

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Eumont Formation Yates-Seven Rivers County Lea
Initial _____ Annual _____ Special X Date of Test 7-6-56
Company Tidewater Oil Company Lease State "B" Well No. 2
Unit P Sec. 16 Twp. 21S Rge. 36E Purchaser El Paso Nat. Gas Co.
Casing 7" Wt. 24# I.D. 6.336 Set at 3834 Perf. 3100 To 3140
Tubing 2 7/8 Wt. 6.5 I.D. 2.441 Set at 3890 Perf. _____ To _____
Gas Pay: From 3140 To 3305 L 3100 xG 0.665 -GL 2061 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G.O. Dual
Date of Completion: 10-17-52 Packer @ 3697 Reservoir Temp. 93° F

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(<u>Prover</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								958		72
1.	4	1.250	545	2.8	60	—	—	847	—	24
2.	4	1.250	534	4.55	63	—	—	771	—	24
3.	4	1.250	552	5.5	67	—	—	719	—	24
4.	4	1.250	552	8.2	70	—	—	650	—	24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure $\sqrt{psia}$	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	9.643	66.14	23.6	1.0000	0.9498	1.059	8632
2.	9.643	106.42	23.4	0.9971	0.9498	1.059	1029
3.	9.643	130.74	23.8	0.9933	0.9498	1.058	1259
4.	9.643	194.91	23.8	0.9905	0.9498	1.057	1869
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
 F_c 0.865 ($1-e^{-s}$) 0.132

Specific Gravity Separator Gas 0.665
Specific Gravity Flowing Fluid _____
 P_c 971.2 P_c^2 943.2

No.	P_w 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.	860.2	739.9	0.55	0.30	0.04	739.9	203.3	860	88.6
2.	784.2	615.0	0.89	0.79	0.10	615.1	328.1	784	80.8
3.	732.2	536.1	1.09	1.19	0.16	536.3	406.9	732	75.5
4.	663.2	439.8	1.62	2.62	0.35	440.2	503.0	663	68.3
5.									

Absolute Potential: 2,900 MCFPD; n 0.991
COMPANY Tidewater Oil Company
ADDRESS Box 547, Hobbs, New Mexico
AGENT and TITLE E. W. Hogue, Acting Area Superintendent
WITNESSED E. G. Smith
COMPANY EPNG Co.

REMARKS

ELVIS L. 4-177
248 ENGINEER

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 .