PACIFIC NORTHWEST PIPELINE CORPORATION

DRILLING DEPARTMENT

NM OCC - 3
Gea Peppin - 1
L. G. Truby - 1
File - 1

COMPANY **Northwest Production Corporation**

LEASE **E** WELL NO. **2-33**

DATE OF TEST **9-13-56**

(Dual Completion)

SHUT IN PRESSURE (PSIG): TUBING **1024** CASING **1025** S.I. PERIOD **12** DAYS

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

FLOW THROUGH **Casing** WORKING PRESSURES FROM **--**

TIME HOURS	TIME MINUTES	Choke PRESSURE	Q (MCFD) 15.025 PSIA & 60°F	Tubing PRESSURE (PSIG)	TEMP
2:00	**pm**	**47**		**1017**	
2:30	**pm**	**40**		**1016**	
4:15	**pm**	**26**	**501 (Uncorrected)**	**1004**	**68**

START TEST AT **1:15 pm** END TEST AT **4:15 pm**

REMARKS:

TESTED BY **W. B. Richardson III**

IL 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 **Tapacito PC Extn.** Formation **Pictured Cliffs** County **Rio Arriba**

Initial ____ Annual ____ Special **XX** Date of Test **9-13-56**

Company **Northwest Production Corp.** Lease **E** Well No. **2-33**

Unit **H** Sec. **33** Twp. **26N** Rge. **3W** Purchaser **Not connected**

Casing **5"** Wt. **11.5#** I.D. ____ Set at **6438** Perf. **4301** To **4082** **4108**

Tubing **2-3/8** Wt. **4.7#** I.D. ____ Set at **6334** Perf. **-** To **-**

Gas Pay: From **See above** L ____ x **Est. .680** -GL ____ Bar.Press. **12.0**

Producing Thru: Casing **XX** Tubing ____ Type Well **Dual - G.G.**

Date of Completion: **8-23-56** Packer **5678'** Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. ____

OBSERVED DATA

Tested Through (XXXXXX) (Choke) (XXXXX) 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										
1.						**1024**		**1025**		**Shut-in**
2.	**2**	**3/4**	**26**		**69**					
3.								**26**	**69**	**3 hrs.**
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**		**38**	**.9915**	**.9393**	**1.000**	**501**
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____

Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____

c ____ $(1-e^{-s})$ ____ P_c **1037** P_c^2 **1075.4**

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.	**38**								
2.						**1.4**	**1074.0**		**1.001**
3.	**low casing flow- $P_w = P_t$**								
4.									
5.									

Absolute Potential: **502** MCFPD; n **.85/1.001**

COMPANY **Northwest Production Corporation**

ADDRESS **520 Simms Bldg., Albuquerque, New Mexico**

AGENT and TITLE **W. B. Richardson III, 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.