

HOBBS OFFICE OCC
MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Eumont Formation Queen Date 1957 FEB 11 AM Count 55 Lea
Initial _____ Annual _____ Special X Date of Test 6/17/56
Company Sun Oil Company Lease J. L. Barr Well No. 2
Unit L Sec. 24 Twp. 195 Rge. 36 E Purchaser Pennian Basin Pipeline Co.
Casing 5 1/2 Wt. 14# I.D. 5.012" Set at 3800 Perf. 3624' To 3784'
Tubing 2 3/8 Wt. 4.7# I.D. 1.995 Set at 3593 Perf. Open end To _____
Gas Pay: From 3594 To 3784 L 3593 xG 0.67 -GL 2436 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: 3-30-54 Packer 3557 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps _____ Pipe _____

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						991.7				72 1/4
1.	4"	2.00"	451.4	8.0	75	821.3				24 1/2
2.	4"	2.00"	457.9	13.6	69	821.2				24
3.	4"	2.00"	456.7	21.3	70	732.9				23 3/4
4.	4"	2.00"	463.1	29.4	75	614.3				23 1/2
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.	29.92	60.97	464.6	0.959	0.923	1.042	1760
2.	29.92	80.04	471.1	0.995	0.933	1.046	2333
3.	29.92	100.0	469.9	0.9905	0.9393	1.044	2906
4.	29.92	118.3	476.3	0.9952	0.9393	1.048	3468
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) 0.194

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1003.9 P_c² 1007.8

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.	894.5	800.1	17.49	305.90	47.11	847.2	207.7	92.3	.91
2.	834.4	696.2	23.18	537.31	82.75	778.9	311.6	88.5	.88
3.	746.1	556.7	28.87	833.48	128.36	681.1	451.1	87.0	.82
4.	627.5	393.8	34.46	1187.49	182.87	576.7	614.0	759.4	.75
5.									

Absolute Potential: 5920 MCFPD; n .63
COMPANY Sun Oil Company
ADDRESS Box 272 Oressa, Texas
AGENT and TITLE Ronald R. Lawrence - Engineer
WITNESSED _____
COMPANY _____

REMARKS

ELVIS A. UTZ
GAS ENGINEER

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 .