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1-EPNG Bill Parish
1-WP Carr
1-D 1-F

SWP-70

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 2/22/62
Company Southwest Production Co. Lease Helen Hartman Well No. 1
Unit P Sec. 8 Twp. 30N Rge. 11 W Purchaser El Paso Natural Gas Company
Casing 4½ Wt. 10.50 I.D. 4.040 Set at 6655 Perf. 6508-24 To 6592-6604
Tubing 1½ Wt. 2.75 I.D. 1.610 Set at 6605 Perf. Open To End
Gas Pay: From 6508 To 6604 L 6605 xG .67 -GL 4425 Bar.Press. 12-0
Producing Thru: Casing _____ Tubing X Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 2/15/62 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (~~830888~~) (Choke) (~~000000~~) Type Taps _____

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2256		2256		7 days
1.		3/4"	218		69	218	69	1241		3 hrs.
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	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		230	.9915	.9463	1.024	2.732
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 2268 P_c² 5143.8
P_w 1253 P_w² 1570.0

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.						1570.0	3573.8		.552
2.									
3.									
4.									
5.									

Absolute Potential: 3,590 MCFPD; n _____
COMPANY Southwest Production Company
ADDRESS 207 Petr. Club Plaza, Farmington, New Mexico
AGENT and TITLE George L. Hoffman, Production Engineer
WITNESSED Art Smith
COMPANY El Paso Natural Gas 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} = 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 .