NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1960 MAY 6 AM 9 58

Pool Jalmat Formation Yates County Lea

Initial ____ Annual ____ Special X Date of Test 4-1-1960

Company Olsen Oils, Inc. Lease Cooper Well No. 1

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

Casing 7" Wt. 23 I.D. 6.366 Set at 3010 Perf. ____ To ____

Tubing 2.5 Wt. 6.5 I.D. 2.441 Set at 3197 Perf. ____ To ____

Gas Pay: From 3127 To 3215 L 3197 xG .656 -GL ____ 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 None Reservoir Temp. Negligible

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter) Type Taps Flg.

No.	Flow Data (Line) Size	Flow Data ~~(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						440		440		72
1.	4	1.500	179	3.06	71	361		399		24
2.	4	1.500	196	11.73	71	330		346		24
3.	4	1.500	208	20.70	74	288		302		24
4.	4	1.500	210	30.80	67	231		253		24
5.										

FLOW CALCULATIONS

No.	Coefficient Flange (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.	13.99	24.25		.9896	.9564	1.016	326.2
2.	13.99	49.54		.9896	.9564	1.019	668.5
3.	13.99	67.67		.9868	.9564	1.020	911.4
4.	13.99	82.91		.9933	.9564	1.021	1,125
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 653,200 cf/bbl.
Gravity of Liquid Hydrocarbons 29.1 deg.
F_c Measured $(1-e^{-s})$ -------

Specific Gravity Separator Gas .656
Specific Gravity Flowing Fluid .8811
P_c 453.2 P_c^2 205.4

No.	P_w ~~P_t~~ (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	412.2					169.9	35.5		.9095
2.	359.2					129.0	76.4		.7926
3.	315.2		-------Measured----------			99.3	106.1		.6955
4.	266.2					70.9	134.5		.5874
5.									

Absolute Potential: 1,695 MCFPD; n .941

COMPANY Olsen Oils, Inc.
ADDRESS Box 691, Jal, New Mexico
AGENT and TITLE Dewey Watson, Petr. Engr. Dewey Watson
WITNESSED L.D. Southern
COMPANY El Paso Natural Gas Company

REMARKS

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.

OLSEN OILS, INC.
COOPER Nº 1
0-11-24-36 LEA CO. N.M. (JALMAT)
ABS. POTENTIAL = 1,695 MCF DAY
Θ 47°; n .941
4-1-1960