

NEW MEXICO OIL CONSERVATION COMMISSION

MODELS OFFICE 000

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Seven Rivers County Lea
Initial _____ Annual _____ Special X Date of Test 8-18 to 8-22-56
Company Tidewater Oil Company Lease Marshall Well No. 1-D
Unit H Sec. 13 Twp. 21S Rge. 36E Purchaser EPNG Co.
Casing 8 5/8 Wt. 32 I.D. 7.921 Set at 2804 Perf. OH 2804 To 3952
Tubing 2 7/8 Wt. 6.5 I.D. 2.441 Set at 2804 Perf. _____ To _____
Gas Pay: From 3600 To 3800 L 2804 xG .695 -GL 1949 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: 10-1-52 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 93° F.

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	<u>(Prover) (Line) Size</u>	<u>(Choke) (Orifice) Size</u>	Press. psig	Diff. $\sqrt{h_w}$	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						774	—	—	—	72
1.	1	0.750	161	3.2	82	602	—	—	—	24
2.	1	0.750	203	3.8	82	522	—	—	—	24
3.	1	0.750	195	5.5	82	397	—	—	—	24
4.	1	0.750	197	8.0	80	202	—	—	—	24
5.										

FLOW CALCULATIONS

No.	Coefficient <u>(24-Hour)</u>	$\sqrt{h_{wpf}}$	Pressure $\sqrt{p_{sia}}$	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	3.435	42.21	13.2	0.9795	0.9292	1.017	134
2.	3.435	55.85	14.7	0.9795	0.9292	1.021	170
3.	3.435	79.32	14.0	0.9795	0.9292	1.020	752
4.	3.435	115.93	14.5	0.9813	0.9292	1.020	370
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 183,980 cf/bbl.
Gravity of Liquid Hydrocarbons 33° API deg.
 F_c 5.866 ($1-e^{-s}$) 0.125
Specific Gravity Separator Gas 0.680
Specific Gravity Flowing Fluid 0.86
 P_c 787.2 P_c^2 619.7

No.	P_t 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	P_w P_c
1.	615.2	378.5	0.79	0.62	.078	378.6	241.1	615	78.2
2.	535.2	286.4	1.05	1.10	.138	286.5	333.2	535	67.9
3.	410.2	168.3	1.48	2.19	.274	168.6	451.1	411	52.2
4.	215.2	46.3	2.17	4.71	.588	46.9	572.8	216	27.4
5.									

Absolute Potential: 400 MCFPD; n 1.000
COMPANY Tidewater Oil Company
ADDRESS Box 587, Hobbs, New Mexico
AGENT and TITLE E. W. Hogue, Acting Area Superintendent
WITNESSED Earl G. Smith
COMPANY EPNG Co.

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 .