

## STATE OF NEW MEXICO

# ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

# OIL CONSERVATION DIVISION HOBBS DISTRICT OFFICE

BRUCE KING GOVERNOR 1-11-93

POST OFFICE BOX 1980 HO88S, NEW MEXICO 88241-1980 (505) 393-6161

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501	Swa 500
RE: Proposed:  MC DHC NSL NSP SWD WFX PMX	
Gentlemen:	
I have examined the application for the:  Ray westall Federal 30 # 7-0  Operator Lease & Well No. Unit  and my recommendations are as follows:	30-23-34 S-T-R
Jerry Sexton Supervisor, District 1	

# STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

# OIL CONSERVATION DIVISION POST OFFICE BUX 2018

FORM C-108 Revised 7-1-81

	SANTA FE. NEW MEXICO B/501
APPLIC	ATION FOR AUTHORIZATION TO INJECT
I.	Purpose: Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? yes no
II.	Operator: Ray Westall
	Address: P.O. Box 4, Loco Hills NM 88255
	Contact party: Randall L. Harris Phone: (505) 677-2370
111.	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
٧.	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:
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and</li> <li>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.).</li> </ol>
·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 boylef.
	Name: Randall L., Harrys// Title Geologist
	Signature: 2 and 1/4/93
Bubmi	ne information required under Sections VI, VIII, X, and XI above has been previously tted, it need not be duplicated and resubmitted. Please show the date and circumstance ne earlier submittal.

#### III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
  - (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
  - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
  - (3) A description of the tubing to be used including its size, lining material, and setting depth.
  - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
  - (1) The name of the injection formation and, if applicable, the field or pool name.
  - (2) The injection interval and whether it is perforated or open-hole.
  - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
  - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
  - (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

#### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.



OPEI	KATOR		LEASE	······································		
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(or	describe any	other casing-tubin	g seal).			
Othe	er Data				,	
1.	Name of the .	Injection formation	Delaware			
2.		d or Pool (if appli		n Bell Lake	e Delaware	
3.	Is this a ne	well drilled for	injection? /	Yes X7	No	
		hat purpose was the				
4.	Has the well	ever been perforat	ed in any other	zone(s)? Li	st all such per	forated intervals
	and give plu	gging detail (sacks	of cement or t	oridgo plug(s)	used)	
		See Attac	hed Detaile	d Schematio	<u> </u>	
5.	Give the dep	th to and name of a	ny overlying a	nd/or underlyi	my oil or gon zo	ones (pools) in
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FEDERAL "30" #2 Unit O Section 30 T-23 South, R-34 East e. Lea County, New Mexico 13 3/8" 755' w/1100 sxs circulated Top 5½" csng @ 3964' TOC 4900' Temp Survey. 8 5/8" @ 5192' w/1650 sxs circulated perfs 5254-5308 sqzd 200 sxs perfs 7335-7345 sqzd 200 sxs perfs 7573-7713 sqzd 150 sxs Perfs 8388-8457 PROPOSED -Cmt plug Top 8615 4 . 4. . . . . . . . . . . . . . CIBP @ 8650 ò Perfs 8712-8782 *C*::: Perfs 9497-9531 Perfs 9578-9626 Cmt plug Top 9865 -CIBP @ 9900 Perfs 9931-9971 Perfs 10903-10945 Perfs 11093-11098 5岁" @ TD 11800' w/1500 sxs

RAY WESTALL - OPERATOR

JAN (, 8 1993



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- IV. One well has penetrated the proposed injection zone within the ½ mile radius of the proposed injection well. This is the Continental Oil Co. Bell Lake Unit #2. This is a disposal water disposal well in the Delaware formation. NMOCD SWD 119.
- VII. The average daily volume 400 BWPD at 2 BPM. Expected maximum of 600 BWPD.

The system will be closed.

Average injection pressure of 600 PSI, maximum of 1200 PSI.

Source of injection water is from the Delaware Formataion from the Ray Westall Federal 19 and Federal 30 wells. Analysis attached.

VIII. The proposed injection zone is the Delaware formation. The top of the Delaware is at 5156' and is 3536 feet thick. The Delaware is comprised of sands and shales.

There is no source of fresh water immediately underlying or overlying the proposed injection interval.

- IX. No stimulation program is proposed.
- X. Logs and data have been filed with the Division.
- XI. There is no fresh water wells within one mile of the proposed injection well.
- XII. All available geologic and engineering data has been examined. No evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water has been found.

RECEIVED

JAN 0 6 1993

VI. WELL HISTORIES IN AREA OF REVIEW

RECEIVED

JAN 0 6 1993

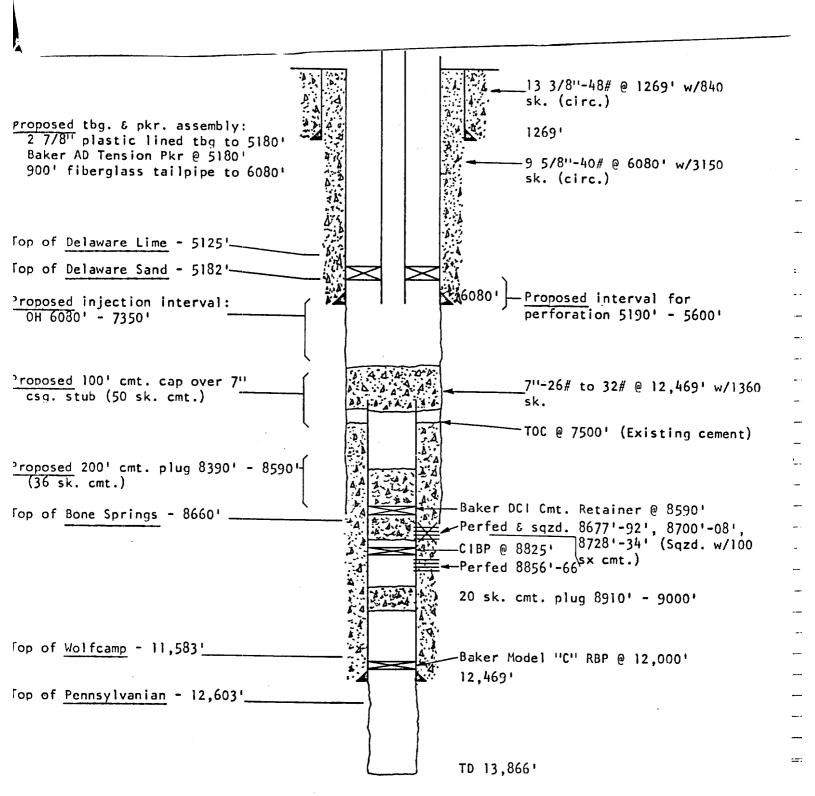
OCD HOBES OF

SWD-119

# APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

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T .	company	I WELL III	P. 0. I	Box 460 U-LL	•

TE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be set for hearing, if the applicant so requests. SEE RULE 701.



# Bell Lake Unit No. 2

660' FSL ε 3300' FEL Sec 30-T23S-R34E (DF 3517', 19' AGL)

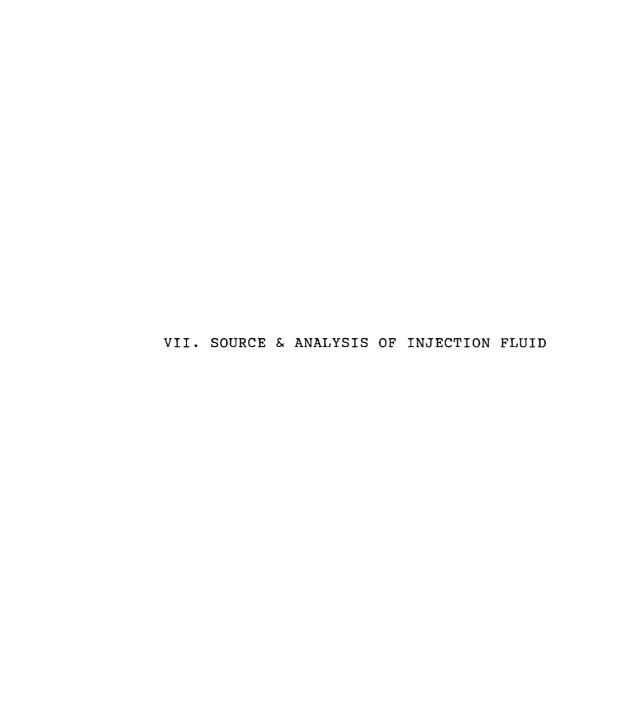
FEK 5-27-71

(GAS) ALLOWABLE

New Well Recompletion

The animal of completion or recompletion. The completion date shall be that date in the case of an oil well when oil is delivered number of completion or recompletion. The completion of completion or recompletion. The completion of completion or recompletion or recompletion. The completion of completion or recompletion of completion or recompletion. The completion of completion of completion or recompletion of completion or recompletion.

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# THE WESTERN COMPANY OF NORTH AMERICA WATER ANALYSIS

HOBBS, NEW MEXICO LAB ANALYSIS #: HB010227

## GENERAL INFORMATION

OPERATOR: RAY WESTALL

WELL: FEDERAL 30

FIELD: North Bell Lake

FORMATION: Delaware

COUNTY: Lea

- NM STATE:

DEPTH:

DATE SAMPLED: 10-25-92

DATE RECEIVED: 10-26-92

SUBMITTED BY: PUMPER???

0

5.59

WORKED BY:

D. SHEPHERD

PHONE #:

505-392-5556

SAMPLE DESCRIPTION: ALL WATER FOR ANALYSIS

## PHYSICAL AND CHEMICAL DETERMINATIONS

1.167 @ 78 °F SPECIFIC GRAVITY:

): .045 OHMS @ 75 °F

RESISTIVITY (CALC.

25 PPM

SULFATE:

266 PPM

IRON (FE++):

20497 PPM

TOTAL HARDNESS:

58612 PPM

CALCIUM:

MAGNESIUM:

1791 PPM

BICARBONATE:

105 PPM

CHLORIDE:

132789 PPM

SODIUM CHLORIDE (CALC)

218438 PPM

and the state of the

**SODIUM+POTASS:** 

59384 PPM

:00

TOT. DISSOLVED SOLIDS: 251155 PPM

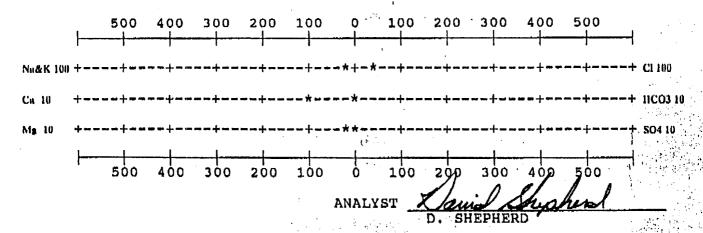
PERCENT OIL

H2S'

:NO TRACE

REMARKS:

## STIFF TYPE PLOT (IN MEQ/L)



## PROOF OF NOTICE

## Surface Owner

State Of New Mexico Office of Commissioner of Public Lands P.O. Box 1148 Santa Fe, NM 87504-1148

# Leasehold Operators

Kaiser-Francis Oil Company P.O. Box 21468 Tulsa, OK 74121-1468

RECEIVED
JAN 0 8 1993

SCO MERCE CON