OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

COPY

March 3, 1960

Mr. George Verity
152 Petroleum Center Building
Farmington, New Mexico

Dear Mr. Verity:

On behalf of your client, Petro-Atlas, Inc., we enclose two copies of Order R-1619 in Case 1893 issued by the Oil Conservation Commission this date.

Very truly yours,

A. L. PORTER, Jr.,
Secretary-Director

ir/

Enclosures: (2)

cc -
Hobbs +
Aztec

fld Aug 58

COPY

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Undesignated** Formation **Pictured Cliffs** County **San Juan**

Initial **X** Annual _____ Special _____ Date of Test **8-21-58**

Company **PETRO-ATLAS, INC.** Lease **AZTEC** Well No. **1**

Unit **F** Sec. **8** Twp. **27N** Rge. **9W** Purchaser **El Paso Natural Gas**

Casing **5-1/2"** Wt. **15.5#** I.D. _____ Set at **2516'** Perf. **2412** To **2441**

Tubing **1-1/4"** Wt. **2.4#** I.D. _____ Set at **2409'** Perf. **2406** To **2408**

Gas Pay: From **2412** To **2464** L _____ xG **0.84** -GL _____ Bar.Press. **12**

Producing Thru: Casing **X** Tubing _____ Type Well **Single Gas**
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: **8-14-58** Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~ Type Taps _____

	Flow Data					Tubing Data		Casing Data		
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI						618		618		
1.		3/4"	178		57	187		178	57	3 hours
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.	12.2		190	1.0029	0.8452	1.014	1,992
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas _____
Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____
P_c _____ $(1-e^{-s})$ _____ P_c **630** P_c^2 **396,900**

No.	P_w P_t (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.						36,100	360,800		
2.									
3.									
4.									
5.									

Absolute Potential: **2,164** MCFPD; n **0.85**

COMPANY **PETRO-ATLAS, INC.**

ADDRESS **729½ E. Main St., Farmington, New Mexico**

AGENT and TITLE **N. B. GOVE, ENGINEER**

WITNESSED _____

COMPANY _____

REMARKS

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 1
CASE 1893

App 1
1893

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.

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 2
CASE 1893

GOVERNOR
JOHN BURROUGHS
CHAIRMAN

State of New Mexico
Oil Conservation Commission

[redacted]
MURRAY E. MORGAN
[redacted]

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY DIRECTOR

1000 RIO BRAZOS ROAD
AZTEC

August 25, 1959

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 1893

Petro-Atlas, Incorporated
729 East Main
Farmington, New Mexico

Gentlemen:

In checking our records we find that your #1 Aztec Well located in Unit F, Section 8-27N-9W, South Blanco Pictured Cliffs Pool, which was connected to the pipeline November 25, 1958, has never had an initial deliverability test filed. As this test is long over-due we are notifying the transporter, El Paso Natural Gas Company to shut this well and leave it shut in until released by this office.

We are enclosing a copy of Order R-333-C & D, the San Juan Basin gas well testing order. You will note that all prorated wells should have initial deliverability tests filed within 45 days in order to avoid losing allowable.

Yours very truly

Emery C. Arnold
Emery C. Arnold
Supervisor, District #3

ECA:ks
cc: El Paso Nat. Gas Co.
~~Farmington, N.M.~~

Oil Conservation Commission
Santa Fe, N.M.

Sept 23 - Oct 7
Flare Oct 7 - 15
Shut 15 - 22

Blanke Rathcliff
Bolo Kendrick

Form C-122-A
Revised April 20, 1955

Initial Deliverability Test

COPY

NEW MEXICO OIL CONSERVATION COMMISSION
GAS WELL TEST DATA SHEET - - SAN JUAN BASIN

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA EXCEPT BARKER DOME STORAGE AREA)

Pool **South Blanco** Formation **Pictured Cliffs** County **San Juan**

Purchasing Pipeline **El Paso Natural Gas Company** Date Test Filed **9-11-59**

Operator **PETRO-ATLAS, INC.** Lease **AZTEC** Well No. **1**

Unit **F** Sec. **8** Twp. **27N** Rge. **9W** Pay Zone: From **2406** To **2441**

Casing: OD **5-1/2"** WT. **15.50#** Set At **2516'** Tubing: OD **1-1/4"** WT. **2.4** T. Perf. **2406**

Produced Through: Casing **X** Tubing ____ Gas Gravity: Measured ____ Estimated ____

Date of Flow Test: From **12-14-58** To **12-23-58** Date S.I.P. Measured **8-21-58**

Meter Run Size **4.00** Orifice Size **1.25** Type Chart **Sq. Root** Type Taps **Flange**

OBSERVED DATA

Flowing casing pressure (Dwt)	____ psig + 12 =	____	psia	(a)
Flowing tubing pressure (Dwt)	____ psig + 12 =	____	psia	(b)
Flowing meter pressure (Dwt)	____ psig + 12 =	____	psia	(c)
Flowing meter pressure (meter reading when Dwt. measurement taken:				
Normal chart reading	____ psig + 12 =	____	psia	(d)
Square root chart reading (____)^2 x spring constant	=	____	psia	(d)
Meter error (c) - (d) or (d) - (c)	±	= ____	psi	(e)
Friction loss, Flowing column to meter:				
(b) - (c) Flow through tubing: (a) - (c) Flow through casing		= ____	psi	(f)
Seven day average static meter pressure (from meter chart):				
Normal chart average reading	____ psig + 12 =	____	psia	(g)
Square root chart average reading (7.00)^2 x sp. const. 500	=	245	psia	(g)
Corrected seven day avge. meter press. (p_f) (g) + (e)	=	245	psia	(h)
P_t = (h) + (f)	=	245	psia	(i)
Wellhead casing shut-in pressure (Dwt) 618	psig + 12 =	630	psia	(j)
Wellhead tubing shut-in pressure (Dwt) 618	psig + 12 =	630	psia	(k)
P_c = (j) or (k) whichever well flowed through	=	630	psia	(l)
Flowing Temp. (Meter Run) 51 °F + 460	=	511	°Abs	(m)
P_d = ½ P_c = ½ (l)	=	315	psia	(n)

FLOW RATE CALCULATION

$$Q = \underset{\text{(integrated)}}{\_\_\_\_} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{\_\_\_\_}{\_\_\_\_} = \_\_\_\_ \right)^{*} = \_\_\_\_ \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \left[\left(\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right) = \frac{297,675}{336,875} \right]^{n} = .9002 = 321.3 \text{ MCF/da.}$$

SUMMARY

P_c =	630	psia
Q =	357	Mcf/day
P_w =	245	psia
P_d =	315	psia
D =	321	Mcf/day

Company **PETRO-ATLAS, INC.**
By **Lonnie Kramer**
Title **Superintendent**
Witnessed by ____
Company ____

* This is date of completion test.
* Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	$(1-e^{-S})$	$(F_cQ)2$	$\frac{(FcQ)^2}{R^2}$ $(1-e^{-S})$	P_t^2 (Column i)	$P_t^2 + R^2$	P_w
			Neglible			

BEFORE THE OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 3
CASE 1893

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 1893

El Paso Natural Gas Company

El Paso, Texas

September 8, 1959

Mr. L. H. Kramer
Petro-Atlas Corporation
729 East Main Street
Farmington, New Mexico

Dear Mr. Kramer:

Listed below is the test information as requested in your telephone call of September 4, 1959:

Well Name	Ave. Daily Volume	Ave. Static	Temp.	Gravity	Spring Size	Orifice Size
Aztec #1	357	7.00	51	.627	500#	1.250

Yours truly,

Measurement Department

Venard Orr, Chief Clerk,
Gas Purchase Section

VO:nc

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 4
CASE 1893

El Paso Natural Gas Company

El Paso, Texas

May 3, 1960

Petro-Atlas, Inc.
Attention: Mr. N. B. Gove
2000 National Bank of Tulsa Building
Tulsa 3, Oklahoma

Gentlemen:

Enclosed are meter charts for stations as indicated below by Meter Code Numbers for the months of November and December, 1958.

74 761 01

These charts are sent at your request for monitoring purposes. Please return them to this office when they have served your purpose.

Yours truly,

Measurement Department

A. M. Skinfill, Jr., Supervisor
Statistics Section

AMSJr:nm