

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Leake Formation Leake County San Juan
Initial 75 Annual Special Date of Test 3-7-60
Company Polhi-Taylor Oil Corporation Lease McCulloch Well No. 1
Unit 3/4 Sec. 14 Twp. 28-N Rge. 9-W Purchaser
Casing 5-1/8" Wt. 17# I.D. 4.622 Set at 6910 Perf. 6070 To 1000
Tubing 2" Wt. 4.70# I.D. 1.993 Set at 6807 Perf. Open Holed To
Gas Pay: From 6072 To 6056 L xG 0.697 -GL Bar.Press. 12
Producing Thru: Casing Tubing X Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 3-7-60 Packer None 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						1879		1881		7 hours
1.		3/4"	350		98*	350	98*	1189		3 hours
2.										
3.										
4.										
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.	12.965		402	0.9608	0.9592	1.038	4595
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 1881 P_c² 3535881

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.									
2.									
3.									
4.									
5.									

Absolute Potential: 6657 MCFPD; n 0.75
COMPANY Polhi-Taylor Oil Corporation
ADDRESS P. O. Drawer 1198, Farmington, New Mexico
AGENT and TITLE J. P. Berry - District Engineer
WITNESSED Frank Clark
COMPANY El Paso Natural Gas Company

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_{ci} = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia
- P_{ws} = 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_g = Meter pressure, psia.
- P_m = Differential meter pressure, inches water.
- F_g = Gravity correction factor.
- F_t = Flowing temperature correction factor.
- F_{pv} = Supercompressibility 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 .

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