3-OCC
1-EPNG Parrish
1-EPNG Kendrick
1-Skelly
2-J. C. Man Jr.
1-D
2-F

SWP-120

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 10/10/62

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

Unit L Sec. 24 Twp. 26 N Rge. 11 W Purchaser El Paso Natural Gas Company

Casing 5 1/2" Wt. 15.50# I.D. 4.950 Set at 6338 Perf. 6181 To 6241

Tubing 1 1/2" Wt. 2.75# I.D. 1.610 Set at 6207 Perf. Open To End

Gas Pay: From 6181 To 6241 L 6202 xG .67 -GL 4155 Bar.Press. 12.0

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

Date of Completion: 9/6/62 Packer 6172 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						1683				7 days
1.		3/4	269		74°	269	74°			3 hrs.
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		281	.9868	.9463	1.028	3,335
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c 16.46 $(1-e^{-s})$ 0.261

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 1702 P_c^2 2898.8
Pw 695 P_w^2 483.2

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.	281	78,961	1,299	1,687	440	483,268	2413.6	695	.408
2.									
3.									
4.									
5.									

Absolute Potential: 3,821 MCFPD; n .75

COMPANY Southwest Production Company
ADDRESS 207 Petr. Club Plaza, Farmington, New Mexico
AGENT and TITLE George L. Heffman, Production Engineer
WITNESSED ____
COMPANY ____

REMARKS

RECEIVED
OCT 15 1962
OIL CON. COM.
DIST. 3

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.