

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Astos Formation Pictured Cliffs County San Juan
Initial I Annual _____ Special _____ Date of Test 11/7/59
Company Astos Oil and Gas Company Lease Holloman Well No. 13
Unit A Sec. 24 Twp. 23N Rge. 10W Purchaser _____
Casing 14 Wt. 9 1/2 I.D. 1.090 Set at 2090 Perf. 2022 To 2062
Tubing 1 Wt. 1.7 I.D. 1.049 Set at 2056 Perf. 2031 To 2041
Gas Pay: From 2022 To 2062 L _____ xG _____ -GL _____ Bar.Press. _____
Producing Thru: Casing I Tubing _____ Type Well Single-Bradenhead
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11/7/59 Packer _____ 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						<u>618</u>		<u>618</u>		<u>7 days</u>
1.		<u>.750</u>	<u>309</u>			<u>309</u>	<u>60</u>	<u>309</u>		<u>3 hours</u>
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wPF}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>12.35</u>		<u>321</u>	<u>1.000</u>	<u>.9678</u>	<u>1.001</u>	<u>3931</u>
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 630 P_c 396,800

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.	<u>321</u>					<u>115,261</u>	<u>160,419</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 5.277 MCFPD; n .05
COMPANY Astos Oil and Gas Company
ADDRESS Box # 736, Farmington, New Mexico
AGENT and TITLE ORIGINAL SIGNED BY D. K. BRYANT D. K. Bryant, Production Engineer
WITNESSED _____
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_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 .

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