

3 N.M.O.C.C.
1 Redfern & Herd
1 Christman
1 file

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Formation Dakota County San Juan
Initial X Annual Special Date of Test 11-22-61
Company Redfern & Herd, Inc. Lease Johnston Well No. 1
Unit I Sec. 28 Twp. 30N Rge. 12W Purchaser
Casing 5 1/2" Wt. 15.5 I.D. Set at 6295 Perf. 6084 To 6260
Tubing 1 1/4" Wt. 2.4 I.D. Set at 6216 Perf. Open ended To
Gas Pay: From 6084 To 6260 L 6216 xG 0.650 -GL 4040 Bar.Press.
Producing Thru: Casing Tubing X Type Well Gas-Gas Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11-6-61 Packer Reservoir Temp.

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2103				
1.										
2.										
3.	2"	3/4"	254		56					3 hrs
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.							
2.							
3.	12.3650		266	1.0039	.9608	1.028	3264
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 24.62 (1-e^{-s}) .255
Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 2115 P_c² 4473.2

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.	266	70.8	80.21	6445.8	1643.7	1714.5	2758.7		1.6215
4.									
5.									

Absolute Potential: 4686 MCFPD; n .75 1.437
COMPANY REDFERN & HERD, INC.
ADDRESS 1007 North Dustin, Farmington, N.M.
AGENT and TITLE T.A. Dugan, Engineer Original signed by T. A. Dugan
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 .