MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool __Atoka__ Formation __Pennsylvanian__ County __Eddy__

Initial __X__ Annual _____ Special _____ Date of Test __Nov. 28, 1960__

Company __Olson Development Company__ Lease __Dayton Town Site Eddy Co.__ Well No. __1__

Unit __G__ Sec. __21__ Twp. __18E__ Rge. __26E__ Purchaser _____

Casing __5.5__ Wt. __17 & 15__ I.D. _____ Set at __9144__ Perf. __8978__ To __8992__

Tubing __2__ Wt. __4.70__ I.D. _____ Set at __8950__ Perf. _____ To _____

Gas Pay: From __8890__ To __9120__ L __9005__ xG __.665__ -GL __5988__ Bar.Press. __13.2__

Producing Thru: Casing _____ Tubing __X__ Type Well __Single__

Date of Completion: _____ Packer __None__ Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	4.026	1.750				2823	61	2814	61	72 hr.
1.			456.8	9	78		69	2809	69	3 hr.
2.			477.0	30	60		69	2804	69	2 hr.
3.			486.8	56	62		69	2799	69	2 hr.
4.			527.6	72	59		68	2792	68	2 hr.
5.			683.0	76	68		68	2784	68	22 hr.

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.	19.27 65.04	65.07	470.0	.9924 .9831	.9822 .9831	1.044 1.037	1276 1254.9
2.	121.27	121.73	490.2	1.0000	.9822	1.046 1.044	2413 2346.0
3.	167.53	167.70	500.0	.9981	.9822	1.047	3317 3309.2
4.	177.34	177.67	540.8	1.0010	.9822	1.051 1.054	3836 3940.3
5.	229.22	229.55	696.2	.9924	.9822	1.066 1.063	4596 4593.2

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio __65338__ cf/bbl.

Gravity of Liquid Hydrocarbons __51.4__ deg.

T_c _____ $(1-e^{-s})$

Specific Gravity Separator Gas __.622__

Specific Gravity Flowing Fluid __.665__

P_c __2836.2__ P_c^2 __8044.0__

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	$\frac{P_w}{P_c}$
1.	2822.2					7964.8	79.2		99.5
2.	2817.2					7936.6	107.4		99.3
3.	2812.2					7908.5	135.5		99.2
4.	2805.2					7869.1	174.9		98.9
5.	2797.2					7824.3	219.7		98.6

Absolute Potential: __163,000__ MCFPD; n __.966__

COMPANY __Olson Development Company__

ADDRESS __Leggett Building, Midland, Texas__

AGENT and TITLE __J. E. Brammer, Agent__

WITNESSED _____

COMPANY _____

REMARKS

Due to the nature of the testing equipment, a larger flow rate was not feasible.

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.