



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

3-31-93

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC _____
DHC _____
NSL _____
NSP _____
SWD ☒ _____
WFX _____
PMX _____

Gentlemen:

SWD-510

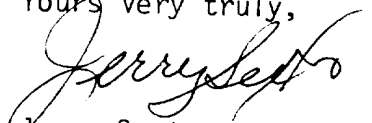
I have examined the application for the:

Yates Petroleum Corp. Kiwi AXX State #8-F 16-22-32
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,


Jerry Sexton
Supervisor, District 1

/ed

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

March 25, 1993

New Mexico Energy & Minerals Department
Oil Conservation Division
P. O. Drawer 1980
Hobbs, NM 88240

Attn: Jerry Sexton

Dear Mr. Sexton,

Enclosed please find our application for authorization to inject for the Kiwi AKX State #8 located in Section 16-T22S-R32E of Lea County, New Mexico.

Sincerely,

Brian Collins
Engineer

BC/th

Enclosures

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MAR 2 1951

JOHN HOBBS & CO.

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: Yates Petroleum Corporation
Address: 105 S. 4th Street
Contact party: Brian Collins Phone: (505) 748-1471
- 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: Brian Collins Title: Engineer
Signature: *Brian Collins* Date: March 25, 1993
- * 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. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

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JOHN HOBBS CENTER

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.

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MAR 2 1951

ORD 40596-1000

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
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SECRETARY
DENNIS G. KINSEY
TREASURER

March 25, 1993

New Mexico Energy & Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504

Attn: David Catanach

Dear Mr. Catanach,

Enclosed please find our application for authorization to inject for the Kiwi AKX State #8 located in Section 16-T22S-R32E of Lea County, New Mexico.

Sincerely,

Brian Collins
Engineer

BC/th

Enclosures

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MAR 21 1993

OFFICE OF THE ATTORNEY GENERAL

C-108
Application For Authorization To Inject
Yates Petroleum Corporation
Kiwi AKX State #8
F 16-T22S-R32E
Lea County, New Mexico

- I. The purpose of reworking this well is to make a disposal well for produced Delaware Sand water into the Delaware Sand formation.

Yates Petroleum plans to convert this well to a water disposal well into the Delaware Sand.

- II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Brian Collins (505) 748-1471

- III. Well Data: See Attachment A

- IV. This is not an expansion of an existing project.

- V. See attached map, Attachment B

- VI. 2 wells within the area of review penetrate the proposed injection zone. (See Attachment C)

- VII. 1. Proposed average daily injection volume approximately 2,000 BWPD.
Maximum daily injection volume approximately 5,000 BWPD.

2. This will be a closed system.

3. Proposed average injection pressure-unknown.
Proposed maximum injection pressure--1048 psi.

4. Sources of injected water would be produced water from the Delaware Sand. (Attachment D)

5. See Attachment D.

- VIII. 1. The proposed injection interval is the portion of the Delaware Sand formation consisting of porous Sandstone from estimated depths of 5240'-8710'.

2. Possible Fresh water zones overlie the proposed injection formations at depths to approximately 850' feet. There are no fresh water zones underlying the formation.

- IX. The proposed disposal interval may be acidized with 7-1/2% HCL acid, 12-3 HF acid, or proppant fractured.

- X. Logs were filed at your office when the well was drilled.

- XI. 1 windmill exists within a one mile radius of the subject location.

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OAS HONOLULU

Application for Authorization to Inject
Kiwi AKX State #8
-2-

- XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval.
- XIII. Proof of Notice
 - A. Certified letters sent to the surface owner and offset operators attached. (Attachment E)
 - B. Copy of legal advertisement attached. (Attachment F)
- XIV. Certification is signed.

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MAR 31 1993
GOD HONOR AMEN

**Yates Petroleum Corporation
Kiwi AKX State #8
F- 16-T22S-R32E**

Attachment A

Page 1

III. Well Data

A. 1. Lease Name/Location:

Kiwi AKX State #8

F-16-T22S-R32E

1980' FNL & 2310' FWL

2. Casing Strings:

a. Present Well Condition

13 3/8", 54.5#, J55 @ 850' w/800 sx (circ)

8 5/8", 32#, HC-80, J55 @ 4590' w/1800 sx.

5 1/2", 15.5#, 17#, N80, J55 @ 8840' w/1355 sx (TOC 3900' CBL)

Present Status:

Non-commercial completion in Delaware at 8443'-8470', 8539'-8562' and 8653'-8710'.

3. Proposed well condition:

Casing same as above.

3 1/2" 9.3 J55 or 2-7/8" 6.5 J55 plastic-coated injection tubing @ 5150'.

4. Propose to use Guiberson or Baker plastic-coated or nickel-plated packer set at 5150'.

B. 1. Injection Formation: Delaware Sand

2. Injection Interval will be through perforations from approximately 5240' - 8710' gross interval.

3. Well was originally drilled as a Delaware Sand oil well. Well will be Delaware Sand water disposal well (5240'-8710') when work is completed.

4. Perforations: High porosity sands to be selected between 5240' and 8710', including current zones 8443'-8470', 8539'-8562' and 8653'-8710'.

5. Next higher (shallower) oil or gas zone within 2 miles--None.

Next lower (deeper) oil or gas zone within 2 miles--Bone Spring.

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ODD HOURS 277-17

Attachment A - Current Status

WELL NAME: Kiwi "AKX" State #8

FIELD AREA: Red Tank Delaware

LOCATION: 1980' FNL & 2310' FNL, Sec 16-22S-32E, Lea County, New Mexico

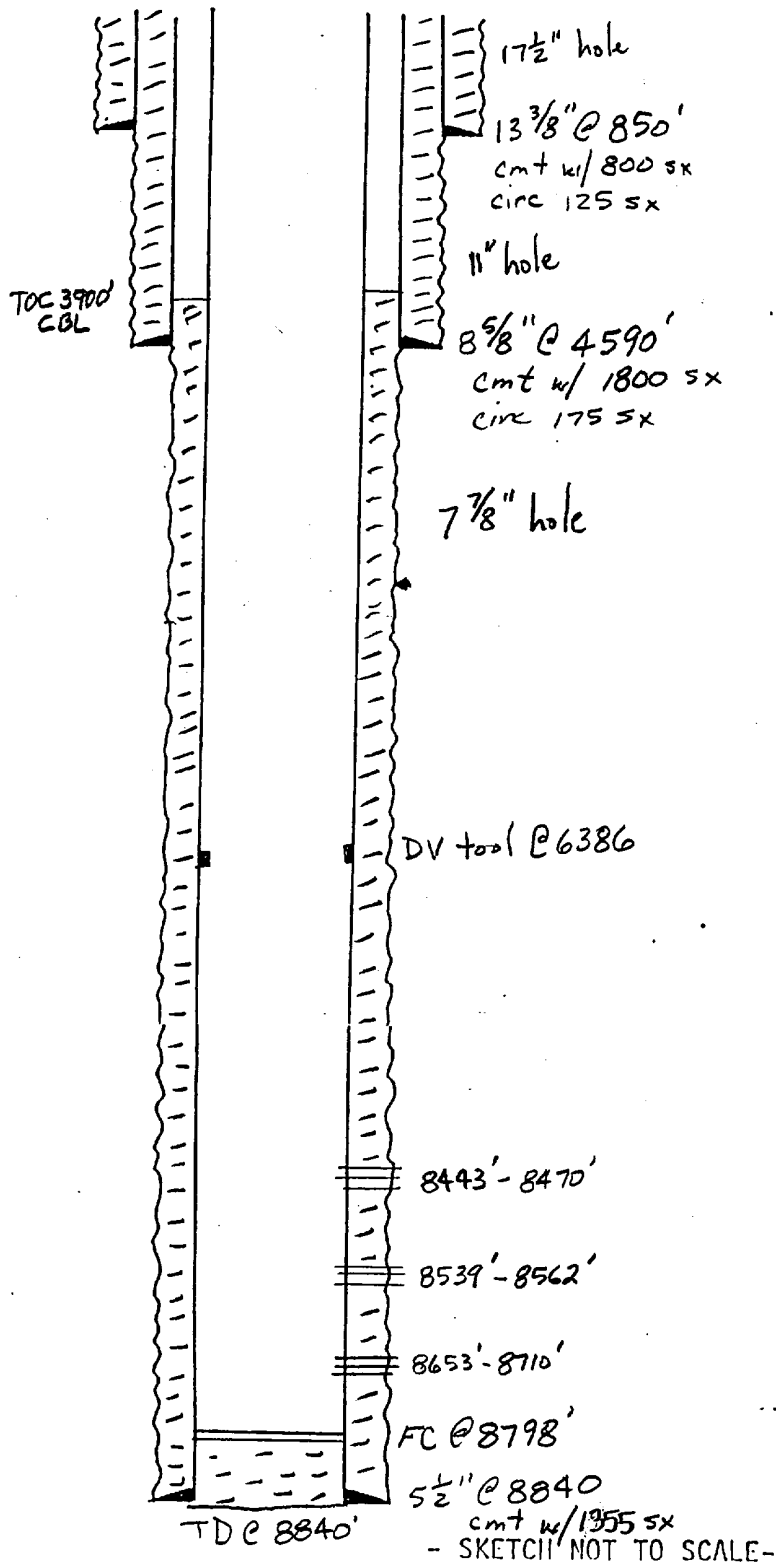
GL: 3746' ZERO: 15' AGL: 3761'

KB: 3761' ORIG. DRLG./COMPL. DATE: 3/93

COMMENTS: _____

CASING PROGRAM:

| SIZE/WT./GR./CONN. | DEPTH SI |
|--|----------|
| 13 3/8" 54.5# J-55 @ 850' | |
| 8 5/8" 32# HL-80 & J-55 @ 4590' | |
| 5 1/2" 15.5# & 17# N-80 & J-55 @ 8840' | |
| | |
| | |
| | |
| | |
| | |



REVISED: _____

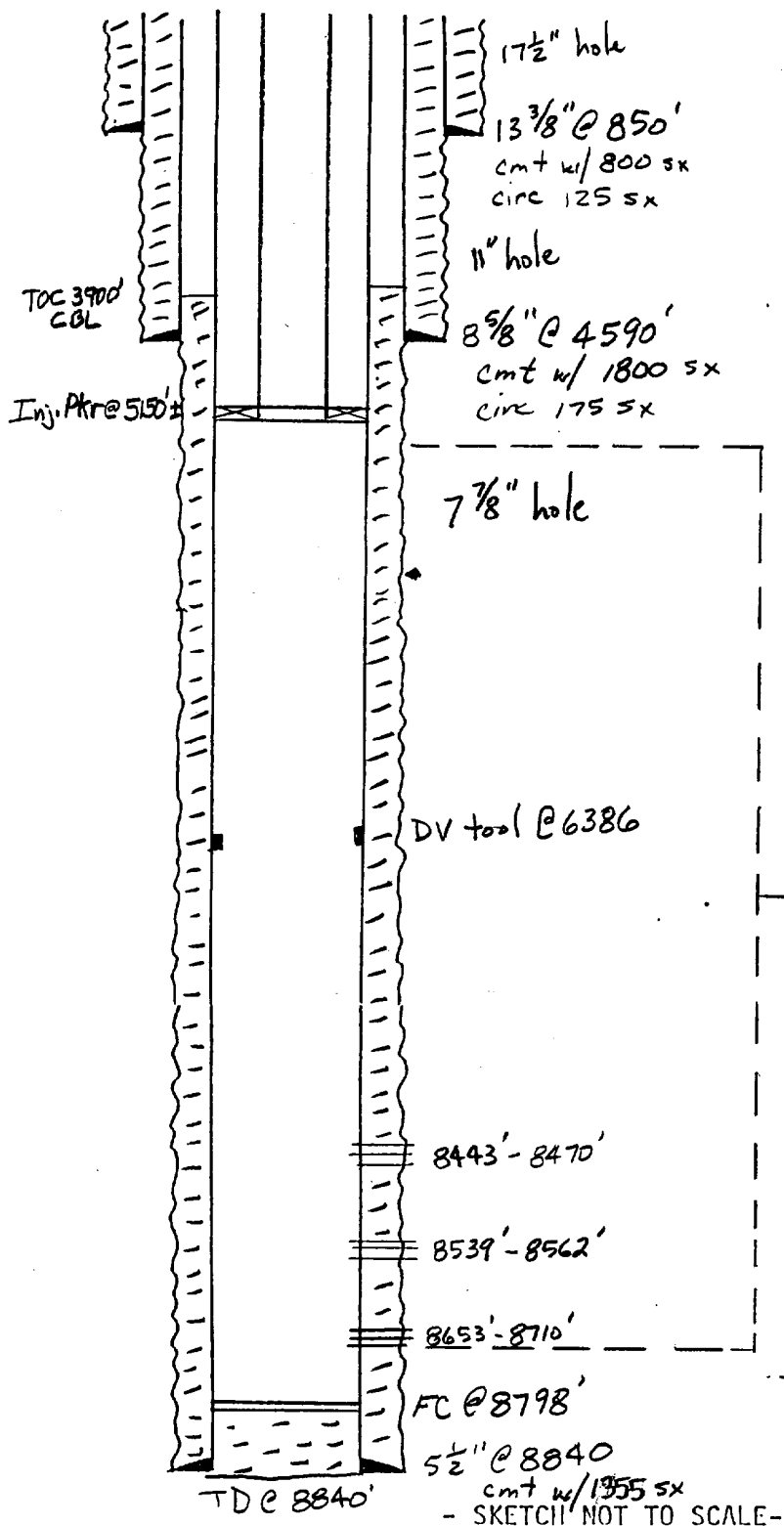
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MAR 8 1986
OCD HOBBS CT

Attachment A - Proposed Schematic

WELL NAME: Kiwi "AKX" State #8 FIELD AREA: Red Tank Delaware
 LOCATION: 1980' FNL & 2310' FWL, Sec 16-22S-32E, Lea County, New Mexico
 GL: 3746 ' ZERO: 15 ' AGL: 3761 '
 KB: 3761 ' ORIG. DRLG./COMPL. DATE: 3/93
 COMMENTS: _____

CASING PROGRAM:

| SIZE/WT./GR./CONN. | DEPTH SI |
|--|----------|
| 13 3/8" 54.5# J-55 @ 850' | |
| 8 5/8" 32# HL-80 & J-55 @ 4590' | |
| 5 1/2" 15.5# & 17# N-80 & J-55 @ 8840' | |
| 3 1/2 9.3 J55 EVE Plastic Lined @ 5150'± | |
| or | |
| 2 7/8 6.5 J55 EVE Plastic Lined @ 5150'± | |



Proposed Gross
 Disposal Interval
 5240' to 8710'

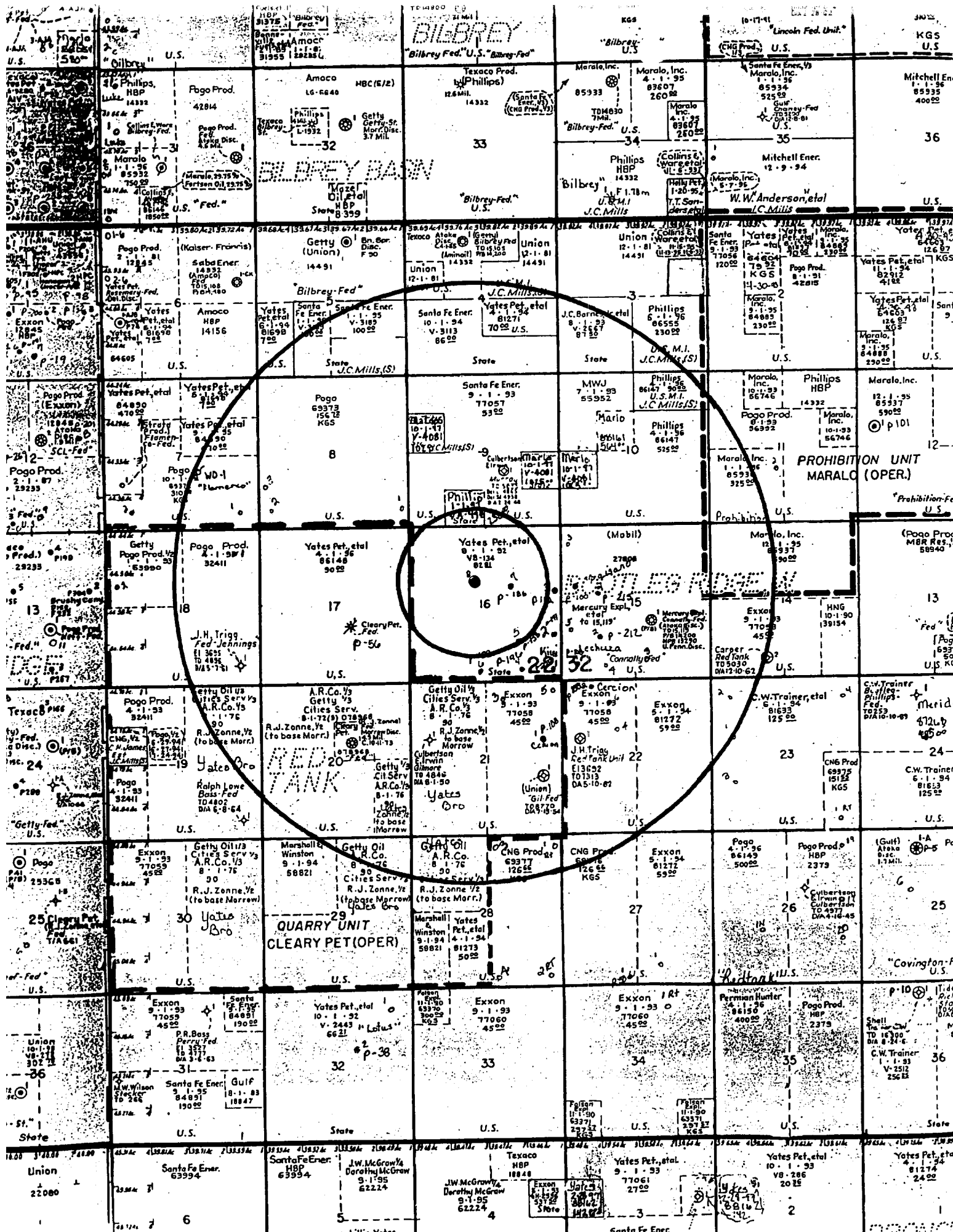
REVISED:

- SKETCH NOT TO SCALE -

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OGD HORNS OTTLE



**YATES PETROLEUM CORPORATION
KIWI AKX STATE #8**

PROPOSED SALT WATER DISPOSAL WELL

SEC. 16-T22S-R32E

1980'FNL & 2310'FWL

LEA COUNTY, NEW MEXICO

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JANUARY 1912

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MAR 2 1912
JANUARY 1912

**Kiwi AKX State #8
Form C-108**

Tabulation of Data on Wells Within Area of Review

| Well Name | Operator | Type | Spud | Completed | Total Depth | Producing Zone | Perforations | Completion Information |
|-----------------------------------|----------|------|----------|-----------|-------------|----------------|--------------|---|
| Kiwi AKX State #5 J 16-22S-32E | YPC | Oil | 07/13/92 | 08/19/92 | 9500' | Delaware | 7174'-8649' | 20" @ 40' w/redimix 13 3/8" @ 850' w/750 sx (circ) 8 5/8" @ 4569' w/1500 sx (circ) 5 1/2" @ 9500' w/1110 sx |
| Kiwi AKX State #7 G 16-22S-32E | YPC | Oil | 10/29/92 | 11/29/92 | 8900' | Delaware | 7136'-8710' | 20" @ 80' w/redimix 13 3/8" @ 850' w/800 sx (circ) 8 5/8" @ 4610' w/1650 sx (circ) 5 1/2" @ 8900' w/1020 sx (circ) |

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MAR 9 1953
JED 40378 077

PETROLITE

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
 Address : ARTESIA, N.M.
 Lease : KIWI 'AKX' STATE
 Well : 1
 Sample Pt. : WELLHEAD

Date : 5-28-92
 Date Sampled : 5-27-92
 Analysis No. : 467

| ANALYSIS | | mg/L | | * meq/L |
|---------------------------------------|------|----------|------|---------|
| ----- | | ---- | | ----- |
| 1. pH | | 5.8 | | |
| 2. H2S | | 0 | | |
| 3. Specific Gravity | | 1.120 | | |
| 4. Total Dissolved Solids | | 191043.8 | | |
| 5. Suspended Solids | | NR | | |
| 6. Dissolved Oxygen | | NR | | |
| 7. Dissolved CO2 | | NR | | |
| 8. Oil In Water | | NR | | |
| 9. Phenolphthalein Alkalinity (CaCO3) | | | | |
| 10. Methyl Orange Alkalinity (CaCO3) | | 450.0 | | |
| 11. Bicarbonate | HCO3 | 549.0 | HCO3 | 9.0 |
| 12. Chloride | Cl | 118396.1 | Cl | 3339.8 |
| 13. Sulfate | SO4 | 900.0 | SO4 | 18.7 |
| 14. Calcium | Ca | 8865.7 | Ca | 442.4 |
| 15. Magnesium | Mg | 5780.9 | Mg | 475.6 |
| 16. Sodium (calculated) | Na | 56315.1 | Na | 2449.5 |
| 17. Iron | Fe | 237.0 | | |
| 18. Barium | Ba | 0.0 | | |
| 19. Strontium | Sr | 0.0 | | |
| 20. Total Hardness (CaCO3) | | 45941.3 | | |

PROBABLE MINERAL COMPOSITION

| *milli equivalents per Liter | | Compound | Equiv wt X meq/L | = mg/L |
|------------------------------------|-----------|-----------|------------------|--------|
| ----- | | | | |
| 442 *Ca <----- *HCO3 | 9 | Ca(HCO3)2 | 81.0 | 729 |
| ----- /-----> | ----- | CaSO4 | 68.1 | 1276 |
| 476 *Mg -----> *SO4 | 19 | CaCl2 | 55.5 | 23009 |
| ----- <----- / | ----- | Mg(HCO3)2 | 73.2 | |
| 2450 *Na -----> *Cl | 3340 | MgSO4 | 60.2 | |
| ----- | ----- | MgCl2 | 47.6 | 22641 |
| Saturation Values Dist. Water 20 C | | NaHCO3 | 84.0 | |
| CaCO3 | 13 mg/L | Na2SO4 | 71.0 | |
| CaSO4 * 2H2O | 2090 mg/L | NaCl | 58.4 | 143151 |
| BaSO4 | 2.4 mg/L | | | |

REMARKS: L.MALLETT

Petrolite Oilfield Chemicals Group

Respectfully submitted,
ROZANNE JOHNSON

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1993

1993



16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737

Reply to: P.O. Box FF
Artesia, New Mexico 88210
(505) 746-3588 Phone
(505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
Address : ARTESIA, NM
Lease : KIWI
Well : #5
Sample Pt. : WELLHEAD

Date : 08/21/92
Date Sampled : 08/20/92
Analysis No. : 123

| ANALYSIS | | mg/L | | * meq/L |
|--|------------------|----------|------------------|---------|
| ----- | | ---- | | ----- |
| 1. pH | 6.0 | | | |
| 2. H ₂ S | 5 PPM | | | |
| 3. Specific Gravity | 1.175 | | | |
| 4. Total Dissolved Solids | | 273726.4 | | |
| 5. Suspended Solids | | NR | | |
| 6. Dissolved Oxygen | | NR | | |
| 7. Dissolved CO ₂ | | NR | | |
| 8. Oil In Water | | NR | | |
| 9. Phenolphthalein Alkalinity (CaCO ₃) | | | | |
| 10. Methyl Orange Alkalinity (CaCO ₃) | | | | |
| 11. Bicarbonate | HCO ₃ | 122.0 | HCO ₃ | 2.0 |
| 12. Chloride | Cl | 169974.0 | Cl | 4794.8 |
| 13. Sulfate | SO ₄ | 675.0 | SO ₄ | 14.1 |
| 14. Calcium | Ca | 24480.0 | Ca | 1221.6 |
| 15. Magnesium | Mg | 4533.9 | Mg | 373.0 |
| 16. Sodium (calculated) | Na | 73941.5 | Na | 3216.2 |
| 17. Iron | Fe | 0.0 | | |
| 18. Barium | Ba | 0.0 | | |
| 19. Strontium | Sr | 0.0 | | |
| 20. Total Hardness (CaCO ₃) | | 79800.0 | | |

PROBABLE MINERAL COMPOSITION

| *milli equivalents per Liter | | Compound | Equiv wt | X meq/L | = mg/L |
|---------------------------------------|-------------------|------------------------------------|----------|---------|--------|
| ----- | ----- | ----- | ----- | ----- | ----- |
| 1222 *Ca <----- | *HCO ₃ | Ca(HCO ₃) ₂ | 81.0 | 2.0 | 162 |
| ----- /-----> | | CaSO ₄ | 68.1 | 14.1 | 957 |
| 373 *Mg -----> | *SO ₄ | CaCl ₂ | 55.5 | 1205.5 | 66893 |
| ----- <-----> | | Mg(HCO ₃) ₂ | 73.2 | | |
| 3216 *Na -----> | *Cl | MgSO ₄ | 60.2 | | |
| ----- | | MgCl ₂ | 47.6 | 373.0 | 17757 |
| Saturation Values Dist. Water 20 C | | NaHCO ₃ | 84.0 | | |
| CaCO ₃ | 13 mg/L | Na ₂ SO ₄ | 71.0 | | |
| CaSO ₄ * 2H ₂ O | 2090 mg/L | NaCl | 58.4 | 3216.2 | 187957 |
| BaSO ₄ | 2.4 mg/L | | | | |

REMARKS:

----- L. MALLETT / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

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MAR 2 1961
GND FORCE CTY

TRETOLITE

Chemicals and Services

ATTACHMENT D

2/1

PETROLITE

16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737

Reply to: P.O. Box FF
Artesia, New Mexico 88210
(505) 746-3588 Phone
(505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
Address : ARTESIA, NEW MEXICO
Lease : KIWI AKX STATE
Well : #8
Sample Pt. : WELLHEAD

Date : 03/09/93
Date Sampled : 03/08/93
Analysis No. : 343

| ANALYSIS | | mg/L | * meq/L |
|----------|---|----------|----------------------|
| ----- | | ---- | ----- |
| 1. | pH | 5.8 | |
| 2. | H ₂ S | 2 PPM | |
| 3. | Specific Gravity | 1.155 | |
| 4. | Total Dissolved Solids | 273230.7 | |
| 5. | Suspended Solids | NR | |
| 6. | Dissolved Oxygen | NR | |
| 7. | Dissolved CO ₂ | 460 PPM | |
| 8. | Oil In Water | NR | |
| 9. | Phenolphthalein Alkalinity (CaCO ₃) | | |
| 10. | Methyl Orange Alkalinity (CaCO ₃) | 150.0 | |
| 11. | Bicarbonate HCO ₃ | 183.0 | HCO ₃ 3.0 |
| 12. | Chloride Cl | 173072.2 | Cl 4882.1 |
| 13. | Sulfate SO ₄ | 450.0 | SO ₄ 9.4 |
| 14. | Calcium Ca | 32625.1 | Ca 1628.0 |
| 15. | Magnesium Mg | 9286.4 | Mg 764.0 |
| 16. | Sodium (calculated) Na | 57532.9 | Na 2502.5 |
| 17. | Iron Fe | 81.0 | |
| 18. | Barium Ba | NR | |
| 19. | Strontium Sr | NR | |
| 20. | Total Hardness (CaCO ₃) | 119707.6 | |

PROBABLE MINERAL COMPOSITION

| *milli equivalents per Liter | | | | Compound Equiv wt X meq/L = mg/L | | | |
|------------------------------------|------------|-----------|---------|---|------|--------|--------|
| +-----+ | | | | ----- | | | |
| 1628 | *Ca <----- | *HCO3 | 3 | Ca (HCO3) 2 | 81.0 | 3.0 | 243 |
| ----- | /-----> | | ----- | CaSO4 | 68.1 | 9.4 | 638 |
| 764 | *Mg -----> | *SO4 | 9 | CaCl2 | 55.5 | 1615.6 | 89651 |
| ----- | <-----/ | | ----- | Mg (HCO3) 2 | 73.2 | | |
| 2503 | *Na -----> | *Cl | 4882 | MgSO4 | 60.2 | | |
| +-----+ | | | +-----+ | MgCl2 | 47.6 | 764.0 | 36370 |
| Saturation Values Dist. Water 20 C | | | | NaHCO3 | 84.0 | | |
| CaCO3 | | 13 mg/L | | Na2SO4 | 71.0 | | |
| CaSO4 * 2H2O | | 2090 mg/L | | NaCl | 58.4 | 2502.5 | 146247 |
| BaSO4 | | 2.4 mg/L | | | | | |

REMARKS:

----- L. MALLET / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
ROZANNE JOHNSON

RECEIVED
MAR 2 1988
300 40000 0000

Reply to: P.O. Box FF
Artesia, New Mexico 88210
(505) 746-3588 Phone
(505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
Address : ARTESIA, NEW MEXICO
Lease : KIWI AREA
Well : UNKNOWN
Sample Pt. : UNKNOWN

Date : 03/22/93
Date Sampled : 03/22/93
Analysis No. : 081

| ANALYSIS | mg/L | * meq/L |
|--|------------------------|----------------------|
| 1. pH | 7.4 | |
| 2. H ₂ S | 0 | |
| 3. Specific Gravity | 1.000 | |
| 4. Total Dissolved Solids | -554.6 | |
| 5. Suspended Solids | NR | |
| 6. Dissolved Oxygen | NR | |
| 7. Dissolved CO ₂ | NR | |
| 8. Oil In Water | NR | |
| 9. Phenolphthalein Alkalinity (CaCO ₃) | | |
| 10. Methyl Orange Alkalinity (CaCO ₃) | | |
| 11. Bicarbonate | HCO ₃ 146.0 | HCO ₃ 2.4 |
| 12. Chloride | Cl 127.0 | Cl 3.6 |
| 13. Sulfate | SO ₄ 25.0 | SO ₄ 0.5 |
| 14. Calcium | Ca 920.0 | Ca 45.9 |
| 15. Magnesium | Mg 972.1 | Mg 80.0 |
| 16. Sodium (calculated) | Na -2744.8 | Na -119.4 |
| 17. Iron | Fe NR | |
| 18. Barium | Ba NR | |
| 19. Strontium | Sr NR | |
| 20. Total Hardness (CaCO ₃) | 6300.0 | |

PROBABLE MINERAL COMPOSITION

| *milli equivalents per Liter | Compound | Equiv wt | X meq/L | = mg/L |
|---|-------------------------------------|----------|---------|--------|
| 46 *Ca <----- *HCO ₃ | Ca (HCO ₃) ₂ | 81.0 | 2.4 | 194 |
| ----- /-----> | CaSO ₄ | 68.1 | 0.5 | 35 |
| 80 *Mg -----> *SO ₄ | CaCl ₂ | 55.5 | 3.6 | 199 |
| ----- <----- / | Mg (HCO ₃) ₂ | 73.2 | | |
| -119 *Na -----> *Cl | MgSO ₄ | 60.2 | | |
| | MgCl ₂ | 47.6 | | |
| Saturation Values Dist. Water 20 C | NaHCO ₃ | 84.0 | | |
| CaCO ₃ 13 mg/L | Na ₂ SO ₄ | 71.0 | | |
| CaSO ₄ * 2H ₂ O 2090 mg/L | NaCl | 58.4 | | |
| BaSO ₄ 2.4 mg/L | | | | |

REMARKS:

----- L. MALLET / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

ATTACHMENT E

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MAR 8 1993

DDO HOBBS OFFICE

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

March 25, 1993

Phillips Petroleum
4001 Pennbrook
Odessa, TX 79762

Gentlemen,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Kiwi AKX State #8 located in Unit F of Section 16-T22S-R32E of Lea County, New Mexico.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins
Engineer

BC/th

Enclosures

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MAR 31 1993

OLD FORDS CENTER

MARTIN YATES, III
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FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
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RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

March 25, 1993

Santa Fe Energy
550 W. Texas
Suite 1330
Midland, TX 79701

Gentlemen,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Kiwi AKX State #8 located in Unit F of Section 16-T22S-R32E of Lea County, New Mexico.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins
Engineer

BC/th

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FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

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PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

March 25, 1993

Pogo Producing Company
P. O. Box 10340
Midland, TX 79701

Gentlemen,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Kiwi AKX State #8 located in Unit F of Section 16-T22S-R32E of Lea County, New Mexico.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins
Engineer

BC/th

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OLD HOBBS OFFICE

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

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JOHN A. YATES
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PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

March 25, 1993

Hobbs New Sun
201 N. Thorp
Hobbs, NM 88240

Gentlemen,

Yates Petroleum Corporation desires to place a public notice in your newspaper for one day. The notice is enclosed.

Please place this notice in your paper on Sunday, March 28, 1993 and forward a copy of it along with your billing as soon as possible to:

Yates Petroleum Corporation
105 S. 4th Street
Artesia, NM 88210
Attn: Brian Collins

If you have any questions, please contact me at 748-1471, Ext. 182. Thank you for your cooperation in this matter.

Sincerely,

Brian Collins
Engineer

BC/th

Enclosure

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MAR 31 1993

OCD HOBBS OFFICE

Attachment F

Legal Notice

Yates Petroleum Corporation, 105 South Fourth Street, Artesia, NM 88210, has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well, the Kiwi AKX State #8 located 1980'FNL & 2310'FWL of Section 16, Township 22 South, Range 32 East of Lea County, New Mexico, will be used for saltwater disposal. Disposal waters from the Delaware Sand will be re-injected into the Delaware Sand at a depth of 5240'-8710' with a maximum pressure of 1048 psi and a maximum rate of 5,000 BWPD.

All interested parties opposing the aforementioned must file objections or requests for a hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, NM 87501, within 15 days. Additional information can be obtained by contacting Brian Collins at (505) 748-1471.

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