

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Otero Formation Pictured Cliff County Rio Arriba
Initial x Annual _____ Special _____ Date of Test 6-13-60
Company PURCO PETROLEUM CORPORATION Lease Otero Federal Well No. 4
Unit a Sec. 23 Twp. 24N Rge. 6W Purchaser El Paso Natural Gas Co
Casing 7 Wt. 20 I.D. _____ Set at 2246 Perf. 2099 To 2161
Tubing 1.9 Wt. 2.75 I.D. _____ Set at 1574-2287 Perf. 2187 To 2195
Gas Pay: From 2099 To 2161 L 2195 xG 0.640 -GL 1360 Bar.Press. 19
Producing Thru: Casing _____ Tubing x Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 6-6-60 Packer _____ Reservoir Temp. 99

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps _____

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						654		654		
1.	2"	3/4	25		60	25		245		3
2.										
3.										
4.										
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.	12.365		37	1.000	1.0077	1.007	454
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

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

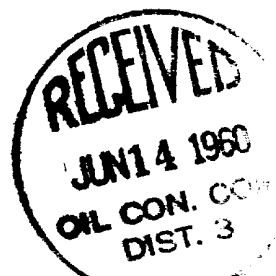
Specific Gravity Separator Gas 0.640
Specific Gravity Flowing Fluid _____
P_c 666 P_c 443,556

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.						66,049	377,507		
2.									
3.									
4.									
5.									

Absolute Potential: 532 MCFPD; n 0.85

COMPANY PURCO PETROLEUM CORP.
ADDRESS 108 West Chuska, Aztec, New Mexico
AGENT and TITLE B. H. Wayshoff, Jr., Prod. Eng.
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 .

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U.S. DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION
WASHINGTON, D.C. 20535

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Y 1739800 : 17398100 :

1. NAME _____
 2. ADDRESS _____
 3. CITY _____
 4. STATE _____
 5. ZIP _____
 6. DATE _____
 7. TIME _____
 8. PLACE _____
 9. REASON _____
 10. OTHER _____

which provide for the collection and distribution of funds for the purpose of providing for the maintenance and improvement of the public health of the community.

2019-2020 2020-2021 2021-2022 2022-2023 2023-2024

59. $\frac{1}{2} \ln 2$

1. The first of these is the fact that the total number of cases of the disease is not known.
 2. The second is the fact that the total number of cases of the disease is not known.
 3. The third is the fact that the total number of cases of the disease is not known.

IMPORTANT WATER SAVING

.....	of		of
.....	of		of

CASING RECORD

[illegible]

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of drilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked," or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

HISTORY OF OIL OR GAS WELL

U. S. GOVERNMENT PRINTING OFFICE

[illegible]

EMPTINESS

Driller	Driller	Driller
Driller	Driller	Driller

FORMATION RECORD

COMPARISON	1971-1972	1972-1973	1973-1974
1. Total number of cases	1,000	1,000	1,000
2. Number of cases with positive results	500	500	500
3. Number of cases with negative results	500	500	500
4. Number of cases with inconclusive results	0	0	0

perforated w/2 shaped charges per foot from 2099 to 2115, 2126 to 2143, and 2155 to 2161.
w/2 bullets per foot from 2104 to 2115 and 2126 to 2143
fractured w/40,000 gal water and 40,000 lb sand; breakdown 1800#, TP 1200-1300#, I.R. 59.6 BM

FORMATION RECORD—Continued