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*Chapter 38*  
*"Enhanced Oil Recovery*  
*Act"*  
*Law of 1992*

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March 30, 1992

HAND-DELIVERED

William J. LeMay, Director  
Oil Conservation Division  
Energy, Minerals and Natural  
Resources Department  
State Land Office Building  
Santa Fe, New Mexico 87503

RECEIVED  
MAR 31 1992  
OIL CONSERVATION DIVISION  
Case 10476

Re: Proposed West Loco Hills Grayburg No. 4 Sand Unit, Eddy County, New Mexico

Dear Mr. LeMay:

Since the early 1980's Yates Petroleum Corporation has been considering conversion of the West Loco Hills Grayburg No. 4 Sand Unit from a waterflood project to a carbon dioxide project. Although in 1985 Yates obtained the Division's approval for an initial pilot project (Order No. R-7821), Yates and the other working interest owners in the pilot project area have been unable to proceed with the 1985 project due to poor economics and concern about the technical aspects of this proposal.

Since that time, however, the interest owners in the project area have continued to work on a proposal that would permit the employment of enhanced recovery techniques in this portion of the Loco Hills-Queen Grayburg San Andres Pool. After making significant changes in the project, and in anticipation of enactment of the Enhanced Oil Recovery Act which will substantially improve project economics, the working interest owners in the proposed unit area in late 1991 approved a new plan to implement a pilot project. This new project differs from the 1985 proposal in the following respects:

- (1) The proposed injection wells will be drilled at locations which differ from the original proposal;

William J. LeMay, Director  
Oil Conservation Division  
Energy, Minerals and Natural  
Resources Department

Page 2

March 30, 1992

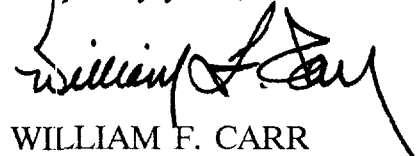
- (2) The injection pattern boundaries of the project area are different. Originally, two separate twenty-two and one half area five-spot patterns were planned. Now, however, one twenty-two and one half-acre inverted five-spot pattern and one ten acre inverted five spot pattern are proposed;
- (3) Unlike the previous proposal, all well bores within one half mile of an injection well must now be repaired to comply with the Federal Underground Injection Control Program; and
- (4) West Loco Hills G4S Unit Tract 13 Well No. 11 located 2310 feet from the North line and 1175 feet from the East line of Section 12, Township 18 South, Range 29 East, was previously designated as one of the wells that fills out one of the inverted five-spot patterns. Actually the West Loco Hills G4S Unit Tract 13 Well No. 4 located 1650 feet from the North line and 330 feet from the East line of Section 12, Township 18 S, Range 29 East is the well that will complete the inverted five-spot pattern.

Yates hopes to obtain the necessary Division approvals to enable it to qualify this new project for the lower severance tax rate authorized by the New Mexico Enhanced Oil Recovery Act. However, to avoid confusion that could result from the approval of the prior project, Yates requests that Order No. R-7821 be rescinded.

Since the Division requires a hearing to approve the new injection well locations, the new injection program, the new project boundary and to approve the new remedial work on existing wells in the project area, it seems reasonable that Yates should be permitted to seek approval of its proposed pilot project as, what it is, a new enhanced oil recovery project and seek certification of the project under the Enhanced Oil Recovery Act.

Your attention to this request is appreciated.

Very truly yours,



WILLIAM F. CARR  
Attorney for Yates Petroleum Corporation

*and the*

WFC:mlh

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 8324  
Order No. R-7821

APPLICATION OF YATES PETROLEUM  
CORPORATION FOR A CARBON DIOXIDE  
INJECTION PILOT PROJECT AND  
UNORTHODOX LOCATIONS, EDDY COUNTY,  
NEW MEXICO

*See Also Exhibit*  
*No. R-7821-A*

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8 a.m. on September 19 and October 17, 1984, at Santa Fe, New Mexico, before Examiners Michael E. Stogner and Gilbert P. Quintana, respectively.

NOW, on this 21st day of February, 1985, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Yates Petroleum Corporation, seeks authority to initiate and conduct a pilot carbon dioxide/water injection project to be known as the Yates Petroleum Loco Hills CO<sub>2</sub> Pilot Injection Project, hereinafter referred to as "pilot project", for tertiary recovery purposes and to test the CO<sub>2</sub> miscible process in the Fourth Sand Member of the Grayburg<sup>2</sup> formation underlying the E/2 of Section 12, Township 18 South, Range 29 East, NMPM, and the W/2 of Section 7, Township 18 South, Range 30 East, NMPM, both sections located in the Loco Hills Queen Grayburg San Andres Pool, West Loco Hills Grayburg No. 4 Sand Unit, Eddy County, New Mexico.

(3) The applicant proposes to initially develop its proposed pilot project on a 22 1/2-acre (approximate) inverted five-spot injection pattern and would require the drilling of

two carbon dioxide/water injection wells at unorthodox locations, the West Loco Hills G4S Unit Tract 13 Well No. 12 to be located 1980 feet from the North line and 10 feet from the East line (Unit H) and the West Loco Hills G4S Unit Tract 6 Well No. 5 to be located 2475 feet from the South line and 10 feet from the East line (Unit I), both wells in said Section 12, Township 18 South, Range 29 East.

(4) The operator of the above-described injection wells should take all steps necessary to ensure that the injected fluids enter only the proposed injection interval and are not permitted to escape to other formations or onto the surface via surrounding injection, production, and/or plugged and abandoned wells.

(5) To fully develop and complete the above-described inverted five-spot injection pattern, an additional producing well will be required to be drilled at an undetermined and possible unorthodox location in the SW/4 NE/4 (Unit H) of said Section 12, Township 18 South, Range 29 East. Also, the following existing wells will be utilized as production wells:

West Loco Hills G4S Unit Tract 13 Well No. 11 located 2310 feet from the North line and 1175 feet from the East line (Unit H);

West Loco Hills G4S Unit Tract 6 Well No. 1 located 1980 feet from the South line and 660 feet from the East line (Unit I);

both wells located in said Section 12, Township 18 South, Range 29 East;

West Loco Hills G4S Unit Tract 1 Well No. 2 located 1650 feet from the North line and 330 feet from the West line (Unit E);

West Loco Hills G4S Unit Tract 1 Well No. 8 located 2310 feet from the North line and 330 feet from the West line (Unit E);

West Loco Hills G4S Unit Tract 1 Well No. 3 located 1980 feet from the South line and 660 feet from the West line (Unit L);

the three above-described wells all located in said Section 7, Township 18 South, Range 30 East.

(6) At the time of the hearing the applicant requested that upon an analysis of the reservoir and fluid

characteristics from any of the wells that make up the aforesaid 22 1/2-acre inverted five-spot injection pattern, it is shown that the area is not suitable for a pilot carbon dioxide/water injection project, the operator should then have the flexibility to drill and/or convert existing wells to be utilized as either carbon dioxide/water injection wells and/or producing wells at locations other than those described in Finding Paragraphs Nos. (3) and (5) above, provided, however, that no such well would be located outside the project area as described in Finding Paragraph No. (2) above.

(7) There are several wells that lie between the outside of the aforesaid 22 1/2-acre inverted five-spot injection pattern and within a half mile radius of the aforesaid proposed injection wells which may or may not have been plugged and abandoned or completed in such a manner as to ensure that they do not provide an avenue of escape for the injected fluids from the proposed zone of interest.

(8) The evidence presently available indicates that said wells should not be adversely affected by the injected fluids since migration of such fluids outside the pilot project area should not occur.

(9) To assure that the injected fluid does not escape the injection interval through or around any of the wells referenced in Finding Paragraph No. (7) above, the pilot project should be confined to only those wells as described in Finding Paragraphs Nos. (3) and (5), above, and the applicant's request for administrative expansion of the pilot project area should be denied.

(10) The area of the pilot project with which this order will hereinafter be concerned is described as follows:

EDDY COUNTY, NEW MEXICO

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM

Section 12: SE/4 NE/4 and NE/4 SE/4

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM

Section 7: SW/4 NW/4 and NW/4 SW/4

(11) The pilot project is in an area where extensive primary and secondary recovery operations have been conducted, (see Division Order No. R-2178, as amended), and is of an experimental nature in order to evaluate the effectiveness of carbon dioxide injection into the subject reservoir and to

provide a study of zone isolation, vertical heterogeneity, reservoir directional variation, and the carbon dioxide displacement process.

(12) Prior to commencing injection operations, the casing in the injection wells in the pilot project should be pressure-tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(13) The injection into each of the injection wells, as described in Finding Paragraph No. (3) above, should be accomplished through either 2 7/8-inch or 2 3/8-inch plastic lined tubing installed in a packer set not more than 100 feet above the uppermost perforation; the casing-tubing annulus of each injection well should be filled with an inert fluid; and a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(14) Said injection wells herein authorized and/or the injection pressurization system should be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth to the uppermost perforations, provided however, the Division Director may authorize a higher surface injection pressure upon satisfactory showing that such pressure will not result in fracturing of the confining strata.

(15) The operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure test on each of the proposed injection wells so that the same may be inspected.

(16) The evidence presently available indicates that there is no fresh water within the area of interest.

(17) In the event the pilot project is successful and indicates the desirability and economic feasibility of the process, the pilot project could be expanded to include additional lands and wells, and could result in the production of otherwise unrecoverable oil, thereby preventing waste.

(18) The pilot project is to be conducted well within the boundaries of the West Loco Hills Grayburg No. 4 Sand Unit Area, a unitized area, and will therefore not impair correlative rights.

(19) The proposed pilot project should be approved, as well as the requested unorthodox injection and oil well

locations as described in Finding Paragraphs Nos. (3) and (5), respectively, above.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Yates Petroleum Corporation, is hereby authorized to initiate and conduct a pilot carbon dioxide/water injection project known as the Yates Petroleum Corporation Loco Hills CO<sub>2</sub> Pilot Injection Project, hereinafter referred to as "pilot project" in the Fourth Sand Member of the Grayburg formation underlying the SE/4 NE/4 and NE/4 SE/4 (Units H and I, respectively) of Section 12, Township 18 South, Range 29 East, NMPM, and the SW/4 NW/4 and NW/4 SW/4 (Units E and L, respectively) of Section 7, Township 18 South, Range 30 East, NMPM, both portions of said sections located in the Loco Hills Queen Grayburg San Andres Pool, West Loco Hills Grayburg No. 4 Sand Unit, Eddy County, New Mexico.

(2) The applicant is hereby authorized to initially develop the above-described pilot project on a 22 1/2-acre (approximate) inverted five-spot injection pattern utilizing the following wells to be drilled as carbon dioxide/water injection wells at unorthodox locations hereby approved:

West Loco Hills G4S Unit Tract 13 Well No. 12 to be located 1980 feet from the North line and 10 feet from the East line (Unit H);

West Loco Hills G4S Unit Tract 6 Well No. 5 to be located 2475 feet from the South line and 10 feet from the East line (Unit I);

both in said Section 12, Township 18 South, Range 29 East.

(3) Injection into each of the above-described injection wells shall be accomplished through either 2 7/8-inch or 2 3/8-inch tubing installed in a packer set not more than 100 feet above the uppermost perforation;

PROVIDED HOWEVER THAT, the tubing shall be internally plastic-lined; the casing-tubing annulus of each injection well shall be filled with an inert fluid; and a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, and/or packer.

PROVIDED FURTHER THAT, prior to commencing injection operations, the casing in the subject wells shall be pressure-tested to assure the integrity of such casing in a

manner that is satisfactory to the supervisor of the Division's district office at Artesia.

(4) The injection wells herein authorized and/or the injection pressurization system shall be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth to the uppermost perforations therein, provided however, the Division Director may authorize a higher surface injection pressure upon satisfactory showing that such pressure will not result in fracturing of the confining strata.

(5) The operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure test in order that the same may be witnessed.

(6) To further develop the above-described inverted five-spot injection pattern, the applicant is hereby authorized to drill an additional producing well at an undetermined and possible unorthodox location in the SE/4 NE/4 (Unit H) of said Section 12, Township 18 South, Range 29 East, provided said well shall be located not closer than 10 feet to any boundary of said quarter-quarter section.

(7) The following existing wells are hereby approved as production wells within the pilot project to fully develop and complete the aforesaid inverted five-spot injection pattern:

West Loco Hills G4S Unit Tract 13 Well No. 11 located 2310 feet from the North line and 1175 feet from the East line (Unit H);

West Loco Hills G4S Unit Tract 6 Well No. 1 located 1980 feet from the South line and 660 feet from the East line (Unit I);

both wells being located in said Section 12, Township 18 South, Range 29 East;

West Loco Hills G4S Unit Tract 1 Well No. 2 located 1650 feet from the North line and 330 feet from the West line (Unit E);

West Loco Hills G4S Unit Tract 1 Well No. 8 located 2310 feet from the North line and 330 feet from the West line (Unit E);

West Loco Hills G4S Unit Tract 1 Well No. 3 located 1980 feet from the South line and 660 feet from the



West line (Unit L);

The three above described wells being located in said Section 7, Township 18 South, Range 30 East.

(8) The operator shall immediately notify the Supervisor of the Artesia district office of the Division of the failure of the tubing, casing, packer, or cement in any well in the pilot project, or of the leakage of fluid from or around any of said wells and shall take such timely steps as may be necessary to correct such failure or leakage.

(9) Any such time that any of the producing wells in the pilot project are shut-in for over 90 consecutive days, the Supervisor of the Artesia district office shall be notified, at which time it shall be demonstrated that any wells that lie between the outside of the aforesaid inverted five-spot injection pattern and within a half mile radius of the aforesaid injection wells will not be adversely affected by the carbon dioxide/water injection operations.

(10) The Yates Petroleum Loco Hills CO<sub>2</sub> Pilot Injection Project shall be governed by this order and the rules contained herein and by the provisions of Rules 701 through 708 of the Division Rules which are not in conflict with this order.

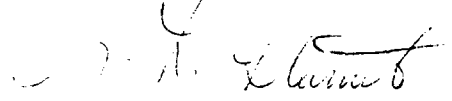
(11) Monthly project reports of the project herein authorized shall be submitted to the Division in accordance with Rule 706 of the Division Rules, separately designating volumes of carbon dioxide and water injected.

(12) The application for administrative approval for the expansion of the pilot project area is hereby denied.

(13) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
R. L. STAMETS,  
Director

S E A L

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

CASE NO. 8324  
Order No. R-7821-A

APPLICATION OF YATES PETROLEUM  
CORPORATION FOR A CARBON DIOXIDE  
INJECTION PILOT PROJECT AND UNORTHODOX  
LOCATIONS, EDDY COUNTY, NEW MEXICO

*See Also*  
*Order*  
*No. R-7821*

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-7821, dated February 21, 1985, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED THAT:

(1) The reference to the " SW/4 NE/4 (Unit H) of Section 12" in lines 4 and 5 of Finding Paragraph No. (5) on page 2 of Division Order No. R-7821, dated February 21, 1985, is incorrect and is hereby amended to show "the SE/4 NE/4 (Unit H) of Section 12."

(2) The well described as the,

" West Loco Hills G4S Unit Tract 13 Well No. 11  
located 2310 feet from the North line and 1175 feet  
from the East line (Unit H);"

appearing, in part, in Finding Paragraph No. (5) on page 2 and in Ordering Paragraph No. (7) on page 6 of said Order No. R-7821, is hereby amended to read as follows:

"West Loco Hills G4S Unit Tract 13 Well No. 4 located  
1650 feet from the North line and 330 feet from the  
East line (Unit H);"

(3) The corrections set forth in this order be entered  
nunc pro tunc as of February 21, 1985.

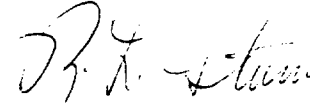
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Case No. 8324

Order No. R-7821-A

DONE at Santa Fe, New Mexico, on this 8th day of May,  
1986.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



R. L. STAMETS  
Director

S E A L

LOCO HILLS-QM-GB-SA continued:

ANADARKO PET CORP continued:

R-5274  
Preston L & M Flood  
\*Capacity Allowable

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BASSETT BIRNEY OIL CORP  
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AKCO Fed.

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MYCO INDUSTRIES, INC.  
Bassett-Birney State

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Robinson  
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MARBOB ENERGY CORP.  
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Langford

R. Travis Jr.  
J. M. MELCH

Aston Federal  
RAY WESTALL

Amoco State  
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LOCO HILLS-QM-GB-SA continued:

\*YATES DRILLING COMPANY

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Denton Federal  
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R-7012  
South Loco Hills Grayburg Unit Flood  
\*Capacity Allowable

S Loco Hills Unit

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LOCO HILLS-QM-GB-SA continued:

YATES PET. CORP. continued:

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LOCO HILLS-QM-GB-SA continued:

YATES PET. CORP. continued:

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# WEST LOCO HILLS GRAYBURG No. 4 SAND UNIT AREA

No. 14-08-0001-8528


APPROVED: June 27, 1963

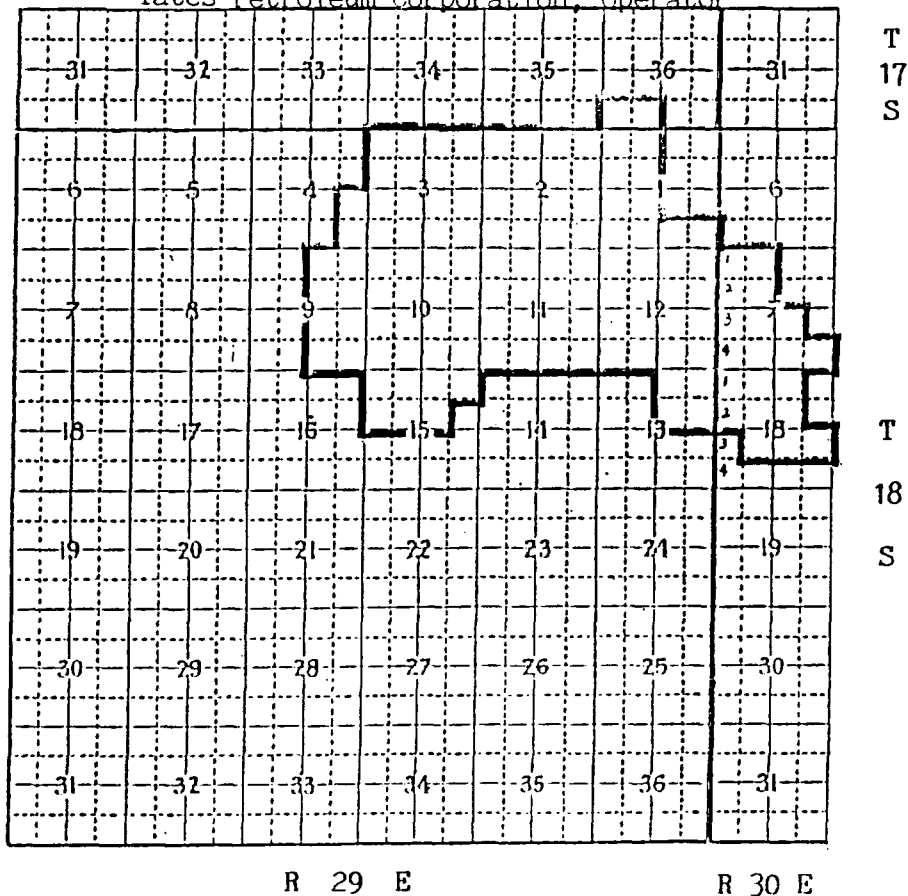
EFFECTIVE: July 1, 1963

## WATERFLOOD

Loco Hills Grayburg No. 4 Sand Formation  
Eddy County, New Mexico

Yates Petroleum Corporation, Operator

 **gulram, inc.**  
petroleum engineering and government regulation consultants



Federal Lands	3,947.73 acres
State Lands	1,280.00 acres
Fee Lands	<u>80.00</u> acres
Total	5,307.73 acres

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE NO. 2473  
Order No. R-2178

APPLICATION OF NEWMONT OIL COMPANY  
FOR EXPANSION OF ITS LOCO HILLS  
WATERFLOOD PROJECT, EDDY COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

R-2178 C

This cause came on for hearing at 9 o'clock a.m. on January 4, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 30th day of January, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Newmont Oil Company, seeks permission to expand its Loco Hills Waterflood Project to include the West Loco Hills Grayburg No. 4 Sand Unit Area, comprising 5,320 acres, more or less, in Townships 17 and 18 South, Ranges 29 and 30 East, NMPM, Eddy County, New Mexico, which unit was approved by Order No. R-2166.

(3) That the applicant seeks permission to operate the expanded waterflood project as a "capacity" type flood unrestricted by the allowable provisions of Rule 701 E.

(4) That in the interest of increasing ultimate recovery in the Loco Hills Pool, the applicant should be authorized to

conduct waterflood operations in the West Loco Hills Grayburg No. 4 Sand Unit Area by the injection of water into the Loco Hills Sand; that the allowables to be assigned to wells in this project should be governed by the provisions of Rule 701 E, except that a buffer zone should be established in which allowables would be unrestricted.

(5) That production from wells outside the buffer zone should be tanked separately from production from wells inside the buffer zone unless the applicant receives approval from the Commission for some other satisfactory means of determining production from each of the two areas.

(6) That for the purpose of determining the project area and computing the project allowable under Rule 701 E, any producing well in said project area lying outside the buffer zone should be entitled to receive credit for offsetting an injection well regardless of whether the injection well is in the buffer zone or in the project area.

IT IS THEREFORE ORDERED:

(1) That the applicant, Newmont Oil Company, is hereby authorized to institute a waterflood in the Loco Hills Pool within the West Loco Hills Grayburg No. 4 Sand Unit Area located in Townships 17 and 18 South, Ranges 29 and 30 East, NMPM, Eddy County, New Mexico, by the injection of water initially into the following-described wells:

Ballard B No. 1 - SE/4 NW/4 Section 1, Township 18 South,  
Range 29 East

Dixon Yates Federal No. 2 - SE/4 SE/4 Section 1, Township  
18 South, Range 29 East

Newmont Canfield No. 1-A - NW/4 NW/4 Section 7, Township  
18 South, Range 30 East

(2) That the ultimate project area for said waterflood shall consist of all the acreage within the said West Loco Hills Grayburg No. 4 Sand Unit Area, except the following-described acreage which shall constitute a buffer zone:

TOWNSHIP 17 SOUTH, RANGE 29 EAST  
Section 36: S/2 SW/4

TOWNSHIP 18 SOUTH, RANGE 29 EAST

Section 1: W/2 and S/2 SE/4

Section 12: NE/4 and N/2 NW/4

TOWNSHIP 18 SOUTH, RANGE 30 EAST

Section 7: NW/4

(3) That the wells located within the above-described buffer zone may be operated at unrestricted rates of production.

(4) That all producing wells located within said waterflood project and outside the above-described buffer zone shall be operated and produced in accordance with the allowable provisions of Rule 701 E of the Commission Rules and Regulations.

(5) That for the purpose of determining the project area and computing the project allowable under Rule 701 E, any producing well in said project area lying outside the buffer zone shall be entitled to receive credit for offsetting an injection well regardless of whether the injection well is in the buffer zone or in the project area.

(6) That production from wells outside the buffer zone shall be tanked separately from production from wells inside the buffer zone unless the applicant receives approval from the Commission for some other satisfactory means of determining production from each of the two areas.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

S E A L

A. L. PORTER, Jr., Member & Secretary

ir/



BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2520  
Order No. R-2178-A

APPLICATION OF NEWMONT OIL COMPANY  
FOR AN AMENDMENT OF ORDER NO. R-2178,  
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

R-2178-C

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on April 10, 1962, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 26th day of April, 1962, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That by Order No. R-2178, entered in Case No. 2473 on January 30, 1962, the Commission authorized Newmont Oil Company to institute a waterflood in the Loco Hills Pool within the West Loco Hills Grayburg No. 4 Sand Unit Area in Eddy County, New Mexico. Said order provided that Rule 701-E of the Commission's Rules and Regulations governed the determination of the project area and of the project allowable, and established a buffer zone within which wells could be produced at unrestricted rates.

(3) That Newmont Oil Company seeks an amendment of said Order No. R-2178 to provide for an exception to Rule 701-E to define the waterflood project area of the West Loco Hills Grayburg No. 4 Sand Unit as comprising all developed proration units in said unit area whether or not the units are offset by injection wells, and to assign to said project area the maximum allowable authorized by Rule 701-E, said allowable to be produced from any well or wells in the unit area. As an alternative, approval is requested of an allowable equal to the maximum allowable authorized by Rule 701-E for all wells in the unit area, to be produced from any well or wells therein.

(4) That in Case No. 1787, Order No. R-1525, by which Rule 701 was promulgated, the Commission determined that reasonable curtailment of production in waterflood projects does not result in a loss of ultimate recovery. Said determination was made only after full consideration of the varying reservoir conditions encountered in the oil pools of New Mexico.

(5) That the applicant in this case failed to prove that the Loco Hills Pool is sufficiently different from other oil pools in New Mexico to justify an exception to Rule 701.

(6) That the applicant failed to prove that waste would be caused or that correlative rights would be violated by operating the subject waterflood project under the provisions of Rule 701 and pursuant to Order No. R-2178.

(7) That the application should be denied.

IT IS THEREFORE ORDERED:

That the application of Newmont Oil Company for an amendment of Order No. R-2178 is hereby denied.

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

S E A L

A. L. PORTER, Jr., Member & Secretary

BEFORE THE OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2578  
Order No. R-2178-B

APPLICATION OF NEWMONT OIL COMPANY  
FOR APPROVAL OF A DEVELOPMENT PLAN  
FOR THE LOCO HILLS WATERFLOOD PROJ-  
ECT, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 7, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 14th day of June, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That by Order No. R-2178, entered in Case No. 2473 on January 30, 1962, the Commission authorized Newmont Oil Company to institute a waterflood in the Loco Hills Grayburg No. 4 Sand Unit Area in Eddy County, New Mexico. Said order provided that Rule 701-E of the Commission Rules and Regulations governed the determination of the project area and of the project allowable, and established a buffer zone within which wells could be produced at unrestricted rates.

(3) That the applicant seeks approval of a plan of development for the Loco Hills Waterflood Project, Eddy County, New Mexico, which would permit the conversion of wells to water injection by stages.

(4) That an administrative procedure should be established whereby wells may be converted to injection by stages rather than after experiencing substantial response to water injection as required by Rule 701-E (5).

(5) That approval of the subject application will not alter the manner in which allowable would be assigned to the waterflood

project area under the provisions of Rule 701, and will result in certain operating convenience to the applicant.

IT IS THEREFORE ORDERED:

(1) That an administrative procedure is hereby established whereby the applicant, Newmont Oil Company, may convert wells to injection by stages within its Loco Hills Sand Unit Waterflood Project, Eddy County, New Mexico. Five stages hereinafter designated and described are hereby established within which wells may be converted to water injection:

STAGE I

January 1, 1963  
to June 30, 1963

E/2 of Section 2, NE/4 and N/2 SE/4 of Section 11, and S/2 NW/4 and S/2 of Section 12, Township 18 South, Range 29 East, and SW/4, W/2 SE/4, and SE/4 SE/4 of Section 7, Township 18 South, Range 30 East.

STAGE II

July 1, 1963  
to December 31, 1963

W/2 of Section 2, W/2 of Section 11, and NE/4 of Section 13, Township 18 South, Range 29 East, NW/4, W/2 NE/4, NE/4 SW/4, and N/2 SE/4 of Section 18, Township 18 South, Range 30 East.

STAGE III

January 1, 1964  
to June 30, 1964

E/2 of Section 3, E/2 of Section 10, and W/2 NE/4 of Section 15, Township 18 South, Range 29 East.

STAGE IV

July 1, 1964  
to December 31, 1964

W/2 of Section 3, W/2 of Section 10, and NW/4 of Section 15, Township 18 South, Range 29 East.

STAGE V

After January 1, 1965

E/2 SE/4 of Section 4 and E/2 of Section 9, Township 18 South, Range 29 East.

(2) That application for administrative approval to convert wells to injection within the above-described stages shall be made in the normal manner under Rule 701-E (5), and shall include data concerning the casing and cementing program in the proposed injection well. A copy of said application shall be furnished to the office of the State Engineer.

-3-

CASE No. 2578

Order No. R-2178-B

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2805  
Order No. R-2178-C

APPLICATION OF NEWMONT OIL  
COMPANY FOR AN AMENDMENT OF  
ORDER NO. R-2178-B.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on May 15, 1963, at Roswell, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 11th day of June, 1963, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That Order No. R-2178-B established an administrative procedure authorizing Newmont Oil Company to convert wells to injection by stages within its Loco Hills Sand Unit Waterflood Project Area, Eddy County, New Mexico.

(3) That Order No. R-2178-B established five stages for conversion to water injection with specific dates for operation of each stage of the flood.

(4) That although the applicant attempted in good faith to comply with the provisions of Order No. R-2178-B, the applicant was unable to finalize the unit agreement in time to comply with the specific dates set out in Order No. R-2178-B.

(5) That the applicant now seeks an amendment of Order No. R-2178-B to provide that Stage I will commence six months after the effective date of the unit agreement and that each successive stage of conversion will commence at six months intervals thereafter.

CASE No. 2805  
Order No. R-2178-C

(6) That approval of the subject application will allow the operator to recover otherwise unrecoverable oil, thereby preventing waste.

IT IS THEREFORE ORDERED:

(1) That Order No. R-2178-B is hereby amended by deleting therefrom any and all reference to specific dates for commencement or expiration of any and all stages for conversion to water injection and by addition of the following provision:

That Stage I of conversion to water injection shall not commence until six months after approval of the unit agreement by the Director of the United States Department of Interior or his authorized representative, and that each successive stage of conversion to water injection shall commence at six months intervals thereafter.

PROVIDED HOWEVER, That this order shall not be effective unless the Director of the United States Department of Interior or his authorized representative approves the unit agreement on or before September 1, 1963.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

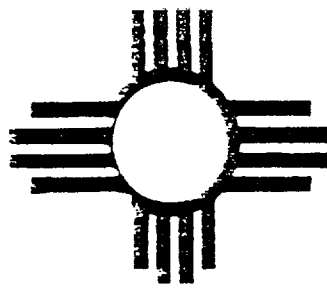
JACK M. CAMPBELL, Chairman

E. S. WALKER, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/



# The Legislature of the State of New Mexico

40th Legislature, 2nd Session

LAWS 1992

CHAPTER 38

HOUSE BILL 23, as amended

with emergency clause, and Certificate of Correction

## Introduced by

REPRESENTATIVES DONALD L. WHITAKER, E. KELLY MORA, DAVID G. MARTINEZ,  
ANGIE VIGIL PEREZ, ROBERT P. WALLACH, GARY D. ROBBINS, HENRY KIKI SAAVEDRA,  
H. JOHN UNDERWOOD, MICHAEL OLGUIN, CISCO MCSORLEY, EARLENE ROBERTS,  
RICHARD P. CHENEY, LINN J. TYTLER, MARIANO (MARIO) TORREZ, BEN LUJAN,  
RAYMOND G. SANCHEZ, RICHARD E. OLSON, ROBERT S. LIGHT,  
MAX COLL, PAUL W. HARRINGTON, JERRY W. SANDEL,  
JOE M. STELL, RAMON HUERTA, PAUL D. BARBER,  
KIP W. NICELY, LUCIANO "LUCKY" VARELA,  
GEORGE D. BUFFETT AND FREDERICK A. PERALTA



FOR THE ENERGY, NATURAL RESOURCES AND  
ENVIRONMENT COMMITTEE AND

THE REVENUE STABILIZATION AND TAX  
POLICY REVIEW COMMITTEE

EMERGENCY CLAUSE



State of New Mexico  
House of Representatives

OFFICE of the CHIEF CLERK

Santa Fe

STEPHEN RAY ARIAS

FORTIETH LEGISLATURE

CHIEF CLERK 1983

SECOND SESSION, 1992

C E R T I F I C A T E   O F   C O R R E C T I O N

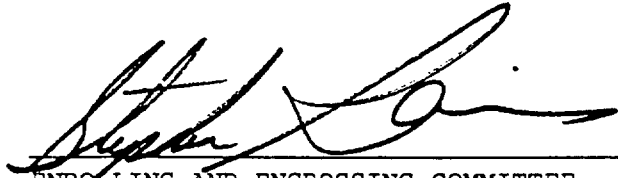
The following error was found in

HOUSE BILL 23, as amended, with emergency clause

and has been corrected in enrolling and engrossing:

1. On page 11, line 11 of printed bill, the period has been deleted and replaced with the punctuation and word "; and", and appears on page 11, line 9 of the enrolled and engrossed bill.

Respectfully submitted,



ENROLLING AND ENGROSSING COMMITTEE  
CHAIRMAN  
HOUSE OF REPRESENTATIVES

# CHAPTER 38

## AN ACT

1 RELATING TO TAXATION; ENACTING THE ENHANCED OIL RECOVERY ACT;  
2 AMENDING AND ENACTING CERTAIN SECTIONS OF THE NMSA 1978; DECLARING  
3 AN EMERGENCY.  
4

5  
6 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF NEW MEXICO:

7 Section 1. SHORT TITLE.--Sections 1 through 5 of this act may  
8 be cited as the "Enhanced Oil Recovery Act".

9 Section 2. DEFINITIONS.--As used in the Enhanced Oil Recovery  
10 Act:

11 A. "crude oil" means oil and other liquid hydrocarbons  
12 removed from natural gas at or near the wellhead;

13 B. "division" means the oil conservation division of the  
14 energy, minerals and natural resources department;

15 C. "enhanced recovery project" means the use or the  
16 expanded use of any process for the displacement of crude oil from  
17 an oil well or pool classified by the division pursuant to Paragraph  
18 (11) of Subsection B of Section 70-2-12 NMSA 1978 other than a  
19 primary recovery process, including but not limited to the use of a  
20 pressure maintenance process, a water flooding process, an immisci-  
21 ble, miscible, chemical, thermal or biological process or any other  
22 related process;

23 D. "expansion or expanded use" means a significant change  
24 or modification, as determined by the oil conservation division in:

25 (1) the technology or process used for the

1 displacement of crude oil from an oil well or pool classified by the  
2 division pursuant to Paragraph (11) of Subsection B of Section  
3 70-2-12 NMSA 1978; or

4 (2) the expansion, extension or increase in size of  
5 the geologic area or adjacent geologic area that could reasonably be  
6 determined to represent a new or unique area of activity;

7 E. "operator" means the person responsible for the actual  
8 physical operation of an enhanced recovery project;

9 F. "person" means any individual, estate, trust, re-  
10 ceiver, business trust, corporation, firm, copartnership, coopera-  
11 tive, joint venture, association or other group or combination  
12 acting as a unit, and the plural as well as the singular number;

13 G. "positive production response" means that the rate of  
14 oil production from the wells or pools affected by an enhanced  
15 recovery project is greater than the rate that would have occurred  
16 without the project;

17 H. "primary recovery" means the displacement of crude oil  
18 from an oil well or pool classified by the division pursuant to  
19 Paragraph (11) of Subsection B of Section 70-2-12 NMSA 1978 into the  
20 well bore by means of the natural pressure of the oil well or pool,  
21 including but not limited to artificial lift;

22 I. "recovered oil tax rate" means that tax rate, as set  
23 forth in Paragraph (3) of Subsection A of Section 7-29-4 NMSA 1978,  
24 on crude oil produced from an enhanced recovery project;

25 J. "secondary recovery project" means an enhanced

1 recovery project that:

2 (1) occurs subsequent to the completion of primary  
3 recovery and is not a tertiary recovery project;

4 (2) involves the application, in accordance with  
5 sound engineering principles, of carbon dioxide miscible fluid  
6 displacement, pressure maintenance, water flooding or any other  
7 secondary recovery method accepted and approved by the division  
8 pursuant to the provisions of Paragraph (14) of Subsection B of  
9 Section 70-2-12 NMSA 1978 that can reasonably be expected to result  
10 in an increase, determined in light of all facts and circumstances,  
11 in the amount of crude oil that may ultimately be recovered; and

12 (3) encompasses a pool or portion of a pool the  
13 boundaries of which can be adequately defined and controlled;

14 K. "severance" means the taking from the soil of any  
15 product in any manner whatsoever;

16 L. "termination" means the discontinuance of an enhanced  
17 recovery project by the operator; and

18 M. "tertiary recovery project" means an enhanced recovery  
19 project that:

20 (1) occurs subsequent to the completion of a second-  
21 ary recovery project;

22 (2) involves the application, in accordance with  
23 sound engineering principles, of carbon dioxide miscible fluid  
24 displacement, pressure maintenance, water flooding or any other  
25 tertiary recovery method accepted and approved by the division

1 pursuant to the provisions of Paragraph (14) of Subsection B of  
2 Section 70-2-12 NMSA 1978 that can reasonably be expected to result  
3 in an increase, determined in light of all facts and circumstances,  
4 in the amount of crude oil that may ultimately be recovered; and

5 (3) encompasses a pool or portion of a pool the  
6 boundaries of which can be adequately defined and controlled.

7 Section 3. PROCEDURES FOR QUALIFYING FOR THE RECOVERED OIL TAX  
8 RATE.--

9 A. Crude oil severed and sold from an enhanced recovery  
10 project or the expansion of an existing project shall qualify for  
11 the recovered oil tax rate if, before the enhanced recovery project  
12 or expansion begins operation, the division approves the project or  
13 expansion and designates the area to be affected by the project or  
14 expansion, but no project or expansion approved by the division  
15 prior to the effective date of the Enhanced Oil Recovery Act shall  
16 qualify for the recovered oil tax rate.

17 B. The operator of a proposed enhanced recovery project  
18 or expansion shall apply to the division for approval of the pro-  
19 posed enhanced recovery project or expansion and shall provide the  
20 division with any relevant information the division requires for  
21 that approval.

22 C. If approval by the division of a unitization agreement  
23 as set forth in Chapter 70, Article 7 NMSA 1978 is required for  
24 purposes of carrying out the enhanced recovery project or expansion,  
25 the division shall not approve the enhanced recovery project or

1 expansion unless it approves the unitization agreement.

2 D. An operator may apply for approval of a proposed  
3 enhanced recovery project or expansion concurrently with an applica-  
4 tion for approval of a unitization agreement as set forth in Chapter  
5 70, Article 7 NMSA 1978 for the purposes of carrying out the pro-  
6 posed enhanced recovery project or expansion.

7 E. The division shall only approve a proposed enhanced  
8 recovery project or expansion if it determines that the application  
9 for approval has not been prematurely filed either for economic or  
10 technical reasons and that the area to be affected by the enhanced  
11 recovery project or expansion has been so depleted that it is  
12 prudent to apply enhanced recovery techniques to maximize the  
13 ultimate recovery of crude oil from the well or pool.

14 F. Upon the approval of the application for an enhanced  
15 recovery project or expansion, the division shall issue a certifica-  
16 tion of approval to the operator and designate the area to be  
17 affected by the enhanced recovery project or expansion.

18 G. The recovered oil tax rate shall apply only to the  
19 crude oil produced from the area the division certifies to be  
20 affected by the enhanced recovery project or expansion.

21 H. The operator shall file an application for certifica-  
22 tion of a positive production response with the division to be  
23 eligible to receive the recovered oil tax rate.

24 I. The recovered oil tax rate shall only apply to crude  
25 oil produced from an enhanced recovery project or the expansion of

1 an existing project beginning the first day of the month following  
2 the date the division certifies that a positive production response  
3 has occurred and if the application for certification of positive  
4 production response is filed:

5 (1) not later than five years from the date the  
6 division issues the certification of approval of the enhanced  
7 recovery project or expansion if the enhanced recovery project or  
8 expansion is designated a secondary recovery project; or

9 (2) not later than seven years from the date the  
10 division issues the certification of approval of the enhanced  
11 recovery project or expansion if the enhanced recovery project or  
12 expansion is designated a tertiary recovery project.

13 J. Qualification for the recovered oil tax rate ends on  
14 the first day of the first calendar month that begins on or after  
15 the ninety-first day following the termination of the enhanced  
16 recovery project or expansion.

17 K. If the active operation of an approved enhanced  
18 recovery project or expansion is terminated, the operator shall  
19 notify the division and the secretary of taxation and revenue in  
20 writing, not later than the thirtieth day after the termination of  
21 the enhanced recovery project or expansion.

22 L. In addition to the powers enumerated in Section  
23 70-2-12 NMSA 1978, the division shall adopt, promulgate and enforce  
24 rules and regulations concerning the approval of the applications,  
25 the designation of the affected areas and the operation, expansion

1 and termination of the enhanced recovery projects as provided for in  
2 the Enhanced Oil Recovery Act.

3 Section 4. NOTIFICATION TO THE SECRETARY OF TAXATION AND  
4 REVENUE--DUTIES OF THE SECRETARY.--

5 A. The division shall immediately notify the secretary of  
6 taxation and revenue upon:

7 (1) certifying that a positive production response  
8 has occurred for an enhanced oil recovery project, in which case the  
9 notice shall contain the date certification was made and the date  
10 positive production response occurred;

11 (2) receiving notification of termination of an  
12 enhanced recovery project, in which case the notice shall contain  
13 the date of termination; and

14 (3) adopting and promulgating rules and regulations  
15 pursuant to the provisions of the Enhanced Oil Recovery Act.

16 B. The secretary of taxation and revenue shall adopt and  
17 promulgate rules and regulations to enforce the provisions of the  
18 Enhanced Oil Recovery Act.

19 Section 5. SECRETARY OF TAXATION AND REVENUE APPROVAL--  
20 REFUND.--

21 A. The person responsible for paying the oil and gas  
22 severance tax on production from the enhanced recovery project shall  
23 not qualify to receive the recovered oil tax rate unless that  
24 person:

25 (1) applies to the secretary of taxation and revenue



1 in the form and manner prescribed by the secretary for approval to  
2 pay the oil and gas severance tax on crude oil severed and saved  
3 from the enhanced recovery project at the recovered oil tax rate;

4 (2) includes the certifications from the division of  
5 approval and designation of the affected areas of the enhanced  
6 recovery project and of a positive production response from the  
7 enhanced recovery project; and

8 (3) provides all relevant material that the secre-  
9 tary of taxation and revenue considers necessary to administer the  
10 applicable provisions of the Enhanced Oil Recovery Act.

11 B. An approval of the secretary of taxation and revenue  
12 in accordance with Subsection A of this section shall be applicable  
13 to crude oil severed and sold from the enhanced recovery project on  
14 and after the first day of the month following the month in which  
15 the division certifies that a positive production response with  
16 respect to the enhanced recovery project has occurred. If the oil  
17 and gas severance tax is paid at a rate imposed in Paragraph (2) of  
18 Subsection A of Section 7-29-4 NMSA 1978 on crude oil severed and  
19 saved from the enhanced recovery project after the month in which  
20 the division certifies that a positive production response with  
21 respect to the enhanced recovery project has occurred, a claim for  
22 refund may be filed in accordance with Section 7-1-26 NMSA 1978 for  
23 the excess in tax over the amount due using the recovered oil tax  
24 rate. Notwithstanding the provisions of Subsection E of Section  
25 7-1-26 NMSA 1978 any such refund granted shall be made in the form

1 of a credit against future oil and gas severance tax liabilities.

2 Section 6. Section 7-29-2 NMSA 1978 (being Laws 1959, Chapter  
3 52, Section 2, as amended) is amended to read:

4 "7-29-2. DEFINITIONS.--As used in the Oil and Gas Severance  
5 Tax Act:

6 A. "commission", "department", "division" or "oil and gas  
7 accounting division" means the taxation and revenue department, the  
8 secretary of taxation and revenue or any employee of the department  
9 exercising authority lawfully delegated to that employee by the  
10 secretary;

11 B. "production unit" means a unit of property designated  
12 by the department from which products of common ownership are  
13 severed;

14 C. "severance" means the taking from the soil any product  
15 in any manner whatsoever;

16 D. "value" means the actual price received for products  
17 at the production unit, except as otherwise provided in the Oil and  
18 Gas Severance Tax Act;

19 E. "product" or "products" means oil, natural gas or  
20 liquid hydrocarbon, individually or any combination thereof, or  
21 carbon dioxide;

22 F. "operator" means any person:

23 (1) engaged in the severance of products from a  
24 production unit; or

25 (2) owning an interest in any product at the time of

1 severance who receives a portion or all of such product for his  
2 interest;

3 G. "primary recovery" means the displacement of oil and  
4 of other liquid hydrocarbons removed from natural gas at or near the  
5 wellhead from an oil well or pool as classified by the oil conserva-  
6 tion division of the energy, minerals and natural resources depart-  
7 ment pursuant to Paragraph (11) of Subsection B of Section 70-2-12  
8 NMSA 1978 into the well bore by means of the natural pressure of the  
9 oil well or pool, including but not limited to artificial lift;

10 H. "purchaser" means a person who is the first purchaser  
11 of a product after severance from a production unit, except as  
12 otherwise provided in the Oil and Gas Severance Tax Act;

13 I. "person" means any individual, estate, trust, re-  
14 ceiver, business trust, corporation, firm, copartnership, coopera-  
15 tive, joint venture, association or other group or combination  
16 acting as a unit, and the plural as well as the singular number;

17 J. "interest owner" means a person owning an entire or  
18 fractional interest of whatsoever kind or nature in the products at  
19 the time of severance from a production unit, or who has a right to  
20 a monetary payment that is determined by the value of such products;

21 K. "new production natural gas well" means a producing  
22 crude oil or natural gas well proration unit that begins its initial  
23 natural gas production on or after May 1, 1987 as determined by the  
24 oil conservation division of the energy, minerals and natural  
25 resources department;

1           L. "qualified enhanced recovery project", prior to  
2 January 1, 1994, means the use or the expanded use of carbon dioxide  
3 when approved by the oil conservation division of the energy,  
4 minerals and natural resources department pursuant to the Enhanced  
5 Oil Recovery Act for the displacement of oil and of other liquid  
6 hydrocarbons removed from natural gas at or near the wellhead from  
7 an oil well or pool classified by the oil conservation division  
8 pursuant to Paragraph (11) of Subsection B of Section 70-2-12 NMSA  
9 1978; and

10           M. "qualified enhanced recovery project", on and after  
11 January 1, 1994, means the use or the expanded use of any process  
12 approved by the oil conservation division of the energy, minerals  
13 and natural resources department pursuant to the Enhanced Oil  
14 Recovery Act for the displacement of oil and of other liquid hydro-  
15 carbons removed from natural gas at or near the wellhead from an oil  
16 well or pool classified by the oil conservation division pursuant to  
17 Paragraph (11) of Subsection B of Section 70-2-12 NMSA 1978, other  
18 than a primary recovery process; the term includes but is not  
19 limited to the use of a pressure maintenance process, a water  
20 flooding process, and immiscible, miscible, chemical, thermal or  
21 biological process or any other related process."

22           Section 7. Section 7-29-4 NMSA 1978 (being Laws 1980, Chapter  
23 62, Section 5, as amended) is amended to read:

24           "7-29-4. OIL AND GAS SEVERANCE TAX IMPOSED--COLLECTION--  
25 INTEREST OWNER'S LIABILITY TO STATE--INDIAN LIABILITY.--

1           A. There is imposed and shall be collected by the depart-  
2 ment a tax on all products that are severed and sold. The measure  
3 of the tax and the rates are:

4               (1) on natural gas severed and sold:

5                   (a) except as provided in Subparagraph (b) of  
6 this paragraph, whichever of the following rates produces the  
7 greater tax: 1) three and three-fourths percent of the value of  
8 products; or 2) using a pressure base of 15.025 pounds per square  
9 inch absolute and at a temperature of sixty degrees fahrenheit, a  
10 tax per one thousand cubic feet (mcf) of sixteen and three-tenths  
11 cents (\$.163) until June 30, 1990, after which the rate of three and  
12 three-fourths percent of the taxable value determined under Section  
13 7-29-4.1 NMSA 1978 of products shall be used; and

14                   (b) from a new production natural gas well,  
15 three and three-fourths percent of the taxable value determined  
16 under Section 7-29-4.1 NMSA 1978;

17               (2) on oil and on other liquid hydrocarbons removed  
18 from natural gas at or near the wellhead, except as provided in  
19 Paragraph (3) of this subsection, three and three-fourths percent of  
20 taxable value determined under Section 7-29-4.1 NMSA 1978;

21               (3) on oil and on other liquid hydrocarbons removed  
22 from natural gas at or near the wellhead produced from a qualified  
23 enhanced recovery project, one and seven-eighths percent of the  
24 taxable value determined under Section 7-29-4.1 NMSA 1978, provided  
25 that the annual average price of west Texas intermediate crude oil,

1 determined by the department by averaging the posted prices in  
2 effect on the last day of each month of the twelve-month period  
3 ending on May 31 prior to the fiscal year in which the tax rate is  
4 to be imposed, was less than twenty-eight dollars (\$28.00) per  
5 barrel; and

6 (4) on carbon dioxide, three and three-fourths  
7 percent of the taxable value determined under Section 7-29-4.1 NMSA  
8 1978.

9 B. Every interest owner shall be liable for this tax to  
10 the extent of his interest in such products. Any Indian tribe,  
11 Indian pueblo or Indian shall be liable for this tax to the extent  
12 authorized or permitted by law.

13 C. The tax imposed by this section may be referred to as  
14 the "oil and gas severance tax".

15 Section 8. EMERGENCY.--It is necessary for the public peace,  
16 health and safety that this act take effect immediately. \_\_\_\_\_

S/ RAYMOND G. SANCHEZ  
RAYMOND G. SANCHEZ, SPEAKER  
HOUSE OF REPRESENTATIVES

S/ STEPHEN R. ARIAS  
STEPHEN R. ARIAS, CHIEF CLERK  
HOUSE OF REPRESENTATIVES

S/ CASEY LUNA  
CASEY LUNA, PRESIDENT  
SENATE

S/ MARGARET LARRAGOITE  
MARGARET LARRAGOITE, CHIEF CLERK  
SENATE

Approved by me this 6th day of March, 1992

15  
BRUCE KING, GOVERNOR  
STATE OF NEW MEXICO

CAMPBELL, CARR, BERGE  
& SHERIDAN, P.A.  
LAWYERS

MICHAEL B. CAMPBELL  
WILLIAM F. CARR  
BRADFORD C. BERGE  
MARK F. SHERIDAN  
WILLIAM P. SLATTERY

PATRICIA A. MATTHEWS  
MICHAEL H. FELDEWERT

JACK M. CAMPBELL  
OF COUNSEL

JEFFERSON PLACE  
SUITE 1 - 110 NORTH GUADALUPE  
POST OFFICE BOX 2208  
SANTA FE, NEW MEXICO 87504-2208  
TELEPHONE (505) 988-4421  
TELECOPIER (505) 983-6043

April 20, 1992

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Enron Oil & Gas Company  
Post Office Box 2267  
Midland, Texas 79702

Re: Application of Yates Petroleum Corporation for its Proposed West Loco Hills  
Grayburg No. 4 Sand Unit CO<sub>2</sub> Pilot Project, Eddy County, New Mexico

Gentlemen:

Enclosed is a copy of Yates Petroleum Corporation's Form C-108 which was filed on this date with the New Mexico Oil Conservation Division. This matter has been set for hearing before a Division Examiner on May 14, 1992.

You are not required to attend this hearing, but as a leasehold operator within one-half mile of an injection well location or the owner of the surface of the land upon which an injection well is to be located, you may appear and present testimony. Failure to appear at that time or otherwise become a party of record will preclude you from challenging this application at a later date.

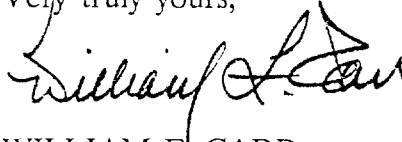
RECEIVED  
APR 20 1992  
OIL CONSERVATION DIVISION



Enron Oil & Gas Company  
April 20, 1992  
Page 2

Parties appearing in cases have been requested by the Division (Memorandum 2-90) to file a Prehearing Statement substantially in the form prescribed by the Division. Prehearing statements should be filed by 4:00 o'clock p.m. on the Friday before a scheduled hearing.

Very truly yours,

A handwritten signature in black ink, appearing to read "William F. Carr". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

WILLIAM F. CARR  
Attorney for Yates Petroleum Corporation

WFC:mlh  
Enc.

cc w/enc.: R. S. Fant, Engineer  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, New Mexico 88210

CAMPBELL, CARR, BERGE

& SHERIDAN, P.A.

LAWYERS

MICHAEL B. CAMPBELL  
WILLIAM F. CARR  
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TELEPHONE (505) 988-4421  
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April 20, 1992

RECEIVED

APR 20 1992

OIL CONSERVATION DIVISION

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

United States Department of the Interior  
Bureau of Land Management  
Post Office Box 1778  
Carlsbad, New Mexico 88220

Re: Application of Yates Petroleum Corporation for its Proposed West Loco Hills  
Grayburg No. 4 Sand Unit CO<sub>2</sub> Pilot Project, Eddy County, New Mexico

Gentlemen:

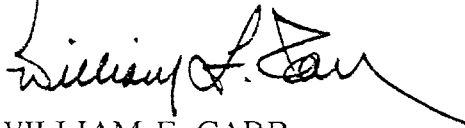
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United States Department of the Interior  
Bureau of Land Management  
April 20, 1992  
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WILLIAM F. CARR  
Attorney for Yates Petroleum Corporation

WFC:mlh  
Enc.

cc w/enc.: R. S. Fant, Engineer  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, New Mexico 88210

**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 10476

APPLICATION OF YATES PETROLEUM CORPORATION  
FOR AMENDMENT OF DIVISION ORDER NO. R-2178,  
AS AMENDED, TO INCLUDE A CARBON DIOXIDE  
INJECTION PILOT PROJECT, TWO UNORTHODOX  
INJECTION WELL LOCATIONS AND TO  
RESCIND DIVISION ORDER NO. R-7821,  
EDDY COUNTY, NEW MEXICO.

**AFFIDAVIT OF MAILING**

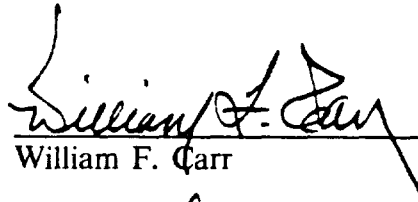
William F. Carr, being duly sworn, states that on April 20, 1992 he mailed a copy of the Application of Yates Petroleum Corporation for Amendment of Division Order No. R-2178, as amended, to include a carbon dioxide injection pilot project, two unorthodox injection well locations and to rescind Division Order No. R-7821, Eddy County, New Mexico with letter(s) setting forth the hearing date, by certified mail, return receipt requested, to the following parties:

United States Department of the Interior  
Bureau of Land Management  
Post Office Box 1778  
Carlsbad, New Mexico 88210

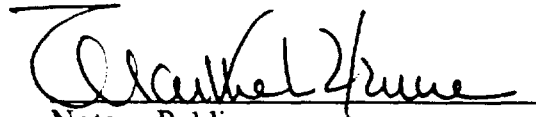
Enron Oil & Gas Company  
Post Office Box 2267  
Midland, Texas 79702

<b>BEFORE EXAMINER STOGNER</b>	
<b>OIL CONSERVATION DIVISION</b>	
<u>YATES</u>	EXHIBIT NO. <u>2</u>
CASE NO. <u>10476</u>	

Further Affiant sayeth naught.

  
William F. Carr

SUBSCRIBED AND SWORN to before me this 13<sup>th</sup> day of May, 1992.

  
Notary Public

My Commission Expires:

August 19, 1995

**CAMPBELL, CARR, BERGE  
& SHERIDAN, P.A.  
LAWYERS**

MICHAEL B. CAMPBELL  
WILLIAM F. CARR  
BRADFORD C. BERGE  
MARK F. SHERIDAN  
WILLIAM P. SLATTERY

PATRICIA A. MATTHEWS  
MICHAEL H. FEJDEWERT

JACK M. CAMPBELL  
OF COUNSEL

JEFFERSON PLACE  
SUITE 1 - 110 NORTH GUADALUPE  
POST OFFICE BOX 2208  
SANTA FE, NEW MEXICO 87504-2208  
TELEPHONE (505) 988-4421  
TELECOPIER (505) 983-6043

April 20, 1992

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

United States Department of the Interior  
Bureau of Land Management  
Post Office Box 1778  
Carlsbad, New Mexico 88220

Re: Application of Yates Petroleum Corporation for its Proposed West Loco Hills  
Grayburg No. 4 Sand Unit CO, Pilot Project, Eddy County, New Mexico

Gentlemen:

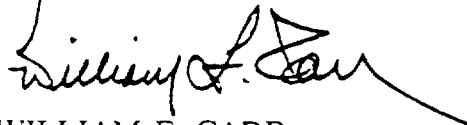
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United States Department of the Interior  
Bureau of Land Management  
April 20, 1992  
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Very truly yours,

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WILLIAM F. CARR  
Attorney for Yates Petroleum Corporation

WFC:mlh

Enc.

cc w/enc.: R. S. Fant, Engineer  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, New Mexico 88210

P-106 677 387

RECEIPT FOR CERTIFIED MAIL

See Reverse

Sent to US Dept. Interior Bureau of Land Management	
Street and No. Post Office Box 1778	
P.O. State and ZIP Code Carlsbad, NM 88220	
Postage	\$ 1.44
Certified Fee	1.00
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	1.00
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$ 3.44
Postmark or Date April 20, 1992	

PS Form 3800, June 1985

**SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.**  
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:  
United States Department of Int.  
Bureau of Land Management  
Post Office Box 1778  
Carlsbad, New Mexico 88220

4. Article Number  
P 106 677 387

Type of Service:  
☐ Registered  
☒ Certified  
☐ Express Mail  
☐ Insured  
☐ COD  
☐ Return Receipt for Merchandise  
 Always obtain signature of addressee or agent of addressee.

5. Signature - Address  
X

6. Signature - Agent  
X *[Signature]*

7. Date of Delivery  
X *April 22*

8. Addressee's Address  
*[Circular Postmark: APR 22 1992]*

PS Form 3811, Mar. 1988 \* U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT



**CAMPBELL, CARR, BERGE  
& SHERIDAN, P.A.  
LAWYERS**

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WILLIAM F. CARR  
BRADFORD C. BERGE  
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SANTA FE, NEW MEXICO 87504-2208  
TELEPHONE (505) 988-4433  
TELECOPIER (505) 983-6043

April 20, 1992

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RETURN RECEIPT REQUESTED**

Enron Oil & Gas Company  
Post Office Box 2267  
Midland, Texas 79702

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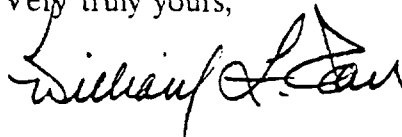
Enron Oil & Gas Company

April 20, 1992

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WILLIAM F. CARR

Attorney for Yates Petroleum Corporation

WFC:mlh

Enc.

cc w/enc.: R. S. Fant, Engineer  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, New Mexico 88210

P-106 677 388

RECEIPT FOR CERTIFIED MAIL

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Street and No. <b>Post Office Box 2267</b>	
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3. Article Addressed to:  <b>Enron Oil &amp; Gas Company Post Office Box 2267 Midland, Texas 79702</b>	4. Article Number  <b>P 106 677 388</b>
5. Signature - Address <b>X</b>	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature - Agent <i>[Signature]</i>	8. Addressee's Address (ONLY if requested and fee paid)  Always obtain signature of addressee or agent and DATE DELIVERED.
7. Date of Delivery <b>APR 23 1992</b>	

PS Form 3811, Mar. 1988 \* U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

APR 20 1992

## APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Tertiary ☐ Secondary Recovery ☐ Pressure Maintenance ☐ ~~Other~~ **OIL CONSERVATION DIVISION**  
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: Yates Petroleum Corporation  
Address: 105 South 4th Street Artesia, NM 88210  
Contact party: Robert S. Fant Phone: (505)748-1471 Ext 185
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ yes ☒ no  
If yes, give the Division order number authorizing the project \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- \* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, **BEFORE EXAMINATION**  
a schematic of any plugged well illustrating all plugging detail. **OIL CONSERVATION DIVISION**
- VII. Attach data on the proposed operation, including:  
1. Proposed average and maximum daily rate and volume of fluids to be injected;  
2. Whether the system is open or closed;  
3. Proposed average and maximum injection pressure; **YATES EXHIBIT NO. 10476**  
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and  
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- \* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: Robert S. Fant Title Petroleum Engineer  
Signature: Robert S. Fant Date: 4/14/92
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

## III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

## XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

---

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Loco Hills CO<sub>2</sub> Pilot Flood C-108

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: Tertiary Recovery  
Application qualifies for administrative approval? No

II. Operator: Yates Petroleum Corporation  
Address: 105 South 4th Street  
Artesia, New Mexico  
Contact Party: Robert S. Fant Phone (505)748-1471 Ext 185

III. Well Data:

A. The following well data must be submitted for each injection well covered by this application.

1. Lease name; well no.; location by Section, Township and Range, and footage location within the section.
  - a. West Loco Hills Unit G4S Tract 1-9  
Section 7-18S-30E 1980 FNL - 40 FWL
  - b. West Loco Hills Unit G4S Tract 1-10  
Section 7-18S-30E 2455 FSL - 50 FWL
2. Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

	<u>Surface</u>	<u>Production</u>
Casing size:	9 5/8"	7"
Depth:	400'+	2850'+
Cement	350 sx	400 sx
Hole Size:	12 1/4"	8 3/4"
Top of Cement	Surface	Surface
Top determined by:	Circulating	Circulating

3. A description of the tubing to be used including its size, lining material, and setting depth.

Tubing Size:	2 7/8"
Lining Material:	Spin Coat
Depth:	Just above perforations

4. The name, model and setting depth of the packer used or a description of any other seal system or assembly used.

Packer Name:	Otis Packer
Model:	Interlok
Depth:	Just above perforations

B. The following must be submitted for each injection well covered by this application.

1. The name of the injection formation and, if applicable, the field or pool name.

Formation: Grayburg  
Field: Loco Hills  
Pool Name: Loco Hills Queen Grayburg San Andres

2. The injection interval and whether it is perforated or open hole.

About 2800' - 2820', perforated

3. State if the well was drilled for injection or, if not, the original purpose of the well.

These wells are being drilled for injection.

4. Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

There are no other perforated intervals.

5. Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

Higher: Penrose Sand - 2350'  
Lower: Premier - 3050'

IV. Is this an expansion of an existing project?

No. However, the Loco Hills Waterflood was previously authorized by the Oil Conservation Commission of New Mexico Case No. 1511, Order No. R-1267 and Case No. 2473, Order No. R-2178. (See attached)

- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review. (See attached map)

VI. Tabulation of well data. (See attached)

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected:

60 tons CO<sub>2</sub> per day per well alternating with 400 bbls per day per well H<sub>2</sub>O. Two months of CO<sub>2</sub> to be followed with one month of H<sub>2</sub>O.

2. Whether the system is open or closed.

The system is closed.

3. Proposed average and maximum injection pressures:

H<sub>2</sub>O and CO<sub>2</sub> surface injection pressure not to exceed 2000 psi.

4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water.

Injection fluid is CO<sub>2</sub> trucked in to the site.

Injection fluid is fresh water delivered from Maljamar Fresh Water System by pipeline and produced water. These waters are compatible as has been proven by injecting them into the West Loco Hills Unit since 1963.

Analysis of CO<sub>2</sub> is not available at this time: however, we will probably be using food quality CO<sub>2</sub> which is 99.9% pure. Analysis of fresh water is attached.

VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geological name, and depth to bottom of all underground sources of drinking water overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

The Loco Hills Sand, which is the zone to be injected, goes from 14 to 61 feet thick with an average of 18 feet. The top of the Loco Hills Sand has a depth range from 2,366 to 2,880 feet. The composition consists of light gray to white and light brown, very finely grained, silty sandstone, sandy and minor shale.



The geologic name of the underground source of drinking water overlying the injection zone is the Rustler formation. The Rustler formation extends down to 360 feet and is comprised of anhydrite and interfingering redbeds. It averages 160 feet in thickness. All shallow water overlying the Rustler is comprised of redbeds. Additional information on file, Case No. 1511, Order No. R-1267.

- IX. Describe the proposed stimulation program if any.

Small acid job only - less than 10,000 gallons.

- X. Attach appropriate logging and test data on the well.

There is none - we propose to drill new injection wells. Information will be submitted when the wells have been drilled.

- XI. Attach a chemical analysis of fresh water from 2 or more fresh water wells within one mile of an injection well.

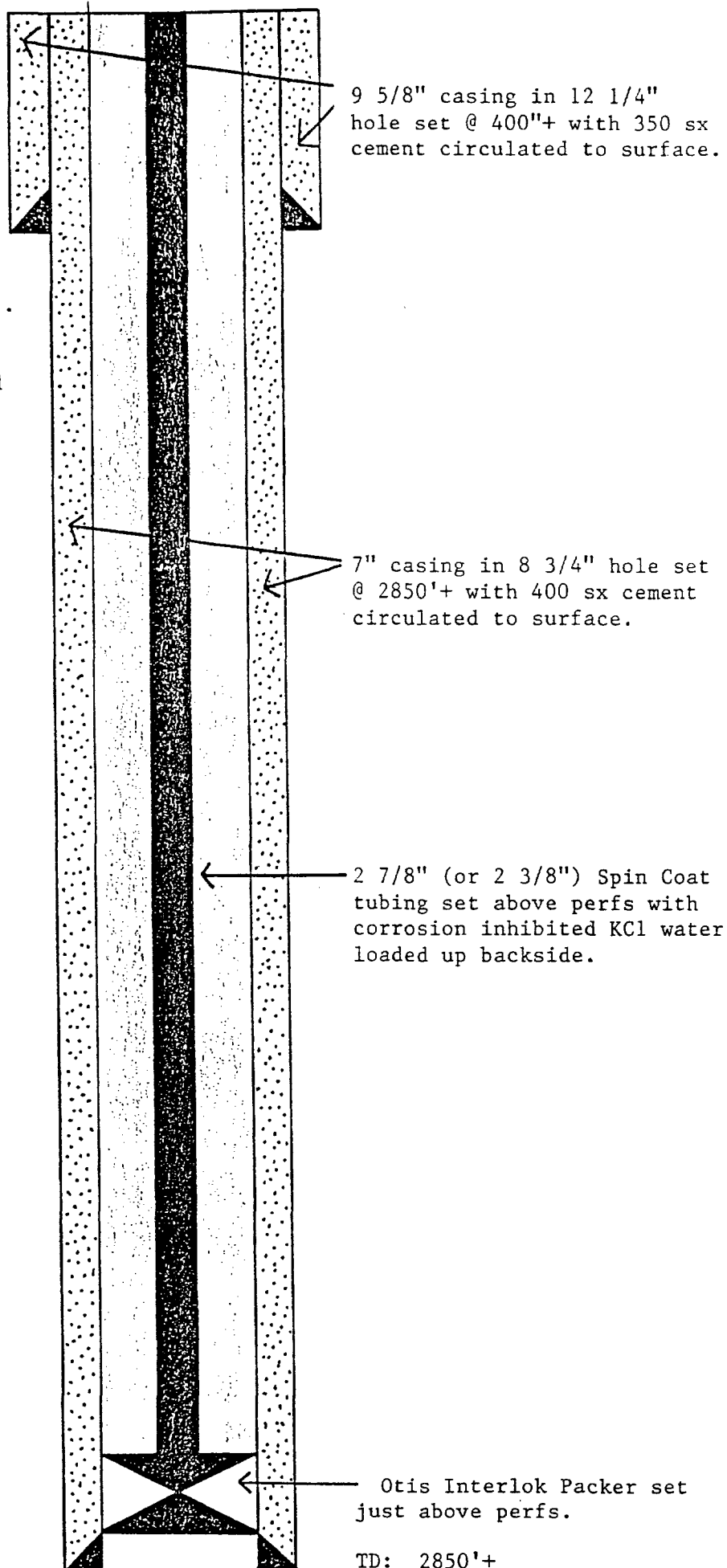
There are no fresh water wells within the one mile radius.

- XII. Affirmative statement: (See attached)

- XIII. Proof of Notice: (See attached)

## PROPOSED INJECTION WELL

West Loco Hills Unit Injection wells will be drilled with 12 1/4" or 10 3/4" bit to top of Salt (400'+). 9 5/8" casing will be run and cement circulated to surface. Cement will be drilled out and the well will TD below the Loco Hills Sand with about 50' of rathole for logging tools (2850'+). 7" J-55 or K-55 20# pipe will be run to TD and cement circulated back to surface. The Loco Hills Sand will be perforated and stimulated to allow injection of 60 tons/day CO<sub>2</sub> or 400 bbls/day water at less than 2000 psi. A stainless steel and plastic coated tension/compression packer will be set just above the perforations at 2800'+. Internally plastic coated tubing of 2 3/8" or 2 7/8" will be used and the backside will be loaded with corrosion inhibited KCl water for protection from corrosion, pressure backup and thermal conductivity.



**LOCO HILLS POOL**  
(GRAYBURG WATERFLOOD)  
Eddy County, New Mexico

Order No. R-1267, Authorizing Newmont Oil Corporation to Conduct a Pilot Waterflood in the Grayburg Formation of the Loco Hills Pool, Eddy County, New Mexico, October 25, 1958.

*Application of Newmont Oil Corporation for an order authorizing a pilot waterflood project in the Loco Hills Pool, Eddy County, New Mexico.*

CASE NO. 1511  
Order No. R-1267

**ORDER OF THE COMMISSION**

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on October 2, 1958, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 25th day of October, 1958, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner Elvis A. Utz, and being fully advised in the premises,

**FINDS:**

1. That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Newmont Oil Corporation, proposes to institute a pilot waterflood project in the Loco Hills Pool to inject water into the Grayburg formation through five (5) wells located in Section 6, Township 18 South, Range 30 East, N.M.P.M., Eddy County, New Mexico, and through one (1) well located in Section 1, Township 18 South, Range 29 East, N.M.P.M., Eddy County, New Mexico.

(3) That the proposed injection wells are as follows:

Yates "A" No. 2 NE/4 NW/4 Section 6 T-18-S, R-30-E

Yates "A" No. 11 NW/4 NE/4 Section 6 T-18-S, R-30-E

Yates No. 5 NW/4 SW/4 Section 6 T-18-S, R-30-E

Yates No. 2 SW/4 NW/4 Section 6 T-18-S, R-30-E

Yates No. 3 SE/4 NW/4 Section 6 T-18-S, R-30-E

Ballard "B" No. 5 NE/4 NE/4 Section 1 T-18-S, R-29-E

(4) That the proposed pilot waterflood injection project will not adversely affect the interests of any other operators in the Loco Hills Pool.

(5) That the proposed program will promote conservation and will tend to prevent waste through the production of oil which might not otherwise be recovered.

**IT IS THEREFORE ORDERED:**

(1) That the application of Newmont Oil Corporation for permission to institute a pilot waterflood project in the Grayburg formation of the Loco Hills Pool in Eddy County, New Mexico, be and the same is hereby approved.

(2) That the following-described wells be and the same are hereby authorized as water injection wells:

Yates "A" No. 2 NE/4 NW/4 Section 6 T-18-S, R-30-E

Yates "A" No. 11 NW/4 NE/4 Section 6 T-18-S, R-30-E

Yates No. 5 NW/4 SW/4 Section 6 T-18-S, R-30-E

Yates No. 2 SW/4 NW/4 Section 6 T-18-S, R-30-E

Yates No. 3 SE/4 NW/4 Section 6 T-18-S, R-30-E

Ballard "B" No. 5 NE/4 NE/4 Section 1 T-18-S, R-29-E

(3) That monthly progress reports on the waterflood project herein authorized shall be submitted to the Commission in accordance with Rule 704 and Rule 1119 of the Commission Rules and Regulations.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

**MALJAMAR POOL**  
(Yates Sand Gas Injection)

Lea County, New Mexico.

Order No. R-106, Authorizing Buffalo Oil Company to Inject Gas Into the Yates Sand in the Maljamar Pool, Lea County, New Mexico, October 31, 1951.

*The application of Buffalo Oil Company for approval of use of its Baish A Well No. 7, Section 21, Township 17 S., Range 32 E., N.M.P.M., Lea County, New Mexico, for gas injection purposes in the Yates Sand.*

CASE NO. 312  
Order No. R-106

**ORDER OF THE COMMISSION**

BY THE COMMISSION: This cause came on for hearing at 10 a.m., October 23, 1951, before the Oil Conservation Commission of New Mexico hereinafter referred to as the "Commission," upon petition of Buffalo Oil Company.

NOW, on this 31st day of October, 1951, the Commission, a quorum being present, having considered all of the testimony adduced and exhibits received at said hearing, and being fully advised in the premises,

**FINDS:**

1. That due public notice having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.

(2) That it would be in the interests of conservation, prevent waste and protect correlative rights to permit the petitioners to conduct a gas injection program in the Yates Sand through its Baish A No. 7 well, located in Section 21, Township 17 S., Range 32 E., N.M.P.M., on an experimental basis.

(3) That gas, in excess of the needs of the Maljamar Cooperative Repressuring Agreement, is available from the plant serving the Maljamar Cooperative Repressuring Agreement, and such excess gas is now being vented to the air, and is available to carry out the gas-injection program as proposed by the petitioner.

**IT IS THEREFORE ORDERED:**

(1) That Buffalo Oil Company is hereby granted permission to inject gas in the Yates Sands through its Baish A No. 7 well, Section 21, Township 17 South, Range 32 East, N.M.P.M., Lea County, New Mexico.

(2) That said gas injection program is to be conducted on an experimental basis, injection to be made between the 8- $\frac{3}{4}$  inch and the 10- $\frac{3}{4}$  inch casing strings, and production from the Maljamar Pool, Lea County, New Mexico, may continue through the 7-inch casing.

(3) That no change in plans for the injection of gas into the Yates Sand shall be made except upon application to the Commission, and the Commission may act administratively upon such application if, in its opinion, the rights of third parties are not affected thereby.

Nothing in this order shall be construed as affecting, changing or modifying the Maljamar Repressuring Agreement as provided by Commission Order No. 485, or as creating any vested right to gas from the Maljamar Repressuring Agreement source, or from any other source.

**IT IS FURTHER ORDERED**, that jurisdiction of this case, be and the same hereby is retained by the Commission for such further order or orders as may seem necessary to the Commission for the promotion of conservation, prevention of waste or protection of correlative rights.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

**LOCO HILLS POOL**  
(West Grayburg No. 4 Sand Unit Area Waterflood)  
Eddy County, New Mexico

Order No. R-2178, Authorizing Newmont Oil Company to Expand its Loco Hills Waterflood Project by Inclusion of the West Loco Hills Grayburg No. 4 Sand Unit Area, Loco Hills Pool, Eddy County, New Mexico

*Application of Newmont Oil Company for expansion of its Loco Hills Waterflood Project, Eddy County, New Mexico.*

CASE NO. 2473  
Order No. R-2178

**ORDER OF THE COMMISSION**

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on January 4, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 30th day of January, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

**FINDS:**

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Newmont Oil Company, seeks permission to expand its Loco Hills Waterflood Project to include the West Loco Hills Grayburg No. 4 Sand Unit Area, comprising 5,320 acres, more or less, in Townships 17 and 18 South, Ranges 29 and 30 East, NMPM, Eddy County, New Mexico, which unit was approved by Order No. R-2166.

(3) That the applicant seeks permission to operate the expanded waterflood project as a "capacity" type flood unrestricted by the allowable provisions of Rule 701 E.

(4) That in the interest of increasing ultimate recovery in the Loco Hills Pool, the applicant should be authorized to conduct waterflood operations in the West Loco Hills Grayburg No. 4 Sand Unit Area by the injection of water into the Loco Hills Sand; that the allowables to be assigned to wells in this project should be governed by the provisions of Rule 701 E, except that a buffer zone should be established in which allowables would be unrestricted.

(5) That production from wells outside the buffer zone should be tanked separately from production from wells inside the buffer zone unless the applicant receives approval from the Commission for some other satisfactory means of determining production from each of the two areas.

(6) That for the purpose of determining the project area and computing the project allowable under Rule 701 E, any producing well in said project area lying outside the buffer zone should be entitled to receive credit for offsetting an injection well regardless of whether the injection well is in the buffer zone or in the project area.

**IT IS THEREFORE ORDERED:**

(1) That the applicant, Newmont Oil Company, is hereby authorized to institute a waterflood in the Loco Hills Pool within the West Loco Hills Grayburg No. 4 Sand Unit Area located in Townships 17 and 18 South, Ranges 29 and 30 East, NMPM, Eddy County, New Mexico, by the injection of water initially into the following-described wells:

- Ballard B No. 1—SE/4 NW/4 Section 1, Township 18 South, Range 29 East
- Dixon Yates Federal No. 2—SE/4 SE/4 Section 1, Township 18 South, Range 29 East
- Newmont Canfield No. 1-A—NW/4 NW/4 Section 7, Township 18 South, Range 30 East

**(LOCO HILLS (WEST GRAYBURG NO. 4 SAND UNIT AREA WATERFLOOD) POOL—Cont'd.)**

(2) That the ultimate project area for said waterflood shall consist of all the acreage within the said West Loco Hills Grayburg No. 4 Sand Unit Area, except the following-described acreage which shall constitute a buffer zone:

TOWNSHIP 17 SOUTH, RANGE 29 EAST  
Section 36: S/2 SW/4

TOWNSHIP 18 SOUTH, RANGE 29 EAST  
Section 1: W/2 and S/2 SE/4  
Section 12: NE/4 and N/2 NW/4

TOWNSHIP 18 SOUTH, RANGE 30 EAST  
Section 7: NW/4

(3) That the wells located within the above-described buffer zone may be operated at unrestricted rates of production.

(4) That all producing wells located within said waterflood project and outside the above-described buffer zone shall be operated and produced in accordance with the allowable provisions of Rule 701 E of the Commission Rules and Regulations.

(5) That for the purpose of determining the project area and computing the project allowable under Rule 701 E, any producing well in said project area lying outside the buffer zone shall be entitled to receive credit for offsetting an injection well regardless of whether the injection well is in the buffer zone or in the project area.

(6) That production from wells outside the buffer zone shall be tanked separately from production from wells inside the buffer zone unless the applicant receives approval from the Commission for some other satisfactory means of determining production from each of the two areas.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

**TOTAH-GALLUP POOL**

(Tenneco Pressure Maintenance Project and Rules)  
San Juan County, New Mexico

Order No. R-2190, Authorizing Tenneco Oil Company to Institute a Pressure Maintenance Project and Adopting Rules to Govern, in the Totah-Gallup Pool, San Juan County, New Mexico, February 21, 1962.

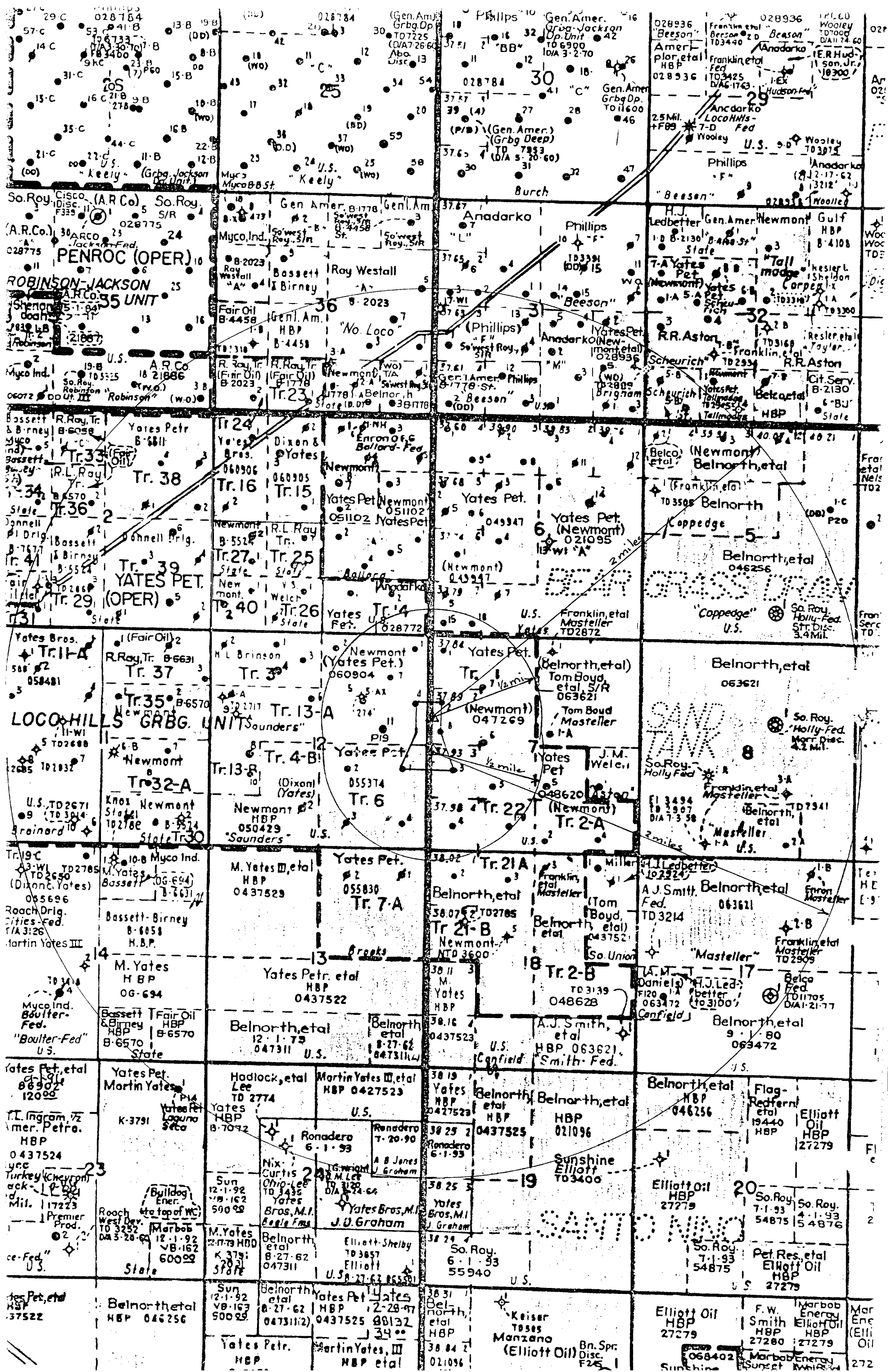
*Application of Tenneco Oil Company for a Pressure Maintenance Project, San Juan County, New Mexico.*

CASE NO. 2484  
Order No. R-2190

**ORDER OF THE COMMISSION**

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on January 24, 1962, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 21st day of February, 1962, the Commission, a quorum being present, having considered this application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,



## VI. Tabulation of Well Data

- A. West Loco Hills G4S Unit Tract 6-1, formerly the Day #1. Located 1980' FSL and 660' FEL of Section 12-18S-29E. Present operator is Yates Petroleum Corporation, former operators are Newmont Oil Company and Dixon & Yates. This well was spudded 2/16/42 and completed 3/24/42 as a producing oil well. Converted to water injection on 1/5/64 with a TD of 2784'. Construction: 8 5/8" 350/50 sx; 7" 20# smls 2635'/100sx; 4 1/2" 9.5# liner 2565-2744'/65 sx; 4 1/2" 9.5# casing to 2568'/125 sx (TOC 1050'). Completion record: shot 50 qts Nitroglycerine 2747-60'; shot 30 qts Nitroglycerine 2760-75'; shot 30 qts Nitroglycerine 2775-83'; SOF 1M Strati-lift; Petro-frac 9M-18M; A/1000 gal 15%; A/500 gal 15%; Sandrill 10/20 sd 2766-2770', 2774-2777'; A/500 gal 15%; A/500 gal 28%; A/500 gal/15% & 5 gal Visco IIII.
- B. West Loco Hills G4S Unit Tract 6-2, formerly the Day #2. Located 1980' FSL and 1980' FEL Section 12-18S-29E. Present operator is Yates Petroleum Corporation, and former operators are Newmont Oil Company and Dixon & Yates. This well was spudded 3/31/42 and completed 5/5/42. This is a producing well with a TD of 2745'. Construction: 8 5/8" 340'/50 sx; 7" 20# smls 2603'/100 sx. Completion record: shot 110 qts Nitroglycerine 2695-2722'; SOF 20M-25M#; F/7.5M# 20/40 sd & 375 bbls lease oil; F/500 gal 15% acid 10M gal lease oil & 10M# 20/40 sd.
- C. West Loco Hills G4S Unit Tract 6-4, formerly the Day #4. Located 660' FSL and 660' FEL of Section 12-18S-29E. Present operator is Yates Petroleum Corporation, former operators were Newmont Oil Company and Dixon & Yates. This well was spudded 9/22/43 and completed 11/3/43 as a producing oil well. During the life of the well it was also TA and is now again a producing well. TD is 2758'. Construction: 8 1/4" 375'/50 sx; 7" 20# smls 2645'/100 sx. Completion record: shot 120 qts Nitroglycerine 2728-58'; SOF 2670-98'/32M-110M#.
- D. West Loco Hills G4S Unit Tract 22-1, formerly called the Canfield No. 1-B and the Canfield "B" #1. Located 660' FSL and 1980' FWL of Sec 7-18S-30E. Present operator is Yates Petroleum Corporation, former operators were Franklin

## Tabulation of Well Data

-2-

Petroleum and Newmont Oil. This well was spudded 6/11/44 and completed 7/15/44 as a producing oil well with a TD of 2818'. It was converted to water injection 1/10/71 and was P & A on 9/14/83. Construction: 8" 28# smls 442'/50sx; 5" 17# smls 2700'/100 sx. Completion record: F/15M gal lease oil 15M# 20-40 . P & A: sqz 50 sx w/packer @ 2400'; pressure test plug & tag plug @ 2550'; perf @ 1180, sqz w/50 sx, tag plug @ 1040'; perf 400', sqz w/50 sx, tag plug @ 300'; set surface plug (15 sx) and P & A marker.

- E. West Loco Hills G4S Unit Tract 13-1, formerly called the Saunders "A" #1 and the Saunders #1. Located 330' FNL and 330' FEL of Section 12-18S-29E. Present operator is Yates Petroleum Corporation, former operators were Newmont Oil Company and Dixon & Yates. This well was spudded 3/1/39 and completed 7/19/39 as a producing oil well with a TD of 3200'. It has since been a water injection well and is currently P & A. Construction: 8" 24# 424'/50 sx; 7" 20# 2698'/100 sx. Completion record: shot 470 qts Nitroglycerine 2990-3190'; shot 230 qts Nitroglycerine 2803-2850'; A/500 gal 15%. P & A: spot 100 sx w/2% calcium bottom, tag plug @ 2587' perf 4 SPF @ 1170', squeezed 50 sx w/2% calcium, tag plug @ 1040', perf 4 shots @ 390', spot 50 sx w/2% calcium, tag 273' 15 sx top, P & A marker.
- F. West Loco Hills Unit G4S Tract 13A-4, formerly called Saunders "A" #4 and the Saunders #4-A. Located 1650' FNL and 330' FEL of Section 12-18S-29E. Present operator is Yates Petroleum Corporation, former operators were Newmont Oil Company and Dixon & Yates. This well was spudded 9/17/41 and completed 10/21/41 as a producing oil well. Since then this well's status has been TA, shut in and is currently producing. TD on this well is 2805'. Construction: 8 1/4" 425'/50 sx; 7" 2680'/100 sx; 4 1/2" 10.5# 2660'/300 sx. Completion record: shot 120 qts Nitroglycerine 2764-2805'; A/500 gal 5% inhibited FE acid; F/395 bbls lease oil & 7500# 20/40 sd; A/1M gal NE-FE acid & 2 drums gyp control chem + 20 bbls water; F/18M gal emulsified oil, 45M#, 20/40 sd, 1400# rock salt.
- G. West Loco Hills G4S Unit Tract 13-5, formerly the Saunders "A" #5-AX and the Saunders #5-AX. Located 1650' FNL and 1670' FEL of Section 12-18S-29E. Present operator is Yates Petroleum Corporation, former operators were Newmont Oil Company and Dixon & Yates. This well was spudded 1/5/42 and completed 2/8/42 with a TD of 2768'. This well was completed as a producing oil well and was later converted to an injection well and is now P & A.

## VI. Tabulation of Well Data

Page -3-

- Construction: 8 1/4" 359'/50 sx; 7" 2632'/100 sx; 4 1/2" 9.5# J-55 liner 2596-2727'/150 sx C1 "C". Completion record: shot 100 qts Nitroglycerine 2739-2768'; F/4300 gal butene 15M-60M; A/500 gal 15%; A/500 gal; A/500 gal; perf/4 SPF 2732-54' 2732-54' A/500 gal regular; A/500 gal regular; A/500 gal 28%; P & A: tag bottom, pull up 1 jt, spot 100 sx/2% calcium, tag plug @ 2307', set packer 819', squeeze 50 sx, tag plug @ 975', 15 sx, tag plug @ 960', squeeze cement with 2% calcium, tag plug @ 219', mix 15 sx with 2% calcium, P & A marker.
- H. West Loco Hills G4S Unit Tract 13-7, formerly the Saunders "A" #7 and the Saunders #7-A. Located 990' FNL and 990' FEL of Section 12-18S-29E. Present operator is Yates Petroleum Corporation, former operators were Newmont Oil Company and Dixon & Yates. This well was spudded 5/22/47 and completed 6/29/47 with a total depth of 2811'. This well was completed as a producing oil well, but since has also been TA, producing and is now shut in. Construction: 8 1/4" 408'/50 sx; 7" 20# 2670'/100 sx. Completion record: shot 100 qts Nitroglycerine 2775-2801'; A/500 gal 5% inhibitor FE acid; sandrill 10/20 sd 2780, 2785, 2790'; A/250 gal 28% F/567 bbls salt water, 24M# 10/20 sd; A/1M gal 15% HCL with inhibitor F/20M gal oil & 40/M# sd & 1400# rock salt.
- I West Loco Hills G4S Unit Tract 13-11. Located 2310' FNL and 1175' FEL of Section 12-18S-29E. Present operator is Yates Petroleum Corporation, former operator was Newmont Oil Company. This well was spudded 12/4/75 and completed 12/31/75 with TD of 2828'. This well is a producing oil well. Construction: 8 5/8" 23# 302'/150 sx C1 "H"/2% CaCl 11' hole; 4 1/2" 9.5# J-55 2824'/650 sx C1 "H" 7 7/8" hole. Completion record: A/1000 gal 15% 2760-84'; F/20M gal + 50M# sd 2760-84'; perf 2760-84' w/2 SPF, A/1500 gal 15% NEFE 2760-2784'.
- J. Yates "A" #10, formerly the Yates #10-A. Located 330' FSL and 990' FWL of Section 6-18S-30E. Present operator is Yates Petroleum Corporation, former operators were Newmont Oil Company, Franklin, Aston & Fair, and Franklin Petroleum Corporation. This well was spudded 6/10/49 and completed 7/11/49 with a TD of 2838'. This well was completed as a producing oil well and has since been TA and is now shut in. Construction: 8 1/4" 28# 447'/50 sx; 6 5/8" 18.9# 2700'/100 sx. Completion record: shot 140 qts Nitroglycerine 2802-2838'; sandrill 2815-19' 4 holes F/tubing 15M gal lease oil & 11.25M# 20/40 sd; sandrill 2815-19' F/15M gal lease oil, 14.6M# sd, 275# Adomite, 30 gal WWI.



VI. Tabulation of Well Data  
Page -4-

- K. Yates "A" #15. Located 330' FSL and 330' FWL of Section 6-18S-30E. Present operator is Yates Petroleum Corporation, former operator was Newmont Oil Company. This well was spudded 7/20/63 and completed 8/7/63 with a TD of 2830'. This well was completed as a producing oil well and has subsequently been SI and is now again producing oil. Construction: 8 5/8" 32# J-55 smls 416'/50 sx; 5 1/2" 15.5# J-55 smls 2732'/100 sx. Completion record: F/sandrill 2786-2794' 10M lease oil, 10M# 20/40 sd, 150# P2 & 250# Adomite; A/2M gal regular acid, 2 gal Adomall, 6 gal LP-19; sandrill 2791' & 2804' F 5 1/2" csg/ 56M gal water, 16.5M# 10/20 sd, 9.5M# 8/12 sd; F/268 bbls water, 320 bbls lease oil, 10M# 20/40 sd.
- L. West Loco Hills G4S Unit Tract 1-1, formerly the Canfield "A" #1 and the Canfield #1. Located 330' FNL and 330' FWL of Section 7-18S-30E. Present operator is Yates Petroleum Corporation, former operators were Newmont Oil Company, Franklin, Aston & Fair; and Franklin Petroleum Corporation. This well was spudded 8/14/39 and completed 9/28/39 with a TD of 2820'. This well was completed as a producing oil well and is now shut in. Construction: 8 1/4" 28# 422'/50 sx; 7" 20# smls 2685'/100 sx. Completion record: shot 70 qts Nitroglycerine 2793-2820'; 10M gal 15M# sd 2671-2820'; A/126 gal 15%.
- M. West Loco Hills G4S Unit Tract 1-2, formerly the Canfield "A" #2 and the Canfield #2-A. Located 1650' FNL and 330' FWL of Section 7-18S-30E. Present operator is Yates Petroleum Corporation, former operators were Newmont Oil Company; Franklin, Aston & Fair; and Franklin Oil Corp. This well was spudded 8/4/41 and completed 9/16/41 with a TD of 2804'. This well was completed as a producing oil well and has since been shut in and is now a producing oil well. Construction: 8" 28# 427'/50 sx; 7" 20# 2690'/100 sx; 4 1/2" 9.5# casing to 2650' w/700 sx (circulated). Completion record: shot 60 qts Nitroglycerine 2785-2804'; 10M gal 15 sd; A/126 gal 15%.
- N. West Loco Hills G4S Unit Tract 1-3, formerly the Canfield "A" #3 and the Canfield #3-A. Located 1980' FSL and 660' FWL of Section 7-18S-30E. Present operator is Yates Petroleum Corporation. Former operators were Newmont Oil Company; Franklin, Aston & Fair; and Franklin Oil Corp. This well was spudded 10/17/42 and completed 12/1/42 as a producing oil well. Clean out and pressure test casing to 750 psi-OK-8/17/91. The TD is 2835'. Construction: 8 1/4" 32# 427'/50 sx; 5" 17# smls 2705'/100 sx.

VI. Tabulation of Well Data  
Page -5-

- O. West Loco Hills G4S Unit Tract 1-4, formerly the Canfield "A" #4 and the Canfield #4-A. Located 660' FSL and 560' FWL of Section 7-18S-30E. Present operator is Yates Petroleum Corporation. Former operators were Newmont Oil Company; Franklin, Aston & Fair; and Franklin Oil Corp. This well was spudded 1/12/44 and completed 3/10/44 as a producing oil well with a TD of 2811'. This well has subsequently been turned in to a water injection well. Construction: 8 1/4" 402'/50 sx; 5 1/4" 2675'/100 sx; 4 1/2" 9.5# J-55 liner 2606-2760'/150 sx C1 "C"/141#; FLAC & 300# salt; 4 1/2" 9.5# casing to 2600'/100 sx (TOC 50'). Completion record: shot 60 qts Nitroglycerine 2777-2811'; shot 70 qts Nitroglycerine 2771-2806'; 10M gal 15M# sd 2575-2811'; sandrill 10/20 sd 2779, 2782, 2790, 2794'; A/500 gal; perf/4 SPF 2776 & 2797'; jet formation 2762-2806' spot A/500 gal 15% regular; A/500 gal 15% NEFE; A/1500 gal regular.
- P. West Loco Hills G4S Unit Tract 1-5, formerly the Canfield "A" #5 and the Canfield #5-A. Located 1650' FSL and 1650' FWL of Section 7-18S-30E. Present operator is Yates Petroleum Corporation. Former operators were Newmont Oil Company; Franklin, Aston & Fair, and Franklin Oil Corp. This well was spudded 12/18/44 and completed 1/29/45 with a TD of 2837'. This well was completed as a producing oil well and is now a water injection well. Construction: 8 5/8" 425'/50 sx; 7" 2690'/100 sx; 4 1/2" 9.5# J-55 liner 2620-2796'/150 sx C1 "C"/1% D-23 & 2% salt. Completion record: shot 140 qts Nitroglycerine 2801-2837'; 10M gal 15M# sd; A/500 gal; perf/1 SPF 2805, 2809, 2313, 2818'; A/500 gal 15%.
- Q. West Loco Hills G4S Unit Tract 1-6, formerly the Canfield "A" #6 and the Canfield #6-A. Located 2590' FNL and 1370' FWL of Section 7-18S-30E. Present operator is Yates Petroleum Corporation. Former operators were Newmont Oil Company; Franklin, Aston & Fair; and Franklin Oil Corp. This well was spudded 11/20/48 and completed 2/3/49 with a TD of 2387'. Repair casing and test to 600 psi on 3/25/92. This is a producing oil well. Construction: 8 1/4" 430'/50 sx; 7" 2698'/100 sx. Completion record: shot 126 qts Nitroglycerine 2795-2837'; shot 200 qts Nitroglycerine 2795-2837'; 10M gal 15M# sd 2698-2837'; 126 gal 15%.

## VI. Tabulation of Well Data

Page -6-

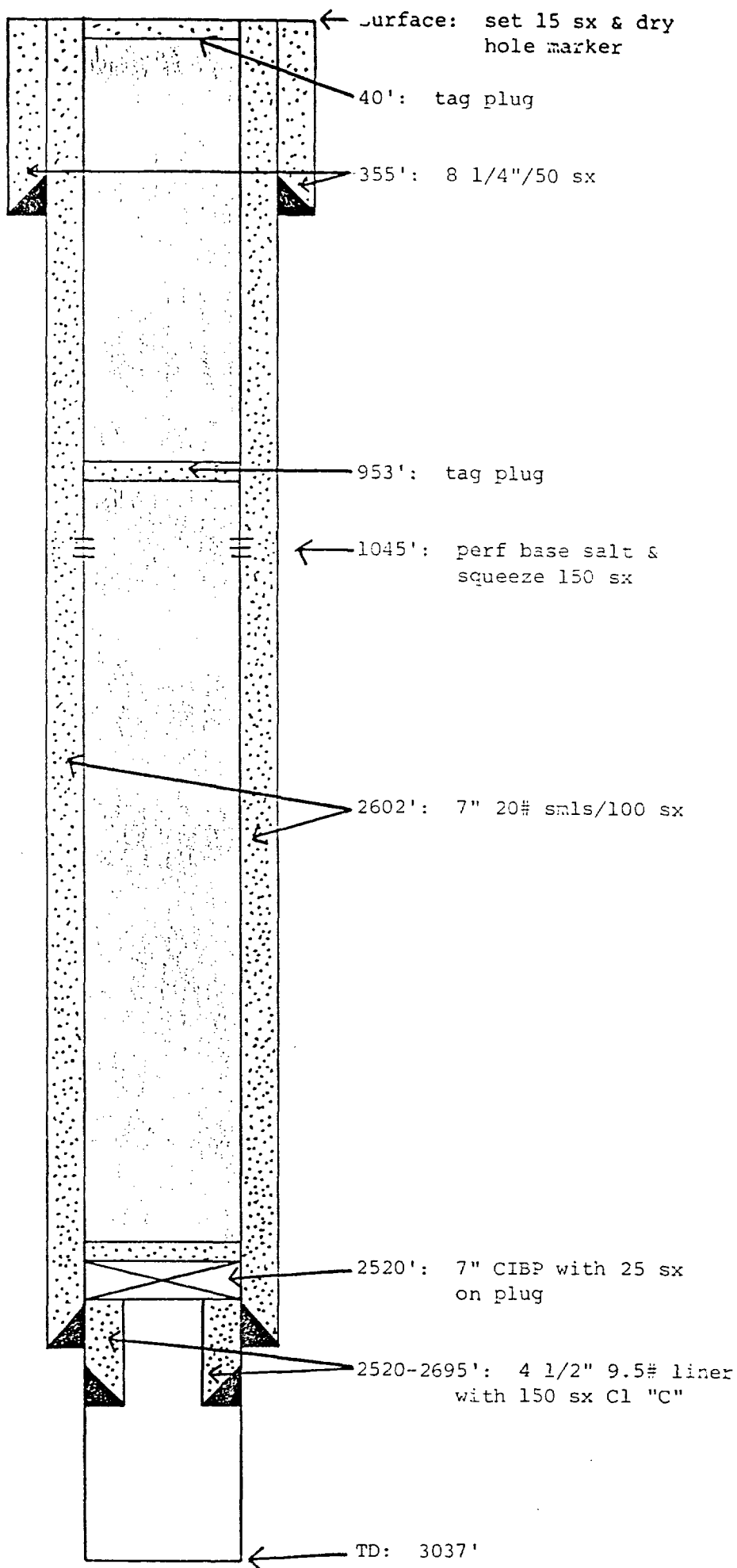
- R. West Loco Hills G4S Unit Tract 1-7, formerly the Canfield "A" #7 and the Canfield #7-A. Located 1270' FNL and 1370' FWL of Section 7-18S-30E. Present operator is Yates Petroleum Corporation. Former operators were Newmont Oil Company; Franklin, Aston & Fair; and Franklin Oil Corp. This well was spudded 4/19/49 and completed 6/3/49 with a TD of 2814'. This well was completed as a producing oil well and subsequently TA and is presently a water injection well. Construction: 8 1/4" 431'/50 sx; 7" 2693'/100 sx; 4 1/2" 9.5# J-55 liner 2594-2769'/300 sx encore/2% salt & 1% D-60; A/500 gal 15% regular; perf 2802-22'/4 SPF A/500 gal 28%; A/1000 gal 28%; A/100 15% regular & 5 gal Visco IIII.
- S. West Loco Hills G4S Unit Tract 1-8, formerly the Canfield "A" #8 and the Canfield #8-A. Located 2310' FNL and 330' FWL of Section 7-18S-30E. Present operator is Yates Petroleum Corporation. Former operators were Newmont Oil Company; Franklin, Aston & Fair; and Franklin Oil Corp. This well was spudded 7/31/56 and completed 8/30/56 with a TD of 2814'. This well was completed as a producing oil well and converted to water injection on 8/7/63. Converted back to a producer on 11/21/91. Construction: 8 5/8" 28# 426'/50 sx; 7" 20# 2774'/ 100 sx; 4 1/2" 2763'/425 sx (circulated). Completion record: 10M SF 15M# 20/40 sd; A/500 gal regular; A/500 gal 28%; A/1000 gal 28%.
- T. Saunders #5A. Located in Section 12-18S-29E. Operator is Dixon & Yates. This well was spudded 11/8/41 and completed 1/6/42 and was J & A with a TD of 2742'. Construction: 8 1/4" 353'/50 sx; 6" 2653'.

West Loco Hills G4S Unit Tract 6-3

Sec 12-18S-29E 660' FSL/1980' FEL

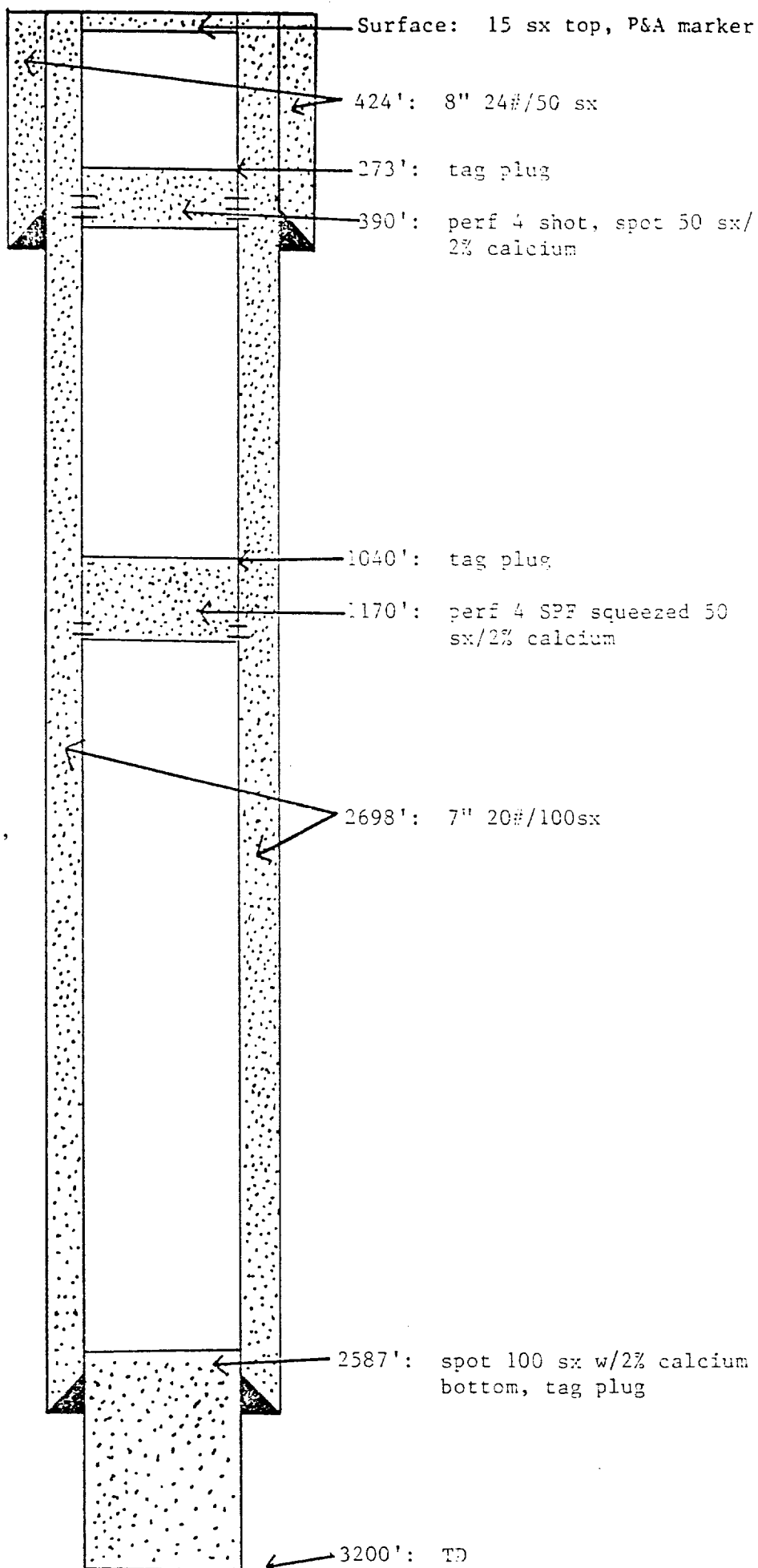
P & A: 12/13/82

Set 7" CIBP @ 2520', spot 25 sx on plug, mud hole up, perf base salt @ 1045' & squeeze with 150 sx cement, tag plug @ 953'; tag plug @ 40'; set 15 sx & dry hole marker at surface



West Loco Hills G4S Unit Tract 13-1

330' FNL/330' FEL Sec 12-18S-29E



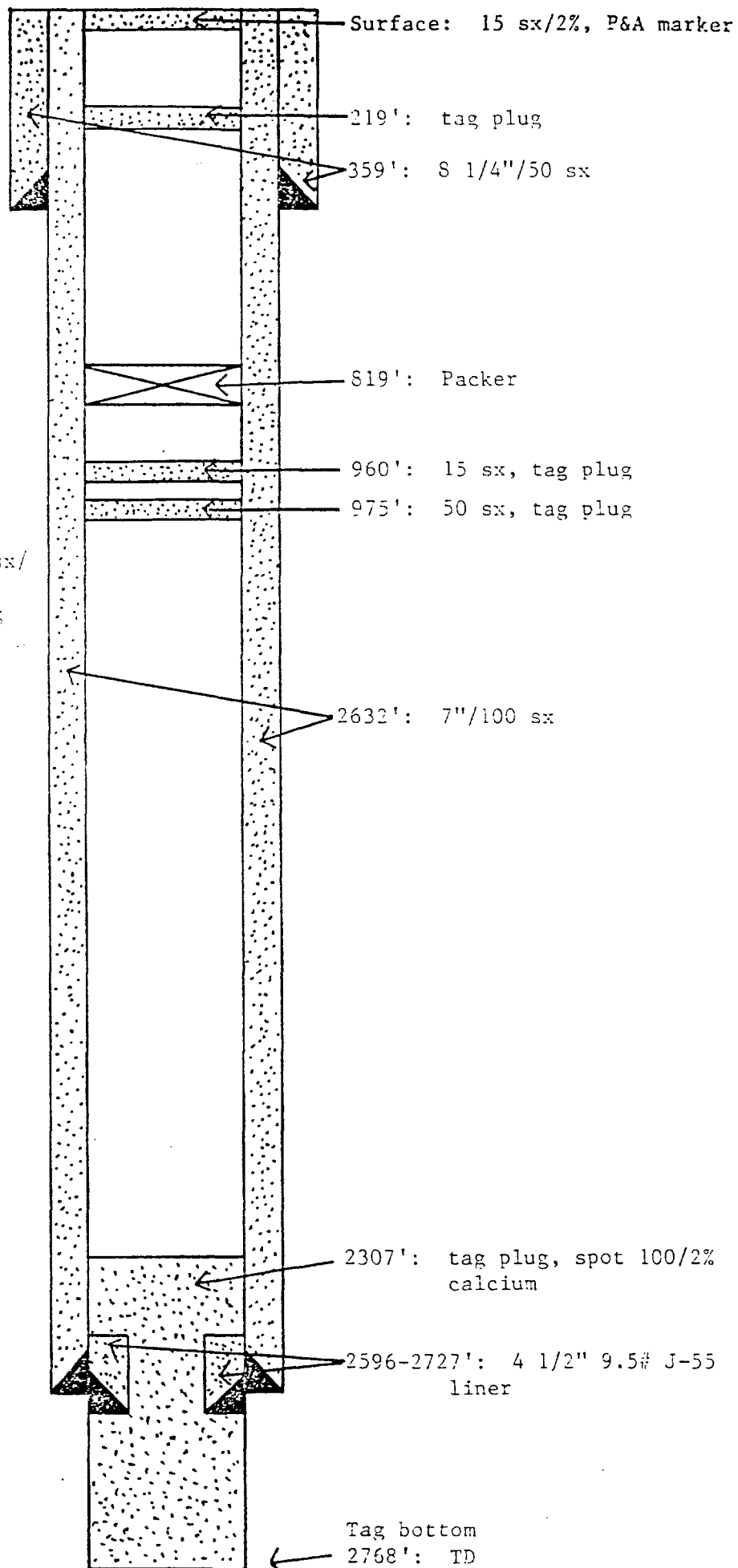
P&A: 7/14/83

Spot 100 sx 2/2% calcium bottom,  
tag plug @ 2587', perf 4 SPF @  
1170', squeezed 50 sx w/2% calcium,  
tag plug @ 1040', perf 4 shots at  
390', spot 50 sx w/2% calcium, tag  
273' 15 sx top, P&A marker.

West Loco Hills G4S Unit Tract 13-5

P&A: 7/27/83

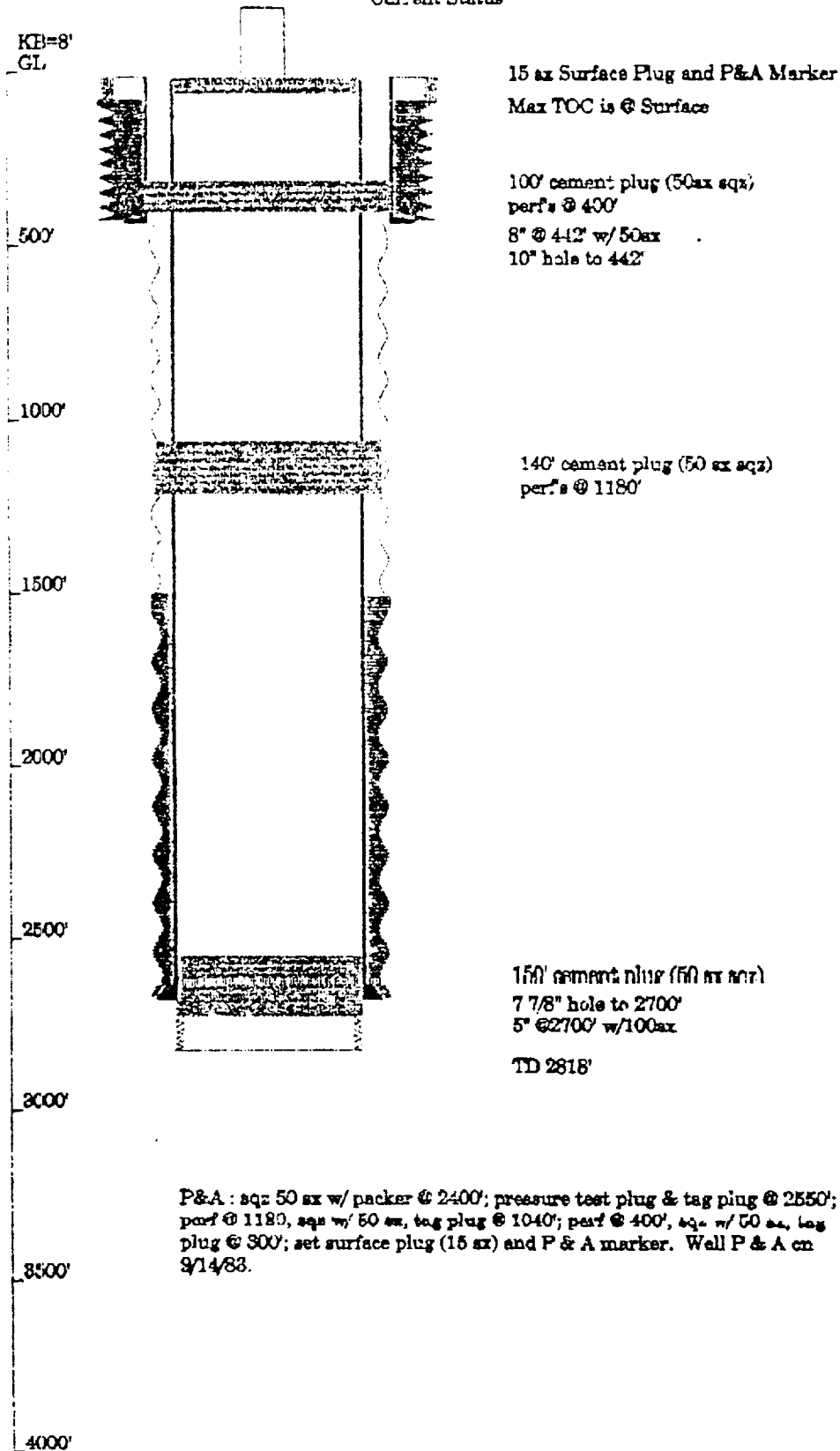
Tag bottom, pull up 1 jt, spot 100 sx/  
2% calcium, tag plug @ 2307', set  
packer 819', squeeze 50 sx, tag plug  
@ 975', 15 sx, tag plug @ 960',  
squeeze cement with 2% calcium, tag  
plug @ 219', mix 15 sx with 2%  
calcium, P&A marker.



# West Loco Hills Unit #22-1

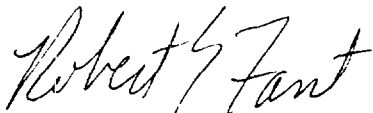
Unit N, 660' FSL 1980' FWL  
Sec. 7-T188-R30E NMPM

Current Status



## XII. Affirmative Statement

I have examined the available geologic and engineering data for this project and I found no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

A handwritten signature in cursive script that reads "Robert S. Fant".

Robert S. Fant  
Petroleum Engineer  
Yates Petroleum Corporation

RSF/cvg



**Working Interest Owners  
West Loco Hills Grayburg No. 4 Sand Unit**

Estate of Kathleen Cone  
P.O. Drawer 1509  
Lovington, New Mexico 88260

Florence M. Dooley  
901 W. Washington Avenue  
Artesia, New Mexico 88210

Keleher & McLeod  
Attn: M.A. Morris (E. Nearburg Interest)  
P.O. Drawer AA  
Albuquerque, New Mexico 87103

Paul Slaton  
P.O. Box 2035  
Roswell, New Mexico 88201

Kenneth G. Cone  
P.O. Box 11310  
Midland, Texas 79702

Eugene E. Nearburg  
P.O. Box 31405  
Dallas, Texas 75231-4394

George S. Emmons  
17 N. Lancaster Lane  
Newton, PA 18940

Clifford Cone  
P.O. Box 6010  
Lubbock, Texas 79413

Paula Dooley  
Successor Personal Representative Of  
The Estate Of William P. Dooley  
1006 South 2<sup>nd</sup> Street  
Artesia, New Mexico 88210

Thomas W. Lett  
P.O. Box 35449  
Dallas, Texas 75235

Yates Energy Corporation  
P.O. Box 2323  
Roswell, New Mexico 88202

Thomas W. Lett, Trustee of the Sam  
Lett Testamentary Trust  
P.O. Box 35449  
Dallas, Texas 75235

Harvey E. Yates Company  
P.O. Box 1933  
Roswell, New Mexico 88201

Cibola Energy Corporation  
P.O. Box 1668  
Albuquerque, New Mexico 87103

I & L Development Co.  
P.O. Box 35449  
Dallas, Texas 75235

Thompson Petroleum Corporation  
4500 Republic Natl. Bank Tower  
Dallas, Texas 75201

Douglas Cone  
P.O. Box 64244  
Lubbock, Texas 79464

Yates Petroleum Corporation  
Yates Drilling Company  
John A. Yates  
Yates Petroleum Corporation Acct. #4  
105 South 4<sup>th</sup> Street  
Artesia, New Mexico 88210

**CO<sub>2</sub> Pilot Project**  
**Offset Operators Within 1/2 Mile of Proposed Injection Wells**

Enron Oil and Gas Company  
P.O. Box 2267  
Empire Plaza Building  
508 West Wall  
Midland, Texas 79702

**Surface Ownership**

United States Department of the Interior  
Bureau of Land Management  
P.O. Box 1778  
Carlsbad, New Mexico 88220

Company Newmont Oil CompanyField Loco HillsUnit West Loco HillsStation Station #1 & Station #2P. O. Box 1499  
HOBBS, N. M. 8824**SERVICE REPORT — TYPE**

DATE	SAMPLE POINT	DISSOLVED OXYGEN ppb	SO <sub>2</sub> ppm	CHLORINE ppm	REMARKS
<u>Station #1</u>					
9-4-79	Tank fill line Valve on tank	41ppb	8 6		Checked SO <sub>2</sub> & Cobalt inj.
9-10-79	Tank fill line Valve on tank		5 3		Checked SO <sub>2</sub> & Cobalt inj.
9-17-79	Tank fill line Valve on tank		7 6		Checked SO <sub>2</sub> & Cobalt inj.
9-21-79	Tank fill line Valve on tank	24ppb	8 5		Checked SO <sub>2</sub> & Cobalt inj.
<u>Station #2</u>					
9-4-79	SO <sub>2</sub> pump discharge Suction manifold	27ppb	8		Checked SO <sub>2</sub> & Cobalt inj.
9-10-79	SO <sub>2</sub> pump discharge Suction manifold		1		Checked SO <sub>2</sub> & Cobalt ini. Increased SO <sub>2</sub> rate
9-17-79	Suction manifold		0 <sup>E</sup>		Checked SO <sub>2</sub> & Cobalt ini. Increased SO <sub>2</sub> rate
9-24-79	Suction manifold		--		Ejector plugged with produced water buildup.

BEFORE EXAMINER STOGNER	
OIL CONSERVATION DIVISION	
<u>YATES</u>	EXHIBIT NO. <u>3</u>
CASE NO. <u>10476</u>	