

NEW MEXICO OIL CONSERVATION COMMISSION

OCT 21 3 09 PM '63

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool _____ Tubb _____ Formation _____ Tubb _____ County _____ Lea _____
Initial _____ Annual _____ Special X Date of Test 7-8/7-12-63
Company Tidewater Oil Co. Lease _____ State "Q" Well No. 1 (Tubing)
Unit N Sec. 36 Twp. 21 Rge. 37 Purchaser El Paso Natural Gas Co.
Casing 5/ 1/2 Wt. 15.5 I.D. _____ Set at 6530 Perf. 5520 To 5560
Tubing 2 3/8 Wt. 4.7 I.D. _____ Set at 6187 Perf. 6140 To 6175
Gas Pay: From 6140 To 6175 L 6140 xG Mix .716 -GL 4396 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well G. G. Dual
Date of Completion: November 15, 1958 6010 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1310				72
1.	4	1.250	517	2.56	84	1071				24
2.	4	1.250	521	5.29	84	992				24
3.	4	1.250	561	8.4	83	833				24
4.	4	1.250	542	10.24	87	694				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.	9.643	36.84		.9777	.9325	1.055	341.6
2.	9.643	53.16		.9777	.9325	1.055	493.1
3.	9.643	69.49		.9786	.9325	1.058	646.9
4.	9.643	75.40		.9750	.9325	1.054	696.7
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 99.086 cf/bbl.
Gravity of Liquid Hydrocarbons 58.5 deg.
F_c 9.936 (1-e^{-s}) 0.261

Specific Gravity Separator Gas .690
Specific Gravity Flowing Fluid .7443
P_c 1323.2 P_c 1750.8

No.	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.	1084.2	1175.5	3.394	11.519	3.01	1178.5	572.3	1084.2	1.000
2.	1005.2	1010.4	4.899	24.000	6.26	1016.7	734.1	1005.2	1.000
3.	848.2	719.4	6.427	41.306	10.78	730.2	1020.6	848.2	1.000
4.	707.2	500.1	6.922	47.914	12.50	512.6	1238.2	707.2	1.000
5.									

Absolute Potential: 880 MCFPD; n .499COMPANY Tidewater Oil Co.ADDRESS Box 249, Hobbs, N. Mex.AGENT and TITLE C. L. Wade, Area Supt. C. L. WadeWITNESSED J. B. MurrayCOMPANY El Paso Natural Gas. 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 .

DENVER OIL CO.
 STATE Q #1 (T36)
 UNIT N 36-21-37; LEA CO., N.M.
 TUBB POOL
 7-12-1963

H.E. LOGARITHMIC 359-110
 KEUTELA ENGINE CO. 2-2-20-1964

