we head shut-in casing (or tubing) pressure whichever is greater. psia

P_w = Static wel ead working pressure as determined at the end of flow period. (Casing if lowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wel head pressure (tubing if flowing through tubing, casing if flowing thr ugh casing.) psia

P_f = Meter pres re, psia.

h_w = Differenti meter pressure, inches water.

F_g = Gravity co ection factor.

F_t = Flowing tem erature correction factor.

F_{pv} = Supercompr ssability factor.

n = Slope of t ck pressure curve.

Note: If P_w ca not be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to frict on within the flow string to P_t.