NEW MEXICO OIL CONSERVATION COMMISSION

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O. C. C.
ARTESIA, OFFICE

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool WILDCAT Formation ATOKA County EDDY

Initial X Annual ____ Special ____ Date of Test 2-20-61 & 2-21-61

Company ODESSA NATURAL GASOLINE COMPANY Lease EL PASO-STATE Well No. 1

Unit A Sec. 36 Twp. 17-S Rge. 30-E Purchaser PENDING (Transwestern)

Casing 4-1/2 Wt. 11.60 I.D. 4.00" Set at 11,861 Perf. 11,357 To 11,460

Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 11,430 Perf. 11,404 To 11,409

Gas Pay: From 11,357 To 11,471 L X xG X -GL X Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well Single

Date of Completion: 2-11-61 Packer **11,430 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 160°F

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Flange

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	3.068	1.500				3030		3097		
1.	3.068	1.500	800	9	95	2591		2728		2
2.	3.068	1.500	800	18	95	2420		2570		3
3.	3.068	1.500	800	42	88	2289		2427		3
4.	3.068	1.500	800	52	62	2154		2300		3
5.	3.068	1.500	900	65	80	1750		2100		24

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.	14.36	85.544		0.9680	0.9366	1.076	1,199
2.	14.36	120.985		0.9680	0.9366	1.076	1,694
3.	14.36	184.809		0.9741	0.9366	1.083	2,622
4.	14.36	205.636		0.9981	0.9366	1.099	3,093
5.	14.36	243.630		0.9813	0.9366	1.097	3,526

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 22,324 cf/bbl.
Gravity of Liquid Hydrocarbons 59 deg.
P_c ____ $(1-e^{-s})$ ____

Specific Gravity Separator Gas 0.684
Specific Gravity Flowing Fluid 0.7971
P_c 3110.2 P_c^2 9,673.3

No.	P_w (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.	2741.2					7514.2	2159.1		0.881
2.	2583.2					6672.9	3000.4		0.830
3.	2440.2					5954.6	3718.7		0.784
4.	2313.2					5350.9	4322.4		0.744
5.	2113.2					4465.6	5207.7		0.679

Absolute Potential: 6,600 MCFPD; n 1

COMPANY ODESSA NATURAL GASOLINE COMPANY

ADDRESS P. O. BOX 3908

AGENT and TITLE DAVID H. DONALDSON, PRODUCTION SUPERINTENDENT David H. Donaldson

WITNESSED L. A. Pickel - Gas Tester

COMPANY El Paso Natural Gas Co.

REMARKS

**Side door choke above packer letting formation pressures into casing and tubing.

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.