

Gulf Oil Company - U.S.

EXPLORATION AND PRODUCTION DEPARTMENT
ROSWELL DISTRICT

T. W. Kidd
DISTRICT MANAGER
M. I. Taylor
DISTRICT PRODUCTION
MANAGER
P. E. Wyche
DISTRICT EXPLORATION
MANAGER
H. A. Rankin
DISTRICT SERVICES MANAGER

P. O. Drawer 1938
Roswell, New Mexico 88201

October 17, 1969

WFK
324

Oil Conservation Commission
State of New Mexico
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.

Re: Cone-Jalmat-Yates-Pool Unit Waterflood Plan
Lea County, New Mexico

Gentlemen:

Gulf Oil Corporation has been furnished a copy of the subject Unit Application for alteration of the waterflood program for this Unit. It is our understanding that Unit Wells No. 5-4, 8-4 and 10-1 will be converted to water injection wells.

Please be advised that we have no objections to this proposal.

Yours very truly,

GULF OIL CORPORATION

M. I. Taylor
M. I. Taylor

JHH:dch

cc: Mr. John C. Byers
8th Floor, 802 Great Plains Life Building
Lubbock, Texas 79401



A DIVISION OF GULF OIL CORPORATION

Petroleum Geologist
Reservoir Engineering

John C. Byers
Eighth Floor
802 Great Plains Life Bldg.
Lubbock, Texas 79401

OCT 9 1969

Telephone
POrter 2-1004

October 6, 1969

1 - 324

Oil & Gas Conservation Commission
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Cone-Jalmat-Yates-Pool Unit
Water flood Plan

Gentlemen:

The Cone-Jalmat-Yates-Pool Unit was authorized for water flood operations through Commission Orders No. R 2495 dated June 11, 1963. An expansion of this water flood operation was authorized through Administrative Orders No. WFX 180 and WFX 206 dated September 22, 1964 and May 27, 1965 respectively.

Water flood operations within the subject unit had been responsible for increasing the unit production from an average 4,000 bbls. per month prior to water injection, to approximately 19,000 bbls. per month during 1969. The degree of response is reflected more completely through the production curve attached hereto and well test data offered in the form of Form No. C-116 attached hereto.

Secondary recovery operation by water flooding in this unit have been responsible for the recovery of approximately one million additional barrels of oil to the present time.

The Working Interest Owners of the subject unit hereby request that Administrative approval be granted for alteration of the water flood program for this unit. The proposed alteration for which this request is made, will involve the conversion of 3 wells heretofore dedicated to production to service as water injection wells. This alteration is not expected to increase unit area under water flood, but is expected to materially improve the effectiveness as well as rate of recovery of oil involved in the unit.

The three wells involved in this request are unit wells No. 5-4, 8-4 and 10-1. Each of these are located on the west down-dip flank of the unit, they are in an area of marginal production. This area also is not backed up by water injection. The purpose of this conversion is to offer substantial water back-up to the down-dip area to displace oil to more productive areas in high productivity wells in the unit, thereby, afford the recovery of oil that might otherwise be left in the reservoir on abandonment due to low productivity of wells through which this oil would be otherwise recovered.

Water requirements for this alteration will be derived from the Santa Rosa Sand water supply. This is the same source of water supply employed in the present project.

Oil & Gas Conservation Commission
October 6, 1969
Page 2

Water injection into the Yates Sand section through these wells will average initially 400 bbls. of water per day. Eventually declining to approximately 200 bbls. of water per day and limited to the maximum 1,300 p.s.i.g. well head pressure.

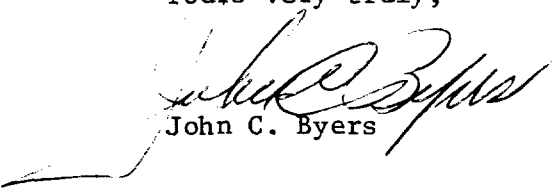
Attached hereto please find Commission Form C-102 relative to each of the wells set out above, through which permission for conversion to water injection is requested. Also, enclosed are well completion diagrams for each well reflecting condition of the well and plans for completion to water injection service.

For your convenience we have enclosed maps of the unit area which will reflect the position of the wells for which this request is made relative to the reservoir and other wells in the unit and adjacent areas.

Duplicate copies of this application along with appropriate exhibits has been supplied to City Service Oil Company, Gulf Oil Corporation and Continental Oil Companies. Alteration of the injection program into this reservoir will affect wells offsetting Continental Oil Company and within one-half mile of Gulf Oil Companies Jalmat-Yates Sand Unit and City Service Clawson Federal Leases. We have requested each of these companies to supply you with waiver of objection to this proposed alteration in injection program.

Your consideration of this request is appreciated. If additional information is required, we will be pleased to furnish whatever we can.

Yours very truly,

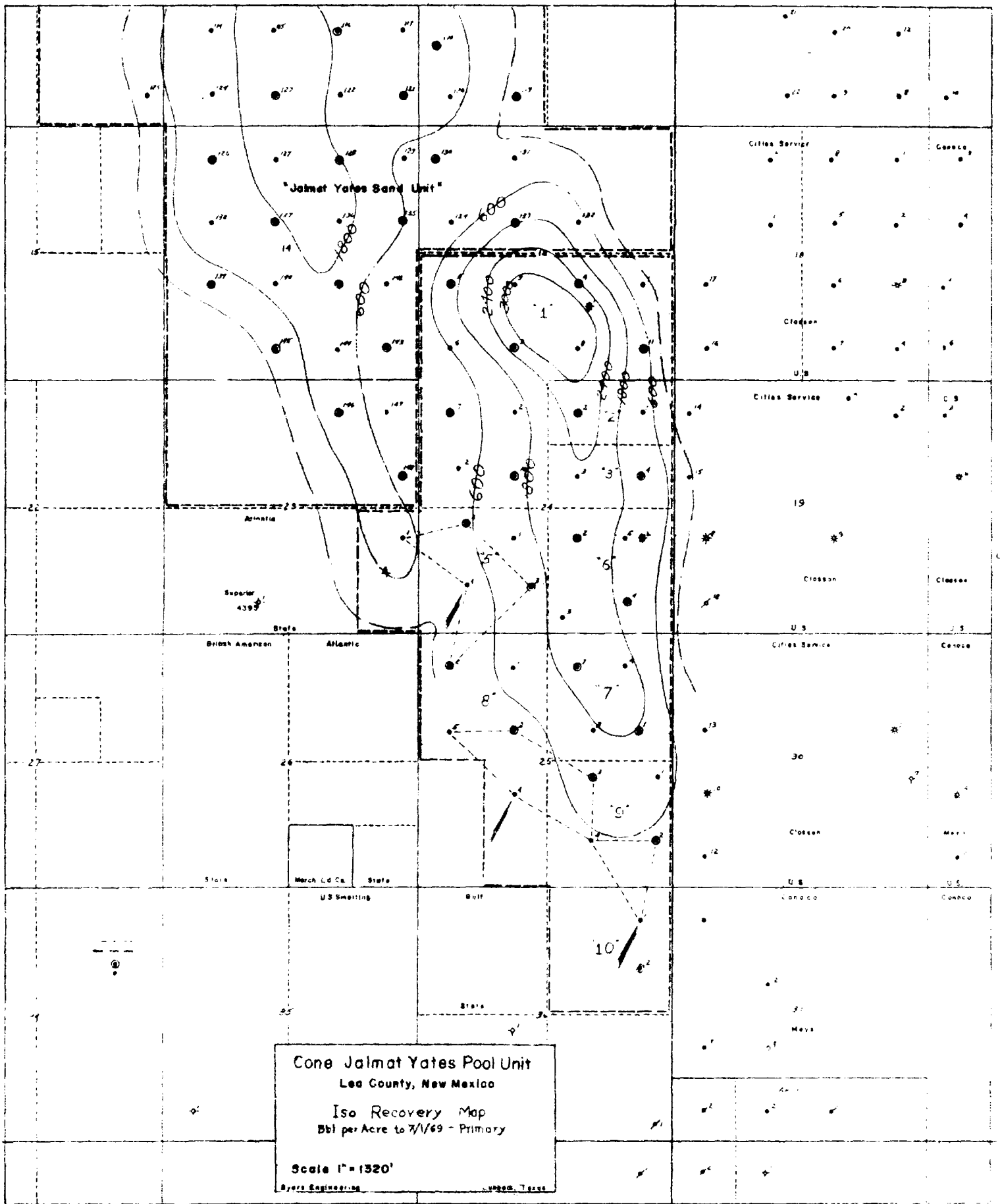


John C. Byers

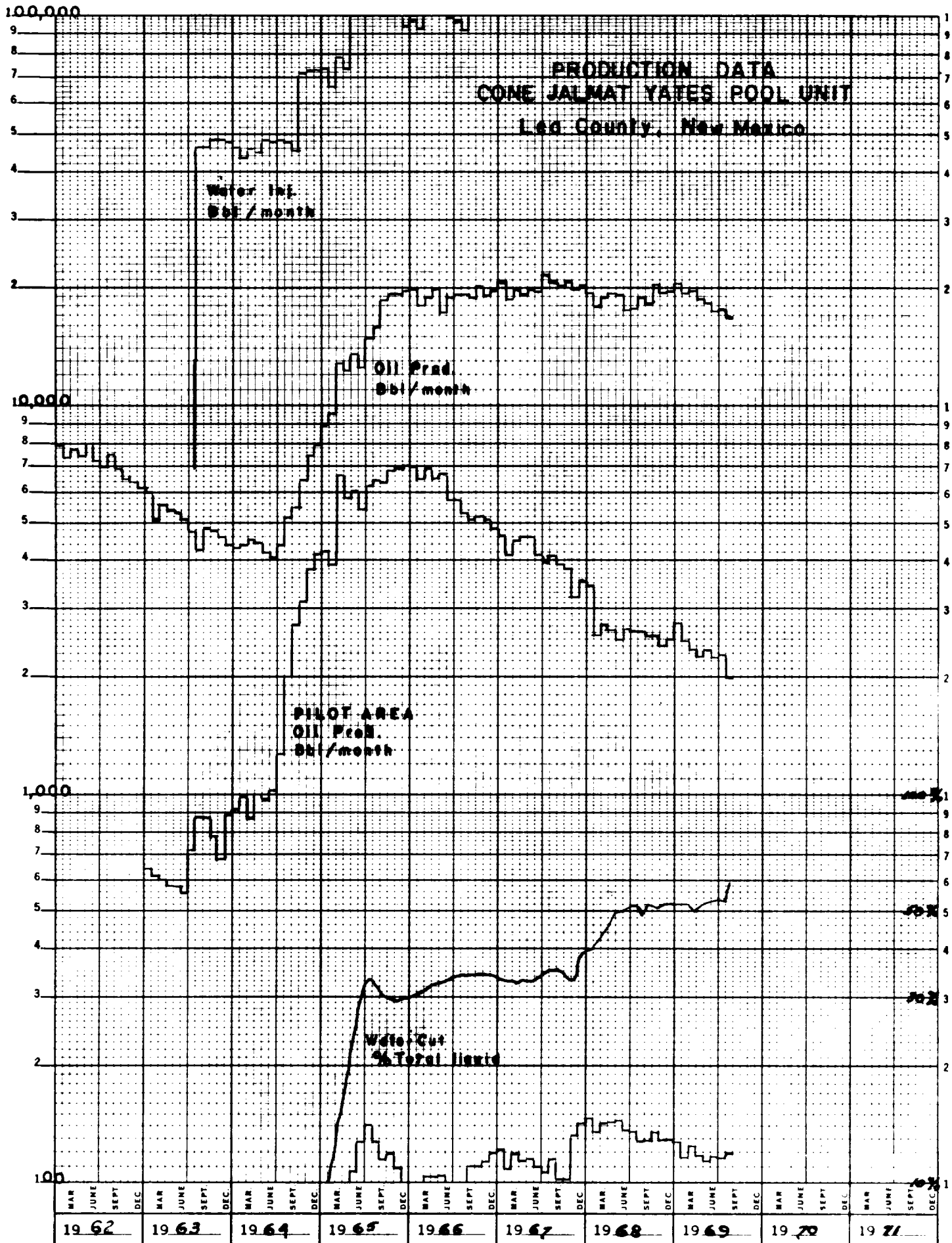
JCB:gy

Enclosures

cc: Oil & Gas Conservation Commission
Hobbs, New Mexico
J. R. Cone
L. O. Storm



R 35 E



NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

Operator J. R. Cone		County Lea												
Address P. O. Box 871 Lubbock, Texas 79408		Jalmat Yates												
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			Special <input checked="" type="checkbox"/>	
		U	S	T						R	WATER BBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.
Cone Jalmat Yates Pool Unit	5-4 M	24	22	35	8/15/69	P		6	24	35	38	9	1.23	137
	8-4 K	25	22	35	8/16/69	P		5	24	0	38	4	4.76	1,439
	10-1 A	36	22	35	8/18/69	P		1	24	8	38	1	6.00	6,000

Note: These are test from wells for which application is made for permission to convert to water injection service. Injection of water into these wells is expected to result in added recovery of oil for the Unit. This recovery is expected to be produced through wells set out in a second Form C-116 report which is attached hereto.

No well will be assigned an allowable greater than the amount of oil produced on the official test.

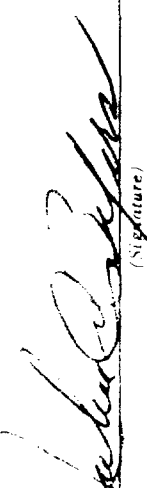
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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


(Signature)
Engineer
October 1, 1969

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

Form
Revised 1-1-67

Operator J. R. Cone		Jalmat Yates		Lea								
Address P. O. Box 871 Lubbock, Texas 79408		TYPE OF TEST - (X)		DATE OF TEST								
LEASE NAME	WELL NO.	LOCATION			DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU. FT./BBL.		
		U	S	T			R	WATER BBL.	GRAV. OIL		OIL BBL.	GAS M.C.F.
Cone Jalmat Yates Pool Unit	4-1	I	23	22	35	3	24	10	38	5	Nil	Est 150
	5-1	K	24	22	35	30	24	6	38	23	2.35	102
	8-1	C	25	22	35	32	24	24	38	39	6.9	177
	8-5	E	25	22	35	10	24	23	38	11	4.6	417
	7-3	O	24	22	35	200	24	73	38	111	21.9	197
	9-4	O	25	22	35	4	24	0	38	4	10.0	2,500
<p>Note: These are test from wells which are expected to be further influenced by water injection into wells set out in this application and the attached Form C-116 report.</p>												

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15,025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

[Signature]
(Signature)

Engineer

(Title)

October 1, 1969

(Date)

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U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease	
State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.	
E-1625-2	

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 "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER - Convert to Water Injection		7. Unit Agreement Name
2. Name of Operator		8. Farm or Lease Name
J. R. Cone		Cone Jalmat Yates
3. Address of Operator		9. Well No.
P. O. Box 371 Lubbock, Texas 79408		5-4
4. Location of Well		10. Field and Pool, or Wildcat
UNIT LETTER <u>N</u> , <u>090</u> FEET FROM THE <u>SOUTH</u> LINE AND <u>090</u> FEET FROM		Jalmat Yates
THE <u>West</u> LINE, SECTION <u>24</u> TOWNSHIP <u>22S</u> RANGE <u>35E</u> NMPM.		
15. Elevation (Show whether DF, RT, GR, etc.)		12. County
3,115' GR		104

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data	
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	OTHER <input type="checkbox"/>
CHANGE PLANS <input checked="" type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
OTHER <u>Convert to Water Injection</u> <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

This west flank (down dip) producer in the Cone Jalmat Yates Pool Unit is to be converted to water injection service in order to improve Unit Oil recovery efficiency.

Tubing and rods will be pulled. Tubing with plastic coated packer will be run in the hole with packer seat at 3,515'. Tubing will be open ended. Casing will be tested to 2,000 psig. The annular space will be loaded with corrosion inhibited water. Water injection will be through 2" EUE tubing.

Water supply for this well will be from the existing system in the unit which delivers Santa Rosa water to the well head at a maximum 1,300 psig.

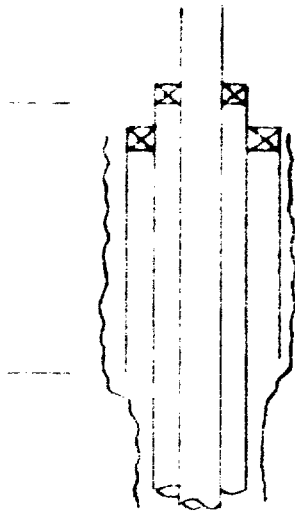
18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED <u>John E. Byers</u>	TITLE <u>Engineer</u>	DATE <u>10/1/69</u>
APPROVED BY _____	TITLE _____	DATE _____
CONDITIONS OF APPROVAL, IF ANY:		

CONE JALMAT YATES POOL UNIT
Well No. 5-4

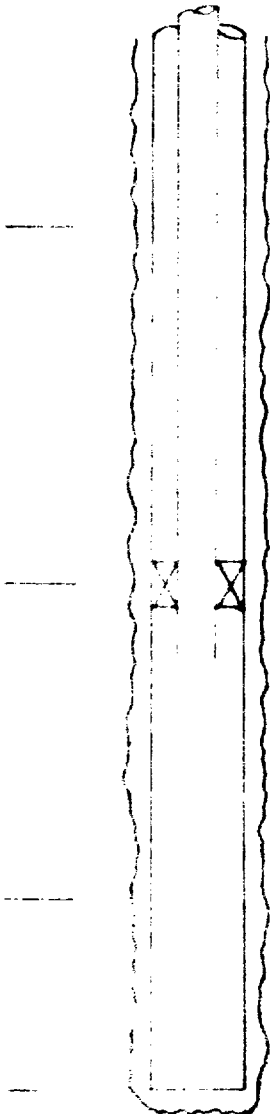
Elev. 3602' KB

Unit M Sec 24 T22S R35E
Lea County, New Mexico



9 5/8" Casing cemented with 150 sacks
at 304'. Cement circulated.

7" 26# J55 casing cemented with 250 sacks
cement. Calculated top of cement
3208'



Top of Rustler 1740'

2 3/8" tubing to be set on packer at 3315'

Top of Yates 3754'

Yates perforations 3766' to 3876'

TD 3881' PBTD 3877'

7" casing seat 3841'

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LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. E-8077

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 "APPLICATION FOR PERMIT - 1" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Convert to Water Injection	7. Unit Agreement Name Cone Jalmat Yates
2. Name of Operator J. R. Cone	8. Farm or Lease Name Cone Jalmat Yates
3. Address of Operator P. O. Box 371 Lubbock, Texas 79408	9. Well No. 8-4
4. Location of Well UNIT LETTER K 1,980 FEET FROM THE West LINE AND 1,980 FEET FROM South 25 TOWNSHIP 22S RANGE 33E NMPM.	10. Field and Pool, or Wildcat Jalmat Yates
15. Elevation (Show whether DF, RT, GR, etc.) 3,535' KP	12. County Lee

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input checked="" type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER Convert to Water Injection <input checked="" type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

This West flank (down dip) producer in the Cone Jalmat Yates Pool Unit is to be converted to water injection service in order to improve Unit oil recovery efficiency.

Tubing and rods will be pulled. Tubing with elastic coated packer will be run in the hole with packer seat at 1,750'. Tubing will be open ended. Casing will be tested to 2,000 psig. The annular space will be loaded with corrosion inhibited water. Water injection will be through 2" EUE tubing.

Water supply for this well will be from the existing system in the Unit which delivers Santa Rosa water to the well head at a maximum 1,300 psig.

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

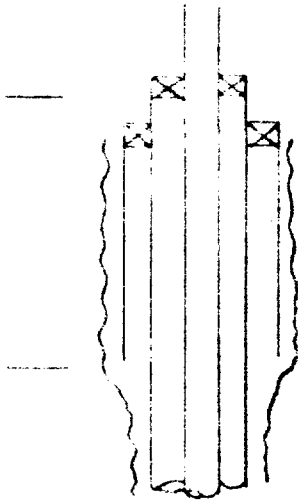
SIGNED <u>John C. Beyer</u>	TITLE <u>Engineer</u>	DATE <u>10/1/69</u>
APPROVED BY _____	TITLE _____	DATE _____

CONDITIONS OF APPROVAL, IF ANY:

CONE JALMAT YATES POOL UNIT
Well No. 8-4

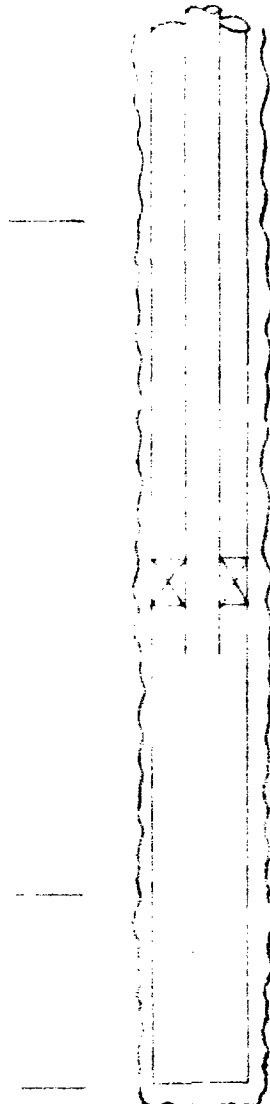
Elev. 3583' KB

Unit K Sec 25 T22S R35E
Lea County, New Mexico



8 5/8" Casing cemented with 300 sacks
at 312'. Cement circulated

5 1/2" 14# J55 casing cemented with 1,450
sacks cement. Cement circulated.



Top of Rustler 1,715'

2 3/8" tubing to be set on packer at 1,750'

Top of Yates 3,713'

Yates perforations 3,812' to 3,832'

TD 3,956'

5 1/2" casing seat 3,956'

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LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. H-2997-2

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 "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Convert to Water Injection	7. Unit Agreement Name Cone Jalmat Yates
2. Name of Operator J. R. Cone	8. Farm or Lease Name Cone Jalmat Yates
3. Address of Operator P. O. Box 371 Lubbock, Texas 79408	9. Well No. 10-1'
4. Location of Well UNIT LETTER A 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE, SECTION 36 TOWNSHIP 22S RANGE 35E NMPM.	10. Field and Pool, or Wildcat Jalmat Yates
15. Elevation (Show whether DF, RT, GR, etc.) 3,553' KB	12. County Lea

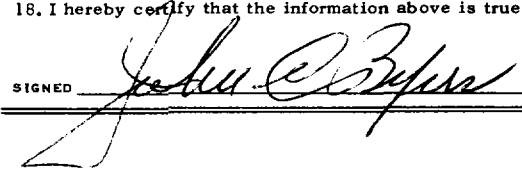
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PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
CHANGE PLANS <input checked="" type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
OTHER Convert to Water Injection <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

This west flank (down dip) producer in the Cone Jalmat Yates Pool Unit is to be converted to water injection service in order to improve Unit oil recovery efficiency.

Tubing and rods will be pulled from the well. Tubing with plastic coated packer will be run in the hole with packer seat at 3,100'. Tubing will be open ended. Casing will be tested to 2,000 psig. The annular space will be loaded with corrosion inhibited water. Water injection will be through 2" EUE tubing.

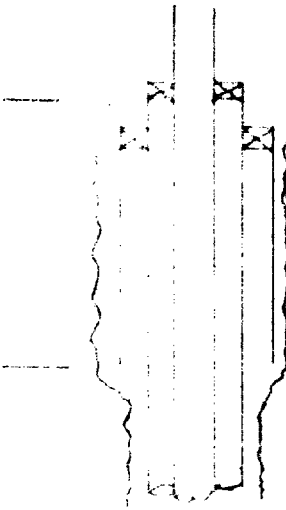
Water supply for this well will be from the existing system in the Unit which delivers Santa Rosa water to the well head at a maximum 1,300 psig.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.		
SIGNED 	TITLE Engineer	DATE 10/1/69
APPROVED BY _____	TITLE _____	DATE _____
CONDITIONS OF APPROVAL, IF ANY:		

CONE JALMAT YATES POOL UNIT
Well No. 10-1

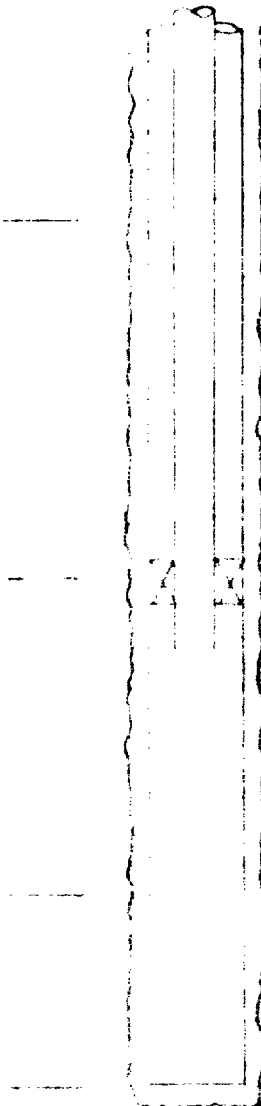
Elev...3,553' KB

Unit A Sec 36 T22S R35E
Lea County, New Mexico



9 5/8" Casing cemented with 150 sacks
at 321'. Cement circulated.

5 1/2" 15# J55 casing cemented with 250
sacks cement. Calculated top of
cement at 3,000'



Top of Rustler 1,674'

2 3/8" tubing to be set on packer at 3,100'

Top of Yates 3,635'

Yates perforations 3,740-52' & 3,798-821'

TD 3,840' PBTD 3,815'

5 1/2" casing seat 3,840'