

NEW MEXICO OIL CONSERVATION COMMISSION

SEP 3 10 36 AM '65

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool B. Inebry Gas Formation B. Inebry County Lee
Initial X Annual _____ Special _____ Date of Test 8/9/65
Company Shell Oil Company Lease Grissell Well No. 6
Unit I Sec. 8 Twp. 22-S Rge. 37-E Purchaser None
Casing 5 1/2 Wt. 17.0 I.D. 4.892 Set at 6536 Perf. 5388' To 5908'
Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 6290 Perf. O.E. To _____
Gas Pay: From 5388' To 5908' L 5388' xG Min .705 -GL 3799 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G.O. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 8/9/65 Packer 6280 Reservoir Temp. _____
(4 pt. test date)

OBSERVED DATA

Tested Through (~~XXXXX~~) (~~XXXXX~~) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(XXXXX) (Line) Size	(XXXXX) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								1605		66
1.	2	1.250	390	5.0	56			1490		1
2.	2	1.250	390	18.0	54			1265		1
3.	2	1.250	405	38.0	54			952		1
4.	2	1.250	405	52.0	62			685		1
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.	10.48 ✓	44.90 ✓	403.2	1.0039 ✓	.9325 ✓	1.050 ✓	462.5 ✓
2.	10.48	85.20	403.2	1.0058 ✓	.9325	1.052 ✓	881.1 ✓
3.	10.48	126.1	418.2	1.0058 ✓	.9325	1.053 ✓	1,306 ✓
4.	10.48	147.5	418.2	.9981 ✓	.9325	1.049 ✓	1,510 ✓ 1509
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 168,818 cf/bbl.
Gravity of Liquid Hydrocarbons 66 API deg.
F_c 1.812 ✓ (1-e^{-s}) .230 ✓

Specific Gravity Separator Gas 690
Specific Gravity Flowing Fluid .7165
P_c 1618.2 P_c 2618.6

No.	XXXX 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.	1503.2	2259.6	.838 ✓	.702 ✓	.161 ✓	2259.8 ✓	358.8 ✓	1503.3	92.9
2.	1278.2	1633.8	1.597 ✓	2.550 ✓	.587 ✓	1634.4 ✓	986.2 ✓	1278.4 ✓	79.0
3.	965.2	931.6	2.366 ✓	5.598 ✓	1.288 ✓	932.9 ✓	1683.7 ✓	965.9 ✓	59.7
4.	698.2	487.5	2.736 ✓	7.486 ✓	1.722 ✓	489.2 ✓	2129.4 ✓	699.4 ✓	43.2
5.									

Absolute Potential: 1,725 MCFPD; n .662

COMPANY Shell Oil Company
ADDRESS Western Production Division, P. O. Box 1509, Midland, Texas
AGENT and TITLE A. L. Ellerd, Gas Tester
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 .