



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

August 9, 1985

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Mr. William F. Carr
Campbell & Black
Attorneys at Law
Post Office Box 2208
Santa Fe, New Mexico

Re: CASE NO. 8502
ORDER NO. R-8000

Applicant:

Yates Drilling Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced
Division order recently entered in the subject case.

Sincerely,

R. L. STAMETS
Director

RLS/fd

Copy of order also sent to:

Hobbs OCD X
Artesia OCD X
Aztec OCD

Other Clarence Doyle

CAMPBELL & BLACK, P.A.

LAWYERS

JACK M. CAMPBELL
BRUCE D. BLACK
MICHAEL B. CAMPBELL
WILLIAM F. CARR
BRADFORD C. BERGE
J. SCOTT HALL
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TELEPHONE: (505) 988-4421
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August 2, 1985

Mr. Gilbert Quintana
Examiner
Oil Conservation Division
New Mexico Department of
Energy and Minerals
State Land Office Building
Santa Fe, New Mexico 87501

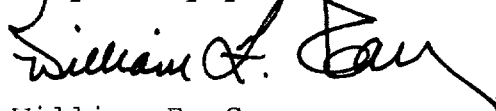
Re: Case 8502: Application of Yates Drilling Company for a
Pressure Maintenance Project, Chaves County, New Mexico.

Dear Mr. Quintana:

Pursuant to our recent telephone conversation, I am enclosing for your consideration in the above-referenced matter a letter which we received from Yates Drilling Company. As you will note from the enclosed, this letter explains how the Doyal interests will in fact benefit if the application of Yates Drilling Company in this case is approved and Yates goes forward with its plans for a pressure maintenance project in the Southeast Chaves Queen Gas Area Associated Pool.

If you need any additional information from Yates Drilling Company to go forward with the Order in this case, please advise.

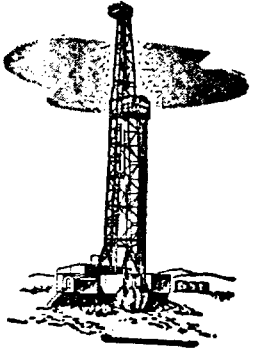
Very truly yours,

A handwritten signature in black ink, appearing to read "William F. Carr", with a stylized flourish extending from the end.

William F. Carr

WFC/cv
enclosure

cc: T. L. Rhodes



YATES DRILLING COMPANY

YATES BUILDING - 207 SOUTH 4TH ST. - (505) 746-3558

ARTESIA, NEW MEXICO - 88210

July 31, 1985

PEYTON YATES.
PRESIDENT

S. P. YATES.
VICE PRESIDENT

B. W. HARPER.
SEC.-TREAS.

JACK W. MCCAUL.
ASST. SEC.-TREAS.

RECEIVED

AUG 01 1985

CAMPBELL AND BLACK

Mr. William F. Carr
Campbell & Black, P.A.
P.O. Box 2208
Santa Fe, New Mexico 87501

Re: Application of Yates Drilling Company for
Authority to Install and Operate a Partial
Pressure Maintenance Project,
Chaves County, New Mexico

Dear Bill:

I have included the additional information that Mr. Quintana requested regarding the captioned case. If you have any questions or require further information please feel free to call me.

The bottom hole pressure in the Doyal #3 well was measured October 4, 1984 and March 11, 1985. Comparison of the two recorded pressures showed a 79 psi drop in reservoir pressure. The Doyal #3 well has never produced other than initial testing. The total volume of reservoir fluids (oil, water and gas) produced from other wells in the reservoir during this period was 142,000 reservoir barrels.

Thus for approximately every 1800 barrels of reservoir fluid removed at this point in the life of the reservoir a 1 psi pressure drop is realized. As the reservoir eventually approaches the state of primary depletion, the increment of pressure drop would increase for the same amount of fluid removed. The injection of the proposed 200 barrels of produced water per day would reduce the decline in reservoir pressure by approximately 40 psi over a one year period.

By reducing the decline it is obvious that all producing wells within the reservoir will benefit to some degree, however this does not mean that other leases will benefit at the expense of the Doyal lease. Due to the location of the Doyal #3 well and the location of the oil/water contact within the reservoir, damage to the correlative rights of the Doyal lease, if any, would be minimal.

Mr. William F. Carr
July 31, 1985
page 2

Overall the Doyal lease would benefit due to the additional primary production which would be realized due to the pressure maintenance and the reduction in operating costs from injecting produced water.

An additional benefit to the Doyal lease would be the increase of daily oil production. At this time maximum daily oil production is not possible due to the limitation caused by the expense of hauling and disposing of the associated produced water. With the produced water being returned to the reservoir maximum daily oil production could be obtained.

Assuming radial flow behavior, the front produced by the injection of 200 barrels of water per day would have only traveled 1030 feet in ten years. At this distance none of the producing wells surrounding the injection well would have experienced water breakthrough.

Prior to the end of this ten year period we hope to have defined the boundary of the reservoir and unitized the involved leases with the help of other operators in the area. Once unitized we would begin secondary recovery operations.

Sincerely,

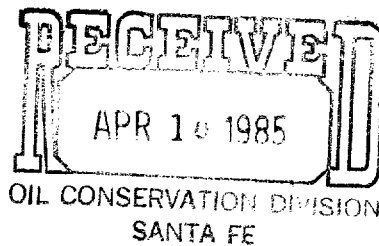
YATES DRILLING COMPANY


T.L. Rhodes
Engineer

TLR/kj1

CAMPBELL & BLACK, P.A.
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April 18, 1985

Mr. Gilbert P. Quintana
Hearing Examiner
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: Oil Conservation Division Case No. 8502: Application
of Yates Drilling Company for a Pressure Maintenance
Project, Chaves County, New Mexico.

Dear Gilbert:

Pursuant to your request, I am enclosing copies of corrected plats on the Gallagher State No. 1 and Garner Federal No. 9 Wells. These plats contain the correct elevations for each of these wells. Also enclosed is a table showing the elevations used in the calculations and the elevations presented at the hearing on these plats. As you will note, there is a difference of three feet in the elevations for the Doyal No. 1 Well. This is the only well where an incorrect elevation was used in the calculations. We submit, however, that this is not significant as it relates to this case, for both elevations put the well above the oil water contact.

As you will recall, we have previously submitted the water analysis which you requested on the Spear water well.

If you need anything further from Yates Drilling Company to proceed with your decision in this case, please advise.

Best regards.

Very truly yours,

A handwritten signature in cursive script, appearing to read "W. Carr".

William F. Carr

WFC/cv
enclosure

cc: T. L. Rhodes

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

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

All distances must be from the outer boundaries of the Section.

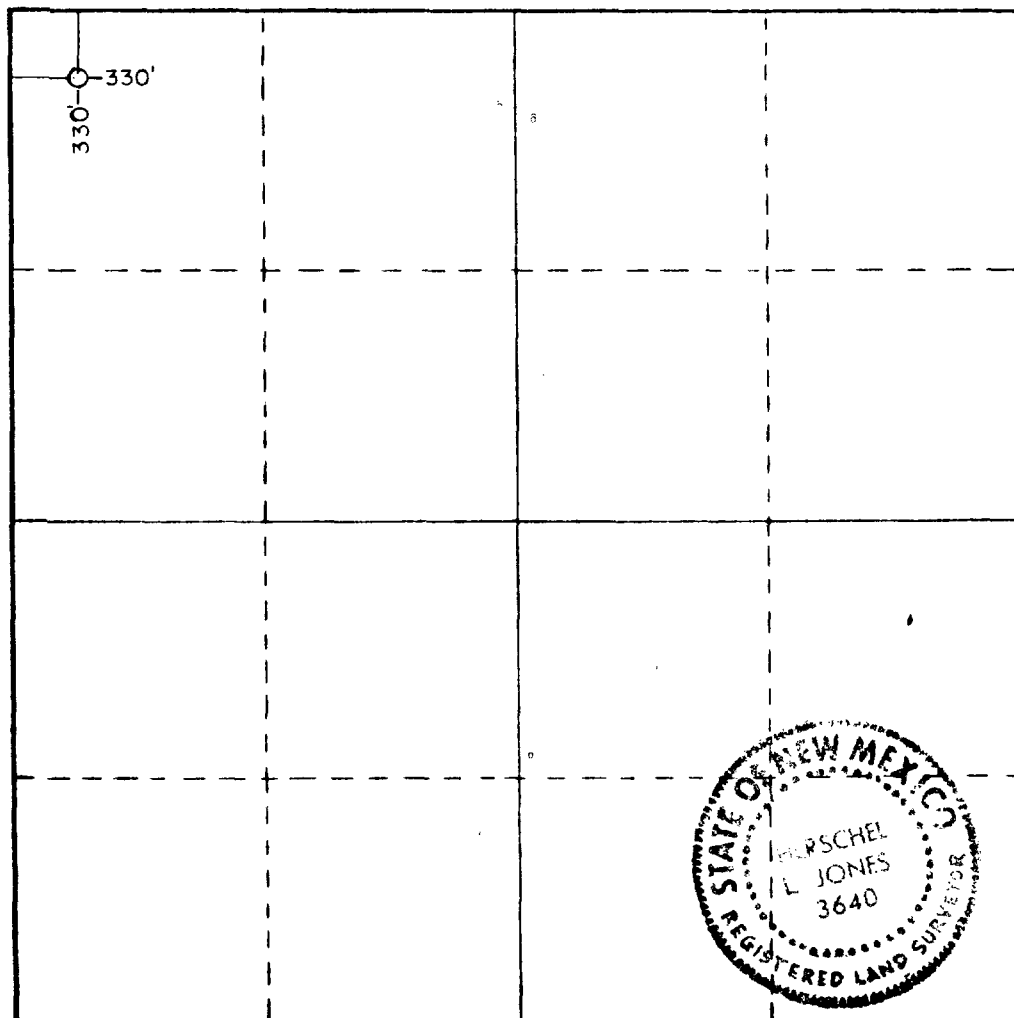
Operator YATES DRILLING COMPANY			Lease Gallagher State		Well No. 1
Unit Letter D	Section 35	Township 12 South	Range 31 East	County Chaves	
Actual Footage Location of Well:					
330 feet from the North line and 330 feet from the West line					
Ground Level Elev. 4424.5	Producing Formation Queen	Pool SE Chaves Queen Gas Area Assoc.		Dedicated Acreage: 40.00 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 _____

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 **T.L. Rhodes**
 Position **Engineer**
 Company **Yates Drilling Company**
 Date **March 14, 1985**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed **March 14, 1985**
 Registered Professional Engineer and/or Land Surveyor
Herschel L. Jones
 Certificate No. **3640**

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

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

All distances must be from the outer boundaries of the Section

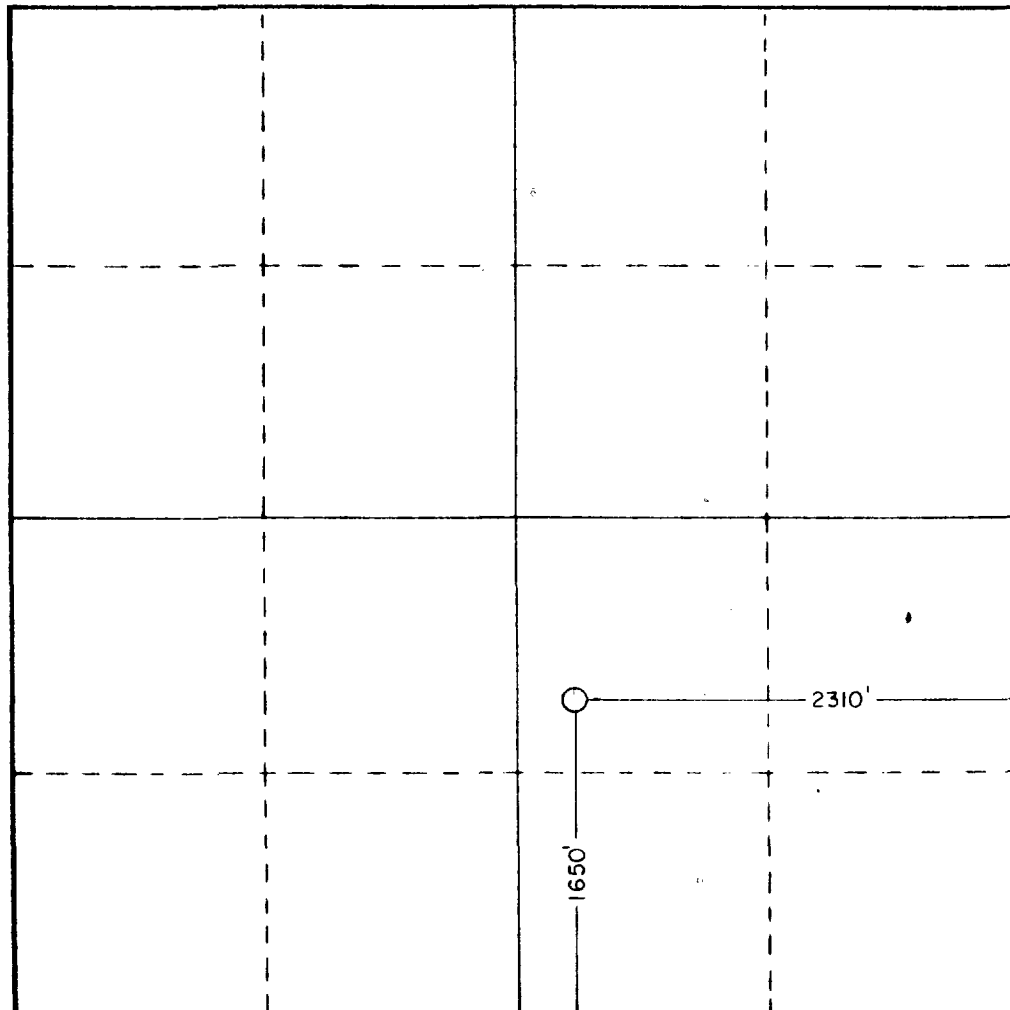
Operator YATES DRILLING COMPANY			Lease Garner Federal		Well No. 9
Unit Letter J	Section 27	Township 12 South	Range 31 East	County Chaves	
Actual Footage Location of Well:					
1650	feet from the South	line and	2310	feet from the East	line
Ground Level Elev. 4434.5	Producing Formation Queen	Pool EE Chaves Queen Gas Area Assoc.		Dedicated Acreage: 40.00 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 communization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

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 communization, 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
T.L. Rhodes
Position
Engineer
Company
Yates Drilling Company
Date
March 14, 1985

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date
March 14, 1985
Registered Professional Engineer
and Land Surveyor
3640
Certified by **FRED LAND SURVEY**

0 330 660 990 1320 1650 1980 2310 2640 2000 1600 1000 500 0

	<u>Elevations Used in Calculations</u>	<u>Elevations Presented on Plats</u>
DeLuna Federal #3	4433.4'	4433.4'
Doyal #1	4425'	4428'
Doyal #2	4427'	4427'
Doyal #3	4429'	4429'
Doyal #4	4424.5'	4425
Gallagher State #1	4424.5'	4435.5'
Garner Federal #7	4433.4'	4432.6'
Garner Federal #9	4434.5'	4424'
Rich Federal #1	4435.6'	4435.6'

CAMPBELL & BLACK, P.A.

LAWYERS

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April 5, 1985

HAND DELIVERED

Mr. Gilbert Quintana
Hearing Examiner
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico 87501

Re: Oil Conservation Division Case ⁸⁵⁰²~~8520~~ Application of
Yates Petroleum Corporation for A Pressure Maintenance
Project, Chaves County, New Mexico.

Dear Gilbert:


Pursuant to your request, I enclose herewith the water
analysis on the Spear Well.

I also would like to discuss with you briefly additional
information we have received on the survey plats for the
Gallagher State #1 Well and the Garner Federal #9 Well.

Please let me know when it would be convenient for you to
review these plats with me.

Best regards.

Very truly yours,



William F. Carr

WFC/cv
enclosure

cc: Toby L. Rhodes



 P. O. Box 423
 Artesia, N. M. 88210

WATER ANALYSIS REPORT

 Company Yates Drilling Date 3-22-85

 Field Spears Water Sample, NW/4SW/4 Section 26-12S-31E County Chaves State N.M.

 Lease No. Prod. Formation

 Source of Sample

 Sample Prod. Water ☐ Inj. Water ☐ Other ☐

 Date Collected Analyst James B. Campanella
WATER ANALYSIS PATTERN

(NUMBER BESIDE ION SYMBOL INDICATES mg/l SCALE UNIT)

	15	10	5	0	5	10	15	20	
Na ⁺									Cl ⁻
Ca ⁺⁺									HCO ₃ ⁻
Mg ⁺⁺									SO ₄ ⁼
Fe ⁺⁺									CO ₃ ⁼

Dissolved Solids

Concentration

MG/L (PPM)

EPM

Calcium	<u>nil</u>
Magnesium	<u>nil</u>
Sodium	<u>nil</u>
Iron	<u>nil</u>
Chloride	<u>nil</u>
Bicarbonate	<u>nil</u>
Carbonate	<u>nil</u>
Sulfate	<u>120</u>

Total Hardness	<u>nil</u>
Total Dissolved Solids	<u>120</u>
Hydrogen Sulfide	<u>nil</u>
Oxygen	<u>10+</u>

ph	<u>6.0</u>
Sp. Gravity	<u> </u>
	<u> </u>
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Remarks:

Fresh H2O