

DUPLICATE

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCT Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalmit Formation Yates County Lea, New Mexico

Initial Annual Special X Date of Test 4-4 to 11, 1960

Company Shell Oil Company Lease State Well No. 1-A

Unit D Sec. 36 Twp. 24S Rge. 36E Purchaser El Paso Natural Gas Company

Casing 5 1/2" Wt. 15.5# I.D. 4.976 Set at 2636 Perf. To

Tubing 2" Wt. 4.7# I.D. 1.995 Set at 2832 Perf. To

Gas Pay: From 2636 To 2834 L 2832 xG .715 -GL Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 2-12-1953 Packer None Reservoir Temp.

OBSERVED DATA

Tested Through (336058X) (336058X) (Meter) Type Taps Flge.

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	
SI								
1.	4"	2.000	98	10.56	54°	883		24 Hr 81
2.	4"	2.000	106	33.64	51°	850		24 Hr 81
3.	4"	2.000	133	59.29	46°	800		24 Hr 81
4.	4"	2.000	136	88.36	50°	749		24 Hr 81
5.								

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wP_f}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	25.58	34.27	111.2	1.0058	.9161		807.7
2.	25.58	63.32	119.2	1.0088	.9161	1.014	1518
3.	25.58	93.11	146.2	1.0137	.9161	1.018	2252
4.	25.58	114.82	149.2	1.0098	.9161	1.017	2763
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.

Gravity of Liquid Hydrocarbons deg.

F_c P_v measured (1-e^{-S})

Specific Gravity Separator Gas

Specific Gravity Flowing Fluid

P_c 922.2 P_c 850.4

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.	902.2					814.0	36.4		97.8
2.	890.2					792.4	58.0		96.5
3.	873.2					762.6	87.9		94.7
4.	858.2					736.5	113.9		93.1
5.									

Absolute Potential: 17.300 MCFPD; n .907

COMPANY Shell Oil Company

ADDRESS P. O. Box 845, Roswell, New Mexico

AGENT and TITLE A. L. Ellerd - Gas Tester A. L. Ellerd

WITNESSED Herbert H. Kerby

COMPANY El Paso Natural Gas Company

REMARKS

This well reworked March 24, 1960

Approximately 1/2 barrel of frac oil recovered on first rate of flow.

[Handwritten signature]

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.

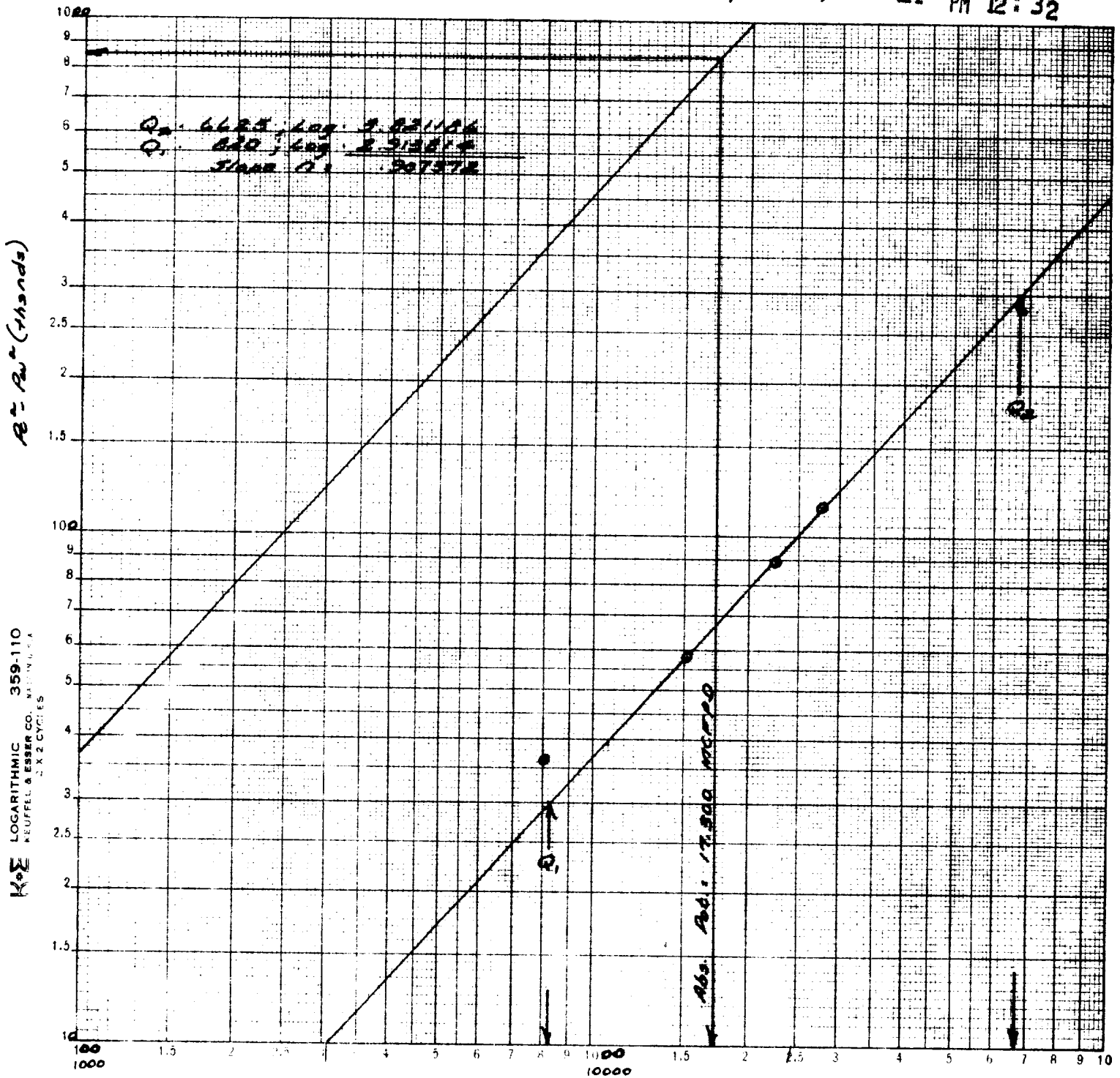
NOMENCLATURE

- 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 .

GAS WELL BACK PRESSURE CURVE

County Lea, Mex. Field Jalisco
Operator Shell Oil Company
Lease State MOBBES OFFICE No. 1A
Volume 17,300 MCF/24hr.
Date April 1980 10:21 PM 12:32



$Q_1 = 1150 \quad 3.359166$
 $Q_2 = 820 \quad 2.913814$
 966.572