NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool __Langlie Mattix__ Formation __7 Rivers__ County __Lea__

Initial _____ Annual _____ Special __X__ Date of Test __4-15 to 4-19-57__

Company __Western Natural Gas Company__ Lease __Harrison__ Well No. __3__

Unit __L__ Sec. __20__ Twp. __24__ Rge. __37__ Purchaser __El Paso Natural Gas Company__

Casing __7__ Wt. __24__ I.D. __6.336__ Set at __3624__ Perf. _____ To _____

Tubing __2-7/8__ Wt. __6.5__ I.D. __2.441__ Set at __3690__ Perf. _____ To _____

Gas Pay: From __3330__ To __3367__ L __3690__ xG __.660__ GL __2935__ Bar.Press. __13.2__

Producing Thru: Casing _____ Tubing __X__ Type Well __Single__

Date of Completion: __3-8-37__ Packer __None__ Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

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

No.	(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						187				72
1.	4	.500	139	6.76	60	147				24
2.	4	.500	119	11.56	65	121				24
3.	4	.500	101	16.81	59	103				24
4.	4	.500	73	29.16	66	78				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.	1.525	32.06		1.0000	.9535	1.014	47
2.	1.525	39.06		0.9952	.9535	1.012	57
3.	1.525	43.78		1.0010	.9535	1.011	64
4.	1.525	50.08		0.9943	.9535	1.000	72
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c __5.866__ $(1-e^{-s})$ __0.154__

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c __200.2__ P_c^2 __400.8__

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.	160.2	256.6				256.6	144.2	506.1	252.8
2.	134.2	180.1				180.1	220.7	424.5	212.0
3.	116.2	135.0	NEG	NEG	NEG	135.0	265.8	367.2	183.4
4.	91.2	83.2				83.2	317.6	288.5	144.1
5.									

Absolute Potential: __85__ MCFPD; n __0.649__

COMPANY __Western Natural Gas Company__
ADDRESS __823 Midland Tower Bldg., Midland, Texas__
AGENT and TITLE __C. M. Rayes Petroleum Engineer__
WITNESSED __H. W. Kerby__
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.