NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea

Initial ____ Annual ____ Special X Date of Test 6-9/6-13, 1958

Company Shell Oil Company Lease Devonian State Well No. 1

Unit O Sec. 20 Twp. 21S Rge. 36E Purchaser El Paso Natural Gas Company

Casing 7 Wt. 23 I.D. 6.336 Set at 3830 Perf. 3060 To 3620

Tubing 2 1/2 Wt. 6.5 I.D. 2.441 Set at 3904 Perf. ____ To ____

Gas Pay: From 3060 To 3620 L 3060 xG .655 =GL 2004 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: 9-2-53 Packer 3710 Reservoir Temp. ____

OBSERVED DATA *Oil zone temporarily abandoned.

Tested Through ~~(Prover)~~ ~~(Chokes)~~ (Meter) Type Taps Flgs.

	Flow Data					Tubing Data		Casing Data		
No.	~~(Prover)~~ (Line) Size	~~(Chokes)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI								946/948/946		24/48/72
1.	4"	1.750	555	10.84	76			878		3
2.	4"	1.750	554	21.16	72			850		3
3.	4"	1.750	551	31.36	70			826		3
4.	4"	1.750	539	43.56	68			804		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	76.27	568.2	0.9950	0.9571	1.056	1464
2.	19.27	109.54	567.2	0.9937	0.9571	1.057	2111
3.	19.27	132.99	564.2	0.9905	0.9571	1.057	2569
4.	19.27	155.07	552.2	0.9924	0.9571	1.055	2994
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c .865 $(1-e^{-s})$ 0.129

Specific Gravity Separator Gas .655
Specific Gravity Flowing Fluid ____
P_c 961.2 P_c^2 923.9

No.	P_w / P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	P_w / P_c
1.	891.2	794.2	1.27	1.61	0.21	794.4	129.5	891.3	92.7
2.	863.2	745.1	1.83	3.35	0.43	745.5	178.4	863.4	89.8
3.	839.2	704.3	2.22	4.93	0.64	704.9	219.0	839.6	87.3
4.	817.2	667.8	2.59	6.71	0.87	668.7	255.2	817.7	85.1
5.									

Absolute Potential: 11,000 MCFPD; n .97

COMPANY Shell Oil Company
ADDRESS Box 845, Roswell, New Mexico
AGENT and TITLE A. L. Elliott - Gas Tester
WITNESSED R. A. Nibbi
COMPANY El Paso Natural Gas Company

REMARKS

ILLEGIBLE

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.