CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: CHEVRON USA Well: CENTRAL 'L' FED NO. 17

Contact: CRAIG WRIGHT Title: AGENT Phone: 915-687-7884

DATE IN 4-23-97 RELEASE DATE 5-8-97 DATE OUT 5-20-97

Proposed Injection Application is for: ___ **WATERFLOOD** ___ Expansion ___ Initial

Original Order: R- _____ ___ Secondary Recovery ___ Pressure Maintenance

SENSITIVE AREAS X **SALT WATER DISPOSAL** ___ Commercial Well

___ WIPP ___ Capitan Reef

Data is complete for proposed well(s)? YES Additional Data Req'd NO

AREA of REVIEW WELLS

18 Total # of AOR 2 # of Plugged Wells

YES Tabulation Complete / Schematics of P & A's

YES Cement Tops Adequate / AOR Repair Required

INJECTION FORMATION

Injection Formation(s) BELL CANYON Compatible Analysis YES

Source of Water or Injectate AREA DRAINAGE (UPPER PENN, LOWER BRUSHY CANYON)

PROOF of NOTICE

___ Copy of Legal Notice ___ Information Printed Correctly

___ Correct Operators ___ Copies of Certified Mail Receipts

NO Objection Received N/A Set to Hearing _____ Date

NOTES: _____

APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL? YES

COMMUNICATION WITH CONTACT PERSON:

1st Contact: ___ Telephoned ___ Letter _____ Date Nature of ~~of Discussion~~

2nd Contact: ___ Telephoned ___ Letter _____ Date Nature of ~~of Discussion~~

3rd Contact: ___ Telephoned ___ Letter _____ Date Nature of ~~of Discussion~~

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108 5/8/77
Revised 7-1-81

SWD 659

APR 23 1997

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: CHEVRON USA PRODUCTION COMPANY

Address: P.O. Box 1150 MIDLAND, TX 79702

Contact party: CRAIG WRIGHT Phone: (915) 687-7284

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: Craig A. Wright Title Petroleum Engr.

Signature: Craig A. Wright Date: 4/7/97

* 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. _____

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.

Section III See attachment 1.

Section V See attachment 2.

Section VI See attachment 3.

Section VII (Proposed Operation)

1. Est. average daily rate = 800 bwpd
   Est. maximum daily rate = 2000 bwpd
   Est. injection volume = 5.8 mmbbls

2. The salt water disposal system will be a closed system.

3. Est. average injection pressure = 500 psi
   Est. maximum injection pressure = 1500 psi

4. Injection water chemical analysis (see attachments 4-6).
   (Note): Fluid compatibility testing in not necessary since the injection and receiving fluids are both in the Delaware formation.

5. The Bell Canyon Formation of the Delaware Mountain Group is the proposed water disposal zone for the Lentini "1" Federal #17 from a depth of 2800' to 3200'. This formation does not produce within one-mile of the proposed well. Therefore, formation water dissolved solids content was inferred through log analysis from the closest well: the Lentini "1" Federal #22. Because no hydrocarbon shows were encountered in this zone, it is assumed to be 100% water saturated and formation water dissolved solids content is calculated below with the standard Archie water saturation equation.

   Offset Well: Lentini "1" Federal #22
   Offset Distance: 700' NNW
   Formation: Bell Canyon
   Depth: 2959'
   Porosity: .23
   Resisitivity: 1.6 ohm-m
   Water Saturation: assumed 100% (no hydrocarbon shows)
   Formation Temperature: 85 degrees F

   Archie Water Saturation Equation: SW= [RW/(POROSITY^2*RT)]^.5
   SW= water saturation
   RW= formation water resistivity (ohm-m)
   RT= formation resistivity (ohm-m)

1.0 =[RW/(.23^2*1.6)]^.5	insert values into Archie Equation
1.0 = [RW/.23^2*1.6]	square both sides of the equation
1.0 = [RW/.053*1.6]	square porosity
1.0 = [RW/.085]	multiply square of porosity times RT
RW = .085 ohm-m	exchange values across equal sign

   .085 ohm-m at 85 degrees formation temperature equates to a NaCl concentration of ~75,000 ppm (from Schlumberger Chart Book, 1988)

Section VIII (Geologic Description of Proposed Injection Zone)

The proposed injection zone for the Lentini "1" Federal #17 is the Bell Canyon Formation of the Delaware Mountain Group. The proposed injection interval for the #17 is the uppermost 400' of the Bell Canyon from about 2800' to 3200'. The Bell Canyon Formation is composed of very-fine grained sandstone with occasional thin siltstone beds. The only known fresh water aquifer in the area is the overlying Quaternary Alluvium at depths less than 250'. No known aquifers underlie the proposed Bell Canyon injection interval.

Section IX (Proposed Stimulation)

Perforate with 4-JHPF between 2800'-3000'. Breakdown the perforations with 2500 gals 15% HCL anti-sludge acid using RCN balls for diversion. Fracture stimulate down the casing with 30,000 gals X-Link gel carrying 90,000 lbs 16/30 sand at 15 BPM and 800 psi.

Section X (Logging and Test Data)

Since this is a new drill, no logging or test data exists. However, well logs from the offset producers have been filed with the Oil Conservation Division and BLM.

Section XI (Fresh Water Analysis)

Craig Helper, State Engineers Office, Roswell, NM, confirmed that no fresh water wells are filed on record within one mile of the proposed disposal well location as of 02/21/97.

Chevron's lease operator for this area agrees, to the best of his knowledge and belief, that no fresh water wells exist within one mile of the disposal well location.

Section XII (Affirmative Statement)

All available geologic data has been examined and no known hydrologic connection exists between the shallow aquifer and the proposed Bell Canyon disposal zone. The data consists of well logs, structure maps, and modern seismic. The Castille Formation, composed of evaporites, immediately overlies the Bell Canyon and provides a seal between the Bell Canyon and any shallow aquifer.

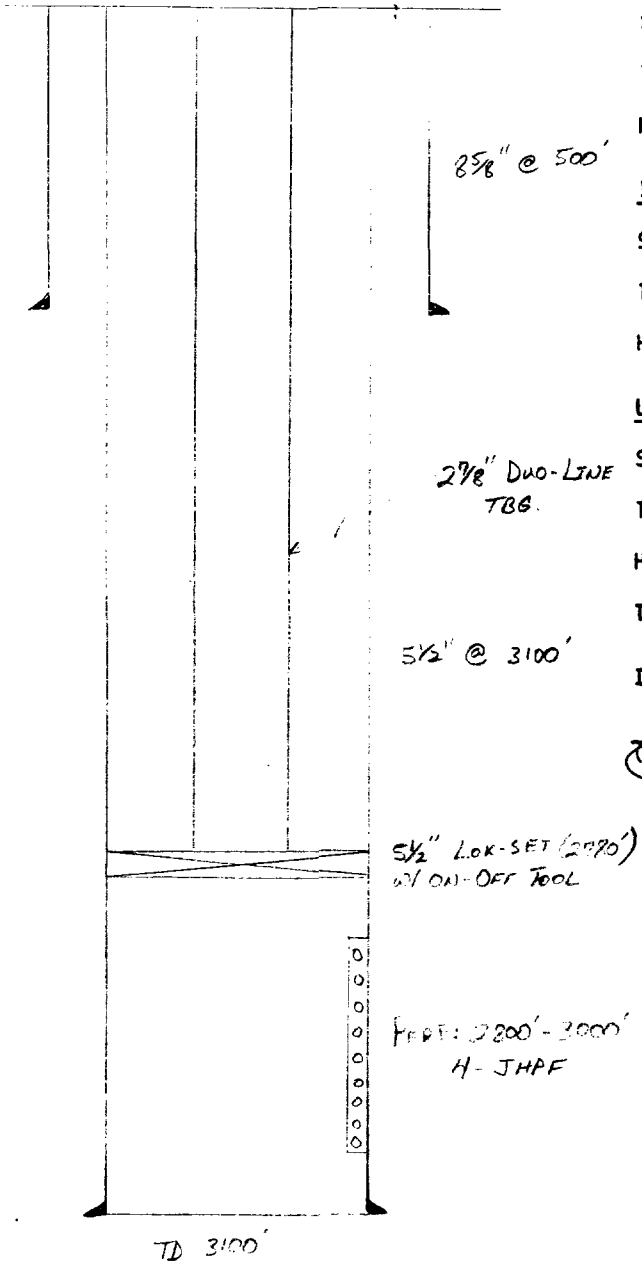
Section XIII ("Proof of Notice")

See attachments 7 & 8.

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
CHEVRON USA PROD. CO.	LENTINI '1' FEDERAL			
#17	1686' FNL & 2505' FWL	1	T-23-S	R-28-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



Tabular Data

Surface Casing

Size 8-5/8" " Cemented with 500 sx.

TOC SURFACE feet determined by CIRC. TO SFC.

Hole size 12-¼"

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5-½" " Cemented with 650 sx.

TOC SURFACE feet determined by CIRC. TO SFC

Hole size 7-⅞"

Total depth 3100'

Injection interval

2800 feet to 3000 feet

(perforated) or open-hole, indicate which)

ATTACHMENT 1

Tubing size 2 7/8" lined with DUO-LINE (material) set in a

WHITAKER LOK-SET W/ ON-OFF TOOL (brand and model) packer at 2780' feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation BELL CANYON (DELAWARE)

2. Name of Field or Pool (if applicable) EAST HERRADURA BEND

3. Is this a new well drilled for injection? ☒ Yes ☐ No

   If no, for what purpose was the well originally drilled? _____

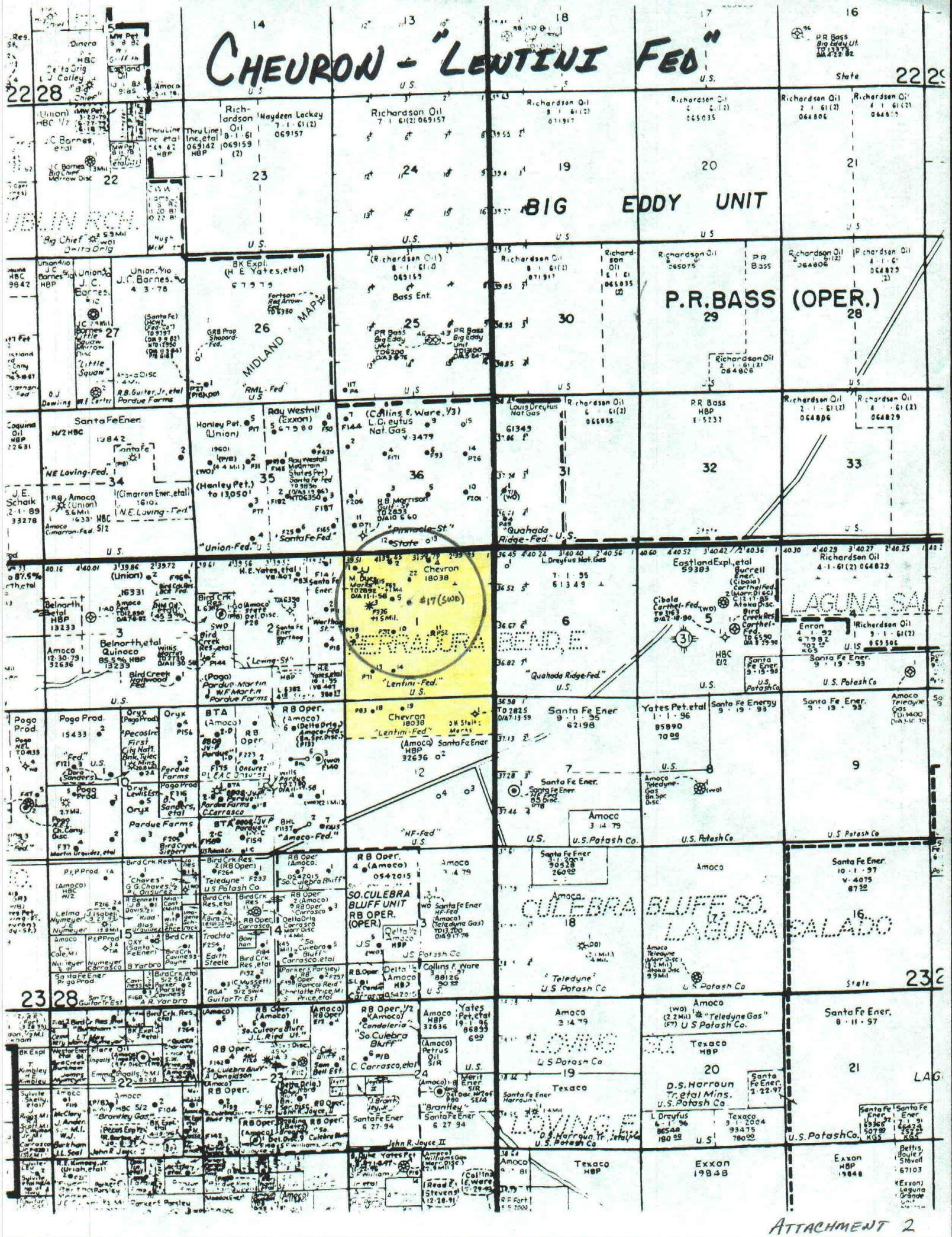
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

   No

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

   ±6000' BRUSHY CANYON (DELAWARE)

   ±6500' BONE SPRING



ATTACHMENT 2

Section VI
Data on all Wells of Public Record Within Area of Review

Well	Type	Method	Construction	Spud Date	Location	TD	PBTD	Record of Completion
Lentini '1' Federal #1	P	Rod Pump	8-5/8" @ 514' (TOC @ sfc) 5-1/2" @ 6400' (TOC @ sfc)	07/20/93	Sec. 1, T23S, R28E 500' FNL & 400' FWL Eddy County, NM	6400'	6311'	Perf 6117'-26', Acidize, Sand Frac Perf 6021'-28', Acidize, Sand Frac Perf 5878'-98', Acidize, Sand Frac
Lentini '1' Federal #2	P	Rod Pump	8-5/8" @ 517' (TOC @ sfc) 5-1/2" @ 6400' (TOC @ sfc)	08/03/93	Sec. 1, T23S, R28E 330' FNL & 1650' FWL Eddy County, NM	6400'	6325'	Perf 6180'-94', Acidize, Sand Frac Perf 6080'-94', Acidize, Sand Frac Perf 5905'-11', Acidize, Sand Frac Perf 5958'-68', Acidize, Sand Frac
Lentini '1' Federal #3	P	Rod Pump	8-5/8" @ 320' (TOC @ sfc) 5-1/2" @ 6385' (TOC @ sfc)	02/08/94	Sec. 1, T23S, R28E 1825' FNL & 900' FWL Eddy County, NM	6385'	6385'	Perf 6148'-64', Acidize, Sand Frac Perf 5920'-44', Acidize, Sand Frac Perf 5570'-82', Acidize, Sand Frac
Lentini '1' Federal #4	P	Rod Pump	8-5/8" @ 380' (TOC @ sfc) 5-1/2" @ 6450' (TOC @ sfc)	08/01/93	Sec. 1, T23S, R28E 330' FNL & 2310' FEL Eddy County, NM	6450'	6396'	Perf 6229'-47', Acidize, Sand Frac Perf 5980'-6006', Acid, Sand Frac Perf 5425'-38', Acidize, Sand Frac
Lentini '1' Federal #5	P	Rod Pump	8-5/8" @ 417' (TOC @ sfc) 5-1/2" @ 6395' (TOC @ sfc)	10/14/93	Sec. 1, T23S, R28E 1650' FNL & 1725' FWL Eddy County, NM	6400'	6332'	Perf 6155'-74', Acidize, Sand Frac Perf 5935'-65', Acidize, Sand Frac Perf 5645'-56', Acidize, Sand Frac
Lentini '1' Federal #9	P	Rod Pump	8-5/8" @ 290' (TOC @ sfc) 5-1/2" @ 6340' (TOC @ sfc)	06/08/94	Sec. 1, T23S, R28E 2060' FSL & 900' FWL Eddy County, NM	6340'	6270'	Perf 6124'-38', Acidize, Sand Frac Perf 5897'-5918', Acid, Sand Frac Re-Frac perfs 5897'-5918'
Lentini '1' Federal #10	P	Rod Pump	8-5/8" @ 255' (TOC @ sfc) 5-1/2" @ 6350' (TOC @ sfc)	05/26/94	Sec. 1, T23S, R28E 2310' FSL & 1750' FWL Eddy County, NM	6350'	6320'	Perf 6228'-40', Acidize, Sand Frac Perf 5918'-46', Acidize, Sand Frac

Well	Type	Method	Construction	Spud Date	Location	TD	PBTD	Record of Completion
Lentini '1' Federal #11	P	Rod Pump	8-5/8" @ 266' (TOC @ sfc) 5-1/2" @ 6390' (TOC @ sfc)	04/23/95	Sec. 1, T23S, R28E 2310' FSL & 2160' FEL Eddy County, NM	6390'	6338'	Perf 6244'-64', Acidize, Sand Frac Perf 5972'-90', Acidize, Sand Frac Perf 5940'-52', Acidize, Sand Frac
Lentini '1' Federal #13	P	Rod Pump	8-5/8" @ 240' (TOC @ sfc) 5-1/2" @ 6325' (TOC @ sfc)	12/9/94	Sec. 1, T23S, R28E 990' FSL & 900' FWL Eddy County, NM	6325'	6278'	Perf 6216'-34', Acidize, Sand Frac Perf 5928'-44', Acidize, Sand Frac Perf 5906'-16', Acidize, Sand Frac
Lentini '1' Federal #14	P	Rod Pump	8-5/8" @ 265' (TOC @ sfc) 5-1/2" @ 6350' (TOC @ sfc)	11/25/94	Sec. 1, T23S, R28E 990' FSL & 1750' FWL Eddy County, NM	6350'	6326'	Perf 6222'-38', Acidize, Sand Frac Perf 5916'-36', Acidize, Sand Frac Perf 6057'-68', Acidize, Sand Frac
Lentini '1' Federal #15	P	Plunger	8-5/8" @ 270' (TOC @ sfc) 5-1/2" @ 6365' (TOC @ sfc)	12/20/94	Sec. 1, T23S, R28E 1000' FNL & 1125' FWL Eddy County, NM	6365'	6273'	Perf 6168'-82', Acidize, Sand Frac Perf 5945'-65', Acidize, Sand Frac Perf 5912-'22', Acidize, Sand Frac
Lentini '1' Federal #22	P	Rod Pump	8-5/8" @ 290' (TOC @ sfc) 5-1/2" @ 6430' (TOC @ sfc)	05/17/95	Sec. 1, T23S, R28E 990' FNL & 2310' FWL Eddy County, NM	6430'	6360'	Perf 5956'-76', Acidize, Sand Frac
Pinnacle State #11	P	Rod Pump	8-5/8" @ 552' (TOC @ sfc) 5-1/2" @ 6373' (TOC @ ?)	12/22/92	Sec. 36, T22S, R28E 990' FSL & 400' FWL Eddy County, NM	6373'	6280'	Perf 5966'-6000', Acid, Sand Frac Perf 6144'-6214', Acid, Sand Frac
Pinnacle State #12	P	Rod Pump	8-5/8" @ 520' (TOC @ sfc) 5-1/2" @ 6250' (TOC @ sfc)	10/04/95	Sec. 36, T22S, R28E 330' FSL & 1650' FWL Eddy County, NM	6250'	6201'	Perf 6193'-98', Acidize, Sand Frac Perf 5960'-70', Acidize, Sand Frac Perf 5216'-59', Acidize, Sand Frac
Pinnacle State #13	P	Rod Pump	8-5/8" @ 503' (TOC @ sfc) 5-1/2" @ 6372' (TOC @ sfc)	09/18/96	Sec. 36, T22S, R28E 330' FSL & 2310' FEL Eddy County, NM	6372'	6333'	Perf 6184'-94', Acidize, Gel Frac

Well	Type	Method	Construction	Spud Date	Location	TD	PBTD	Record of Completion
Warthog '2' State #1	P	Flowing	8-5/8" @ 410' (TOC @ sfc) 5-1/2" @ 6390' (TOC @ sfc)	11/23/92	Sec. 2, T23S, R28E 330' FNL & 660' FEL Eddy County, NM	6390'	6343'	Perf 5930'-80', Acidize, Sand Frac
Warthog '2' State #2	P	Rod Pump	8-5/8" @ 400' (TOC @ sfc) 5-1/2" @ 6356' (TOC @ sfc)	12/15/92	Sec. 2, T23S, R28E 1980' FNL & 660' FEL Eddy County, NM	6356'	6000'	Perf 6126'-72', Plugged Perf 5910'-80', Acidize, Sand Frac
Warthog '2' State #4	P	Rod Pump	8-5/8" @ 400' (TOC @ sfc) 5-1/2" @ 6392' (TOC @ sfc)	01/11/93	Sec. 2, T23S, R28E 1980' FSL & 660' FEL Eddy County, NM	6392'	6346'	Perf 5950'-80', Acidize, Sand Frac

REEF CHEMICAL

Company:	Chevron USA Inc.	Location:	Lentini 1 Federal #1
Source :	Swab Top Zone - H1 , BRUSHY CANYON (DELAWARE) 5878'- 5896'	Attention:	*****
Number :	41	Date Sampled:	January 6, 1997
Salesman:	Dennis Autry	Date of Analysis:	January 7, 1997

ANALYSIS	mg/L		EQ. WT.		MEQ/L
1. pH	6.79				
2. Specific Gravity 60/60 f.	1.187				
3. Hydrogen Sulfide	0 PPM				
4. Carbon Dioxide	Not Determined				
5. Dissolved Oxygen	Not Determined				
6. Hydroxyl (OH-)	0	/	17.0	=	0.00
7. Carbonate (CO3=)	0	/	30.0	=	0.00
8. Bicarbonate (HCO3-)	147	/	61.1	=	2.41
9. Chloride (Cl-)	161,963	/	35.5	=	4,562.34
10. Sulfate (SO4=)	1,025	/	48.8	=	21.00
11. Calcium (CA++)	16,433	/	20.1	=	817.56
12. Magnesium (Mg++)	3,161	/	12.2	=	259.10
13. Sodium (Na+)	80,709	/	23.0	=	3,509.09
14. Barium (Ba++)	Not Determined				
15. Total Iron (Fe)	900.00				
16. Dissolved Solids	263,438				
17. Filterable Solids	0.00				
18. Total Solids	263,438				
19. Total Hardness As CaCO3	54,048				
20. Suspended Oil	0.0000				
21. Volume Filtered (ml)	0				
22. Resistivity @ 75 F. (calculated)	0.0300 /cm.				

23. CAC03 Saturation Index

@80 F.	0.3356
@100 F.	0.6456
@120 F.	0.9056
@140 F.	1.2656
@160 F.	1.6156

24. CASO4 Supersaturation Ratio

@70F	1.6899
@90F	1.8535
@110F	1.6481
@130F	1.6096
@150F	1.6084

Ratio Greater than 1 indicates Scale

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X MEQ/L	= mg/L
Ca(HCO3)2	81.04	2.41	195
CaSO4	68.07	21.00	1,429
CaC12	55.50	794.15	44,075
Mg(HCO3)2	73.17	0.00	0
MgSO4	60.19	0.00	0
MgCL2	47.62	259.10	12,338
NaHCO3	84.00	0.00	0
NaSO4	71.03	0.00	0
NaCl	58.46	3,509.09	205,141

RAY SHAFFNER
Chemist

ATTACHMENT #1

REEF CHEMICAL

Company:	Chevron USA Inc.	Location:	Lentini 1 Federal #1
Source :	Swab Middle Zone-UPPER H2, BRUSHY CANYON	Attention:	*****
Number :	42	Date Sampled:	January 6, 1997
Salesman:	Dennis Autry 6021'-28', (DELAWARE)	Date of Analysis:	January 7, 1997

ANALYSIS	mg/L		EQ. WT.		MEQ/L
1. pH	6.75				
2. Specific Gravity 60/60 f.	1.187				
3. Hydrogen Sulfide	0 PPM				
4. Carbon Dioxide	Not Determined				
5. Dissolved Oxygen	Not Determined				
6. Hydroxyl (OH-)	0	/	17.0	=	0.00
7. Carbonate (CO3=)	0	/	30.0	=	0.00
8. Bicarbonate (HCO3-)	73	/	61.1	=	1.19
9. Chloride (Cl-)	181,959	/	35.5	=	5,125.61
10. Sulfate (SO4=)	1,525	/	48.8	=	31.25
11. Calcium (CA++)	6,413	/	20.1	=	319.05
12. Magnesium (Mg++)	2,188	/	12.2	=	179.34
13. Sodium (Na+)	107,172	/	23.0	=	4,659.66
14. Barium (Ba++)	Not Determined				
15. Total Iron (Fe)	525.00				
16. Dissolved Solids	299,330				
17. Filterable Solids	0.00				
18. Total Solids	299,330				
19. Total Hardness As CaCO3	25,022				
20. Suspended Oil	0.0000				
21. Volume Filtered (ml)	0				
22. Resistivity @ 75 F. (calculated)	0.0260 /cm.				

23. CAC03 Saturation Index

@80 F.	-0.4170
@100 F.	-0.1070
@120 F.	0.1530
@140 F.	0.5130
@160 F.	0.8630

24. CASO4 Supersaturation Ratio

@70F	0.9915
@90F	1.1512
@110F	0.9688
@130F	0.9479
@150F	0.9473

Ratio Greater than 1 indicates Scale

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	MEQ/L	= mg/L
Ca(HCO3)2	81.04		1.19	96
CaSO4	68.07		31.25	2,127
CaC12	55.50		286.61	15,907
Mg(HCO3)2	73.17		0.00	0
MgSO4	60.19		0.00	0
MgCL2	47.62		179.34	8,540
NaHCO3	84.00		0.00	0
NaSO4	71.03		0.00	0
NaCl	58.46		4,659.66	272,404

RAY SHAFFNER
Chemist

REEF CHEMICAL

Company:	Chevron USA Inc.	Location:	Lentini 1 Federal #1
Source:	Swab Bottom Zone - Lower Hz, Brushy Canyon (Delaware)	Attention:	*****
Number:	43	Date Sampled:	January 6, 1997
Salesman:	Dennis Autry 6117'-26'	Date of Analysis:	January 7, 1997

ANALYSIS	mg/L		EQ. WT.		MEQ/L
1. pH	6.68				
2. Specific Gravity 60/60 f.	1.187				
3. Hydrogen Sulfide	0 PPM				
4. Carbon Dioxide	Not Determined				
5. Dissolved Oxygen	Not Determined				
6. Hydroxyl (OH-)	0	/	17.0	=	0.00
7. Carbonate (CO3=)	0	/	30.0	=	0.00
8. Bicarbonate (HCO3-)	73	/	61.1	=	1.19
9. Chloride (Cl-)	181,959	/	35.5	=	5,125.61
10. Sulfate (SO4=)	1,175	/	48.8	=	24.08
11. Calcium (CA++)	12,826	/	20.1	=	638.11
12. Magnesium (Mg++)	1,216	/	12.2	=	99.67
13. Sodium (Na+)	101,501	/	23.0	=	4,413.10
14. Barium (Ba++)	Not Determined				
15. Total Iron (Fe)	400.00				
16. Dissolved Solids	298,750				
17. Filterable Solids	0.00				
18. Total Solids	298,750				
19. Total Hardness As CaCO3	37,033				
20. Suspended Oil	0.0000				
21. Volume Filtered (ml)	0				
22. Resistivity @ 75 F. (calculated)	0.0260 /cm.				

23. CAC03 Saturation Index

@80 F.	-0.1860
@100 F.	0.1240
@120 F.	0.3840
@140 F.	0.7440
@160 F.	1.0940

24. CASO4 Supersaturation Ratio

@70F	1.5087
@90F	1.8116
@110F	1.4718
@130F	1.4377
@150F	1.4367

Ratio Greater than 1 indicates Scale

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	MEQ/L	=	mg/L
Ca(HCO3)2	81.04		1.19		96
CaSO4	68.07		24.08		1,639
CaC12	55.50		612.84		34,013
Mg(HCO3)2	73.17		0.00		0
MgSO4	60.19		0.00		0
MgCL2	47.62		99.67		4,746
NaHCO3	84.00		0.00		0
NaSO4	71.03		0.00		0
NaCl	58.46		4,413.10		257,990

RAY SHAFFNER
Chemist

Affidavit of Publication

№ 19023

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:

March 19, 19 97
_____, 19___
_____, 19___
_____, 19___
_____, 19___
_____, 19___

That the cost of publication is $ 15.77, 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 March, 19 97

Donna Crump

My commission expires 08/01/98
Notary Public

March 19, 1997

Chevron USA Production Co., P.O. Box 1150, Midland, TX 79702, New Mexico Gas Group (915)687-7284, intends to drill a salt water disposal well on the Lentini "1" Federal Lease. The legal location is Section 1, T23S, R28E, 1686' FNL & 2505' FWL, Eddy County, NM. Injection (receiving) formation is the Delaware (Bell Canyon), Herradura Bend East Field, approx. 2800'. Estimated maximum injection rates and pressure are 2000 bwpd & 1500 psi.

Note: Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, NM 87501 within 15 days from the date an application was mailed to them.

ATTACHMENT 7

Leasehold Operators Within One-Half Mile of Proposed SWD Well Location:

Louis Dreyfus Natural Gas Corp.
14000 Quail Springs Parkway, #600
Oklahoma City, OK 73134

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
LOUIS DREYFUS NATURAL GAS CORP.
14000 QUAIL SPRINGS PARKWAY #600
OKLAHOMA CITY, OK 73134

4a. Article Number 002694

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery 4-10

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*
X [signature]

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form 3811, December 1994 Domestic Return Receipt

Thank you for using Return Receipt Service.

Santa Fe Energy Operating Partners, L.P.
550 W. Texas, Suite 1330
Midland, TX 79701

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
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- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
SANTA FE ENERGY OPER. PARTNERS,
L.P.
550 W. TEXAS, SUITE 1330
MIDLAND, TEXAS 79701

4a. Article Number 002695

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery 4-10-97

5. Received By: *(Print Name)* DeVona Hatch

6. Signature: *(Addressee or Agent)*
X [signature]

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form 3811, December 1994 Domestic Return Receipt

Thank you for using Return Receipt Service.

ATTACHMENT 8