NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea

Initial ____ Annual ____ Special X Date of Test 5-27 to 5-31-57

Company R. Olsen Oil Company Lease Cooper "S" Well No. 1

Unit O Sec. 11 Twp. 24 Rge. 36 Purchaser El Paso Natural Gas Company

Casing 7" Wt. 20.0 I.D. ____ Set at 3010 Perf. ____ To ____

Tubing 2" Wt. 4.7 I.D. ____ Set at 1685 Perf. ____ To ____

Gas Pay: From 3127 To 3215 L 1685 xG 0.655 -GL 1104 Bar.Press. 13.2

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

Date of Completion: 3-30-1949 Packer ____ Reservoir Temp. ____

OBSERVED DATA

Tested Through [illegible] (Meter) Type Taps ____

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						472		472		72
1.	4	1.000	223	1.44	88	300		328		24
2.	4	1.000	223	2.56	84	258		321		24
3.	4	1.000	222	11.56	81	239		267		24
4.	4	1.000	228	16.00	75	238		268		24
5.										

FLOW CALCULATIONS

No.	Coefficient F_{lg} (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.	6.135	18.43		.9741	.9571	1.020	107
2.	6.135	24.58		.9777	.9571	1.020	145
3.	6.135	52.12		.9804	.9571	1.020	307
4.	6.135	62.10		.9859	.9571	1.021	368
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 485.2 P_c^2 235.4

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	P_c
1.	313.2	98.1				116.4	119.0		
2.	271.2	73.5				111.7	123.7		
3.	252.2	63.6				78.5	156.9		
4.	251.2	63.1				79.1	156.3		
5.									

Absolute Potential: 555 MCFPD; n 1.000

COMPANY R. Olsen Oil Company

ADDRESS 2805 Liberty Bank Building, Oklahoma City, Oklahoma

AGENT and TITLE Phillip Randolph, Vice President

WITNESSED ____

COMPANY ____

REMARKS

2nd test poor point alignment - General slope in excess of 1.000. Slope of 1.000 was drawn through point representing highest rate of flow. Poor point alignment on first test.

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.

R. OLSEN OIL CO.
COOPER N° 1
O-11-24-36 LEA CO. N.M.
5-31-1957