STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

2040 Pacheco St.
Santa Fe, Nm 87505

FORM C-108
Revised 7-1-81

SWD

6/14/99

APPLICATION FOR AUTHORIZATION TO INJECT MAY 28 1999

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

II. Operator: KERR-McGEE CORPORATION
Address: P.O. Box 2880, Dallas, TX 75221-2880
Contact Party: STEPHEN FORE Phone: 972-715-4520

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/1 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 text data on the well. (If well logs have been filed with the Division they need not be submitted.)

* 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: STEPHEN FORE Title: TECHNICAL ASSISTANT

Signature: _____ Date: 05-28-99

If the information required under Section 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. ADMINISTRATTIVE ORDER SWD-97 WAS APPROVED 03-09-98 FOR CONOCO STATE #3. CONOCO STATE #5 IS IN SAME SECTION.

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

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.

Proposed Completion

KB: 4046.0'
DF: 0.0'
GL: 4030.0'
KB estimated

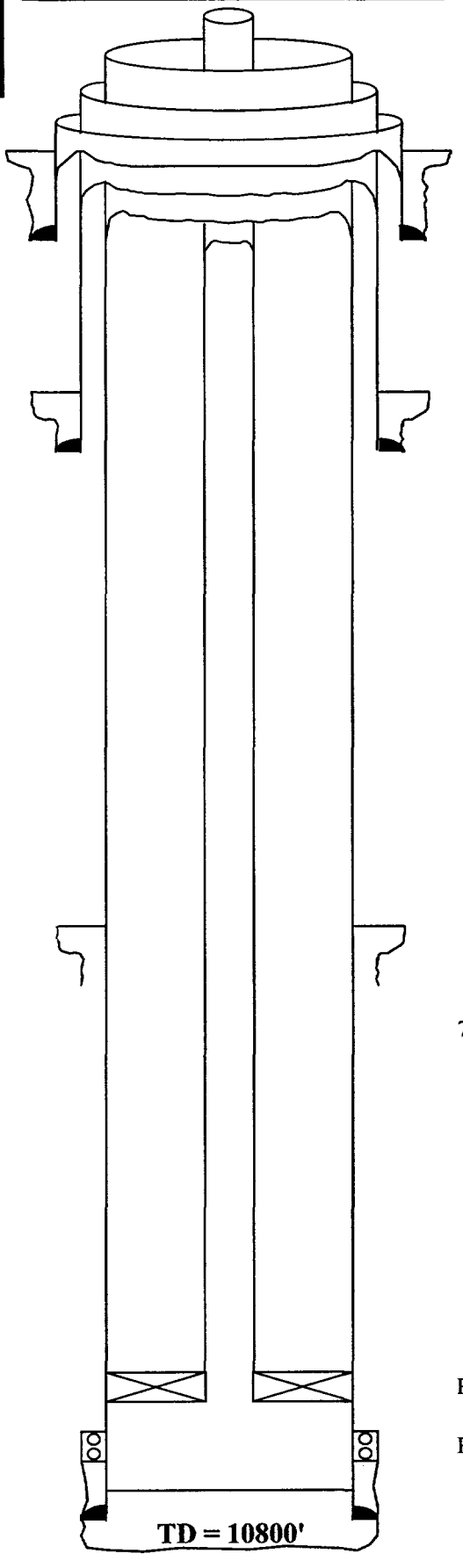
Conoco State #5

Rob Brown 5/27/99

1650' FNL & 1650' FWL
Sec 2-T22S-R23E
Eddy Co, NM

20 ", 94 #/ft casing @ 40'
Grouted in

13-3/8", 48 #/ft @ 1300' w/1000 sx
TOC @ surface



TOC @ 5000'

7" tubing @ 10000'

9-5/8", 40/43.5 #/ft @ 10800'
w/1500 sx

Packer @ 10000'

Perfs @ 10100-800'

PBTD = 10800'

TD = 10800'

INJECTION WELL DATA SHEET

OPERATOR		LEASE		
KERR-McGEE		CONOCO STATE		
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
#5	1650 FNL & 1650 FWL	2	22 S	23 E

Schematic

Tabular Data

Surface Casing

Size 20" Cemented with GROUT sx.

TOC SURFACE feet determined by VISUAL

Hole size 24"

Intermediate Casing

Size 13 3/8" Cemented with 1000 SXS sx.

TOC SURFACE feet determined by VISUAL

Hole size 17 1/2"

Long string

Size 9 5/8" Cemented with 1500 SXS sx.

TOC 5000' feet determined by TEMP SURVEY

Hole size 12 1/2"

Total depth 10,800'

Injection interval

10,000' feet to 10,800' feet.

(perforated or open-hole, indicate which)

INJECTION WELL DATA SHEET -- SIDE 2

Tubing size 7" lined with PLASTIC COATED (material) set in a

BAKER LOCK-SET (brand and model) packer at 10000' feet

(or describe any other casing-tubing seal.)

Other Data

1. Name of the injection formation DEVONIAN

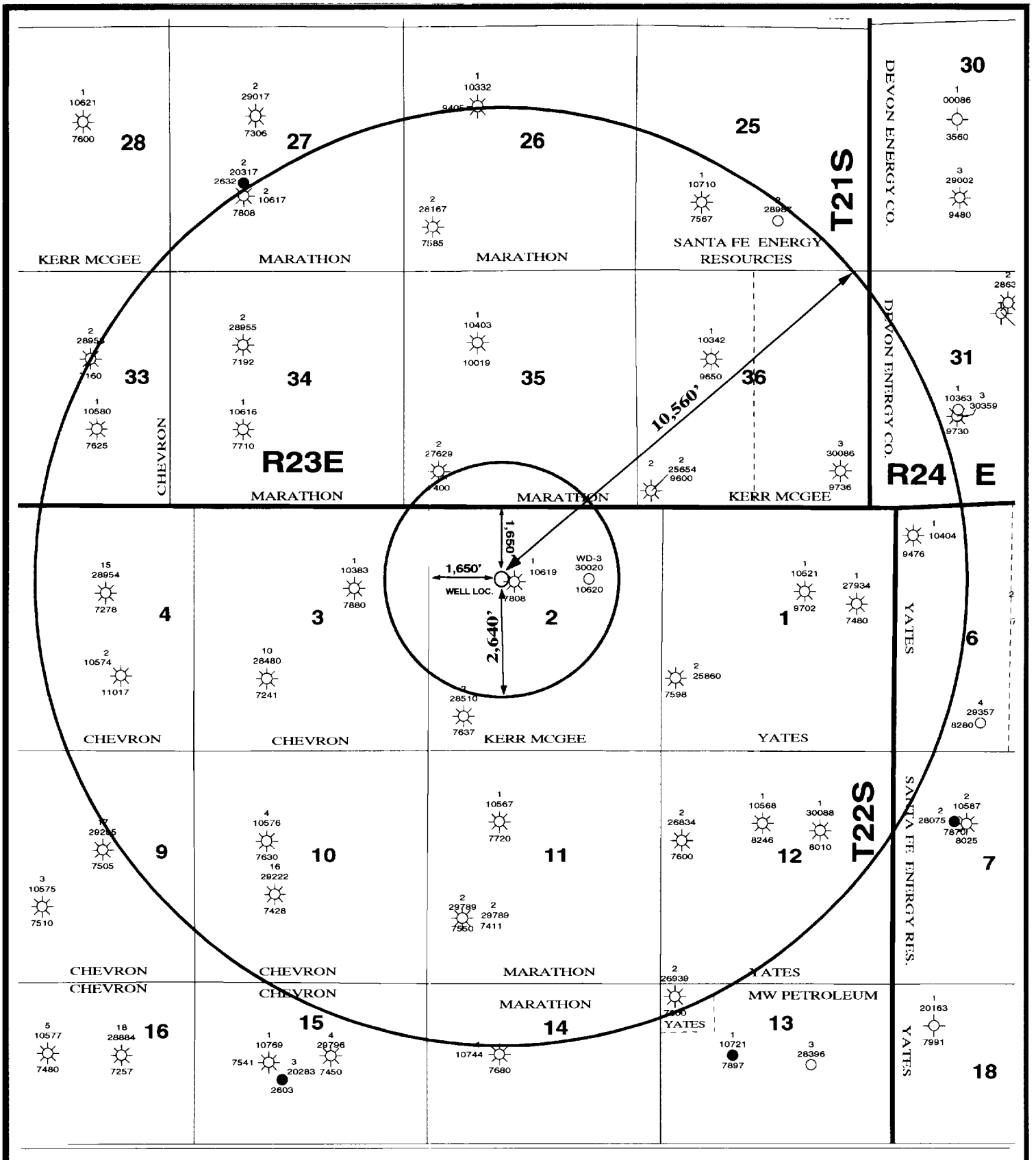
2. Name of Field or Pool (if applicable) INDIAN BASIN

3. Is this a new well drilled for injection? [Y] Yes [ ] No

   If no, for what purpose was the well originally drilled? WELL WILL BE DRILLED FOR SALT WATER DISPOSAL

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) NO

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. UPPER PENN 7396'



KERR McGEE CORPORATION

CONOCO - STATE WELL No. 5

Section 2, T22S - R 23E
EDDY COUNTY, NEW MEXICO
APPLICATION FOR WATER INJECTION

	ONSHORE	
5000.GPF	1" = 3,000'	FEDDY-PROJ.

WELLS IN AREA OF REVIEW

WELL NAME	OPERATOR	API#	TYPE WELL	SPUD DATE	TD	COMP. DATE	CASING PROGRAM
Conoco State #3	Kerr McGee Corp.	30-015-30020	Disposal	1/30/98	10,620 ' OH	3/19/98	16"-25 surf. csg w/grout to surface 9 5/8" 36# @ 1404' w/ 960sxs cmt, TOC 720' Pea gravel 260 - 270' w/ 200sxs cmt to surface 7" 23 & 26# @ 10,165' w/ 1170 sxs cmt, TOC @ 6450' TS

pn.

WELL COMPLETION SKETCHES ORYX-5036-4-A

WELL	FIELD	DATE
Conoco State #3 SWD	Indian Basin	2-24-98

☐ PRESENT COMPLETION ☑ SUGGESTED COMPLETION

PERMANENT WELL BORE DATA

25' - 16" surface pipe w/ grout to surface.

PEA Gravel fr. 260 - 720'

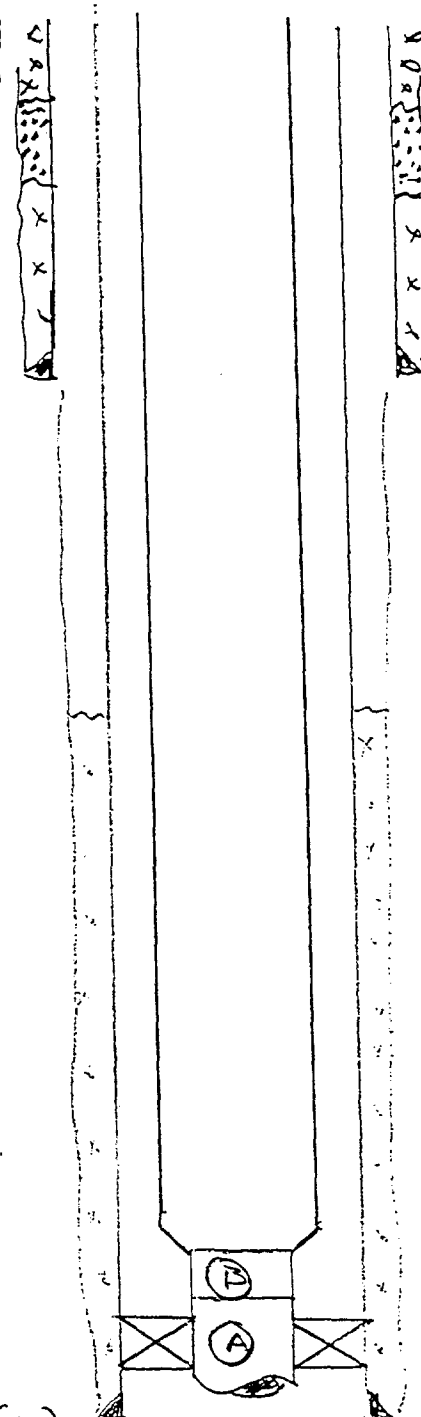
TOC @ 720' (T.S.)

9 5/8", 36#, K55 @ 1404'
(cmtd w/ 960 sxs, No returns to surface, Attempted 200 sxs. dump w/1" Above TOC @ 720' → No success. 200 sxs. cmt to fl. 240' to surface)

8 3/4" Hole

7", 23 & 26# @ 10,147 (+/-)
(K-55 L-80, HCL-80)
(previously - cmt w/ 1185 sxs)
OH: 8 3/4" Hole

TD @ 10,620'



DATA ON THIS COMPLETION

GL - 3908' KB - 3920' est.)
4 1/2", 12.75#, L-80
w/ MMS Brd threads IPC BS
(240 jts in hole)

Dagley @ +/- 7217'

TOC @ 6450' (T/S)

E. S.S. on/off tool w/ 2.31 profile nipple
A. 7" Baker Lockset pkr. externally nickel plated, internally plastic coated, @ 10,105' (+/-)

OH Designation for 10147 - 10620'.

VII.

1. Proposed average and maximum daily rate @ 24,000 BWPD and 40,000 BWPD, respectively.

2. System is closed.

3. Proposed average and maximum daily pressure @ 1000 psig and 2000 psig.

VIII. The proposed injection zone for the Cisco-Canyon produced water is the Devonian formation from 10,100' to 10,800' MD. Lithologically the Devonian formation consists of dolomite and cherty dolomites characterized by intercrystalline and vugular porosity. The proposed injection zone will be an open-hole interval. The total Devonian thickness is the area is 800 feet. There are no known sources of drinking in the immediate area of the proposed salt-water disposal well.

IX. Proposed stimulation program consists of approximately 8,000 gallons of 15% NEFEHCL with nitrogen and assumes 400 feet of treating interval.

X. After penetrating the top of the Devonian formation, the attached logging program will be run from the Devonian to surface casing. It should be noted Kerr McGee has no plans to run logs across the 400 feet of openhole Devonian section.

XI. Kerr McGee has reviewed the available geologic and engineering data and has concluded that there is no known underground source of drinking water with open faults or other hydrologic connection which could communicate with the disposal water

To: *Doug Casteel*
P.O. Box 867, Andrews, TX 79714

Laboratory No.
Sample Received 5-14-99
Results Reported

CO: *Kerr-McGee Corp.* *Conoco State*
FIELD *Indian Basin*
Section Block Survey County: *Eddy, NM*
No. 1 Combined waters @ disposal tank. 5-13-99
No. 2
No. 3
No. 4
REMARKS

Specific Gravity @ 60°F.	1.0125
pH When Sampled	
pH When Received	7.71
Bicarbonate, as HCO3	952
Supersaturation, as CaCO3	160
Undersaturation, as CaCO3	—
Total Hardness, as CaCO3	2350
Calcium, as Ca	688
Magnesium, as Mg	153
Sodium and/or Potassium	3981
Sulfate, as SO4	2320
Chloride, as Cl	5539
Iron, as Fe	10.8
Barium, as Ba	
Turbidity, Electric	
Color as Pt	
Total Solids, Calc.	13633
Temperature, °F.	
Carbon Dioxide, Calculated	31
Dissolved Oxygen	
Hydrogen Sulfide	159
Resistivity, ohms/m @ 77°F.	0.550
Suspended Oil	
Filtrable Solids, mg/l	
Volume Filtered, ml	
Calcium Carbonate Scaling Tendency	Mild
Calcium Sulfate Scaling Tendency	None

Results Reported As Milligrams Per Liter

Additional Determinations & Remarks: In this study we have found only a very slight supersaturation to calcium carbonate, but no other scaling potential is indicated at this time. We would generally classify the corrosion rate to be somewhat severe. The somewhat higher pH level reduces the corrosion slightly, but we would not be confident that this was the pH level in the field as the pH is inclined to go up when a sample is taken.

MARTIN WATER LABS, INC.

Affidavit of Publication

№ 19856

State of New Mexico,
County of Eddy, ss.

Amy McKay,
being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the state wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

May 20, 1999
_____, 19____
_____, 19____
_____, 19____
_____, 19____
_____, 19____

That the cost of publication is $30.14, and that payment thereof has been made and will be assessed as court costs.

Amy McKay

Subscribed and sworn to before me this

20th day of May, 1999

Patricia Mason

My commission expires 1/27/01
Notary Public

May 20, 1999

LEGAL NOTICE
May 11, 1999

Kerr McGee Corporation hereby gives public notice that it is applying to the Oil Conservation Division of New Mexico, Santa Fe, for a permit to dispose of produced saltwater by injection into a formation which is not productive of oil and/or gas.

The applicant proposes to inject fluid into Conoco State Lease Well #5, located 1650 FNL and 1650 FWL of Section 2, Lot F, T22S, R23E, Eddy County, New Mexico. Fluid will be injected into strata in the subsurface depth interval ranging from 10,000 - 10,900 at a maximum rate of 40,000 barrels of water per day and/or a maximum surface pressure of 2100 psi.

Any objections or requests for hearing by interested parties, who can show they are adversely affected, should be submitted in writing within fifteen days of publication, to Oil Conservation Division of New Mexico, Energy and Mineral Department, P.O. Drawer 2088, Santa Fe, New Mexico 87501. For further information, contact Kerr McGee Corporation, PO Box 2880, Dallas TX 75221-2880 (Telephone 972-715-8020).

KERR-McGEE

P.O. BOX 2880 • DALLAS, TEXAS 75221-2880

May 28, 1999

Marathon Oil Company
PO Box 522
Midland, TX 79702

Re: Conoco State #5

Ladies and Gentlemen:

Kerr McGee Corporation is planning to drill the Conoco State #5 and utilize as a disposal well. The well is located 1650 feet from the north line, 1650 feet from the west line in Section 2, Township 22 S, Range 23 E in Eddy County, New Mexico.

Kerr McGee intends to complete into the Devonian formation and dispose of Cisco-Canyon produced water at 2,100 psi and 40,000 bbls per day maximum. All parties must file objections or request for hearing with the Oil Conservation, PO Drawer 2088, Santa Fe, New Mexico, 87501, within fifteen days.

If you have any questions concerning this application, please contact me at my direct office number, 972-715-4520.

Yours truly,

Stephen Fore
Technical Assistant

Enclosure:

KERR-McGEE

P.O. BOX 2880 • DALLAS, TEXAS 75221-2880

May 28, 1999

Chevron, U.S.A., Inc.
PO Box 1150
Midland, TX 79702

Re: Conoco State #5

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Yours truly,

Stephen Fore
Technical Assistant

Enclosure:

KERR-McGEE

P.O. BOX 2880 • DALLAS, TEXAS 75221-2880

May 28, 1999

New Mexico State Land Office
PO Box 1148
Santa Fe, New Mexico 87504-1148

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Yours truly,

Stephen Fore
Technical Assistant

Enclosure:

U.S. POSTAL SERVICE **CERTIFICATE OF MAILING**

MAY BE USED FOR DOMESTIC AND INTERNATIONAL MAIL, DOES NOT PROVIDE FOR INSURANCE—POSTMASTER

Received From:

Kerr-McGee Corp.
PO Box 2880
Dallas, TX 75221-2880

One piece of ordinary mail addressed to:

Marathon Oil Company
PO Box 522
Midland, TX 79702

Affix fee here in stamps or meter postage and post mark. Inquire of Postmaster for current fee.

PS Form 3817, Mar. 1989

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PS Form 3817, Mar. 1989

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Santa Fe NM 87504-1148

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