

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates 1958 SEP 1 AM 10:02 County LeaInitial X Annual _____ Special _____ Date of Test 7-20/7-24-59Company Olsen Oils, Inc. Lease Gregory Fed "B" Well No. 1Unit E Sec. 28 Twp. 26 Rge. 37 Purchaser El Paso Natural Gas Co.Casing 7" Wt. 23.0 I.D. _____ Set at 3354 Perf. 2992 To 3110Tubing 2" Wt. 4.7 I.D. _____ Set at 2968 Perf. _____ To _____Gas Pay: From 2992 To 3110 L 2968 xG .650 (Assumed) -GL _____ Bar.Press. 13.2Producing Thru: Casing _____ Tubing X Type Well SingleDate of Completion: 2-26-59 Packer None Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(<u>Branch</u>) (Line) Size	(<u>Choke</u>) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						975		975		72
1.	4	1.250	526	14.06	69	955		960		24
2.	4	1.250	543	21.16	65	882		907		24
3.	4	1.250	513	30.80	64	814		855		24
4.	4	1.250	513	42.90	66	740		793		24
5.										

FLOW CALCULATIONS

No.	Coefficient Flange (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	87.07		.9915	.9608	1.054	843
2.	9.643	108.5		.9952	.9608	1.053	1053
3.	9.643	127.5		.9962	.9608	1.055	1241
4.	9.643	150.2		.9943	.9608	1.051	1453
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 77.625 cf/bbl.
Gravity of Liquid Hydrocarbons 37.9 deg.
F_c Measured (1-e^{-s})Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid 8353
P_c 988.2 P_c² 976.5

No.	P _{ps} 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	Measured Cal. P _w	P _w / P _c
1.	968.2	937.4				947.1	29.4	973.2	.98
2.	895.2	801.4				846.8	129.7	920.2	.93
3.	817.2	667.8	-----Measured	-----	-----	753.8	222.7	868.2	.88
4.	753.2	567.3				649.9	326.6	806.2	.81
5.									

Absolute Potential: 4.900 MCFPD; n .499COMPANY Olsen Oils, Inc.ADDRESS Box 691, Jal, New MexicoAGENT and TITLE Dewey Watson, Engr.WITNESSED J. B. MurrayCOMPANY El Paso Natural Gas Company

REMARKS

Slope less than .499. Slope of .499 drawn thru point corresponding to lowest rate of flow.

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 .