OIL LUNSEHVATION DIVISION

POST OFFICE BOX 20H8 STATE LAND OFFICE BUILDING SANTA FE NEW MEXICO 87501 FORM C-108 Revised 7-1-81

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Di-11 MAP 45, 1982
OL GUNSERVATION INVESTIGA

APPLICATION	FOR	AUTHORIZATION	ΤO	INJECT	
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, , ,	Purpose: Secondary Recovery Pressure Maintenance X Di-11 MAP 5 1982
1.	Application qualifies for administrative approval? X yes OIL CUNSCIVATION DIVIS
II.	Operator: PETRO-LEWIS CORPORATION SANTA FE
	Address: P. O. Box 937, Levelland, Texas 79336
	Contact party: James F. Sieck - District Engineer Phone: (806) 894-8589
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? \square yes \square no If yes, give the Division order number authorizing the project $\underline{\cdot}$.
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.

- VII. Attach data on the proposed operation, including:
 - Proposed average and maximum daily rate and volume of fluids to be injected;

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

- Whether the system is open or closed;
- Proposed average and maximum injection pressure;

a schematic of any plugged well illustrating all plugging detail.

- 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.).
- Attach appropriate geological data on the injection zone including appropriate lithologic *VIII. 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.
 - Applicants for disposal wells must make an affirmative statement that they have XII. 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

VI.

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

Name: James F	. Sieck	т.	itle $_^{\mathrm{D1}}$	strict Engineer
Signature:	Dames F	Such	Date:	3/11/82

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. An electric log was submitted 12-15-81 with a prior request

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 dement 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 rearing of administrative applications within 15 days from the date this application was mailed to them.

FEDERAL 12-C #1
Sec. 12, T19N, R4W
Sandoval County, New Mexico

RE: Para XIII-C-108

NOTICE

Surface Owners: Minerals Management Service

Drawer 600

Farmington, New Mexico 87401

Offset Operators within one-half mile:

Trend Exploration Govenor's Center

Suite 600, 777 Grant Street Denver, Colorado 80203 Federal pocall Engle Miren Field

Location: 330 First, 460 FSL, Sec. 12, TI9H, RYLU, Sandeval Co., New Misyrco Casing: 10 74"@ 2071, H.S. 15" w/250 sks. 7" @ 3724", HS. 874" w/692 sks. Tubing 276" @ N.A. w/facker

77 Top Cement @surface Jop Cement @ 1000' -lerts, 5483 - 3493 -PBTD - 5574

7"@ 5724"

TD- \$735'

PETRO-LEWIS CORPORA-TION, P. O. Box 937, Levelland, Texas 79335, 806 894-8589

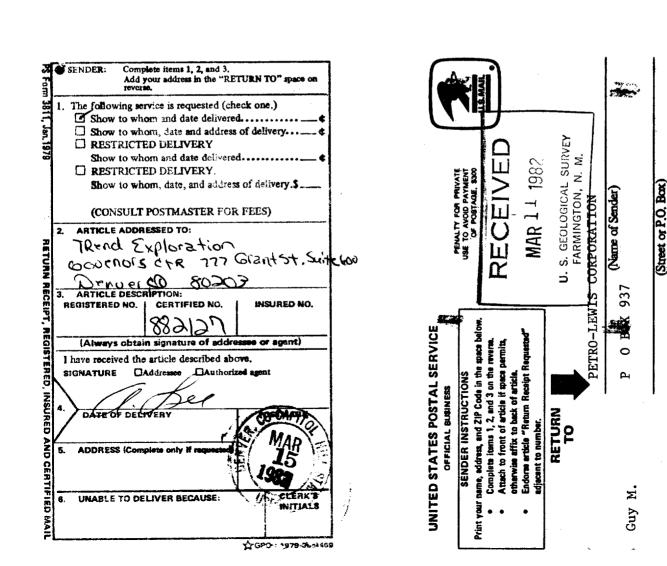
CONTACT: James F. Sieck Petro-Lewis Corporation intends to convert the Federal 12-1 well into a salt water disposal well in order to disposal well incention in adjacent wells. Well location is 960 FSL and 330 FWL of Section 12, Township 19 North, Range 4 West, Sandoval County, New Mexico.

The injection interval is through perforations from 3493 - 5482 in the Entrada formation. The maximum anticipated injection rate is 5 BPM at 500 psj. Maximum anticipated volume is 7500 BPD.

Interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Rox 2088, Santa Fe, New Mexico 67501 within 15 days.

Journal, February 23, 1982

STATE OF NEW MEXICO, Ss. County of Bernalillo being duly sworn declares and says that he is of Albuquerque Journal, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefor has been made or assessed as court costs; that the notice, a copy of which is hereto attached, was published in said paper in the regular daily edition, times, the first publication being on the. day 197. and the subsequent consecutive publications on Sworn and subscribed to before me, a Notary Public in and for the County of Bernalillo and State of New Mexico, Commission : Notary Public. My commission expires



TEXAS 79336

LEVELLAND

FEDERAL 12-C #1 Sec. 12, T19N, R4W Sandoval County, New Mexico

RE: Para XII-C-108

Petro-Lewis Corporation has examined available geologic and engineering data and finds no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

Federal 12-C #1 Section 12, T19N, R4W Sandoval County, New Mexico

RE: Para X-C-108

LOGGING AND TEST DATA

An electric log was submitted 12-15-81 to the New Mexico Oil Conservation Division along with a prior request for SWD approval.

RE: Para XI-C-108

CHEMICAL ANALYSIS OF FRESH WATER

The only fresh water well within one mile of the proposed disposal well is currently inoperable. Therefore, a sample was not obtained and analyzed.

FEDERAL 12-C #1 Sec. 12, T19N, R4W Sandoval County, New Mexico

RE: Para VIII-C-108

GEOLOGICAL DATA

POOL: Eagle Mesa-Entrada

FORMATION: Entrada

GEOLOGICAL NAME: Entrada

THICKNESS: @ 255 feet

DEPTH: @ 5735 feet

INJECTION INTERVAL: 5435 feet

RE: Para IX-C-108

No stimulation program is currently being proposed for this well.

FEDERAL 12-C #1 SEC. 12, T19N, R4W Sandoval County, New Mexico

RE: Para VII-C-108

DATA ON PROPOSED OPERATION

 Proposed average and maximum daily rate and volume of fluids to be injected.

Average daily rate of 6000 BWIPD. Maximum daily rate of 7500 BWIPD.

- 2. System is closed. 🦯
- 3. Proposed average and maximum injection pressure:

 Average injection pressure 400 psi.

 Maximum injection pressure 500 psi.
- 4. A. Source of injection fluid: Produced water from Entrada formation in adjacent wells.
 - B. Analysis of formation fluid: N/A
- 5. Zone of disposal is productive of oil within one mile of the proposed disposal well.
- 6. Packer fluid will fill the annulus above the packer. The annular pressure will be monitored regularly to detect leakage.

OPTRATOR		LEASE		
	s Corporation	Federal 12		
	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
1	960 FSL	12	19N	4W
Sche	ematic	Ťa	bular Data	
	•	Surface Casing		
		Size 10 3/4 H	Comported with	250
		10C Surface		circulated
		Hole size 15"		
	1034"	Intermediate Casing		
4	207'		Cemented with	s
•		TOC	feet determined by _	
		Hole size		
		Long string		603
		Size 7	Cemented with	s
		TOC 1000 f	feet determined by _	calculated
,		Hole size 8	3/4"	
		Total depth573	35 '	
		Injection interval		
			5493	6 a a h
		(perforated or open-hol	e, indicate which)	feet
		Perforated		
	pkr. @5900	/		
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	b -483'			
	± 5483′ =			
	- 5493'			
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Paleon I	ale Cat	· (mater packer at		feet.
baker i	Lok-Set and and model)	pockor de	1	
(or describe	e any other casing-tubing	seal).		
Other Data				
1. Name of	the injection formation	Entrada	· · · · · · · · · · · · · · · · · · ·	
	Field or Pool (if applic			
	a new well drilled for i		□ No	
		well originally drilled?	 '	
If no, i	for what purpose was the	well oliginally, olilized:		
	<u> </u>			
4. Has the	well ever been perforate pluoging detail (sacks	<pre>d in any other zone(s)? of cement or bridge plug</pre>	List all such perfo (s) used) No	rated interval
and give	. brodding occurs (serve			
 				
	e depth to and name of an	y overlying and/or under	lying oil or gas zor	nes (pools) in
CHIR RIE	unknown		•	·
			·	

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0	### P.L.C. Federal 11-C 10	o de convert to		7
5	P. L. C. Novajo 14-C 10 5662'	•/ Navajo 13-C TD 5670'	·	18
	23	24		19
7	26	25		3

Well Name, Number Operator	Location: Unit Sec., Twp., Range	Туре	Date Spudded	Completed	Depth	PBTD	Zone(s)	Record of Completion: Perf(s) and Well Construction
Federal 13-C-l Operator: Petro-Lewis Corporation	330' FWL, 430' FNL, Sec. 13, T-19-N, R-4-W, Sandoval County, New Mexico	011 Producer	9-24-75	10-7-75	5670'	5517'	Entrada)-3/4") sx., e" @ 59
Federal 11-C-1	330'FSL, 330' FEL, Sec. 11, T-19-N, R-4-W, Sandoval County, New Mexico	Oil Producer	9-5-75	9-18-75	5484		Entrada	Perfs & Csg.: 10-3/4" @ 201; w/250 sx. cement, 7" @ 5465' w/700 sx.
Federal 14-C-1	330'FNL, 330'FEL, Sec.14, T-19-N, R-4-W, Sandoval	Oil Producer	10-20-75	11-2-75	5662'	55481	Entrada	Open Hole: 5476' - 5484' Perfs & Csg: 10-3/4" @ 197" 7" & 5½" @ 5590'
	County, New Mexico							Perfs: 5442' - 5460'



Oil and Gas Producers

P.O. Box 937 Sundown Highway Farm to Market Road 300 Levelland, Texas 79336 806/894-8589

OFFSET OPERATORS

Gentlemen:

Petro-Lewis Corporation wishes to convert its Federal 12-C well #1 to a salt water disposal well. The well is located in Section 12, T-19-N, R-4-W, Sandoval County, New Mexico. Produced water will be disposed of through 2 7/8" tubing with a packer set at + 5250'. The perforated interval is from 5493' to 5483' (Entrada). This well is currently temporarily abandoned.

If you have no objection to this disposal request, please sign the waiver below and return in the enclosed envelope. You may retain one copy for your files. If I can supply you with any additional information please let me know.

James F. Sieck
Sr. Operations Engineer

WAIVER

We have been notified of Petro-Lewis Corporation's request for salt water disposal in the well identified above. We are aware of the facts and hereby waive any objection to approval of this request.

Signed:	 	
Company:	 	
Date:		



Oil and Gas Producers

P.O. Box 937 Sundown Highway Farm to Market Road 300 Levelland, Texas 79336 806/894-8589

OFFSET OPERATORS

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If you have no objection to this disposal request, please sign the waiver below and return in the enclosed envelope. You may retain one copy for your files. If I can supply you with any additional information please let me know.

> Sincerely, James F. Sieck Sr. Operations Engineer

WAIVER

We have been notified of Petro-Lewis Corporation's request for salt water disposal in the well identified above. We are aware of the facts and hereby waive any objection to approval of this request.

igned:	
ompany:	
ate:	

NEW MEXICO OIL CONSERVATION COMMISSION

Form. C-166 Revised :-i-fc

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A PORQUS FORMATION

OPERAT OR	·		ADDRESS			200	11. V. V. V.
Petro-Lewis Co	rnoration		1	OV 937	Levell		79336
LEASE NAME	rporación	WELL NO.	FIELD		De A 6 1 1	land, IX	COUNTY
Federal l	2	1	Eagle	Mesa			Sandoval
LOCATION						····································	
UNIT LETTER _	M ; we	LL IS LOCATED	FEET FF	SC	outhu	NE AND33	FEET FROM TH
West LINE, SECTION	12 tow	NSHIP 19N	range 4W	NMPK	и.		
			AND TUBING DAT				
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEME	NT T	OP OF CEME	NT TO	P DETERMINED BY
, and and the	10 3/4	207	250		surface	ci	rculated
NTERMEDIATE							
ONG STRING	7"	5724	692 (2	stage)	1000'	Ca	lculated
TUBING			NAME, MODEL AND D	7 '		Ca	
Entrada	MATION		TOP OF FORM 5480			Unknow	
S INJECTION THROUGH TUBING, CAS	SING, OR ANNULUS?	PERFORATIONS	OR OPEN HOLE? PR		VAL(S) OF INJEC		
Tubing				5493-54			
S THIS A NEW WELL DRILLED FOR DISPOSAL?	1	NO, FOR WHAT PURPOS Production	SE WAS WELL ORIGIN.	ALLY DRILLED?	?	HAS WELL EVER ZONE OTHER TH TION ZONE?	BEEN PERFORATED IN AN AN THE PROPOSED INJEC-NO
IST ALL SUCH PERFORATED INTER	VALS AND SACKS OF CE	MENT USED TO SEAL O	FF OR SQUEEZE EACH	ı	<u></u>		
PPTH OF BOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA UNKNOWN		DEPTH OF BOTTOM OF OIL OR GAS ZONE IN T	NEXT HIGHER HIS AREA IKNOWN	***	DEPTH OF TOP OIL OR GAS TO Unk	OF NEXT LOWER NE IN THIS AREA NOWN	
NTICIPATED DAILY MINIMUM NJECTION VOLUME 1 BBLS.) 6000	MAXIMUM 7500		ED TYPE SYSTEM	1	TO BE BY GRAV	ITY OR APPE	OX. PRESSURE (PS!)
NEWER YES OR NO WHETHER THE F	1 7500 OLLOWING WATERS ARE	Closed	TO BE DISPOSED OF	Pressu		ARE WATER ANA	500 LYSES ATTACHED?
RALIZED TO SUCH A DEGREE AS TO TOCK, IRRIGATION, OR OTHER GENE	BE UNFIT FOR DOMEST TRAL USE —	10, 1		SAL ZONE		No	
AME AND ADDRESS OF SURFACE OF	NER (OR LESSEE, IF ST	TATE OR FEDERAL LAN	D)	J			
IST NAMES AND ADDRESSES OF AL	L OPERATORS WITHIN OF	NE-HALF (3) MILE OF	THIS INJECTION WEL	L	·····		
Union Oil of Ca		P.O. Box 310			0.2		
						<u>-</u>	
Trend Exploration	on Govenor's	Center, Sui	te 600, 777	Grant_St	t., Denve	r, Colora	do 80203
AVE COPIES OF THIS APPLICATION ENT TO EACH OF THE FOLLOWING?	BEEN SURFACE OWNE	R		OR WITHIN ONE	-HALF MILE		
ENT TO EACH OF THE PULLOWING?	No		OF THIS WELL	Yes			
RE THE FOLLOWING ITEMS ATTACH HIS APPLICATION (SEE RULE 701-E	ED TO PLAT OF AREA Unavail	ahlo	ELECTRICAL L		1		SKETCH OF WELL
	: Ullavall	ante	Yes	3		Ye	?S
I hereby	certify that the info	rmation above is t	rue and complete	to the best	of my knowle	dge and belie	f.

(Signature)

Sr. Operations Engr.

(Title)

(Date)

KOTE: Should valuers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New

E: Should valvers 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 processed. If a protest is received, the application will be set for hearing, if the applicant so requests, SEE RULE 701.

OFFSET OPERATORS

Union Oil of California P.O. Box 3100 Midland, Texas 79702

Trend Exploration Govenor's Center, Suite 600 777 Grant Street Denver, Colorado 80203

HUA KUNCHUK LATENDAG WITH LINEAR COMPANIES FOR ACEDAN OIL COMPANY FEDERAL 12 NO. furnished by the customer. CHANGES FEDERAL 12 NO. 1 WELL JORDAN_ EARLY MESA FIELD_ NEW MEXICO SANDOVAL Other Services: SW - SW were COMPANY FDC WITH SEC F- CURVE RANGE data **4W** 12 19N borehole reference Elev.: K.B. 6705 GL **6**8**0**3 ent Datum:_ KB D F._. GL 6693 11-8-78 ONE)r:"ler 5605 03391 5604 Interval 5594 .0400 'rterva! 182 Driller 9-5/82179 Logger 182 กดียน 8-3.4 FRESH GEL MLD d in Hole The well Visc. 55 9.3 Fluid Loss 10.0 10.0 ---ml FLOWLINE ml f Sample Meas, Temp. 1.4 <u>@ 64</u>
Meas Temp. 1.27 <u>@ 63</u>
Mars Temp. 3 Meas, Temp. (a) (a) (b) F , Ł