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April 20, 1992

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APR 20 1992

OIL CONSERVATION DIVISION

10476

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

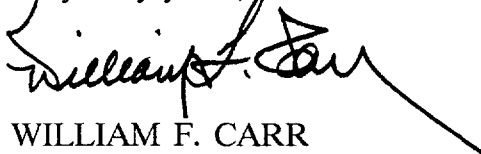
Re: Application of Yates Petroleum Corporation for its West Loco Hills Grayburg No.
4 Sand Unit CO₂ Pilot Project, Eddy County, New Mexico

Dear Mr. LeMay:

Enclosed in triplicate is Yates Petroleum Corporation's completed Form C-108 in the above-referenced matter. This application has been set for hearing before a Division Examiner on May 14, 1992.

By copy of this letter, a completed copy of this form is being sent to the Oil Conservation Division's District Office in Artesia, New Mexico.

Very truly yours,


WILLIAM F. CARR

WFC:mlh

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

RECEIVED

Revised 7-1-81

APR 20 1992 Case 10476

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Tertiary ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: Yates Petroleum CorporationAddress: 105 South 4th StreetArtesia, NM 88210Contact party: Robert S. FantPhone: (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, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

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;
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. FantTitle Petroleum EngineerSignature: Robert S. FantDate: 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 CO₂ 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 CO₂ per day per well alternating with 400 bbls per day per well H₂O. Two months of CO₂ to be followed with one month of H₂O.

2. Whether the system is open or closed.

The system is closed.

3. Proposed average and maximum injection pressures:

H₂O and CO₂ 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 CO₂ 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 CO₂ is not available at this time: however, we will probably be using food quality CO₂ 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.

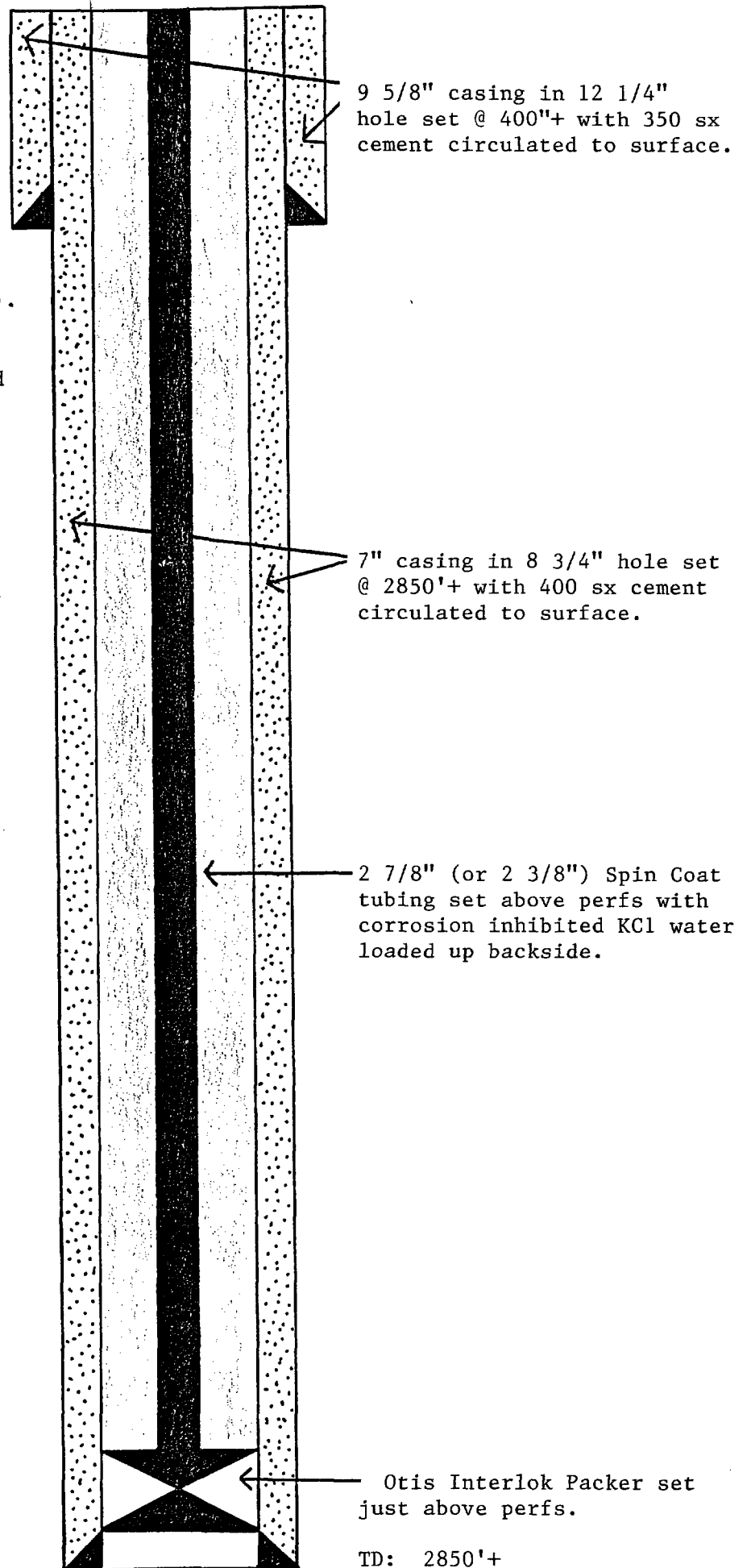
There are no fresh water wells within the one mile radius.

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 CO₂ 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- $\frac{5}{8}$ 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.

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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
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- 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.

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- 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

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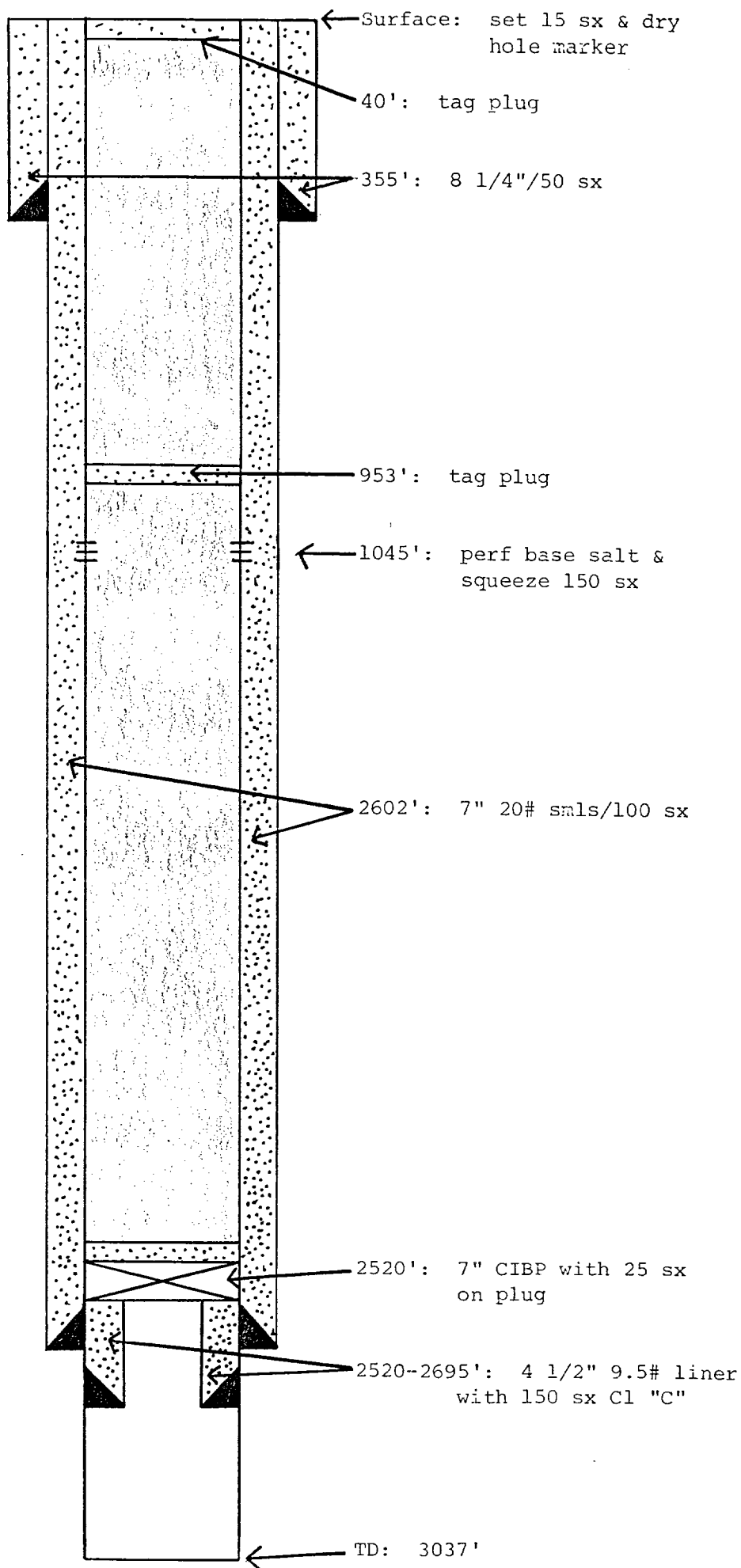
- R. West Loco Hills G4S Unit Tract 1-7, formerly the Canfield "A" #7 and the Canfield #7-A. Located 1270' FNL and 1370' FWL of Section 7-18S-30E. Present operator is Yates Petroleum Corporation. Former operators were Newmont Oil Company; Franklin, Aston & Fair; and Franklin Oil Corp. This well was spudded 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' 1/4 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: 12/18/82

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

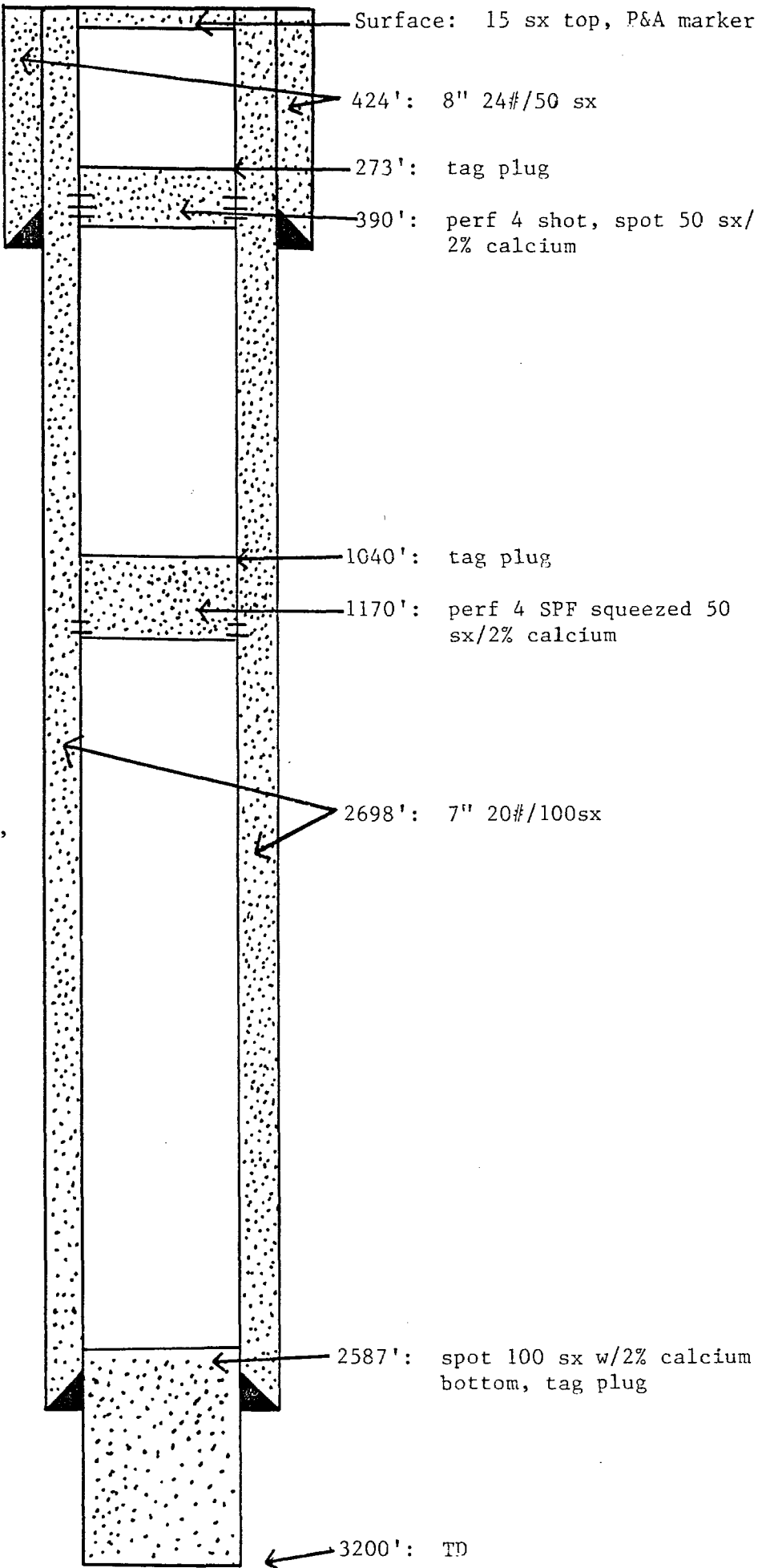


West Loco Hills G4S Unit Tract 13-1

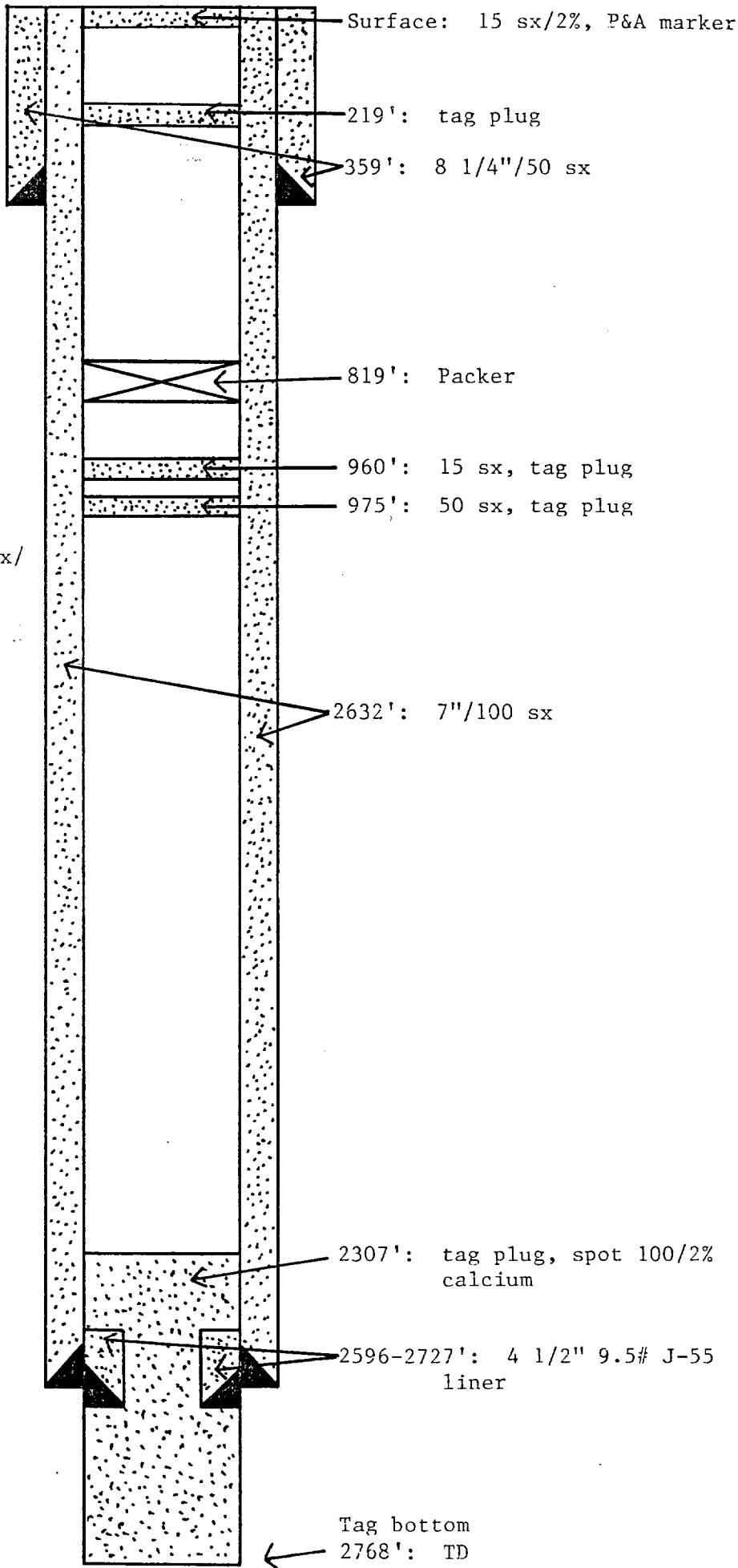
330' FNL/330' FEL Sec 12-18S-29E

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

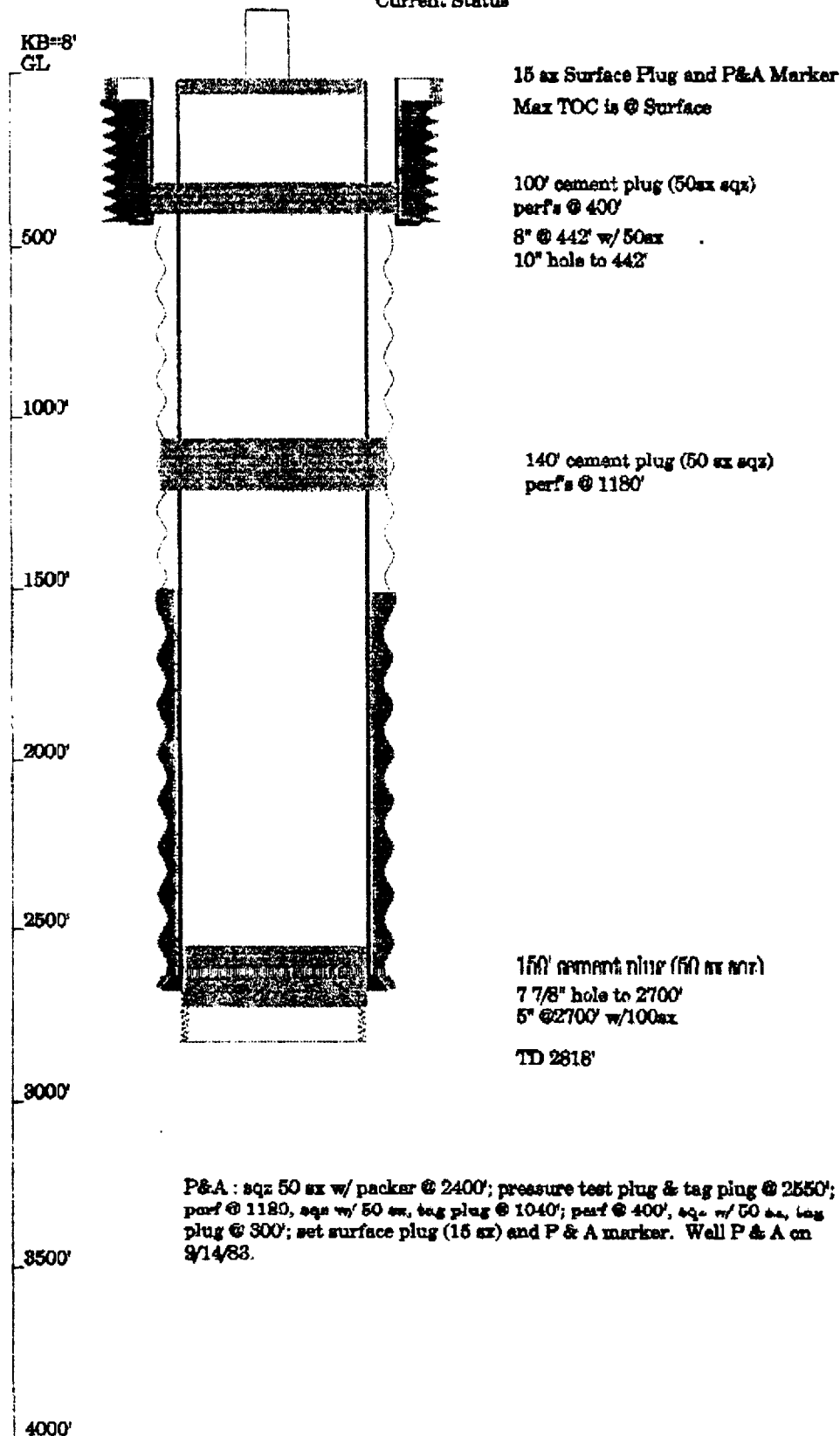
Tag bottom, pull up 1 jt, spot 100 sx/ 2% calcium, tag plug @ 2307', set packer 819', squeeze 50 sx, tag plug @ 975', 15 sx, tag plug @ 960', squeeze cement with 2% calcium, tag plug @ 219', mix 15 sx with 2% calcium, P&A marker.

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". The signature is written in dark ink and is positioned above the printed name and title.

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
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Midland, Texas 79702

Eugene E. Nearburg
P.O. Box 31405
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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
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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.
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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 4th Street
Artesia, New Mexico 88210

CO₂ 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