

NEW-MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Grosby Formation Doverian 1957 FEB 11 AM 9:56 County Lea

Initial I Annual _____ Special _____ Date of Test Dec. 11-18, 1956

Company Gulf Oil Corporation Lease G. W. Shahan Well No. 2

Unit B Sec. 33 Twp. 29S Rge. 37E Purchaser El Paso Natural Gas Co.

Casing 5.5 Wt. 17.0 I.D. 4.892 Set at 8246 Perf. 8226 To 8243

Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 8237 Perf. _____ To _____

Gas Pay: From 8226 To 8243 L 8237 xGL .698 -GL 5.00 Bar. Press. 13.2

Producing Thru: Casing _____ Tubing I Type Well Single

Date of Completion: 12-3-56 Packer _____ Reservoir Temp. 127

FB TD 8243' OBSERVED DATA

Tested Through (FLOW) (ORIFICE) (Meter) Type Taps Flange

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	
SI								
1.	6	1.50	99	20.25	85	201	262	72
2.	6	1.50	90	22.16	84	210	252	74
3.	6	1.50	81	24.06	83	219	242	76
4.	6	1.50	72	25.96	82	228	232	78
5.								

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wP_f}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	32.11	107.4	972.2	.978	.979	1.047	1000
2.	32.11	108.11	902.2	.977	.979	1.046	950
3.	32.11	108.77	832.2	1.011	.979	1.045	900
4.	32.11	109.44	762.2	.977	.979	1.044	850
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 96.781 cf/bbl. Specific Gravity Separator Gas .60

Gravity of Liquid Hydrocarbons 57.6 deg. Specific Gravity Flowing Fluid .678

F_c Measured (1-e^{-s}) P_c 2465.2 P_c² 7103.3

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.	2575.2					627.2	616.3		.62
2.	2485.2					607.7	1107.6		.60
3.	2395.2					589.2	1608.9		.59
4.	2305.2					570.7	2110.2		.58
5.									

Absolute Potential: 23,000 MCFPD; n 0.77

COMPANY Gulf Oil Corporation

ADDRESS Box 1207, Hobbs, N.M.

AGENT and TITLE J. D. Smith

WITNESSED _____

COMPANY _____

REMARKS

Bottom hole pressure 3458 psig on 12-18-56. Gradient indicated no fluid.

JTZ

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} = 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 .