



May 30, 1984

Mr. Tom Kellahin
117 North Guadalupe
El Padio Building
Santa Fe, New Mexico 87504

Dear Tom:

Enclosed are two copies of the C-108 and attachments for our Dagger Draw SWD Well #1 application.

A copy has been sent to the Artesia office of the N.M.O.C.D.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. G. Kernaghan". The signature is written in dark ink and is positioned above the printed name.

D. G. Kernaghan

DGK/dkn

encl.

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Anadarko Production Company
Address: Box 130, Artesia, New Mexico 88210
Contact party: Jerry Buckles Phone: 505/748-3368

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

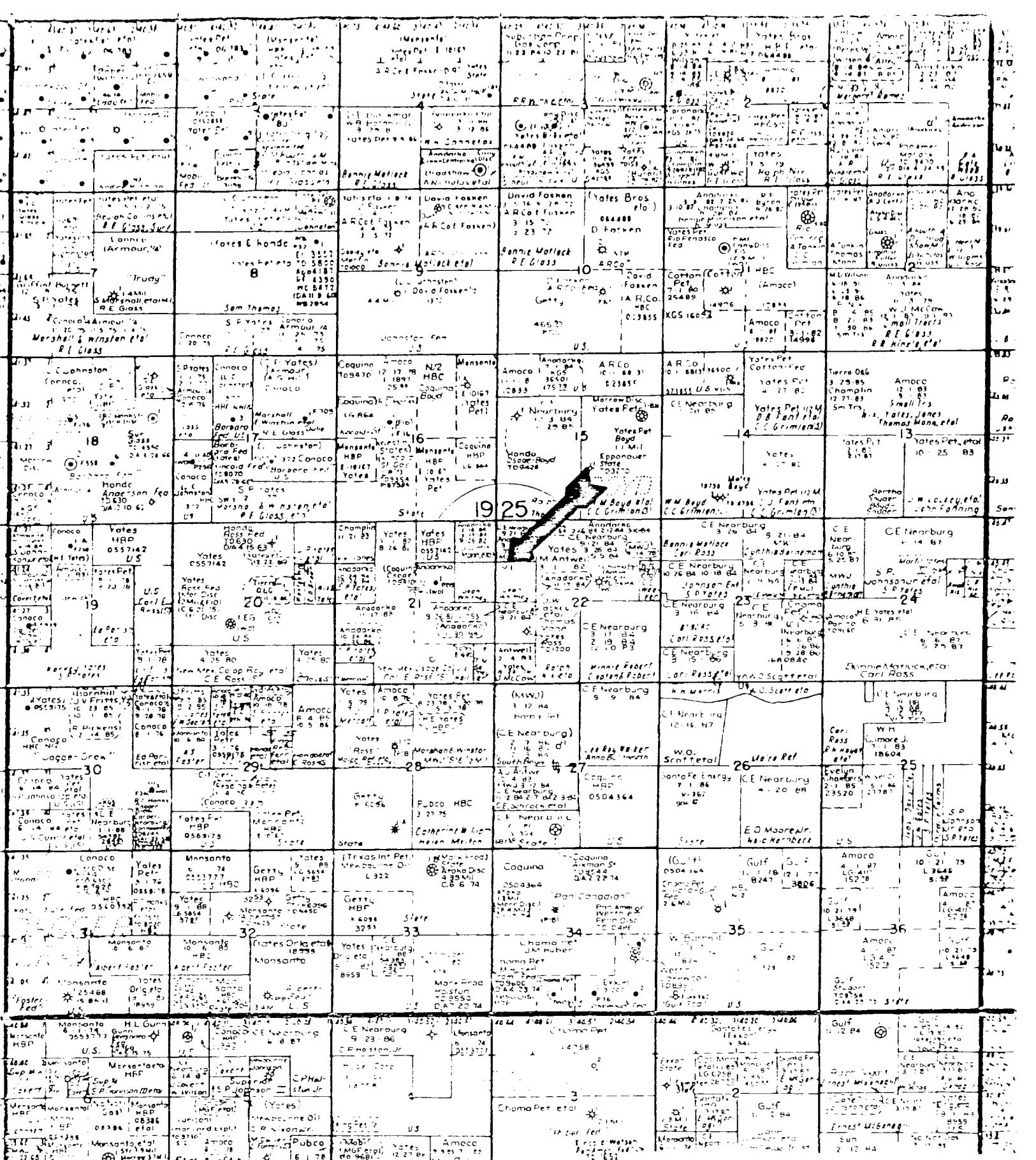
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: D. G. Kernaghan Title Division/Operations Manager

Signature: [Signature] Date: 5/30/84

* 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. Logs will be filed when run.

Send to Section 1 with one copy to the appropriate Division



ANADARKO PRODUCTION COMPANY
MIDLAND DIVISION

DAGGER DRAW NE
EDDY CO., NEW MEXICO

015

LAND PLAT

WELL AND OPERATING DATA
PROPOSED
ANADARKO DAGGER DRAW SWD #1 WELL

LOCATION: 1495' FNL & 225' FWL
Sec. 22, T19S, R25E
Eddy County, New Mexico

WELL DATA

Casing and Tubing: As shown on attached schematic subject to NMOCD rules and permit approval. Cement circulated on surface and intermediate casing. Cement calculated to reach surface on long string.

Packer: Tension packer set as close to perfs as preactical.

Stimulation: NE HCL or other acid in sufficient volume to clean perfs and formation near wellbore.

Logs: To be filed when run.

FORMATION DATA

Injection Formation: Cisco-Canyon

Thickness: 400 feet.

Lithology: Limestone w/scattered dolomite

Interval: Perforations from 7800' to 8030' approx.

Possible productive zones in area: Yeso - 2500'
Wolfcamp - 6200'
Strawn - 8300'
Atoka - 9000'
Morrow - 9300'

Lowest Fresh Water: 1100' est.

SYSTEM DATA

Closed system

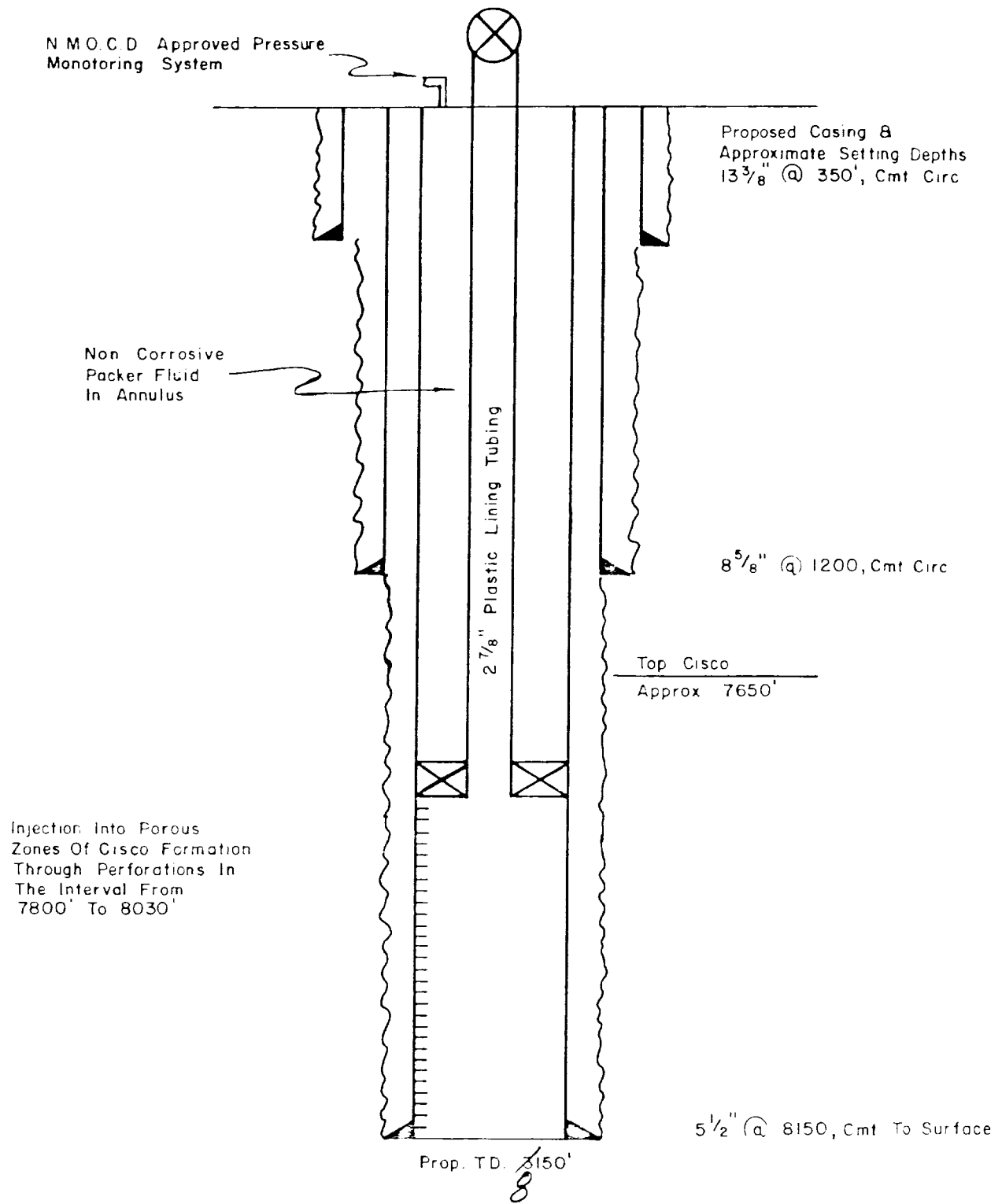
Water Treatment: Corrosion inhibitors as needed

Injection Pressure: Vac to 1500 psig

Volume of Disposed Water: Up to 10,000 B/D.
4000 B/D initially only from Cisco-Canyon

PROPOSED COMPLETION

ANADARKO - DAGGER DRAW SWD # 1 WELL
1495' FNL & 225' FWL SEC. 22, T 19 S R 25 E
EDDY COUNTY, NEW MEXICO



TABULATION OF WELL DATA

WELL NAME	LOCATION		STATUS	DATE COMPL.	TD	CASING, DEPTH & CEMENT	PERFS	FORMATION
	FOOTAGE	STR						
Anadarko Osage No.1	1980'FN&EL	21-19-25	Prod. Oil	9/23/82	7954 PBTD	13-3/8" @ 500' w/500 sxs 8-5/8" @ 1299' w/850 sxs 5-1/2" @ 7926' w/475 sxs	7672-7704	Cisco
Orig. Coquina Osage No.1			D&A	8/16/73	9410 TD			

AFFIRMATIVE STATEMENT
(ITEM XII)

I affirmatively state that I have thoroughly 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 quality water.

A handwritten signature in cursive script, reading "Richard A. Erickson".

Richard A. Erickson
Staff Geological Engineer
Anadarko Production Company

2E32E

7-7-83

7-4-83

RESULTS REPORTED

P.O. Drawer 130, Artesia, NM

COMPANY _____ LEASE
FIELD OR POOL _____ Dagger Draw

SECTION _____ BLOCK _____ SURVEY _____ COUNTY Eddy STATE NM

SOURCE OF SAMPLE AND DATE TAKEN

NO. 1 Produced water - taken from Orange fl.

NO. 2

NO. 3

NO. 4

REMARKS:

Слвсо

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0068			
pH When Sampled				
pH When Received	7.22			
Bicarbonate as HCO ₃	1,147			
Supersaturation as CaCO ₃				
Undersaturation as CaCO ₃				
Total Hardness as CaCO ₃	1,950			
Calcium as Ca	572			
Magnesium as Mg	126			
Sodium and/or Potassium	1,920			
Sulfate as SO ₄	2,415			
Chloride as Cl	1,740			
Iron as Fe	0.04			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	7,820			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	700			
Resistivity, ohms/m at 77° F.	0.725			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks Our nearest records of Cisco water in the area are about 10 miles south. When we compare the above with those records, we do see some significant similarity in this water and Cisco. This results in a slightly unstable conclusion that this is natural connate Cisco.

Waylan C. Martin, M. A.

LABORATORY NO. 583334

SAMPLE RECEIVED 5-20-83
RESULTS REPORTED 5-24-83

SOURCE OF SAMPLE AND DATE TAKEN

NO. 4

CHEMICAL AND PHYSICAL PROPERTIES

RECEIVED
MAY 2 1965
NOTES

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge.



May 30, 1984

ADDRESS LIST ATTACHED

Gentlemen:

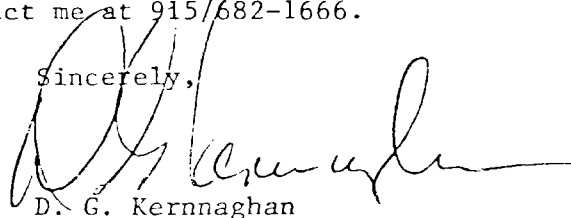
Anadarko Production Company is making application for Authority to Inject salt water into the Cisco-Canyon formation in a well to be drilled as a SWD well at a location 1495' FNL & 225' FWL of Section 22, T19S, R25E, Eddy County, New Mexico. A copy of the C-108 form and a map showing the proposed location are attached.

Anadarko intends to request permission to dispose of water from our Osage No. 1 well and other company operated Cisco-Canyon wells in the area as well as possible outside water on a commercial basis. Total volume will range from 4000 BPD initially to 10,000 BPD at a later date. Surface pressure will be a maximum of 1500 psig.

A hearing will be required by the N.M.O.C.D. to consider this application. Anyone wishing to file an objection should notify the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico, 87501 within 15 days.

If you have any questions please contact me at 915/682-1666.

Sincerely,



D. G. Kernnaghan

DGK:gks

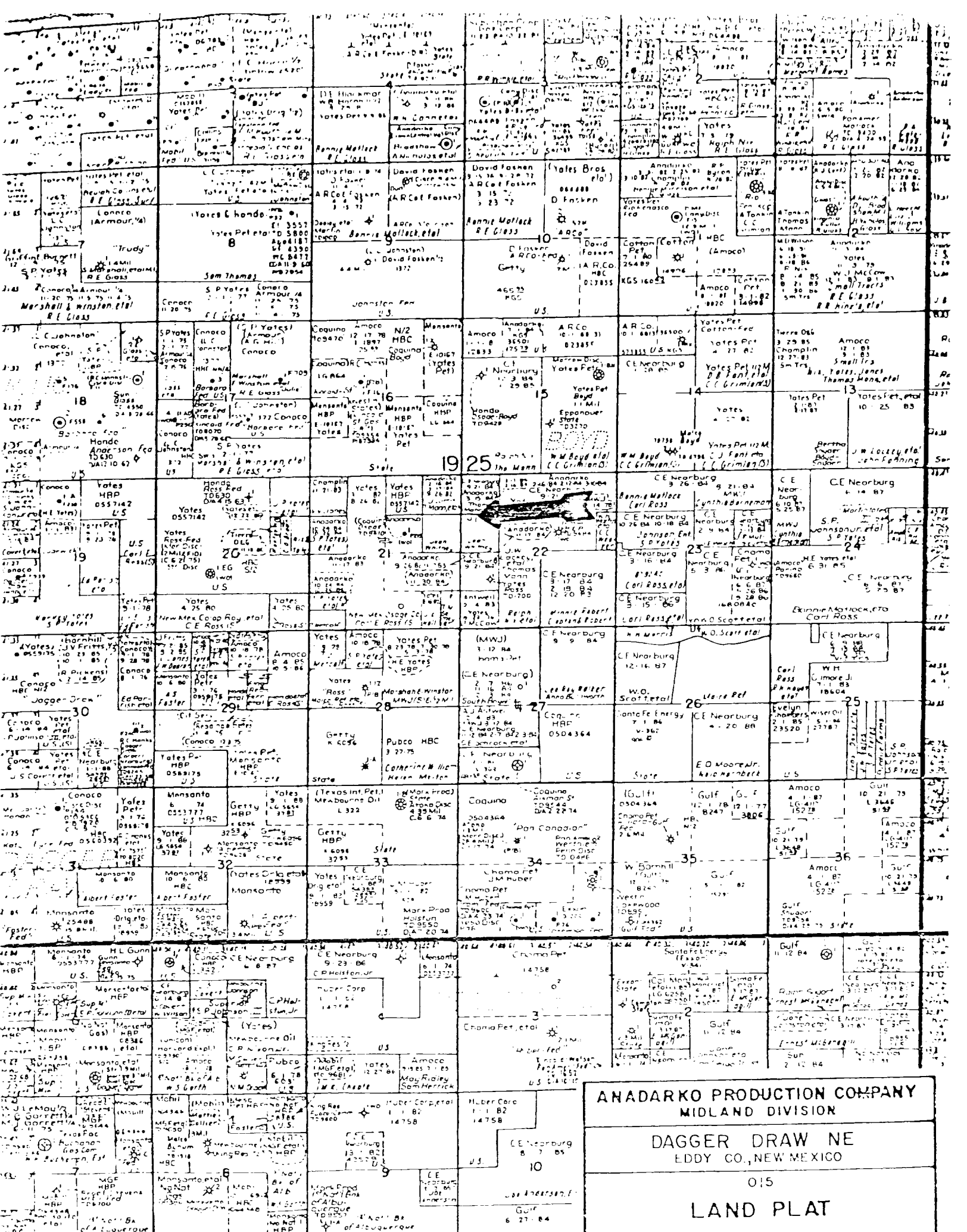
ATTACH.

- ✓ A. J. Antweil
814 W. Marland
Hobbs, New Mexico
- ✓ Armour Properties
c/o R. E. Chambers
1107 Oil & Gas Bldg.
Wichita Falls, Texas 76301
- ✓ D. E. Blackmar
1407 Highland Road
Roswell, New Mexico 88201
- ✓ Conoco, Inc.
P. O. Box 1959
Midland, Texas 79702
- ✓ Mary Elaine Cribbs
231 East Iliff Ave 1/2
Denver, Colorado 80210
- ✓ Crown Central Petroleum Corporation
731 West Wadley
Building K, Suite 200
Midland, Texas 79701
- ✓ Flag-Redfern Oil Company
P. O. Box 2280
Midland, Texas 79702
- ✓ Hondo Oil & Gas Co.
P. O. Box 1610
Midland, Texas 79702
- ✓ Marshall & Winston, Inc.
P. O. Box 874
Midland, Texas 79702
- ✓ Monsanto Company
1330 Midland National Bank Tower
Midland, Texas 7701
- ✓ C. E. Nearburg
P. O. Box 31405
Dallas, Texas 75231
- ✓ Reading & Bates Oil & Gas
1100 Midcontinent Bldg.
409 S. Boston Ave.
Tulsa, Oklahoma 74103
- ✓ T. J. Sivley
214 Booker Bldg.
Artesia, New Mexico 88210
- ✓ Suburban Propane Gas Corp.
P. O. Box 17689
San Antonio, Texas 78217
- ✓ Leslie and Jean Whitney
12723 Richmond Ave. 1/2
Grandview, MO 64030
- ✓ Yates Petroleum Corp.
207 South 4th
Artesia, New Mexico 88201

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

Logs will be filed when run.

1- Copy to with one copy to the appropriate Division



PS Form 3811, Jan. 1978

SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)

☐ Show to whom and date delivered.....

☐ Show to whom, date and address of delivery.....

☐ RESTRICTED DELIVERY

Show to whom and date delivered.....

☐ RESTRICTED DELIVERY.

Show to whom, date, and address of delivery.\$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

Reading & Bates Oil & Gas

409 S. Boston Ave.

Tulsa, Oklahoma 74103

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

6-1-84

DATE OF DELIVERY

6-1-84

ADDRESS (Complete only if requested)

UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

TULSA OK JUN 1 1984

GPO : 1979-288-848

PS Form 3811, Jan. 1978

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☐ RESTRICTED DELIVERY.

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(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

Mary Elaine Cribbs

231 East Iliff Ave. 1/2

Denver, Colorado 80210

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

ME Cribbs

DATE OF DELIVERY

5-31-84

ADDRESS (Complete only if requested)

UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

GPO : 1979-288-848

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(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

Yates Petroleum Corp.

207 South 4th

Artesia, New Mexico 88201

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	5384963	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☒ Authorized agent

Phonda Birunt

DATE OF DELIVERY

6-1-84

ADDRESS (Complete only if requested)

UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

GPO : 1979-288-848

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☐ RESTRICTED DELIVERY.

Show to whom, date, and address of delivery.\$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

A.J. Antweil

814 W. Marland

Hobbs, New Mexico 88240

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☒ Authorized agent

A. Antweil

DATE OF DELIVERY

5-31-84

ADDRESS (Complete only if requested)

UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

GPO : 1979-288-848

PS Form 3811, Jan. 1978

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(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

Marshall & Winston, Inc.
P. O. Box 874
Midland, Texas 79702

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	5384963	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY 6-1-84 POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆ GPO : 1979-288-848

PS Form 3811, Jan. 1978

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☐ RESTRICTED DELIVERY.

Show to whom, date, and address of delivery. \$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

D.E. Blackmar
1407 Highland Road
Roswell, New Mexico 88201

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	5384962	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY 5/31/84 POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆ GPO : 1979-288-848

PS Form 3811, Jan. 1979

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Show to whom and date delivered.

☐ RESTRICTED DELIVERY.

Show to whom, date, and address of delivery. \$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

Conoco, Inc.
P. O. Box 1959
Midland, Texas 79702

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	5384960	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY 5-31-84 POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆ GPO : 1979-288-848

PS Form 3811, Jan. 1979

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☐ RESTRICTED DELIVERY

Show to whom and date delivered.

☐ RESTRICTED DELIVERY.

Show to whom, date, and address of delivery. \$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

Flag-Redfern Oil Company
P. O. Box 2280
Midland, Texas 79702

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	725 5384977	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆ GPO : 1979-288-848

PS Form 3811, Jan. 1978

SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
☐ Show to whom and date delivered.....
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☐ RESTRICTED DELIVERY.
Show to whom, date, and address of delivery.\$ ____
(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Crown Central Petroleum Corp.
731 West Wadley, Bldg. K, Suite 200
Midland, Texas 79701

3. ARTICLE DESCRIPTION:
REGISTERED NO. CERTIFIED NO. INSURED NO.
5384941
(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent
4. *Donna McCann*
DATE OF DELIVERY POSTMARK
5. ADDRESS (Complete only if requested)
6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆GPO : 1979-288-848

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☐ RESTRICTED DELIVERY.
Show to whom, date, and address of delivery.\$ ____
(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Hondo Oil & Gas Co.
P. O. Box 1610
Midland, Texas 79702

3. ARTICLE DESCRIPTION:
REGISTERED NO. CERTIFIED NO. INSURED NO.
POS 5384990
(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent
4. *Eric T. Parks*
DATE OF DELIVERY POSTMARK
6/1/84
5. ADDRESS (Complete only if requested)
6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆GPO : 1979-288-848

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(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
T.J. Sivley
214 Booker Bldg.
Artesia, New Mexico 88210

3. ARTICLE DESCRIPTION:
REGISTERED NO. CERTIFIED NO. INSURED NO.
5384959
(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent
4. *T.J. Sivley*
DATE OF DELIVERY POSTMARK
5/31/84
5. ADDRESS (Complete only if requested)
6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

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(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Monsanto Company
1330 Midland National Bank Tower
Midland, Texas 79701

3. ARTICLE DESCRIPTION:
REGISTERED NO. CERTIFIED NO. INSURED NO.
POS 5384911
(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent
4. *Sam G. ...*
DATE OF DELIVERY POSTMARK
MAY 31 1984
5. ADDRESS (Complete only if requested)
6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

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(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
 Suburban Propane Gas Corp.
 P. O. Box 17689
 San Antonio, Texas 78217

3. ARTICLE DESCRIPTION:
 REGISTERED NO. CERTIFIED NO. INSURED NO.
 5384958

(Always obtain signature of addressee or agent)

I have received the article described above.
 SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆GPO : 1979-288-848

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

PS Form 3811, Jan. 1978

SENDER: Complete items 1, 2, and 3.
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☐ RESTRICTED DELIVERY.
 Show to whom, date, and address of delivery.\$ ____

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
 C.E. Nearburg
 P. O. Box 31405
 Dallas, Texas 75231

3. ARTICLE DESCRIPTION:
 REGISTERED NO. CERTIFIED NO. INSURED NO.
 5384961

(Always obtain signature of addressee or agent)

I have received the article described above.
 SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆GPO : 1979-288-848

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

PS Form 3811, Jan. 1978

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 Show to whom and date delivered.....
☐ RESTRICTED DELIVERY.
 Show to whom, date, and address of delivery.\$ ____

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
 Armour Properties
 1107 Oil & Gas Bldg.
 Wichita Falls, Texas 76301

3. ARTICLE DESCRIPTION:
 REGISTERED NO. CERTIFIED NO. INSURED NO.
 5384973

(Always obtain signature of addressee or agent)

I have received the article described above.
 SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆GPO : 1979-288-848

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

PS Form 3811, Jan. 1978

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☒ Show to whom, date and address of delivery...
☐ RESTRICTED DELIVERY
 Show to whom and date delivered.....
☐ RESTRICTED DELIVERY.
 Show to whom, date, and address of delivery.\$ ____

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
 Leslie and Jean Whitney
 12723 Richmond Ave. 1/2
 Grandview, MO. 64030

3. ARTICLE DESCRIPTION:
 REGISTERED NO. CERTIFIED NO. INSURED NO.
 5384977

(Always obtain signature of addressee or agent)

I have received the article described above.
 SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆GPO : 1979-288-848

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Anadarko Production Company
Address: Box 130, Artesia, New Mexico 88210
Contact party: Jerry Buckles Phone: 505/748-3368

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

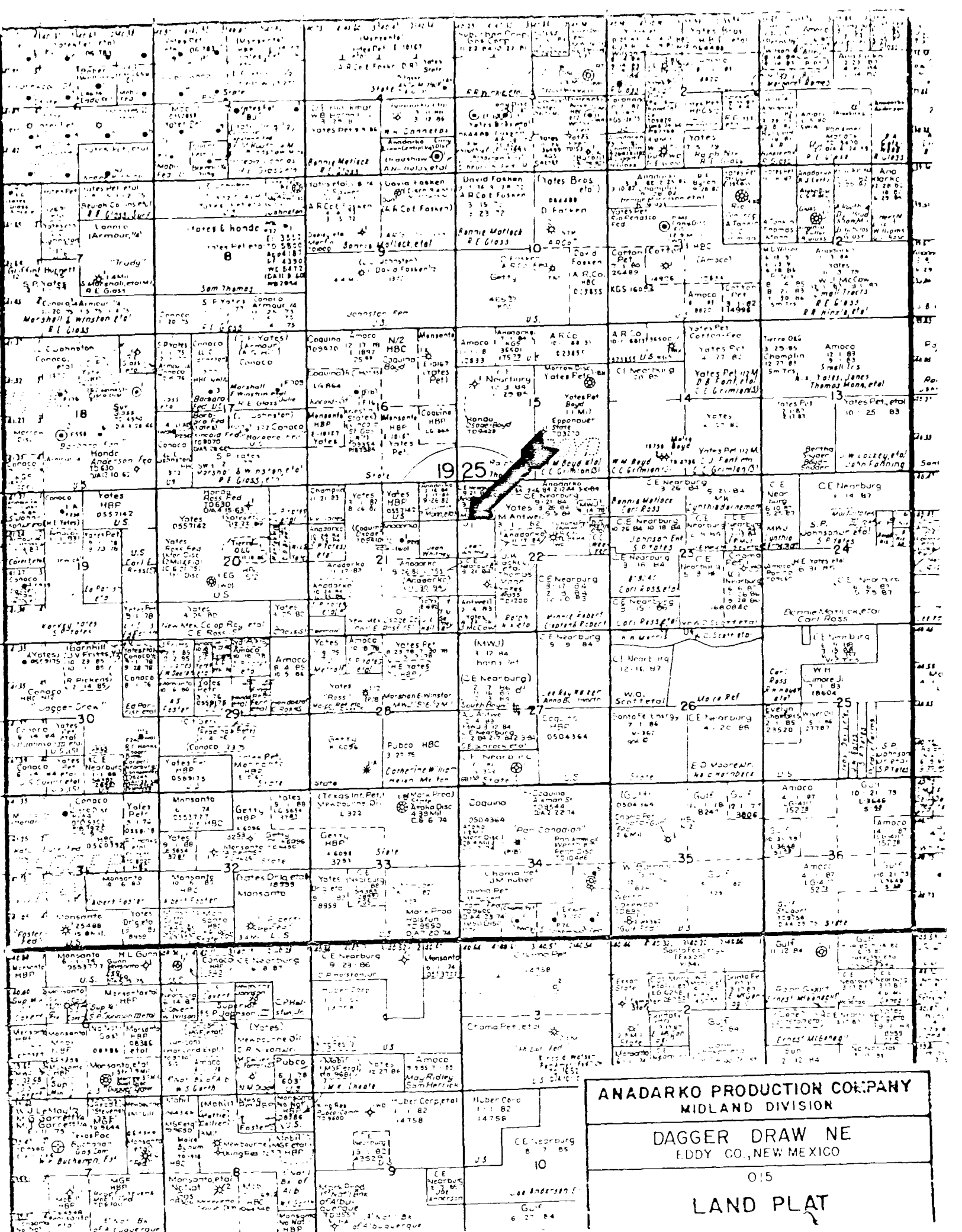
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: D. G. Kernaghan Title Division/Operations Manager

Signature: [Signature] Date: 5/30/84

* 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. Logs will be filed when run.

RECEIVED: Approval and one copy to Santa Fe with one copy to the appropriate Division



WELL AND OPERATING DATA
PROPOSED
ANADARKO DAGGER DRAW SWD #1 WELL

LOCATION: 1495' FNL & 225' FWL
Sec. 22, T19S, R25E
Eddy County, New Mexico

WELL DATA

Casing and Tubing: As shown on attached schematic subject to NMOCD rules and permit approval. Cement circulated on surface and intermediate casing. Cement calculated to reach surface on long string.

Packer: Tension packer set as close to perfs as preactical.

Stimulation: NE HCL or other acid in sufficient volume to clean perfs and formation near wellbore.

Logs: To be filed when run.

FORMATION DATA

Injection Formation: Cisco-Canyon

Thickness: 400 feet.

Lithology: Limestone w/scattered dolomite

Interval: Perforations from 7800' to 8030' approx.

Possible productive zones in area: Yeso - 2500'
Wolfcamp - 6200'
Strawn - 8300'
Atoka - 9000'
Morrow - 9300'

Lowest Fresh Water: 1100' est.

SYSTEM DATA

Closed system

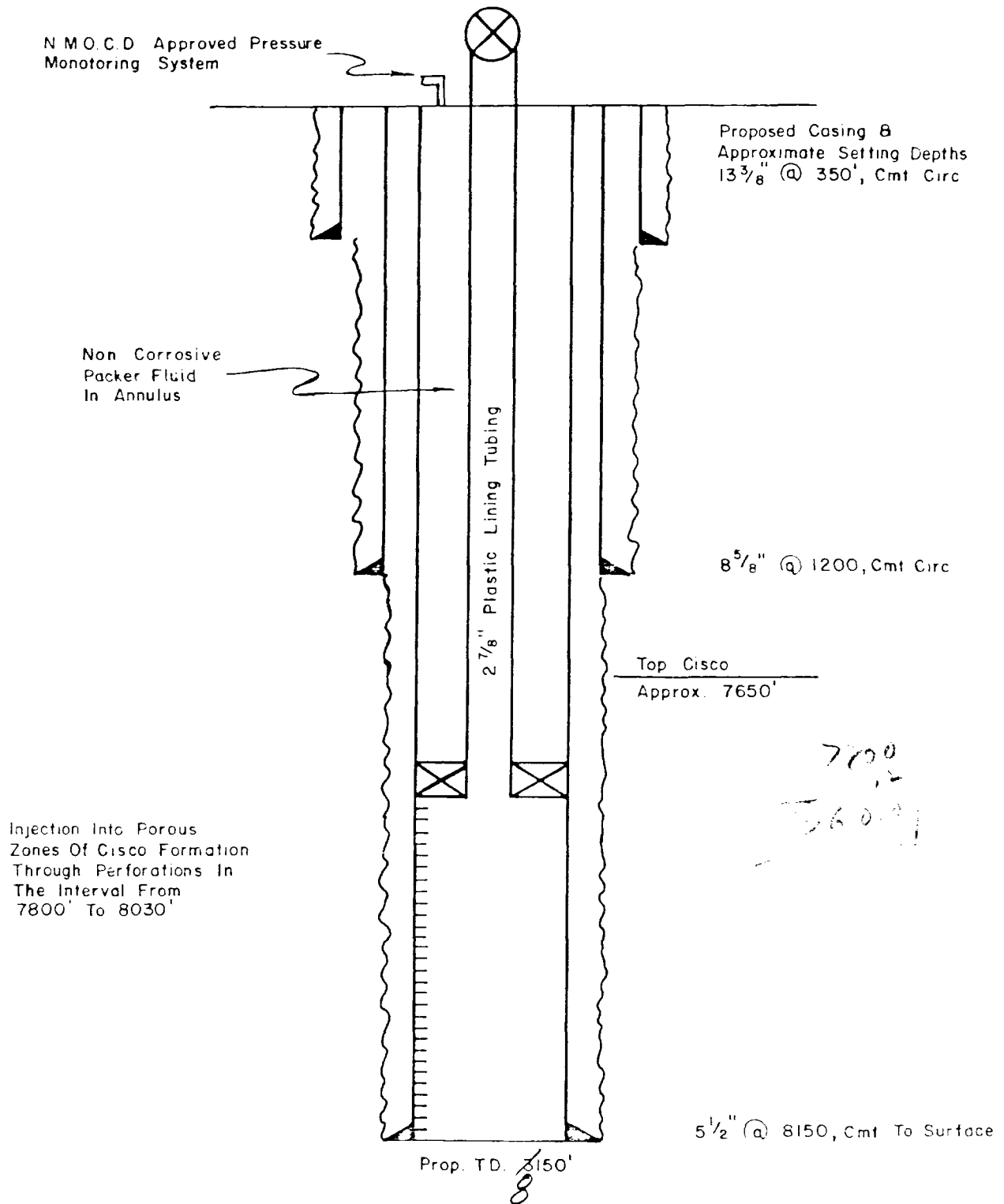
Water Treatment: Corrosion inhibitors as needed

Injection Pressure: Vac to 1500 psig

Volume of Disposed Water: Up to 10,000 B/D.
4000 B/D initially only from Cisco-Canyon

PROPOSED COMPLETION

ANADARKO - DAGGER DRAW SWD # 1 WELL
1495' FNL & 225' FWL SEC. 22, T 19 S R 25 E
EDDY COUNTY, NEW MEXICO



TABULATION OF WELL DATA

WELL	LOCATION		STATUS	DATE COMPL.	TD	CASING, DEPTH & CEMENT	PERFS	FORMATION
	FOOTAGE	STR						
Osage No.1	1980'FN&EL	21-19-25	Prod. Oil	9/23/82	7954 PBTD	13-3/8" @ 500' w/500 sxs 8-5/8" @ 1299' w/850 sxs 5-1/2" @ 7926' w/475 sxs	7672-7704	Cisco
Coquina Osage No.1			D&A	8/16/73	9410 TD			

AFFIRMATIVE STATEMENT
(ITEM XII)

I affirmatively state that I have thoroughly 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 quality water.

A handwritten signature in cursive script, reading "Richard A. Erickson".

Richard A. Erickson
Staff Geological Engineer
Anadarko Production Company

Waylan C. Martin, M. A.

RESULT OF WATER ANALYSES

TO Anadarko Production Company LABORATORY NO. 583326
P.O. Drawer 130, Artesia, NM 88210 SAMPLE RECEIVED 5-20-83
RESULTS REPORTED 5-24-83

COMPANY Anadarko Production Company LEASE _____

FIELD OR POOL _____

SECTION _____ BLOCK _____ SURVEY _____ COUNTY Eddy STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from Section 15 windmill.

NO. 2 _____

NO. 3 _____

NO. 4 _____

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0035			
pH When Sampled				
pH When Received	7.68			
Bicarbonate as HCO ₃	198			
Supersaturation as CaCO ₃				
Undersaturation as CaCO ₃				
Total Hardness as CaCO ₃	1,280			
Calcium as Ca	386			
Magnesium as Mg	77			
Sodium and/or Potassium	1			
Sulfate as SO ₄	1,026			
Chloride as Cl	38			
Iron as Fe	0.36			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	1,726			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	4.75			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

RECEIVED

MAY 25 1983

ARTESIA, NM

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

cc: Mr. Bill Griffin, Midland
Mr. Dan Kernaghan, Midland

By Waylan C. Martin, M. A.

RESULT OF WATER ANALYSES

LABORATORY NO. 583334

TO. Anadarko Production Company

SAMPLE RECEIVED 5-20-83

P O Drawer 130, Artesia, NM 88210

RESULTS REPORTED 5-24-83

COMPANY Anadarko Production Company LEASE

FIELD OR POOL

SECTION BLOCK SURVEY COUNTY Eddy STATE NM

SOURCE OF SAMPLE AND DATE TAKEN

NO. 1 Raw water - taken from Section 22 windmill.

NO. 2

NO. 3

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0012			
pH When Sampled				
pH When Received	7.58			
Bicarbonate as HCO ₃	95			
Supersaturation as CaCO ₃				
Undersaturation as CaCO ₃				
Total Hardness as CaCO ₃	1,645			
Calcium as Ca	966			
Magnesium as Mg	117			
Sodium and/or Potassium	4			
Sulfate as SO ₄	1,376			
Chloride as Cl	29			
Iron as Fe	1.5			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	2,187			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	3.40			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge.

Form No. 3

cc: Mr. Bill Griffin, Midland
Mr. Dan Kernaghan, Midland

By

Waylan C. Martin, M. A.



May 30, 1984

ADDRESS LIST ATTACHED

Gentlemen:

Anadarko Production Company is making application for Authority to Inject salt water into the Cisco-Canyon formation in a well to be drilled as a SWD well at a location 1495' FNL & 225' FWL of Section 22, T19S, R25E, Eddy County, New Mexico. A copy of the C-108 form and a map showing the proposed location are attached.

Anadarko intends to request permission to dispose of water from our Osage No.1 well and other company operated Cisco-Canyon wells in the area as well as possible outside water on a commercial basis. Total volume will range from 4000 BPD initially to 10,000 BPD at a later date. Surface pressure will be a maximum of 1500 psig.

A hearing will be required by the N.M.O.C.D. to consider this application. Anyone wishing to file an objection should notify the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico, 87501 within 15 days.

If you have any questions please contact me at 915/682-1666.

Sincerely,

D. G. Kernnaghan

DGK:gks

ATTACH.

✓ A. J. Antweil
814 W. Marland
Hobbs, New Mexico

✓ Armour Properties
c/o R. E. Chambers
1107 Oil & Gas Bldg.
Wichita Falls, Texas 76301

✓ D. E. Blackmar
1407 Highland Road
Roswell, New Mexico 88201

✓ Conoco, Inc.
P. O. Box 1959
Midland, Texas 79702

✓ Mary Elaine Cribbs
231 East Iliff Ave 1/2
Denver, Colorado 80210

✓ Crown Central Petroleum Corporation
731 West Wadley
Building K, Suite 200
Midland, Texas 79701

✓ Flag-Redfern Oil Company
P. O. Box 2280
Midland, Texas 79702

✓ Hondo Oil & Gas Co.
P. O. Box 1610
Midland, Texas 79702

✓ Marshall & Winston, Inc.
P. O. Box 874
Midland, Texas 79702

✓ Monsanto Company
1330 Midland National Bank Tower
Midland, Texas 7701

✓ C. E. Nearburg
P. O. Box 31405
Dallas, Texas 75231

✓ Reading & Bates Oil & Gas
1100 Midcontinent Bldg.
409 S. Boston Ave.
Tulsa, Oklahoma 74103

✓ T. J. Sivley
214 Booker Bldg.
Artesia, New Mexico 88210

✓ Suburban Propane Gas Corp.
P. O. Box 17689
San Antonio, Texas 78217

✓ Leslie and Jean Whitney
12723 Richmond Ave. 1/2
Grandview, MO 64030

✓ Yates Petroleum Corp.
207 South 4th
Artesia, New Mexico 88201

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☒ no
- II. Operator: Anadarko Production Company
Address: Box 130, Artesia, New Mexico 88210
Contact party: Jerry Buckles Phone: 505/748-3368
- 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.)
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- 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: D. G. Kernaghan Title Division/Operations Manager
Signature: [Signature] Date: 5/30/84
- * 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. Logs will be filed when run.

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

ANADARKO PRODUCTION COMPANY
MIDLAND DIVISION

DAGGER DRAW NE
EDDY CO., NEW MEXICO

0.5
LAND PLAT

stated herein, viz:

(1) to require dry or abandoned wells to be plugged in such a way as to confine the crude petroleum oil, natural gas or water in the strata in which they are found, and to prevent them from escaping into other strata; the division may require a bond of not to exceed ten thousand dollars (\$10,000) conditioned for the performance of such regulations;

(2) to prevent crude petroleum oil, natural gas or water from escaping from strata in which they are found into another stratum or other strata;

(3) to require reports showing locations of all oil or gas wells, and for the filing of logs and drilling records or reports;

(4) to prevent the drowning by water of any stratum or part thereof capable of producing oil or gas, or both oil and gas, in paying quantities, and to prevent the premature and irregular encroachment of water, or any other kind of water encroachment, which reduces or tends to reduce the total ultimate recovery of crude petroleum oil or gas, or both such oil and gas, from any pool;

(5) to prevent fires;

(6) to prevent "blow-outs" and "caving" in the sense that the conditions indicated by such terms are generally understood in the oil and gas business;

(7) to require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties;

(8) to identify the ownership of oil or gas producing leases, properties, wells, tanks, refineries, pipelines, plants, structures and all transportation equipment and facilities;

(9) to require the operation of wells with efficient gas-oil ratios and to fix such ratios;

(10) to fix the spacing of wells;

(11) to determine whether a particular well or pool is a gas or oil well, or a gas or oil pool, as the case may be, and from time to time to classify and reclassify wells and pools accordingly;

(12) to determine the limits of any pool or pools producing crude petroleum oil or natural gas or both, and from time to time redetermine such limits;

(13) to regulate the methods and devices employed for storage in this state of oil or natural gas or of any other substance into any pool in this state for the purpose of repressuring, cycling, pressure maintenance or secondary recovery operation;

(14) to permit the injection of natural gas or of any other substance into any pool in this state for the purpose of repressuring, cycling, pressure maintenance or secondary recovery operation;

(15) to regulate the disposition of water produced or used in connection with the drilling for or producing of oil or gas, or both, and to direct surface or subsurface disposal of such water in a manner that will afford reasonable protection against contamination of fresh water supplies designated by the state engineer;

(16) to determine the limits of any area containing commercial potash deposits and from time to time redetermine such limits; or

(17) to regulate and where necessary prohibit drilling or producing operations for oil or gas within any area containing commercial deposits of potash where such operations would have the effect unduly to reduce the total quantity of such commercial deposits of potash which may reasonably be recovered in commercial quantities or where such operations would interfere unduly with the orderly commercial development of such potash deposits.

History: Laws 1935, ch. 72, § 10; 1941 Comp., § 69-211; Laws 1949, ch. 168, § 10; 1953 Comp., § 65-3-11; Laws 1961, ch. 61, § 1; 1965, ch. 58, § 3; 1977, ch. 237, § 2; 1977, ch. 255, § 47.

Cross-references. — For filing rules and regulations, see 14-4-1 NMSA 1978. As to public utilities commission's lack of power to regulate sale price at well head, see 62-6-4 NMSA 1978.

1977 amendments. — Laws 1977, ch. 237, § 2, substituting "shall require a corporate surety bond in a sum" for "may require a bond of" in Subsection (1),

substituting "fifty thousand dollars (\$50,000)" for "ten thousand dollars (\$10,000)" in that subsection, substituting "location" for "locations" in Subsection (3), substituting "product including the subsurface storage of natural gas" for "other substance into any pool in this state for the purpose of repressuring, cycling, pressure maintenance or secondary recovery operation; or" at the end of Subsection (13), adding Subsection (18), relating to spending the oil and gas reclamation fund and plugging dry and abandoned wells in accordance with the Oil and Gas Act and the