NEW MEXICO OIL CONSERVATION COMMISSION

MAIN OFFICE OCC

1956 OCT 10 PM 3:06

ELVIS A. UTZ GAS ENGINEER

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1956 SEP 5 AM 9:03

Pool Eumont Formation Queen County Lea

Initial ____ Annual ____ Special X Date of Test 8-20 to 8-24-56

Company El Paso Natural Gas Company Lease Shell State Well No. 11

Unit G Sec. 13 Twp. 20 S Rge. 36 E Purchaser El Paso Natural Gas Company

Casing 5½ Wt. 15.5 I.D. 4.950 Set at 3162 Perf. ____ To ____

Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3426 Perf. ____ To ____

Gas Pay: From 3162 To 3437 L 3426 xG .670 -GL ____ Bar.Press. 13.2

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

Date of Completion: 5-18-55 Packer None Reservoir Temp. ____

OBSERVED DATA

Tested Through (~~Xxxxxx~~) (Meter) Type Taps Flange

No.	Flow Data (~~Xxxxxx~~) (Line) Size	(~~Xxxxxx~~) (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						925		925		72
1.	4"	1.500	568	3.0	66	897		913		24
2.	4"	1.500	559	6.8	63	869		903		24
3.	4"	1.500	558	7.5	64	829		892		24
4.	4"	1.500	567	9.3	65	799		881		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	94.01		.9984	.9463	1.062	1,312
2.	13.99	148.29		.9971	.9463	1.064	2,083
3.	13.99	181.99		.9962	.9463	1.064	2,554
4.	13.99	223.97		.9952	.9463	1.062	3,134
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c Measured $(1-e^{-s})$ ____

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 938.2 P_c^2 880.2

No.	P_w (~~Xxxx~~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.	926.2					857.8	22.4		.9870
2.	916.2					839.4	40.8		.9762
3.	905.2					819.4	60.8		.9643
4.	894.2					799.8	80.6		.9524
5.									

Absolute Potential: 15,800 MCFPD; n .676

COMPANY El Paso Natural Gas Company
ADDRESS P. O. Box 1384; Jal, New Mexico
AGENT and TITLE R. T. Wright - Petroleum Engineer R. T. Wright
WITNESSED Earl G. Smith
COMPANY El Paso Natural Gas Company

REMARKS

Unable to get 30% draw down - maximum capacity of meter run.

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.