3-OCC
1-Bill Parish
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 10-4-61

Company Southwest Production Co. Lease Douthit Federal Well No. 1

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

Casing 4½ Wt. 10.50 I.D. 4.040 Set at 6675 Perf. 6550 To 6634

Tubing 2 Wt. 4.70 I.D. 1.610 Set at 6596 Perf. - To 6596

Gas Pay: From 6550 To 6634 L 6596 xG .67 -GL 4419.3 Bar.Press. 12.0

Producing Thru: Casing ____ Tubing X Type Well Single gas
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 9/22/61 Packer 0 Reservoir Temp. ____

OBSERVED DATA

Tested Through ~~(Bxxxxx)~~ (Choke) ~~(Meter)~~ Type Taps ____

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						2015		2015		7 day
1.		3/4	279		79	279	79	1066		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		291	.9822	.9463	1.028	3,446
2.							
3.							
4.							
5.							

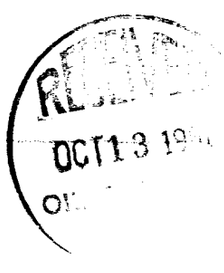
PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
P_c ____ $(1-e^{-s})$ ____ P_c 2027 P_c^2 4108.7
Pw 1078 Pw2 1162.1

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.						1162.1	2946.6		.531
2.									
3.									
4.									
5.									

Absolute Potential: 4,418 MCFPD; n .75
COMPANY Southwest Production Company
ADDRESS 207 Petr. Club Plaza
AGENT and TITLE G. L. Hoffman, Production 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.