

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool North Justis Formation Alibon County Lea

Initial X Annual _____ Special _____ Date of Test 5-1-65

Company Humble Oil & Refining Company Lease State "A" Well No. No.2

Unit I Sec. 2 Twp. 25 N Rge. 37 E Purchaser None

Casing 2 7/8 Wt. 6.5 I.D. 2.441 Set at 7480' Perf. 5377' To 5553'

Tubing None Wt. - I.D. - Set at - Perf. - To -

Gas Pay: From 5377' To 5553' L 5377 xG Mix. 8563 -GL 4604 Bar. Press. 13.2

Producing Thru: Casing X Tubing - Type Well G.O. Dual

Date of Completion: 5-1-65 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 100° F

OBSERVED DATA

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

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						1181		-	-	89.0
1.	3"	20/64 2"	300	11.0	69	558	86	-	-	11.0
2.	3"	18/64 2"	300	7.8	70	721	83	-	-	1.0
3.	3"	16/64 2"	300	6.0	67	772	76	-	-	1.0
4.	3"	14/64 2"	300	4.0	60	877	70	-	-	2.0
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.	27.52	58.70	313.2	.9915	.9258	1.036	1.536
2.	27.52	49.43	313.2	.9905	.9258	1.034	1.250
3.	27.52	43.34	313.2	.9933	.9258	1.036	1.136
4.	27.52	35.39	313.2	1.0000	.9258	1.037	.935
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 234.531 cf/bbl.

Gravity of Liquid Hydrocarbons 41.2 deg.

P_c 5.866 (1-e^{-S}) 0.272

Specific Gravity Separator Gas .7000

Specific Gravity Flowing Fluid .8563

P_c 1424.2 P_c^2 2028.3

BHr = (-2331) * 5465' Used For Pressure Calculations

No.	P _w BHr 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.	654.2	-	-	-	-	428.0	1600.3	-	45.9
2.	859.2	-	-	-	-	738.2	1290.1	-	60.3
3.	945.2	-	-	-	-	895.3	1133.0	-	66.4
4.	1057.2	-	-	-	-	1117.7	910.6	-	74.2
5.									

Absolute Potential: 1.950 MCFPD; n .93

COMPANY Humble Oil & Refining Company

ADDRESS P. O. Box 2100, Hobbs, New Mexico

AGENT and TITLE COLEMAN PETROLEUM ENGINEERING COMPANY

WITNESSED Ken Mc Leroy

COMPANY Sivalls Tanks Incorporated

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 .



COLEMAN PETROLEUM ENGINEERING COMPANY

PHONE EXPRESS 33413
611 GRIMES
P. O. BOX 1424
HOBBS NEW MEXICO

BOTTOM HOLE PRESSURE RECORD

OPERATOR HUMBLE OIL & REFINING COMPANY
FIELD N. JUSTIS FORMATION BLINEBRY
LEASE STATE "BM" WELL No. 2
COUNTY LEA STATE NEW MEXICO
DATE 5-1-55 TIME 6:00 AM
STATUS SHUT IN Test depth 5465'
Shut in 89.0 HRS Last test date INITIAL
Pressure 1181 DWT BHP Test test -
Comp. Pres. DUAL BHP change -
Flow 3134' DF Fluid top NONE
Datum (-2331)** Water top NONE
Temp. at 100' F Run by COLEMAN
C.I. No. A2419N Chart No. 1

Depth	Pressure	Gradient
0	1181	-
1000	1220	.039
2000	1262	.042
3000	1305	.043
4000	1348	.043
5000	1391	.043
5465(-2331)	1411	.043

