3-OCC
1-EPNG-H. L. Kendrick
1-WD
3-JHH
1-D
2-F

SWP-112

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 8/8/62

Company Southwest Production Company Lease Scott Federal Well No. 12

Unit D Sec. 36 Twp. 27N Rge. 11W Purchaser El Paso Natural Gas Company

Casing 4½" Wt. 11.60 I.D. 4.000 Set at 6794 Perf. 6550 To 6654

Tubing 1½" Wt. 2.75 I.D. 1.610 Set at 6652 Perf. ____ To 6652

Gas Pay: From 6550 To 6654 L 6652 xG .67 -GL .67 Bar.Press. 12.0

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

Date of Completion: 7/29/62 Packer ____ Reservoir Temp. ____

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~ 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						1170		1915		7-Day
1.		3/4"	156		84	156	84	827		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		168	.9777	.9463	1.014	1,949
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 1927 P_c^2 3713.3
P_w 839 P_w^2 703.9

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.						703.9	3009.4		.435
2.									
3.									
4.									
5.									

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DIST. 3

Absolute Potential: 2,300 MCFPD; n .75
COMPANY Southwest Production Company
ADDRESS 207 Petr. Club Plaza, Farmington, New Mexico
AGENT and TITLE G. L. Hoffman, Production Engineer
WITNESSED Tom Grant
COMPANY El Paso Natural Gas Company

REMARKS

Flowing tubing pressure fluctuate from 86#-227#, used average pressure of 156#.
Well making extreme heads of oil.

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.