

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122

RECEIVED

c/sr
File

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11/28/82		JAN 20 1983	
Company Yates Petroleum Corporation						Connection Transwestern Pipeline Company			
Pool Pecos Slope - Abo Pool						Formation Abo		Unit	
Completion Date 6/5/82		Total Depth 4250.0'		Plug Back TD 4105.0'		Elevation 3693.3'		Farm or Lease Name Cottonwood RchMK St	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set Rt 4160.0'	Perforations: From 3682.0' To 3846.0'		Well No. 4			
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set Rt 3655.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge 0 36 6S 25E			
Type Well Single						Packer Set Rt 3655.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 102 @ 3655'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 3655.0'	H 3655.0'	Gg .635	%CO2 .11	%N2 4.16	%H2S 0.00	Prover 0.000"	Meter Run 2.000"	Taps Flange	

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Prover Orifice Size X Size	Press. psig	Diff. hw	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	
SI	0.000 X 0.000	0	0.0	72	1011	0	0	0	0 hrs.
1.	2.067 X 1.375	200	40.0	70	760	62	0	0	24 hrs.
2.	2.067 X 1.375	190	58.9	70	705	62	0	0	24 hrs.
3.	2.067 X 1.375	185	77.8	72	630	62	0	0	24 hrs.
4.	2.067 X 1.375	180	98.8	72	546	62	0	0	24 hrs.
5.	0.000 X 0.000	0	0.0	0	0	0	0	0	0 hrs.

RATE OF FLOW CALCULATIONS							
NO	Coefficient (24 HOUR)	1/hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	10.204	92.35	213.20	.991	1.255	1.016	1190
2.	10.204	109.40	203.20	.991	1.255	1.015	1408
3.	10.204	124.18	198.20	.989	1.255	1.014	1595
4.	10.204	138.16	193.20	.989	1.255	1.014	1773
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Pr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio Dry	Mcf/bbl.
1.	.32	530	1.49	.969	A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.
2.	.31	530	1.49	.971	Specific Gravity Separator Gas	.635
3.	.30	532	1.50	.972	Specific Gravity Flowing Fluid	xxxxxx .635
4.	.29	532	1.50	.973	Critical Pressure	664.3 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	355.7°R

Pc 1024.2 Pc2 1049.0				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)
1.	597.8	784.2	615.0	434.0
2.	515.8	734.9	540.1	508.9
3.	413.7	667.2	445.2	603.8
4.	312.7	593.4	352.1	696.8
5.	0.0	0.0	0.0	0.0

$$\frac{Pc^2}{Pc^2 - Pw^2} = 1.5044 \quad (2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.3491$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 2392 \text{ Mcfd}$$

Absolute Open Flow	2392 Mcfd @ 15.025	Angle of Slope, 0	36	Slope, n .733
Remarks:				

Approved By:	Conducted By: David Weaver	Calculated By: Andie Alderson	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 1/20/83

COMPANY Yates Petroleum Corporation LEASE Cottonwood RichMK St WELL NO. 4

LOCATION: Unit 0 Section 36 Township 6S Range 25E

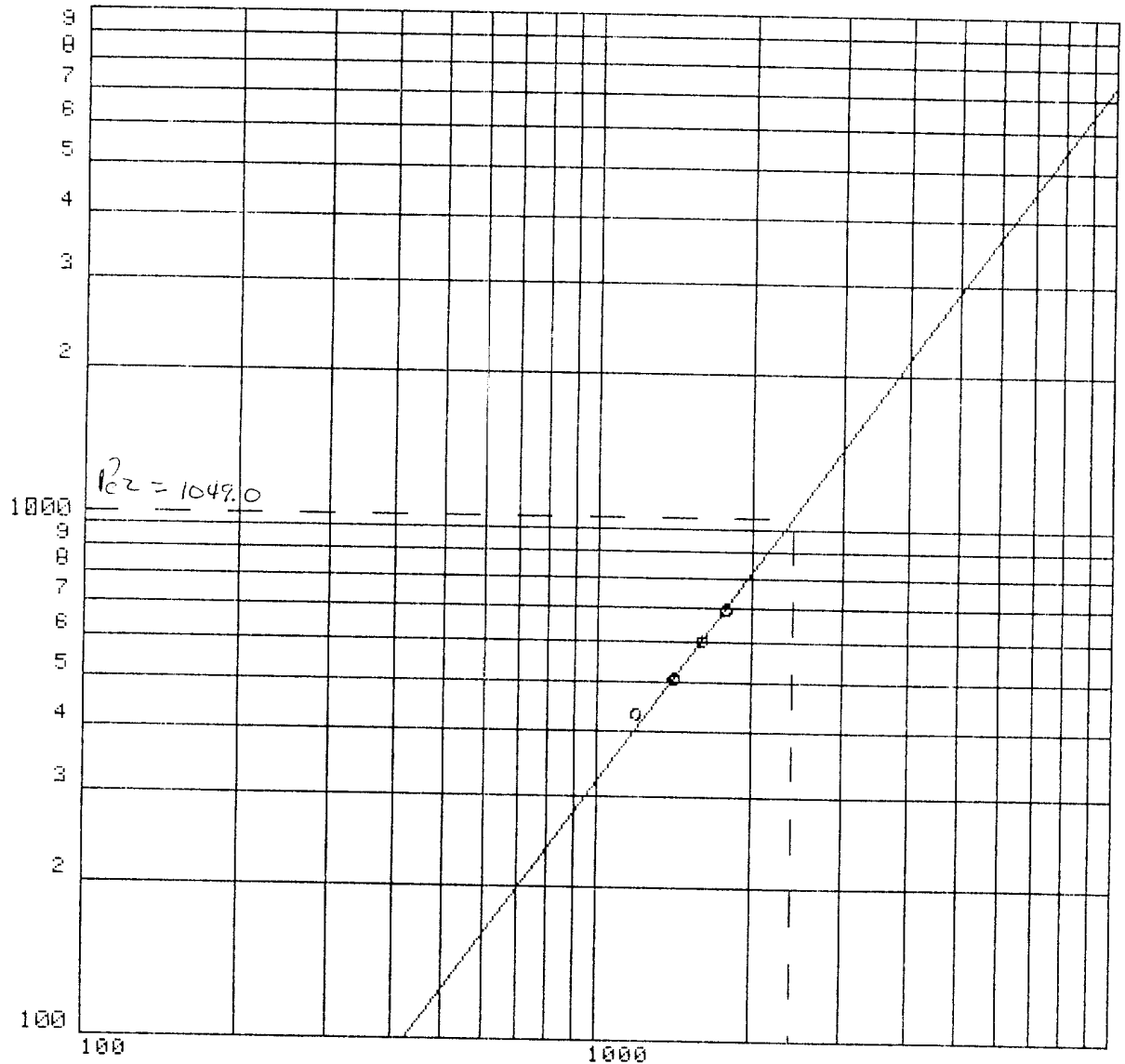
L 3655.0 H 3655.0 L/H 1.000 G .635 %CO₂ .11 %N₂ 4.16 %H₂S 0.00

d 1.995 Fr .017777 GH 2320.9 Pcr 664.3 Tcr 355.7

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	1.190	1.408	1.595	1.773	0.000
2 Tw(W.H.*R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.*R)	562.0	562.0	562.0	562.0	0.0
4 T=(Tw+Ts)/2	542.0	542.0	542.0	542.0	0.0
5 Z(Est.)	.889	.896	.906	.917	0.000
6 TZ	482.0	485.8	491.0	497.0	0.0
7 GH/TZ	4.815	4.778	4.726	4.670	0.000
8 e ^s (Table XIV)	1.198	1.196	1.194	1.191	0.000
9 1-e ^{-s} (Table XIV)	.165	.164	.162	.161	0.000
10 Pt	773.2	718.2	643.2	559.2	0.0
11 Pt ² /1000	597.8	515.8	413.7	312.7	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.569	8.636	8.731	8.835	0.000
14 FcQm	10.196	12.162	13.922	15.668	0.000
15 L/H(FcQm) ²	103.949	147.926	193.833	245.488	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	17.172	24.263	31.477	39.436	0.000
17 Pw ² =Pt ² +Fw	615.0	540.1	445.2	352.1	0.0
18 Ps ² =e ^s Pw ²	736.7	646.0	531.5	419.5	0.0
19 Ps	858.3	803.8	729.0	647.7	0.0
20 P=(Pt+Ps)/2	815.8	761.0	686.1	603.5	0.0
21 Pr=(P/Pcr)	1.23	1.15	1.03	.91	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.889	.896	.906	.917	0.000

Company	Yates Petroleum Corporation
Well	Cottonwood RichMK St. No. 4
Location	O, 36-6S-25E
County	Chaves
Date	1/20/83

$P_0^2 - P_w^2$, THOUSANDS



ROF= 2392

Q , Mcfd

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

RECEIVED

JUN 7 1982

O. C. D.
ARTESIA, OFFICEREQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Yates Petroleum Corporation ✓

207 South 4th St., Artesia, NM 88210

Reason(s) for filing (Check proper box)

New Well	☒	Change in Transporter of:	
Recompletion	☐	Oil	☐
Change in Ownership	☐	Casinghead Gas	☐
		Dry Gas	☐
		Condensate	☐

Other (Please explain)

Change of ownership give name
and address of previous owner

DESCRIPTION OF WELL AND LEASE

Well Name	Well No.	Pool Name, Including Formation	Kind of Lease	Lease No.
Cottonwood Ranch MK State	4	Pecos Slope Abo	State, Federal or Fee State	L-4283

Location

Unit Letter 0 ; 660 Feet From The South Line and 1980 Feet From The EastLine of Section 36 Township 6S Range 25E , NMPA, Chaves County

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil ☐ or Condensate ☒ Address (Give address to which approved copy of this form is to be sent)
Navajo Crude Oil Purchasing Co. Box 159, Artesia, NM 88210Name of Authorized Transporter of Casinghead Gas ☐ or Dry Gas ☒ Address (Give address to which approved copy of this form is to be sent)
Transwestern Pipeline Co. Box 2521, Houston, TX 77001

Well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
	0	36	6s	25e	Yes	<u>approx 6-8 wks</u> <u>11/22/82</u>

this production is commingled with that from any other lease or pool, give commingling order number:

COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas well	New Well	Workover	Deepen	Plug Back	Same Reservoir, Different Well
		X	X				
Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.				
5-9-82	6-5-82	4250'	4105'				
Elevations (DF, RAB, RT, CR, etc.)	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth				
3693.3' GR	Abo	3682'	3655'				
Perforations		Depth Casing Shoe					
	3682-3846'	4160'					

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
24"	20"	60'	
14-3/4"	10-3/4"	885'	700
7-7/8"	4-1/2"	4160'	350
	2-3/8"	3655'	

TEST DATA AND REQUEST FOR ALLOWABLE (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

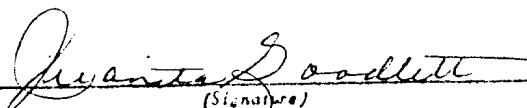
Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

AS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
456	3 hrs	-	-
Testing Method (prior, back pr.)	Tubing Pressure (shut-in)	Casing Pressure (shut-in)	Choke Size
Back Pressure	570	Packer	1/2"

CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.



Engineering Secretary

(Title)

6-7-82

(Date)

OIL CONSERVATION DIVISION

DEC 2 1982

APPROVED _____, 19____

BY _____ Original Signed By

Leslie A. Clements

TITLE _____ Supervisor District II

This form is to be filed in compliance with NMLA 100-1.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviated tests taken on the well in accordance with NMLA 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of ownership, well name or number, or transporter or other such change of conditions. Separate Form C-104 must be filed for each pool in multiple

NEW MEXICO OIL CONSERVATION DIVISION

P. O. DRAWER "DD"

ARTESIA, NEW MEXICO 88210

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DEC 1 1982

O. C. D.
ARTESIA, OFFICE

NOTICE OF GAS CONNECTION

DATE November 29, 1982

This is to notify the Oil Conservation Division that connection for the
purchase of gas from the Yates Petroleum Corp. ✓

Operator

Cottonwood Ranch "MK" State

Lease

Well #4-Unit Letter "O"

Well Unit

36-6S-25E, Chaves County

S.T.R.

Pecos Slope (Abo)

Pool

Transwestern
Name of purchaser

was made on

November 22, 1982

Transwestern Pipeline Company
Company

 H. N. Aicklen
Representative

Supervisor Gas Purchase Contract Administration
Title

cc: Operator
Oil Conservation Division - Santa Fe