

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Tubb Formation Tubb County Lea
Initial X Annual _____ Special _____ Date of Test Dec. 10, 1964
Company Southern Petroleum Exploration, Inc. Lease Downes "D" Well No. 3
Unit N Sec. 32 Twp. 21 S Rge. 37E Purchaser None
Casing 7 Wt. 23# I.D. 6.366 Set at 6555 Perf. 6145 To 6226
Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 6132 Perf. Open end To _____
Gas Pay: From 6145 To 6226 L 6132 xG .680 -GL 4170 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Re- _____ Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 10/2/64 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (~~Choke~~) (~~Master~~)

Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Choke) Size	(Choke) (Choke) Size	Press. psig	Diff. Wellhead Choke $\frac{h_w}{h_c}$	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1619		1625		24
1.	2	1/2	36.0	11/64	24	1430		1520		1
2.	2	1/2	60.0	12/64	30	1355		1432		1
3.	2	5/8	61.5	16/64	37	1017		1280		1
4.	2	3/4	67.0	19/64	39	875		1041		1
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.	5.5233		49.2	1.0365	.9393	1.000	265
2.	5.5233		73.2	1.0302	.9393	1.000	391
3.	8.3555		74.7	1.0229	.9393	1.000	599
4.	12.2023		80.2	1.0208	.9393	1.000	938
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio * _____ cf/bbl.
Gravity of Liquid Hydrocarbons * _____ deg.
 P_c Measured (1-e^{-s}) _____

Specific Gravity Separator Gas .680
Specific Gravity Flowing Fluid _____
 P_c 1638.2 P_c^2 2683.7

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.	1533.2					2350.7	333.0		.94
2.	1445.2					2088.6	595.1		.88
3.	1293.2					1672.4	1011.3		.79
4.	1054.2					1111.3	1572.4		.64
5.									

Absolute Potential: 1460 MCFPD; n .89
COMPANY Southern Petroleum Exploration, Inc.
ADDRESS c/o Oil Reports & Gas Services, Box 763, Hobbs, New Mexico
AGENT AND TITLE N. R. Smith Independent Gas Tester
WITNESSED J. J. Dyer
COMPANY Southern Petroleum Exploration, Inc.

REMARKS

*Tested into low pressure separator. Produced emulsion & water during test.

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 .

Southern Petroleum Exploration, Inc.
 Downes D No.3 Tubb Gas Pool
 N 32-21S-37E Lea Co.
 Dec. 10, 1964
 A.P. 1460 MCF

