NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Blinebry Gas** Formation **Blinebry** County **Lea**

Initial ____ Annual ____ Special **X** Date of Test **10-18 to 25-63**

Company **Shell Oil Company** Lease **Turner** Well No. **5**

Unit **I** Sec. **22** Twp. **21-S** Rge. **37-E** Purchaser **El Paso Natural Gas Company**

Casing **5 1/2"** Wt. **15.5** I.D. **4.976** Set at **6450** Perf. **5512** To **5635**

Tubing **2** Wt. **4.7** I.D. **1.995** Set at **6402** Perf. ____ To ____

Gas Pay: From **5512** To **5635** L **5512** xG **Mix .694** -GL **3825** Bar.Press. **13.2**

Producing Thru: Casing **x** Tubing ____ Type Well **G. O. Dual**
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: **7-25-52** Packer **6402** 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	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI								1410		72
1.	4	1.750	575	5.76	90			1114		24
2.	4	1.750	574	13.69	82			1122		24
3.	4	1.750	601	30.25	75			1055		24
4.	4	1.750	565	44.89	72			988		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.	19.27	58.21	588.2	.9723	.9312	1.055	1,072
2.	19.27	89.66	587.2	.9795	.9312	1.058	1,666
3.	19.27	136.31	614.2	.9859	.9312	1.064	2,566
4.	19.27	161.11	578.2	.9887	.9312	1.064	3,041
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **1,363,000** cf/bbl.
Gravity of Liquid Hydrocarbons **58.0** deg.
F_c **1.758** $(1-e^{-s})$ **.231**

Specific Gravity Separator Gas **.692**
Specific Gravity Flowing Fluid **.7467**
P_c **1423.2** P_c^2 **2025.5**

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.	1127.2	1270.6	1.884	3.549	.820	1271.4	754.1	1127.6	79.2
2.	1135.2	1288.7	2.929	8.579	1.982	1290.7	734.8	1136.1	79.8
3.	1068.2	1141.0	4.511	20.349	4.701	1145.7	879.8	1070.4	75.2
4.	1001.2	1002.4	5.346	28.580	6.602	1009.0	1016.5	1004.5	70.6
5.									

Absolute Potential: **6,300** MCFPD; n **1.000**
COMPANY **Shell Oil Company**
ADDRESS **P. O. Box 1858, Roswell, New Mexico**
AGENT and TITLE **A. L. Ellerd - Gas Tester**
WITNESSED **L. D. Southern**
COMPANY **El Paso Natural Gas Company**

REMARKS

Slope greater than 1.000, a slope of 1.000 drawn through highest rate of flow.

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.

GAS WELL
BACK PRESSURE CURVE

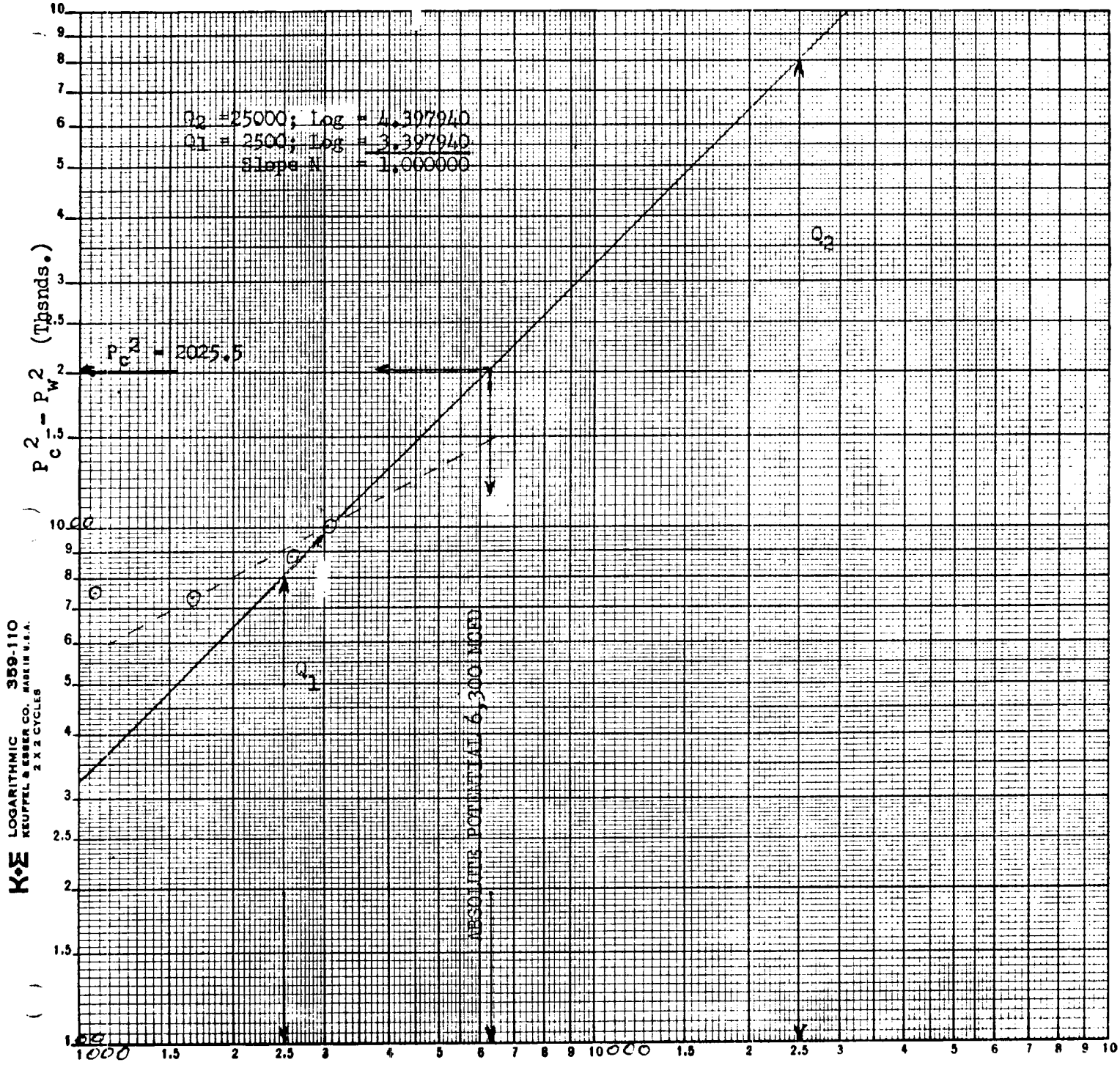
County LEA Field BLINEBRY GAS

Operator SHELL OIL COMPANY

Lease TURNER Well No. 5

Volume 6,300 MCF/24 hr.

Date OCTOBER 25, 1963



——— Q in MCFD @ 15.025 psia———