

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan
Initial Yes Annual _____ Special _____ Date of Test Jan. 23, 1961
Company Southern Union Gas Co. Lease Reid Well No. 1-A
Unit Reid #1-A Sec. 32 Twp. 29N Rge. 10W Purchaser Southern Union Gas Co.
Casing 4 1/2" Wt. 9.50 I.D. 4" Set at 6865 Perf. 6608 To 6814
Tubing 1 3/4" Wt. 2.75 I.D. 1.5 Set at 6544 Perf. 6538 To 6544
Gas Pay: From _____ To _____ L _____ xG _____ -GL _____ Bar.Press. _____
Producing Thru: Casing _____ Tubing X Type Well Single-Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: Jan. 23, 1961 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (~~PERF~~) (Choke) (~~PERF~~) 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						1807		1807		10 days
1.		3/4"	126		80°			743		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.	12,3650		138	.9813	.9463	1.013	1,604
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
 F_c _____ ($1-e^{-S}$)

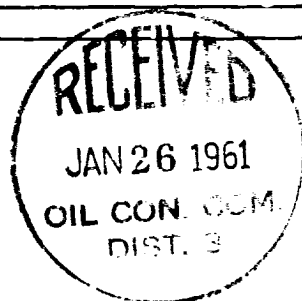
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
 P_c 1819 P_c^2 3308
 P_w 755 P_w^2 570

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	$\frac{P_w}{P_c}$
1.									
2.									
3.									
4.									
5.									

Absolute Potential: 1,851 MCFPD; n 0.75

COMPANY _____
ADDRESS _____
AGENT and TITLE _____
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 .