NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE O. C. C.

DEC 12 AM '63

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation San Andres County Roosevelt

Initial X Annual Special Date of Test 11-20-63

Company Jack L. Mc Clellan Lease Mc Clellan Federal Well No. 1

Unit A Sec. 28 Twp. 7 S Rge. 35 E Purchaser Nearburg & Ingram

Casing 5 1/2" Wt. 15.0 I.D. 4.976 Set at 4355' Perf. 4141' To 4145'

Tubing 2" Wt. 4.7 I.D. 1.995 Set at 4050' Perf. - To -

Gas Pay: From 4141' To 4145' L 4050 xG 0.7769 -GL 3146 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

Date of Completion: 11-22-63 Packer 4050' Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 100°F

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter) L-10 Type Taps Flange

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. DWT psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						1065				72.0
1.	3	2.000	6.6	5.6	65	166	65	Pkr	-	22.0
2.	3	2.000	6.5	4.8	55	421	55	-	-	20.0
3.	3	2.000	6.3	3.4	55	692	55	-	-	6.0
4.	3	2.000	5.9	0.5	60	927	60	-	-	18.0
5.										

FLOW CALCULATIONS

No.	Coefficient M = .7071 (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.	27.52	36.96	-	.9952	.8788	-	629.0
2.	27.52	31.20	-	1.0048	.8788	-	536.0
3.	27.52	27.42	-	1.0048	.8788	-	368.1
4.	27.52	2.95	-	1.0000	.8788	-	50.4
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl. Specific Gravity Separator Gas .7769

Gravity of Liquid Hydrocarbons - deg. Specific Gravity Flowing Fluid -

P_c 9.936 $(1-e^{-s})$ .195 BHP P_c 1222.2 P_c^2 1493.8

Bottom Hole Pressure @ 4143' (+98)* Used For Pressure Calculations

No.	P_w BHP ~~PT~~ (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	379.2	-	-	-	-	143.8	1350.0	-	-
2.	532.2	-	-	-	-	283.2	1210.6	-	-
3.	825.2	-	-	-	-	681.0	812.8	-	-
4.	1145.2	-	-	-	-	1311.5	182.3	-	-
5.									

Absolute Potential: 700.0 MCFPD; n 1.25

COMPANY Jack L. Mc Clellan

ADDRESS Petroleum Bldg., Roswell, New Mexico

AGENT and TITLE Coleman Petroleum Engineering Company Joe A. Coleman

WITNESSED -

COMPANY -

REMARKS

* Mid Point Of Casing Perforations

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.

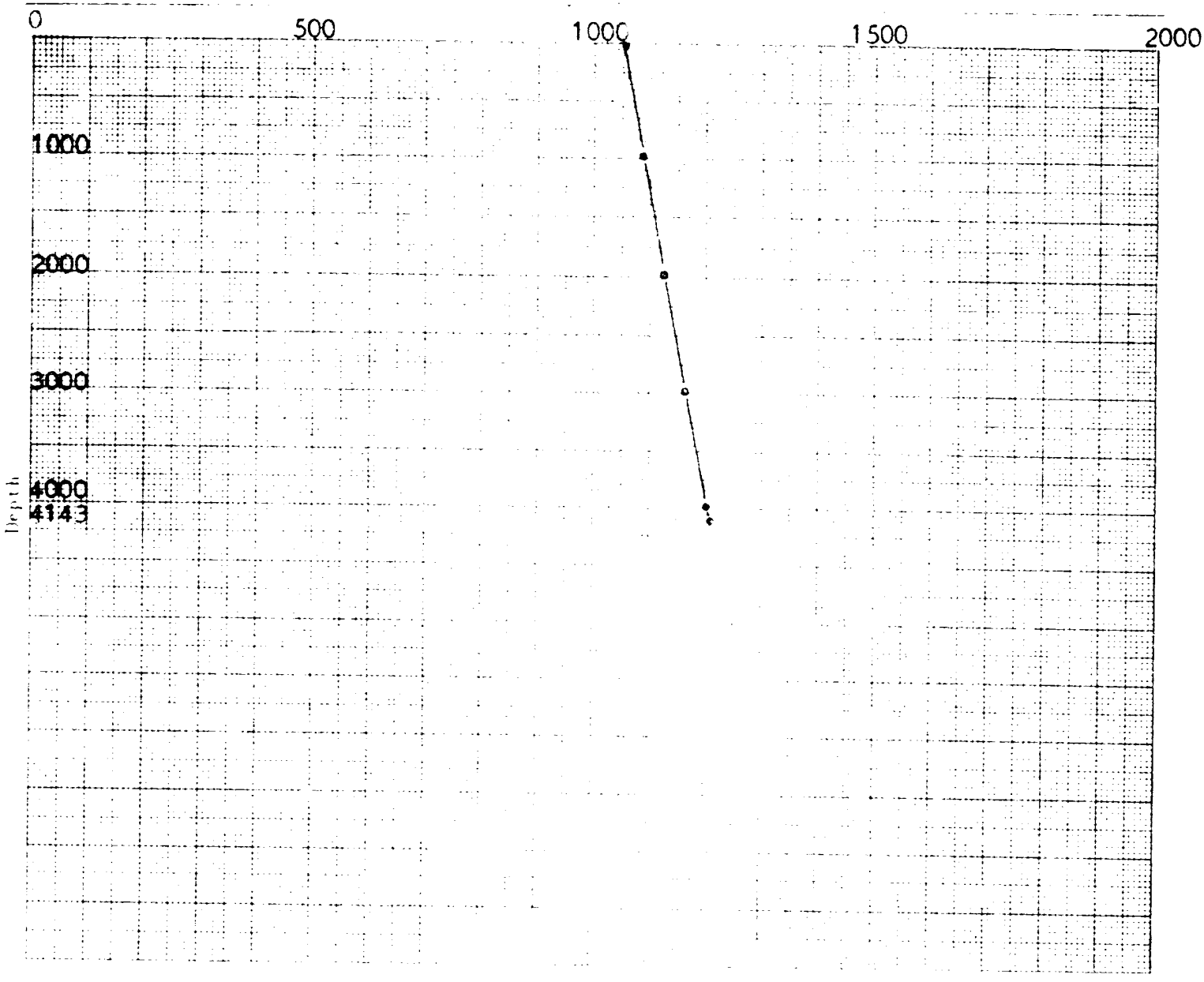
Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t.

OPERATOR JACK L. Mc CLELLAN

FIELD	UNDESIGNATED	SAN ANDRES	
LEASE	McCLELLAN FEDERAL	No. 1	
COUNTY	ROOSEVELT	NEW MEXICO	
DATE	11-18-63	11:00 AM	
STATUS	SHUT IN	4143'	
TIME	72.0 HRS	INITIAL	
TUBE	1053 DWT	-	
CSG	PKR	-	
ELEV	4241' DF	NONE	
DATUM	(+98')**	NONE	
TEMP	100°F	STINSON	
CAL NO	4090N	1	

0	1053	
1000	1088	.035
2000	1125	.037
3000	1162	.037
4000	1203	.041
4143 (+98)	1209	.042

** MID POINT OF CASING PERFORATIONS



COMPANY Jack A. Mc Clellan

WELL Mc Clellan Federal, NO. 1

LOCATION A-26-7s-35e

COUNTY Roosevelt

DATE 11-22-63

$P_c^2 - P_w^2$ (THSNDS.)

ABSOLUTE POTENTIAL

$Q_2 = 430,406 = 2.63347$

$Q_1 = 24,406 = 1.38021$

Slope $n = 1.25326$

Q_1

Q_2

comp

LOGARITHMIC SCALE CROSS SECTION
NO 5X4 5 INCH BASE
THE FREDERICK POST CO
CHICAGO