NM OCC-3
Truby-1
Peppin-1
Fowler-1
File-1

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Formation Mesaverde County Rio Arriba

Initial X Annual ____ Special ____ Date of Test 8-2-57

Company Northwest Production Corp. Lease "M" Well No. 10-7

Unit L Sec. 7 Twp. 26N Rge. 4W Purchaser Not connected

Casing 5½ Wt. 14 & 15.5 I.D. ____ Set at 6240 Perf. 5502 To 6126

Tubing 2-3/8 Wt. 4.7 I.D. ____ Set at 6002 Perf. ____ To ____

Gas Pay: From 5502 To 6126 L ____ xG .650 -GL ____ Bar.Press. ____

Producing Thru: Casing ____ Tubing X Type Well Single

Date of Completion: 7-24-57 Packer ____ Single-Bradenhead-G. G. or G.O. Dual 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 | | | | | | 1020 | | 1023 | | SI |
| 1. | | | | | | | | | | |
| 2. | | 3/4 | | | | 202 | 82 | 517 | | 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. | 12.3650 | | 214 | 0.9795 | 0.9608 | 1.019 | 2538 |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |

PRESSURE CALCULATIONS

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

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

$P_c$ ____ $(1-e^{-s})$ ____ $P_c$ 1035 $P_c^2$ 1071.2

| 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. | | | | | | | | | |
| 2. | | | | | | 279.8 | 791.4 | | 1.3536 |
| 3. | | | | | | | | | |
| 4. | | | | | | | | | |
| 5. | | | | | | | | | |

Absolute Potential: 3,282 MCFPD; n .85/1.2932

COMPANY Pacific Northwest Pipeline Corporation

ADDRESS 405½ W. Broadway, Farmington, New Mexico

AGENT and TITLE C. R. Wagner, Well Test Engineer

WITNESSED ____

COMPANY ____

REMARKS

RECEIVED
AUG 12 1957
OIL CON. COM.
DIST. 3

## INSTRUCTIONS

This form is to be used for reporting multi-po nt back pressure tests on gas wells in the State, except those on which special o ders are applicable. Three copies of this form and the back pressure curve sha l be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back p essure 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) pre sure whichever is greater. psia

$P_w$= Static wellhead working pressure as determined t the end of flow period. (Casing if flowing thru tubing, tubing if flowi g thru casing.) psia

$P_t$= Flowing wellhead pressure (tubing if flowing th ough 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 c mpletion or condition of well, then $P_w$ must be calculated by addin the pressure drop due to friction within the flow string to $P_t$.

| AZ EC DISTRICT OFFICE | | |
|---|---|---|
| No. Co es Received 3 | | |
| DISTRIBUTION | | |
| | NO. FURNISHED | |
| Ope a | | |
| Sa a Fe | 1 | |
| Proratio Office | | |
| ate La d Office | | |
| G | 1 | |
| Transpo er | | |
| File | 1 | ✓ |
| | | |

DRILLING DEPARTMENT

COMPANY Northwest Production Corp.

LEASE "N" WELL NO. 10-7

DATE OF TEST 8-2-57

SHUT IN PRESSURE (PSIG): TUBING 1020 CASING 1023 S. I. PERIOD 8 DAYS

SIZE BLOW NIPPLE 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 |
|---|---|---|---|---|---|
| | 34.5 | 518 | | 798 | 59 |
| | 41.5 | 594 | | 772 | 62 |
| | 50 | 680 | Freezing | 776 | 63 |
| 1 | 0 | 740 | Change T-C Choke | 782 | 64 |
| | 12 | 330 | | 649 | 65 |
| | 26.5 | 286 | | 664 | 71 |
| | 44 | 264 | | 610 | 75 |
| 2 | 5 | 238 | | 574 | 77 |
| | 30 | 222 | | 542 | 81 |
| 3 | 0 | 202 | | 517 | 82 |
| | | | | | |
| | | | | | |

START AT: 10:30 AM END TEST AT 1:30 PM

REMARKS: Light fog of $H_2O$ through out test

TESTED BY: C. R. Wagner

WITNESS: _____