5WD 12/30/99 762 KERR-MCGEE OIL & GAS ONSHORE LLC

P.O. BOX 809004 • DALLAS, TEXAS 75380-9004 • PH (972) 715-4000 14311 WELCH ROAD • DALLAS, TEXAS 75244-3934 • FAX (972) 715-4069

December 6, 1999

Energy, Minerals & Natural Resources Dept. Oil & Gas Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505

DEC | 5 1999 ł

Re: Bunnell Federal #3 30-015-3070

Ladies and Gentlemen:

Kerr McGee Oil & Gas Onshore LLC is planning to utilize the Bunnell Federal #3 as a disposal well. The well is located 2050 feet from the south line, 1850 feet from the east line in Section 18, Township 21 S, Range 23 E in Eddy County, New Mexico.

Kerr McGee Oil & Gas Onshore LLC intends to complete into the Devonian formation and dispose of Cisco-Canyon produced water at 2,100 psi and 30,000 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 Analyst

- STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

2040 Pacheco St. Santa Fe, Nm 87505

APPLICA	TION FOR AUTHORIZATION TO INJECT
i∕ I.	Purpose: Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? yes N no
V 11.	Operator: KERR-McGEE 01L & GAS ONSHORE LLC
	Address: P.O. Box 809004, Dallas, TX 75380-9004
	Contact Party: STEPHEN_FOREPhone: 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.
ℒ IV.	Is this an expansion of an existing project? yes X 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: Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and 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.).
VVIII.	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.
V 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:
	When the I

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.
- \checkmark (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.
 - ν (1) The name of the injection formation and, if applicable, the field or pool name.
 - \checkmark (2) The injection interval and whether it is perforated or open-hole.
 - \checkmark (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.
 - $_{\mathcal{I}}$ (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.

Affidavit of Publication

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:

November 12	
	, 1999
	1999
	1999
	, 1999
	, 1999

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

U	mymylay
La day of	ibed and sworn to before me this
A	Maine Roporte
My commission expires	5/25/03
	Notary Public

November 12, 1999

LEGAL NOTICE November 9, 1999

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

The applicant proposes to inject fluid into Bunnell Federal Lease Well #3, located 2050 FSL and 1850 FEL of Section 18, Lot J, T21S, R23E, Eddy County, New Mexico. Fluid will be injected into strata in the subsurface depth interval ranging from 9,500 - 1,000 at a maximum rate of 30,000 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 Oil & Gas Onshore LLC, PO Box 809004, Dailas, TX 75380-9004 (Telephone 972-715-4520).

	RANGE	23 E			GROUT SX.	VISUAL			730 SXS sx.	VISUAL			<u>600</u> sx.	TEMP SURVEY				feet.
	TOWNSHIP	21 S	Tabular Data		Cemented with	feet determined by	18 1/2"		" Cemented with	feet determined by	14 3/4"		Cemented with	feet determined by	4" & 6 1/8"	10,000°		to <u>10,000° OH</u> Jicate which)
LEASE	BUNNELL FEDERAL SECTION	18		Surface Casing	Size 16"	TOC SURFACE	Hole size	Intermediate Casing	Size <u>9 5/8</u> "	TOC SURFACE	Hole size	Long string	Size 7" & 5 " LINER	TOC 5,400' & 6,900	Hole size 8 3/	Total depth	Injection interval	<u>9,500°0H</u> feet 1 (perforated or open-hole, ind
	FOOTAGE LOCATION	2050 FSL & 1850 FEL	amatic															
OPERATOR	KEKK-MCGEE WELL NO.	#3	Sche														-	

SIDE 1

INJECTION WELL DATA SHEET

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-	INJECTION WELL DATA SHEET SIDE 2
duT	Ing size 3 1/2" & 2 //8" Ined with INIEKNAL PLASILC CUALED (material)
<u>BAKEF</u> (or	LOCK-SET packer at 9,500' (brand and model) describe any other casing-tubing seal.)
Oth	er Data
,	Name of the injection formation <u>DEVONIAN</u>
N	Name of Field or Pool (if applicable) INDIAN BASIN
'n	Is this a new well drilled for injection?
	If no, for what purpose was the well originally drilled? WELL WAS DRILL TO TD 7,400° AS UPPER PENN GAS WELL. UPPER PENN IS NOT
	PRODUCTIVE. WELL BORE WILL BE DEEPEN AND UTILIZED AS A SWD WELL IN THE DEVONNTAN FORMATION.
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) <u>YES</u>
	PERFS 7,025 - 7,361' UPPER PENN, PERFS WILL BE SQUEZZED AND 5" LINER WILL OVER LAP 125'
ъ.	Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. <u>UPPER PENN 7,025</u>

VII.

- 1. Proposed average and maximum daily rate @ 15,000 BWPD and 30,000 BWPD, respectively.
- 2. System is closed.
- 3. Proposed average and maximum daily pressure @ 1000 psig and 2100 psig.
- VIII. The proposed injection zone for the Cisco-Canyon produced water is the Devonian formation from 9,500' to 10,000' 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 500 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 500 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 500 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



	CASING PROGRAM	16"-25 surf. csg w/grout to surface 9 5/8" 36# @ 1,300' w/1,730 sx cmt, TOC @ surface Stage collar @ 3,020' w/265 sx 7" 23 & 26# @ 7,400' w/ 205 sx, TOC @ 5,400' (calc) perfs 7,025 - 7,361'
2	COMP. DATE	10/2/99
of Reviev	đ	PTD 10,000
AREA (SPUD DATE	8/10/99
ELLS IN	TYPE WELL	Disposal
3	API#	30-015-30701
	OPERATOR	Kerr McGee
	WELL NAME	Bunnell Federal #3

NO OTHER WELL BORES WITHIN THE ONE-HALF MILE RADIUS PENETRATE THE PROPOSED FORMATION



JAN-16-1998 07:25 FROM ORYX HOBES NM

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P.02

DRAFT

TO:	Doug Castee	1		LAB. NO. DATE REC	1-15-98					
P.O. Box 8	67. Andrews. T	- X 79714		1-1J-70						
COMPAN	Y Oryx Energy	Company		Conoco State	#2					
FIELD				CONVOU BLACE	17 44					
SEC	BLK	SURVEY		CO						
NO.1	Produced wa	ter - taken from	Conoco Sta	te #2						
NO. 2	-									
NO. 3.										
NO. 4										
REMARK	S:									
Specific G	ravity @ 600F.		1.00	18						
pH When	Sampled									
pH When :	Received		4.68	3		, 	•	,		
Bicarbona	te, as HC03		54	4		1	ł		1	
Supersa	turated, as CaC	03								
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Suspende	a Ull Solida					<u> </u>				
Volume	Solius									
volume r	merea, m									

Remarks: We are not familiar with the specific location of this well or the zone being produced, but we do note that this water is composed of essentially all condensed water vapor.

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Bureau of Land Management 2909 West Second Street Roswell, New Mexico 88202

Re: Bunnell Federal #3

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Nadel and Gussman Permian Inc. Suite 508 601 North Marienfeld Midland, Texas 79701

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Marathon Oil Company PO Box 522 Midland, TX 79702

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

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Trustees of the Moore Trusts PO Box 10908 Midland, Texas 79702

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Mobil Producing Texas & New Mexico Inc. 12450 Greenspoint Drive Houston, Texas 77060

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Yates Petroleum Corporation 1050 South Fourth Street Artesia, New Mexico 88210

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Santa Fe Synder Corporation Suite 1330 550 West Texas Midland, Texas 79701

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