



GREENHILL PETROLEUM CORPORATION

Incorporated in Delaware, U.S.A.

WESTHEIMER ROAD, SUITE 200
HOUSTON, TEXAS 77077-6841
TELEPHONE (713) 589-8484
FAX (713) 589-7892

JAN 27 1992

January 27, 1992

Oil Conservation Division
Energy, Minerals and Natural Resources Department
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Attention: Mr. David Catanach

Re: West Lovington Unit
Well Numbers 10, 17, 28, 30, 31, 55, 56, 59, 82 & 99
Lea County, New Mexico

Dear Mr. Catanach:

Enclosed please find the application whereby Greenhill Petroleum Corporation proposes to convert Well Numbers 10, 17, 28, 30, 31, 55, 56, 59, and 82 from producing wells to water injection wells within the West Lovington Unit. Greenhill Petroleum Corporation also plans to drill Well Number 99 as a water injection well. I will forward the affidavit of publication and certified receipts verifying the offset operators and surface owners were notified of our application.

Please advise in the event you have any further questions.

Very truly yours,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
92.069

Enclosures

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: GREENHILL PETROLEUM CORPORATION
Address: 11490 Westheimer, Suite 200, Houston, Texas 77077
Contact party: Mike Newport Phone: (713) 589-8484
- 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 R-2071.
- 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: Michael J. Newport Title Land Manager-Permian Basin

Signature: *Michael J. Newport* Date: 1/7/92

- * 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.

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

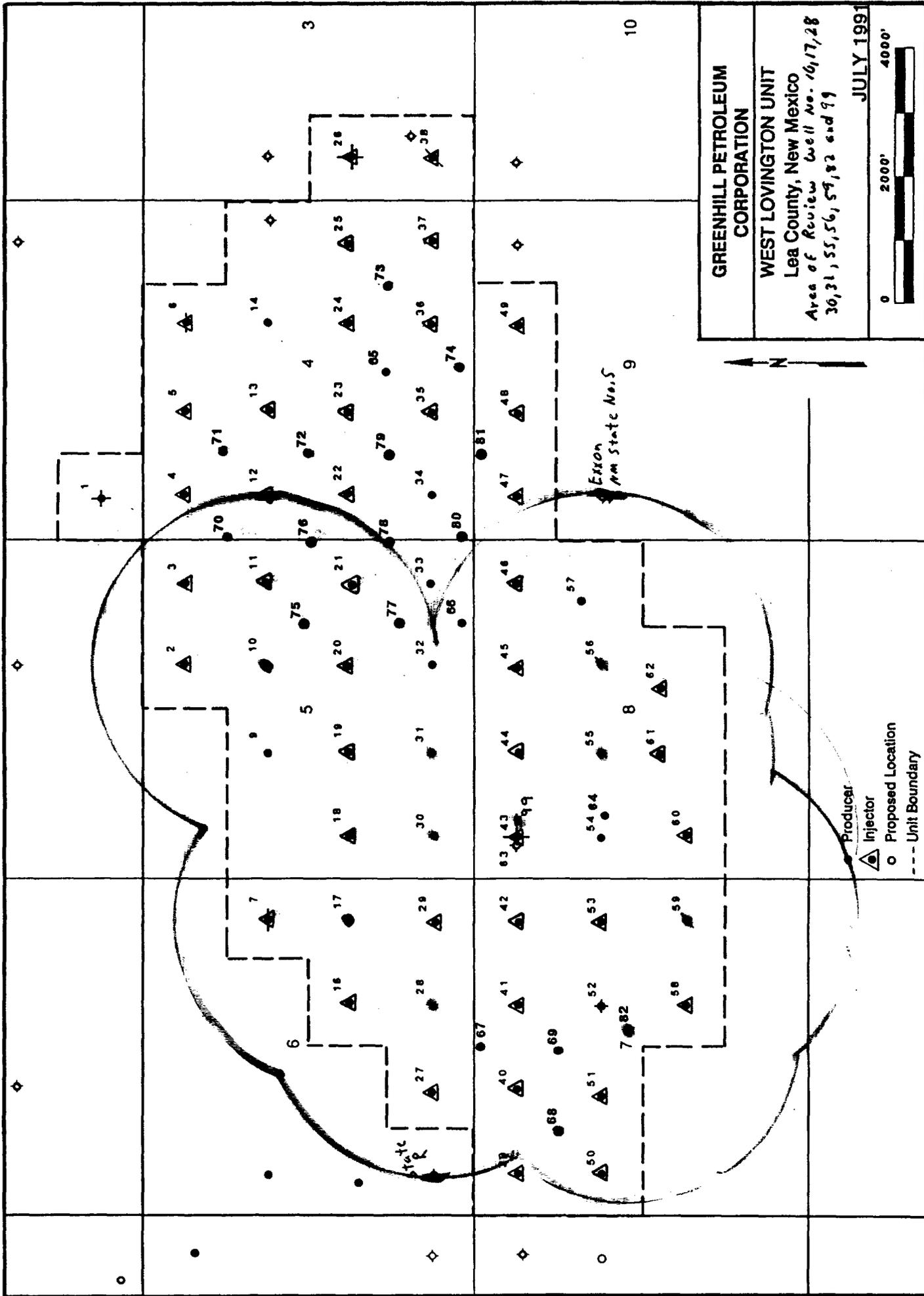
All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

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:

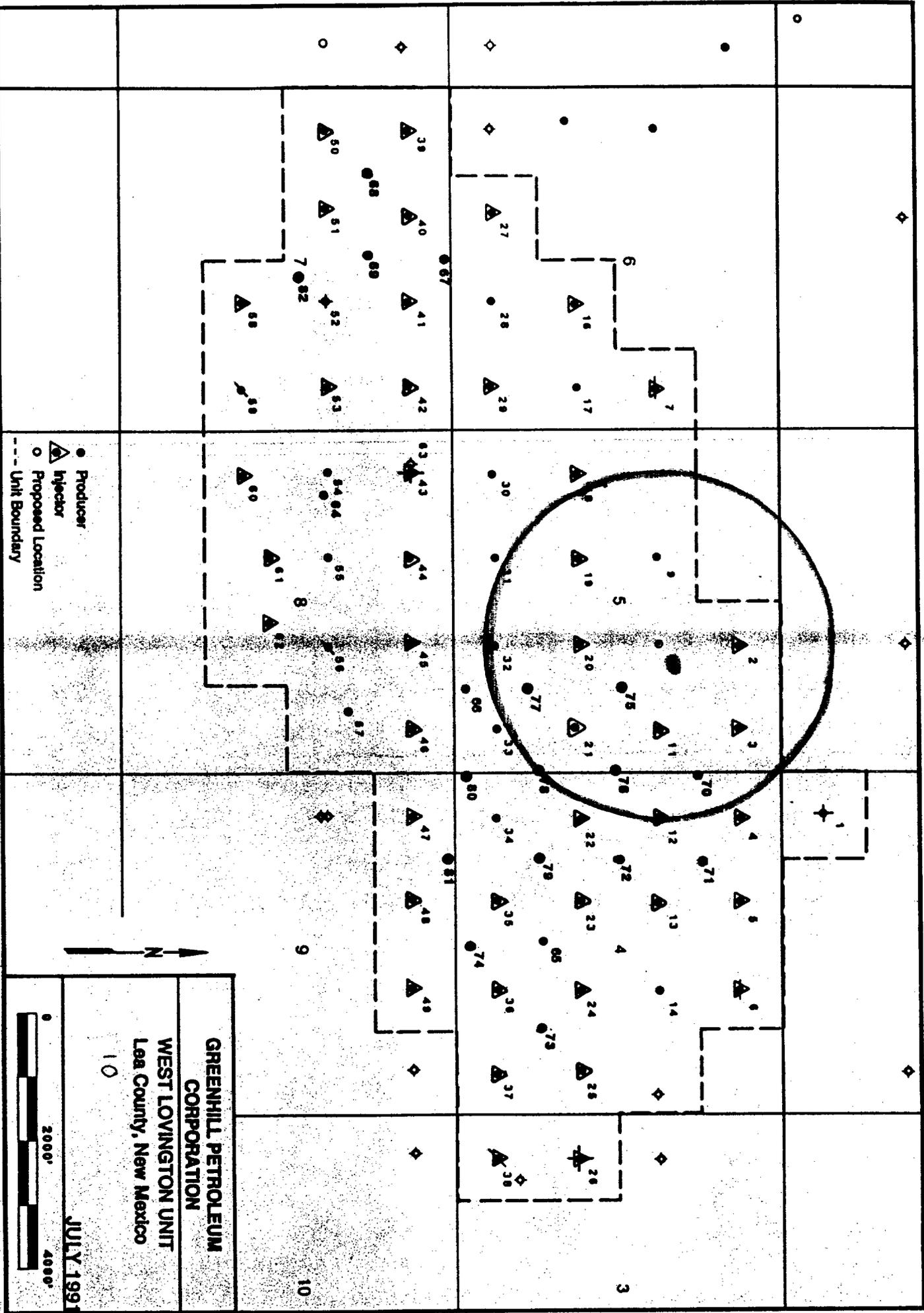
- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates 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.



III. Tabulation and Prognosis for each well Greenhill proposes for injection.



- Producer
- ▲ Injector
- Proposed Location
- Unit Boundary

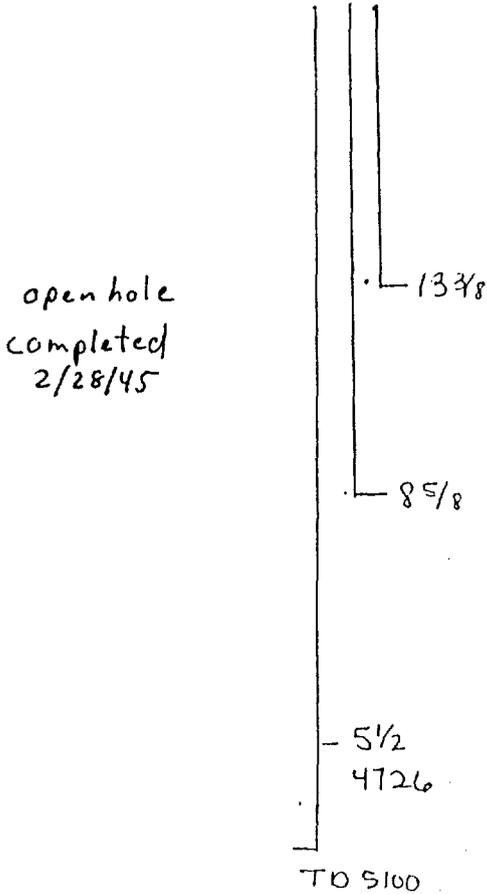


GREENHILL PETROLEUM CORPORATION
WEST LOVINGTON UNIT
 Lea County, New Mexico
 10
 JULY 1991

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
10	1982 FNL & 1981 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX
 TOC: SURFACE feet determined by CALC
 Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 600 SX
 TOC: 119 feet determined by CALC 50%
 Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 300 SX
 TOC: 3091 feet determined by CALC 80%
 Hole Size: 7 7/8

Total Depth: 5100

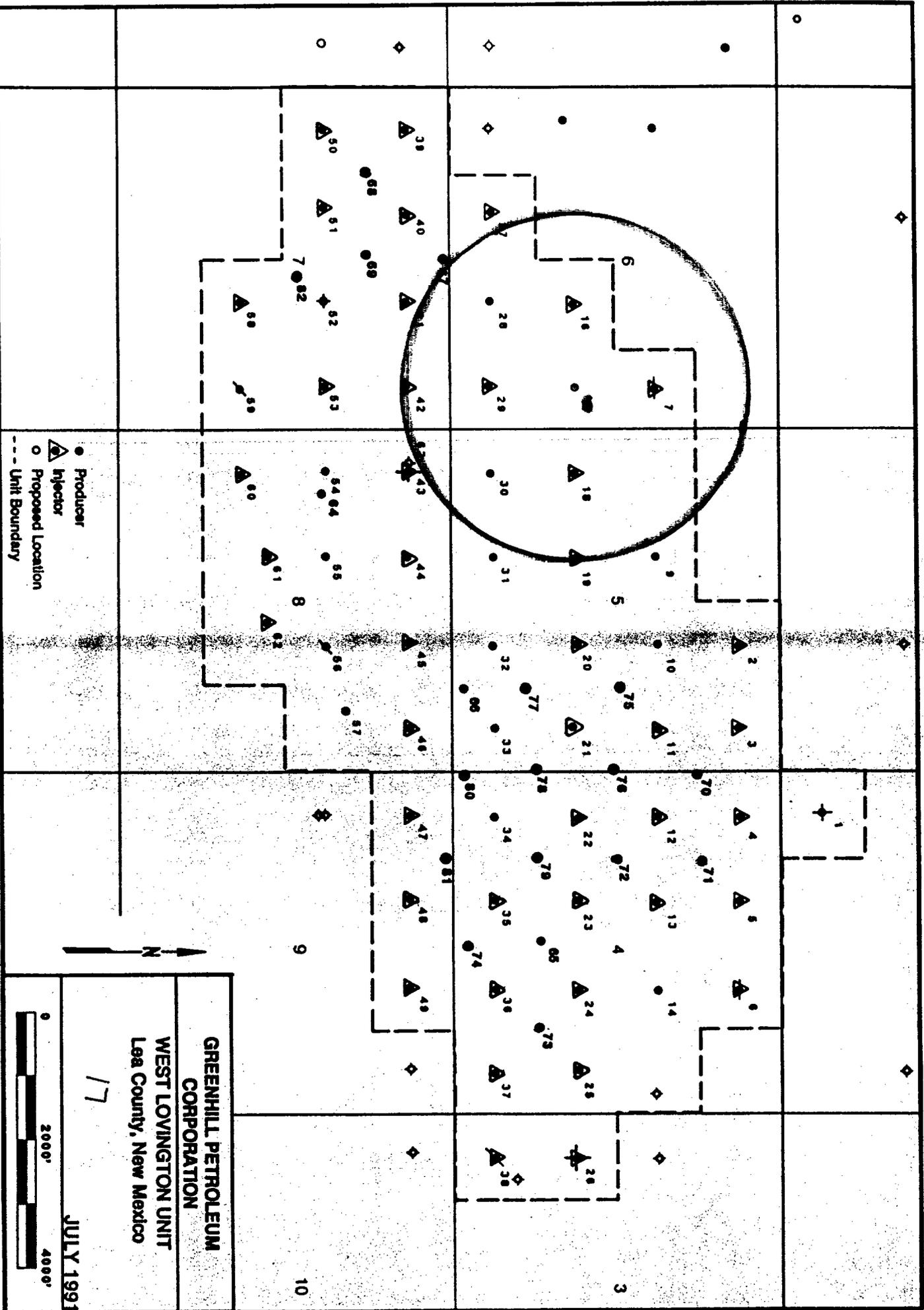
Injection Interval

4750 feet to 5100 feet
 (perforated or open-hole indicate which)

Tubing size 2 3/8" lined with IPC set in a
(material)
4551' packer at 4551' feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING



GREENHILL PETROLEUM
CORPORATION
WEST LOVINGTON UNIT
Lea County, New Mexico

JULY 1991

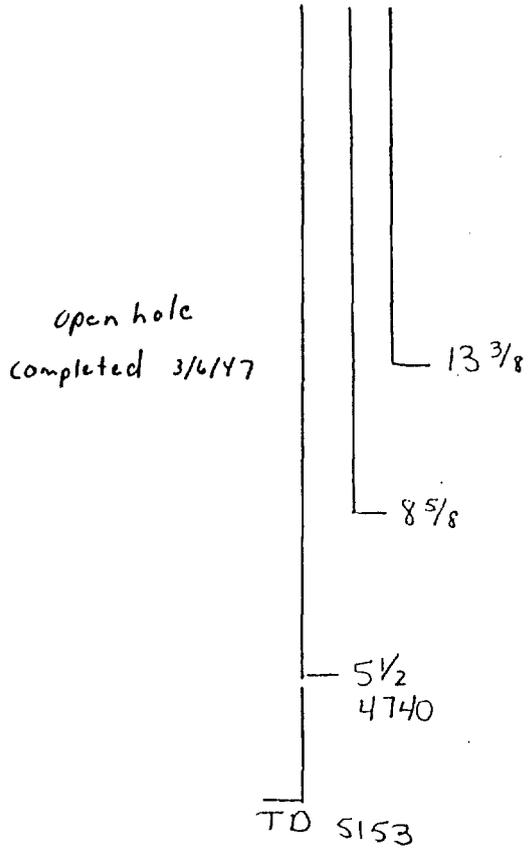
17



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR	LEASE			
17	1980 FSL & 660 FEL	6	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX
 TOC: SURFACE feet determined by CALC
 Hole size: 17

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX
 TOC: 1518 feet determined by CALC 50%
 Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX
 TOC: 3578 feet determined by CALC 80%
 Hole Size: 7 3/4

Total Depth: 5153

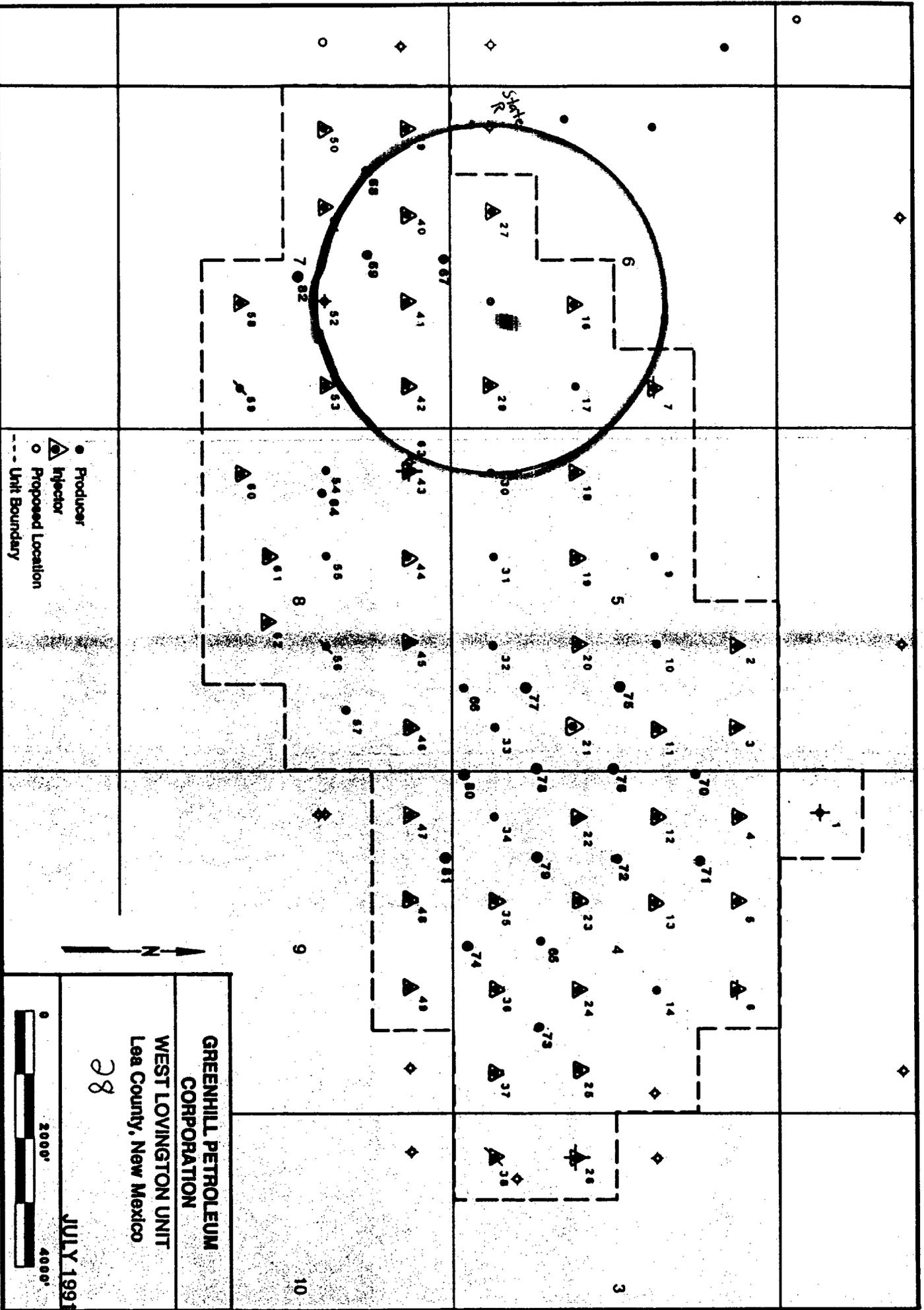
Injection Interval

4750 feet to 5153 feet
 (perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
NONE packer at -- feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
28	660 FSL & 1980 FEL	6	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

open hole
completed - 6/25/45

13 3/8

8 5/8

5 1/2 4718

TD 5160

Surface Casing
 Size: 13 3/8 " Cemented with 250 SX
 TOC: SURFACE feet determined by CALC
 Hole size: 17

Intermediate Casing
 Size: 8 5/8 " Cemented with 150 SX
 TOC: 1352 feet determined by CALC 50%
 Hole Size: 11

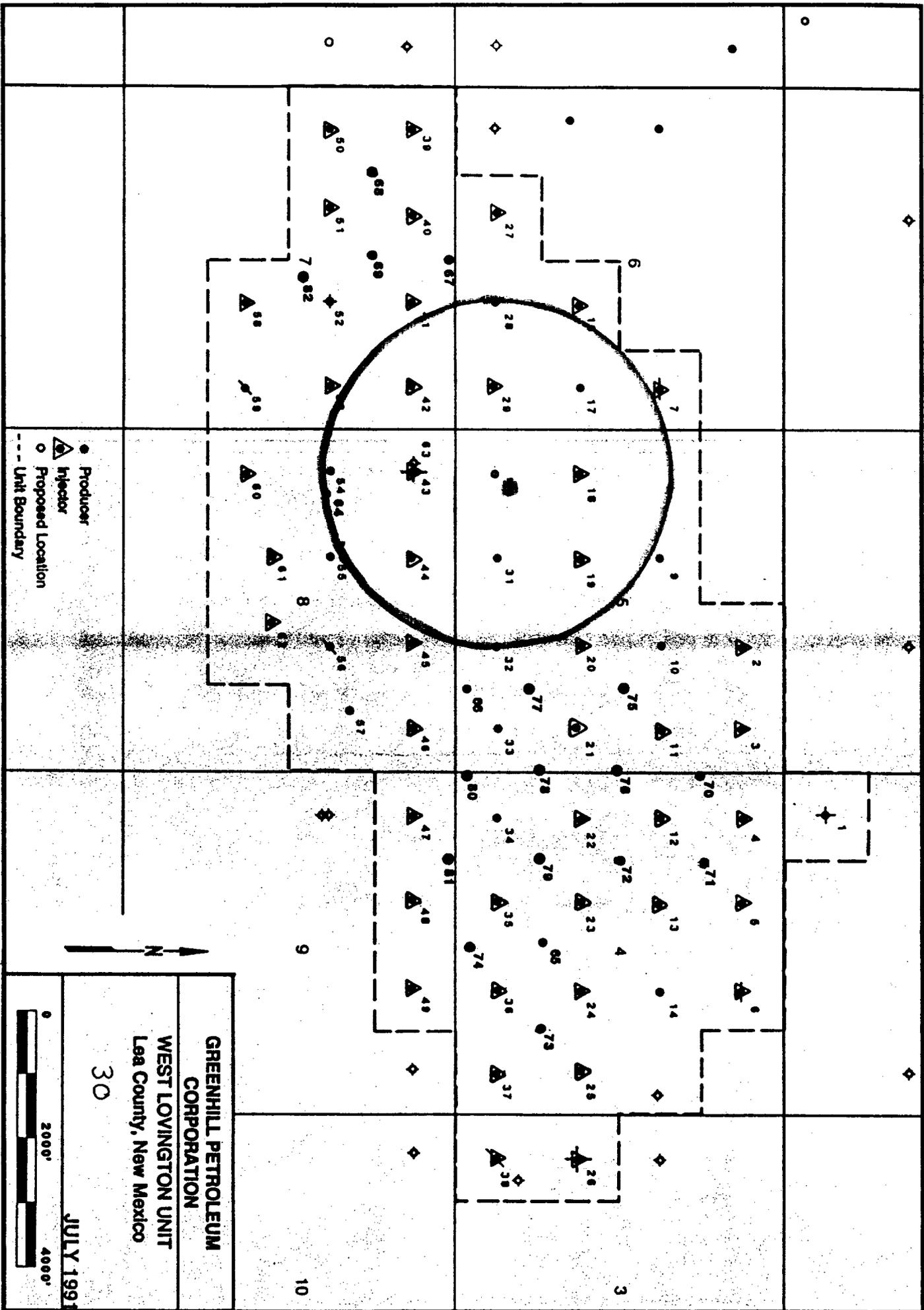
Long String
 Size: 5 1/2 " Cemented with 200 SX
 TOC: 3556 feet determined by CALC 80%
 Hole Size: 7 3/4
 Total Depth: 5160

Injection Interval
4800 feet to 5160 feet
 (perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
NONE packer at -- feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING



GREENHILL PETROLEUM CORPORATION
 WEST LOVINGTON UNIT
 Lea County, New Mexico

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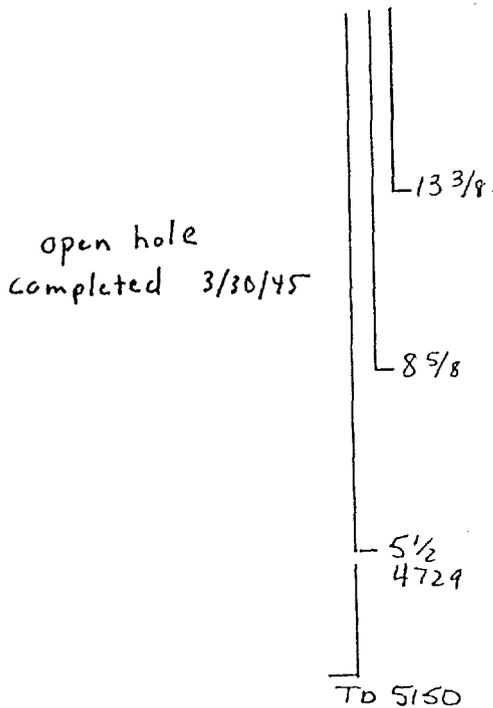
JULY 1991



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
30	660 FSL & 660 FWL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 15

Intermediate Casing

Size: 8 5/8 " Cemented with 300 SX

TOC: 1044 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: 1861 feet determined by CALC 80%

Hole Size: 7 3/8

Total Depth: 5150

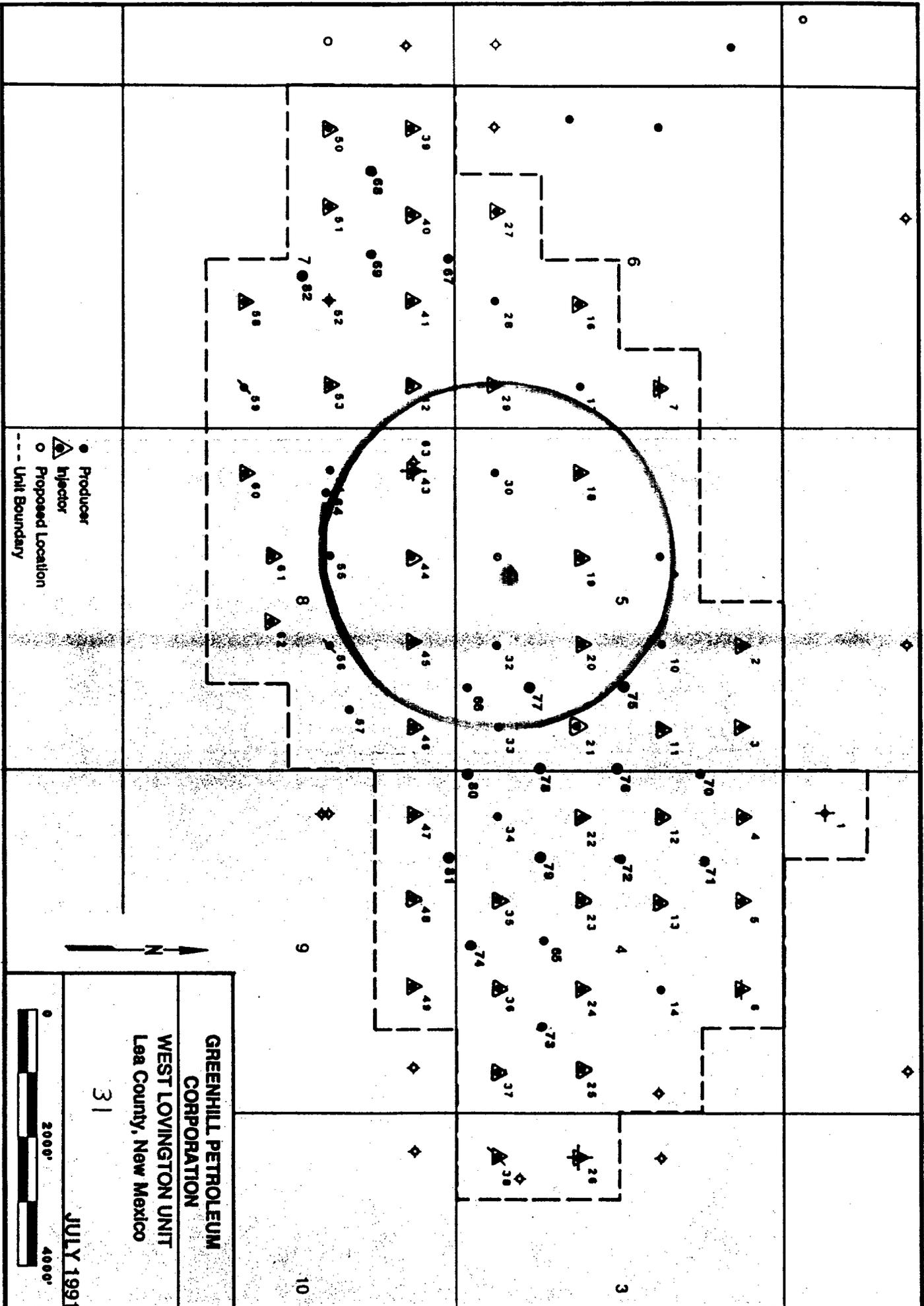
Injection Interval

4790 feet to 5150 feet
(perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

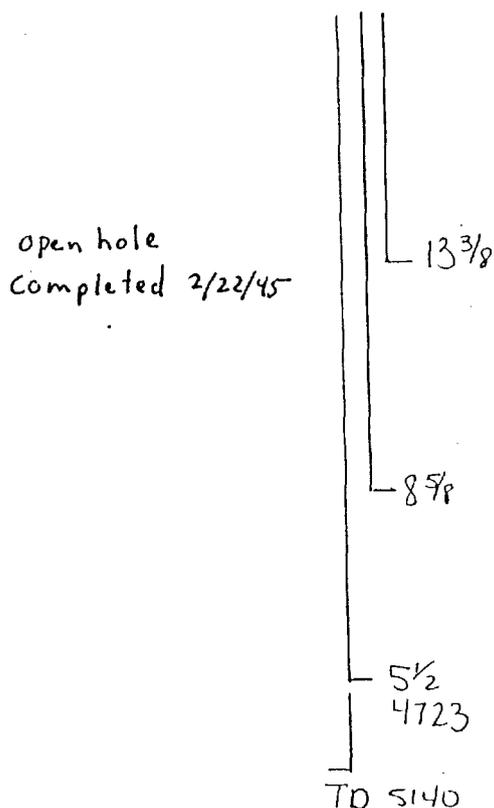
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
31	660 FSL & 1980 FWL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 190 SX

TOC: SURFACE feet determined by CALC

Hole size: 17

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1478 feet determined by CALC 50%

Hole Size: 11 1/2

Long String

Size: 5 1/2 " Cemented with 150 SX

TOC: 3905 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5140

Injection Interval

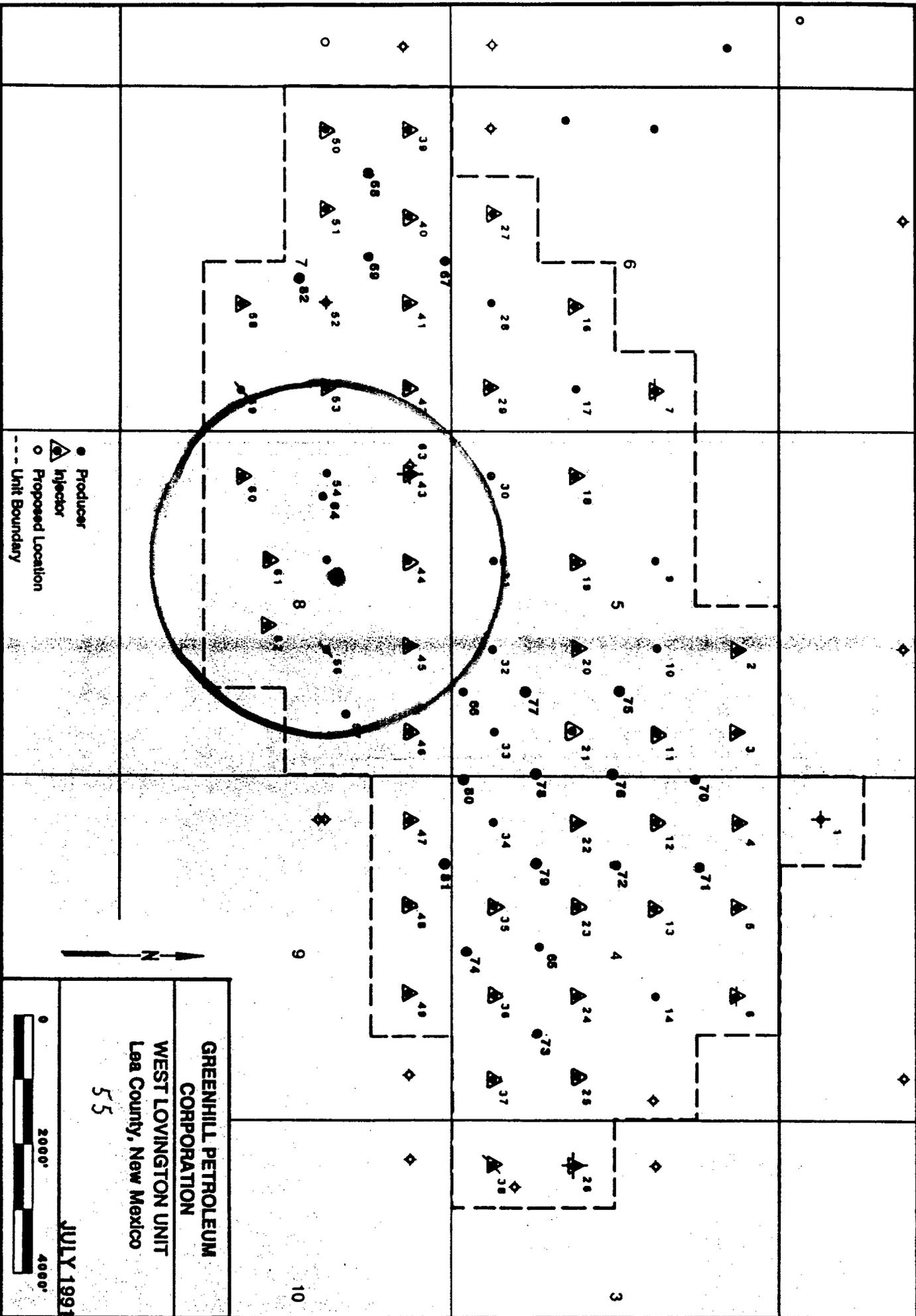
4784 feet to 5055 feet
(perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
(material)
NONE packer at -- feet.
(brand & model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING



- Producer
- ▲ Injector
- Proposed Location
- - - Unit Boundary

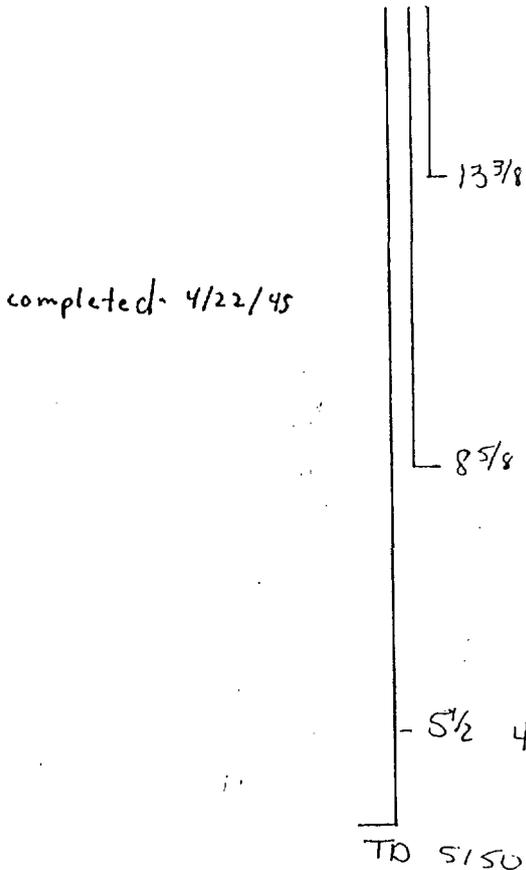


GREENHILL PETROLEUM CORPORATION
 WEST LOVINGTON UNIT
 Lea County, New Mexico
 55
 JULY 1991

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
55	1980 FNL & 1980 FWL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing
 Size: 13 3/8 " Cemented with 250 SX
 TOC: SURFACE feet determined by CALC
 Hole size: 16

Intermediate Casing
 Size: 8 5/8 " Cemented with 200 SX
 TOC: 1324 feet determined by CALC 50%
 Hole Size: 11 1/2

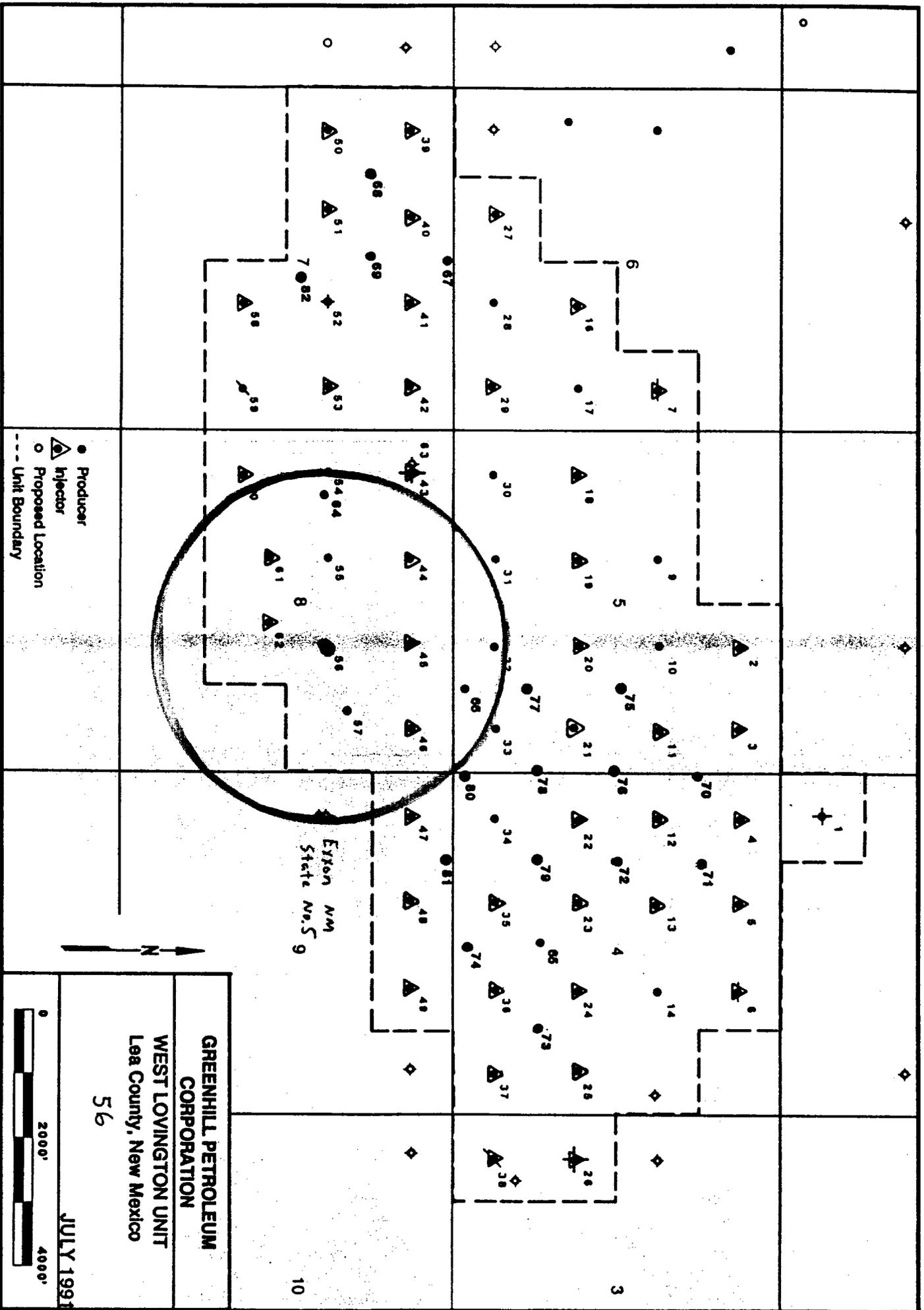
Long String
 Size: 5 1/2 " Cemented with 200 SX
 TOC: 2884 feet determined by CALC 80%
 Hole Size: 7
 Total Depth: 5150

Injection Interval
4775 feet to 5150 feet
 (perforated or open-hole, indicate which)

Tubing size 2 7/8" lined with IPC set in a
 (material)
4636' packer at 4636' feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

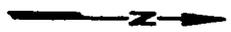
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING



GREENHILL PETROLEUM CORPORATION
 WEST LOVINGTON UNIT
 Lea County, New Mexico

56

JULY 1991



Eykon NM
 State No. 5 9

10

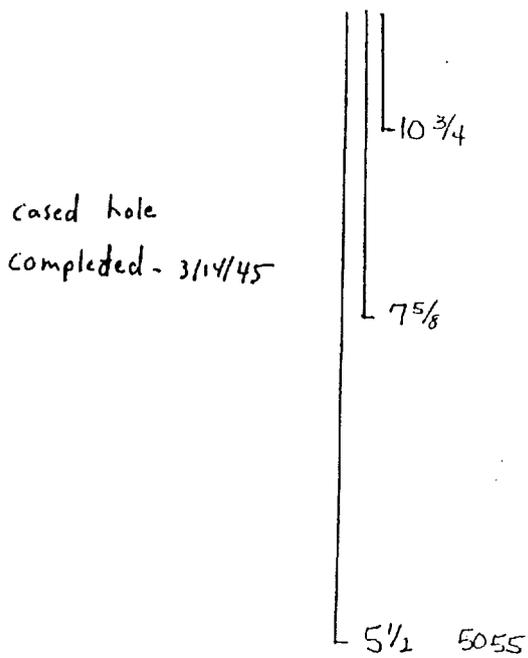
INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

WEST LOVINGTON UNIT

OPERATOR		LEASE		
56	1980 FNL & 1980 FEL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 213 SX

TOC: SURFACE feet determined by CALC

Hole size: 13 3/4

Intermediate Casing

Size: 7 5/8 " Cemented with 600 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: 1363 feet determined by CALC 80%

Hole Size: 6 3/4

Total Depth: 5055

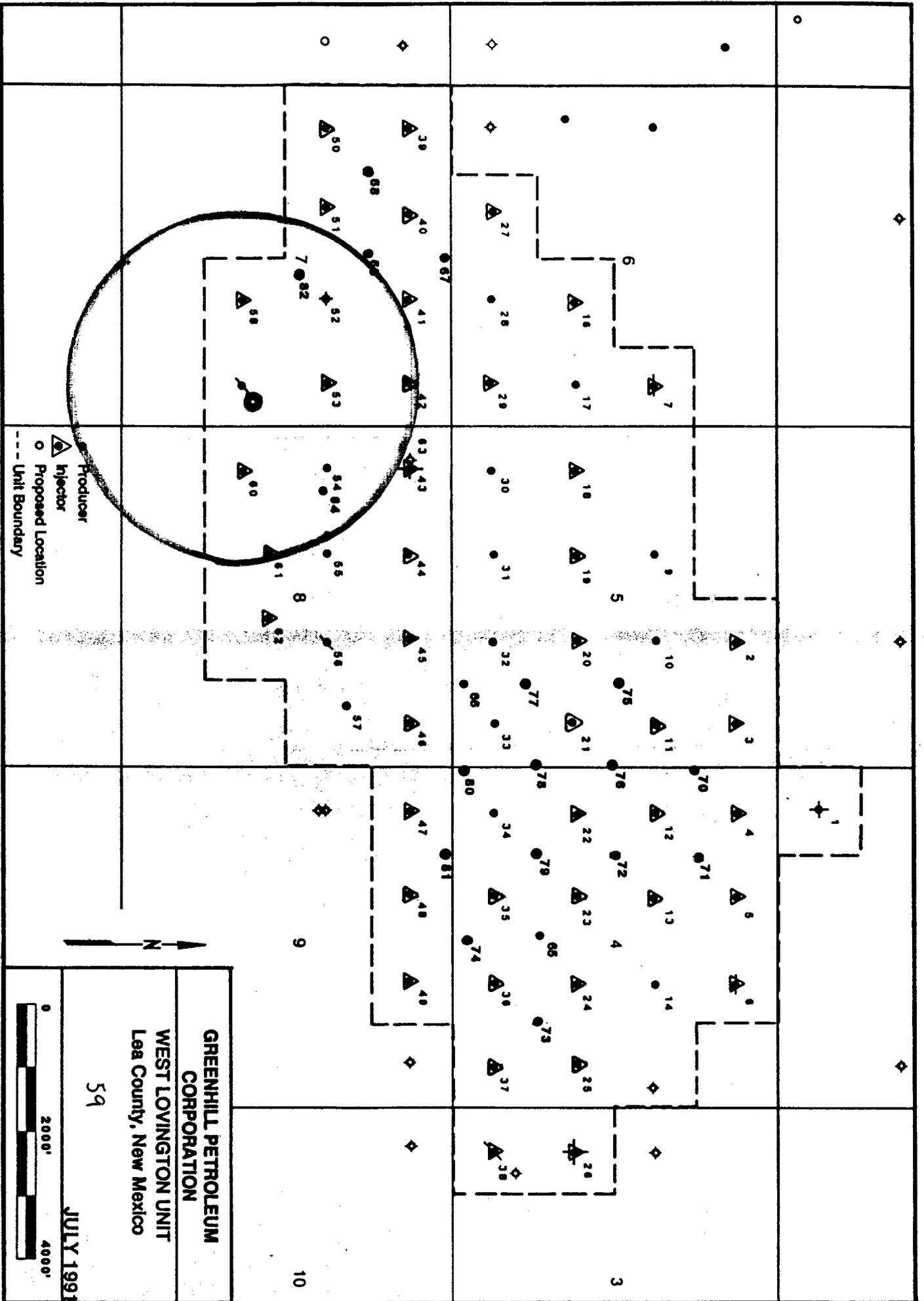
Injection Interval

4720 feet to 5050 feet
 (perforated) or open-hole, indicate which

Tubing size NONE lined with -- set in a
 (material)
NONE packer at -- feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

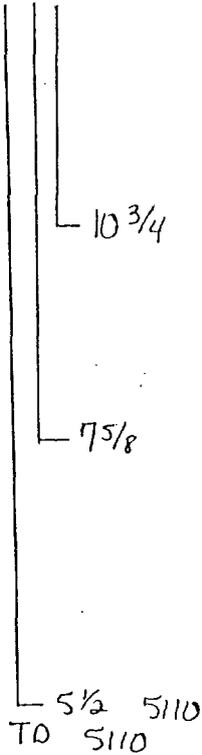


INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
59	1980 FSL & 660 FEL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Cased hole
Completed 12/13/48



Surface Casing

Size: 10 3/4 " Cemented with 275 SX

TOC: SURFACE feet determined by CALC

Hole size: 15

Intermediate Casing

Size: 7 5/8 " Cemented with 650 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 650 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 6 3/4

Total Depth: 5110

Injection Interval

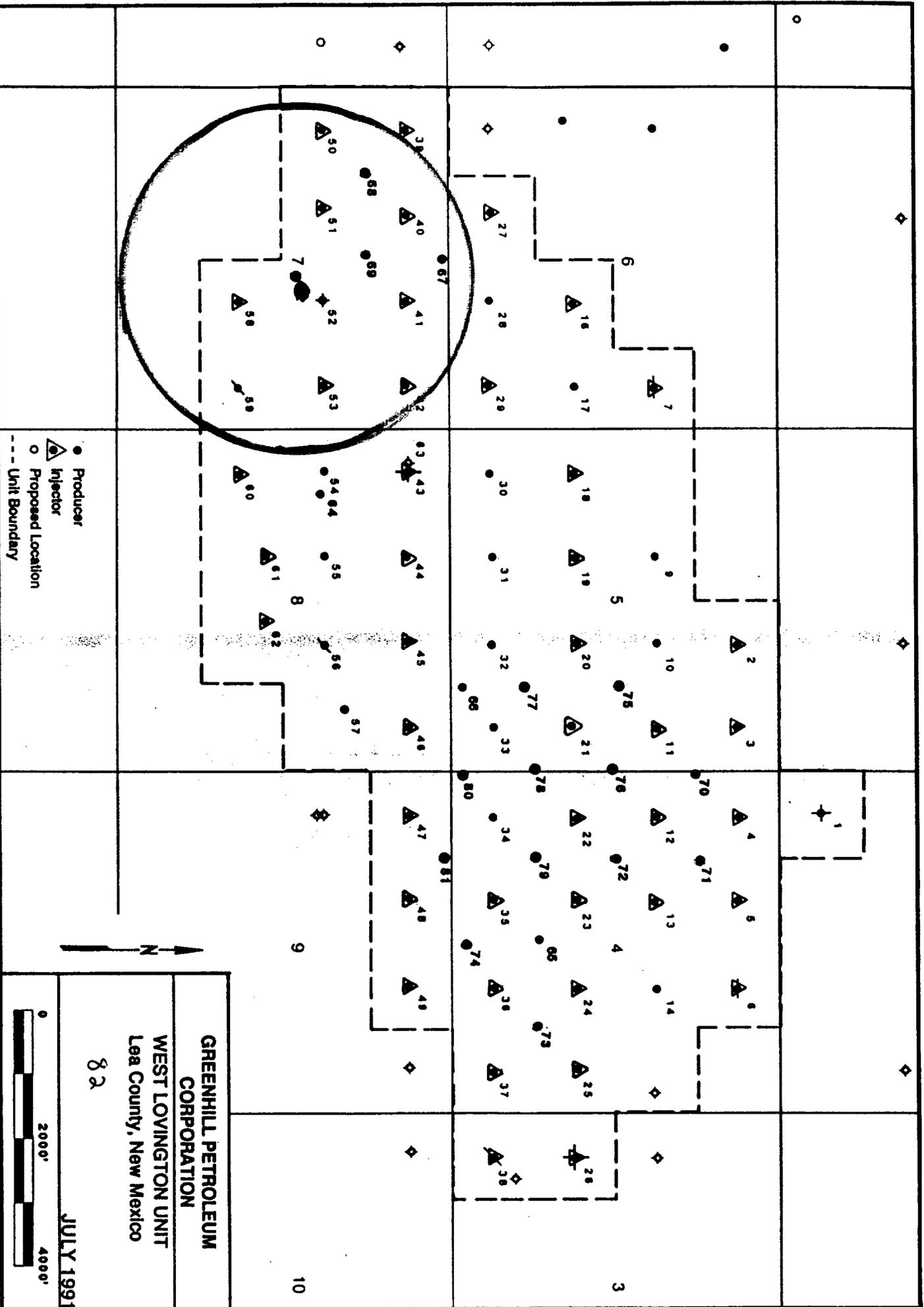
5020 feet to 5106 feet
(perforated) or open-hole, indicate which)

Tubing size NONE lined with -- set in a
(material)
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING



● Producer
 ▲ Injector
 ○ Proposed Location
 --- Unit Boundary



GREENHILL PETROLEUM CORPORATION
WEST LOVINGTON UNIT
 Lea County, New Mexico

82

JULY 1991

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

West Lovington Unit

OPERATOR		LEASE		
82	2390 FEL & 2390 FNL	7	T17S-R36E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 300 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long String

Size: 5 1/2 " Cemented with 1950 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8"

Total Depth: 5230'

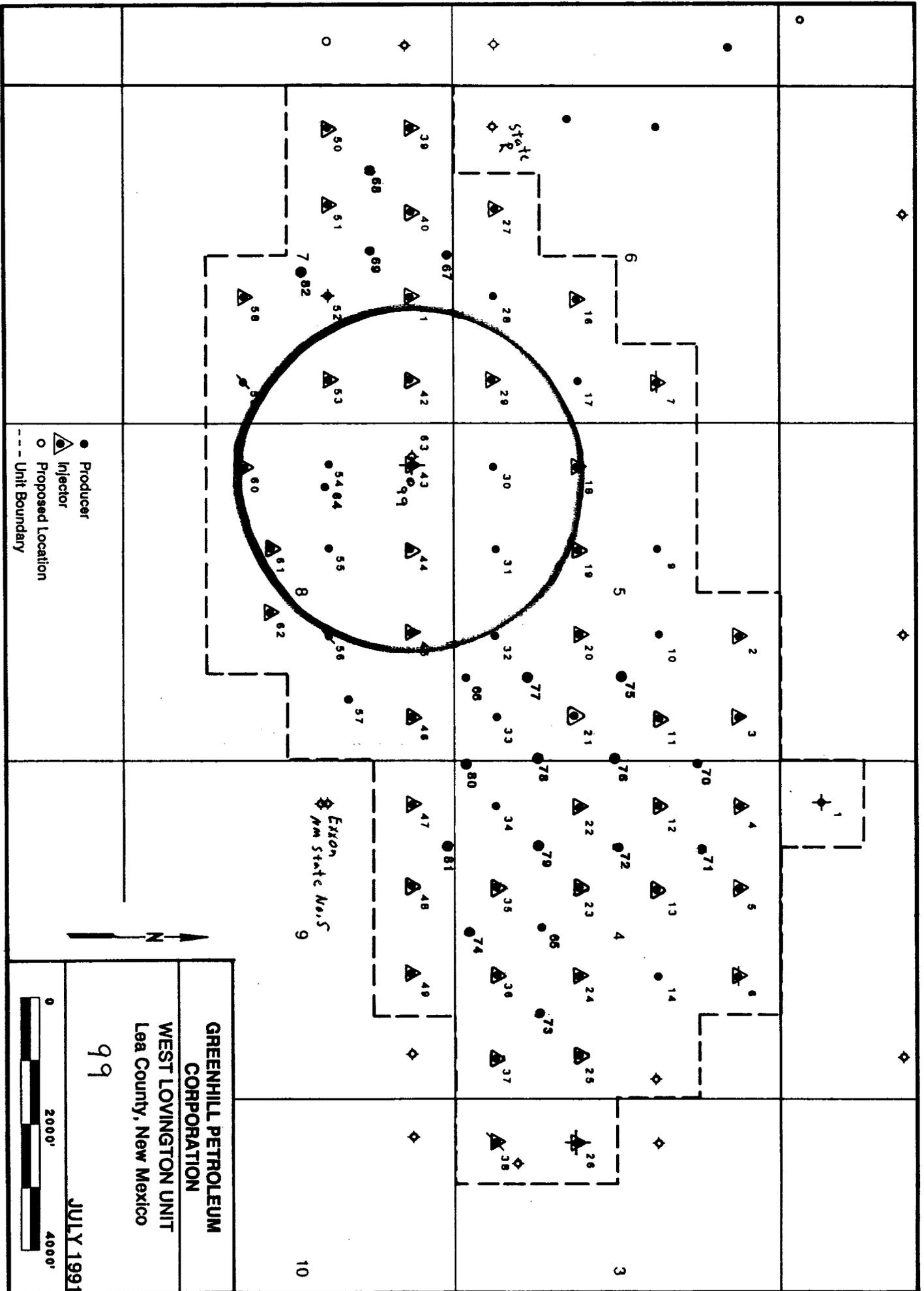
Injection Interval

4695 feet to 5230 feet
(perforated or open-hole) indicate which)

Tubing size 2 7/8" lined with _____ set in a
 _____ (material)
Baker AD1 packer at 4665 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Lovington (San Andres) West
- Is this a new well drilled for injection? No
 If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg



- Producer
- ▲ Injector
- Proposed Location
- - - Unit Boundary



GREENHILL PETROLEUM CORPORATION
WEST LOVINGTON UNIT
 Lea County, New Mexico

99

JULY 1991

Exxon
 Am State No. 5

10

3

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		West Lovington		
OPERATOR		LEASE		
99	675 FNL & 595 FWL	8	T17S-R36E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 550 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long String

Size: 4 1/2 " Cemented with 1300 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8"

Total Depth: 5230'

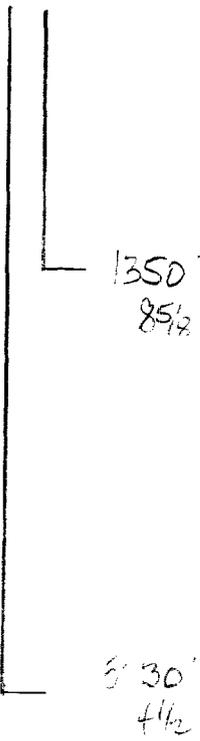
Injection Interval

to be determined feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size 2 7/8" lined with _____ IPC _____ set in a
(material)
Baker AD-1 packer at 4970' feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

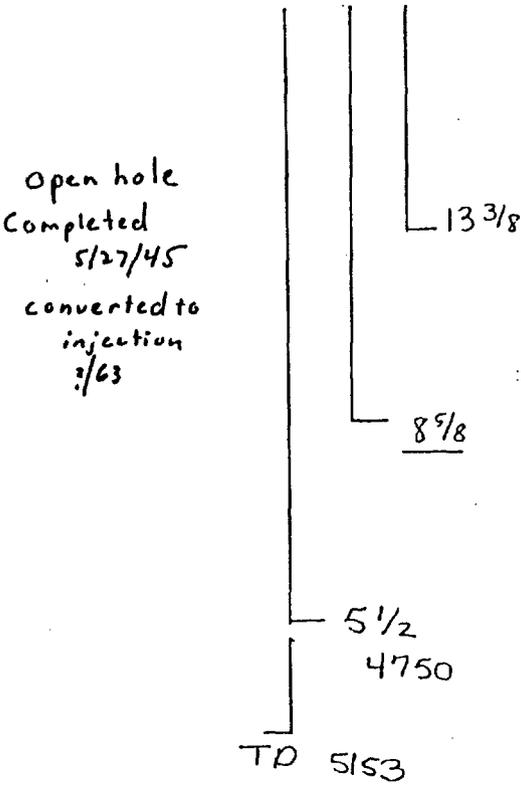
- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) West Lovington Upper San Andres
- Is this a new well drilled for injection? Yes
If no, for what purpose was the well originally drilled? -----
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
overlying Grayburg



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
2	660 FNL & 1980 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 700 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 250 SX

TOC: 3358 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5100

Injection Interval

4820 feet to 5100 feet
(perforated or open-hole indicate which)

Tubing size 2" lined with IPC set in a
(material)
packer at 4623' feet.
(brand & model)
(or describe any other casing-tubing seal).

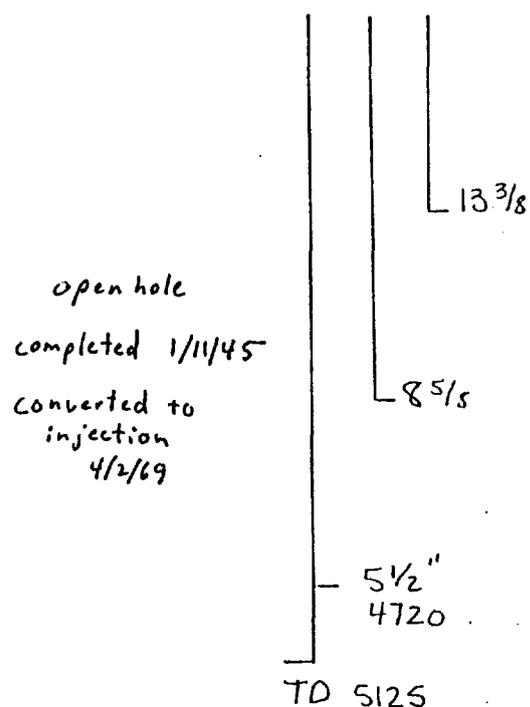
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
3	660 FNL & 660 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 12 3/4 " Cemented with 200 SX
 TOC: SURFACE feet determined by CAL
 Hole size: 14 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 200 SX
 TOC: 1374 feet determined by CALC 50%
 Hole Size: 10 3/4

Long String

Size: 5 1/2 " Cemented with 400 SX
 TOC: 2263 feet determined by CALC 80%
 Hole Size: 7 5/8

Total Depth: 5125

Injection Interval

4750 feet to 5125 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
 (material)
4653" packer at 4653" feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres Dolomite
2. Name of Field or Pool (If applicable) Lovington (San Andres) West
3. Is this a new well drilled for injection? no
 If no, for what purpose was the well originally drilled? PRODUCTION
4. Has the well ever be 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.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		West Lovington Unit		
OPERATOR		LEASE		
7	660 FEL & 1980 FNL	6	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: surface feet determined by ?

Hole size: ?

Intermediate Casing

Size: 8 5/8 " Cemented with 425 SX

TOC: 486 feet determined by 60% calc.

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 425 SX

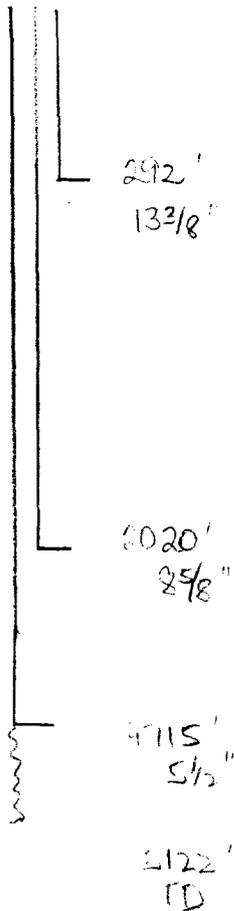
TOC: 2861' feet determined by 60% calc.

Hole Size: 7 7/8"

Total Depth: 5122

Injection Interval

4715 feet to 5122 feet
(perforated or open-hole, indicate which)



Tubing size 2 3/8 lined with IPC set in a
(material)
----- packer at 4616 feet.
(brand & model)
(or describe any other casing-tubing seal).

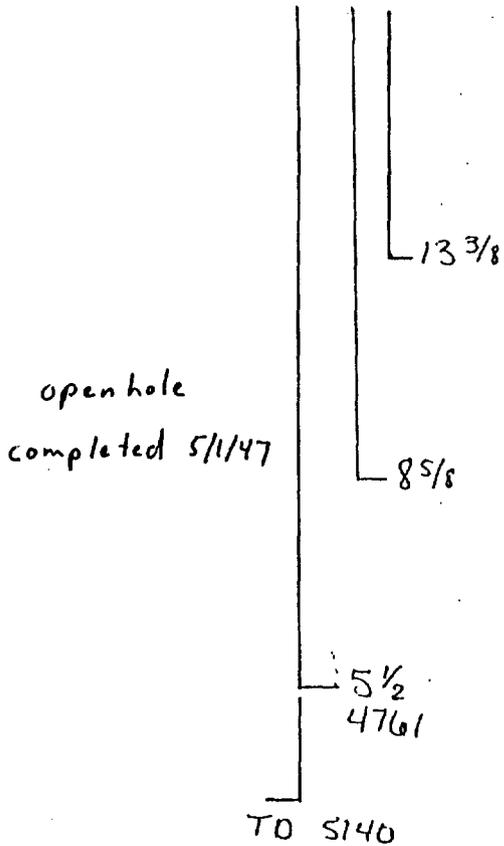
Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg-overlying

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
9	1980 FWL & 1980 FNL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 180 SX

TOC: SURFACE feet determined by CALC

Hole size: 14 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 300 SX

TOC: 1071 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: 2582 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5140

Injection Interval

4800 feet to 5140 feet
(perforated or open-hole indicate which)

Tubing size NONE lined with -- set in a
(material)
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

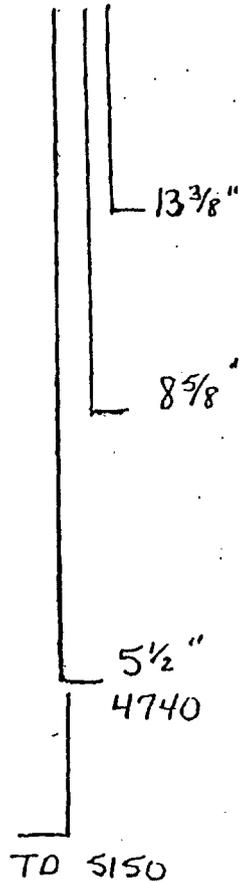
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
11	660 FEL & 1980 FNL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 14 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 200 SX

TOC: 1400 feet determined by CALC @ 50%

Hole Size: 10 3/4

Long String

Size: 5 1/2 " Cemented with 350 SX

TOC: 2643 feet determined by CALC @ 80%

Hole Size: 7 5/8

Total Depth: 5150

Injection Interval

4740 feet to 5105 (PBD) feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
Baker packer at 4720 feet.
(brand & model)

(or describe any other casing-tubing seal).

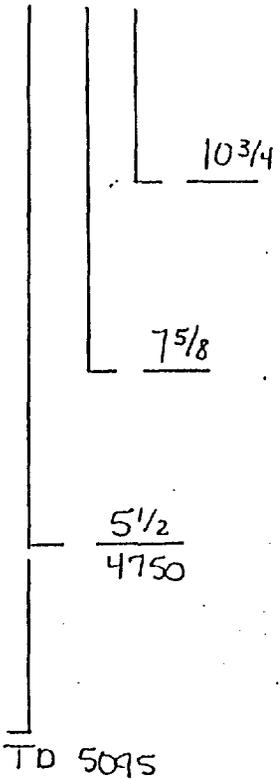
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
12	660 FWL & 1980 FNL	4	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO		WEST LOVINGTON FIELD		

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 210 SX

TOC: SFC @ 75%EFF feet determined by CALC

* Hole size: 12 1/4

Intermediate Casing

Size: 7 5/8 " Cemented with 600 SX

TOC: 350' @ 50%EFF feet determined by CALC

* Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: 2300' @ 50% feet determined by CALC

* Hole Size: 6 3/4

Total Depth: 5100 FT

Injection Interval

4750 feet to 5095 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
Baker packer at 4730 feet.
(brand & model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES
- Name of Field or Pool (IF applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

* EST.

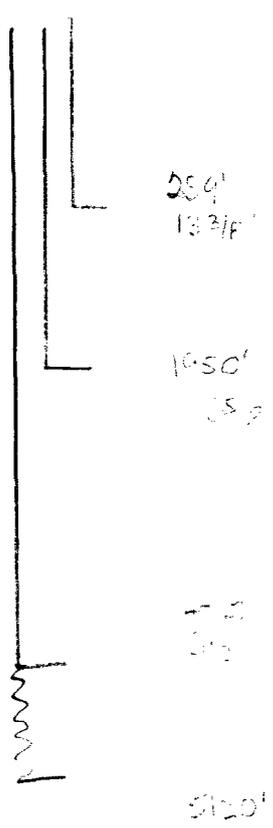
INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

West Lovington Unit

OPERATOR		LEASE		
16	1980 FSL & 1980 FEL	6	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: surface feet determined by circ.

Hole size: 17 1/4"

Intermediate Casing

Size: 8 5/8 " Cemented with 450 SX

TOC: 745 feet determined by 60% calc.

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: 2473 feet determined by 60% calc.

Hole Size: 7 3/8"

Total Depth: 5120'

Injection Interval

4780 feet to 5120 feet
(perforated or open-hole, indicate which)

Tubing size 2 7/8" lined with IPC set in a
(material)
Baker AD1 packer at 4688 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
18	1980 FSL & 660 FWL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 3/4

Intermediate Casing

Size: 8 5/8 " Cemented with 300 SX

TOC: 1044 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: 1881 feet determined by CALC 80%

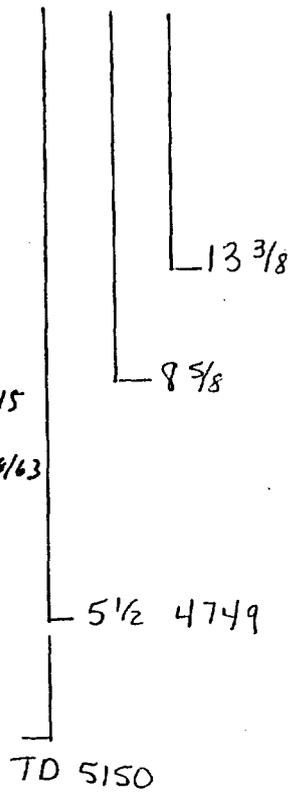
Hole Size: 7 3/8

Total Depth: 5150

Injection Interval

4780 feet to 5150 feet
(perforated or open-hole, indicate which)

open hole
Completed 7/30/45
Converted to
injection - 2/18/63



Tubing size 2 3/8" lined with IPC set in a
(material)
packer at 4627' feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST.
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

WEST LOVINGTON UNIT

OPERATOR

LEASE

19

1980 FSL & 1980 FWL

5

17S

36E

NMPM

WELL NO.

FOOTAGE LOCATION

SEG.

TOWNSHIP

RANGE

WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 190 SX

TOC: CIRC feet determined by CALC

Hole size: 17"

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1494' @ 80% feet determined by CALC

Hole Size: 11 1/2"

Long String

Size: 5 1/2 " Cemented with 150 SX

TOC: 3839' @ 80% FILL feet determined by CALC

Hole Size: 7 7/8

Total Depth: 5085

Injection Interval

4740 feet to 5085 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
Baker 4720 packer at 4720 feet.

(brand & model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING - PRODUCTIVITY NEVER DETERMINED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR	LEASE			
20	1980 FSL & 1980 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17

Intermediate Casing

Size: 8 1/4 " Cemented with 200 SX

TOC: 1364 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3610 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5104

Injection Interval

4700 feet to 5104 feet
(perforated or open-hole, indicate which)

Tubing size 2" lined with IPC set in a
(material)
packer at 4663' feet.
(brand & model)

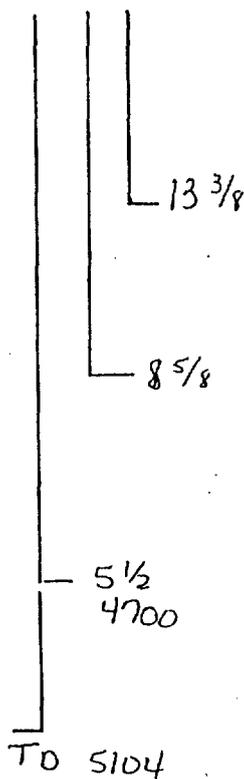
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING

converted to
injection
2/18/63
completed 3/2/45
Open hole



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
21	1980 FSL & 660 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 200 SX

TOC: 1364 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3266 feet determined by CALC 80%

Hole Size: 7 3/8

Total Depth: 5100

Injection Interval

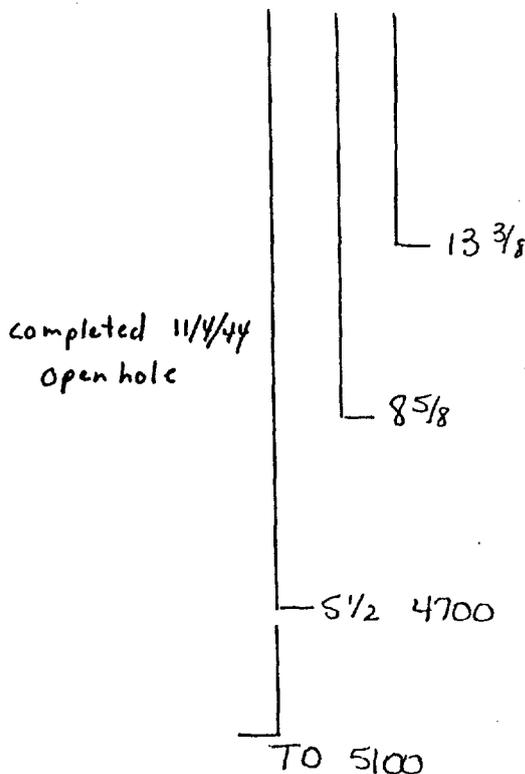
4767 feet to 5100 feet
(perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
(material)
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

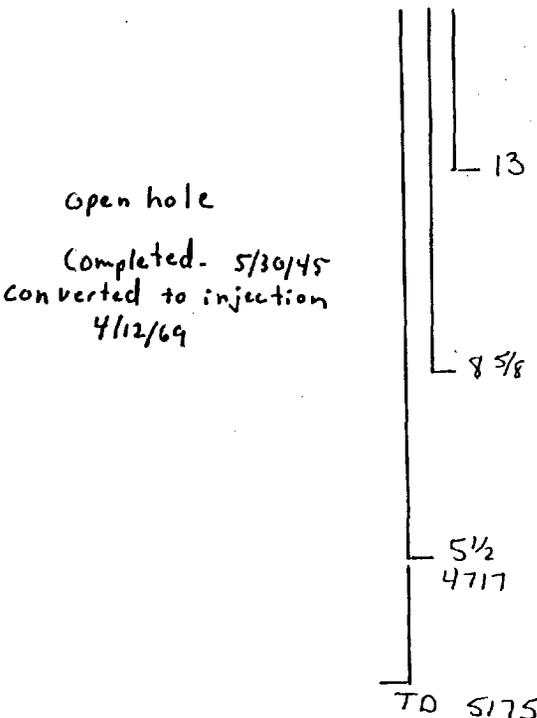
GRAYBURG - OVERLYING



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
27	660 FSL & 1980 FWL	6	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 " Cemented with 250 SX
 TOC: SURFACE feet determined by CALC
 Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 600 SX
 TOC: 78.67 feet determined by CALC 50%
 Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 400 SX
 TOC: 2394 feet determined by CALC 80%
 Hole Size: 7 3/4

Total Depth: 5175

Injection Interval

4770 feet to 5175 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
 (material)
4667' packer at 4667' feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

WEST LOVINGTON UNIT

OPERATOR

LEASE

29

660 FSL & 660 FEL

6

17S

36E

WELL NO.

FOOTAGE LOCATION

SEC.

TOWNSHIP

RANGE

LEA COUNTY, NEW MEXICO

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 200 SX

TOC: 1364 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 2874 feet determined by CALC 80%

Hole Size: 7

Total Depth: 5155

Injection Interval

4735 feet to 5155 feet
(perforated or open-hole indicate which)

Tubing size 2 3/8" lined with IPC set in a
(material)
packer at 4610' feet.

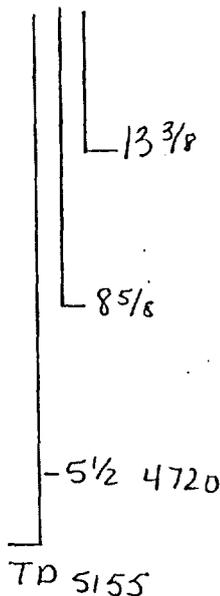
(brand & model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation SAN ANDRES DOLOMITE
2. Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
3. Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
4. Has the well ever be 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.
GRAYBURG - OVERLYING

open hole
Completed - 4/5/45
converted to injection
4/10/69



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
32	660 FSL & 1980 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17

Intermediate Casing

Size: 8 5/8 " Cemented with 200 SX

TOC: 1364 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3241 feet determined by CALC 80%

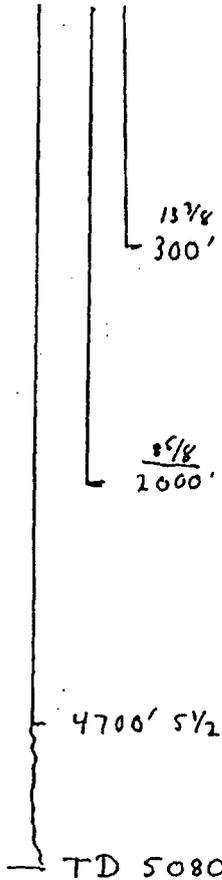
Hole Size: 7 3/8

Total Depth: 5080

Injection Interval

4700 feet to 5080 feet
(perforated or open-hole, indicate which)

open hole
Completed - 2/13/45



Tubing size NONE lined with -- set in a
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

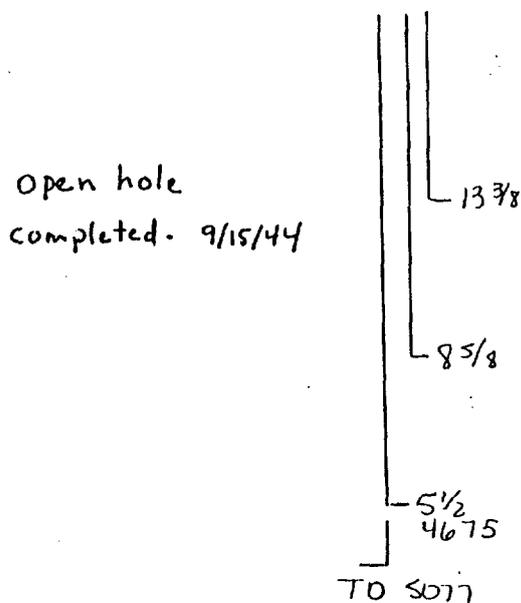
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
33	660 FSL & 660 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 " Cemented with 225 SX

TOC: SURFACE feet determined by CALC

Hole size: 17

Intermediate Casing

Size: 8 5/8 " Cemented with 250 SX

TOC: 1327 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3585 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5077

Injection Interval

4770 feet to 5077 feet
(perforated or open-hole indicate which)

Tubing size NONE lined with -- set in a
(material)
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

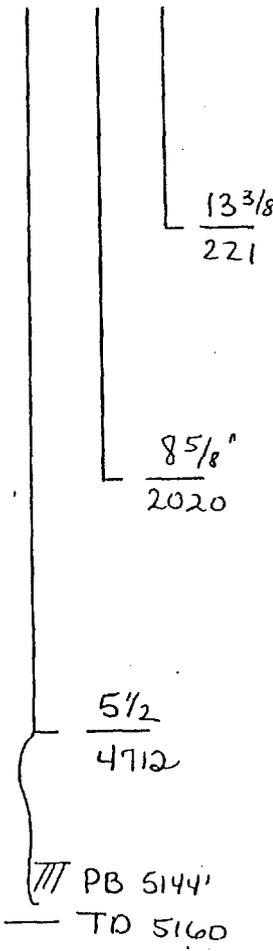
Other Data

1. Name of the injection formation SAN ANDRES DOLOMITE
2. Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
3. Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
4. Has the well ever be 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.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT			
OPERATOR		LEASE			
40	1980 FWL & 660 FNL	7	17S	36E	NMPM
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE	
WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO					

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 150 SX

TOC: 22' @ 100' FILL feet determined by CALC

Hole size: 19"

Intermediate Casing

Size: 8 5/8 " Cemented with 250 SX

TOC: 723' @ 100% FILL feet determined by CALC

Hole Size: 11"

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3088 @ 100% FILL feet determined by CALC

Hole Size: 7 3/4

Total Depth: 5160

Injection Interval

4112 feet to 5144 (fill) feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
BAKER packer at 4642' feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

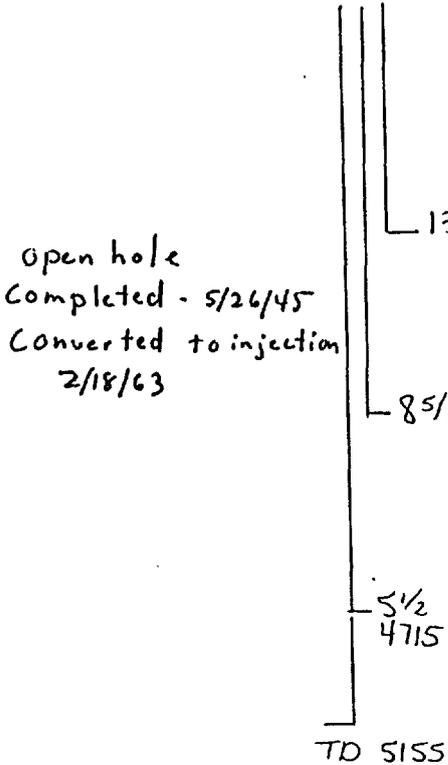
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used). NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
41	660 FNL & 1980 FEL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 220 SX

TOC: SURFACE feet determined by CALC

Hole size: 16

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1505 feet determined by CALC 50%

Hole Size: 11 1/2

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 2869 feet determined by CALC 80%

Hole Size: 7

Total Depth: 5155

Injection Interval

4760 feet to 5155 feet
(perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
(material)
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

WEST LOVINGTON UNIT

OPERATOR

LEASE

42

660 FNL & 660 FEL

7

17S

36E

NMPM

WELL NO.

FOOTAGE LOCATION

SEC.

TOWNSHIP

RANGE

WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: CIRC @ 50%EFF feet determined by CALC

Hole size: 16"

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1590 @ 75%EFF feet determined by CALC

Hole Size: 11 1/2

Long String

Size: 5 1/2 " Cemented with 200 SX

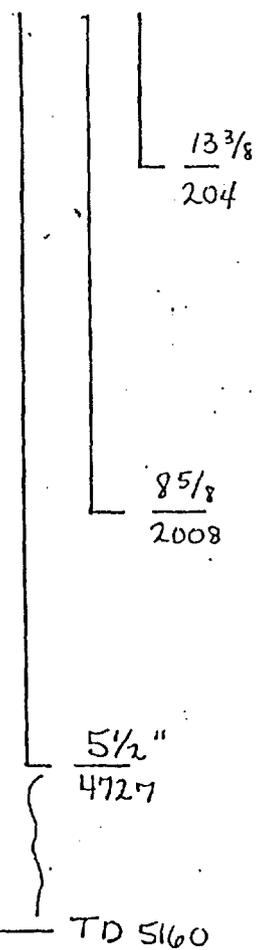
TOC: 3011' @ 75%EFF feet determined by CALC

Hole Size: 7"

Total Depth: 5160

Injection Interval

4727 feet to 5160 feet
(perforated or open-hole indicate which)



TD 5160

Tubing size 2-3/8" lined with IPC set in a
(material)
Baker packer at 4707 feet.

(brand & model)

(or describe any other casing-tubing seal).

Other Data

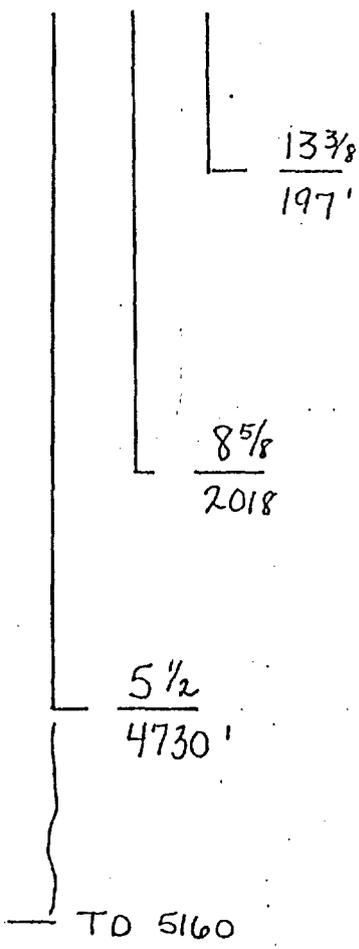
1. Name of the injection formation SAN ANDRES DOLOMITE
2. Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
3. Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
4. Has the well ever be perforated in any other zone(s)? List 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.

GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION OPERATOR WEST LOVINGTON UNIT LEASE
 44 1980 FWL & 660 FNL 8 17S 36E NMPM
 WELL NO. FOOTAGE LOCATION SEC. TOWNSHIP RANGE
 WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 340 SX

TOC: CIRC feet determined by CALC

Hole size: 16"

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1485 @ 80% feet determined by CALC

Hole Size: 11 1/2

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 2539 @ 80%EFF feet determined by CALC

Hole Size: 7

Total Depth: 5160

Injection Interval

4730 feet to 5160 feet
 (perforated or open-hole indicate which)

Tubing size 2-3/8" lined with IPC set in a
Baker packer at 4710 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
45	660 FNL & 1980 FEL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 10 3/4 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 13 3/4

Intermediate Casing

Size: 7 5/8 " Cemented with 650 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 6 3/4

Total Depth: 5100

Injection Interval

4730 feet to 5060 feet
 (perforated or open-hole, indicate which)

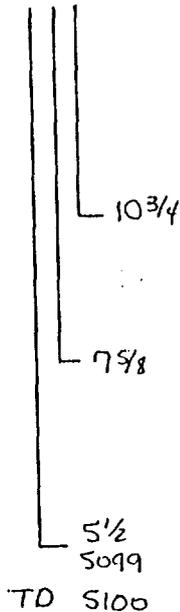
Tubing size 2 3/8" lined with IPC set in a
 _____ (material)
 _____ packer at 4681' feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING

cased hole
 completed - 1/10/45
 converted to injection
 2/18/63



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

WEST LOVINGTON-UNIT

OPERATOR

LEASE

46

660 FNL & 660 FEL

8

17S

36E

NMPM

WELL NO.

FOOTAGE LOCATION

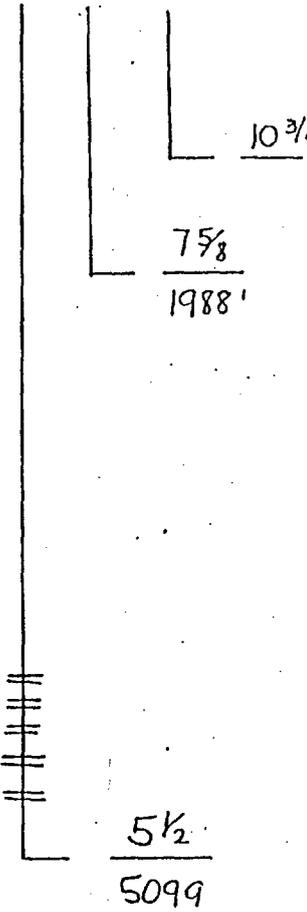
SEC.

TOWNSHIP

RANGE

WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 200 SX

TOC: CIRC feet determined by CALC

Hole size: 13 3/4

Intermediate Casing

Size: 7 5/8 " Cemented with 650 SX

TOC: CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: 1709 feet determined by CALC

Hole Size: 6 3/4 PERFS:

- 4730-60 5050-55
- 4780-4810 5085-95
- 4870-80
- 4910-15
- 4980-5040

Total Depth: 5100

Injection Interval

4730 feet to 5095 feet

(perforated) or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a

BAKER packer at 4710 feet.

(brand & model)

(or describe any other casing-tubing seal).

Other Data

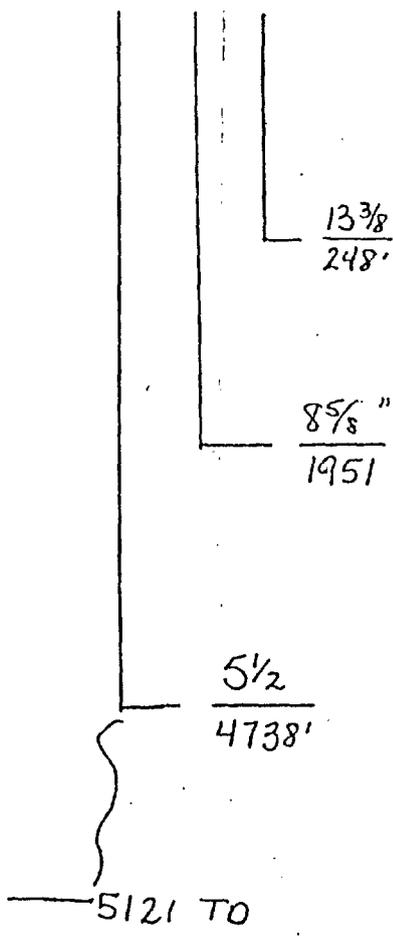
1. Name of the injection formation SAN ANDRES DOLOMITE
2. Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
3. Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCER
4. Has the well ever be perforated in any other zone(s)? List all 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.

GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
50	660 FWL & 1980 FNL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX
 TOC: CIRC feet determined by CALC
 Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 450 SX
 TOC: 400' @ 75% FILL feet determined by _____
 Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX
 TOC: 1739' @ 75% feet determined by _____
 Hole Size: 7 3/8

Total Depth: 5121

Injection Interval

CIBP @ 4640

4738 feet to 5121 feet
 (perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
 Baker packer at 4718 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

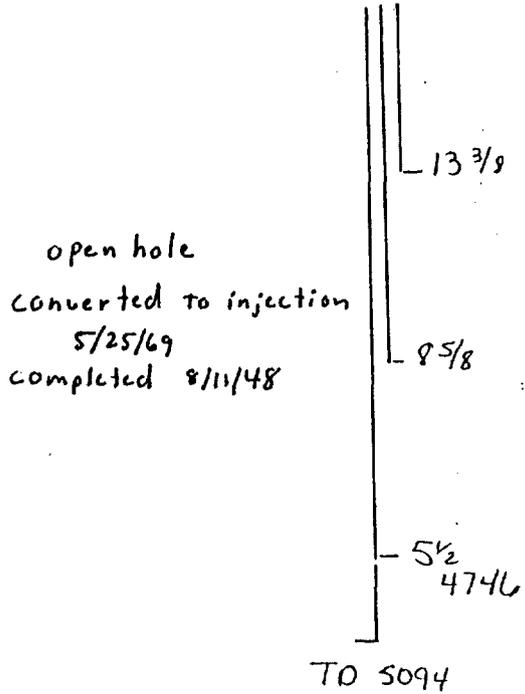
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
51	1980 FNL & 1896 FWL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 450 SX

TOC: 519 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: 1520 feet determined by CALC 80%

Hole Size: 7 3/8

Total Depth: 5094

Injection Interval

4810 feet to 5094 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
(material)
--- packer at 4631' feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

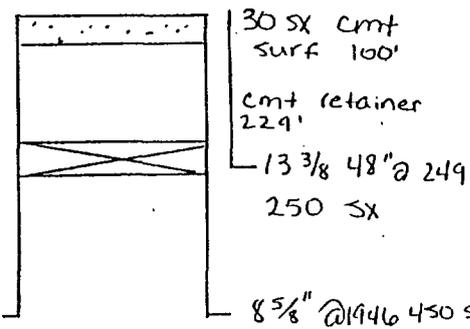
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
52	1980 FNL & 1980 FEL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing



Size: 13 3/8 " Cemented with 250 SX

TOC: SURFACE feet determined by CIRC

Hole size: 17 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 450 SX

TOC: SURFACE feet determined by CIRC

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: SURFACE feet determined by P&A

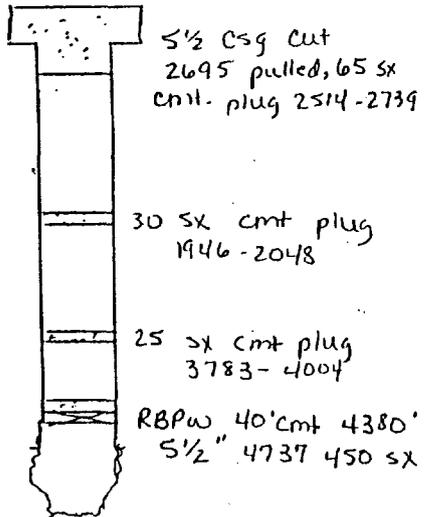
Hole Size: 7 7/8

Total Depth: 5110

Injection Interval

_____ feet to _____ feet
 (perforated or open-hole, indicate which)

Completed - 6/5/48
 P&A - 6/20/83



Tubing size 2" lined with _____ IPC _____ set in a
 _____ packer at 4265' feet.
 (brand & model)

(or describe any other casing-tubing seal).

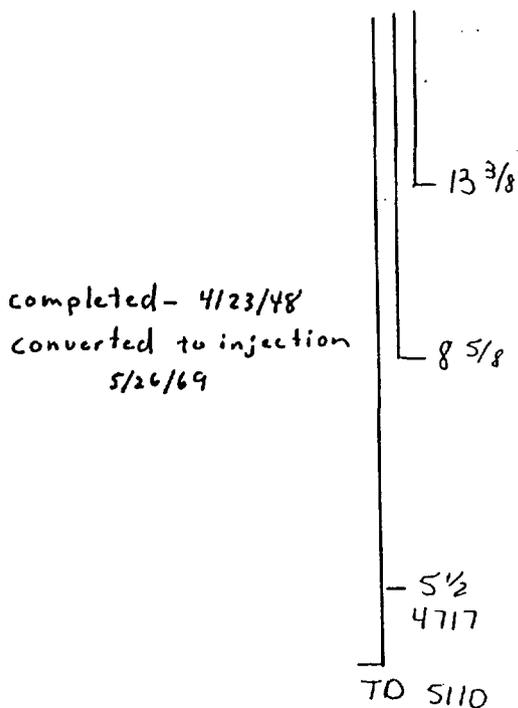
Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) _____
- Is this a new well drilled for injection? _____
 If no, for what purpose was the well originally drilled? _____
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used). _____
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
53	660 FEL & 1980 FNL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 450 SX

TOC: 505 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: 2265 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5110

Injection Interval

4750 feet to 5110 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
(material)
packer at 4300' feet.
(brand & model)

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
54	660 FWL & 1980 FNL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 400 SX

TOC: 678 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: 2278 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5100

Injection Interval

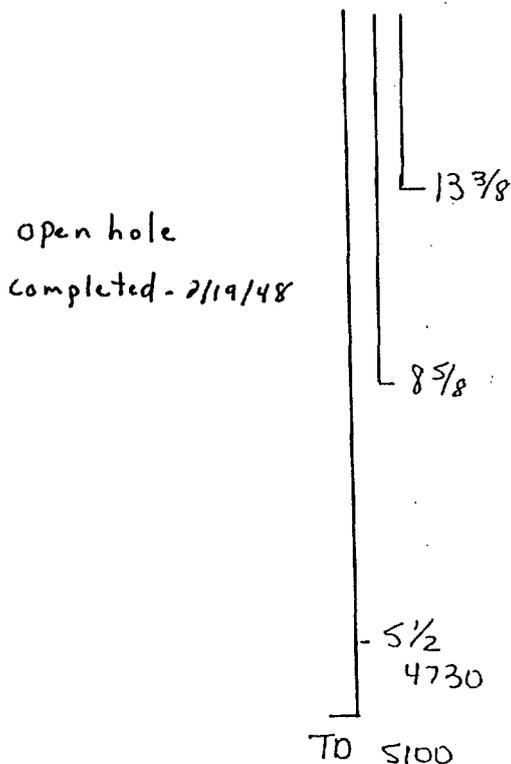
4760 feet to 5100 feet
(perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
(material)
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING

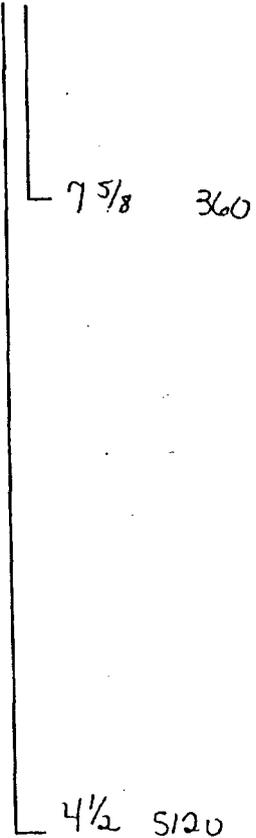


INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
57	1650 FNL & 989 FEL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Cased hole
Completed - 12/21/66



Surface Casing

Size: 7 5/8 " Cemented with _____ SX

TOC: CMT CIRC feet determined by CALC

Hole size: 11

Intermediate Casing

Size: -- " Cemented with -- SX

TOC: -- feet determined by --

Hole Size: --

Long String

Size: 4 1/2 " Cemented with 650 SX

TOC: 676 feet determined by CALC 80%

Hole Size: 6 3/4

Total Depth: 5120

Injection Interval

4682 feet to 5028 feet
(perforated) or open-hole, indicate which)

Tubing size NONE lined with -- set in a
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

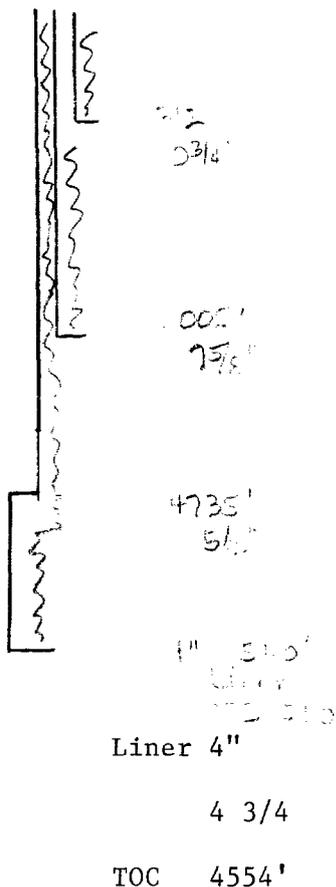
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		West Lovington Unit		
OPERATOR		LEASE		
58	1980 FSL & 1980 FEL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data



Surface Casing

Size: 10 3/4" " Cemented with 225 SX
 TOC: surface feet determined by circulation
 Hole size: 15

Intermediate Casing

Size: 7 5/8" " Cemented with 1600 SX
 TOC: 570 feet determined by 60% calc.
 Hole Size: 9 7/8"

Long String

Size: 5 1/2" " Cemented with 1175 SX
 TOC: surface feet determined by 60% calc.
 20 sacks
 Hole Size: 6 3/4" "

Total Depth: 5110'

Injection Interval

4750 feet to 5108 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
 (material)
shorty tension packer at 4657 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

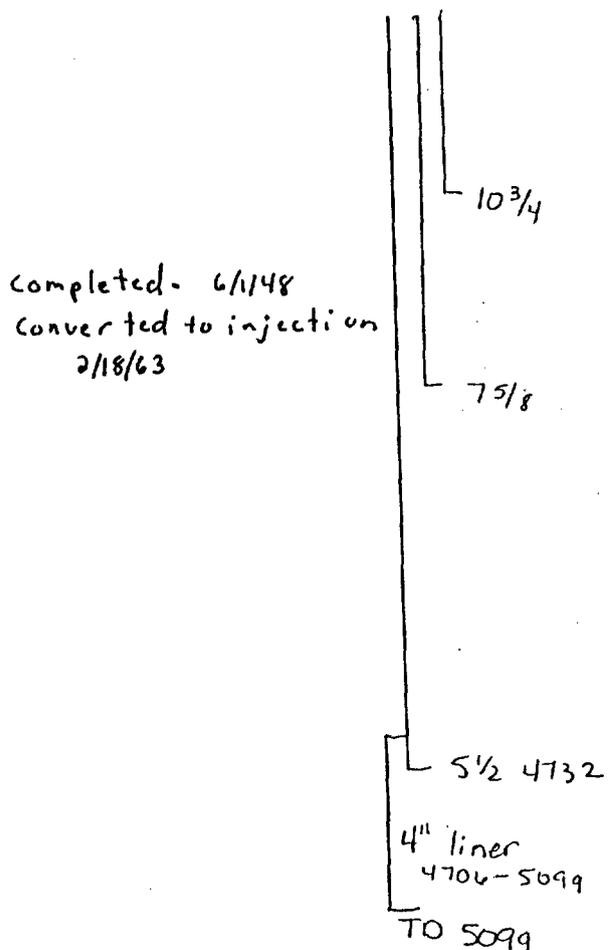
Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
 If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
60	660 FWL & 1980 FSL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 250 SX

TOC: SURFACE feet determined by CALC

Hole size: 15

Intermediate Casing

Size: 7 5/8 " Cemented with 960 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 1000 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 6 3/4

Total Depth: 5099

Injection Interval

5048 feet to 5098 feet
(perforated or open-hole, indicate which)

Tubing size 2" lined with -- ipc set in a
(material)
packer at -- 4660 feet.

(brand & model)

(or describe any other casing-tubing seal).

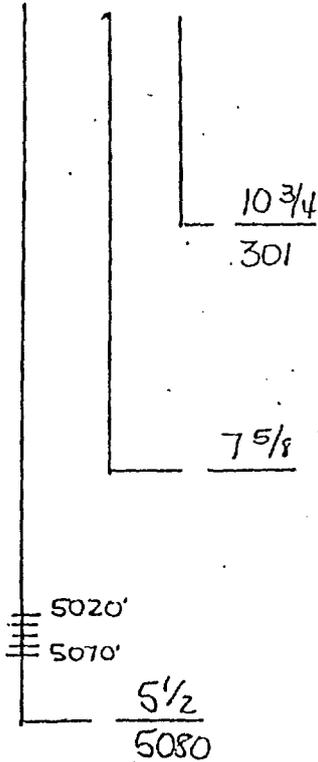
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT			
OPERATOR		LEASE			
61	2310 FSL & 1980 FWL	8	17S	36E	NMPM
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE	
WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO					

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 300 SX

TOC: CIRC feet determined by CALC

Hole size: 15

Intermediate Casing

Size: 7 5/8 " Cemented with 500 SX

TOC: CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 1050 SX

TOC: CIRC feet determined by CALC

Hole Size: 6 3/4

Total Depth: 5080 CIBP @ 4954
Perfs: 5020-70

Injection Interval

5020 feet to 5070 feet
(perforated) or open-hole, indicate which

Tubing size 2-3/8" lined with IPC set in a
Baker packer at 4060 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

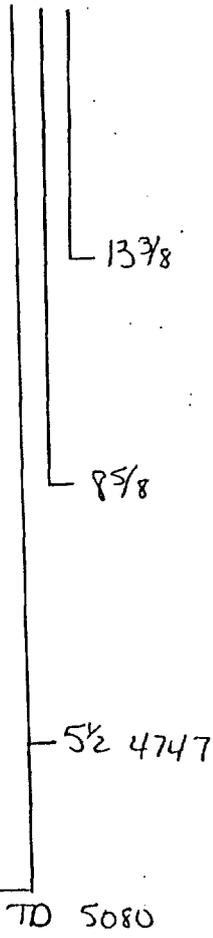
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (if applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
62	2970 FNL & 2310 FEL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

open hole
completed 1/9/49
converted to injection
2/26/63



Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: SURFACE feet determined by CALC

Hole size: 17

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1500 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3585 feet determined by CALC 80%

Hole Size: 7 3/4

Total Depth: 5080

Injection Interval

4770 feet to 5080 feet
(perforated or open-hole indicate which)

Tubing size 2 3/8" lined with -- set in a
-- (material)
-- 4640 packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

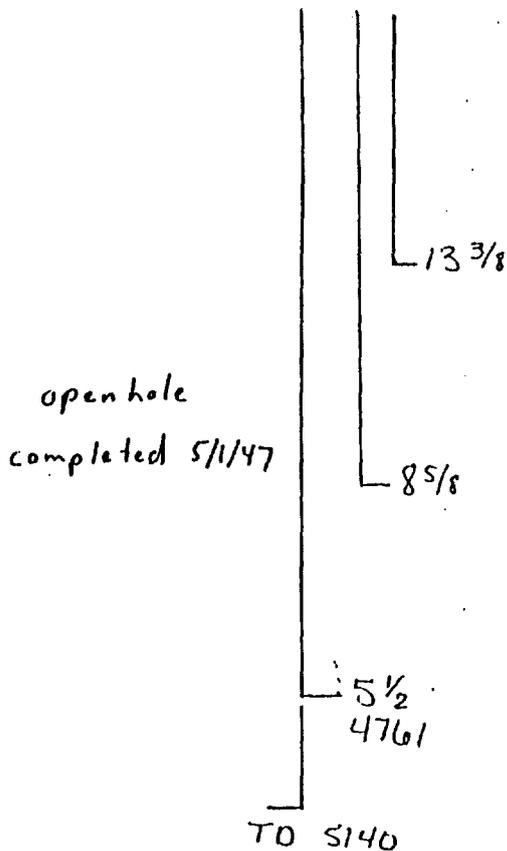
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
9	1980 FWL & 1980 FNL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 180 SX
 TOC: SURFACE feet determined by CALC
 Hole size: 14 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 300 SX
 TOC: 1071 feet determined by CALC 50%
 Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 400 SX
 TOC: 2582 feet determined by CALC 80%
 Hole Size: 7 7/8

Total Depth: 5140

Injection Interval

4800 feet to 5140 feet
 (perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
 (material)
NONE packer at -- feet.
 (brand & model)
 (or describe any other casing-tubing seal).

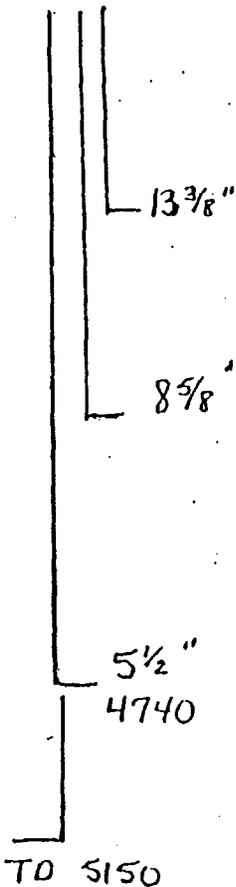
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
11	660 FEL & 1980 FNL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 14 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 200 SX

TOC: 1400 feet determined by CALC @ 50%

Hole Size: 10 3/4

Long String

Size: 5 1/2 " Cemented with 350 SX

TOC: 2643 feet determined by CALC @ 80%

Hole Size: 7 5/8

Total Depth: 5150

Injection Interval

4740 feet to 5105 (PBTD) feet
(perforated or open-hole indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
Baker packer at 4720 feet.
(brand & model)

(or describe any other casing-tubing seal).

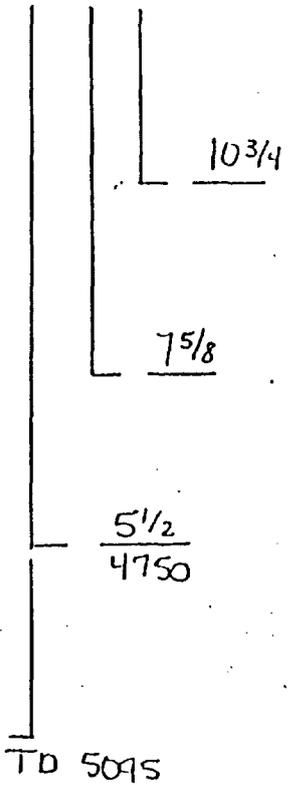
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
12	660 FWL & 1980 FNL	4	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO		WEST LOVINGTON FIELD		

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 210 SX

TOG: SFC @ 75%EFF feet determined by CALC

* Hole size: 12 1/4

Intermediate Casing

Size: 7 5/8 " Cemented with 600 SX

TOG: 350' @ 50%EFF feet determined by CALC

* Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 400 SX

TOG: 2300' @ 50% feet determined by CALC

* Hole Size: 6 3/4

Total Depth: 5100 FT

Injection Interval

4750 feet to 5095 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
Baker packer at 4730 feet.
(brand & model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES
- Name of Field or Pool (If applicable) LOVINGTON (SAN-ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

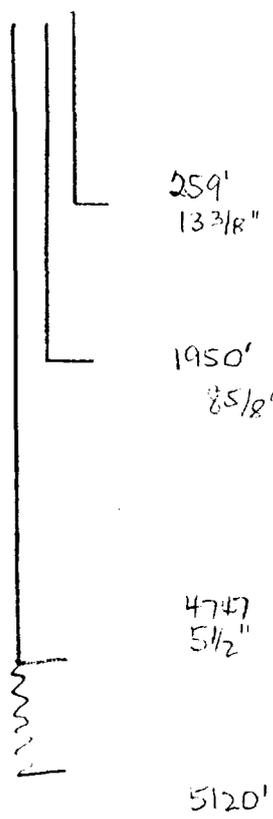
INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORTION

West Lovington Unit

OPERATOR		LEASE		
16	1980 FSL & 1980 FEL	6	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: surface feet determined by circ.

Hole size: 17 1/4"

Intermediate Casing

Size: 8 5/8 " Cemented with 450 SX

TOC: 745 feet determined by 60% calc.

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: 2473 feet determined by 60% calc.

Hole Size: 7 3/8"

Total Depth: 5120'

Injection Interval

4780 feet to 5120 feet
(perforated or open-hole, indicate which)

Tubing size 2 7/8" lined with IPC set in a
Baker AD1 packer at 4688 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
18	1980 FSL & 660 FWL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 3/4

Intermediate Casing

Size: 8 5/8 " Cemented with 300 SX

TOC: 1044 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: 1881 feet determined by CALC 80%

Hole Size: 7 3/8

Total Depth: 5150

Injection Interval

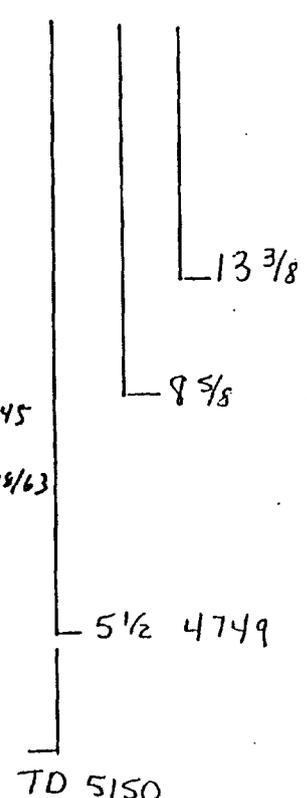
4780 feet to 5150 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
(material)
packer at 4627' feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST.
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

open hole
Completed 7/30/45
Converted to
injection - 2/19/63



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT			
OPERATOR		LEASE			
19	1980 FSL & 1980 FWL	5	17S	36E	NMPM
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE	
WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO					

Tubular Data

<div style="border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black; padding: 5px; margin-bottom: 10px;"> $13\frac{3}{8}$ 299 </div> <div style="border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black; padding: 5px; margin-bottom: 10px;"> $8\frac{5}{8}$ 1989 </div> <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;"> $5\frac{1}{2}$ 4740 </div>	<p><u>Surface Casing</u></p> <p>Size: <u>13 3/8</u> " Cemented with <u>190</u> SX</p> <p>TOC: <u>CIRC</u> feet determined by <u>CALC</u></p> <p>Hole size: <u>17"</u></p>
	<p><u>Intermediate Casing</u></p> <p>Size: _____ " Cemented with <u>150</u> SX</p> <p>TOC: <u>1494'@ 80%</u> feet determined by <u>CALC</u></p> <p>Hole Size: <u>11 1/2"</u></p>
	<p><u>Long String</u></p> <p>Size: <u>5 1/2</u> " Cemented with <u>150</u> SX</p> <p>TOC: <u>3839'@ 80%FILL</u> feet determined by <u>CALC</u></p> <p>Hole Size: <u>7 7/8</u></p> <p>Total Depth: <u>5085</u></p>

Injection Interval
4740 feet to 5085 feet
 (perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with _____ IPC _____ set in a
 (material)
Baker packer at 4720 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

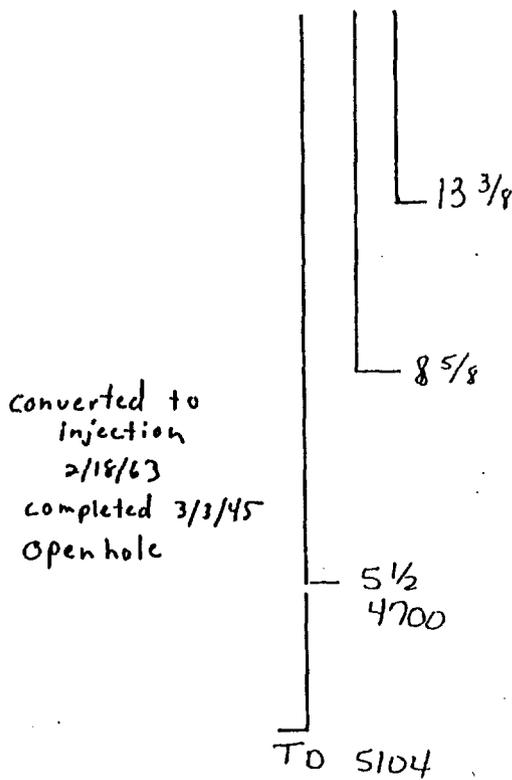
Other Data

1. Name of the injection formation SAN ANDRES DOLOMITE
2. Name of Field or Pool (if applicable) LOVINGTON (SAN ANDRES) WEST
3. Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
4. Has the well ever be 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.
GRAYBURG - OVERLYING - PRODUCTIVITY NEVER DETERMINED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
20	1980 FSL & 1980 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17

Intermediate Casing

Size: 8 1/4 " Cemented with 200 SX

TOC: 1364 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3610 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5104

Injection Interval

4700 feet to 5104 feet
(perforated or open-hole, indicate which)

Tubing size 2" lined with IPC set in a
(material)
packer at 4663' feet.
(brand & model)
(or describe any other casing-tubing seal).

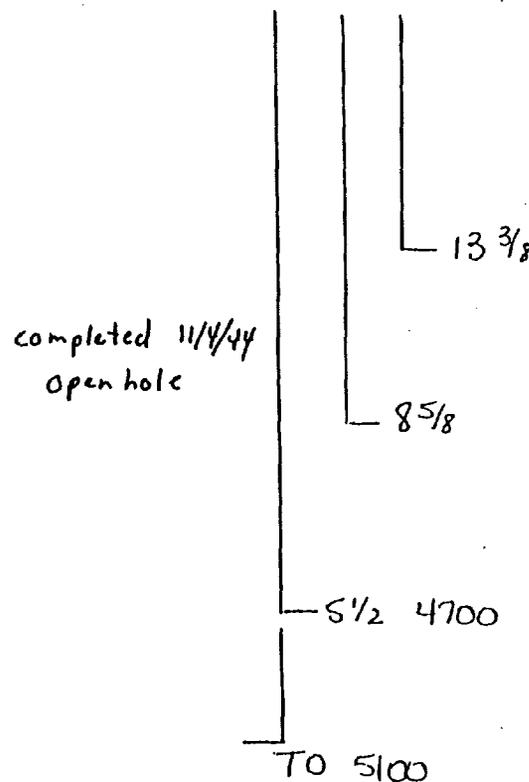
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
21	1980 FSL & 660 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 200 SX

TOC: 1364 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3266 feet determined by CALC 80%

Hole Size: 7 3/8

Total Depth: 5100

Injection Interval

4767 feet to 5100 feet
(perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
(material)
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

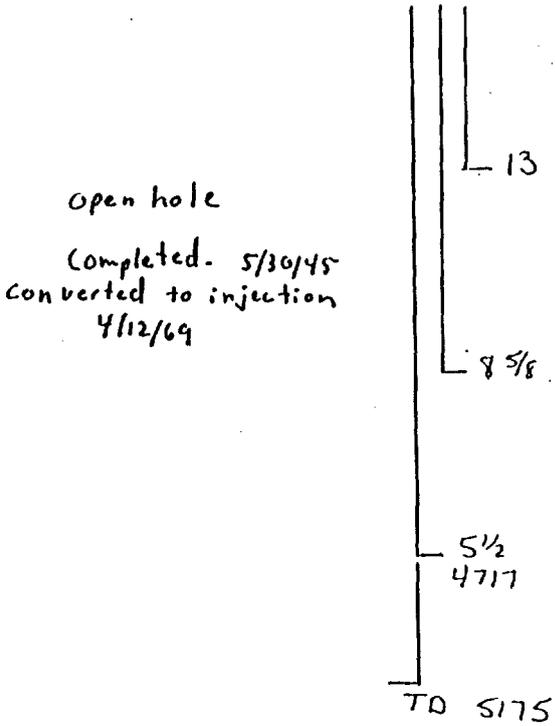
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
27	660 FSL & 1980 FWL	6	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 " Cemented with 250 SX
 TOC: SURFACE feet determined by CALC
 Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 600 SX
 TOC: 78.67 feet determined by CALC 50%
 Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 400 SX
 TOC: 2394 feet determined by CALC 80%
 Hole Size: 7 3/4

Total Depth: 5175

Injection Interval

4770 feet to 5175 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
 (material)
4667' packer at 4667' feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
29	660 FSL & 660 FEL	6	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 200 SX

TOC: 1364 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 2874 feet determined by CALC 80%

Hole Size: 7

Total Depth: 5155

Injection Interval

4735 feet to 5155 feet
(perforated or open-hole indicate which)

Tubing size 2 3/8" lined with IPC set in a
(material)
packer at 4610' feet.

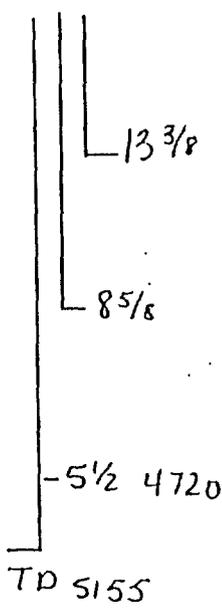
(brand & model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

Open hole
Completed - 4/5/45
converted to injection
4/10/69

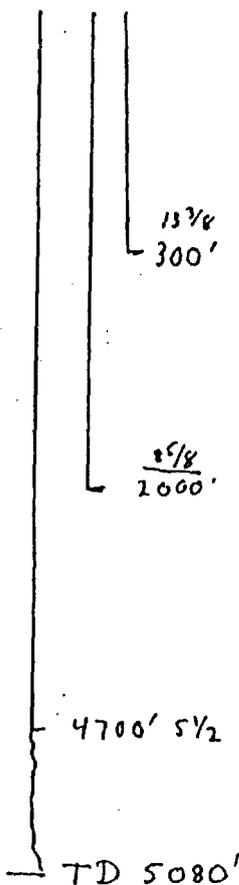


INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
32	660 FSL & 1980 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

open hole
Completed - 2/13/45



Surface Casing

Size: 13 3/8 " Cemented with 200 SX
 TOC: SURFACE feet determined by CALC
 Hole size: 17

Intermediate Casing

Size: 8 5/8 " Cemented with 200 SX
 TOC: 1364 feet determined by CALC 50%
 Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX
 TOC: 3241 feet determined by CALC 80%
 Hole Size: 7 3/8

Total Depth: 5080

Injection Interval

4700 feet to 5080 feet
 (perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
NONE packer at -- feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

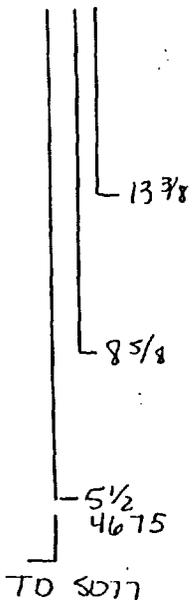
GREENHILL PETROLEUM CORPORATION

WEST LOVINGTON UNIT

OPERATOR		LEASE		
33	660 FSL & 660 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Open hole
completed - 9/15/44



Surface Casing

Size: 13 " Cemented with 225 SX

TOG: SURFACE feet determined by CALC

Hole size: 17

Intermediate Casing

Size: 8 5/8 " Cemented with 250 SX

TOG: 1327 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOG: 3585 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5077

Injection Interval

4770 feet to 5077 feet
(perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

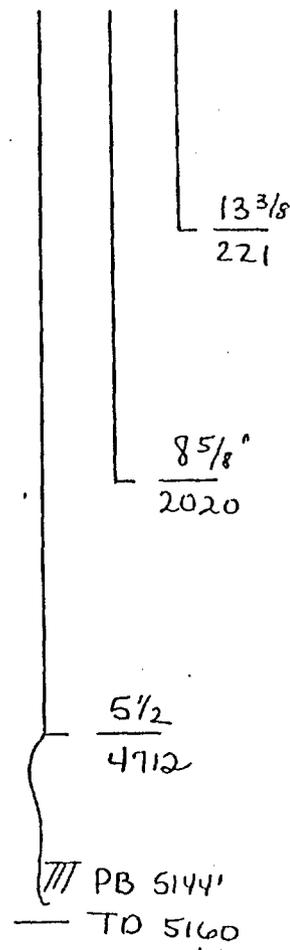
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT			
OPERATOR		LEASE			
40	1980 FWL & 660 FNL	7	17S	36E	NMPM
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE	
WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO					

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 150 SX

TOC: 22' @ 100' FILL feet determined by CALC

Hole size: 19"

Intermediate Casing

Size: 8 5/8 " Cemented with 250 SX

TOC: 723' @ 100% FILL feet determined by CALC

Hole Size: 11"

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3088 @ 100% FILL feet determined by CALC

Hole Size: 7 3/4

Total Depth: 5160

Injection Interval

4112 feet to 5144 (fill) feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
BAKER packer at 4642' feet.
(brand & model) (material)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used). NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

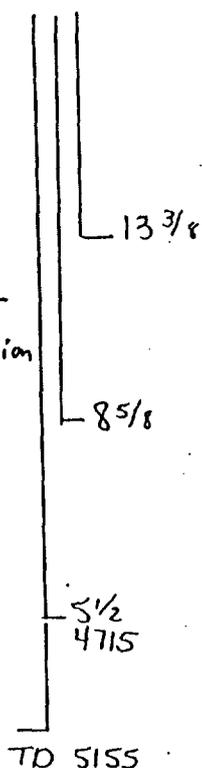
GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
41	660 FNL & 1980 FEL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

open hole
Completed - 5/26/45
Converted to injection
2/18/63



Surface Casing

Size: 13 3/8 " Cemented with 220 SX

TOC: SURFACE feet determined by CALC

Hole size: 16

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1505 feet determined by CALC 50%

Hole Size: 11 1/2

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 2869 feet determined by CALC 80%

Hole Size: 7

Total Depth: 5155

Injection Interval

4760 feet to 5155 feet
(perforated or open-hole indicate which)

Tubing size NONE lined with -- set in a
(material)
NONE packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

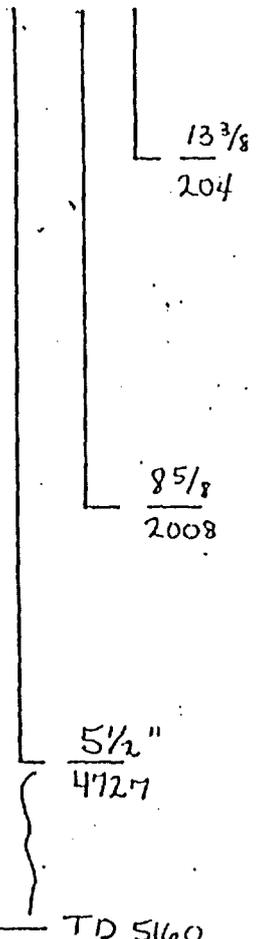
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area:
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT			
OPERATOR		LEASE			
42	660 FNL & 660 FEL	7	17S	36E	NMPM
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE	
WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO					

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: CIRC @ 50%EFF feet determined by CALC

Hole size: 16"

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1590 @ 75%EFF feet determined by CALC

Hole Size: 11 1/2

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3011' @ 75%EFF feet determined by CALC

Hole Size: 7"

Total Depth: 5160

Injection Interval

4727 feet to 5160 feet
(perforated or open-hole indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
Baker packer at 4707 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

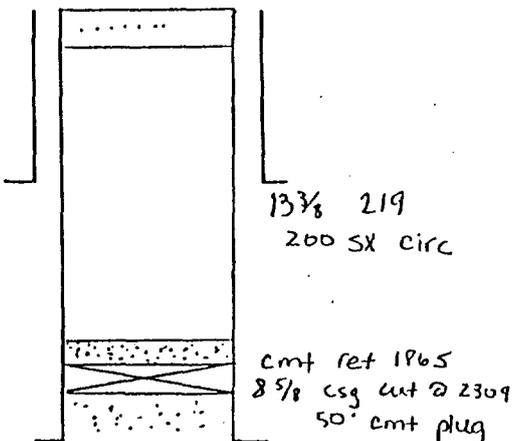
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
43	660 FNL & 660 FWL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



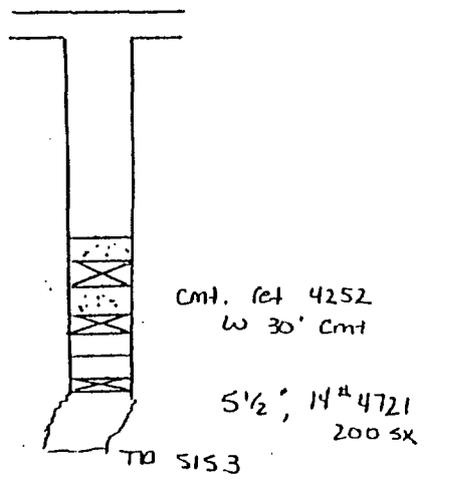
Surface Casing
 Size: 13 3/8 " Cemented with 200 SX
 TOC: SURFACE feet determined by CIRC
 Hole size: 16

Intermediate Casing
 Size: 8 5/8 " Cemented with 200 SX
 TOC: SURFACE feet determined by CIRC
 Hole Size: 11 1/2

Long String
 Size: 5 1/2 " Cemented with 200 SX
 TOC: SURFACE feet determined by P&A
 Hole Size: 7
 Total Depth: 5160

Injection Interval
 _____ feet to _____ feet
 (perforated or open-hole, indicate which)

completed
12/23/44
P&A 476



Tubing size _____ lined with _____ set in a _____ (material) packer at _____ feet. (brand & model) (or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation _____
2. Name of Field or Pool (If applicable) _____
3. Is this a new well drilled for injection? _____
If no, for what purpose was the well originally drilled? _____
4. Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).

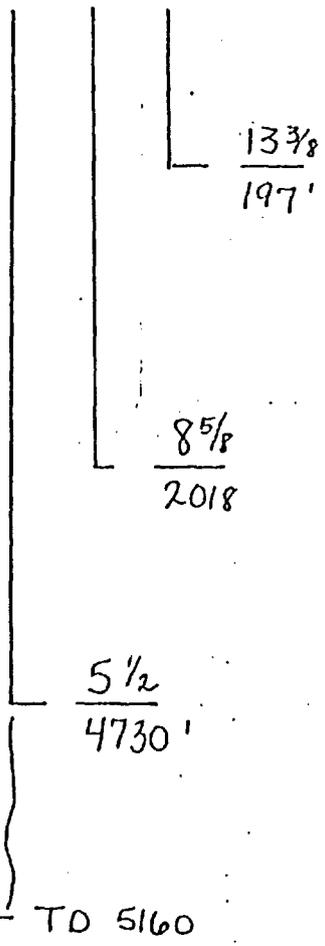
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT			
OPERATOR		LEASE			
44	1980 FWL & 660 FNL	8	17S	36E	NMPM
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE	

WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 340 SX

TOC: CIRC feet determined by CALC

Hole size: 16"

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1485 @ 80% feet determined by CALC

Hole Size: 11 1/2

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 2539 @ 80%EFF feet determined by CALC

Hole Size: 7

Total Depth: 5160

Injection Interval

4730 feet to 5160 feet
(perforated or open-hole indicate which)

Tubing size 2-3/8" lined with IPC set in a
Baker packer at 4710 feet.
(brand & model)
(or describe any other casing-tubing seal).

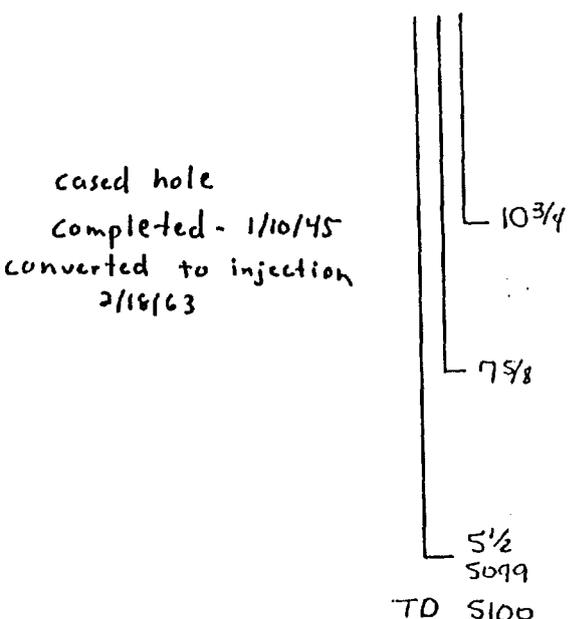
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (IF applicable) LOVINGTON (SAN:ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
45	660 FNL & 1980 FEL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 13 3/4

Intermediate Casing

Size: 7 5/8 " Cemented with 650 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 6 3/4

Total Depth: 5100

Injection Interval

4730 feet to 5060 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
(material)
packer at 4681' feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (IF applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

WEST LOVINGTON UNIT

OPERATOR

LEASE

46

660 FNL & 660 FEL

8

17S

36E

NMPM

WELL NO.

FOOTAGE LOCATION

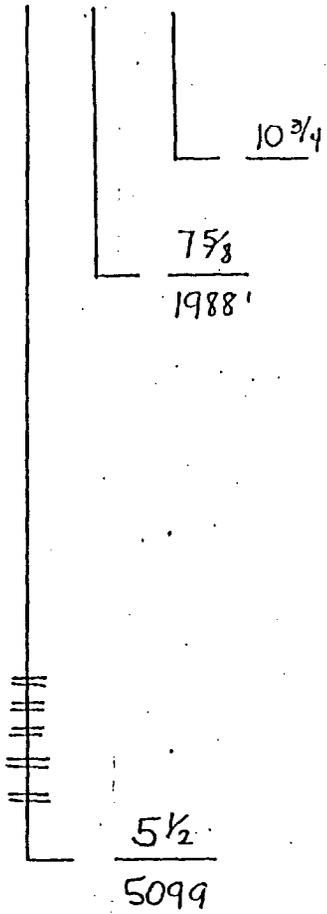
SEC.

TOWNSHIP

RANGE

WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 200 SX

TOC: CIRC feet determined by CALC

Hole size: 13 3/4

Intermediate Casing

Size: 7 5/8 " Cemented with 650 SX

TOC: CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: 1709 feet determined by CALC

Hole Size: 6 3/4 PERFS:

Total Depth: 5100 4730-60 5050-55

4780-4810 5085-95

4870-80

Injection Interval

4910-15

4980-5040

4730 feet to 5095 feet
(perforated) or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a

BARER

packer at

(material)

4710

feet.

(brand & model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation SAN ANDRES DOLOMITE

2. Name of Field or Pool (if applicable) LOVINGTON (SAN ANDRES) WEST

3. Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCER

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

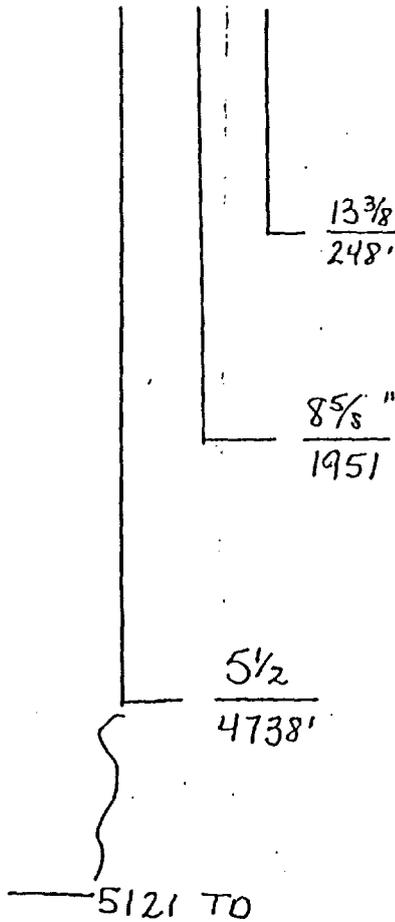
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
50	660 FWL & 1980 FNL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX
 TOC: CIRC feet determined by CALC
 Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 450 SX
 TOC: 400'@ 75%FILL feet determined by _____
 Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX
 TOC: 1739'@ 75% feet determined by _____
 Hole Size: 7 3/8

Total Depth: 5121

Injection Interval

CIBP @ 4640

4738 feet to 5121 feet
 (perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
Baker packer at 4718 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

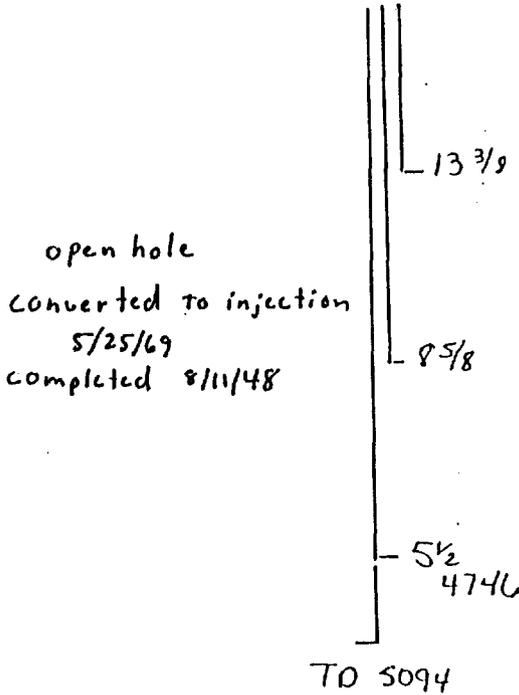
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
51	1980 FNL & 1896 FWL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 200 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 450 SX

TOC: 519 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: 1520 feet determined by CALC 80%

Hole Size: 7 3/8

Total Depth: 5094

Injection Interval

4810 feet to 5094 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
(material)
packer at 4631' feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

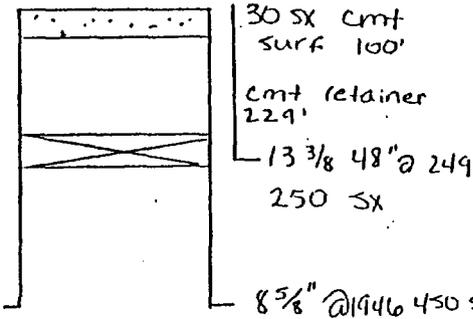
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
52	1980 FNL & 1980 FEL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

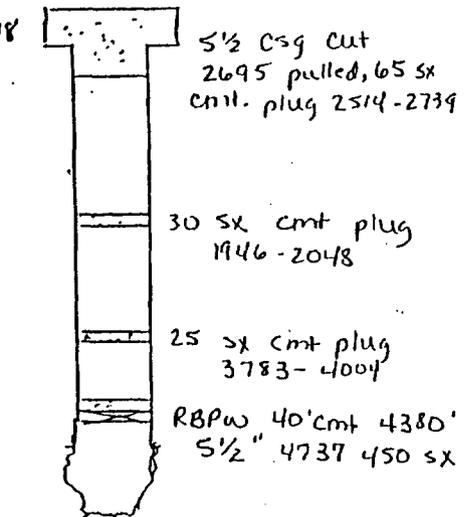


Size: 13 3/8 " Cemented with 250 SX

TOC: SURFACE feet determined by CIRC

Hole size: 17 1/2

Intermediate Casing



Size: 8 5/8 " Cemented with 450 SX

TOC: SURFACE feet determined by CIRC

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: SURFACE feet determined by P&A

Hole Size: 7 7/8

Total Depth: 5110

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size 2" lined with IPC set in a
_____ (material)
_____ packer at 4265' feet.
(brand & model)

(or describe any other casing-tubing seal).

Other Data

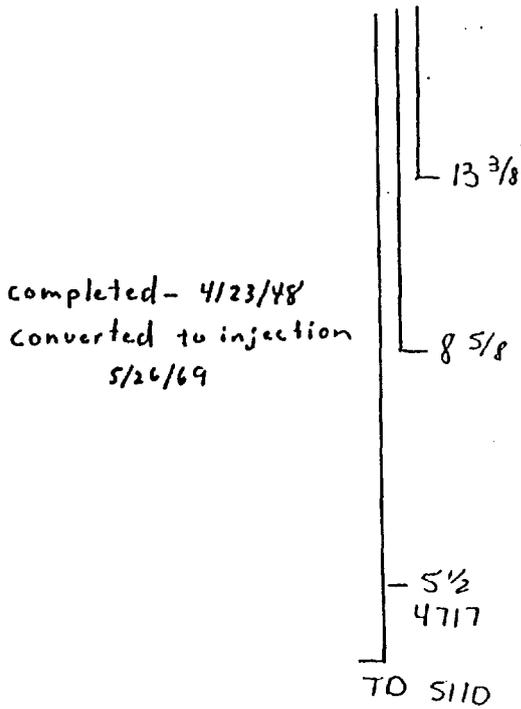
1. Name of the injection formation _____
2. Name of Field or Pool (If applicable) _____
3. Is this a new well drilled for injection? _____
If no, for what purpose was the well originally drilled? _____
4. Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).

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

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
53	660 FEL & 1980 FNL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 450 SX

TOC: 505 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: 2265 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5110

Injection Interval

4750 feet to 5110 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
(material)
packer at 4300' feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
54	660 FWL & 1980 FNL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 400 SX

TOC: 678 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 450 SX

TOC: 2278 feet determined by CALC 80%

Hole Size: 7 7/8

Total Depth: 5100

Injection Interval

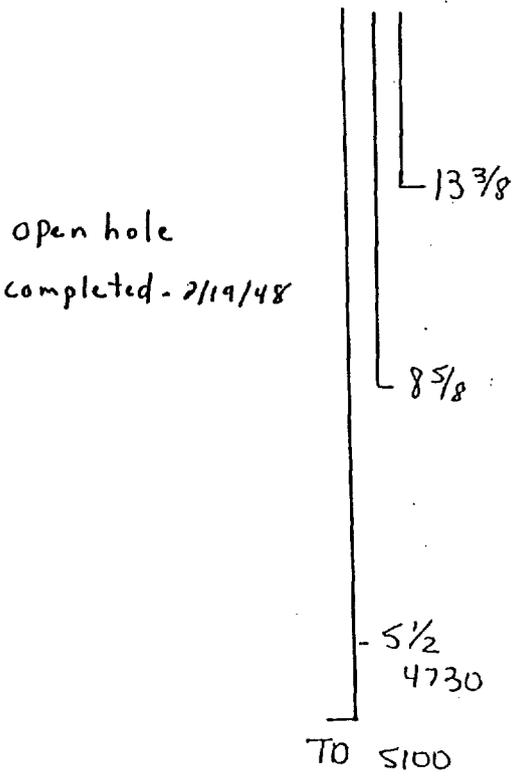
4760 feet to 5100 feet
(perforated or open-hole, indicate which)

Tubing size NONE lined with -- set in a
NONE packer at -- feet.
(brand & model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
57	1650 FNL & 989 FEL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 7 5/8 " Cemented with _____ SX

TOC: CMT CIRC feet determined by CALC

Hole size: 11

Intermediate Casing

Size: -- " Cemented with -- SX

TOC: -- feet determined by --

Hole Size: --

Long String

Size: 4 1/2 " Cemented with 650 SX

TOC: 676 feet determined by CALC 80%

Hole Size: 6 3/4

Total Depth: 5120

Injection Interval

4682 feet to 5028 feet
 (perforated) or open-hole, indicate which)

Tubing size NONE lined with -- set in a
 _____ (material)
NONE packer at -- feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

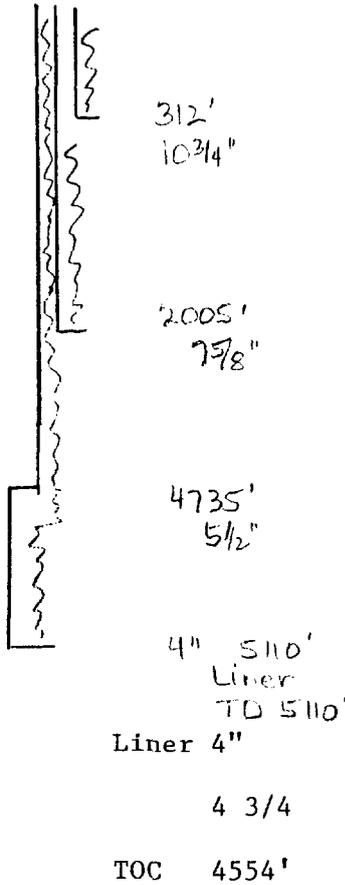
Cased hole
 Completed - 12/21/66



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		West Lovington Unit		
OPERATOR		LEASE		
58	1980 FSL & 1980 FEL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data



Surface Casing

Size: 10 3/4" " Cemented with 225 SX
 TOC: surface feet determined by circulation
 Hole size: 15

Intermediate Casing

Size: 7 5/8" " Cemented with 1600 SX
 TOC: 570 feet determined by 60% calc.
 Hole Size: 9 7/8"

Long String

Size: 5 1/2" " Cemented with 1175 SX
 TOC: surface feet determined by 60% calc.
 20 sacks
 Hole Size: 6 3/4 "

Total Depth: 5110'

Injection Interval

4750 feet to 5108 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with IPC set in a
 (material)
shorty tension packer at 4657 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

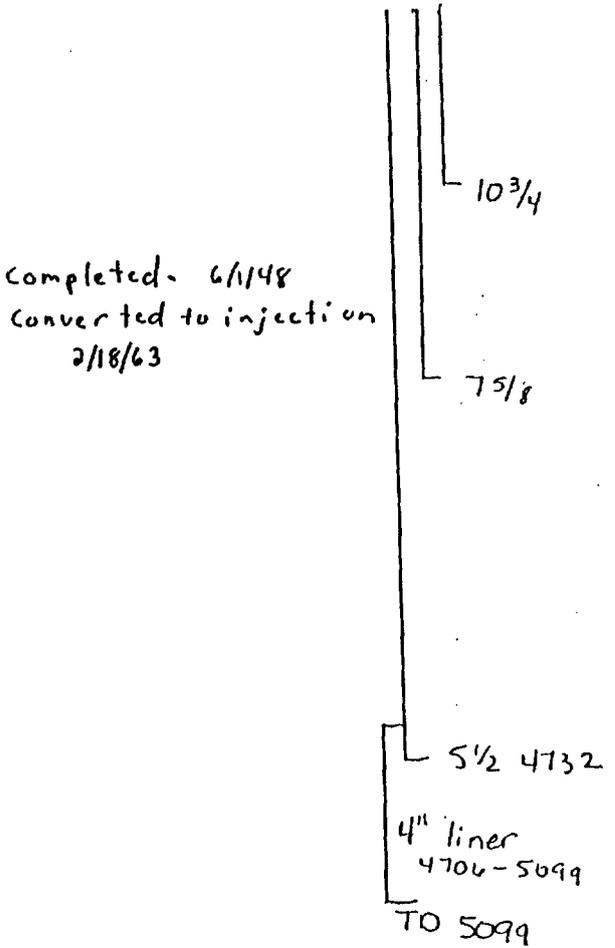
Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
 If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
60	660 FWL & 1980 FSL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 250 SX

TOC: SURFACE feet determined by CALC

Hole size: 15

Intermediate Casing

Size: 7 5/8 " Cemented with 960 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 1000 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 6 3/4

Total Depth: 5099

Injection Interval

5048 feet to 5098 feet
(perforated or open-hole, indicate which)

Tubing size 2" lined with -- ipc set in a
(material)
packer at -- 4660 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

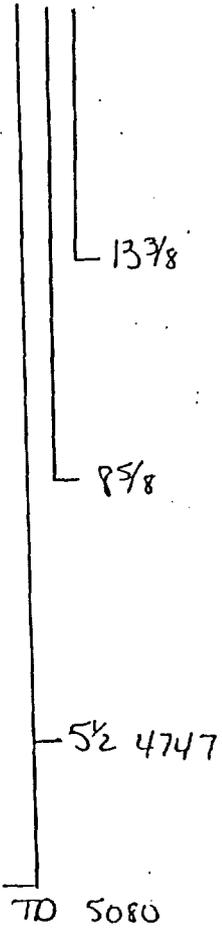
- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
62	2970 FNL & 2310 FEL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

open hole
completed 1/9/49
converted to injection
2/26/63



Surface Casing

Size: 13 3/8 " Cemented with 250 SX

TOC: SURFACE feet determined by CALC

Hole size: 17

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SX

TOC: 1500 feet determined by CALC 50%

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3585 feet determined by CALC 80%

Hole Size: 7 3/4

Total Depth: 5080

Injection Interval

4770 feet to 5080 feet
(perforated or open-hole indicate which)

Tubing size 2 3/8" lined with -- set in a
-- (material)
-- 4640 packer at -- feet.
(brand & model)
(or describe any other casing-tubing seal).

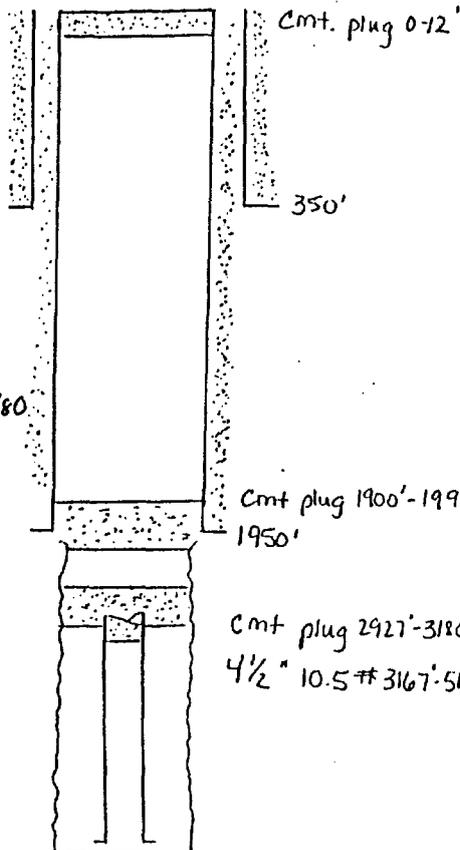
Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
63 PA	660 FNL & 560 FWL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data



PA-9/24/80

Surface Casing

Size: 13 3/8 " Cemented with 450 SX

TOC: SURFACE feet determined by CIRC

Hole size: 17 1/2"

Intermediate Casing

Size: 8 5/8 " Cemented with 1300 SX

TOC: SURFACE feet determined by CIRC

Hole Size: 12 1/4

Long String

Size: 4 1/2 " Cemented with 560 SX

TOC: SURFACE feet determined by PA

Hole Size: 7 7/8"

Total Depth: 5150

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a
_____ (material)
_____ packer at _____ feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) _____
- Is this a new well drilled for injection? _____
If no, for what purpose was the well originally drilled? _____
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).

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

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		West Lovington Unit		
OPERATOR		LEASE		
64	2080 FNL & 989 FWL	8	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 16 " Cemented with 700 SX

TOC: surface feet determined by circ.

Hole size: 20 "

Intermediate Casing

Size: 13 3/8 " Cemented with 2200 SX

TOC: surface feet determined by circ.

Hole Size: 15

Long String

Size: 8 5/8 " Cemented with 2050 SX

TOC: 1300 feet determined by TS

Hole Size: 12 1/4"

Total Depth: 9500'

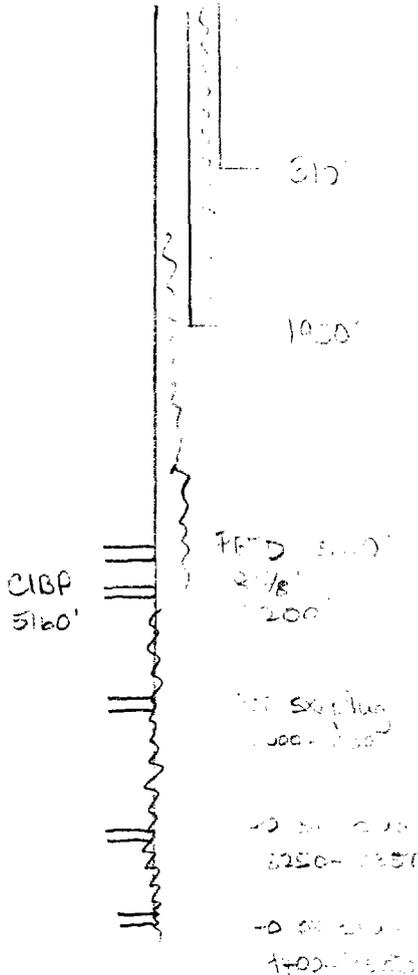
Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a
 _____ (material)
 _____ packer at _____ feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
 If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		WEST LOVINGTON UNIT		
OPERATOR		LEASE		
66	135 FSL & 1300 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE
LEA COUNTY, NEW MEXICO				

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 450 SX

TOC: SURFACE feet determined by CALC

Hole size: 17 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 380 SX

TOC: 937 feet determined by CALC 50%

Hole Size: 12 1/4

Long String

Size: 5 1/2 " Cemented with 1275 SX

TOC: CMT CIRC feet determined by CALC

Hole Size: 7 7/8

Total Depth: 5230

Injection Interval

4709 feet to 5062 feet
 (perforated or open-hole, indicate which)

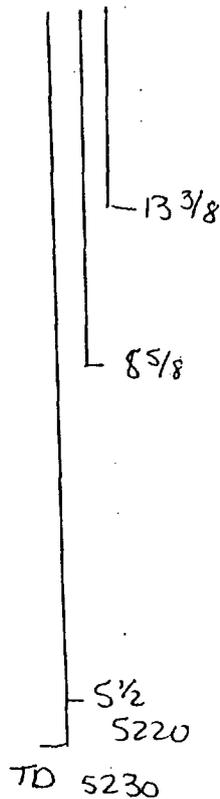
Tubing size NONE lined with -- set in a
 (material)
NONE packer at -- feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (If applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
 If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

GRAYBURG - OVERLYING

Completed - 2/23/40



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		West Lovington Unit			
OPERATOR		LEASE			
67	135 FNL 2600 FWL	7	17S	36E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE	

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 275 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long String

Size: 5 1/2 " Cemented with 1200 SX

TOC: surface feet determined by 60% calc.

Hole Size: 7 7/8"

Total Depth: 5240

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a
 _____ (material)
 _____ packer at _____ feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
 If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

8 5/8"
302'

5 1/2"
5240'

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

West Lovington Unit

OPERATOR	LEASE			
68	1335 FNL & 1280 FWL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8" Cemented with 275 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: " Cemented with SX

TOC: feet determined by

Hole Size:

Long String

Size: 5 1/2" Cemented with 600 SX

TOC: 2477 feet determined by 60% calc.

Hole Size: 7 7/8"

Total Depth: 5200'

Injection Interval

 feet to feet
(perforated or open-hole, indicate which)

Tubing size lined with set in a
 packer at feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

2 5/8"
362'

5 1/2"
5200'

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		West Lovington Unit		
OPERATOR		LEASE		
69	1305 FNL & 2575 FWL	7	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 275 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long String

Size: 5 1/2 " Cemented with 785 SX

TOC: 1680 feet determined by 60% calc.

Hole Size: 7 7/8"

Total Depth: 5240'

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a
 _____ packer at _____ feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
 If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

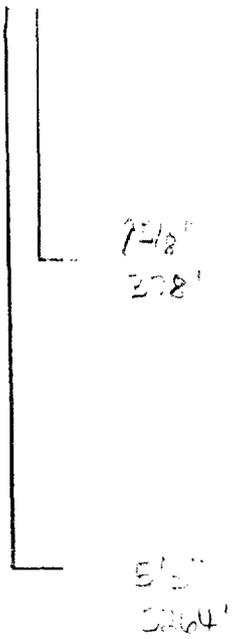
8 5/8"
368'

5 1/2"
5240'

INJECTION WELL DATA SHEET

<u>GREENHILL PETROLEUM CORPORATION</u>	<u>West Lovington Unit</u>		
OPERATOR	LEASE		
<u>70</u>	<u>1300 FNL & 15 FWL</u>	<u>4</u>	<u>17S 36E</u>
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP RANGE

Tubular Data



Surface Casing

Size: 8 5/8 " Cemented with 250 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long String

Size: 5 1/2 " Cemented with 675 SX

TOC: 2202 feet determined by 60% calc.

Hole Size: 8 5/8"

Total Depth: 5264'

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a
(material)
_____ packer at _____ feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation _____
2. Name of Field or Pool (If applicable) Upper Lovington San Andres West
3. Is this a new well drilled for injection? No production
If no, for what purpose was the well originally drilled? _____
4. Has the well ever be 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.
Grayburg overlying

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

WEST LOVINGTON UNIT

OPERATOR

LEASE

61

2310 FSL & 1980 FWL

8

17S

36E

NMPM

WELL NO.

FOOTAGE LOCATION

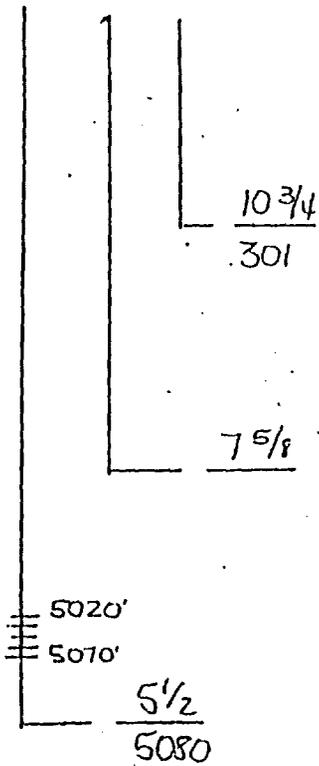
SEC.

TOWNSHIP

RANGE

WEST LOVINGTON FIELD, LEA COUNTY, NEW MEXICO

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 300 SX

TOC: CIRC feet determined by CALC

Hole size: 15

Intermediate Casing

Size: 7 5/8 " Cemented with 500 SX

TOC: CIRC feet determined by CALC

Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 1050 SX

TOC: CIRC feet determined by CALC

Hole Size: 6 3/4

Total Depth: 5080 CIBP @ 4954
Perfs: 5020-70

Injection Interval

5020 feet to 5070 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
Baker packer at 4060 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES DOLOMITE
- Name of Field or Pool (if applicable) LOVINGTON (SAN ANDRES) WEST
- Is this a new well drilled for injection? NO
If no, for what purpose was the well originally drilled? PRODUCTION
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
GRAYBURG - OVERLYING - UNEVALUATED

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		West Lovington Unit		
OPERATOR		LEASE		
75	2625 FSL & 1305 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8" Cemented with 300 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: _____" Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long String

Size: 5 1/2" Cemented with _____ SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8"

Total Depth: 5230'

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a
(material)
_____ packer at _____ feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

8 5/8"
300'
5 1/2"
5230'

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

West Lovington Unit

OPERATOR	LEASE			
76	15 FEL & 2515 FSL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 300 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long String

Size: 5 1/2 " Cemented with 1075 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8"

Total Depth: 5230'

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a
_____ (material) _____
_____ packer at _____ feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

8 5/8"
3165'
5 1/2"
5230'

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		West Lovington Unit		
OPERATOR		LEASE		
77	1165 FSL & 1305 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 300 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long String

Size: 5 1/2 " Cemented with 1100 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8"

Total Depth: 5230'

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a
_____ (material)
_____ packer at _____ feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

852'
350'

515'
5230'

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

West Lovington Unit

OPERATOR		LEASE		
78	1305 FSL & 15 FEL	5	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8" Cemented with 300 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4"

Intermediate Casing

Size: " Cemented with SX

TOC: feet determined by

Hole Size:

Long String

Size: 5 1/2" Cemented with 1275 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8"

Total Depth: 5230

Injection Interval

 feet to feet
(perforated or open-hole, indicate which)

Tubing size lined with set in a
 (material)
 packer at feet.
(brand & model)
(or describe any other casing-tubing seal).

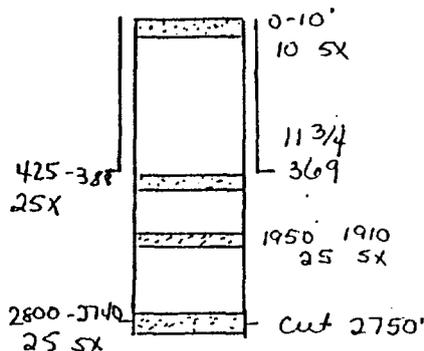
Other Data

- Name of the injection formation
- Name of Field or Pool (If applicable) Upper Lovington San Andres West
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? production
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).
No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Grayburg overlying

INJECTION WELL DATA SHEET

HUMBLE OIL & REFINING COMPANY		NEW MEXICO "P" STATE	
OPERATOR		LEASE	
5	2080' FNL & 660' FWL	9	T17S-R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP RANGE

Tubular Data



Surface Casing

Size: 11-3/4 " Cemented with 375 SX

TOC: Surface feet determined by Calc.

Hole size: 15

Intermediate Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long String

Size: 8-5/8 " Cemented with 450 SX

TOC: .3517' feet determined by 80% calc

Hole Size: 11

Total Depth: 8700'

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

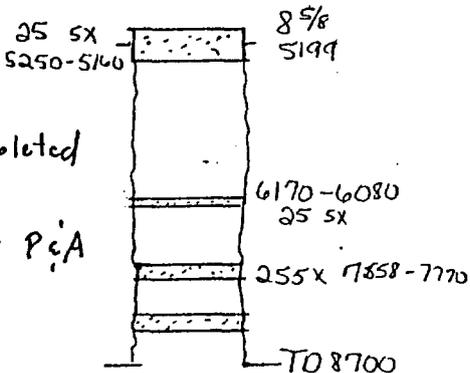
Tubing size _____ lined with _____ set in a
(material)
_____ packer at _____ feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation _____
2. Name of Field or Pool (If applicable) _____
3. Is this a new well drilled for injection? _____
If no, for what purpose was the well originally drilled? _____
4. Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).

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

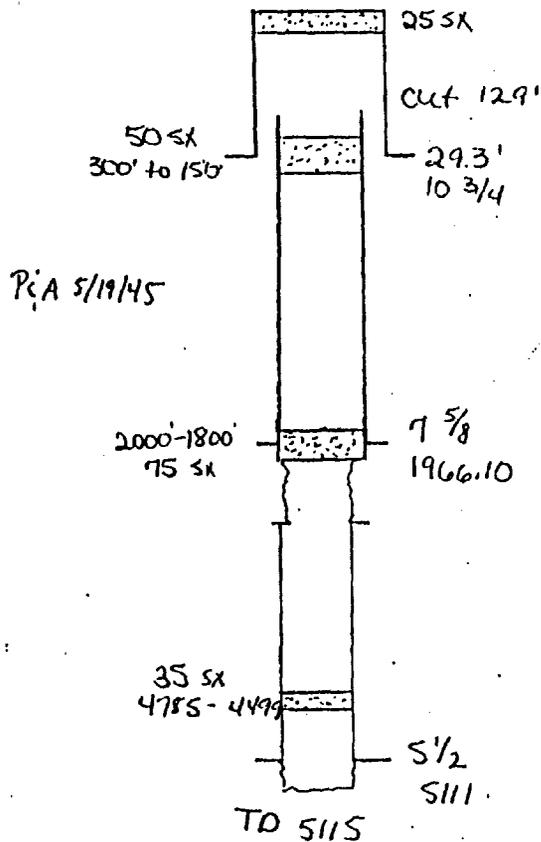
date completed
4/16/68
4/16/68 P&A



INJECTION WELL DATA SHEET

Humble Oil & Refining Company		N. M. State "R"		
OPERATOR		LEASE		
#1	600 FNL & 660 FEL	9	T17S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data



Surface Casing

Size: 10 3/4 " Cemented with 210 SX
 TOC: Surface feet determined by calc
 Hole size: 13 3/4

Intermediate Casing

Size: 7 5/8 " Cemented with 600 SX
 TOC: circulated feet determined by calc
 Hole Size: 9 7/8

Long String

Size: 5 1/2 " Cemented with 400 SX
 TOC: 588\' circulated feet determined by calc 80%
 Hole Size: 6 3/4
 Total Depth: 5115

Injection Interval

_____ feet to _____ feet
 (perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a
 _____ (material)
 _____ packer at _____ feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (if applicable) _____
- Is this a new well drilled for injection? _____
 If no, for what purpose was the well originally drilled? _____
- Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used).

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

VII

1. The proposed average and maximum daily rate and volume to be injected are 2000 PSI and 1500 BWPB.
2. The system will be a closed system.
4. The sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water is attached hereto as Exhibit "A".

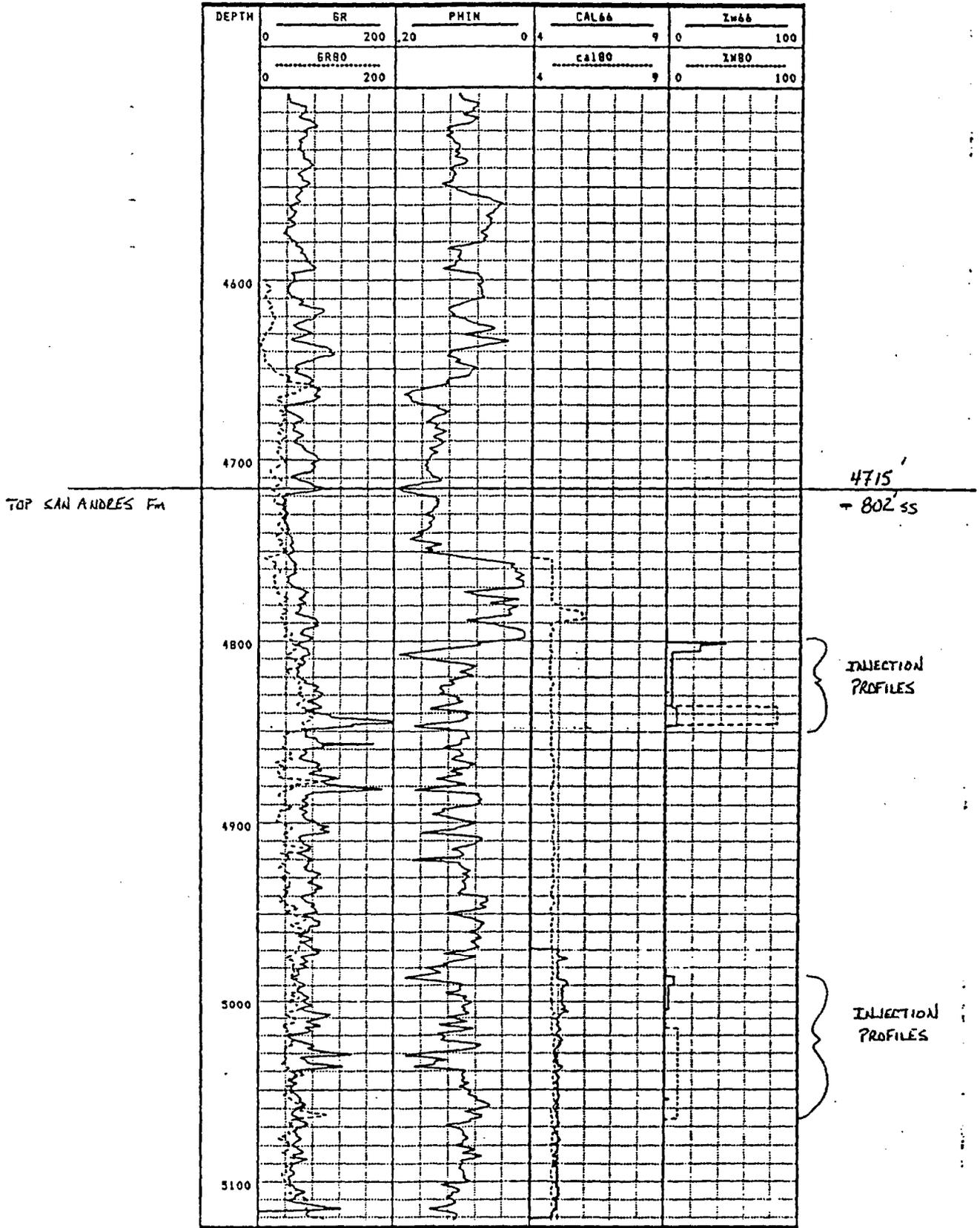
VIII Geologic Data

The zone of interest for this application to inject is the San Andres Formation. In the area of the West Lovington San Andres Field, the San Andres formation is approximately 1350' of dolomite; however, only the upper 400' - 500' is productive. The top of the San Andres formation occurs between 4650' and 5160' (log depth) in the West Lovington San Andres Field. Attached is a type log from the West Lovington San Andres Field. The well log (WLU#18) is an injection well and shows two main zones within the field unit where water has been injected.

The only known underground source of drinking water in the West Lovington Field area is the Ogalalla Formation. The approximate base of the formation is 200'. No source is known to be immediately underlying the proposed injection interval.

VIII

CYPRESS PETROLEUM CONSULTANTS	
WELL NAME	- TEXACO INC. (UNIT 181)
LOCATION	- 880 FM 680 FEL 5-17S-36E WLU
WELL DATA	- DE 3913 TO 5130. 5-172 4746
LOGS	- NORTH GRM (11-15-62)
LOG PARAMETERS	
DATA FILE NAME: wlu18.1q1	
DATE OF PLOT: 3/23/1989	



PROPOSED STIMULATION PROGRAM
FOR CONVERSIONS FROM PRODUCERS TO INJECTION WELLS

WEST LOVINGTON UNIT
LEA COUNTY, NEW MEXICO

1. MIRU pulling unit w/reverse unit. Check and report press. on all csg. strings. Inspect wellhead connections for condition and press. rating. Ensure all csg. valves are at least 2000 psig W.P. Rig up & test BOP.
2. Pull and lay down IPC tbg. string (see note). PU 4 3/4" bit w/csg. scraper on 2 3/8" work string and TIH. [Rotate scraper thru interval of 4050' to 4675'. Do not take scraper below 4675'.] POOH w/tools. Lay down scraper. TIH w/bit on 2 3/8" work string. Clean out from below packer (possibly 4160') to TD @ 5155' w/clean water (fresh or brine). POOH w/tools.
3. PU 5 1/2" pkr on tbg. and TIH. Set pkr. at ±4650'. Open pkr. bypass and spot 2-5 tons of CO2 to 100 ft. above the pkr. Close bypass and displace CO2 into formation under pressure with fresh water. Do not overdisplace. Shut-in overnight.
4. Open well and flowback to recover load. POOH w/tbg. & pkr.
5. Pick up BJ Titan PFT tool and TIH to 5150'±.
6. Pump in 2000 gallons of clean water (fresh or brine) through PFT in circulation mode while moving across interval 5150' to 4780'.

Treat the following intervals:

A. 5150-5100	E 8-10	E. 4850-40	C-7
B. 5070-5030	E 1-4	F. 4820-4780	B-3 to C-2
C. 4990-4970	D 7-9		

NOTE: EXCLUDE 4715-4780

7. Pump 3200 gal of 15% NEFE HCL treated with Iron and Sulfur control agents (to prevent reprecipitation of FeS) through the PFT in injection mode utilizing approximately 20 gal/ft in each interval specified above.
8. Pull up to 4700' - flush with 20 Bbls clean water. SI for 1 hr., then flowback to recover load. POH w/2 3/8" tubing & PFT, laying down tubing. Lay down PFT tools. Release B.J.
9. PU Inj string w/packer. Rerun and try to set packer at 4650'± (records

show packer at 4160'±.

10. Circulate inhibited water into annulus. Set packer w/12M tension. Flange up.
11. Perform leakage test per NMOC requirements. Release rig.
12. Install cartridge housing and filter.
13. R.T.I. Monitor and report pressures, rates, etc. and pressure on filter.

"A"

WATER ANALYSIS REPORT

K-SBT175R36E

Company : GREENHILL PETROLEUM Date : 7-17-90
 Address : HOBBS, NM Date Sampled : 7-17-90
 Lease : WEST LOVINGTON UNIT Analysis No. : 2
 Well : SOUTHWEST WINDMILL
 Sample Pt. : WINDMILL

ANALYSIS	mg/L	* meq/L
1. pH	7.7	
2. H2S	NEG.	
3. Specific Gravity	1.002	
4. Total Dissolved Solids	690.5	
5. Suspended Solids		
6. Dissolved Oxygen		
7. Dissolved CO2		
8. Oil In Water		
9. Phenolphthalein Alkalinity (CaCO3)		
10. Methyl Orange Alkalinity (CaCO3)		
11. Bicarbonate	HCO3 2.0	HCO3 0.0
12. Chloride	Cl 321.0	Cl 9.1
13. Sulfate	SO4 125.0	SO4 2.6
14. Calcium	Ca 180.0	Ca 9.0
15. Magnesium	Mg 0.1	Mg 0.0
16. Sodium (calculated)	Na 62.0	Na 2.7
17. Iron	Fe 0.3	
18. Barium	Ba 0.0	
19. Strontium	Sr 0.0	
20. Total Hardness (CaCO3)	450.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
9 *Ca <----- *HCO3	Ca(HCO3)2	31.0	3
/----->	CaSO4	68.1	177
0 *Mg -----> *SO4	CaCl2	55.5	352
<-----/	Mg(HCO3)2	73.2	
3 *Na -----> *Cl	MgSO4	60.2	
	MgCl2	47.6	0
	NaHCO3	94.0	
	Na2SO4	71.0	
	NaCl	58.4	158

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
R. MATTHEWS

"A"

E- 54 T175236E

WATER ANALYSIS REPORT

Company : GREENHILL PETROLEUM
 Address : HOBBS, NM
 Lease : WEST LOVINGTON UNIT
 Well : NORTH WINDMILL
 Sample Pt. : WINDMILL

Date : 7-17-90
 Date Sampled : 7-17-90
 Analysis No. : 1

ANALYSIS		mg/L		* meq/L
1. pH	7.6			
2. H2S	NEG.			
3. Specific Gravity	1.001			
4. Total Dissolved Solids		724.6		
5. Suspended Solids				
6. Dissolved Oxygen				
7. Dissolved CO2				
8. Oil In Water				
9. Phenolphthalein Alkalinity (CaCO3)				
10. Methyl Orange Alkalinity (CaCO3)				
11. Bicarbonate	HCO3	2.0	HCO3	0.0
12. Chloride	Cl	350.0	Cl	9.9
13. Sulfate	SO4	135.0	SO4	2.8
14. Calcium	Ca	190.0	Ca	9.5
15. Magnesium	Mg	30.5	Mg	2.5
16. Sodium (calculated)	Na	16.7	Na	0.7
17. Iron	Fe	0.4		
18. Barium	Ba	0.0		
19. Strontium	Sr	0.0		
20. Total Hardness (CaCO3)		600.0		

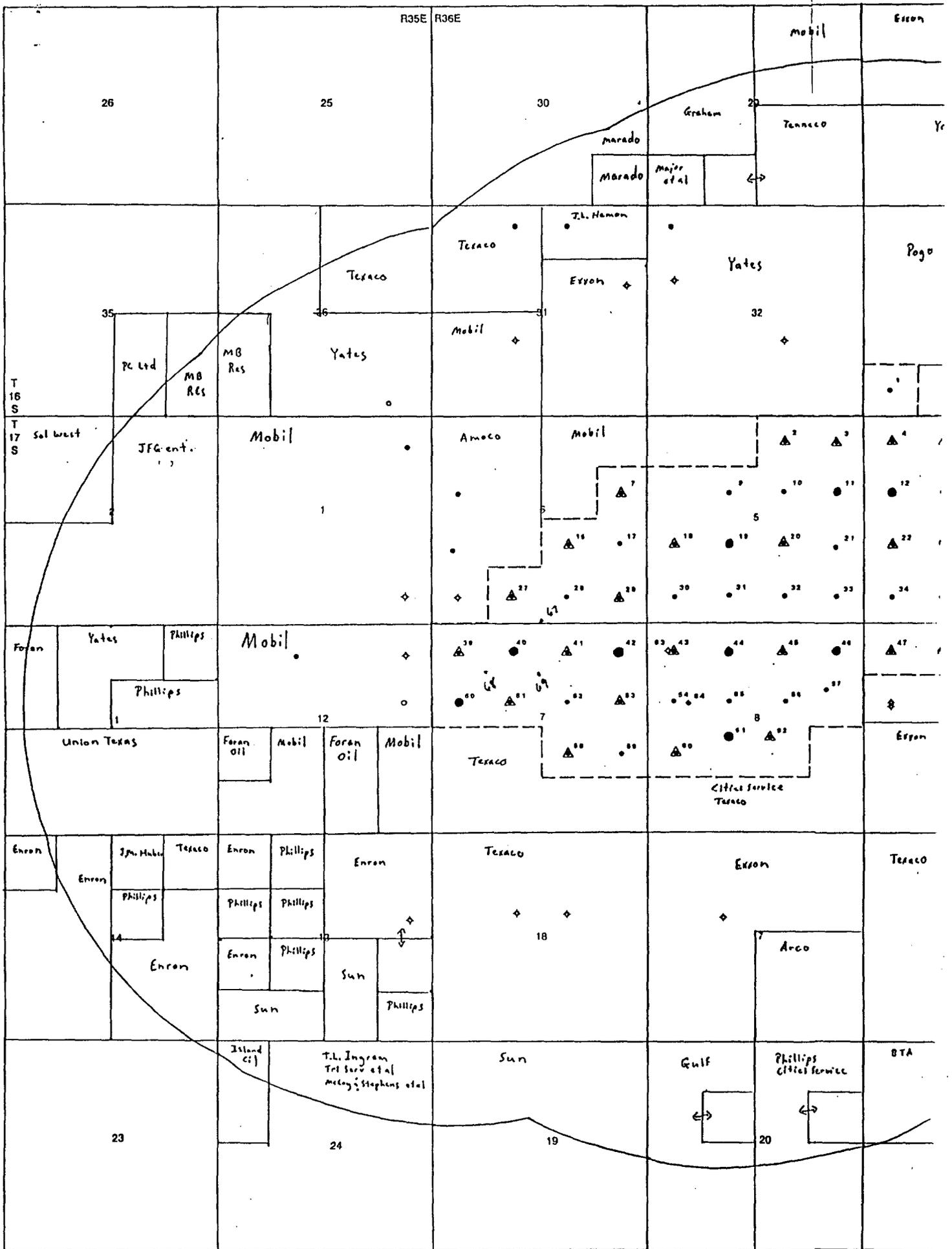
PROBABLE MINERAL COMPOSITION

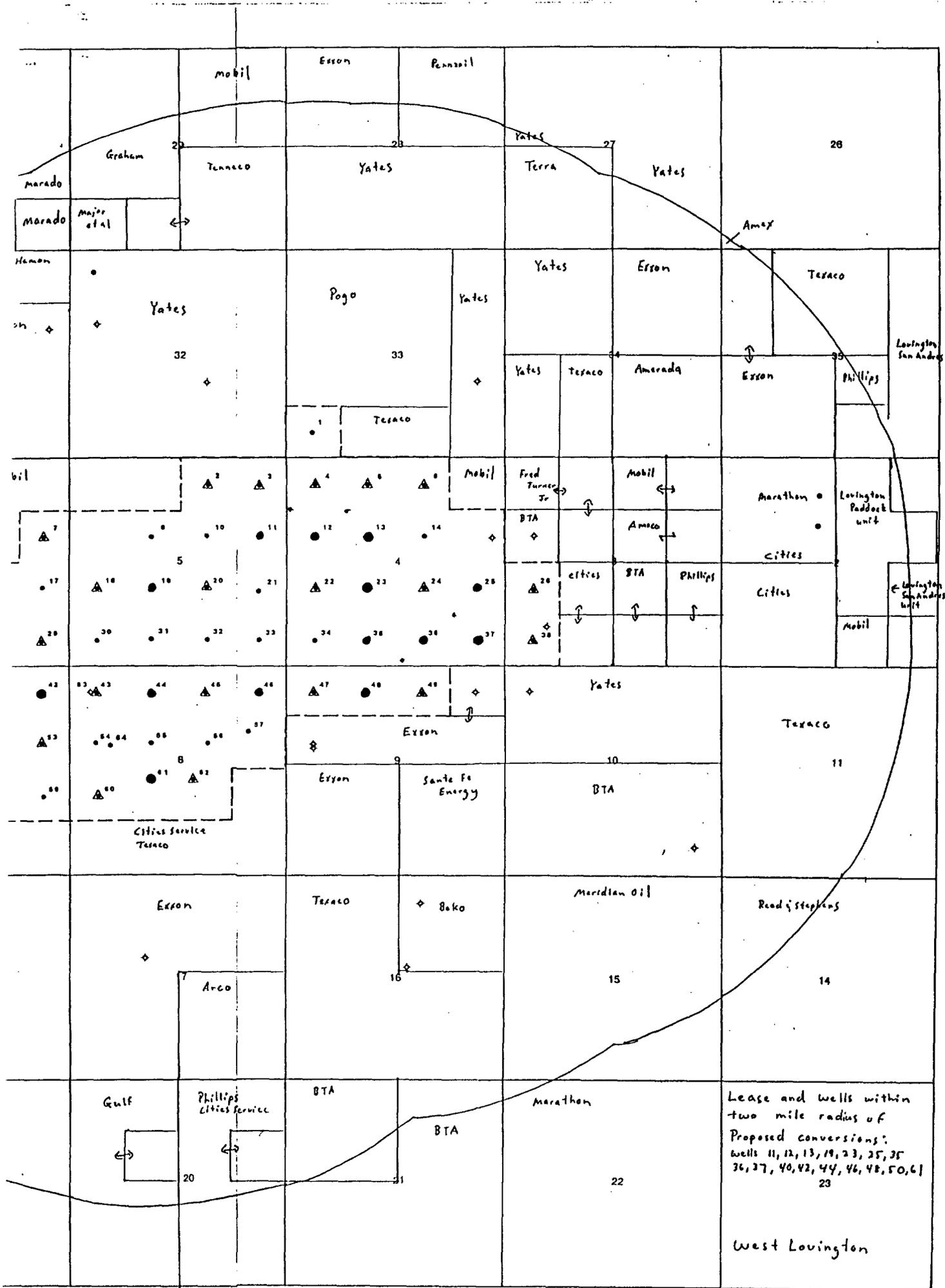
*milli equivalents per Liter		Compound	Equiv wt	X meq/L	= mg/L
9	*Ca <----- *HCO3	Ca(HCO3)2	81.0	0.0	3
	/----->	CaSO4	68.1	2.8	191
3	*Mg -----> *SO4	CaCl2	55.5	6.6	368
	<-----/	Mg(HCO3)2	73.2		
1	*Na -----> *Cl	MgSO4	60.2		
		MgCl2	47.6	2.5	119
Saturation Values Dist. Water 20 C		NaHCO3	84.0		
	CaCO3 13 mg/L	Na2SO4	71.0		
	CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	0.7	43
	BaSO4 2.4 mg/L				

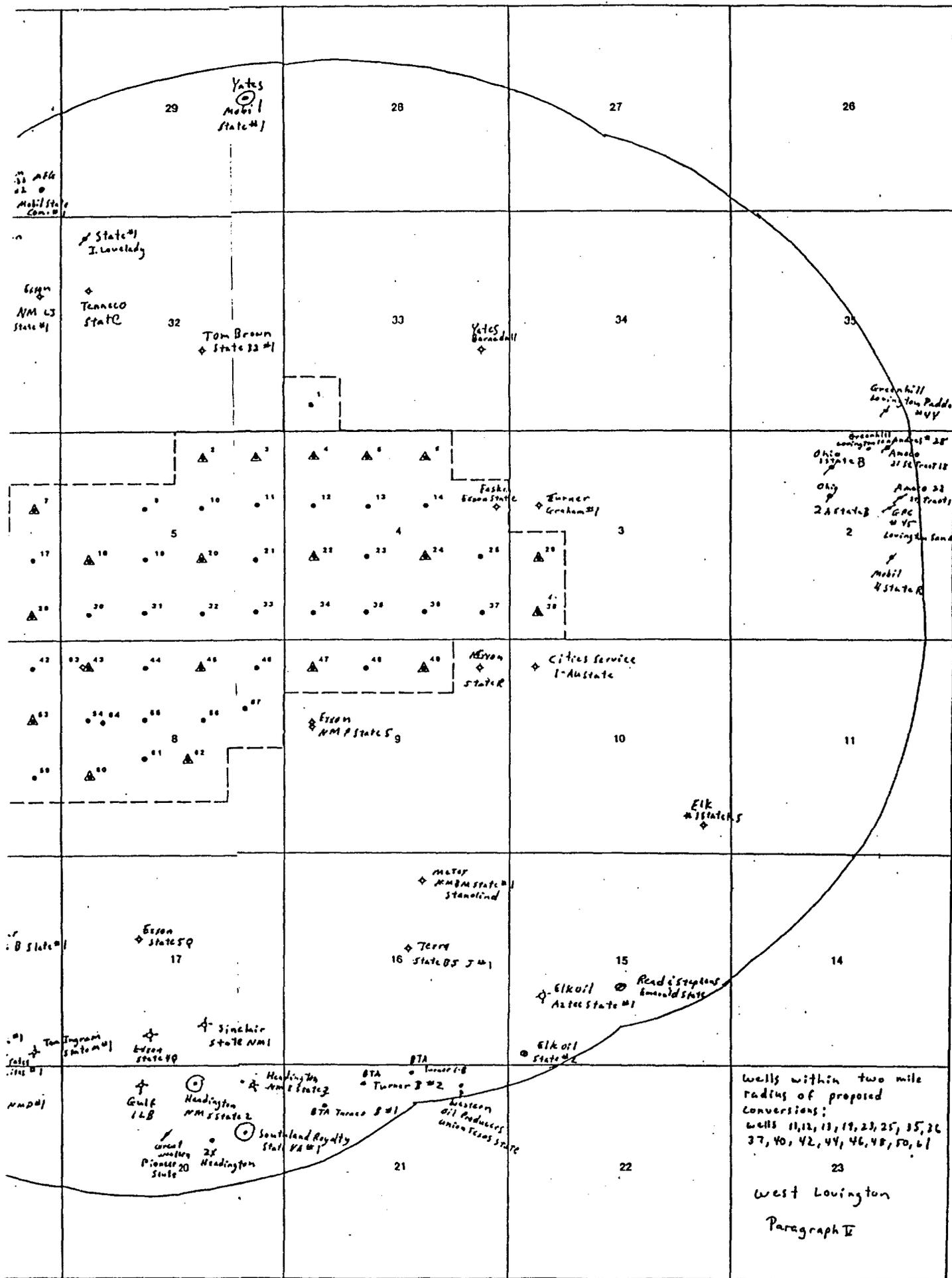
REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 R. MATTHEWS







Wells within two mile
 radius of proposed
 conversions;
 wells 11, 12, 13, 19, 23, 25, 35, 36,
 37, 40, 42, 44, 46, 48, 50, 61
 23
 West Louington
 Paragraph II



GREENHILL PETROLEUM CORPORATION

Incorporated in Delaware, U.S.A.

1990 WESTHEIMER ROAD, SUITE 200
HOUSTON, TEXAS 77077-6841
TELEPHONE (713) 589-8484
FAX (713) 589-7892

47 9 06

January 30, 1992

Oil Conservation Division
Energy, Minerals and Natural Resources Department
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Attention: Mr. David Catanach

Re: West Lovington Conversion
Well Numbers 10, 17, 28, 30, 31,
55, 56, 59 and 82
Lea County, New Mexico

Dear Mr. Catanach:

Enclosed find the proof of publication covering Well Numbers 10, 17, 28, 30, 31, 55, 56, 59 and 82. Greenhill Petroleum Corporation submitted an application to convert these wells from producers to water injection wells pursuant to our letter dated January 27, 1992 and application dated January 7, 1992.

Very truly yours,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
92.080

Enclosure

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, Kathi Bearden

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period

of _____

One weeks.
Beginning with the issue dated

Jan. 8, 1992
and ending with the issue dated

Jan. 8, 1992

Kathi Bearden
General Manager

Sworn and subscribed to before

me this 10 day of

January, 1992
Paula Bearden
Notary Public.

My Commission expires _____

Aug. 5, 1995
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE
January 8, 1992

Greenhill Petroleum Corporation, 11490 Westheimer, Suite 200, Houston, Texas 77077-Phone (713) 589-8484 Contact: Mike Newport. Greenhill Petroleum Corporation plans to convert the following producing wells to injection wells within the West Lovington Field Area. The purpose of

the produced injection wells is to increase the reservoir pressure in order to improve the recovery of hydrocarbons. The location of the proposed injection wells are the following Well Numbers within Sections 5, 6, 7 and 8, T17S-R36E, Lea County, New Mexico Well Numbers 10, 17, 28, 30, 31, 55, 56, 59 and 82. The injection intervals are approximately between the depths

of 4650' and 5160' in the San Andres formation. The maximum injection rates and pressures are 2000 PSI 1500 BWPD. 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.
Michael J. Newport
Land Manager-Permian Basin