PACIFIC NORTHWEST PIPELINE CORPORATION

DRILLING DEPARTMENT

COMPANY Northwest Production Corporation

LEASE "S" WELL NO. 13-12

DATE OF TEST September 26, 1956

SHUT IN PRESSURE (PSIG): TUBING 1021 CASING 1021 S.I. PERIOD 28 DAYS

SIZE BLOW NIPPLE 2 x 3/4 B-M Choke

FLOW THROUGH Tubing WORKING PRESSURES FROM Casing

TIME HOURS	TIME MINUTES	Choke PRESSURE	Q (MCFD) 15.025 PSIA & 60°F	WELLHEAD WORKING PRESSURE (PSIG)	TEMP
3		84		357	61

START TEST AT 11:00 a.m. END TEST AT 2:00 p.m.

REMARKS:

TESTED BY W. B. Rich

OIL CONSERVATION COMMISSION

AZTEC DISTRICT OFFICE

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Pictured Cliffs County Rio Arriba

Initial XX Annual _____ Special _____ Date of Test 9-26-56

Company Northwest Production Corporation Lease "S" Well No. 13-12

Unit I Sec. 12 Twp. 24N Rge. 4W Purchaser No connected

Casing 4½ Wt. 9.5# I.D. _____ Set at 3140 Perf. 2997 To 3052

Tubing 1½ Wt. 2.3# I.D. _____ Set at 3009 Perf. _____ To _____

Gas Pay: From 2997 To 3053 L _____ xG .670 (Est.) -GL _____ Bar.Press. 12.0

Producing Thru: Casing _____ Tubing XX Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 8-27-56 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~ Type Taps _____

No.	Flow Data: ~~(Prover)~~ ~~(Orifice)~~ Size	Flow Data: (Choke) 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						1021		1021		shut-in
1.										
2.	2	3/4	84		61	84	61	357		3 hrs
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.							
2.							
3.	14.1605		96	.9880	.9463	1,000	1388
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas _____
Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____
F_c _____ $(1-e^{-s})$ _____ P_c 1033 P_c^2 1067.1

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.									
2.									
3.	369					136.2	930.9		1.146
4.									
5.									

Absolute Potential: 1443 MCFPD; n .85/1.123

COMPANY Northwest Production Corporation
ADDRESS 520 Simms Building, Albuquerque, New Mexico
AGENT and TITLE W. B. Richardson, Well Test Engineer
WITNESSED _____
COMPANY _____

REMARKS

RECEIVED
OCT 2 1956
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.