

NEW MEXICO OIL CONSERVATION COMMISSION

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Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Lumont Formation Queen County Lea
Initial _____ Annual _____ Special X Date of Test 7-23 to 7-27-56
Company Tidewater Oil Company Lease State "AC" Well No. 1
Unit F Sec. 5 Twp. 19S Rge. 37E Purchaser EPNG Co.
Casing 5-1/2 Wt. 15.5 I.D. 4.976 Set at 3922 Perf. 3536 To 3827
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 3728 Perf. — To —
Gas Pay: From 3536 To 3827 L. 3728 xG 0.670 -GL 2498 Bar. Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 2-18-56 Packer None Reservoir Temp. 93° F.

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(<u>Pressure</u>) (Line) Size	(<u>Choke</u>) (Orifice) Size	Press. psig	Diff. $\sqrt{h_w}$	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1062		1074		72
1.	4"	1.25	604	2.80	56	1023		1060		24
2.	4"	1.25	629	5.40	56	1010		1044		24
3.	4"	1.25	666	7.05	80	962		1027		24
4.	4"	1.25	712	8.45	80	927		1013		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wPF}}$	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.	9.643	69.55	24.839	1.0039	0.9463	1.072	684
2.	9.643	136.82	25.338	1.0039	0.9463	1.076	1348
3.	9.643	183.71	26.058	0.9813	0.9463	1.066	1755
4.	9.643	227.52	26.926	0.9843	0.9463	1.073	2185
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas 0.690
Specific Gravity Flowing Fluid _____
 P_c 1087.2 P_c^2 1182.0

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	F_{wF_c}
1.	1036.2	1073.7				1151.7	30.3	1071	98.7
2.	1023.2	1046.9				1117.6	64.4	1053	97.2
3.	975.2	951.0				1082.0	100.0	1040	95.9
4.	940.2	883.9				1053.1	128.9	1025	94.4
5.									

Absolute Potential: 13,000 MCFPD; n 0.792

COMPANY Tidewater Oil Company
ADDRESS Box 547 Hobbs, New Mexico
AGENT and TITLE E. W. Hogue, Acting Area Superintendent
WITNESSED Edward Mabe
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 .