

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Langlie Mattix Formation Queen County Lea
Initial _____ Annual _____ Special X Date of Test 4-29-57 & 5-3-57
Company Tidewater Oil Company Lease Coates "D" Well No. 1
Unit N Sec. 24 Twp. 25S Rge. 37E Purchaser El Paso Natural Gas Co.
Casing 6-5/8 Wt. 29.0 I.D. _____ Set at 2960 Perf. _____ To _____
Tubing 2" Wt. 4.7 I.D. _____ Set at 3287 Perf. _____ To _____
Gas Pay: From 2960 To 3300 L 3287 xG 0.655 -GL 2153 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: 7-3-1952 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 107° F.

OBSERVED DATA

Tested Through (Boomer) (Glauber) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Boomer) (Line) Size	(Glauber) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						697	-	-	-	72
1.	4	1	263	16.00	58	545	-	-	-	24
2.	4	1	255	27.56	58	499	-	-	-	24
3.	4	1	227	41.60	60	470	-	-	-	24
4.	4	1	247	43.56	62	444	-	-	-	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.	6.135	66.45	276	1.0019	.9571	1.028	402
2.	6.135	85.95	268	1.0019	.9571	1.027	519
3.	6.135	99.92	240	1.000	.9571	1.023	601
4.	6.135	106.43	260	.9981	.9571	1.025	640
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) 0.138
Specific Gravity Separator Gas 0.685
Specific Gravity Flowing Fluid _____
P_c 710.2 P_c² 504.4
Second test on this well. Slope greater than 1,000.
Slope of 1.000 was drawn through point corresponding to highest rate of flow.

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.	558.2	311.6	3.99	15.92	2.20	313.8	190.6	177.0	24.92
2.	512.2	262.3	5.16	26.63	3.67	266.0	238.4	163.5	23.02
3.	483.2	233.5	5.97	35.64	4.92	238.4	266.0	154.6	21.77
4.	457.2	209.0	6.36	40.45	5.58	214.6	289.8	146.8	20.67
5.									

Absolute Potential: 1100 MCFPD; n 1.000

COMPANY Tidewater Oil Company
ADDRESS Box 547 Hobbs, New Mexico
AGENT and TITLE H. P. Shackelford, Area Supt.
WITNESSED Larl G. Smith
COMPANY El Paso Natural Gas Company

REMARKS

APR 4 1957
HOBBS, N.M.

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 .