

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

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 4-20-82		MAY - 6 1982	
Company CITIES SERVICE COMPANY ✓						TO AIR			
Pool Burton Flats North Wolfcamp						Wolfcamp		Unit ARTESIA, OFFICE	
Completion Date 4-20-82		Total Depth 11,730'		Perforations: 10900 10,920'		Elevation 3236.4		Farm or Lease Name Government "AD" Com	
Csg. Size 5 1/2"	Wt. 17#	d 4.892	Set At	Perforations: From 9027 To 9059		Well No. 1			
Tbg. Size 2 7/8"	Wt. 6.5#	d 2.441	Set At 8900	Perforations: From OPENENDED		Unit C 21 21S 27E		Sec. Twp. Rge.	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple						Packer Set At 8917		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 164 @ 9043		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State New Mexico	
L 9043	H 9043	Gg .735	% CO ₂ 1.76	% N ₂ 5.87	% H ₂ S	Prover	Meter Run 4"	Taps Flange	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							1582		PKR.	CHOKE	24 HRS.
1.	4	x	1.00	500	5	68°	1279			6/64	1 HR.
2.	4	x	1.00	500	10	78	1397			12/64	1 HR.
3.	4	x	1.00	500	40	78	1454			17/64	1 HR.
4.	4	x	1.500	510	13	74	1193			23/64	1 HR.
5.	4	x	1.500	510	45	74	1055			30/64	1 HR.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_{wp}^3}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.753	50.66	513.2	.9924	1.166	1.052	293
2	4.753	71.64	513.2	.9831	1.166	1.048	409
3	4.753	143.28	513.2	.9831	1.166	1.048	818
4	10.84	82.47	523.2	.9868	1.166	1.052	1082
5	10.84	153.44	523.2	.9868	1.166	1.052	2013

NO.	P _r	Temp. °R	T _r	Z	Gas-Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.77	528	1.40	.903	1.282	
2.	.77	538	1.43	.910	47.8 @ 60°	
3.	.77	538	1.43	.910	Specific Gravity Separator Gas .735	XXXXXXX
4.	.79	534	1.42	.904	Specific Gravity Flowing Fluid XXXXX	
5.	.79	534	1.42	.904	Critical Pressure 663 P.S.I.A.	P.S.I.A.
					Critical Temperature 376 °R	°R

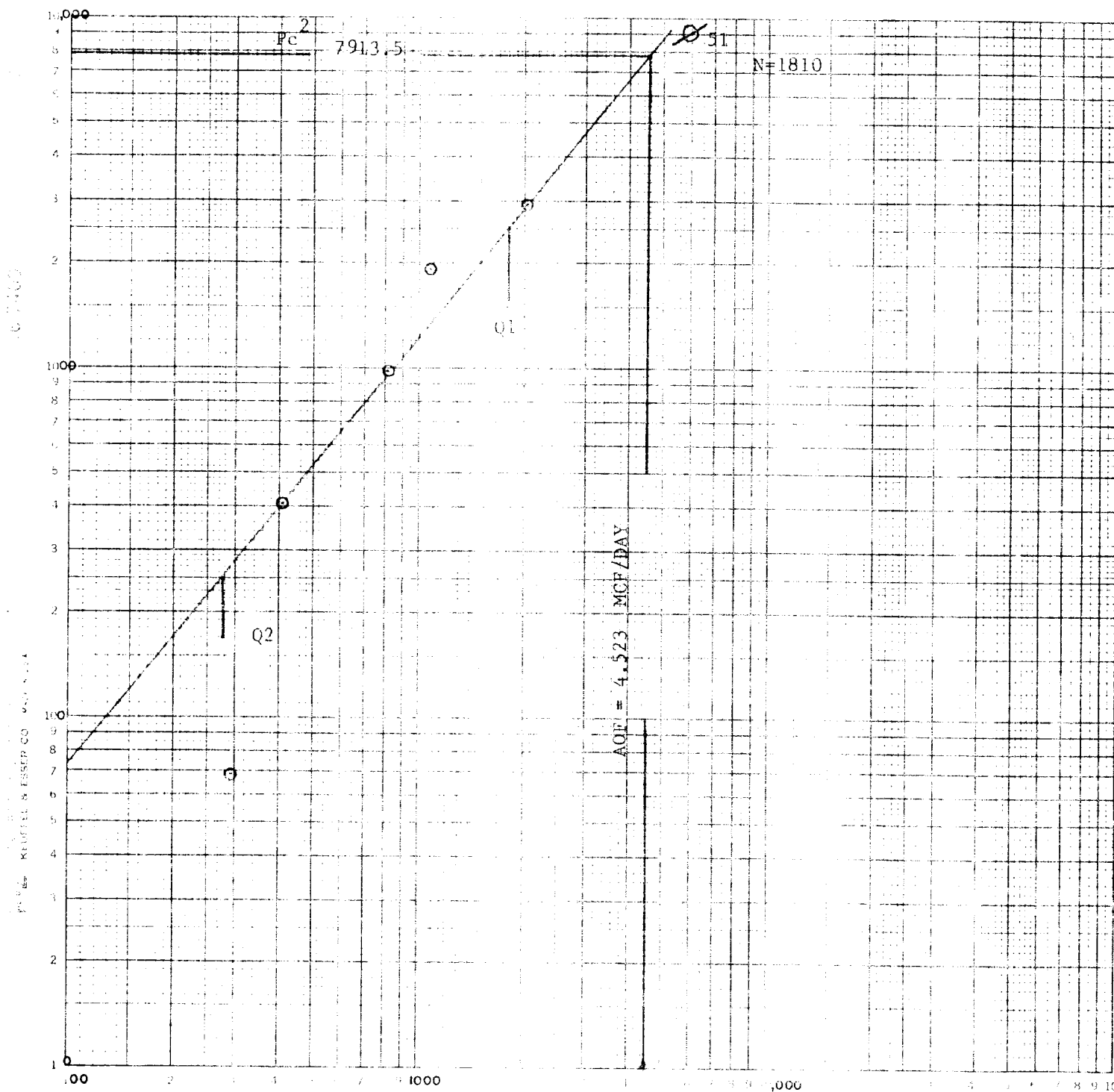
NO.	P _t ²	P _w	P _w ²	P _t ² - P _w ²	1) $\frac{P_c^2}{P_t^2 - P_w^2} =$	2) $\left[\frac{P_c^2}{P_t^2 - P_w^2} \right]^n =$
1		2800.8	7844.5	69.0	2.717	2.247
2		2740.5	7510.3	403.2		
3		2633.9	6937.4	976.1		
4		2450.8	6006.4	1902.1		
5		2236.3	5001.0	2912.5		

Absolute Open Flow	4.523	Mcf/d @ 15.025	Angle of Slope @	51°	Slope, n	.810
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Remarks: 150 Bbls. of condensate made during test.
Bottom Hole Pressures Measured with Kuster Gauge.

Approved By Commission:	Conducted By: W.S.	Calculated By: R.R.	Checked By: R.R.
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$$\begin{array}{r} Q = 1800 = \text{Log } 3.255273 \\ QZ = 279 = \text{Log } 2.445273 \\ \hline N = .810000 \end{array}$$


$$Q = \text{MCF/DAY}$$

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_c or P_w)
FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

Form C-122F
Adopted 9-1-65

COMPANY Cities Service LEASE 6701 AD WELL NO. 1 DATE 4-20-82

LOCATION: Unit _____ Section _____ Township _____ Range _____

L 9043 H 8043 LH 1.00 G .735 % CO₂ 1.76 % N₂ 5.87 % H₂S _____

CH 6647 P_{ci} 665 T_{ci} 376
TABLE IX & X TABLE IX & X

LINE	1	2	3	4	5	6	7	8
1	$T_w(W.H.^{\circ}R)$	534	534	534	534	534	534	534
2	$T_g(B.H.^{\circ}R)$	624	624	624	624	624	624	624
3	$T = \left(\frac{T_w + T_g}{2} \right)$	579	579	579	579	579	579	579
4	Z (Est.)	.837	.806	.830	.902	.870	.904	.914
5	TZ	4243	4271	4300	4413	4527	4641	4755
6	GH/TZ	13.01	12.81	12.61	12.41	12.21	12.01	11.81
7	e^s (Table XIV)	1.074	1.066	1.059	1.051	1.043	1.035	1.027
8	P_f or P_s	3658.2	3658.2	3566.2	3584.2	3454.2	3454.2	3225.2
9	P_f^2 or P_s^2	13382.4	13382.4	12666.4	12666.4	11974.4	11974.4	10516.4
10	$P_c^2 = P_f^2/e^s$ or $P_w^2 = P_s^2/e^s$	8001.2	7811.5	7647.5	7506.5	7058.0	6937.7	6089.5
11	P_c or P_w	2828.7	2800.8	2765.4	2740.5	2656.7	2633.9	2467.6
12	$P_c \left(\frac{P_w + P_s}{2} \right)$ or $\left(\frac{P_c + P_f}{2} \right)$	3243.4	3039.5	2174.8	3163.3	3055.4	3044.1	2806.4
13	$P_f = (P/P_{cr})$	4.89	4.87	4.79	4.77	4.61	4.59	4.29
14	$T_f = (T/T_{cr})$	1.54	1.54	1.54	1.54	1.54	1.54	1.54
15	Z (Table XI)	.806	.805	.802	.801	.794	.794	.783

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_c or P_w)
FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

Form C-122F
Adopted 9-1-65

COMPANY Cities Service LEASE 6001 AD WELL NO. 1 DATE 4-20-82

LOCATION: Unit 9043 Section 9043 Township 1.00 Range 1.035
L 9043 H 9043 L/H 1.00 G 1.035 % CO₂ 1.76 % N₂ 5.87 % H₂S 1.00

GH 6644 P_{cr} 663 T_{cr} 376
TABLE IX & Y TABLE IX & X

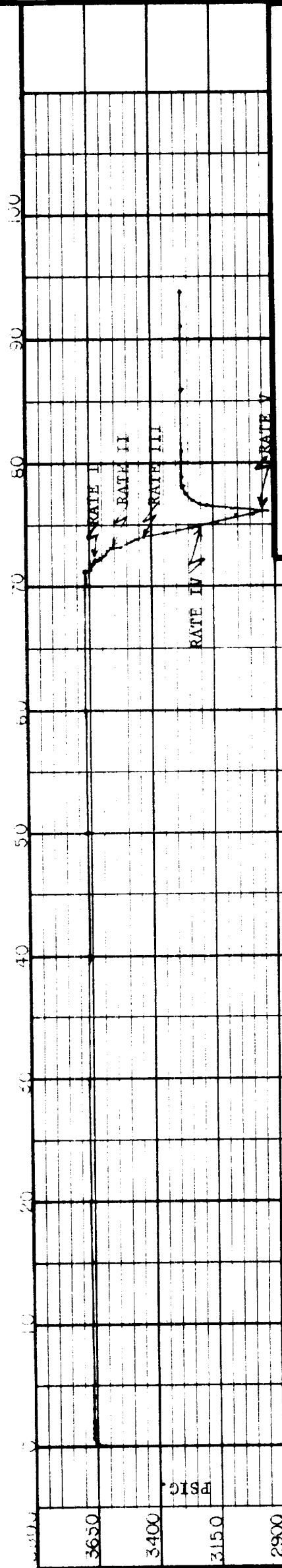
LINE	1	2	3	4	5	6	7	8
1	T_w (W.H. °R)	534	534				534	534
2	T_s (B.H. °R)	624	624				624	624
3	$T = (\frac{T_w + T_s}{2})$	579	579				579	579
4	Z (Est.)	884	1775				1838	1806
5	TZ	465.5	465.5				465.5	466.7
6	GH/TZ	1.424	1.424				1.424	1.424
7	e^S (Table XIV)	1.228	1.228				1.228	1.228
8	P_f or P_s	2782.2	2782.2				2782.2	2782.2
9	P_f^2 or P_s^2	8155.5	8155.5				8155.5	8155.5
10	$P_c^2 = P_f^2/e^S$ or $P_w^2 = P_s^2/e^S$	5122.1	5000.0				5122.1	7913.3
11	P_c or P_w	2268.8	2236.3				2268.8	2813.1
12	$P_c (\frac{P_w + P_s}{2})$ or $(\frac{P_c + P_f}{2})$	2605.5	2594.2				2605.5	3243.6
13	$P_r = (P/P_{cr})$	3.93	3.91				3.93	4.89
14	$T_r = (T/T_{cr})$	1.54	1.54				1.54	1.54
15	Z (Table XI)	1.775	1.774				1.806	1.806

TEST DATE: APRIL 17 to 21, 1982
TEST DEPTH: 9043 FEET

ELEMENT NO: 34912
RANGE: 0-8000 PSI
CLOCK NO: 22509
RANGE: 0-72 HOURS

NOTE: SEE TABULATION OF TIMES AND PRESSURES ON ATTACHED SHEET.

TIME IN HOURS



CITIES SERVICE COMPANY

GOVERNMENT "AD" NO. 1

BOTTOM HOLE PRESSURE BUILD-UP TEST, 4-POINT BACK
PRESSURE TEST, BOTTOM HOLE PRESSURE BUILD-UP TEST.

JOHN W. WEST ENGINEERING CO. 4085 NEW AVE.

CITIES SERVICE COMPANY
 GOVERNMENT "AD" NO. 1
 BOTTOM HOLE PRESSURE BUILD-UP TEST,
 4-POINT BACK PRESSURE TEST AND
 BOTTOM HOLE PRESSURE TEST.
 TABULATION OF TIMES AND PRESSURES,

Test Conducted by:
 JOHN WFST ENGINEERING COMPANY

TEST DATE: APRIL 17 to 21, 1982
 TEST DEPTH: 9043 FEET
 ELEMENT NO: 34912 (0-8000 PSI)
 OPERATOR: Winn Sutton

<u>DATE</u>	<u>TIME</u>	<u>CUM HRS. / MIN.</u>	<u>PSIG @ 9043 FEET</u>
4-17-82	10:00 A.M.		3629 Gauge reached 9043 Feet
	11:00 A.M.	00 Hrs. 00 Min.	3629 Shut-In, Begin Build-Up
	11:15 A.M.	00 15	3653
	11:30 A.M.	00 30	3657
	12:00 Noon	01 00	3657
	12:30 P.M.	01 30	3657
	1:00 P.M.	02 00	3657
	2:00 P.M.	03 00	3657
	3:00 P.M.	04 00	3657
	4:00 P.M.	05 00	3661
4-17-82	9:00 P.M.	10 00	3661
4-18-82	2:00 A.M.	15 00	3661
	7:00 A.M.	20 00	3661
4-18-82	5:00 P.M.	30 00	3661
4-19-82	3:00 A.M.	40 00	3661
	1:00 P.M.	50 00	3661
4-19-82	11:00 P.M.	60 00	3661
4-20-82	8:45 A.M.	69 45	3661
4-20-82	9:45 A.M.	00 Hrs. 00 Min.	3661 D.W. 1582 Back to 9043'
	10:00 A.M.	00 15	3661 Begin 4-Point
	10:15 A.M.	00 30	3649
	10:30 A.M.	00 45	3649
	10:45 A.M.	01 00	3645
	11:00 A.M.	01 00	3645 End Rate I
	11:15 A.M.	01 15	3612
	11:30 A.M.	01 30	3596
	11:45 A.M.	01 45	3580
	12:00 Noon	02 00	3571 End Rate II
	12:15 P.M.	02 15	3522
	12:30 P.M.	02 30	3486
	12:45 P.M.	02 45	3461
	1:00 P.M.	03 00	3441 End Rate III
	1:15 P.M.	03 15	3343
	1:30 P.M.	03 30	3294
	1:45 P.M.	03 45	3249
	2:00 P.M.	04 00	3212 End Rate IV
	2:15 P.M.	04 15	3105
	2:30 P.M.	04 30	3033
	2:45 P.M.	04 45	2996
	3:00 P.M.	05 00	2939 End Rate V

CITIES SERVICE COMPANY
 GOVERNMENT "AD" NO. 1
 BOTTOM HOLE PRESSURE BUILD-UP TEST,
 4-POINT BACK PRESSURE TEST AND,
 BOTTOM HOLE PRESSURE BUILD-UP TEST.
 TABULATION OF TIMES AND PRESSURES

TEST CONDUCTED BY:
 JOHN WEST ENGINEERING CO.

TEST DATE: APRIL 17 to 21, 1982
 TEST DEPTH: 9043 FEET
 ELEMENT NO: 34912 (0-8000 PSI)
 OPERATOR: Winn Sutton

<u>DATE</u>	<u>TIME</u>	<u>CUM HRS./ MIN.</u>	<u>PSIG @ 9043 FEET</u>
4-20-82	3:00 P.M.	00 Hrs. 00 Min.	2939 Shut-In, Begin Build-Up
	3:15 P.M.	00 15	3073
	3:30 P.M.	00 30	3167
	3:45 P.M.	00 45	3208
	4:00 P.M.	01 00	3233
	4:30 P.M.	01 30	3257
	5:00 P.M.	02 00	3265
	6:00 P.M.	03 00	3273
	7:00 P.M.	04 00	3273
4-20-82	8:00 P.M.	05 00	3273
4-21-82	1:00 A.M.	10 00	3278
	6:00 A.M.	15 00	3278 D.W. 1576
4-21-82	8:45 A.M.	17 45	3278 Gauge out End of Test.

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 83, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. **Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF: CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	GEOLOGIC MARKERS		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
				Wolfcamp	8800'	

NEW MEXICO OIL CONSERVATION COMMISSION
 DRAWER 88
 ARTESIA, NM 88210
WELL LOCATION AND ACREAGE DEDICATION PLAT

RECEIVED

Form C-102
 Supersedes C-128
 Effective 1-1-65

All distances must be from the outer boundaries of the Section

MAY 11 1982

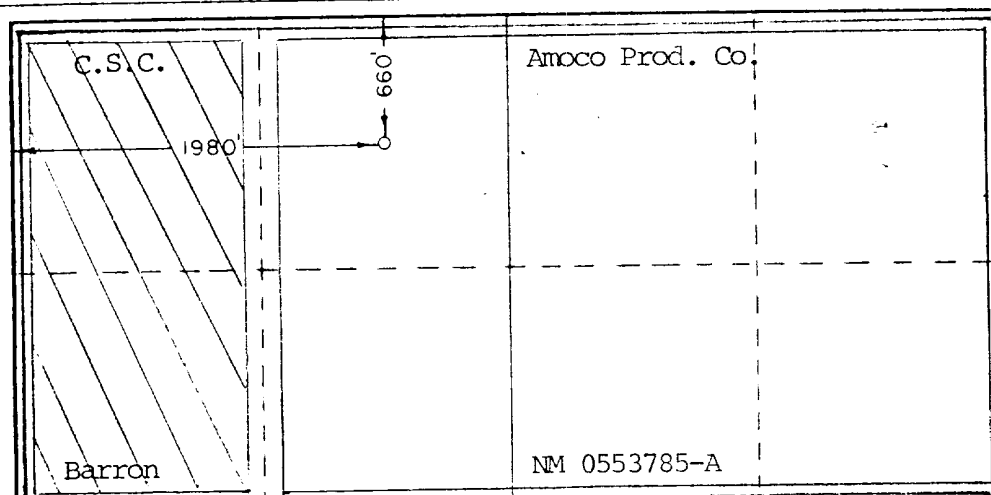
Operator Cities Service Oil Company			Lease Government AD Com		Well No. 1
Section C	Section 21	Township 21 South	Range 27 East	County ARTESIA, OFFICE Eddy	
Actual Surface Location of Well: 660 feet from the North line and 1980 feet from the West line					
Ground Level Elev. 3236.4	Producing Formation Wolfcamp	Producing Formation Burton Flats North Wolfcamp		Dedicated Acreage: 320	Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization (See reverse side)

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



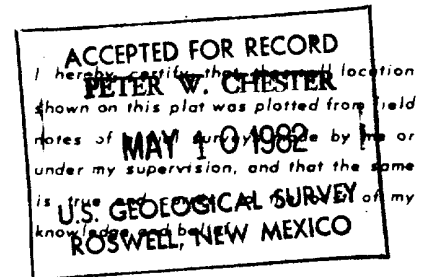
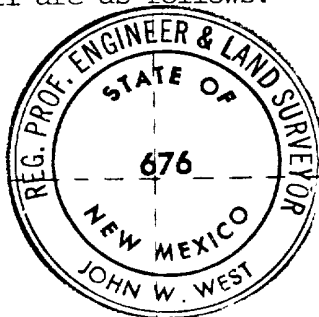
CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name
James Stutz
 Position
 Region Opr. Mgr. - Prod.
 Company
 Cities Service Company
 Date
 May 4, 1982

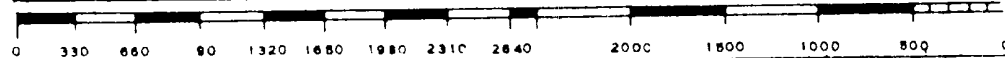
Unit block consists of 4932 acres. Working interests of participating companies in this well are as follows:

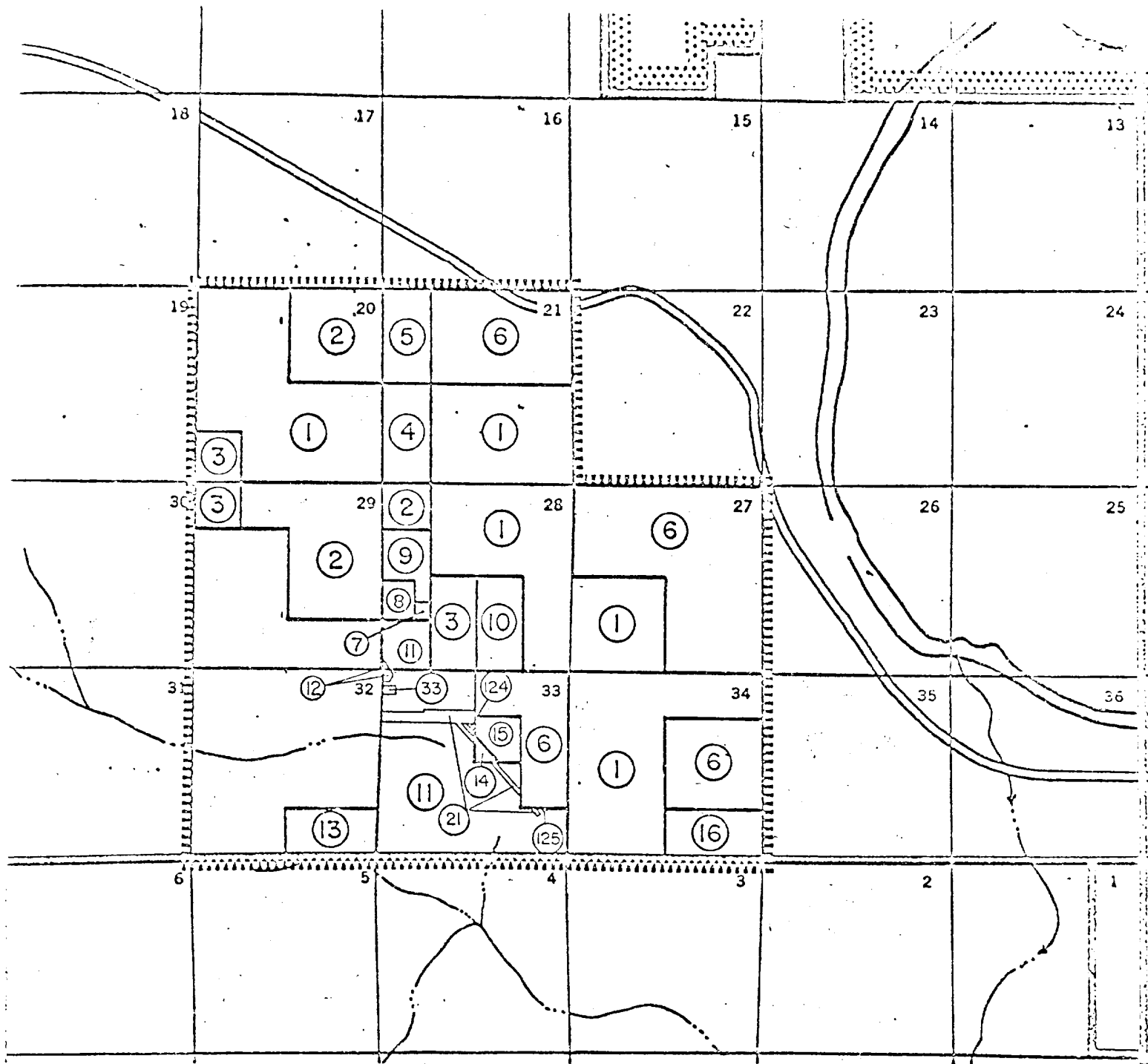
Cities Service Co.	36.69185%
Amoco Prod. Co.	22.18587%
Pioneer Prod. Co.	16.63940%
Flag Redfern Oil Co.	8.02056%
John J. Redfern, Jr.	7.78687%
and Rosalind Redfern	1.70661%
Champlin Petr. Co.	1.70661%
Patoil Corp.	4.43026%
Union Oil of Calif.	0.83197%
Claremont Corp.	100.00000%



Date Surveyed
February 28, 1975
 Registered Professional Engineer
 and/or Land Surveyor

John W. West
 Certificate No. **676**





R-27-E

TRACT NO. WORKING INTEREST OWNER
Amarillo Oil Co., Flag-Redfern Oil Co.

,3,4,5,7,
0,14,21 & 33 Cities Service Oil Co.

Amoco Production Co.
J.M. Huber, Pierce & Davis
Union Oil Co. of Calif.
Patoil Corp.
Champlin Petro. Co.

EXHIBIT "A" PART IV

OPERATING AGREEMENT DATED SEPT. 22 1972
EDDY COUNTY, NEW MEXICO

,15,124
125 Unleased Acreage

PLAT OF UNIT AREA

UNIT AREA

② TRACT NUMBERS

SCALE: 1" = 4000'

RECEIVED
Form 9-331
Dec. 1973

NM OIL CONS. COMMISSION
Drawer DD

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES OF AMERICA
Artesia, NM 88210

MAY 11 1982

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ARTESIAN OFFICE

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☒ other

2. NAME OF OPERATOR
Cities Service Company

3. ADDRESS OF OPERATOR
P.O. Box 1919 - Midland, Texas 79702

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 660' FNL & 1980' FWL
AT TOP PROD. INTERVAL: Same as above
AT TOTAL DEPTH: Same as above

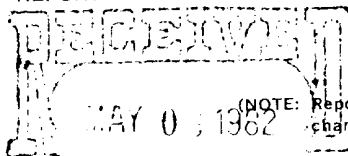
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐
(other) Well remedial work

SUBSEQUENT REPORT OF:

☐
☐
☐
☐
☐
☐
☐
☐
☐
☐



(NOTE: Report results of multiple completion or zone change on Form 9-330.)

U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

5. LEASE

NM 0553785-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Government AD Com

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Burton Flats North Wolfcamp

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 21-T21S-R27E

12. COUNTY OR PARISH
Eddy

13. STATE
New Mexico

14. API NO.
30-015-21515

15. ELEVATIONS (SHOW DF, KDB, AND WD)
3236' GR

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

O.T.D. 11730' Lime & Shale, PBTD 10900'. Workover complete. MIRU completion unit and pulled tubing and packer. Set a CIBP @ 10950' and dumped 6 sacks of cement on top of CIBP for a new PBTD of 10900'. Perforated the Wolfcamp Zone w/2 SPF @ 9027 - 9043', 9049 & 9057 - 9059'. Total 42 holes. Ran and set 2-7/8" OD tubing @ 8900' and a packer set @ 8900'. Flowed 8 barrels of dist./3.5 hrs. plus ARO 420 MCFPD thru 1" choke, FTP 100#. Acidized Wolfcamp Perfs 9027 - 9059' w/4000 gals 15% HCl acid + additives and 1000 SCF N₂/barrel. (Total 121,000 SCF) Max press 5300#, min press 5200#, AIR 10.4 BPM, ISIP 3650#, 10 min SIP 2250#. 72 hr. SITP 1583# (DW). Flowed on 5 pt tests as follows:

(SEE REVERSE SIDE)

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

Prod.

SIGNED Elmer Stutz TITLE Region Opr. Mgr.- DATE May 4, 1982

APPROVED BY _____ (This space for Federal or State office use)
CONDITIONS OF APPROVAL, IF ANY: _____

ACCEPTED FOR RECORD

PETER W. CHESTER

MAY 10 1982

U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

See Instructions on Reverse Side

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

GPO : 1976 O - 214-149

<u>TIME</u> 1 hr	<u>GR</u> 308 MCFPD	<u>CHOKE</u> 6/64"	<u>FTP</u> 1279#	<u>BP</u> 500#
1 hr	432 MCFPD	12/64"	1397#	500#
1 hr	864 MCFPD	17/64"	1454#	500#
1 hr	1139 MCFPD	23/64"	1193#	510#
1 hr	2119 MCFPD	30/64"	1055#	510#

Flowed 150 bbls of 47.8° gravity oil during 5 hr test.

CAOF Wolfcamp Perfs 9027 - 9059' = 4523 MCFPD

**NEW-TEX
LAB**

PHONE 505/393-3561

P. O. BOX 1161

811 W. SNYDER

HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT: JOHN WEST ENGINEERING
ADDRESS: 412 N DAL PASO
CITY, STATE: HOBBS NM 88240

ANALYSIS NUMBER : 7201
DATE OF RUN : 4 20 82
DATE SECURED : 4 20 82

SAMPLE IDENT: CITIES SERVICE OIL COMPANY - GOVERNMENT "AD" #1
SAMPLING PRESS: SAMPLING TEMP:

REMARKS: S21 T21S R27E

***** GAS ANALYSIS *****

	MOLE PERCENT	GAL/ MCF
NITROGEN	5.870	
CARBON DIOXIDE	1.762	
METHANE	73.245	
ETHANE	12.403	3.308
PROPANE	4.637	1.273
ISO-BUTANE	0.446	0.146
NORMAL BUTANE	0.976	0.307
ISO-PENTANE	0.185	0.068
NORMAL PENTANE	0.197	0.071
HEXANES	0.098	0.040
HEPTANES PLUS	0.181	0.083
TOTAL	100.002	5.296

PROPANE GPM:	1.27	BUTANES GPM:	0.45
ETHANE GPM:	3.31	PENTANES PLUS GPM:	0.26

SPECIFIC GRAV (CALC): 2.7353
MOLE WEIGHT: 21.31

HHV-BTU/CU FT	PRESSURE (PSIA)		
		WET	DRY
14.696	1132		1152
14.650	1129		1149
14.730	1135		1155
14.735	1135		1155

ANALYZED BY: DEANE SIMPSON

APPROVED BY

Deane Simpson