NEW MEXICO OIL CONSERVATION COMMISSION - Stu 1, Fe

HOBBS OFFICE OCC

1957 FEB 27 PM 3:03

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea

Initial ____ Annual ____ Special X Date of Test 11-18-56

Company Continental Oil Company Lease State A-6 Well No. 1

Unit H Sec. 6 Twp. 19S Rge. 37E Purchaser EPNG

Casing 5 1/2 Wt. 14 I.D. 5.012 Set at 3884 Perf. 3600 To 3862

Tubing None Wt. ____ I.D. ____ Set at ____ Perf. ____ To ____

Gas Pay: From 3600 To 3880 L 3600 xG .690 -GL 2484 Bar.Press. 13.2

Producing Thru: Casing X Tubing ____ Type Well Single

Date of Completion: 9-2-54 Packer None Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 90°

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								870		72
1.	4	2.000	280	6.76	60			288		24
2.	4	2.000	52	56.25	63			92		24
3.	4	2.000	50	55.50	86			118		24
4.	4	2.000	43	46.92	73			232		24
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.	25.58	44.50		1.0000	.9325	1.033	1096
2.	25.58	60.47		.9971	.9325	1.033	1439
3.	25.58	59.23		.9759	.9325	1.033	1377
4.	25.58	51.26		.9877	.9325	1.033	1208
5.							

PRESSURE CALCULATIONS

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

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

F_c .9002 $(1-e^{-s})$ .157 P_c 883.2 P_c^2 780.0

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.	301.2	90.7	.99	.98	.15	90.8	689.2	301.3	.34
2.	105.2	11.1	1.30	1.69	.27	11.4	768.6	106.8	.12
3.	131.2	17.2	1.24	1.54	.24	17.5	762.5	132.3	.15
4.	245.2	60.1	1.09	1.19	.19	60.3	719.7	245.6	.28
5.									

Absolute Potential: 1,450 MCFPD; n 1.000

COMPANY Continental Oil Company

ADDRESS Box 427, Hobbs, New Mexico

AGENT and TITLE W. D. Howard, Gas Tester

WITNESSED ____

COMPANY ____

REMARKS

This well would not produce into E.P.N.G. high-pressure gathering at sufficient rate to accomplish back-pressure test. Test separator was installed and gas vented thru meter run. Slope greater than 1.00 - average slope of 1.000 drawn thru highest rate of flow. Two previous attempts to test this well were unsuccessful.

NEW MEXICO OIL CONSERVATION COMMISSION GAS ENGINEERING

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.