

AZTEC OIL & GAS Company

KOCH-STATE No. 1  
Section 30-37N-9W  
San Juan County, N.M.

Total Depth 4523'

Coring to 3 1/2" @ 163'

7 9/16" @ 3330'

5 1/2" @ 2262' to 4523'

2 3/8" @ 4445'

1" @ 2188'

Bottom 2 1/2" @ 2236'

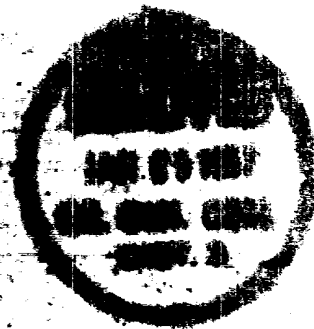
Intervals:

Cliff 2141' - 2220'

Cliff Hors 3808' - 3830'

3854' - 3890'

Point Lookout 4390' - 4460'



## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Aztec Formation Pictured Cliffs County San Juan  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 1-22-57  
Company Aztec Oil & Gas Company Lease Koch-State Well No. 1  
Unit G Sec. 36 Twp. 29-N Rge. 9-W Purchaser - -  
Casing 7 5/8" Wt. 26.40# I.D. \_\_\_\_\_ Set at 2330' Perf. 2147 To 2220  
Tubing 1" Wt. 1.7# I.D. \_\_\_\_\_ Set at 2188' Perf. 2168 To 2179  
Gas Pay: From 2147 To 2220 L \_\_\_\_\_ xG \_\_\_\_\_ -GL \_\_\_\_\_ Bar.Press. \_\_\_\_\_  
Producing Thru: Casing X Tubing \_\_\_\_\_ Type Well G. G. Dual  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 1-13-57 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) 9 day shut-in 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. $^{\circ}\text{F.}$	Press. psig	Temp. $^{\circ}\text{F.}$	Press. psig	Temp. $^{\circ}\text{F.}$	
SI						824	60	823	60	
1.		3/4"				168	60	167	60	3 hour
2.										
3.										
4.										
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor $F_t$	Gravity Factor $F_g$	Compress. Factor $F_{pv}$	Rate of Flow Q-MCFPD @ 15.025 psia
1.	12.3650		179	1.00	0.961	1.020	2169
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

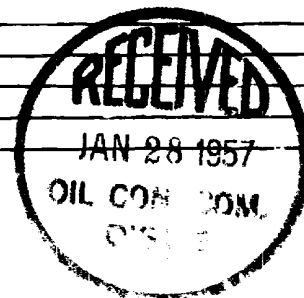
Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
 $F_c$  \_\_\_\_\_  $(1-e^{-s})$

Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
 $P_c$  835  $P_c^2$  697225

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.	180					32400	664825		
2.									
3.									
4.									
5.									

Absolute Potential: 2261 MCFPD; n .85  
COMPANY AZTEC OIL & GAS COMPANY  
ADDRESS P O Box 786, Farmington, New Mexico  
AGENT and TITLE ORIGINAL SIGNED BY BILL R. HASTING, Production Engineer  
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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