LOW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 FEB 11 AM 10 : 01

Pool __Jalmat__ Formation __Yates & 7 Rivers__ County __Lea__

Initial_____ Annual_____ Special __X__ Date of Test __11-19 to 11-23-56__

Company __El Paso Natural Gas Company__ Lease __Shell State__ Well No. __2__

Unit __P__ Sec. __13__ Twp. __23 S__ Rge. __36 E__ Purchaser __El Paso Natural Gas Company__

Casing __5½__ Wt. __15.5__ I.D. __5.076__ Set at __2946__ Perf._____ To_____

Tubing __2__ Wt. __4.7__ I.D. __1.995__ Set at __3176__ Perf._____ To_____

Gas Pay: From __2946__ To __3198__ L __3176__ xG __.655__ -GL __2080__ Bar.Press. __13.2__

Producing Thru: Casing_____ Tubing __X__ Type Well __Single__
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: __5-5-54__ Packer __None__ Reservoir Temp._____

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI						905		905		72
1.	4	1.500	634	7.84	70	842		853		24
2.	4	1.500	624	16.81	98	805		821		24
3.	4	1.500	631	23.04	92	777		799		24
4.	4	1.500	610	62.41	90	626		702		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.	13.99	71.22		.9905	.9571	1.065	1,006
2.	13.99	103.48		.9653	.9571	1.054	1,410
3.	13.99	121.81		.9706	.9571	1.056	1,672
4.	13.99	197.18		.9723	.9571	1.054	2,707
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio_____ cf/bbl.
Gravity of Liquid Hydrocarbons_____ deg.
F_c_____ $(1-e^{-s})$_____

Specific Gravity Separator Gas_____
Specific Gravity Flowing Fluid_____
P_c __918.2__ P_c^2 __843.1__

No.	P_w P_w (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.	866.2	731.4				750.3	92.8		
2.	834.2	669.5				695.9	147.2		
3.	812.2	624.4				659.7	183.4		
4.	715.2	408.8				511.5	331.6		
5.									

Absolute Potential: __5,850__ MCFPD; n __.806__
COMPANY __El Paso Natural Gas Company__
ADDRESS __P. O. Box 1384, Jal, New Mexico__
AGENT and TITLE __R. T. Wright__ __R. T. Wright - Petroleum Engineer__
WITNESSED __Jack T. Littlefield__
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.
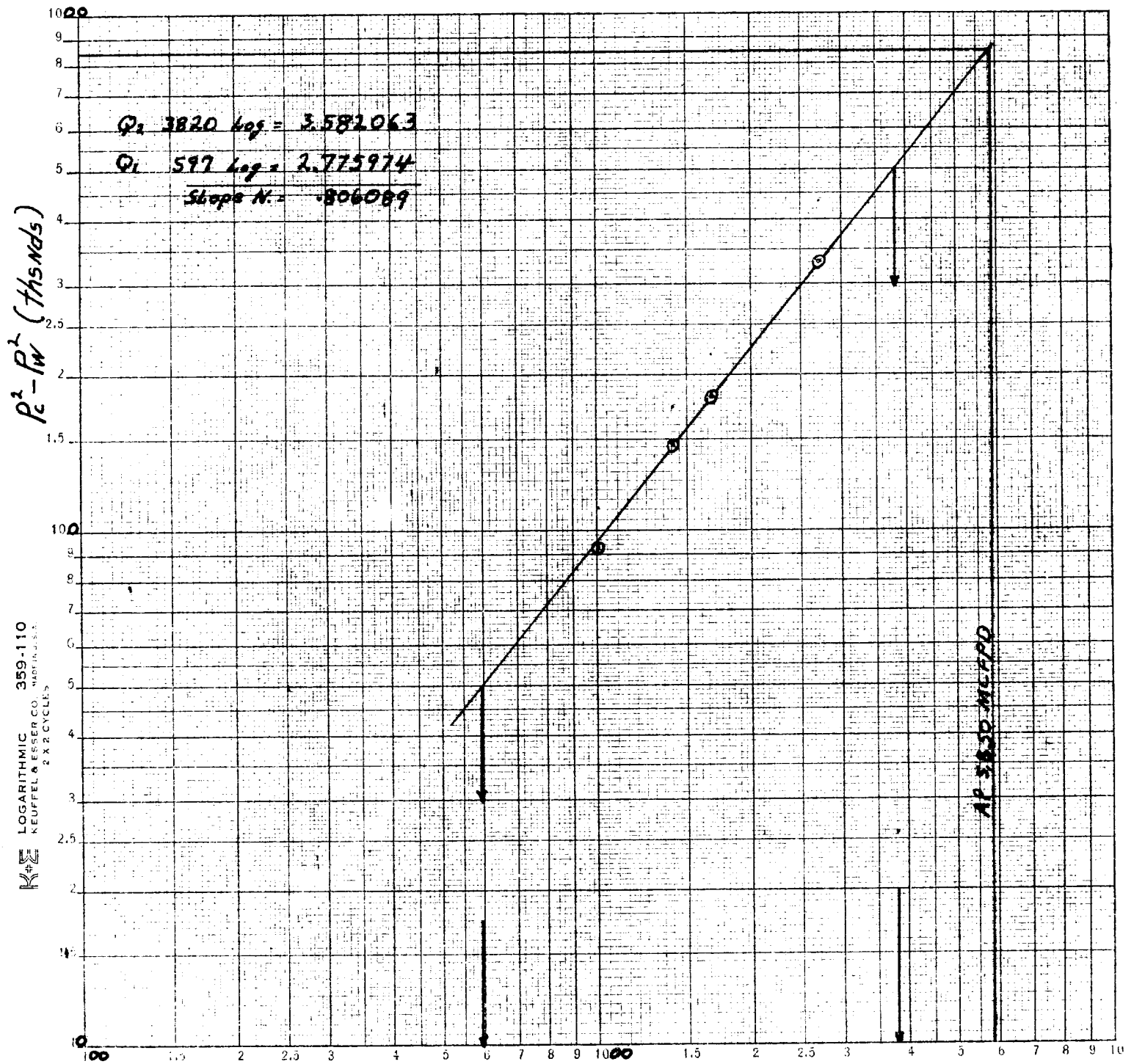
The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

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.

El Paso Natural Gas Co.
. Shell State #2
Sec. 13-T23S-R36E Lea N.M.
11-23-56

Q_2 3820 Log = 3.582063
Q_1 597 Log = 2.775974

Slope N.= .806089

$P_c^2 - P_w^2$ (Ths Nds)

LOGARITHMIC 359-110
KEUFFEL & ESSER CO. MADE IN U.S.A.
2 X 2 CYCLES

AP 5830 MCFPD

Q - MCFPD