



GREENHILL PETROLEUM CORPORATION

11490 WESTHEIMER, SUITE 200
HOUSTON, TEXAS 77077
TELEPHONE (713) 589-8484
FAX (713) 589-9399

Incorporated in Delaware, U.S.A.

September 5, 1991

Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. David Catanach

Re: Lovington San Andres Unit
Lea County, New Mexico

Dear Mr. Catanach:

Enclosed please find the application whereby Greenhill proposes to convert the following producing oil wells to injection wells in the Lovington San Andres Area:

Well Numbers 8, 12, 14, 16, 29, 33 and 41

Also enclosed are copies of certified receipts whereby I have contacted all parties as required by the NMOC. I will forward the publication information when I receive it from the newspaper.

Very truly yours,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
91.120

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-2278.
- 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: 9-3-91
- * 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.

Standard oil	Texas Crude	Pennsoll				
20	Texas	Pennsoll	Amerind oil	21	22	23
		Texas				V
	Yates	Southern Petroleum	Calumet oil	Amerind		
29	Tipperary	Amerind	Standard oil	28	Standard oil	Amerind (Standard oil)
	Monticello, Jr.		Bill Sutter			
Texas	Texas	Southern Petroleum	Texas	Amerind	Am-Tex	Union Texas
32	Texas	Texas	Texas	Amerind		
33	Texas	Texas	Texas	Amerind		
34	Texas	Texas	Texas	Amerind		
35	Texas	Texas	Texas	Amerind		
36	Texas	Texas	Texas	Amerind		
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96	Texas	Texas	Texas	Amerind		
97	Texas	Texas	Texas	Amerind		
98	Texas	Texas	Texas	Amerind		
99	Texas	Texas	Texas	Amerind		
100	Texas	Texas	Texas	Amerind		

21	Tel con 7/1/43		Union Texas 7/1/43		Yates	Mobil	R36E Yates	R37E Skellon oil	Texa
	Hess		Yates VSS	Sohio V7/42	Sohio	Sohio	Yates	Skellon	Nearburg
	Bonneville Fuels V 1/4/42		Yates 1/1/43	Phillips Propertys 7/4/43	Yates 3/4/42				
28	Yates		Hess	Tipperary oil	Texasco	Tipperary oil	open	Tipperary oil	King
	Terra		Union Texas	Sohio	Sohio	Texasco			King
				Wiser oil	Texasco				
T 16 S	Yates	Yates	Exxon	Exxon	Texasco	Texasco			
	Pogo	Yates	Hess	Texasco Phillips					
	Texasco	Yates							
T 17 S	Amoco	Fred Turner	Mobil	Marathon					
		BTA	Amoco						
		Phillips	Phillips	Mobil					
	Exxon	Yates		Texasco	Union				Phillips Taco
	open	BTA			Hess				
					Union	Union	Hess	Draney Sohio	
16	Meridian			M.J. Harvey	Read & Stephens				EP
				Read Stevens	David Petroleum				
	BTA								open
				open			David Petroleum		

<p>21</p>	<p>22</p> <p>Champion L.B. Hall</p> <p>Pennell State well #1</p>	<p>23</p> <p>Pennell State well #1</p> <p>Pennell State well #1</p>	<p>24</p> <p>Monterey Lovington well #1</p> <p>Tidewater Alameda State</p> <p>Tidewater Alameda State</p> <p>Amesbury State</p>	<p>R30E R37E</p> <p>Amesbury State</p> <p>Amesbury State</p>
<p>28</p>	<p>27</p>	<p>26</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>25</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>Amesbury State</p> <p>Amesbury State</p>
<p>33</p> <p>Barnsdall State well #1</p>	<p>34</p>	<p>35</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>36</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>Amesbury State</p> <p>Amesbury State</p>
<p>T 18 S</p> <p>T 17 S</p> <p>4</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>3</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>2</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>1</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>Amesbury State</p> <p>Amesbury State</p>
<p>9</p>	<p>10</p> <p>Amesbury State</p>	<p>11</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>12</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>Amesbury State</p> <p>Amesbury State</p>
<p>16</p>	<p>15</p>	<p>14</p> <p>Amesbury State</p>	<p>13</p> <p>Amesbury State</p> <p>Amesbury State</p>	<p>Amesbury State</p> <p>Amesbury State</p>

VII

1. The proposed average and maximum daily rate and volume to be injected are 2000 PSI and 1500 BWPD.
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".

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
GREENHILL EXHIBIT NO. 7
CASE NO. 10154

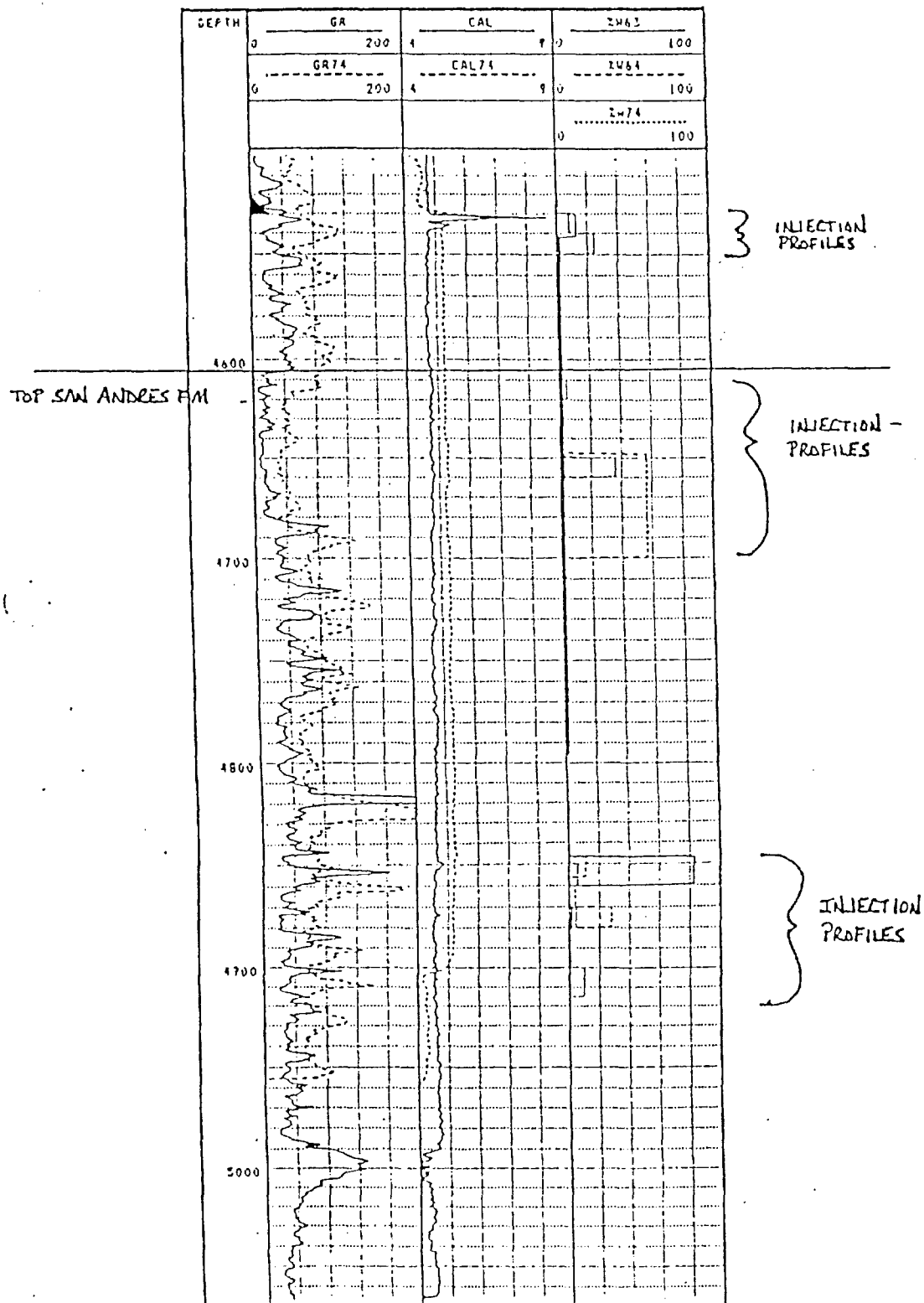
VIII GEOLOGIC DATA

The zone of interest for this application to inject is the San Andres Formation. In the area of the 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 4580' and 4670' (log depth) in the Lovington San Andres Field. Attached is a type log from the Lovington San Andres Field. The well log (LSAU #14) is an injection well and shows three main zones within the field unit where water has been injected.

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

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
GREENHILL EXHIBIT NO. <u>8</u>
CASE NO. <u>10154</u>

CYPRESS PETROLEUM CONSULTANTS	
WELL NAME	SHERRY OIL LSA #14
LOCATION	198W FSL 990 FAL L-125-14E L34
WELL DATA	SL ELEV. OF 2827 TO 2087 5-16-83
LOGS	WALGAI SURVEYS SPECTO TRACER 5-20-83
LOG PARAMETERS	
DATA FILE NAME: LSA14.LBI	
DATE OF PLOT: 5/20/1989	



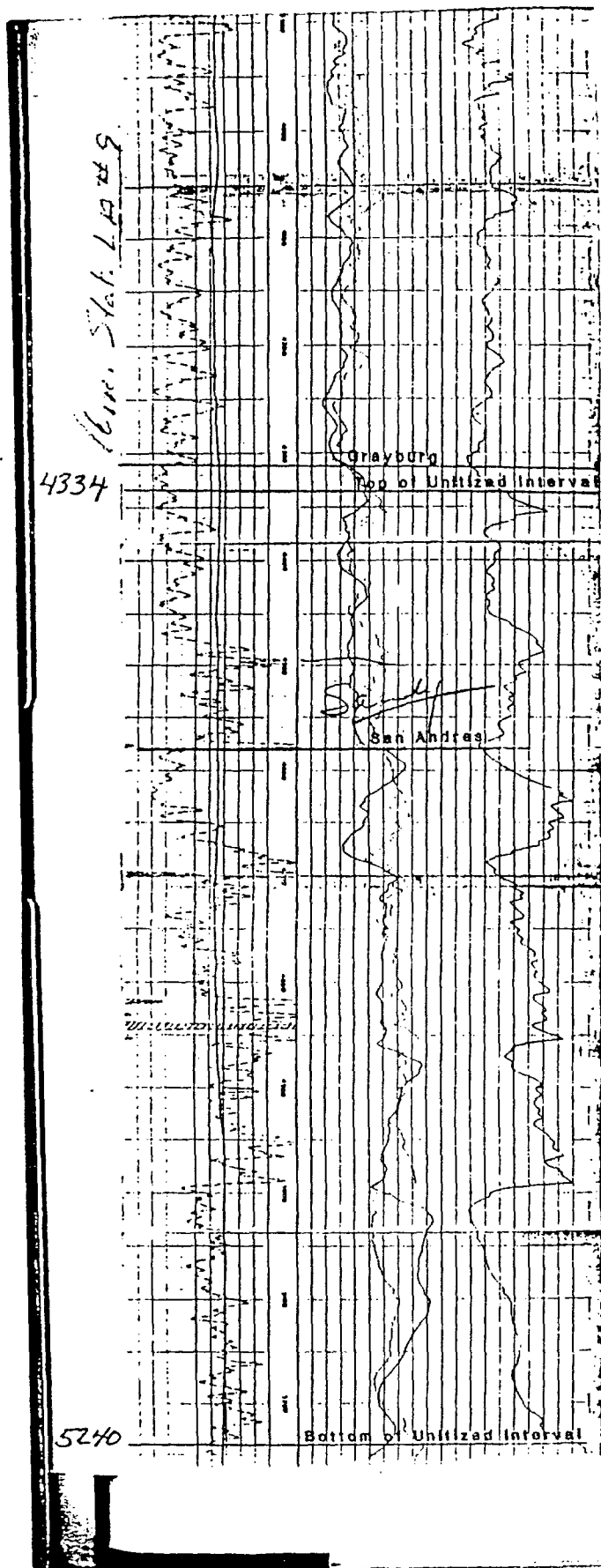
1-12 State
 12 12 SE
 1/12/36

THAMES	CO	SQ
Campsite No.		
Panels No.	-0-1-18	
Seals No.		

SPONTANEOUS-POTENTIAL millivolts	TIME	CONDUCTIVITY millimhos/m
- 65		INDUCTION 0.00 0.20 0.40 0.60 0.80 1.00
		RESISTIVITY -ohms m/m 16 NORMAL INDUCTION
	TIME 0.00 0.20 0.40 0.60 0.80 1.00	

Ann

NENE



IX

PROPOSED STIMULATION PROGRAM
FOR CONVERSIONS FROM PROCEDURES TO INJECTION WELLS
LOVINGTON SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

1. MIRU PU w/reverse unit. Check and report pressure on casing strings. Inspect wellhead connections for condition and pressure rating. Insure all casing valves are at least 2000 psig W. P. Pull and lay down rods and pump.
2. Rig up and pressure test BOP to 3000 psig for 5 min. Pull tubing and TAC. Lay down TAC.
3. PU bit, casing scraper and collars and TIH to 200' above casing shoe. Scrape casing to 10 ft. above shoe. Do not go below casing shoe with scraper. POOH and lay down scraper. TIH to 10 ft. above casing shoe and circulate hole clean with clean water. Rotate and clean out bottom of open-hole interval below casing shoe.
4. Spot enough 20% NEFE HCl acid to cover the open-hole interval. Slowly pull bit above top of acid and POOH.
5. Rig up perforating contractor. String shoot water flood intervals w/400 grains per foot primacord. TIH with bit and tubing and circulate open hole interval clean to TD w/water. POOH laying down workstring.
6. PU new 2 3/8" IPC tubing string w/new water flood packer and TIH to 20' above casing shoe. Circulate inhibited fresh water into tubing-casing annulus and set packer. Pressure test annulus to 500 psig for 5 min. Release pressure. RD BOP and install waterflood and wellhead.
7. Pressure test annulus per NMOC requirements. Release rig.
8. Rig up acid contractor and treat below packer with 15 tons CO₂ and 3000 gal. 20% NEFE HCl acid using diverter in 3 stages. Flow well back to recover load and clean-up formation. SI well.
9. Install wellhead filter cartridge housing and filter. Hook up new water injection line.
10. Put well on injection. When rate and pressure stabilize, run water injection survey.

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION

GREENHILL EXHIBIT NO. 9

CASE NO. 10154

KT

P. O. BOX 1468
MONAHAN, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

TO: Mr. Dan Westover
12777 Jones Road, Suite 375, Houston, TX

LABORATORY NO. 1189311
SAMPLE RECEIVED 11-27-89
RESULTS REPORTED 12-4-89

COMPANY Greenhill Petroleum Corporation LEASE Lovington San Andres Unit
FIELD OR POOL Lovington
SECTION BLOCK SURVEY COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Produced water - taken from injection pump discharge. 11-27-89
NO. 2
NO. 3
NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0160			
pH When Sampled	6.8			
pH When Received	6.90			
Bicarbonate as HCO ₃	1,464			
Supersaturation as CaCO ₃	70			
Undersaturation as CaCO ₃	---			
Total Hardness as CaCO ₃	5,700			
Calcium as Ca	1,540			
Magnesium as Mg	450			
Sodium and/or Potassium	5,369			
Sulfate as SO ₄	2,358			
Chloride as Cl	9,730			
Iron as Fe	0.32			
Barium as Ba	0			
Turbidity, Electric	72			
Color as Pt	56			
Total Solids, Calculated	20,910			
Temperature °F.	67			
Carbon Dioxide, Calculated	381			
Dissolved Oxygen, - chemets	0.000			
Hydrogen Sulfide	480			
Resistivity, ohms/m at 77° F.	0.420			
Suspended Oil	15			
Filtrable Solids as mg/l	22.9			
Volume Filtered, ml	850			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The above results show no direct or indirect evidence of air contamination in this study, therefore indicating effective control against this condition is being accomplished. Our microscopic study of the filtrable solids showed them to be essentially all a very fine paraffin, therefore indicating no particular significance to the higher quantity we have encountered as compared to recent studies. We have identified no evidence of any other development of concern and therefore see no need to make any changes at this time.

Form No. 3

cc: Mr. Bryant Bradley, Ozark Training
& Consulting, Austin
Mr. Cy Jones, Hobbs

By 
Waylan C. Martin, M.A.

.. 709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES.

To: Mr. Dan Westover
12777 Jones Road, Suite 375, Houston, TX

LABORATORY NO. 98943
SAMPLE RECEIVED 9-1-89
RESULTS REPORTED 9-8-89

COMPANY Greenhill Petroleum Corporation LEASE Lovington Paddock/San Andres Unit
FIELD OR POOL Lovington

SECTION _____ BLOCK _____ SURVEY _____ COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

No. 1 Raw water - taken from water supply well #1. 9-1-89 VL8 SI T175 R 3/4 E

NO. 2 Raw water - taken from water supply well #2. 9-1-89 VLG SI T175 R36E

NO. 3.

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0025	1.0018		
pH When Sampled	7.2	7.4		
pH When Received	7.03	7.34		
Bicarbonate as HCO ₃	229	249		
Supersaturation as CaCO ₃	8	4		
Undersaturation as CaCO ₃	---	---		
Total Hardness as CaCO ₃	370	164		
Calcium as Ca	120	51		
Magnesium as Mg	17	9		
Sodium and/or Potassium	171	130		
Sulfate as SO ₄	99	89		
Chloride as Cl	320	107		
Iron as Fe.	0.48	0.64		
Barium as Ba	0	0		
Turbidity, Electric	3	5		
Color as Pt	7	3		
Total Solids, Calculated	956	634		
Temperature °F.	65	66		
Carbon Dioxide, Calculated	25	16		
Dissolved Oxygen, mg/l - Chemets	4.7	3.0		
Hydrogen Sulfide	0.0	0.0		
Resistivity, ohm-cm at 77° F.	6.75	12.25		
Suspended Oil				
Filtrable Solids as mg/l	2.1	3.2		
Volume Filtered, ml	10.000	1.000		

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks - The primary significance in the above results at water well #1 is that we again identified only a very minor amount of sand in the filtrable solids. This generally confirms the results of the sample taken 7-27-89 and reported on laboratory #789270 that the previously high level of sand was temporary. We also identified no significant sand in the suspended material at water well #2. In general, we find the current chemical and physical properties of these waters to be satisfactory, thereby indicating no need for any action.

Form No. 3

cc: Mr. Bryant Bradley, Ozark Training
& Consulting, Austin
Mr. Cy Jones, Hobbs

By Waylan C. Martin, M.A.

Calcium Carbonate Scale Prediction Lovington San Andres Unit Paragon Engineering Services

Water "A": 50% Lovington WSW-1 + 50% WSW-#2, Analysis No. 1188285
Water "B": Calculated produced water analysis assuming injection water
is 56% produced & 44% source. Analysis No. 1188290
Analysis: Martin Water Laboratories, Inc.
Date Reported: 12/07/88.

Hypothetical Composition of Mixed Waters mg/l

% Water "A"	100	80	44	40	20	0
% Water "B"	0	20	56	60	80	100
Components:						
CATIONS						
Calcium, Ca	138.50	646.18	1560.00	1661.54	2169.21	2676.89
Magnesium, Mg	15.50	122.82	316.00	337.46	444.79	552.11
Iron, Fe	1.09	1.74	2.90	3.03	3.68	4.32
Barium, Ba	0.00	0.00	0.00	0.00	0.00	0.00
Sodium, Na	150.00	1931.43	5138.00	5494.29	7275.71	9057.14
ANIONS						
Chloride, Cl	323.00	3555.86	9375.00	10021.57	13254.43	16487.29
Sulfate, SO ₄	99.50	655.04	1655.00	1766.11	2321.64	2877.18
Carbonate, CO ₃	0.00	0.00	0.00	0.00	0.00	0.00
Bicarbonate, HCO ₃	223.00	766.57	1745.00	1853.71	2397.29	2940.86
Tot. Dsol'd Solids	950.59	7679.63	19791.90	21137.71	27866.75	34595.79
Measured pH Values	7.00		6.70			
1/H ⁺ = 10 ^{-pH}	10000000		5011872.34			
H ⁺ = 1/10 ^{-pH}	.0000001	.0000001355	.0000001995	.000000207	.000000242	.000000278
1/H ⁺ = 10 ^{-pH}		7377619.17		4839445.40	4129154.49	3600678.77
Calculated pH Values		6.87		6.68	6.62	6.56

Calcium Carbonate Solubility Calculation.

- Calculate molar ionic strength of water, (u).
(u) = sum of (mg/l x Conv. Factor) for all ions.

	Conv. Factor						
Ca	.000005	.006925	.032309	.078000	.083077	.108461	.133845
Mg	.000082	.001271	.010071	.025912	.027672	.036472	.045273
Ba	.000015	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Na	.000022	.003300	.042491	.113036	.120874	.160066	.199257
Cl	.000014	.004522	.049782	.131250	.140302	.185562	.230822
SO ₄	.000021	.002090	.013756	.034755	.037088	.048754	.060421
CO ₃	.000033	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
HCO ₃	.000008	.001784	.006133	.013960	.014830	.019178	.023527
u =		.02	.15	.40	.42	.56	.69

Calcium Carbonate Stability Index (Cont.)

Water: "A"	100	80	44	40	20	0
Water: "B"	0	20	56	60	80	100

2. Determine K from Stiff & Davis graph for (u); pCa and pAlk are calculated by this program from the equations below.

$$pCa = \log(1/\text{mols Ca}^{++}/\text{Liter})$$

$$pAlk = \log(1/\text{Equiv. Total Alk}/\text{Liter})$$

Temperature: 80F (26.7C)
120F (49C)

Look Up K:

K for 80F	2.06	2.60	3.07	3.08	3.21	3.29
K for 120F	1.68	2.16	2.56	2.58	2.70	2.78
Calculated pCa	2.46	1.79	1.41	1.38	1.27	1.18
Calculated pAlk	2.44	1.90	1.54	1.52	1.41	1.32

3. Calculate the Stiff & Davis CaCO₃ Stability Index (SI).

$$SI = pH - (K + pCa + pAlk)$$

(K + pCa + pAlk)

At 80F =	6.96	6.29	6.02	5.98	5.88	5.78
At 120F =	6.58	5.85	5.51	5.48	5.37	5.27

CaCO₃ SI =

At 80F =	<u>.04</u>	<u>.52</u>	<u>.68</u>	<u>.70</u>	<u>.73</u>	<u>.77</u>
At 120F =	<u>.42</u>	<u>1.01</u>	<u>1.19</u>	<u>1.20</u>	<u>1.24</u>	<u>1.28</u>

SI = Calcium Carbonate Stability Index. A positive value indicates the water has a tendency to precipitate CaCO₃ under these conditions. A negative SI indicates the water is non-scaling.

Note: All calculations above are made and stored in the computer to eleven significant figures. Only eight decimal places are shown in this print out.

CaCO₃ I_s Across System

Calculation of Oddo & Thomson CaCO₃ Scaling Index - I_s
Two Phase System (Water & Gas)
Oddo and Thomson Method
Lovington San Andres Unit
Paragon Engineering Services

Water: Calculated produced water composition. See CaCO₃ calculation.
Analysis: Martin Water Laboratories, Inc. No. 1188286
Date Reported: 12/07/88.
Approximate Location in System: Reservoir

$$I_s = D + (1.549 \times 10^{-2} \times T) - (4.26 \times 10^{-6} \times T^2) \\ - (7.44 \times 10^{-5} \times P) + 0.919u - 2.52(u)^{0.5} + 5.89$$

P = 2000.00 psia
X = .05 Mole Fraction CO₂
Ca = .066755 Moles/l
Alk = .048211
D = -5.80922 log[(C)(Alk)²/(P)(X)]
T = 120.00 Temp, F
u = .69 Molar Ionic Strength

C = Ca(mg/l)/40100 = .066755
Alk = (HCO₃ + CO₃(mg/l))/61000 = .0482108
D = log[(C)(Alk)²/(P)(X)] = -5.80922

Variable	Value	x Constant	=	Product
D	-5.80922	1.00	=	-5.81
T	120.00	.01549	=	1.86
(T)(T)	14400.00	-.000004	=	-.06
P	2000.00	-.000074	=	-.15
u	.69	.919	=	.63
(u) ^{0.5}	.8306624	-2.52	=	-2.09
				5.89

Sum = I_s = .27

"A"

WATER ANALYSIS REPORT

Company : GREENHILL PETROLEUM
 Address : LOVINGTON, NM
 Lease : SENE SEC 2 T17S R36E
 Well : S. A. #44
 Sample Pt. : WINDMILL

Date : 8-22-90
 Date Sampled : 8-22-90
 Analysis No. : 1

ANALYSIS		mg/L		* meq/L	
-----		-----		-----	
1.	pH	7.5			
2.	H2S	0			
3.	Specific Gravity	1.001			
4.	Total Dissolved Solids	2222.8			
5.	Suspended Solids	NR			
6.	Dissolved Oxygen	NR			
7.	Dissolved CO2	NR			
8.	Oil In Water	NR			
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	244.0	HCO3	4.0
12.	Chloride	Cl	917.6	Cl	25.9
13.	Sulfate	SO4	325.0	SO4	6.8
14.	Calcium	Ca	720.0	Ca	35.9
15.	Magnesium	Mg	0.5	Mg	0.0
16.	Sodium (calculated)	Na	15.7	Na	0.7
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		1800.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter				Compound Equiv wt X meq/L = mg/L			
+-----+				+-----+			
36	*Ca <-----	*HCO3	4	Ca(HCO3)2	81.0	4.0	324
	/----->			CaSO4	68.1	6.8	461
0	*Mg ----->	*SO4	7	CaCl2	55.5	25.2	1396
	<-----/			Mg(HCO3)2	73.2		
1	*Na ----->	*Cl	26	MgSO4	60.2		
				MgCl2	47.6	0.0	2
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	40
	BaSO4	2.4 mg/L					

REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
D. SWEATT

"A"

WATER ANALYSIS REPORT

Company : GREENHILL PETROLEUM
 Address : LOVINGTON, NM
 Lease : SENE SEC~~25~~ TI6S R36E
 Well : PAD 18 ~~35~~
 Sample Pt. : WINDMILL

Date : 8-22-90
 Date Sampled : 8-22-90
 Analysis No. : 2

ANALYSIS		mg/L		* meq/L
-----		-----		-----
1. pH	7.6			
2. H ₂ S	0			
3. Specific Gravity	1.001			
4. Total Dissolved Solids		2086.2		
5. Suspended Solids		NR		
6. Dissolved Oxygen		NR		
7. Dissolved CO ₂		NR		
8. Oil In Water		NR		
9. Phenolphthalein Alkalinity (CaCO ₃)				
10. Methyl Orange Alkalinity (CaCO ₃)				
11. Bicarbonate	HCO ₃	244.0	HCO ₃	4.0
12. Chloride	Cl	1035.2	Cl	29.2
13. Sulfate	SO ₄	200.0	SO ₄	4.2
14. Calcium	Ca	350.0	Ca	17.5
15. Magnesium	Mg	224.9	Mg	18.5
16. Sodium (calculated)	Na	32.1	Na	1.4
17. Iron	Fe	0.0		
18. Barium	Ba	0.0		
19. Strontium	Sr	0.0		
20. Total Hardness (CaCO ₃)		1800.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
-----	-----	-----	-----
17 *Ca <----- *HCO ₃	Ca(HCO ₃) ₂	81.0 4.0	324
----- /----->	CaSO ₄	68.1 4.2	283
19 *Mg -----> *SO ₄	CaCl ₂	55.5 9.3	516
----- <-----/	Mg(HCO ₃) ₂	73.2	
1 *Na -----> *Cl	MgSO ₄	60.2	
-----	MgCl ₂	47.6 18.5	881
Saturation Values Dist. Water 20 C	NaHCO ₃	84.0	
CaCO ₃ 13 mg/L	Na ₂ SO ₄	71.0	
CaSO ₄ * 2H ₂ O 2090 mg/L	NaCl	58.4 1.4	82
BaSO ₄ 2.4 mg/L			

REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 D. SWEATT



GREENHILL PETROLEUM CORPORATION

11490 WESTHEIMER, SUITE 200
HOUSTON, TEXAS 77077
TELEPHONE (713) 589-8484
FAX (713) 589-9399

Incorporated in Delaware, U.S.A.

September 4, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

City of Lovington
P. O. Box 1268
Lovington, New Mexico 88260

Re: Lovington San Andres
Lea County, New Mexico

Gentlemen:

Greenhill Petroleum is hereby notifying you as surface owner that we plan to convert the following producing wells to injection wells within our Lovington San Andres Unit Area.

Well Numbers 9, 21, 24, 26, 29, 33, and 41

We are required by the Commission to notify the surface owner of the proposed conversion. Please advise in the event you have any questions concerning the conversions.

Very truly yours,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
91.111



GREENHILL PETROLEUM CORPORATION

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September 5, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUEST**

Mobil Exploration and Producing
12450 Greenspoint Drive
Houston, Texas 77060-4991

Attention: Mr. R. L. Fajkowski

Re: Lovington San Andres Unit
Lea County, New Mexico

Dear Mr. Fajkowski:

Enclosed find the C-108 and attachments covering the conversion of producing wells to injector wells within the Lovington San Andres Unit. We are obligated by the Commission to notify offset operators within a one-half mile radius of these proposed conversions. We plan to convert well numbers 9, 21, 24, 26, 29, 33 and 41 from producers to water injection within our Lovington San Andres Area.

Please call in the event you have any additional questions.

Yours very truly,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
91.112

Enclosures



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September 5, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUEST**

Texaco, USA
500 North Loraine
Heritage Circle
Midland, Texas 79702

Re: Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

Enclosed find the C-108 and attachments covering the conversion of producing wells to injector wells within the Lovington San Andres Unit. We are obligated by the Commission to notify offset operators within a one-half mile radius of these proposed conversions. We plan to convert well numbers 9, 21, 24, 26, 29, 33 and 41 from producers to water injection within our Lovington San Andres Area.

Please call in the event you have any additional questions.

Yours very truly,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
91.112

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September 5, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUEST**

Marathon Oil Company
5555 San Felipe Road
Houston, Texas 77056

Re: Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

Enclosed find the C-108 and attachments covering the conversion of producing wells to injector wells within the Lovington San Andres Unit. We are obligated by the Commission to notify offset operators within a one-half mile radius of these proposed conversions. We plan to convert well numbers 9, 21, 24, 26, 29, 33 and 41 from producers to water injection within our Lovington San Andres Area.

Please call in the event you have any additional questions.

Yours very truly,

Michael J. Newport
Land Manager-Permian Basin

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91.112

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Incorporated in Delaware, U.S.A.

September 5, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUEST**

Phillips Petroleum
P. O. Box 1967
Houston, Texas 77251-1967

Re: Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

Enclosed find the C-108 and attachments covering the conversion of producing wells to injector wells within the Lovington San Andres Unit. We are obligated by the Commission to notify offset operators within a one-half mile radius of these proposed conversions. We plan to convert well numbers 9, 21, 24, 26, 29, 33 and 41 from producers to water injection within our Lovington San Andres Area.

Please call in the event you have any additional questions.

Yours very truly,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
91.112

Enclosures



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Incorporated in Delaware, U.S.A.

September 5, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUEST**

Exxon
233 Benmar
Suite 970
Houston, Texas 77060

Re: Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

Enclosed find the C-108 and attachments covering the conversion of producing wells to injector wells within the Lovington San Andres Unit. We are obligated by the Commission to notify offset operators within a one-half mile radius of these proposed conversions. We plan to convert well numbers 9, 21, 24, 26, 29, 33 and 41 from producers to water injection within our Lovington San Andres Area.

Please call in the event you have any additional questions.

Yours very truly,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
91.112

Enclosures



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Incorporated in Delaware, U.S.A.

September 5, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUEST**

Rice Engineering Corportion
122 West Taylor
Hobbs, New Mexico 88240

Re: Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

Enclosed find the C-108 and attachments covering the conversion of producing wells to injector wells within the Lovington San Andres Unit. We are obligated by the Commission to notify offset operators within a one-half mile radius of these proposed conversions. We plan to convert well numbers 9, 21, 24, 26, 29, 33 and 41 from producers to water injection within our Lovington San Andres Area.

Please call in the event you have any additional questions.

Yours very truly,

Michael J. Newport
Land Manager-Permian Basin

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91.112

Enclosures



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FAX. (713) 589-9399

Incorporated in Delaware, U.S.A.

September 5, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUEST**

Penroc Oil Corporation
5014 Carlsbad Highway
Hobbs, New Mexico 88241

Re: Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

Enclosed find the C-108 and attachments covering the conversion of producing wells to injector wells within the Lovington San Andres Unit. We are obligated by the Commission to notify offset operators within a one-half mile radius of these proposed conversions. We plan to convert well numbers 9, 21, 24, 26, 29, 33 and 41 from producers to water injection within our Lovington San Andres Area.

Please call in the event you have any additional questions.

Yours very truly,

Michael J. Newport
Land Manager-Permian Basin

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September 5, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUEST**

Amerada Hess Corporation
218 West 6th Street
Tulsa, Oklahoma 74102

Re: Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

Enclosed find the C-108 and attachments covering the conversion of producing wells to injector wells within the Lovington San Andres Unit. We are obligated by the Commission to notify offset operators within a one-half mile radius of these proposed conversions. We plan to convert well numbers 9, 21, 24, 26, 29, 33 and 41 from producers to water injection within our Lovington San Andres Area.

Please call in the event you have any additional questions.

Yours very truly,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
91.112

Enclosures



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HOUSTON, TEXAS 77077
TELEPHONE (713) 589-8484
FAX. (713) 589-9399

Incorporated in Delaware, U.S.A.

September 5, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUEST**

Oryx Energy Company
P. O. Box 1861
Midland, Texas 79702-1861

Re: Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

Enclosed find the C-108 and attachments covering the conversion of producing wells to injector wells within the Lovington San Andres Unit. We are obligated by the Commission to notify offset operators within a one-half mile radius of these proposed conversions. We plan to convert well numbers 9, 21, 24, 26, 29, 33 and 41 from producers to water injection within our Lovington San Andres Area.

Please call in the event you have any additional questions.

Yours very truly,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
91.112

Enclosures

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		Lovington San Andres Unit		
OPERATOR		LEASE		
9	1980 FNL & 660 FEL	36	T16S-	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Proposed Conversion
to Injection

Size: 13 " Cemented with 250 SX

TOC: surface feet determined by circ.

Hole size: 17 1/4

Intermediate Casing

Size: 9 5/8 " Cemented with 250 SX

TOC: 1924 feet determined by 50% calc

Hole Size: 12

Long String

Size: 7 " Cemented with 250 SX

TOC: 3074 feet determined by 80% calc

Hole Size: 8 3/4

Total Depth: 5100

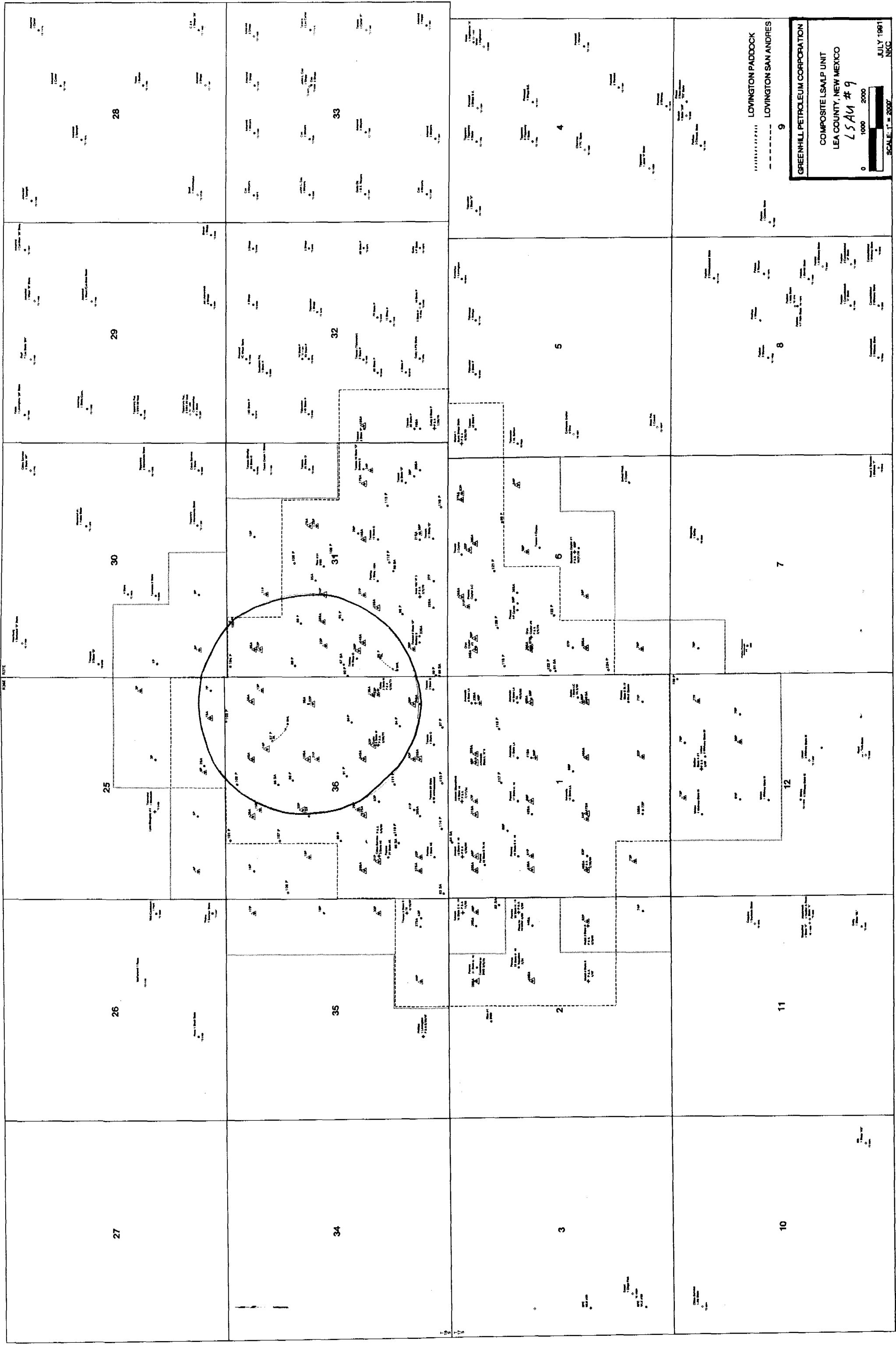
Injection Interval

4645 feet to 5065 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with IPC set in a
(material)
Baker packer at 4530 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 Grayburg San Andres
- 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.



LOVINGTON PADDOCK
LOVINGTON SAN ANDRES

GREENHILL PETROLEUM CORPORATION
COMPOSITE LSALP UNIT
LEA COUNTY, NEW MEXICO
LSAU # 9
0 1000 2000
SCALE: 1" = 2000'
JULY 1981
NKC

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

Lovington San Andres Unit

OPERATOR

LEASE

21
WELL NO.

2310 FEL & 660 FSL
FOOTAGE LOCATION

31
SEC.

T16S
TOWNSHIP

R31E
RANGE

Tubular Data

Surface Casing

Size: 13" ~ Cemented with 200 SX

TOC: surface feet determined by circ.

Hole size: 15

Intermediate Casing

Size: 8 5/8 ~ Cemented with 500 SX

TOC: 1784 feet determined by 50% calc.

Hole Size: 10 1/4

Long String

Size: 5 1/2 ~ Cemented with 200 SX

TOC: 642' feet determined by 80% calc.

Hole Size: 6 1/4

Total Depth: 5032

Injection Interval

4570 feet to 5032 feet
(perforated or open-hole, indicate which)

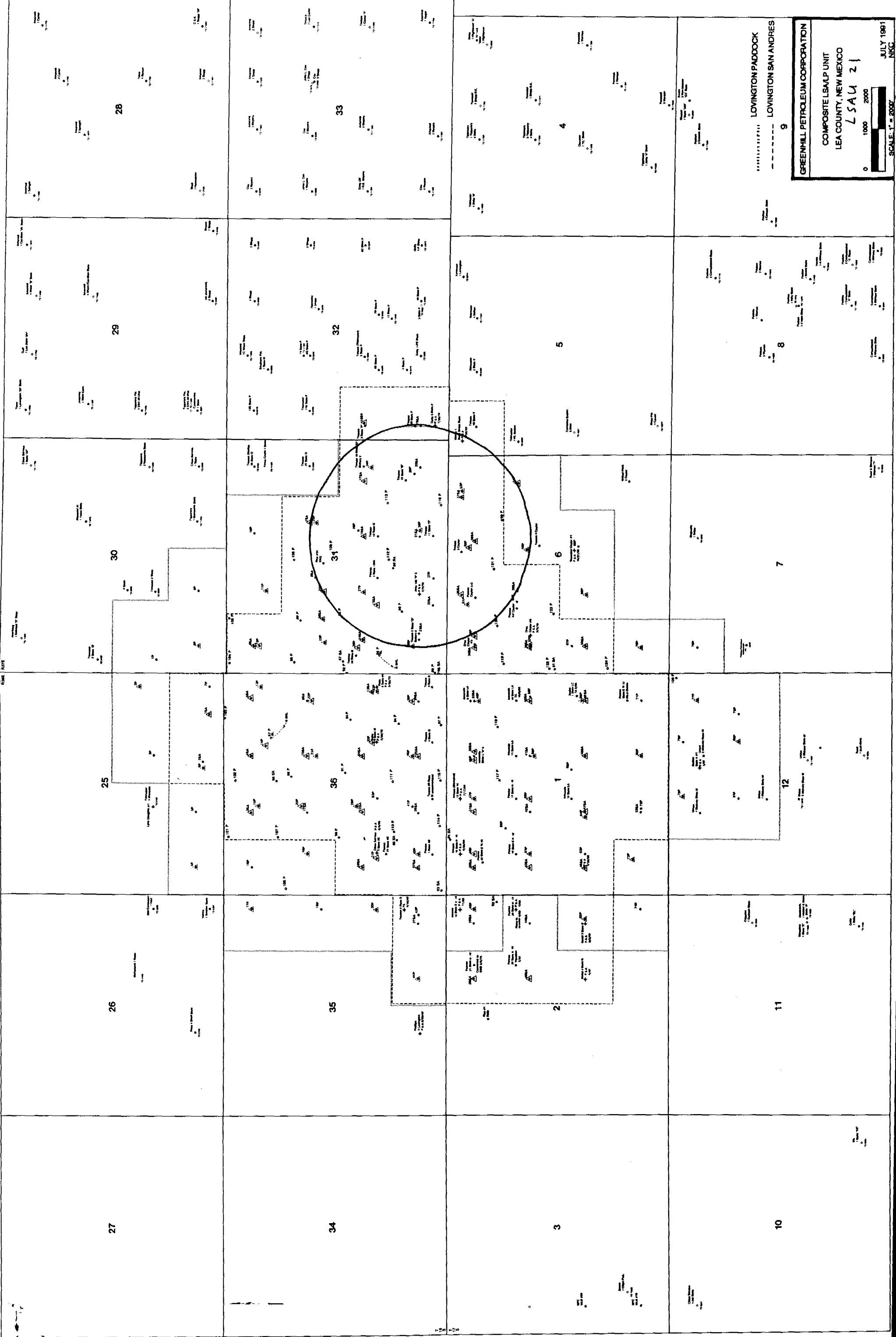
Tubing size 2 3/8" lined with IPC set in a

Baker packer at 4500 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 Grayburg San Andres
- 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.



INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

Lovington San Andres Unit

OPERATOR

LEASE

24

660' FEL & 660' FSL

36

16S

36E

WELL NO.

FOOTAGE LOCATION

SEC.

TOWNSHIP

RANGE

Tubular Data

Completed

9-8-39

Proposed Conversion

to Injection

Surface CasingSize: 13 " Cemented with 250 SXTOC: Surface feet determined by circ.Hole size: 15Intermediate CasingSize: 8 5/8 " Cemented with 500 SXTOC: 1458 feet determined by calc.Hole Size: 9 3/4Long StringSize: 5 1/2 " Cemented with 250 SXTOC: 3145 feet determined by calc.Hole Size: 6 1/4Total Depth: 5075'Injection Interval4515 feet to 5075 feet
(perforated or open-hole, indicate which)Tubing size 2 3/8 lined with IPC set in a

(material)

Baker

packer at 4480 feet.

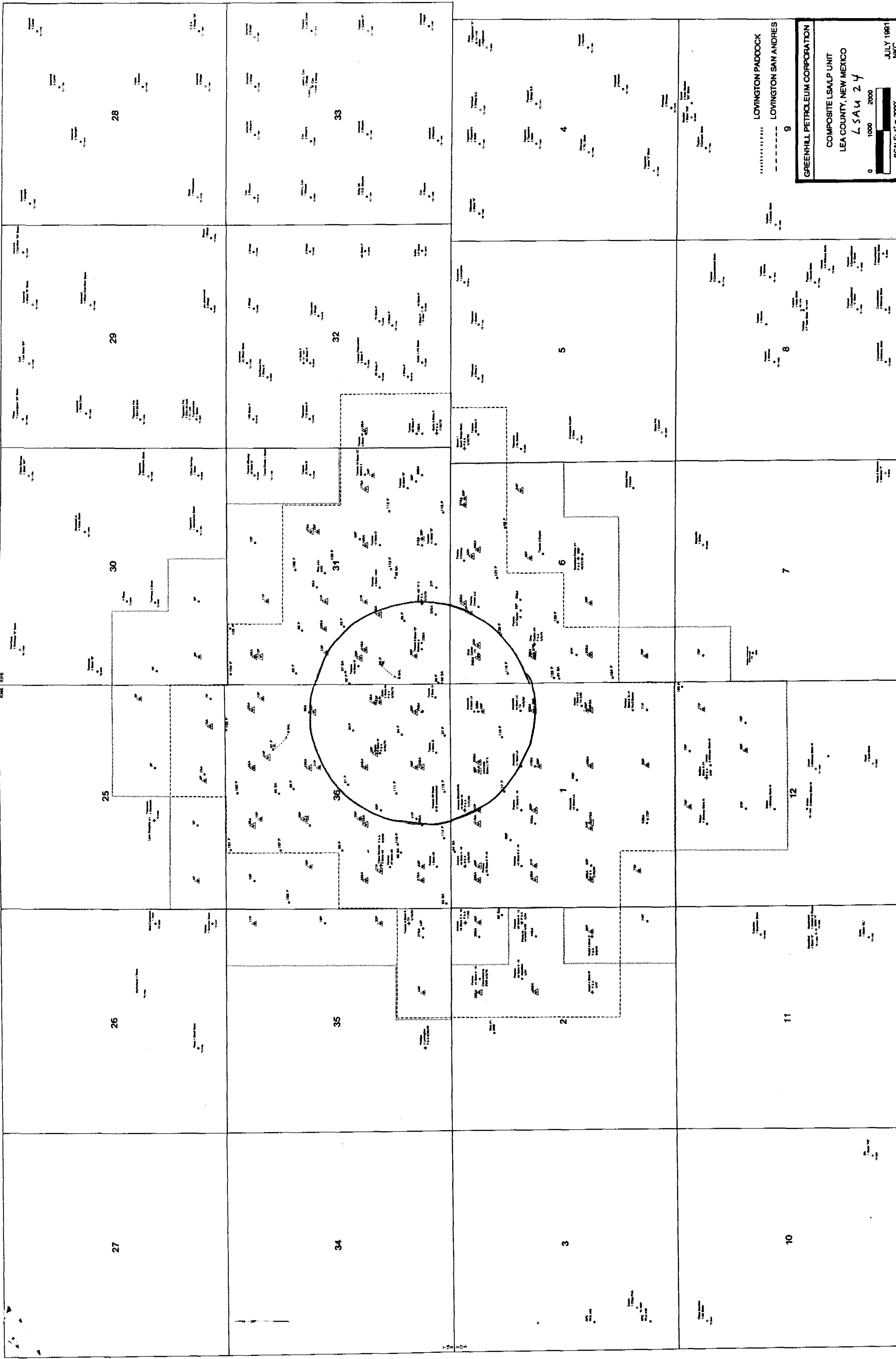
(brand & model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres
2. Name of Field or Pool (If applicable) Lovington Grayburg San Andres
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.

Underlying-Grayburg



GREENHILL PETROLEUM CORPORATION

COMPOSITE LSA/P UNIT
LEA COUNTY, NEW MEXICO
LSA/P 24

0 1000 2000
SCALE: 1" = 2000'

JULY 1981
NKC

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION

Lovington San Andres Unit

OPERATOR

LEASE

26

660FSL & 1980 FWL

36

T16S

R36E

WELL NO.

FOOTAGE LOCATION

SEC.

TOWNSHIP

RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 200 SX

TOC: surface feet determined by circ.

Hole size: 15"

Intermediate Casing

Size: 8 5/8 " Cemented with 400 SX

TOC: 390 feet determined by 70% calc

Hole Size: 10 1/2

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3200'est. feet determined by calc.

Hole Size: 6 3/4"

Total Depth: 5128'

Injection Interval

4520 feet to 5129 feet
(perforated or open-hole, indicate which)

Completed 12-3- 39

Proposed Conversion
to Injection

13"
296'
330'

8 5/8"
3010'

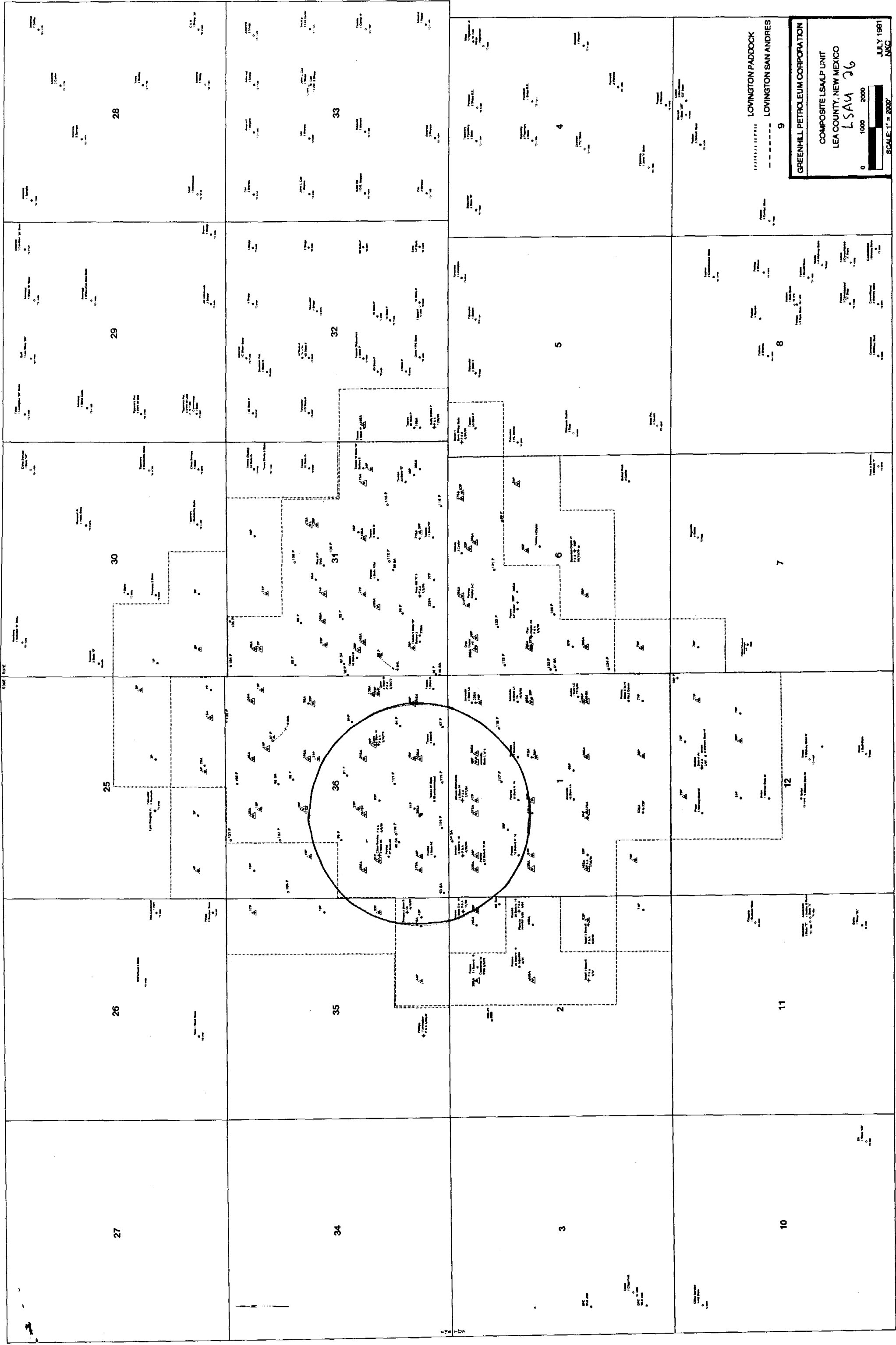
5 1/2"
4520'

TD
5128'

Tubing size 2 3/8 lined with IPC set in a
(material)
Baker packer at 4480 feet.
(brand & model)
(or describe any other casing-tubing seal).

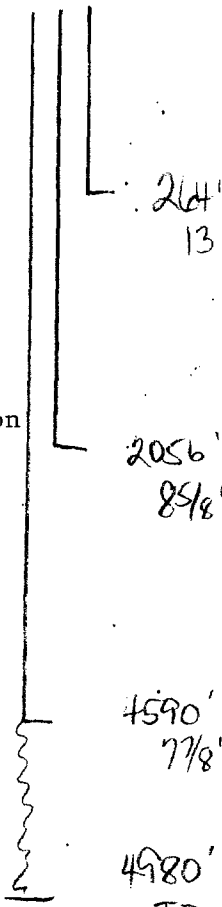
Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Lovington Grayburg San Andres
- 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.
Underlying-Grayburg



INJECTION WELL DATA SHEET

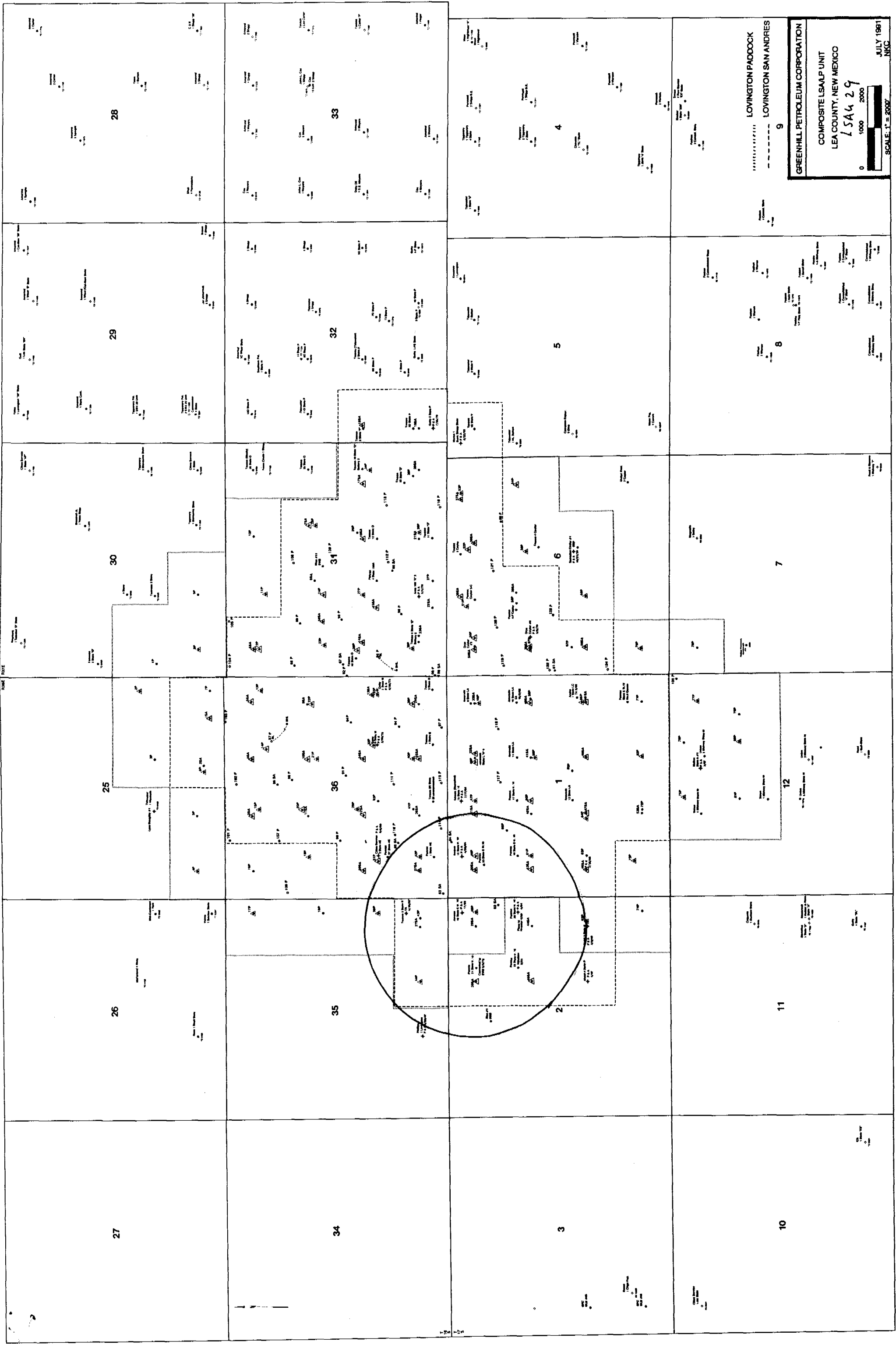
Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#29	660 FNL & 660 FEL	2	T17S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataSurface CasingSize: 13 " Cemented with 215 SXTOC: Surface feet determined by calc.Hole size: 17"Intermediate CasingSize: 8 5/8 " Cemented with 600 SXTOC: 218 feet determined by 50% calc.Hole Size: 11"Long StringSize: 5 1/2 " Cemented with 380 SXTOC: 2518 feet determined by 80% calc.Hole Size: 7 7/8"Total Depth: 4980'Injection Interval4590 feet to 4980 feet
(perforated or open-hole, indicate which)Completed
1-21-42Proposed conversion
to Injection

Tubing size 2 3/8 lined with IPC set in a
(material)
Baker packer at 4520' 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 Grayburg San Andres
- 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.
Underlying-Grayburg



INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#33	660 FNL & 660 FEL	1	T17S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Proposed Conversion
to Injection

Completed
10-15-39

13"
213'
 8 5/8"
3109'
 5 1/2"
4551'
 TD
4900'

Surface Casing

Size: 13 " Cemented with 200 SX

TOC: 94 feet determined by 70% calc.

Hole size: 17 1/4"

Intermediate Casing

Size: 8 5/8 " Cemented with 250 SX

TOC: 2352 feet determined by 70% calc

Hole Size: 11"

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 3702 feet determined by 70% calc

Hole Size: 7 7/8"

Total Depth: 4900'

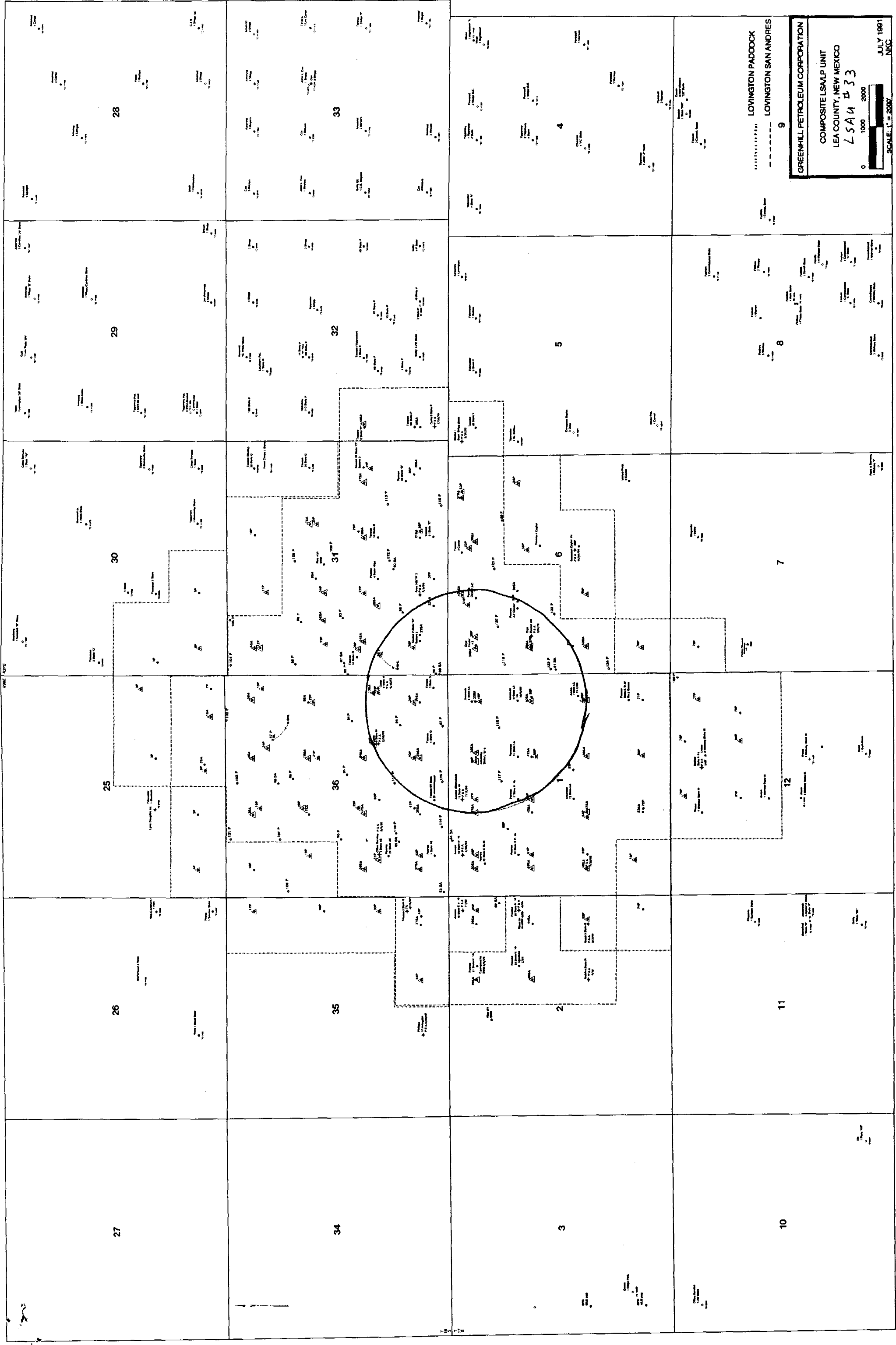
Injection Interval

4481 feet to 4775 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with IPC set in a
(material)
Baker packer at 4520' 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 Grayburg San Andres
- 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.
Underlying-Grayburg



LOVINGTON PADDOCK
LOVINGTON SAN ANDRES

GREENHILL PETROLEUM CORPORATION
COMPOSITE LSALP UNIT
LEA COUNTY, NEW MEXICO
LSA 4 B 33
0 1000 2000
SCALE: 1" = 2000'
JULY 1981
NKG

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation
OPERATORLovington San Andres
LEASE

#41

1980' FNL & 1980' FEL

1

17S

36E

WELL NO.

FOOTAGE LOCATION

SEC.

TOWNSHIP

RANGE

Tubular Data

Completed

9-22-39

Surface Casing

Size: 13 " Cemented with 250 SX

TOC: Surface feet determined by calc

Proposed Conversion

to Injection

Hole size: 17 1/4"

Intermediate Casing

Size: 8 5/8" Cemented with 250 SX

TOC: 2332 feet determined by calc

Hole Size: 11"

Long String

314

13" Size: 5 1/2 " Cemented with 200 SX

TOC: 3501 feet determined by calc

3100'

8 7/8"

Hole Size: 7 7/8"

Total Depth: 4903

Injection Interval4592 feet to 4903 feet
(perforated or open-hole, indicate which)L
4592'
314
3100'
8 7/8"
4903'
TDTubing size 2 3/8" lined with IPC set in a
(material)

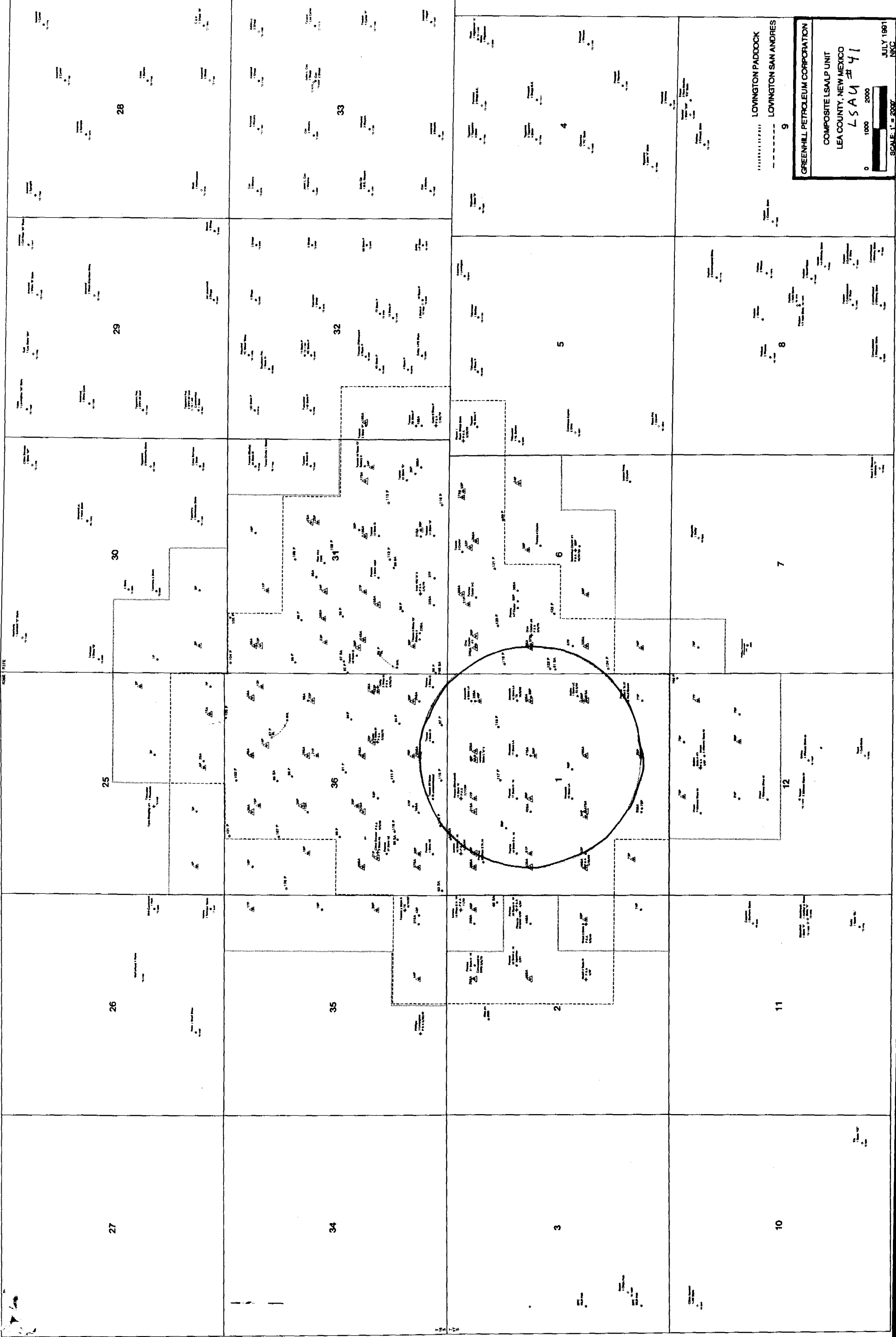
Baker packer at 4520 feet.

(brand & model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres
2. Name of Field or Pool (If applicable) Lovington Grayburg San Andres
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.
Underlying-Grayburg



GREENHILL PETROLEUM CORPORATION

COMPOSITE LSA/P UNIT
LEA COUNTY, NEW MEXICO
LSA/P #41

JULY 1981
NKC

SCALE: 1" = 2000'

0 1000 2000

LOVINGTON PADDOCK
LOVINGTON SAN ANDRES

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres	
OPERATOR		LEASE	
53	660 FSL & 1980 FWL	1	T17S-R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP RANGE

Tubular Data

Surface Casing

Completed
1/39
 281'
13"

Size: 13" Cemented with 300 SX

TOG: Surface feet determined by circ.

Hole size: 17 1/2

Intermediate Casing

 2983'
9 5/8"

Size: 9 5/8" Cemented with 500 SX

TOG: 1475 feet determined by 80% calc.

Hole Size: 12 1/4

Long String

 75 1/8"
3454'

Size: 5 1/2" Cemented with 55 SX

TOG: 4418 feet determined by 80% calc.

Hole Size: 8 3/4

 4624' 5 1/2"
4815'
TD

Total Depth: 4815

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) Lovington Paddock
- 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).

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

I

10

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#1	300 FSL & 990 FEL	25	T16S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 425 ⁴⁷⁵ SX

TOG: Surface feet determined by calc

Hole size: 11

Intermediate Casing

Size: " Cemented with SX

TOG: feet determined by

Hole Size:

Long String

Size: 5 1/2 " Cemented with 425 ^{525 - 450} SX

TOG: 2313 feet determined by 80% calc

Hole Size: 7 7/8

Total Depth: 5060'

Injection Interval

4600' feet to 5060' feet
(perforated or open-hole, indicate which)

Tubing size 2" lined with IPC set in a
(material)
packer at 4575' 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
- 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.

Underlying - Grayburg

Completed
10/4/45

Converted to
Injection
6/29/65

2096' 4629

8 5/8
2096

5 1/2 4629

TD 5060

11
P

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		LOVINGTON PADDOCK		
OPERATOR		LEASE		
# 7	330' FEL & 330' FSL	25	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tabular Data

Spud Date
8-1-53

Cement to be raised
pursuant to order No.
R-9431

Surface Casing

Size: 8-5/8" Cemented with 800 SX

TOC: Surface feet determined by calc C/C

Hole size: 11"

Intermediate Casing

Size: 8 5/8" Cemented with SX

TOC: feet determined by calc

Hole Size:

Long String

Size: 5-1/2" Cemented with 225 SX

TOC: 4859 feet determined by 80%

Hole Size: 7-7/8"

Total Depth: 6260'

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) Paddock
- 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.
Above Glorieta

I

17

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#6	660 FNL & 660 FWL	31	T16S	R37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 16 " Cemented with 100 SXTOG: Surface feet determined by calc.Hole size: 18

Intermediate Casing

Size: 8 5/8 " Cemented with 150 SXTOG: 1271 feet determined by calc 50%Hole Size: 11

Long String

Size: 7 " Cemented with 200 SXTOG: 2229 feet determined by 80% calcHole Size: 8Total Depth: 5000'

Injection Interval

4538 feet to 5000 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with IPC set in a
(material)
packer at 4434 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

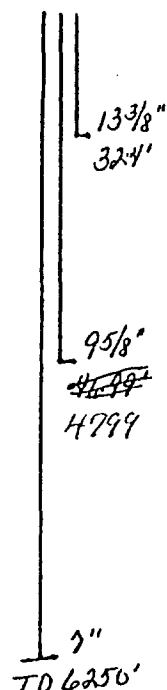
- Name of the injection formation San Andres
- Name of Field or Pool (IF applicable) Lovington San Andres
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever be perforated in any other zone(s)? List all such perforated 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.
Underlying - Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#12	781' FNL & 660' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
4-05-53

Surface Casing

Size: 13-3/8 " Cemented with 350 SX

TOC: Surface feet determined by ^{CIRC}calc

Hole size: 17 1/4

Intermediate Casing

Size: 9-5/8" Cemented with 2600 SX

TOC: 310 feet determined by calc Temp Survey

Hole size: 12 1/4

Long String

Size: 7" Cemented with 450 SX

TOC: 2675 feet determined by 70% calc

Hole size: 8 1/4

Total Depth: 6250'

Injection Interval

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

Tubing size - lined with - set in a - packer

at - feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

19
P

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#13	880' FNL & 331' FWL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
2-13-53

Surface Casing

Size: 8-5/8 " Cemented with 650 SX

TOC: Surface feet determined by calc

Hole size: 12 1/2

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 225 SX

TOC: 5185 feet determined by 70% calc

Hole size: 5 7/8

Total Depth: 6279'

Injection Interval

6087 feet to 6279 feet
(perforated or open-hole, indicate which)

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

at 6087 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production

- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

Above Glorieta

4-86
Squeeze Csg leak
2078-2112 w/ 200 SX
9/81 Shoot 3 holes
at 2114 cm
w/ 275 SX

Cement to be raised
pursuant to order No.
R-9431

8 5/8"
2115'
5 1/2"
6258'
TOTAL 6279'

INJECTION WELL DATA SHEET

20

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR	<i>990</i>	LEASE		
#14	<i>940' FNL & 1741' FEL</i>	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
10-27-53

Surface Casing

Size: 8-5/8 " Cemented with 975 SX

TOC: Surface feet determined by calc *Circ*

Hole size: //

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 400 SX

TOC: 3918 feet determined by temp survey

Hole size: *7 7/8*

Total Depth: 6270'

Injection Interval

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#4	660 FNL & 1980 FEL	36	T16S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 200 SX

TOG: Surface feet determined by calc.

Hole size: 14 3/4

Intermediate Casing

Size: 9 5/8 " Cemented with 500 SX

TOG: Surface feet determined by calc.

Hole Size: 11 1/4

Long String

Size: 7 " Cemented with 300 SX

TOG: 1910' feet determined by 80% calc.

Hole Size: 8 1/4

Total Depth: 5012'

Injection Interval

4634 feet to 5012 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with IPC set in a
(material)
packer at 4586 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
- 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.
Underlying - Grayburg

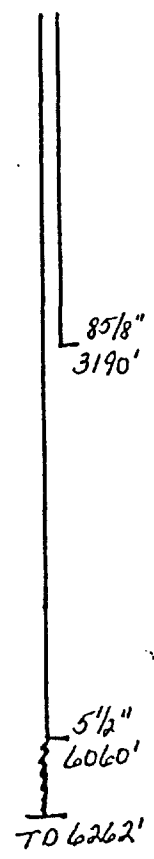
INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#20	1830' FNL & 2130' FWL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
3-24-54

Converted
to Injection
3/74



Surface Casing

Size: 8-5/8" Cemented with 1800 SX

TOC: Surface feet determined by calc *Circ*

Hole size: //

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 500 SX

TOC: 3535 feet determined by temp survey

Hole size: 7 7/8

Total Depth: 6262'

Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#11	1980 FNL & 1980 FWL	36	T16S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed 1/40	2 5/8" 13"	<u>Surface Casing</u>	
		Size: 13 " Cemented with 25 SX	
		TOC: Surface feet determined by calc	
	3 1/2" 2087'	Hole size: 15	
		<u>Intermediate Casing</u>	
		Size: 8 5/8 " Cemented with 500 SX	
	5 1/2" 4575'	TOC: 555 feet determined by 50% calc	
		Hole Size: 10 1/4	
		<u>Long String</u>	
	4496 TD	Size: 5 1/2 " Cemented with 200 SX	
TOC: 649 feet determined by 80% calc			
Hole Size: 6 1/4"			
Total Depth: 4996'			

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 San Andres
- Name of Field or Pool (IF applicable) Lovington San Andres
- 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.
Underlying - Grayburg

I

29

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#21	2190' FNL & 1980' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
7-26-53

Converted
to Injection
2/73

Surface Casing

Size: 10-3/4" Cemented with 500 SX

TOC: Surface feet determined by calc Circ

Hole size: 15

Intermediate Casing

Size: 7-5/8" Cemented with 1000 SX

TOC: Surface feet determined by calc

Hole size: 9 7/8

Long String

Size: 5-1/2" Cemented with 630 SX

TOC: 3638 feet determined by temp
survey

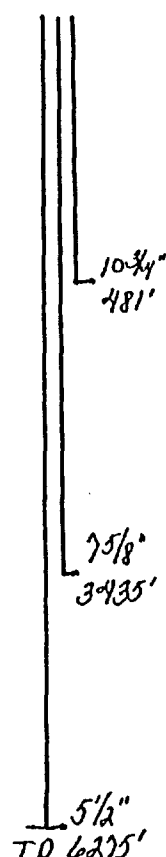
Hole size: 6 7/8

Total Depth: 6275'

Injection Interval

6103 feet to 6226 feet
(perforated or open-hole, indicate which)

5 1/2 liner
3312-6275
w/1480 SX
58' d top w/ 50 SX



Tubing size 2-3/8" lined with IPC set in a packer
at 6043 feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation: Paddock
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such
perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#22	2080' FNL & 660' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
9-10-52

Surface Casing

Size: 10-3/4" Cemented with 400 SX

TOC: Surface feet determined by calc

Hole size: 13 3/8

Intermediate Casing

Size: 7-5/8" Cemented with 2014 SX

TOC: Surface feet determined by calc

Hole size: 9 7/8

Long String

Size: 5-1/2" Cemented with 700 SX

TOC: 3581 feet determined by temp survey

Hole size: 6 3/4

Total Depth: 6350' 8603

Injection Interval

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

Tubing size - lined with - set in a - packer

at - feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

5 1/2" liner
3273 - 6350

10 3/4"
401'

1952
Plug back from 8603

110 SX 5603 - 8117

60 SX 6533 - 6464

45 SX 6464 - 6303

Drill out to 6350

7 5/8"
3389'

5 1/2"
TO 6350'
8603

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR	2321.9	LEASE		
#23	2392' FNL & 750' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

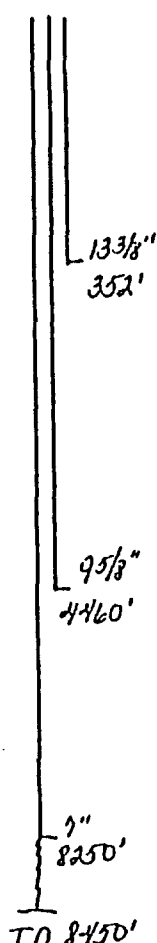
Spud Date
3-29-52

Converted
to Injection
2/73

CIBP 6310'

Cmt. to 6300'

17" / 14" r
4171-8250

Surface Casing

Size: 13-3/8" Cemented with 350 SX

TOC: Surface feet determined by calc

Hole size:

Intermediate Casing

Size: 9-5/8" Cemented with 2250 SX

TOC: Surface feet determined by calc

Hole size:

Long String

Size: 7" Cemented with 500 SX

TOC: 2250 feet determined by temp survey ?

Hole size:

Total Depth: 8450'

Injection Interval

6120 feet to 6170 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 6089 feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation: Paddock
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#24	2310' FNL & 1968' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
9-12-53

Surface Casing

Size: 8-5/8" Cemented with 950 SX

TOC: Surface feet determined by calc

Hole size: / /

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 400 SX

TOC: 4077 feet determined by temp
survey

Hole size: 7 7/8

Total Depth: 6257'

Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such
perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

35

Rice Engineering		Abo SWD (State "0")		
OPERATOR		LEASE		
13	2310' FNL & 2626' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
1-18-53

Converted to
SWD (Inject
thru 9730-10260)

Surface Casing

Size: 13-3/8" Cemented with 246 SX

TOC: Surface feet determined by ^{Circ}calc

Hole size: 18"

Intermediate Casing

Size: 9-5/8" Cemented with 1400 SX

TOC: ^{Surface}352 feet determined by ^{Circ}50% calc

Hole size: 12-1/4"

Long String

Size: 5-1/2" Cemented with 1982 SX

TOC: 247 feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 12,251

Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) East Lovington (Penn)
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

Abo (Above)

*Cement Bond log 1964
Top good cmt 3765
sgzd several intervals
above & below this
point*

*682 at shoe
1300 thru
DU 1001 at
8988*

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#25	2130' FNL & 1980' FNL ^{FEL}	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
11-16-54

Converted
to Inj.
12/54

Surface Casing

Size: 8-5/8" Cemented with 1550 SX

TOC: Surface feet determined by calc ^{Circ}

Hole size: //

Intermediate Casing

8 5/8"
3215'

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 450 SX

TOC: 4160 feet determined by temp survey

Hole size: 7 1/2"

TD 6270'

Total Depth: 6270'

Injection Interval

6107 feet to 6270 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 6043 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

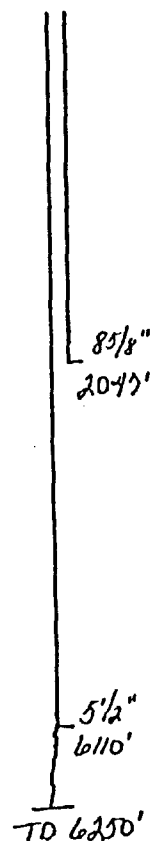
INJECTION WELL DATA SHEET

41

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#34	1830' FSL & 660' FEL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
2-10-54



Surface Casing

Size: 8-5/8" Cemented with 1075 SX

TOC: Surface feet determined by calc^{Circ}

Hole size: //

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 535 SX

TOC: 3257 feet determined by temp survey

Hole size: 7 7/8

Total Depth: 6250'

Injection Interval

6110 feet to 6250 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 6075 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

42

Texaco	State "O"			
OPERATOR	LEASE			
14	1980' FSL & 660' FEL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
4-23-53

TO be corrected
pursuant to order
R 9431

Surface Casing
Size: 13-3/8" Cemented with 235 SX
TOC: Surface feet determined by ^{Circ}calc
Hole size: 18"
Intermediate Casing
Size: 9-5/8" Cemented with 1200 SX
TOC: 819 feet determined by 50% calc
Hole size: 12-1/4"
Long String
Size: 5-1/2" Cemented with 800 SX
TOC: 4071 feet determined by 80% calc
Hole size: 7-7/8"
Total Depth: 8429'
Injection Interval

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Lovington Abo
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

(Above) Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#26	2130' FSL & 2160' FEL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
8-26-53

Surface Casing

Size: 8-5/8" Cemented with 975 SX

TOC: Surface feet determined by calc ^{Circ}

Hole size:

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 400 SX

TOC: 4077 feet determined by temp survey

Hole size:

Total Depth: 6252'

Injection Interval

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#16	2310 FEL & 1980 FSL	31	T16S	R37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 200 SX

TOC: Surface feet determined by Circ

Hole size: 15 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 500 SX

TOC: 1245 feet determined by Calc

Hole Size: 10 1/4

Long String

Size: 5 1/2 " Cemented with 200 SX

TOC: 2343 feet determined by 80% calc

Hole Size: 6 3/4

Total Depth: 4950'

Injection Interval

4605 feet to 4950 feet
(perforated or open-hole, indicate which)

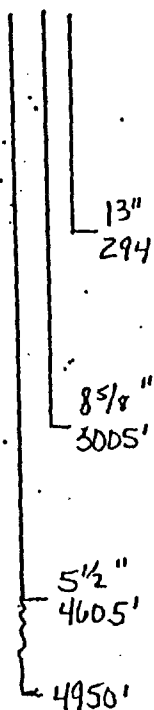
Tubing size 2 3/8 lined with IPC set in a
(material)
packer at 4557 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (IF applicable) Lovington San Andres
- 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.
Underlying - Grayburg

Completed
12/6/39

Converted to
Injection
3/16/63

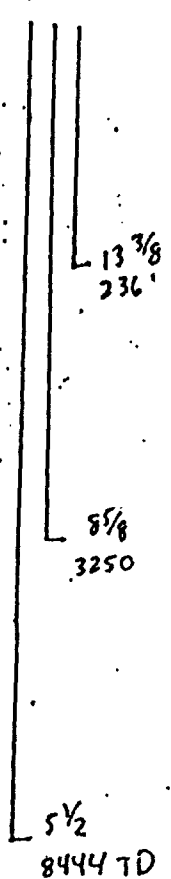


INJECTION WELL DATA SHEET

<u>Texaco</u>		<u>State "Q"</u>		
OPERATOR		LEASE		
<u>12</u>	<u>1650' ESL & 2310' FEL</u>	<u>31</u>	<u>16S</u>	<u>37E</u>
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
8-08-52



Surface Casing

Size: 13-3/8 " Cemented with 245 SX
TOC: Surface feet determined by Circ calc
Hole size: 18" 16

Intermediate Casing

Size: 8-5/8 " Cemented with 1800 SX
TOC: Surface feet determined by Circ calc
Hole Size: 12-1/4"

Long String

Size: 5-1/2 " Cemented with 700 SX
TOC: 3984 feet determined by 80% calc
Hole Size: 7-7/8"
Total Depth: 8444'

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) Lovington Abo
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).

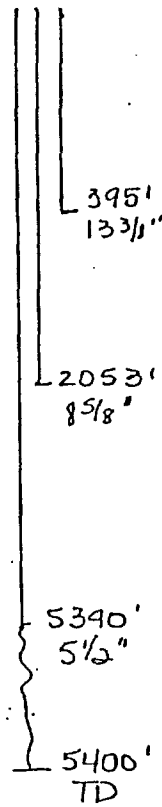
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Above Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#60	1283' FSL & 2527' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
1-31-90



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 600 SX
 TOC: 215 feet determined by calc
 Hole Size: 11" 12 1/4

Long String

Size: 5-1/2 " Cemented with 1450 SX
 TOC: Surface feet determined by calc
 Hole Size: 7-7/8"

Total Depth: 5400'

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 San Andres
2. Name of Field or Pool (If applicable) Lovington San Andres
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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

47

OK

Penroc		State 182 "A"		
OPERATOR		LEASE		
4	1650' FSL. & 2289' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataSurface CasingSize: 13-3/8" Cemented with 300¹ SXTOC: Surface feet determined by calc^{circ}

Hole size: 16"

Intermediate Casing

Size: 9-5/8" Cemented with 1200 SX

TOC: Surface feet determined by calc

Hole size: 12"

Long String

Size: 7" Cemented with 404 SX

TOC: 3798 feet determined by 80% calc

Hole size: 8"

Total Depth: 8460'

Injection Interval

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

Tubing size - lined with - set in a - packer

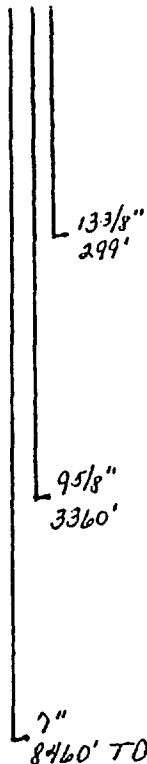
at - feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation:
 - Name of Field or Pool (If applicable) Lovington Abo
 - Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
 - Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

Above Drinkard

Work over Aug Sept
1968 sized from
6400, 5000, & 4600
w/ total 1200 SX
TOC 4000 by
Temp Survey



INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

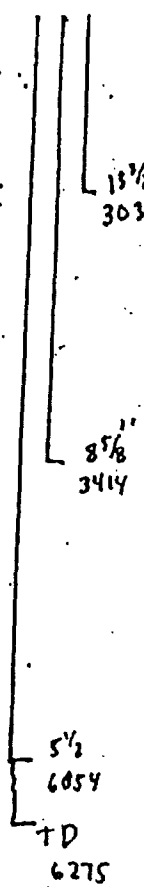
Lovington Paddock

OPERATOR		LEASE		
# 27	1960' FWL & 1980' FSL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEG.	TOWNSHIP	RANGE

Tubular Data

Completion
6-16-53

Converted to
Injection
6/67



Surface Casing

Size: 13-3/8 " Cemented with 350 SX

TOC: Surface feet determined by ^{Circ}calc

Hole size: 17-1/4"

Intermediate Casing

Size: 8-5/8 " Cemented with 900 SX

TOC: 656 feet determined by 50% calc

Hole Size: 11"

Long String

Size: 5-1/2 " Cemented with 250 SX

TOC: ~~4692~~ 4316 feet determined by ⁷⁵~~80%~~ calc

Hole Size: 7-7/8"

Total Depth: 6275'

Injection Interval

6080 feet to 6275 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC (material) set in a
packer at 6000 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Paddock
- Name of Field or Pool (If applicable) Paddock
- 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.

Above Glorieta

INJECTION WELL DATA SHEET

<u>Greenhill Petroleum Corporation</u>		<u>Lovington San Andres Unit</u>		
OPERATOR		LEASE		
<u>#14</u>	<u>1980 FSL & ⁸¹⁹818 FWL</u>	<u>31</u>	<u>T16S</u>	<u>R37E</u>
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 10 3/4" Cemented with 250 SX

TOC: Surface feet determined by Circ calc

Hole size: 12 1/4"

Intermediate Casing

Size: 7 5/8" Cemented with 500 SX

TOC: 363.7 feet determined by 50% calc

Hole Size: 9 1/4"

Long String

Size: 5 1/2" Cemented with 200 SX

TOC: 604' feet determined by 80% calc

Hole Size: 6 1/4"

Total Depth: 5087'

Injection Interval

4530 feet to 5087 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with IPC set in a
(material)
packer at 4468.11 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres
2. Name of Field or Pool (If applicable) Lovington San Andres
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.
Underlying - Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#28	2108' FSL & 624' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
5-02-53

Surface Casing

Size: 9-5/8" Cemented with 850 SX

TOC: Surface feet determined by calc

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 500 SX

TOC: 3869 feet determined by 70% calc

Hole size: 7 1/2

Total Depth: 6252'

Injection Interval

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

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

Other Data

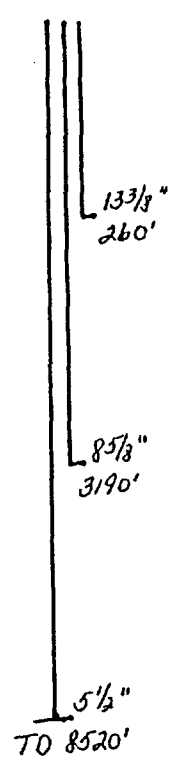
- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Texaco		State "0"		
OPERATOR		LEASE		
10	440' FWL & 3080' FNL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
4-13-52



Surface Casing

Size: 13-3/8" Cemented with ²⁷⁵225 SX
TOC: Surface feet determined by calc^{CIRC}

Hole size: 18"

Intermediate Casing

Size: 8-5/8" Cemented with 700 SX
TOC: ^{surface}1046 feet determined by ^{CIRC}50% calc

Hole size: 11"

Long String

Size: 5-1/2" Cemented with 775 SX
TOC: 4298 feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 8520'

Injection Interval

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

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

Other Data

1. Name of the injection formation:
 2. Name of Field or Pool (If applicable) Lovington Abo
 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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
(Above) Drinkard

INJECTION WELL DATA SHEET

Tidewater GCH		State "M"		
OPERATOR		LEASE		
2	3630' FNL & 330' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
3-03-52

P&A 6-26-73

7" liner 4823-8459
w 400 SX.

To be corrected
pursuant to order
R 9431

4688-
4796
40SX

5657-
6059
20SX

8148-
8185
75X

5 1/2" 8459
TP
8460

Surface Casing

Size: 13-3/8" Cemented with 350 SX

TOC: Surface feet determined by calc

Hole size: 17-1/4"

Intermediate Casing

Size: 9-5/8" Cemented with 3000 SX

TOC: Surface feet determined by calc

Hole Size: 12-1/4"

Long String

Size: 7" Cemented with 400 SX

TOC: 5820 feet determined by C 103 report

Hole Size: 8-3/4"

Total Depth: 8460'

Injection Interval

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

Tubing size lined with (material) set in a
packer at foot.
(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) Lovington Abo
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).
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Above Drinkard

I

53

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR	<i>H30</i>	LEASE		
#33	1650' FSL & 400' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completion
2-2-53

Deepened for
Inj. 12/66
6150-6237'

Converted to
Injection 12/66

To be corrected
pursuant to order
R9431

DV
1979
300 SX
around shoe
100' + DV

10 3/4"
3 1/2'
7"
61 1/2'
TO 6237'

Surface Casing

Size: ~~8-5/8"~~ *10 3/4"* Cemented with 250 SX

TOC: Surface feet determined by ~~calc~~ *Circ*

Hole size: *13 3/8*

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 7" Cemented with 400 SX

TOC: 3636 feet determined by 80% calc

Hole size: 8-3/4"

Total Depth: 6237'

Injection Interval

6040 feet to 6237 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 5972 feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation: Paddock
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

54

Getty	State "M"			
OPERATOR	LEASE			
3	1650' FSL & 1650' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataCompleted
8-16-52

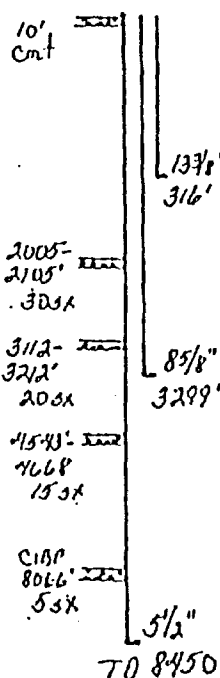
P&A 2-11-75

5 1/2" Liner

3161 - 8449

previously
identified as a
problem well. will
correct as outlined
on the attached (103)

to be corrected
pursuant to order
R 9431

Surface Casing

Size: 13-3/8" Cemented with 400 SX

TOC: Surface feet determined by calc circ

Hole size: 17-1/2"

Intermediate Casing

Size: 8-5/8" Cemented with 1100 SX

TOC: Surface feet determined by calc circ

Hole size: 11"

Long String

Size: 5-1/2" Cemented with 600 SX

TOC: 4966 feet determined by 80% calc

Hole size: 7-3/4"

Total Depth: 8450'

Injection Interval

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

Tubing size - lined with - set in a - packer
at - feet. (Or, describe any other casing-tubing seal).

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Abo
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

(Above) Drinkard

INJECTION WELL DATA SHEET

55

P?

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#32	1750' FSL & 1650' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
3-19-53

To Be Corrected
pursuant to order
R 9431

8 5/8"
2097'

5 1/2"
TD 6229'

Surface Casing

Size: 8-5/8" Cemented with 1000 SX

TOC: Surface feet determined by calc Circ

Hole size: //

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 300 SX

TOC: 4400 feet determined by temp survey

Hole size: 7 1/8"

Total Depth: 6229'

Injection Interval

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corp.
OPERATOR

Lovington Paddock
LEASE

84
WELL NO.

1100 FEL & 2285 FSL
FOOTAGE LOCATION

36
SEC.

T/65-
TOWNSHIP

66
RANGE

Tubular Data

Surface Casing.

Size: $13\frac{3}{8}$ ". Cemented with 500 SX

TOC: Surface feet determined by calc

Hole size: 17 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 1200 SX

TOC: surface feet determined by 50% calc

Hole Size: 11

Long String

Size: 5 1/2 " Cemented with 1040 SX

TOC: 788 feet determined by 80% calc

Hole Size: 7 7/8

Total Depth: 6470

Infection 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) Lovington Paddock
3. Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? prod
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.

(Above) Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington San Andres

OPERATOR

LEASE

#541

1980' FSL & 1980' FEL

36

16S

36E

WELL NO.

FOOTAGE LOCATION

SEC.

TOWNSHIP

RANGE

Tubular Data

Spud 1-7-63

May 89
H₂O 4 1/2" CS
1200' at
846, 1546 & 1608
H₂O 51'

Surface Casing

Size: 7-5/8" Cemented with 240 SX

TOC: Surface feet determined by calc Circ

Hole size: 9-7/8"

Intermediate Casing

Size: " Cemented with SX

TOC: feet determined by

Hole Size:

Long String

Size: 4-1/2" Cemented with 235 SX

TOC: 2314 feet determined by Temp survey

Hole Size: 6-3/4"

Total Depth: 5110'

Injection Interval

4662 feet to 5037 feet
(perforated or open-hole, indicate which)

Tubing size 2" lined with IPC set in a
(material)
? packer at 4579 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)
- 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.
- 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 Corp.
OPERATOR

State "8" Livingston Paddock Unit
LEASE

83
WELL NO.

2310 FWL c 1650 FSL
FOOTAGE LOCATION

Sec 36
SEC.

T165
TOWNSHIP

6E
RANGE

Tubular Data

Surface Casing

Size: 13 3/8 ". Cemented with 245 SX

TOC: surface feet determined by calc

Hole size: 18

Intermediate Casing

Size: 8 5/8 " Cemented with 1200 SX

TOC: surface feet determined by 50% calc

Hole Size: 17

Long String

Size: 5 1/2 " Cemented with 900 SX

TOC: 3551 feet determined by 80% calc

Hole Size: 7 7/8

Total Depth: 8454.

Infection 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) Lovington Abo
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).

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

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington Paddock

OPERATOR		LEASE		
#29	2130' FSL & 2130' FWL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataCompleted
10-11-53Converted to
Injection 10/75Cement to be raised
pursuant to Order
No. 9431Surface Casing

Size: 8-5/8" Cemented with 975 SX

TOC: Surface feet determined by ^{circ} ~~calc~~

Hole size: 11"

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 275 SX

TOC: ⁵²⁰⁵ ~~4574~~ feet determined by ^{Tamp. Survey} ~~80% calc~~

Hole size: 7-7/8"

Total Depth: 6256'

Injection Interval6072 feet to 6256 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 5992 feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation: Paddock
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

61

Cities Service Penroc		State AE		
OPERATOR		LEASE		
2Y	1420' FSL & 990' FWL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

||| Surface Casing
 Size: 13-3/8" Cemented with 350 SX
 TOC: Surface feet determined by ^{CIRC} calc
 [13 3/8" Hole size: 17-1/2"
 303'
 Intermediate Casing
 Size: 8-5/8" Cemented with 1800 SX
 TOC: Surface feet determined by ^{CIRC} calc
 [8 5/8" Hole size: 12-1/4"
 3328'
 Long String
 Size: 5-1/2" Cemented with 1330 SX
 TOC: ³⁶⁰⁵ 1265 feet determined by ^{Temp Survey} 80% calc
 [5 1/2" Hole size: 7-7/8"
 TD 8510' Total Depth: 8510'
 Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Abo
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

(Above) Drinkard

INJECTION WELL DATA SHEET

Cities Service		State AE		
OPERATOR		LEASE		
2	3630' FNL & 4290' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

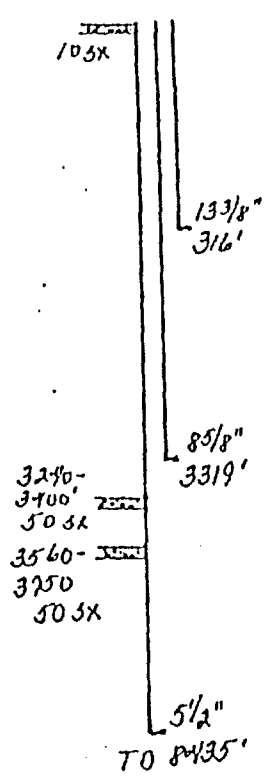
Tubular Data

Completed
1-09-53

P&A 6-6-69

5 1/2" csg. cut and
pulled down from
3200'

cont. ret. at 3588
w 555 SX below



Surface Casing
Size: 13-3/8" Cemented with 325 SX
TOC: Surface feet determined by calc
Hole size: 17-1/2"
Intermediate Casing
Size: 8-5/8" Cemented with 2164 SX
TOC: Surface feet determined by calc
Hole size: 11"
Long String
Size: 5-1/2" Cemented with 650 SX
TOC: 5600 feet determined by temp survey
Hole size: 7-7/8"
Total Depth: 8435'
Injection Interval

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

Tubing size - lined with - set in a - packer
at - feet. (Or describe any other casing-tubing seal):

Other Data

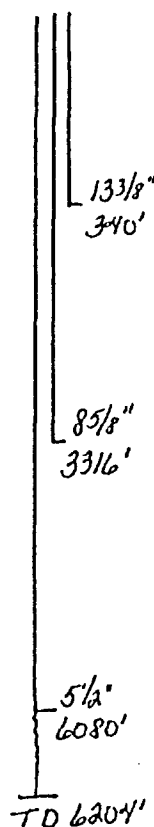
1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Abo
3. Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
(Above) Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#31	1650' FSL & 890' FWL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
12-16-53

Surface Casing

Size: 13-3/8" Cemented with 350 SX

TOC: Surface feet determined by ~~catc~~ Circ 30 SX

Hole size:

Intermediate Casing

Size: 8-5/8" Cemented with 2300 SX

TOC: Surface feet determined by ~~catc~~ Circ 300 SX

Hole size:

Long String

Size: 5-1/2" Cemented with 400 SX

TOC: 4350 feet determined by temp
survey

Hole size:

Total Depth: 6204'

Injection Interval

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#59	1980' FSL & 660' FWL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
6-29-65



Surface Casing

Size: 8-5/8 " Cemented with 825 SX
 TOC: Surface feet determined by circ
 Hole size: 11"

Intermediate Casing

2064' Size: _____ " Cemented with _____ SX
8 7/8" TOC: _____ feet determined by _____
 Hole Size: _____

Long String

Size: 4-1/2 " Cemented with 450 SX
 TOC: 3581 feet determined by Temp Survey
5060' Hole Size: 7-7/8"
4 1/2" Total Depth: 5060
 TD

Injection Interval

4666 feet to 5034 feet
 (perforated or open-hole, indicate which)

Tubing size 2" lined with IPC set in a
 (material)
Halliburton R-3 Tension packer at 4619 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
- 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.
Underlying-Grayburg

I

65

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#30	1650 FSL 3630' FNL & 330' FEL	35	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
4-12-53

4/53 Plugged
Back from Abo

Cmt 6275-6400'
Cmt 8240-8400'
Cmt 8600-8760'

Converted to
Injection 12/66

Surface Casing

Size: 13-3/8" Cemented with 350 SX

TOC: Surface feet determined by ^{CIRC}calc

13 3/8" Hole size: 17 1/4
339'

Intermediate Casing

Size: 8-5/8" Cemented with 400 SX

TOC: Surface feet determined by ^{CIRC}calc

8 5/8" Hole size: 11
3369'

Long String

Size: 5-1/2" Cemented with 400 SX

TOC: 4200 feet determined by temp
survey

Hole size: 7-7/8"

5 1/2" Total Depth: 8760'
6087'

Injection Interval

6087 feet to 6270 feet
TO 8 1/2" (perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 5999 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

66
OK

Greenhill Petroleum Corporation

Lovington Paddock

OPERATOR	LEASE			
#44	660' FSL & 1880' FEL	35	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataCompleted
9-52Converted to
Injection 1/68Surface CasingSize: 13-3/8" Cemented with 325 SXTOC: Surface feet determined by ~~cat~~ Circ

Hole size: 17-1/4"

Intermediate Casing

Size: 8-5/8" Cemented with 2150 SX

TOC: Surface feet determined by ~~cat~~ Circ

Hole size: 11"

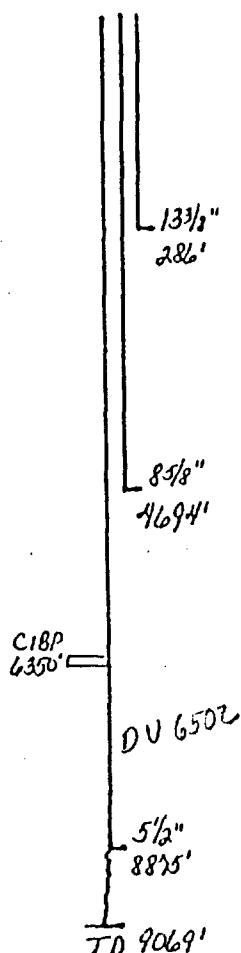
Long String

Size: 5-1/2" Cemented with 740 SX

TOC: 3250 TS 4844 feet determined by ~~80% cat~~

Hole size: 7-7/8"

Total Depth: 9069'

Injection Interval6194 feet to 6328 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 6164 feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation: Paddock
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#27	660 FEL & 660 FSL	35	T16S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 7 5/8 " Cemented with 600 SXTOC: Surface feet determined by calcHole size: 9 1/4"

Intermediate Casing

Size: " Cemented with SXTOC: feet determined by Hole Size:

Long String

Size: 5 1/2 " Cemented with 300 SXTOC: 273 feet determined by 80% calcHole Size: 6 1/2"Total Depth: 5000'

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) Lovington San Andres3. Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? Production4. 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.

Underlying - Grayburg

Completed

2035'
7 5/8"4600'
5 1/2"5000'
TD

SI
TA 4-19-87

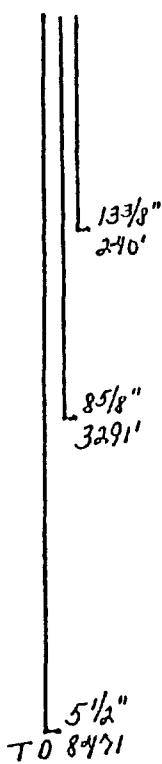
68

INJECTION WELL DATA SHEET

Texaco		Skelly "S" State		
OPERATOR		LEASE		
2	990' FSL & 330' FEL	35	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
12-29-52
P&A 6-6-69



Surface Casing

Size: 13-3/8" Cemented with ~~240~~ SX
TOC: Surface feet determined by calc *Circ*
Hole size: 18"

Intermediate Casing

Size: 8-5/8" Cemented with 1300 SX
TOC: Surface feet determined by calc
Hole size: 11"

Long String

Size: 5-1/2" Cemented with 900 SX
TOC: 3568 feet determined by 80% calc
Hole size: 7-7/8"

Total Depth: 8471'

Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Abo
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

(Above) Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#43	660' FSL & 460' FEL	35	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
4-29-54

Surface Casing
 Size: 8-5/8" Cemented with 1800 SX
 TOC: Surface feet determined by ¹¹⁷⁰⁰ ~~calc~~ ^{Circ}
 Hole size: //

Intermediate Casing
 Size: Cemented with SX
 TOC: feet determined by
 Hole size:

Long String
 Size: 5-1/2" Cemented with 485 SX
 TOC: 3613 feet determined by temp survey
 Hole size: 7 7/8"

Total Depth: 6285'

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

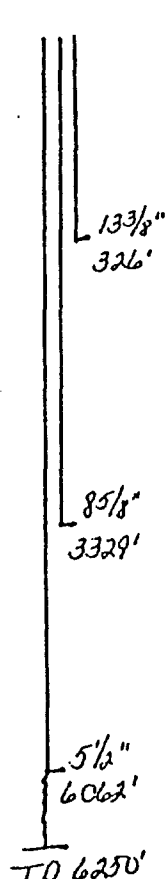
INJECTION WELL DATA SHEET

70

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#42	990' FWL & 660' FSL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
11-17-55



Surface Casing

Size: 13-3/8" Cemented with 300 SX

TOC: Surface feet determined by calc

Hole size: 17 1/4

Intermediate Casing

Size: 8-5/8" Cemented with 2000 SX

TOC: Surface feet determined by calc CIRC

Hole size: 11-1/4"

Long String

Size: 5-1/2" Cemented with 400 SX

TOC: 3883 feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 6250'

Injection Interval

6062 feet to 6250 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 6007 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

71
P

INJECTION WELL DATA SHEET

Penroc	State AF
OPERATOR	LEASE
330 FSL 990 FWL	
1	4950' FNL & 4290' FEL
WELL NO.	FOOTAGE LOCATION
36	16S
SEC.	TOWNSHIP
36E	RANGE

Tubular Data

Completed
11-1-52

Cement to
be raised pursuant
to order R 9431

13 3/8"
314'

 8 1/8"
3350'

 5 1/2"
708430'

Surface Casing

Size: 13-3/8" Cemented with 350 SX
 TOC: Surface feet determined by CIRC calc
 Hole size: 17-1/4"

Intermediate Casing

Size: 8-5/8" Cemented with 1900 SX
 TOC: Surface feet determined by CIRC calc
 Hole Size: 11"

Long String

Size: 5-1/2" Cemented with 400 SX
 TOC: 6251 feet determined by 80% calc
 Hole Size: 7-7/8"
 Total Depth: 8430'

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) Lovington Abo
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).

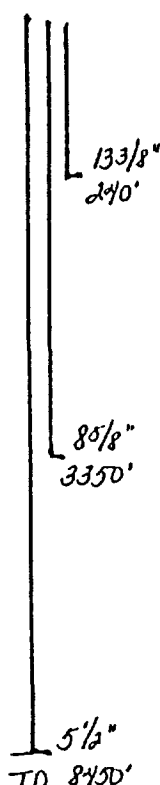
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Above Drinkard

SI
Feb 89

74

INJECTION WELL DATA SHEET

Texaco		State "R"		
OPERATOR		LEASE		
5	330' FSL & 2310' FWL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataCompleted
6-30-52Surface Casing

Size: 13-3/8" Cemented with 245 SX

TOC: Surface feet determined by calc

Hole size: 18"

Intermediate Casing

Size: 8-5/8" Cemented with 800 SX

TOC: 900 feet determined by 50% calc

Hole size: 12-1/4"

Long String

Size: 5-1/2" Cemented with 800 SX

TOC: 4093 feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 8450'

Injection Interval

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

Tubing size - lined with - set in a - packer

at - feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation:
 2. Name of Field or Pool (If applicable) Lovington Abo
 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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

(Above) Drinkard

INJECTION WELL DATA SHEET

75

P

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#40	1980' FEL & 810' FSL	36	16S	' 36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
10-07-53

To be corrected
pursuant to order
R 9431



Surface Casing

Size: 8-5/8" Cemented with 850 SX

TOC: Surface feet determined by calc

Hole size: 11"

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 265 SX

TOC: 4565 feet determined by 80% calc

Hole size: 7 7/8

Total Depth: 6252'

Injection Interval

6009 feet to 6252 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8 lined with IPC set in a - packer
at 5881 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

76

Texaco		Skelly "Q" State		
OPERATOR		LEASE		
4	330' FSL & 1650' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataCompleted
4-23-52

$13\frac{3}{8}"$
 $265'$

 $8\frac{5}{8}"$
 $33\frac{4}{3}'$

 $5\frac{1}{2}"$
 $TD 8435'$

Surface Casing

Size: 13-3/8" Cemented with 265 SX
 TOC: Surface feet determined by ^{CIRC} calc
 Hole size: 18"

Intermediate Casing

Size: 8-5/8" Cemented with 800 SX
 TOC: ^{Surface} ~~798~~ feet determined by ^{CIRC} ~~50%~~ calc
 Hole size: 11"

Long String

Size: 5-1/2" Cemented with 800 SX
 TOC: 4077 feet determined by 80% calc
 Hole size: 7-7/8"

Total Depth: 8435'

Injection Interval

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Lovington Abo
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

(Above) Drinkard

INJECTION WELL DATA SHEET

Texaco	Skelly "Q" State			
OPERATOR	LEASE			
3	330' FSL & 330' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

<div style="display: flex; align-items: center;"> <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 0 5px; margin-right: 5px;"> 13" 252' </div> <div> <p>Surface Casing</p> <p>Size: 13 " Cemented with 275 SX</p> <p>TOC: Surface feet determined by <u>calc</u></p> <p>Hole size: 18"</p> </div> </div>	<p>Intermediate Casing</p> <p>Size: 8-5/8 " Cemented with 1750 SX</p> <p>TOC: Surface feet determined by <u>calc</u></p> <p>Hole Size: 12-1/4"</p>
	<p>Long String</p> <p>Size: 5-1/2 " Cemented with 739 SX</p> <p>TOC: 4037 feet determined by <u>Haliburton</u></p> <p>Hole Size: 7-7/8"</p>
	<p>Total Depth: 8442'</p>
	<p>Injection Interval</p> <p>_____ feet to _____ feet</p> <p>(perforated or open-hole, indicate which)</p>

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

INJECTION WELL DATA SHEET

77
P

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#39	810' FSL & 660' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataSurface Casing

Size: 8-5/8" Cemented with 900 SX

TOC: Surface feet determined by calc *Circ*

Hole size: 11

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 275 SX

TOC: 4632 feet determined by temp survey

Hole size: 7 7/8

Total Depth: 6229'

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

Tubing size - lined with - set in a - packer

at - feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

To be corrected
pursuant to order
R9431

8 5/8"
2040'

5 1/2"
6017'

TD 6229'

I

80

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#38	810' FSL & 665' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
6-28-53

Converted to
Injection 1-71

Surface Casing

Size: 9-5/8" Cemented with 900 SX *Circ*

TOC: Surface feet determined by ~~calc~~

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 500 SX
3527 (casing set deeper than on original calc.)

TOC: ~~3316~~ feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 6252'

Injection Interval

6040 feet to 6220 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 5966 feet. (Or describe any other casing-tubing seal).

Other Data

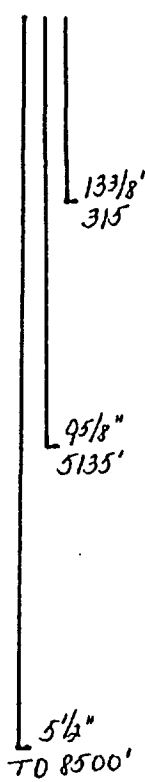
1. Name of the injection formation: Paddock
2. Name of Field or Pool (If applicable) Paddock
3. Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Texaco		State "0" Battery 2		
OPERATOR		LEASE		
9	660' FSL & 815' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
12-8-51



Surface Casing

Size: 13-3/8" Cemented with 300 650 SX
TOC: Surface feet determined by ^{Circ}calc
Hole size: 18"

Intermediate Casing

Size: 9-5/8" Cemented with 4500 SX
TOC: Surface feet determined by ^{Circ}calc
Hole size: 12-1/4"

Long String

Size: 5-1/2" Cemented with 650 SX
TOC: 4959 feet determined by 80% calc
Hole size: 7-7/8"

Total Depth: 8500

Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Abo
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

(Above) Drinkard

3505x0tshoe
41505x Thrie
DU Teel at
4510

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#23	660 FSL & 900 FWL	31	T16S	R37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 200 SXTOC: Surface feet determined by calcHole size: 14

Intermediate Casing

Size: 9 5/8 " Cemented with 500 SXTOC: 1773 feet determined by 50% calcHole Size: 11 1/4

Long String

Size: 7 " Cemented with 200 SXTOC: 2735 feet determined by 80% calcHole Size: 8 1/4Total Depth: 5081'

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 San Andres
- Name of Field or Pool (If applicable) Lovington San Andres
- 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.
Underlying - Grayburg

Completed
6/2/39

13"
277'

9 5/8"
3013'

7"
4551'

TD 5081'

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#22	330 FSL & 1650 FWL	31	T16S	R73E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 200 SXTOC: Surface feet determined by calcHole size: 15 1/2

Intermediate Casing

Size: 9 5/8 " Cemented with 500 SXTOC: 1369 feet determined by 50% calcHole Size: 11 1/4

Long String

Size: 7 " Cemented with 200 SXTOC: 3161 feet determined by 80% calcHole Size: 8 3/4Total Depth: 5086

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 San Andres
- Name of Field or Pool (If applicable) Lovington San Andres
- 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.
Underlying - Grayburg

Completed
 11/19/55

Deepened to 4917
 6/8/66

Deepened to 5086
 2/4/86

13"
 299'

9 5/8"
 3002'

7"
 4525'

TD 4760'

deepened
 4917
 6-8-66

TD 5086
 2-4-86

INJECTION WELL DATA SHEET

84

Arco	State 182 "A"			
OPERATOR	LEASE			
3	1959.54' FWL & 660' FSL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

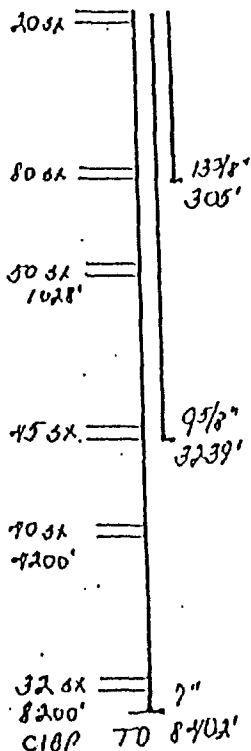
Tubular Data

Completed
4-12-52

P&A'd 2-4-76

cut & pulled
9 5/8" from 1028

cut & pull
7" from 4200
perf at 5000
592.120 SX.



Surface Casing

Size: 13-3/8" Cemented with 325 SX

TOC: Surface feet determined by calc

Hole size: 17-1/4"

Intermediate Casing

Size: 9-5/8" Cemented with 1200 SX

TOC: feet determined by

Hole size: 12-1/4"

Long String

Size: 7" Cemented with 500 SX

TOC: 5261 feet determined by 80% calc.

Hole size: 8-3/4"

Total Depth: 8402'

Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Abo
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

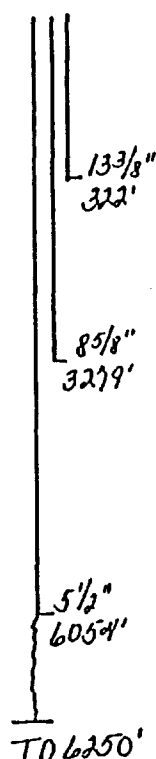
(Above) Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#37	330' FSL & 2290' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
8-6-53

Surface Casing

Size: 13-3/8" Cemented with 350 SX

TOC: Surface feet determined by ^{Circ}calc

Hole size: 17 1/2

Intermediate Casing

Size: 8-5/8" Cemented with 930 SX

TOC: 1235 feet determined by temp survey

Hole size: 11

Long String

Size: 5-1/2" Cemented with 250 SX

TOC: 4290 feet determined by temp survey

Hole size: 7 7/8

Total Depth: 6250'

Injection Interval

6054 feet to 6250 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at - feet. (Or describe any other casing-tubing seal).

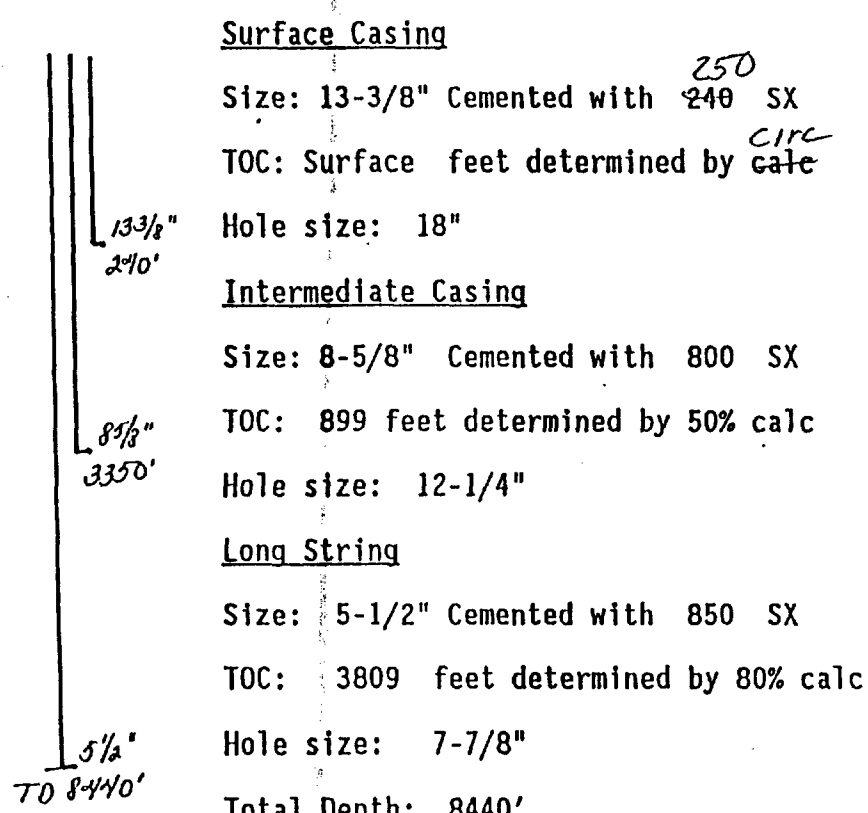
Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Texaco		State "O"		
OPERATOR		LEASE		
11	330' FSL & 2310' FEL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data



Surface Casing

Size: 13-3/8" Cemented with 250 SX
 TOC: Surface feet determined by calc

Hole size: 18"

Intermediate Casing

Size: 8-5/8" Cemented with 800 SX
 TOC: 899 feet determined by 50% calc

Hole size: 12-1/4"

Long String

Size: 5-1/2" Cemented with 850 SX
 TOC: 3809 feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 8440'

Injection Interval

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

Tubing size - lined with - set in a - packer
 at - feet: (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Abo
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
 (Above) Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#36	660' FSL & 2160' FEL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
12-3/53

Converted to
Injection 1/71

Surface Casing

Size: 8-5/8" Cemented with 1475 SX

TOC: Surface feet determined by ^{Circ} ~~calc~~

Hole size: 11"

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 400 SX

TOC: 4077 feet determined by temp
survey

Hole size: 7-7/8"

Total Depth: 6245'

Injection Interval

6050 feet to 6245 feet
(perforated or open-hole, indicate which)

8 5/8"
3145'

5 1/2"
6050'
TD 6245'

Tubing size 2-3/8" lined with IPC set in a - packer
at 5974 feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation: Paddock
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such
perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Texaco	State "0"			
OPERATOR	LEASE			
23	990' FSL & ⁹⁹⁰ 660 ' FEL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
11-6-54

Surface Casing

Size: 8-5/8" Cemented with 1575 SX

TOC: Surface feet determined by calc

Hole size: 11"

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 875 SX

TOC: 3673 feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 8440'

Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Drinkard
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

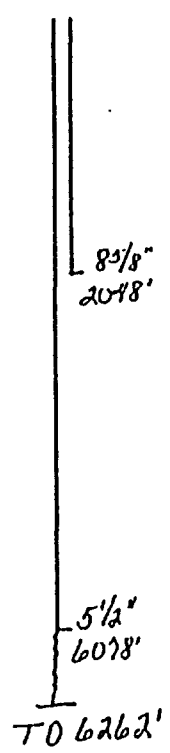
(Above) Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#35	810' FSL & 810' FEL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
3-20-54



Surface Casing

Size: 8-5/8" Cemented with 975 SX

TOC: Surface feet determined by ^{Circ}calc

Hole size: 11

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 585 SX

TOC: 3225 feet determined by temp survey

Hole size: 7 7/8

Total Depth: 6262'

Injection Interval

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#20	660 FSL & 660 FEL	31	T16S	R37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 20 SX

TOC: Surface feet determined by calc

Hole size: 15

Intermediate Casing

Size: 8 5/8 " Cemented with 475 400 SX

TOC: 784 feet determined by 50% calc

Hole Size: 11 10 1/2

Long String

Size: 5 1/2 " Cemented with 450 200 SX

TOC: 1340 654 feet determined by 80% calc

Hole Size: 6 1/4 7

Total Depth: 4945'

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 San Andres
2. Name of Field or Pool (IF applicable) Lovington San Andres
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.
Underlying - Grayburg

Completed
1/6/45

13'
20'
8 5/8"
2099'
5 1/2"
4580'
4945'

INJECTION WELL DATA SHEET

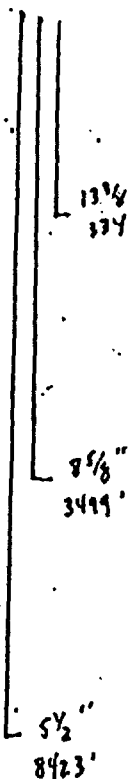
Texaco OPERATOR		State "P"			LEASE	
3-00 WELL NO.	800' FSL & 330' FWL FOOTAGE LOCATION	32 SEC.	16S TOWNSHIP	37E RANGE		

Tubular Data

Completed
3-28-54

Cement to be
raised pursuant
to Order R 9431

5 1/2" liner
3375-8423



Surface Casing

Size: 13-3/8" Cemented with 350 SX
 TOC: Surface feet determined by circ calc
 Hole size: 17-1/2"

Intermediate Casing

Size: 8-5/8" Cemented with 1250 SX
 TOC: Surface feet determined by calc
 Hole Size: 11"

Long String

Size: 5-1/2" Cemented with 650 SX
 TOC: 5210 feet determined by C-103
 Hole Size: 7-7/8"

Total Depth: 8423'

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

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation	Lovington San Andres Unit			
OPERATOR	LEASE			
#19	660 FSL 330 FWL	32	T16S	R37E
WELL NO.	1980-FNL & 2310-FEL	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 3/8 " Cemented with 200 SXTOG: Surface feet determined by calcHole size: 17 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 300 SXTOG: 1193 feet determined by 50% calcHole Size: 11

Long String

Size: 5 1/2 " Cemented with 300 SXTOG: 2982 feet determined by 80% calcHole Size: 7 7/8Total Depth: 4946'

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 San Andres
- Name of Field or Pool (IF applicable) Lovington San Andres
- 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.
Underlying - Grayburg

Completed
 1/5/46

319'
 8 5/8"
 2113'
 5 1/2"
 4617'
 4946' TD

INJECTION WELL DATA SHEET

E. F. Moran Inc.

Shipp State "A"

OPERATOR	LEASE
1 330' FNL & 330' FWL	5 17S 37E
WELL NO..	FOOTAGE LOCATION
SEC.	TOWNSHIP RANGE

Tubular Data

Surface Casing

Size: 10-3/4" Cemented with 175 SX
TOC: Surface feet determined by ^{circ.} ~~calc~~
Hole size: 13-3/4"

Intermediate Casing

Size: Cemented with SX
TOC: feet determined by
Hole size:

Long String

Size: 5-1/2" Cemented with 400 SX
TOC: 2485 feet determined by 80% calc
Hole size: 7-7/8"

Total Depth: 4934'

Injection Interval

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

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

Other Data

1. Name of the injection formation: NA
2. Name of Field or Pool (If applicable) Lovington
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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		Lovington Paddock		
OPERATOR		LEASE		
#53	330' FNL & 840' FEL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
10-52

Surface Casing

Size: 13-3/8" Cemented with 250 SX

TOC: Surface feet determined by ^{Circ}~~calc~~

Hole size:

Intermediate Casing

Size: 8-5/8" Cemented with 2100 SX

TOC: 808 feet determined by temp survey

Hole size:

Long String

Size: 5-1/2" Cemented with 230 SX

TOC: 4116 feet determined by temp survey

Hole size:

Total Depth: 14,153'

Injection Interval6144 feet to 6194 feet
(perforated or open-hole, indicate which)

13 3/8"
258'

8 5/8"
5010'

5 1/2" to
6246' - POTO 6250'

Set 15 plugs
TO 14,153'

Tubing size 2-3/8" lined with IPC set in a - packer
at 6094 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation OPERATOR	Lovington San Andres Unit LEASE			
#36 WELL NO.	660 FNL & 2040 FEL FOOTAGE LOCATION	6 SEC.	T17S TOWNSHIP	R37E RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 200 SX
 TOC: Surface feet determined by circulation
 Hole size: 14 3/4"

Intermediate Casing

Size: 8 5/8 " Cemented with 400 SX
 TOC: 1774 feet determined by 50% calc
 Hole Size: 10 1/4

Long String

Size: 5 1/2 " Cemented with 125 SX
 TOC: 3127 feet determined by 80% calc
 Hole Size: 6 3/4"
 Total Depth: 4955'

Injection Interval

4540 feet to 4955 feet
 (perforated or open-hole, indicate which)

Pkr. #1
 Tubing size 2 3/8 lined with IPC set in a
Baker "A" Pension packer at 4466 feet.
 (brand & model)
 (or describe any other casing-tubing seal). Pkr. #2 Howco R-3 set @ 4435'.

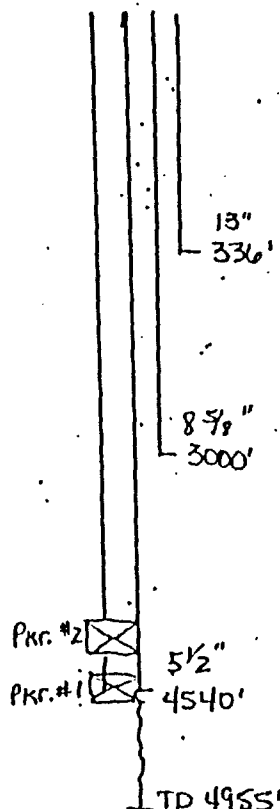
Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (if applicable) Lovington San Andres
- 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.
Underlying - Grayburg

Completed
 9/12/39

Pkr. #1
 3/22/63

Pkr. # 2
 1/25/79



INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#52	510' FNL & 2190' FEL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
10-31-53

Surface Casing

Size: 8-5/8" Cemented with 1425 SX

TOC: Surface feet determined by ^{Circ}calc

Hole size: //

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 400 SX

TOC: 4220 feet determined by temp survey

Hole size: 7 7/8

Total Depth: 6250'

Injection Interval

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

Tubing size - lined with - set in a - packer

at - feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

100

Texaco		C. S. Caylor		
OPERATOR		LEASE		
3	330' FNL & 2310' FEL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataCompleted
6-17-52Surface Casing

Size: 13-3/8" Cemented with 240 SX

TOC: Surface feet determined by ^{CIRC} calc13 3/8"
240'

Hole size: 18"

Intermediate Casing

Size: 8-5/8" Cemented with 800 SX

TOC: 905 feet determined by 50% calc

Hole size: 12-1/4"

8 5/8"
3356'Long StringSize: 5-1/2" Cemented with ⁸⁰⁰ 450 SX

TOC: 3270 feet determined by temp survey

Hole size: 7-7/8"

Total Depth: 8435'

5 1/2"
TD 8435'Injection Interval- feet to - feet
(perforated or open-hole, indicate which)

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

Other Data

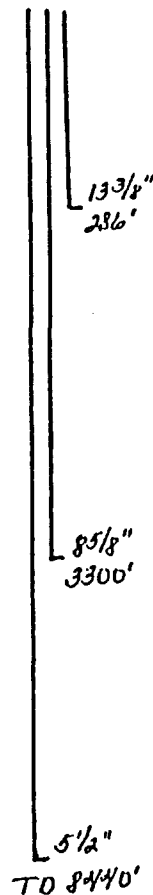
1. Name of the injection formation:
 2. Name of Field or Pool (If applicable) Lovington Abo
 3. Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
 4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
(Above) Drinkard

INJECTION WELL DATA SHEET

Penroc	C. S. Caylor			
OPERATOR	LEASE			
3	660' FNL & 1827 FNL 3393' FET	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
5-18-52



Surface Casing

Size: 13-3/8" Cemented with 300 SX
TOC: Surface feet determined by ^{CIRC} calc
Hole size: 18"

Intermediate Casing

Size: 8-5/8" Cemented with 800 SX
TOC: 849 feet determined by 50% calc
Hole size: 12-1/4"

Long String

Size: 5-1/2" Cemented with 800 SX
TOC: 4082 feet determined by 80% calc
Hole size: 7-7/8"
Total Depth: 8440'

Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Abo
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
(Above) Drinkard

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INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR	(1740 FWL)	LEASE		
#51	3540' FEL & 480' FNL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completion
9-23-53

Converted to
Injection 12/66

Surface Casing

Size: 8-5/8" Cemented with 950 SX

TOC: Surface feet determined by ^{C/L} calc

Hole size: 11

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 275 SX

TOC: 4050 feet determined by 70% calc

Hole size: 7 7/8

Total Depth: 6245'

Injection Interval

6080 feet to 6245 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 5981 feet. (Or describe any other casing-tubing seal).

Other Data

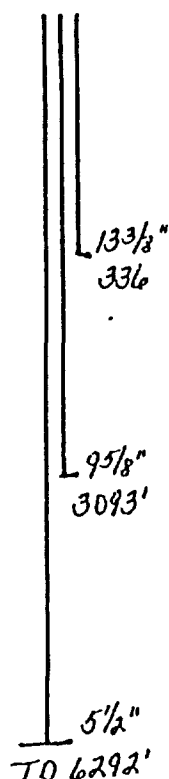
- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#50	660' FNL & 902' FWL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
7-31-53

Surface Casing

Size: 13-3/8" Cemented with 300 SX
Circ

TOC: Surface feet determined by calc

Hole size: 17 1/4

Intermediate Casing

Size: 9-5/8" Cemented with 1550 SX
Circ

TOC: Surface feet determined by calc

Hole size: 12 1/2

Long String

Size: 5-1/2" Cemented with 500 SX
450

TOC: ~~4100~~ 4150 feet determined by temp
survey

Hole size: 8 3/4

Total Depth: 6292'

Injection Interval

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

Tubing size - lined with IPC set in a - packer
at - feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details. (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovinton San Andres Unit		
OPERATOR		LEASE		
#34	660 FNL & 615 FWL	6	T17S	R37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 200 SXTOC: Surface feet determined by circulationHole size: 17 1/4 15

Intermediate Casing

Size: 9 5/8 " Cemented with 500 SXTOC: 1956 feet determined by 50% calcHole Size: 12"

Long String

Size: 7 " Cemented with 200 SXTOC: 3264 feet determined by 80% calcHole Size: 8 3/4"Total Depth: 4950'

Injection Interval

4521 feet to 4950 feet
(perforated or open-hole, indicate which)

Packer #1
Tubing size 2" lined with IPC set in a
(material)
Baker "A" Pension packer at 4498 feet.
(brand & model)

(or describe any other casing-tubing seal). Packer #2 - 2 3/8" plastic lined tbq.
set in a 7" Guiberson Packer @ 4470'.

Other Data

1. Name of the injection formation San Andres
2. Name of Field or Pool (if applicable) Lovington San Andres
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.
Underlying - Grayburg

INJECTION WELL DATA SHEET

Amerada Hess

State L "A"

OPERATOR	LEASE
8	560' FNL & 660' FEL
WELL NO.	FOOTAGE LOCATION
	SEC. TOWNSHIP RANGE
	1 17S 36E

Tubular Data

Completed
5-3-52

Cement to be
raised pursuant
to Order No. R9431

Surface Casing

Size: 13-3/8 " Cemented with 225 SX

TOC: Surface feet determined by calc

13 3/8
280 Hole size: 17-1/2"

Intermediate Casing

Size: 8-5/8 " Cemented with 1000 SX

TOC: 1497
3063 feet determined by TS
507 calc

8 5/8
3148 Hole Size: 11"

Long String

Size: 5-1/2 " Cemented with 600 SX

TOC: 4975 feet determined by temp survey ✓

5 1/2
8142 Hole Size: 7-7/8"

TD
8430 Total Depth: 8430'

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

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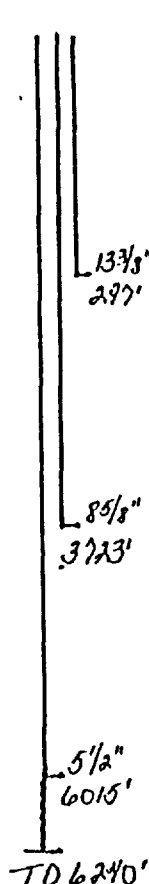
INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#49	760 FNL & 660 FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
8-18-53

Converted to
Injection 12/66

Surface Casing

Size: 13-3/8" Cemented with 300 SX

TOC: Surface feet determined by calc ^{CIRC}

Hole size: 17-1/2"

Intermediate Casing

Size: 8-5/8" Cemented with 1500 SX

TOC: ³⁹⁰ Surface feet determined by ^{TS} calc

Hole size: 11"

Long String

Size: 5-1/2" Cemented with 550 SX

TOC: ³⁷²⁴ 3019 feet determined by ^{TS} 80%-calc

Hole size: 7-7/8"

Total Depth: 6240'

Injection Interval

6015 feet to 6140 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 5921 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

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P

INJECTION WELL DATA SHEET

Amerada Hess		State L "A"		
OPERATOR		LEASE		
9	660' FNL & 1880' FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
6-24-52

Cement to be
raised pursuant
to Order No. R 9431

13 7/8 295' 2 5/8 3748' 5 1/2 9335' 8440' TD	<u>Surface Casing</u>
	Size: 13-3/8" Cemented with 225 SX
	TOC: Surface feet determined by <u>Circ calc</u>
	Hole size: 17-1/2"
	<u>Intermediate Casing</u>
	Size: 8-5/8" Cemented with 1500 SX
	TOC: <u>1275</u> Surface feet determined by <u>TS calc</u>
	Hole Size: 11"
	<u>Long String</u>
	Size: 5-1/2" Cemented with 600 SX
TOC: 5597 feet determined by <u>temp survey</u>	
Hole Size: 7-7/8"	
Total Depth: 8440'	
<u>Injection Interval</u>	
- 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) Lovington Abo
- Is this a new well drilled for injection? No Production
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.
Above Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation
OPERATORLovington San Andres Unit
LEASE#32
WELL NO.660 FNL & 1980 FEL
FOOTAGE LOCATION1
SEC.T17S
TOWNSHIPR36E
RANGE

Tubular Data

Surface Casing

Size: 10 3/4" Cemented with 180 SXTOC: Surface feet determined by circulationHole size: 13 3/4"

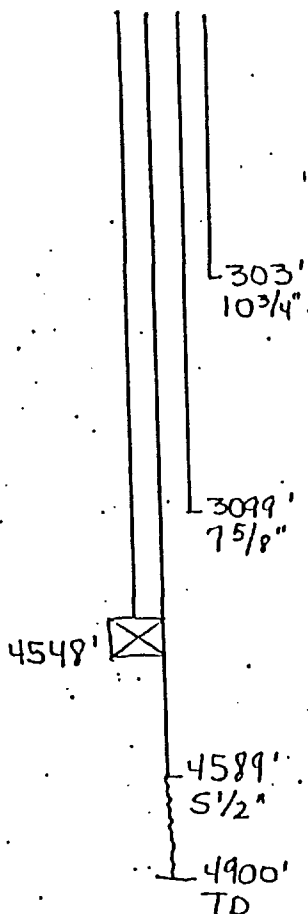
Intermediate Casing

Size: 7 5/8" Cemented with 265 SXTOC: 2200' feet determined by 50% calc.Hole Size: 9 7/8"

Long String

Size: 5 1/2" Cemented with 200 SXTOC: 2326' feet determined by 80% calc.Hole Size: 6 3/4"Total Depth: 4900'

Injection Interval

4589 feet to 4900 feet
(perforated or open-hole, indicate which)Completed
1/1/40Tubing size 2 3/8" lined with IPC set in aBaker "A" Pension packer at 4548 feet.
(brand & model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres
2. Name of Field or Pool (If applicable) Lovington San Andres
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.

Underlying - Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington Paddock

OPERATOR	LEASE
#48	660' FNL & 2080' FEL
WELL NO.	FOOTAGE LOCATION
	SEC. TOWNSHIP RANGE

Tubular DataSurface Casing

Size: 13-3/8" Cemented with 300 SX

TOC: Surface feet determined by calc

Hole size: 17 1/2

Intermediate Casing

Size: 8-5/8" Cemented with 1500 SX

TOC: 602 feet determined by temp survey

Hole size: //

Long String

Size: 5-1/2" Cemented with 550 SX

TOC: 3712 feet determined by temp survey

Hole size: 7 1/8

Total Depth: 6235'

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

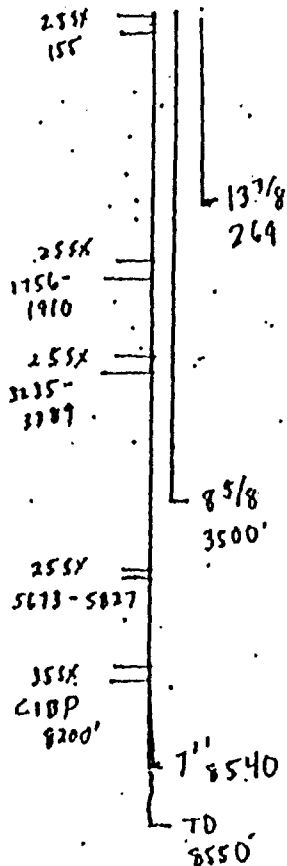
INJECTION WELL DATA SHEET

Amoco	State "E" TR 18			
OPERATOR	LEASE			
15	330' FNL & 2310" FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
12-4-52

P&A'd
7-17-84



Surface Casing

Size: 13-3/8" Cemented with 275 SX

TOC: Surface feet determined by calc

Hole size: 17-1/2"

Intermediate Casing

Size: 8-5/8" Cemented with 500 SX

TOC: 223 feet determined by 50% calc

Hole Size: 12-1/4"

Long String

Size: 5-1/2" Cemented with 450 per life SX

TOC: 1855 feet determined by temp survey
4910 original by temp survey
sidetrack

Hole Size: 8-3/4"

Total Depth: 8550'

Injection Interval

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

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

Other Data

1. Name of the injection formation
2. Name of Field or Pool (if applicable) Lovington Abo
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).
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Above Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington Paddock

OPERATOR	LEASE
#47	1 17S 36E
WELL NO.	FOOTAGE LOCATION

Tubular Data

Completed
9-04-54

8 5/8"
2041'

5 1/2"
6045'
6027'
TO 6221'

Surface Casing

Size: 8-5/8" Cemented with ¹²⁰⁰ 1000 SX

TOC: Surface feet determined by ^{Circ} calc

Hole size:

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with ³⁰⁰ 182 SX

TOC: ⁴¹⁴⁷ 5053 feet determined by ^{TS file} 80% calc

Hole size: 7-7/8"

Total Depth: 6221'

Injection Interval

6045 feet to 6221 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a packer
at 5957 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Amoco	State "E" TR 18			
OPERATOR	LEASE			
16	330' FNL & 990' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
2-25-53

P&A'd
4-26-84

CIDP set
@ 8103'
Pumped 15 sx
Set retainer
@ 4261'
Pumped 346 sx
Set retainer
@ 1326'
Pumped 900 sx
Spotted 15 sx
cement surface
plug

Surface Casing

Size: 13-3/8" Cemented with 300 SX

TOC: Surface feet determined by circ. calc.

13 3/8
215 Hole size: 17-1/2"

Intermediate Casing

Size: 9-5/8" Cemented with 300 SX

TOC: 1576
2050 feet determined by TS
50% calc.

9 5/8
3281 Hole Size: 12-1/4"

Long String

Size: 7" Cemented with 500 per lb
500 SX

TOC: 4550 feet determined by temp survey

7"
10 8517 Hole Size: 8-3/4"

Total Depth: 8517'

Injection Interval

- foot to - foot
(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

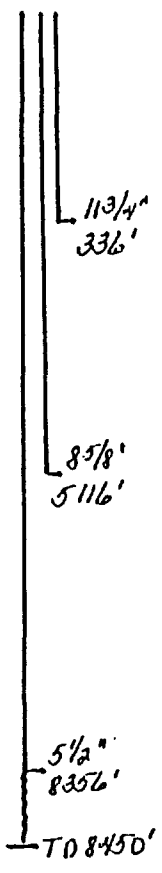
1. Name of the injection formation -
2. Name of Field or Pool (if applicable) Lovington Abo
3. Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? Production
4. Has the well ever be perforated in any other zone(s)? List all such perforated intervals and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

INJECTION WELL DATA SHEET

Penroc		State "E" TR 18		
OPERATOR		LEASE		
23	880' FNL & 790' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
3-17-73



Surface Casing

Size: 11-3/4" Cemented with 635 SX
TOC: Surface feet determined by calc
Hole size: 17-1/2"

Intermediate Casing

Size: 8-5/8" Cemented with 2800 SX
TOC: Surface feet determined by calc
Hole size: 11"

Long String

Size: 5-1/2" Cemented with 1000 SX
TOC: 2908 feet determined by 80% calc
Hole size: 7-7/8"

Total Depth: 8450'

Injection Interval

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

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

Other Data

1. Name of the injection formation:
 2. Name of Field or Pool (If applicable) Lovington Abo
 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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
(Above) Drinkard
-

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#30	660 FNL & 660 FWL	1	T17S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13" Cemented with 200 SX

TOC: Surface feet determined by circulation

Hole size: 17 1/4

Intermediate Casing

Size: 8 5/8" Cemented with 500 SX

TOC: 1597 feet determined by 50% calc

Hole Size: 12"

Long String

Size: 5 1/2" Cemented with 300 SX

TOC: 2910 feet determined by 80% calc

Hole Size: 7 7/8"

Total Depth: 4970'

Injection Interval

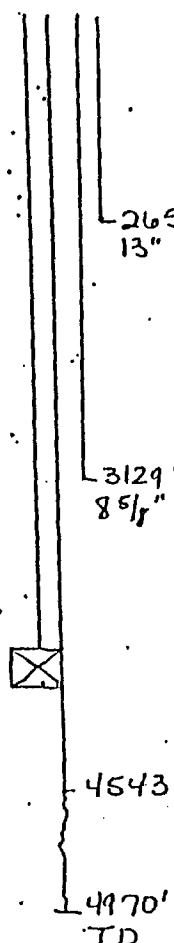
4543 feet to 4970 feet
(perforated or open-hole, indicate which)

Tubing size 2" lined with IPC set in a
(material)
Baker Model A packer at 4485 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
- 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.
Underlying - Grayburg

Completed
12/2/39

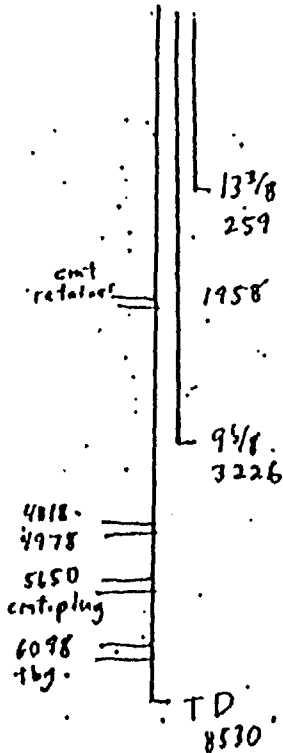


INJECTION WELL DATA SHEET

Amoco State "E" TR 18
 OPERATOR LEASE
 18 330' ENL & 330' FEL 2 17S 36E
 WELL NO. FOOTAGE LOCATION SEC. TOWNSHIP RANGE

Tubular Data

Completed
 6-12-53
 P&A'd 11-7-83



Surface Casing

Size: 13-3/8 " Cemented with 275 SX
 TOC: Surface feet determined by circ calc
 Hole size: 17-1/2"

Intermediate Casing

Size: 9-5/8 " Cemented with 300 SX
 TOC: 2246 1600 feet determined by 50% calc 75
 Hole Size: 12-1/4"

Long String

Size: 7 " Cemented with 550+550 cu ft SX
 TOC: 4975 feet determined by 80% calc 75
 Hole Size: 8-5/8"

Total Depth: 8530'

Injection Interval

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

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

Other Data

- Name of the injection formation
- Name of Field or Pool (IF applicable) Lovington Abo
- 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.
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
 Above Drinkard

INJECTION WELL DATA SHEET

118

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#45	660' FNL & 330' FCL FWE	2	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
2-9-55

Converted to
Injection 12/66

Surface Casing

Size: 8-5/8" Cemented with 1350 SX

TOC: Surface feet determined by calc

Hole size: 12 1/2"

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 350 SX

TOC: 3865 feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 6235'

Injection Interval

6111 feet to 6235 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a packer
at 6090 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

SWD

120

INJECTION WELL DATA SHEET

Penroc	State E TR 18			
OPERATOR	LEASE			
21	660' FNL & 1650' FEL	2	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
11-9-53

Converted to
SWD 3-9-79

Deepened to
8987' 3-9-79

Surface Casing

Size: 13-3/8" Cemented with 275 SX

TOC: Surface feet determined by Circ

Hole size: 17-1/2"

Intermediate Casing

Size: 9-5/8" Cemented with 300 SX

TOC: feet determined by

Hole Size: 12-1/4"

Long String

Size: 7" Cemented with 550 SX

TOC: 3375 feet determined by temp survey

Hole Size: 8-3/4"

Total Depth: 8470'

Injection Interval

8391 feet to 8987 feet
(perforated or open-hole, indicate which)

Tubing size 2-1/2" lined with IPC (material) set in a
 packer at 8378 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Abo
- Name of Field or Pool (If applicable) Lovington Abo
- 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).
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

Above Drinkard

7" CSS sig = d w/
600SX at 4722
TOC 3375 by TS.

11 3/8
264'
DU
2037
9 5/8
3300
7"
8391
TD
8470
TD
8987

150 b. low &
150 thru DU
Tool

+550. Perforate

I

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INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation	Lovington San Andres Unit			
OPERATOR	LEASE			
#28	660 FNL & 1980 FEL	2	T17S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 175 SX

TOC: Surface feet determined by circulation

Hole size: 17 1/2"

Intermediate Casing

Size: 8 5/8 " Cemented with 600 SX

TOC: 233 feet determined by 50% calc

Hole Size: 11"

Long String

Size: 5 1/2 " Cemented with 400 SX

TOC: 2421 feet determined by 80% calc

Hole Size: 7 7/8 "

Total Depth: 5068'

Injection Interval

4602 - 5068 feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size 2" lined with _____ IPC set in a
(material)
Baker Model A packer at 4543 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) Lovington San Andres
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.
Underlying - Grayburg

Rice Engineering
~~Ohio Oil Company~~

Abc SWD System
State B-4286 "A"

OPERATOR	LEASE
1	2
WELL NO.	SEC.
2310' FWL & 990' FNL	17S
FOOTAGE LOCATION	TOWNSHIP
	RANGE

Tubular Data

Surface Casing

Completed
2-8-54

Rice Engrg.
Deepened to
8858' &
Converted to
a SWD Well

Size: 13-3/8" Cemented with 350 SX

TOC: Surface feet determined by calc

Hole size: 17-1/2"

Intermediate Casing

Size: 9-5/8" Cemented with 1750 SX

TOC:Circ to Sur. feet determined by calc

Hole size: 12"

Long String

Size: 5-1/2" Cemented with 1350 SX

TOC: 3484 feet determined by 80% calc

Hole size: 8-3/4"

Total Depth: 8534'

Injection Interval

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

Tubing size - lined with - set in a - packer

at - feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation: NA
 2. Name of Field or Pool (If applicable) Lovington
 3. Is this a new well drilled for Injection?
If no, for what purpose was the well originally drilled?
 4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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

<u>Greenhill Petroleum Corp.</u>	<u>Lovington Paddock</u>
OPERATOR	LEASE
<u>85</u>	<u>1590 FWL & 1417 FNL</u>
WELL NO.	FOOTAGE LOCATION
	<u>Sec. 1</u>
	<u>T17S-R36E</u>
	SEC. TOWNSHIP RANGE

Tubular Data

Surface Casing

Size: 13 7/8 " Cemented with 500 SXTOC: Surface feet determined by Circ. Calc.Hole size: 11 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 900 SXTOC: 201 feet determined by 50% calcHole Size: 11

Long String

Size: 5 1/2 " Cemented with 1230 SXTOC: Surface feet determined by 80% calcHole Size: 7 7/8Total Depth: 6400

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) Lovington Paddock
- 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).

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

5WD

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INJECTION WELL DATA SHEET

Penroc	State E TR 18			
OPERATOR	LEASE			
22	1650' FNL & 1650' FEL	2	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed:
5-9-54

Converted to
Injection and
Deepened 12-27-80

Sidetracked fish &
Kicked off to 8443'.
Drld. to 9000'. Run
packer & tbg to 8150'.
Packer set @ 8302'.
Ran tailpipe & set
packer @ 8272'

3-10-82
5 1/2" from 3900
with 1500 SY after
running CBL from
8150 - 3600

10-20-80
5 1/2" from 4360
w/ 450 SX

	<u>Surface Casing</u>
	Size: 13-3/8" Cemented with 275 SX
13 3/8 252	TOC: Surface feet determined by ^{Circ} calc
	Hole size: 13 3/8"
DV 2106	<u>Intermediate Casing</u>
	Size: 9-5/8" Cemented with 300 SX
9 5/8 3275	TOC: 2661 feet determined by 50% calc
	Hole Size: 12-1/4"
	<u>Long String</u>
	Size: 5-1/2" Cemented with 835+835 cu ft SX
5 1/2 8330	TOC: 2279 feet determined by ^{perlite} 80% calc
9000' TD	Hole Size: 8-5/8"
deepened 12/80	Total Depth: 8477'

150 SY below
6150 thru
DV Tool

Injection Interval

8242 feet to 8316 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
packer at 8272 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Abo
- Name of Field or Pool (If applicable) Lovington Abo
- Is this a new well drilled for injection? No Production
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.
Above Drinkard

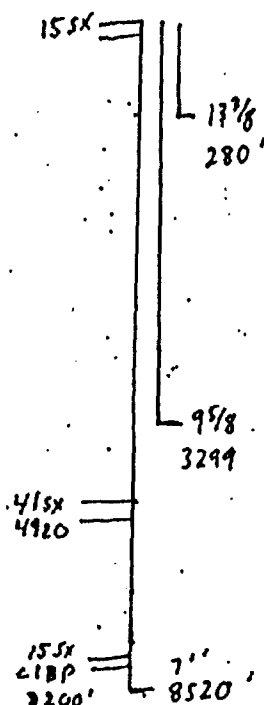
INJECTION WELL DATA SHEET

Penroc		State E TR 18		
OPERATOR		LEASE		
20	1650' ENL & 330' FEL	2	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
9-24-53

P&A'd
4-9-84



Surface Casing

Size: 13-3/8 Cemented with 265 SX
TOG: Surface feet determined by core
Mole size: 17-1/2" scale

Intermediate Casing

Size: 9-5/8" Cemented with 300 SX
TOG: _____ feet determined by _____
Hole Size: 12-1/4"

Long String

Long String + 500 cu. ft per lot
Size: 7" Cemented with 550 SX
TOC: 2138 feet determined by calc
Hole Size: 8-3/4"
Total Depth: 8525'

Total Depth: 8525'

Infection 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 No
2. Name of Field or Pool (If applicable) Lovington Paddock
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.)
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

Above Glorieta

I

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INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington Paddock

OPERATOR

LEASE

#61

990' FWL & ¹⁹⁸⁰2310' FNL

1

17S

36E

WELL NO.

FOOTAGE LOCATION

SEC.

TOWNSHIP

RANGE

Tubular DataSurface Casing

1710

Size: 8-5/8" Cemented with 1000 SX

TOC: Surface feet determined by calc

Hole size: 12 1/4

Intermediate Casing8 5/8"
2039'

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String5 1/2"
6080'

350

Size: 5-1/2" Cemented with 220- SX

TOC: ³⁷⁰⁰~~4490~~ feet determined by ^{temp survey}~~80% calc~~ _{file}

Hole size: 7-7/8"

Total Depth: 6220'

Injection Interval6080 feet to 6220 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 6045 feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation: Paddock
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

128
P

INJECTION WELL DATA SHEET

Penroq		State "E" TR 18		
OPERATOR		LEASE		
19	1650' FNL & 990' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Completed
7-29-53

Size: 13-3/8" Cemented with 332 SX

TOC: Surface feet determined by ^{Circ}calc

Hole size: 17-1/2"

Intermediate Casing

Size: 9-5/8" Cemented with 300 SX

TOC: ¹⁵³⁷1937 feet determined by ^{TS}50% calc

Hole Size: 12-1/4"

Long String

Size: 7" Cemented with ^{+225 p.c. l.c.}225 SX

TOC: 6775 feet determined by temp survey

Hole Size: 8-3/4"

Total Depth: 8530'

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

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#42	1980' FNL & 1980' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
4-1-39

299'
13"

3095'
9 5/8"

4536'
7"

4938'
TD

Surface Casing

Size: 13" Cemented with 200 SXTOC: Surface feet determined by calcHole size: 17-1/4"

Intermediate Casing

Size: 9-5/8" Cemented with 535 SXTOC: 1517 feet determined by calcHole Size: 12"

Long String

Size: 7" Cemented with 300 SXTOC: 2887 feet determined by calcHole Size: 8-3/4"Total Depth: 4938'

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 San Andres
2. Name of Field or Pool (If applicable) Lovington San Andres
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.
Underlying-Grayburg

130
P

INJECTION WELL DATA SHEET

PENROC	State "E" TR 18			
OPERATOR	LEASE			
17	1650' FNL & 2310' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13-3/8 " Cemented with 275 SX

TOC: Surface feet determined by calc

Hole size: 17-1/2"

Intermediate Casing

Size: 9-5/8 " Cemented with 300 SX

TOC: 2316 feet determined by 50% calc

Hole Size: 12-1/4"

Long String

Size: 7 " Cemented with 500 SX

TOC: 5175 feet determined by Temp Survey

Hole Size: 8-3/4"

Total Depth: 8506'

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

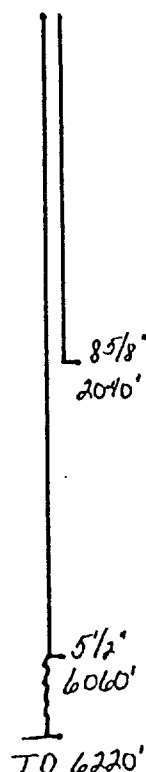
1. Name of the injection formation -
2. Name of Field or Pool (If applicable) Lovington Abo
3. Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? Production
4. Has the well ever be perforated in any other zone(s)? List all such perforated intervals and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

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#60	1980' FNL & 2310' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
10-11-54

Surface Casing

Size: 8-5/8" Cemented with 1200 SX

TOC: Surface feet determined by ^{CIRC} calc

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 350 SX

TOC: 3841 feet determined by temp ^{file} survey

Hole size: 7 7/8

Total Depth: 6220'

Injection Interval

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

Tubing size - lined with IPC set in a - packer
at - feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Amerada Hess		State L "A"		
OPERATOR		LEASE		
11	1650' FNL & 1980' FEL	1	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 calc

Hole size: 17-1/2"

Intermediate Casing

Size: 8-5/8 " Cemented with 1500 SX

TOC: Surface feet determined by calc

Hole Size: 11"

Long String

Size: 5-1/2 " Cemented with 600 SX

TOC: 4908 feet determined by temp survey

Hole Size: 7-7/8"

Total Depth: 8440'

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

I

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INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR	2080	LEASE		
#59	1650' FNL & 1980' FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
10-19-53

Converted to
Injection 9-73

	<u>Surface Casing</u>
	Size: 13-3/8" Cemented with 300 SX
	TOC: Surface feet determined by calc ^{CXC}
13 3/8"	Hole size: 17 1/2"
297'	<u>Intermediate Casing</u>
	Size: 8-5/8" Cemented with 1500 SX
	TOC: Surface feet determined by calc ^{TS}
	Hole size: 11"
8 5/8"	<u>Long String</u>
3235'	Size: 5-1/2" Cemented with 550 SX
	TOC: 3054- feet determined by 80% calc ^{TS}
	Hole size: 7-7/8"
5 1/2"	Total Depth: 6235
6050'	<u>Injection Interval</u>
TO 6235'	6050 feet to 6235 feet (perforated or open-hole, indicate which)

Tubing size 3" lined with IPC set in a - packer
at 5991 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

135
P

INJECTION WELL DATA SHEET

Amerada Hess

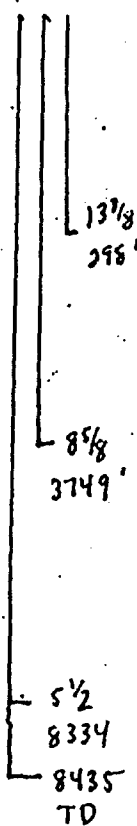
State L"A"

OPERATOR	LEASE			
10	1650' FNL & 660' FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
11-7-52

cement to be
raised pursuant
to Order No. R 9431



Surface Casing

Size: 13-3/8 " Cemented with 225 SX

TOC: Surface feet determined by Circ calc

Hole size: 17-1/2"

Intermediate Casing

Size: 8-5/8 " Cemented with 1500 SX

TOC: 1346 Surface feet determined by TS calc

Hole Size: 11"

Long String

Size: 5-1/2 " Cemented with 600 SX

TOC: 4972 feet determined by temp survey

Hole Size: 7-7/8"

Total Depth: 8435'

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

Above Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington Paddock

OPERATOR		LEASE		
#58	1980' FNL & 560' FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataSpud Date
10-53

	<u>Surface Casing</u>
	Size: 13-3/8" Cemented with 300 SX CIPC
	TOC: Surface feet determined by calc
	Hole size: 17 1/2"
	<u>Intermediate Casing</u>
	Size: 8-5/8" Cemented with 1500 SX
	TOC: 588 feet determined by temp survey ✓
	Hole size: 11"
	<u>Long String</u>
	Size: 5-1/2" Cemented with 550 SX
	TOC: 3795 feet determined by temp survey ✓
	Hole size: 7 7/8"
	Total Depth: 6235
	<u>Injection Interval</u>

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

137

P

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
# 57	FNL 1980' & 695' FEL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13-3/8 " Cemented with 300 SXTOC: Surface feet determined by calc ^{Circ}Hole size: 17 1/2

Intermediate Casing

Size: 8-5/8 " Cemented with 1450 SXTOC: Surface feet determined by calcHole Size: 11

Long String

Size: 5-1/2 " Cemented with 550 SXTOC: 5454 4820 feet determined by TS [✓]Hole Size: 7 3/4Total Depth: 8450

Injection Interval

6028
~~6028~~ ~~5820~~ feet to 6187 feet
 (perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
 (material)
 packer at 6018 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Paddock
- Name of Field or Pool (If applicable) Paddock
- 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.

Above Glorieta

Completed
 6-13-52
 Cement to be
 raised pursuant
 to order No. R9431

13 1/8
 349
 560
 8 5/8
 3129
 5 1/2
 708840

INJECTION WELL DATA SHEET

Sun Oil Company		M. Caylor		
OPERATOR		LEASE		
6	902' FWL & 1980' FNL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
10-15-53

P&A'd 3-9-70

Surface Casing

Size: 13-3/8" Cemented with 300 SX

TOC: Surface feet determined by ^{calc} ~~calc~~

Hole size: 18"

Intermediate Casing

Size: 9-5/8" Cemented with ¹⁵⁵⁰ ~~1200~~ SX

TOC: Surface feet determined by ^{calc} ~~calc~~

Hole size: 12-1/4"

Long String

Size: 5-1/2" Cemented with ⁵⁰⁰ ~~450~~ SX

TOC: 3270 feet determined by temp survey

Hole size: 7-7/8"

Total Depth: 6269'

Injection Interval

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

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

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Paddock
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

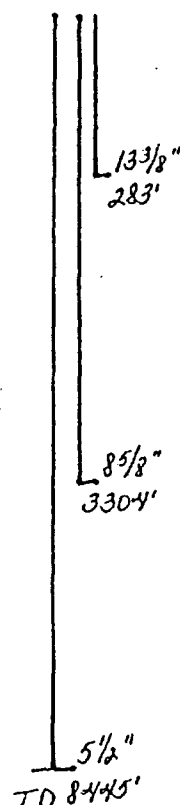
(Above) Glorieta

INJECTION WELL DATA SHEET

Penroc		C. S. Caylor		
OPERATOR		LEASE		
4F	1653' FNL & 1558' FWL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
7-14-52

Surface Casing

Size: 13-3/8" Cemented with 280 SX

TOC: Surface feet determined by calc

Hole size: 18"

Intermediate Casing

Size: 8-5/8" Cemented with 800 SX

TOC: 853 feet determined by 50% calc

Hole size: 12-1/4"

Long String

Size: 5-1/2" Cemented with 800 SX

TOC: 4087 feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 8445'

Injection Interval

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

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

Other Data

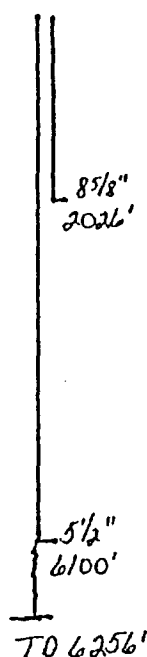
- Name of the injection formation:
- Name of Field or Pool (If applicable) Lovington Abo
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
(Above) Drinkard

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#56	1650' FNL & 1733' FWL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
10-7-53

Surface Casing

Size: 8-5/8" Cemented with 975 SX

TOC: Surface feet determined by calc

Hole size: //

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 400 SX

TOC: 4139 feet determined by temp survey

Hole size: 7 7/8

Total Depth: 6256'

Injection Interval

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

I

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INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#55	1879' FNL & 2248' FEL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completion
6-20-53

Converted to
Injection 1/71

Surface Casing
 Size: 8-5/8" Cemented with ¹⁰²⁵~~1595~~ SX
 TOC: Surface feet determined by ^{Circ}~~calc~~
 Hole size: 11
Intermediate Casing
 Size: Cemented with SX
 TOC: feet determined by
 Hole size:
Long String
 Size: 5-1/2" Cemented with 400 SX
 TOC: 3971 feet determined by 80% calc
 Hole size: 7 7/8
 Total Depth: 6250'
Injection Interval
 6120 feet to 6250 feet
 (perforated or open-hole, indicate which)

Tubing size 2-3/8 lined with IPC set in a - packer
at 6067 feet. (Or describe any other casing-tubing seal).

Other Data

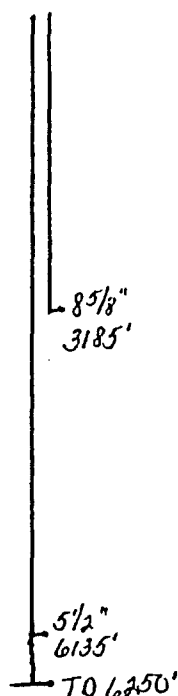
- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#54	1650' FNL & 660' FEL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
2-6-54

Surface Casing

Size: 8-5/8" Cemented with 1595 SX

TOC: Surface feet determined by catc ^{CIRC}

Hole size: //

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 5-1/2" Cemented with 435 SX

TOC: 3537 feet determined by temp survey

Hole size: 7 7/8

Total Depth: 6250'

Injection Interval

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

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

Other Data

- Name of the injection formation:
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

SWD
TA

150

INJECTION WELL DATA SHEET

Araho		State L "C"		
OPERATOR		LEASE		
SWD 1-I	2190' FSL & 560' FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
11-26-59

Dry Hole
TA

Surface Casing

Size: 13-3/8" Cemented with 450 SX

TOC: Surface feet determined by calc

Hole size: 17-1/2"

Intermediate Casing

Size: Cemented with SX

TOC: feet determined by

Hole size:

Long String

Size: 8-5/8" Cemented with 1500 SX

TOC: ²⁷⁶⁵ Surface feet determined by ^{TS} 80% calc

Hole size: 11"

Total Depth: 12,704

Injection Interval

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

Tubing size - lined with - set in a - packer
at - feet. (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? Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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		Lovington San Andres		
OPERATOR		LEASE		
#61	2545' FNL & 100' FWL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
3-15-90

Surface CasingSize: 13-3/8 " Cemented with 450 SXTOC: Surface feet determined by circ.Hole size: 17-1/2"Intermediate CasingSize: 8-5/8 " Cemented with 800 SXTOC: Surface feet determined by calcHole Size: 12-1/4"Long StringSize: 5-1/2 " Cemented with 940 SXTOC: 262 feet determined by calcHole Size: 7-7/8"Total Depth: 5400'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 San Andres
- Name of Field or Pool (If applicable) Lovington San Andres
- 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

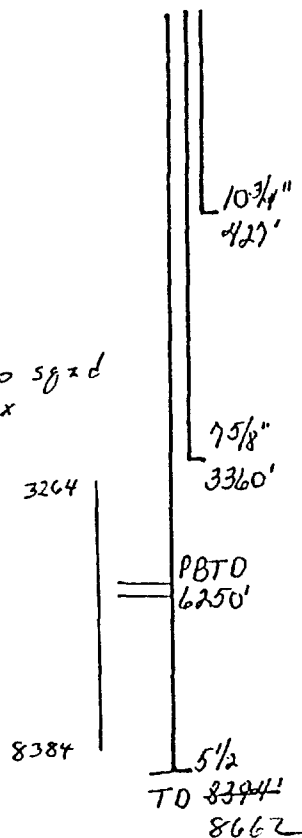
Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR	1980	LEASE		
#66	2080' FSL & 660' FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
4-16-53

Converted to
Injection 12/66

liner top 58' d
w/ 200 SX

Surface Casing

Size: 10-3/4" Cemented with 500 SX

TOC: Surface feet determined by ^{CIRC} calc

Hole size: 15

Intermediate Casing

Size: 7-5/8" Cemented with 2400 SX

TOC: Surface feet determined by ^{CIRC} calc

Hole size: 9-7/8"

Long String

Size: 5-1/2" Cemented with 950 SX

TOC: Surface feet determined by ^{file} 80% calc

Hole size: 6-3/4"

Total Depth: 8394' 8662

Injection Interval

6134 feet to 6240 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 6066 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#49	1980' FSL & 660' FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataSurface CasingSize: 13" Cemented with 250 SXTOC: Surface feet determined by circ.Hole size: ?Intermediate CasingSize: 9-5/8" Cemented with 250 SXTOC: 2350 feet determined by calcHole Size: ?Long StringSize: 7" Cemented with 259' SXTOC: 3090 feet determined by calcHole Size: ?Total Depth: 4960'Injection Interval4556 feet to 4960 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
Baker Model AD-1 packer at 4417 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
- 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#48	1980' FSL & 1980' FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

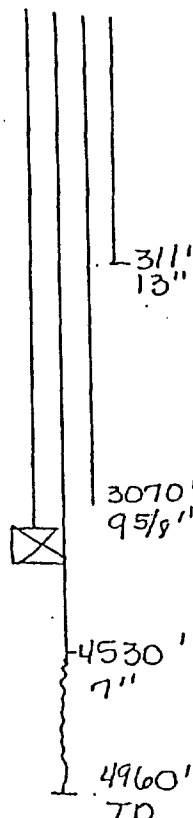
Tubular DataSurface CasingSize: 13 " Cemented with 250 SXTOC: Surface feet determined by calcHole size: 17-1/4"Intermediate CasingSize: 9-5/8 " Cemented with 250 SXTOC: 2251 feet determined by calcHole Size: 12"Long StringSize: 7 " Cemented with 225 SXTOC: 3119 feet determined by calcHole Size: 8-3/4"Total Depth: 4960'Injection Interval4530 feet to 4960 feet
(perforated or open-hole, indicate which)

Tubing size 2-7/8" lined with IPC set in a
(material)
Baker Model 'A' packer at 4526 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres
2. Name of Field or Pool (If applicable) Lovington San Andres
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.
Underlying-Grayburg

Completed
5-21-39

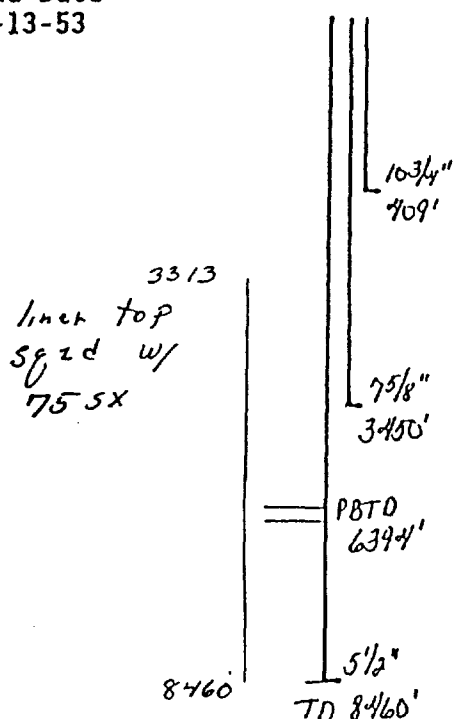


INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock		
OPERATOR		LEASE		
#65	2310' FSL & 2310' FEL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Spud Date
6-13-53

Surface Casing

Size: 10-3/4" Cemented with 500 SX

TOC: Surface feet determined by ^{CIRC} calc

Hole size: 15

Intermediate Casing

Size: 7-5/8" Cemented with 1136 SX

TOC: Surface feet determined by calc

Hole size: 9 7/8

Long String

Size: 5-1/2" Cemented with 800 SX

TOC: 3780 feet determined by temp survey

Hole size: 6 3/4

Total Depth: 8460'

Injection Interval

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

Tubing size - lined with - set in a - packer

at - feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Paddock
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Amerada Hess		State L "A"		
OPERATOR		LEASE		
12	2310' FSL & 2310' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
2-23-53

Cement to be raised pursuant to order R 9431

Surface Casing

Size: 13-3/8. Cemented with 250 SX

TOC: Surface : feet determined by calc

Hole size: 17-1/2"

Intermediate Casing

Size: 8-5/8 ~ Cemented with 1500 SX

TOC: 1039 Surface feet determined by 75 calc

Hole Size: 11"

Long String

Size: 5-1/2 " Cemented with 600 SX

TOC: 5614 feet determined by temp survey

Hole Size: 7-7/8"

Total Depth: 8440'

Infection 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) Lovington Abo
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).

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

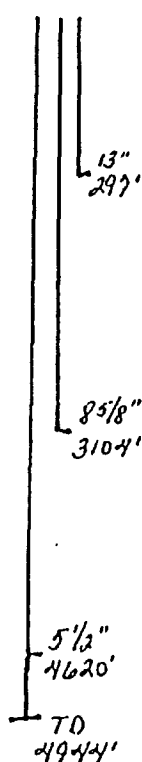
INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
47	1980' FNL & ¹⁹⁸⁰ 1986' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
7-6-39

Converted
to Injection
8-6-69

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 500 SX

TOC: 1572 feet determined by 50% calc

Hole size: 11"

Long String

Size: 5-1/2" Cemented with 230 SX

TOC: 3367 feet determined by 80% calc

Hole size: 7-7/8"

Total Depth: 4944'

Injection Interval

4620 feet to 4935 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 4517 feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation: San Andres
 2. Name of Field or Pool (If applicable) Lovington San Andres
 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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

(Above) Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

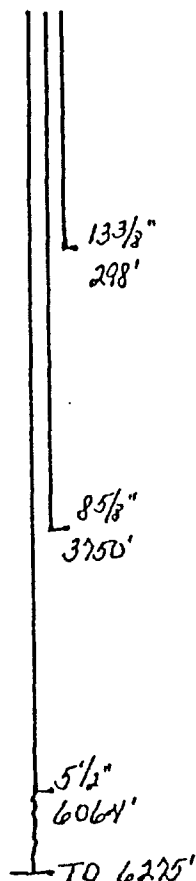
Lovington Paddock

OPERATOR		LEASE		
#64	1980' FSL & 1880' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
12-18-53

Converted to
Injection 12/66



Surface Casing

Size: 13-3/8" Cemented with ²⁹⁵300 SX
TOC: Surface feet determined by ^{CIRC}calc
Hole size: 17 1/2

Intermediate Casing

Size: 8-5/8" Cemented with 1500 SX
TOC: ⁶⁰⁷Surface feet determined by ^{TS}calc
Hole size: 11

Long String

Size: 5-1/2" Cemented with 550 SX
TOC: ³⁸³⁴3068 feet determined by ^{TS}80% calc
Hole size: 7-7/8"

Total Depth: 6275'

Injection Interval

6064 feet to 6275 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 5979 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

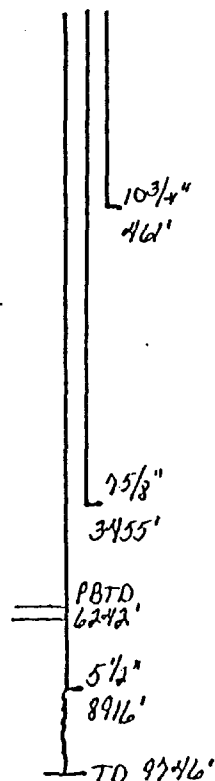
INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation			Lovington Paddock		
OPERATOR			LEASE		
#62	1980' FSL & 560' FEL		2	17S	36E
WELL NO.	FOOTAGE LOCATION		SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
6-19-53

5 1/2" liner
3258 - 8916

Surface Casing

400

Size: 10-3/4" Cemented with 600 SX

TOC: Surface feet determined by calc

Hole size: 13-3/4"

Intermediate Casing

1400

Size: 7-5/8" Cemented with 1136 SX

TOC: Surface feet determined by calc

Hole size: 9-7/8"

Long String

Size: 5-1/2" Cemented with 800 SX

TOC: ^{Top of liner} Surface feet determined by 80% calc ^{File}

Hole size: 6-3/4"

Total Depth: 9746'

Injection Interval

6169 feet to 6194 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a - packer
at 6073 feet. (Or describe any other casing-tubing seal).

Other Data

- Name of the injection formation: Paddock
- Name of Field or Pool (If applicable) Paddock
- Is this a new well drilled for Injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.
Above Glorieta

INJECTION WELL DATA SHEET

Oryx Energy Company		Maggie Caylor		
OPERATOR		LEASE		
3	660' FNL & 665' FWL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

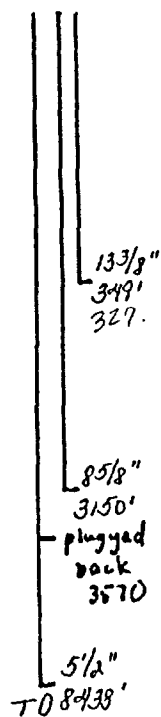
Tubular Data

Completed
3-19-52

Sidetrack
6-28-90

Well Plugged
Back to 3570'
Wellbore has
8-5/8" csg.
set @ 3150' &
cmt'd. w/1200
SXS
sidetracked

5 1/2" set at 5297'
30 SX below 170' above
TOC 3570

Surface Casing

Size: 13-3/8" Cemented with 300 SX
TOC: Surface feet determined by calc

Hole size: 17-1/4"

Intermediate Casing

Size: 8-5/8" Cemented with 1200 SX
TOC: Surface feet determined by calc

Hole size: 11"

Long String

Size: 5-1/2" Cemented with 410 SX
TOC: 3117 feet determined by temp survey
6057 feet determined by 80% calc provided by Oryx

Hole size: 7-3/4"

Total Depth: 8438'

Injection Interval

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

Tubing size - lined with - set in a - packer

at - feet. (Or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation:
2. Name of Field or Pool (If applicable) Lovington Abo
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 been perforated in any other zone(s)? List all such perforated intervals and give plugging details (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.

(Above) Drinkard

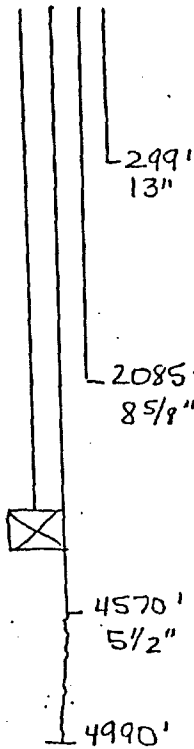
INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#58	2310' FNL & 1309' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
5-15-41

deepen to 5070



Surface Casing

Size: 13 " Cemented with 180 SX

TOC: Surface feet determined by circ

Hole size: 17-1/4"

Intermediate Casing

Size: 8-5/8 " Cemented with 400 SX

TOC: 860 feet determined by calc

Hole Size: 11"

Long String

Size: 5-1/2 " Cemented with 200 SX

TOC: 3479 feet determined by calc

Hole Size: 7-7/8"

Total Depth: 4990'

Injection Interval

4570 feet to 5070 feet
(perforated or open-hole, indicate which).

Tubing size 2- /8 lined with IPC set in a
(material)
packer at 4550 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
- 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#40	1980 FNL & 660 FEL	1	T17S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
12/4/39

313' 13"	Surface Casing	120
	Size: 13" Cemented with 100 SX	
	TOC: Surface feet determined by circulation	
	Hole size: 17 1/4"	
3091' 8 5/8"	Intermediate Casing	250
	Size: 8 5/8" Cemented with 600 SX	
	TOC: 1050 feet determined by calc 50%	
	Hole Size: 11"	
3091' 8 5/8"	Long String	260 + 50
	Size: 5 1/2" Cemented with 300 SX	
	TOC: 3680 feet determined by calc 80%	
	Hole Size: 7 7/8"	
4579' 5 1/2"	Total Depth: 4950'	
	Injection Interval	
4950' TD	4579 feet to 4950 feet (perforated or open-hole, indicate which)	

Tubing size 2 3/4 lined with IPC (material) set in a
 (brand & model) packer at 4519 feet.
 (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
- 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#31	660' FNL & 1980' FWL	1	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
12-22-39

Deepened
6-20-87

Surface Casing

Size: 13 " Cemented with 200 SX

TOC: Surface feet determined by circ

Hole size: 17-1/4"

291'
13"

Intermediate Casing

Size: 8-5/8 " Cemented with 500 SX

TOC: 2021 feet determined by calc

3109'
8 3/8"

Hole Size: 11"

Long String

Size: 5-1/2 " Cemented with 325 SX

TOC: 2890 feet determined by calc 80%

4541'
5 1/2"

Hole Size: 7-7/8"

4960'
TD

Total Depth: 5125

Injection Interval

5125'
TD

4541 feet to 5125 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
water flood tension packer at 4499 feet.
(brand & model)
(or describe any other casing-tubing seal).

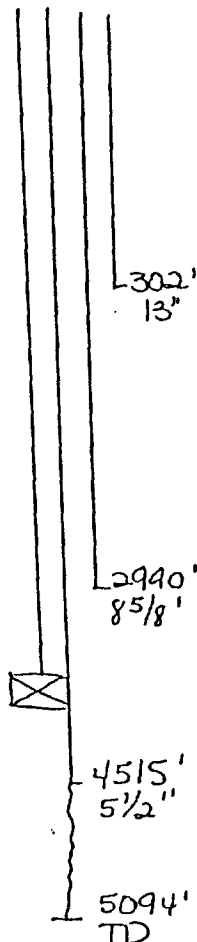
Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Lovington San Andres
- 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.

Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#25	1980' FEL & 660' FSL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataSurface CasingSize: 13 " Cemented with 200 SXTOC: Surface feet determined by circHole size: 17-1/4"Intermediate CasingSize: 8-5/8 " Cemented with 400 SXTOC: 1765 feet determined by calcHole Size: 11"Long StringSize: 5-1/2 " Cemented with 200 SXTOC: 3424 feet determined by calcHole Size: 7-7/8"Total Depth: 5094'Injection Interval4515 feet to 5090 feet
(perforated or open-hole, indicate which)Completed
10-18-39

Tubing size 2- 1/8 lined with IPC set in a
waterflood tension packer at 4495 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
- 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#12	1980' FSL & 1980' FWL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
7-5-45

Deepened
7/87

Surface Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole size: _____

Intermediate Casing

Size: 8-5/8 " Cemented with 500 SX

TOC: _____ surface feet determined by calc 80%

Hole Size: 11"

Long String

Size: 5-1/2 " Cemented with 450 SX

TOC: 2435 feet determined by calc 80%

Hole Size: 7-7/8"

Total Depth: 5055'

Injection Interval

4580 feet to 5055 feet
(perforated or open-hole, indicate which)

2080'
8 5/8"
4580'
5 1/2"
4490'
TD
5055'
TD

Tubing size 2 3/8 lined with IPC set in a
(material)
Water flood-tension packer packer at 4560 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
- 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#57	660 FSL & 660 FWL	36	T16S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 200 SX
 TOC: Surface feet determined by circulation
 Hole size: 17 "

Intermediate Casing

Size: 9 5/8 " Cemented with 200 SX
 TOC: 1509 feet determined by 70% calc
 Hole Size: 12 1/4 "

Long String

Size: 7 " Cemented with 250 SX
 TOC: 3266 feet determined by 70% calc
 Hole Size: 8 3/4 "

Total Depth: 5144'

Injection Interval

4640 feet to 5144 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with IPC set in a
 (material)
waterflood tension packer at 4620 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

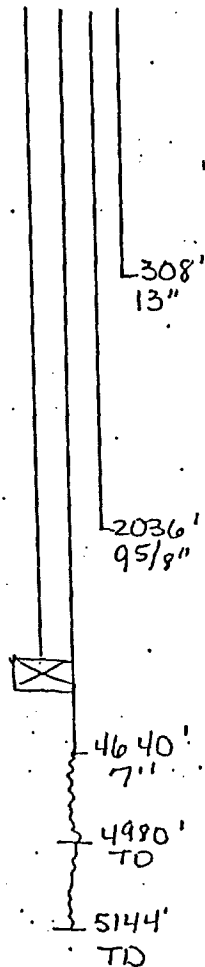
Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Lovington San Andres
- 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.
Underlying - Grayburg

Gb Pore 4399-4644
 10-31-86

Completed
 8/25/39

Deepened
 5144'
 11/86



INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#43	1980 FNL & 660 FWL	1	T17S	R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13" Cemented with 200 SX
 TOC: Surface feet determined by circulation
 Hole size: 17 1/2

Intermediate Casing

Size: 8 5/8" Cemented with 600 SX
 TOC: 199 feet determined by 50% calc
 Hole Size: 11"

Long String

Size: 5 1/2" Cemented with 350 SX
 TOC: 2679 feet determined by 80% calc
 Hole Size: 7 7/8"
 Total Depth: 4990'

Injection Interval

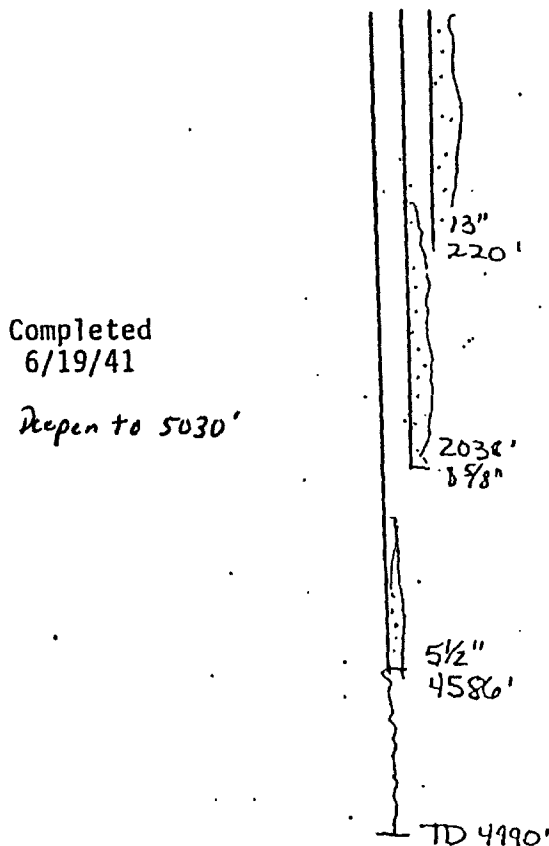
4546 feet to 5030 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with IPC set in a
 (material)
 packer at 4536 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) Lovington San Andres
- 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.

Underlying - Grayburg



Completed
 6/19/41
 Deepen to 5030'

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation	Lovington San Andres			
OPERATOR	LEASE			
#45	1980' FNL & 1980' FEL	2	17S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataCompleted
5-26-43Surface CasingSize: 13 " Cemented with 175 SXTOC: Surface feet determined by circHole size: 17"Intermediate CasingSize: 8-5/8 " Cemented with 600 SXTOC: 213 feet determined by calcHole Size: 11"Long StringSize: 5-1/2 " Cemented with 400 SXTOC: 2396 feet determined by calcHole Size: 7-7/8"Total Depth: 5147'Injection Interval4577 feet to 5147 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 — lined with IPC set in a
(material)
packer at 4527 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) Lovington San Andres
- 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.

Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#39	1985 FNL & ⁶¹⁶ 610 FWL	6	T17S	R37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 13 " Cemented with 200 SX

TOC: Surface feet determined by circulation

Hole size: 15 "

Intermediate Casing

Size: 9 5/8 " Cemented with 500 SX

TOC: 1506 feet determined by 50% calc

Hole Size: 12 "

Long String

Size: 7 " Cemented with 200 SX

TOC: 3245 feet determined by 80% calc

Hole Size: 8 3/4 "

Total Depth: 4945'

Injection Interval

4522 feet to 4975 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with IPC (material) set in a
packer at 4570 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
- 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.
Underlying - Grayburg

Completed
10/28/39

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#37	330' FNL & 990' FEL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
7-24-46

Surface Casing

Size: 13 " Cemented with 20 SX

TOC: Surface feet determined by circ

Hole size: 15"

Intermediate Casing

Size: 7-5/8 " Cemented with 500 SX

TOC: Surface feet determined by calc

Hole Size: 9-3/4"

Long String

Size: 5-1/2 " Cemented with 290 SX

TOC: Surface feet determined by calc

Hole Size: 6-1/4"

Total Depth: 4943'

Injection Interval

4560 — feet to 5030 — feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 — lined with — IPC set in a
(material)
packer at 4510 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
- 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
#35	339' FNL & 1890' FWL	6	17S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
5-4-39

Deepen to 5040

323'
13"

2950'
9 5/8"

4570'
7"

4942'
TD

Surface Casing

Size: 13 " Cemented with 200 SX

TOC: Surface feet determined by circ

Hole size: 17-1/4"

Intermediate Casing

Size: 9-5/8" " Cemented with 400 SX

TOC: 1644 feet determined by calc

Hole Size: 12"

Long String

Size: 7 " Cemented with 300 SX

TOC: 1789 feet determined by calc

Hole Size: 8-3/4"

Total Depth: 4942'

Injection Interval

4570 — feet to 5040 — feet
(perforated or open-hole, indicate which)

Tubing size 2 7/8 " — lined with IPC — set in a
(material)
packer at 4520 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation — San Andres
2. Name of Field or Pool (If applicable) Lovington San Andres
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.

Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation	Lovington San Andres Unit			
OPERATOR	LEASE			
#17	1980 FSL 990 FEL	31	T-16S	R37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 450 SXTOC: Surface feet determined by Circ. calcHole size: 10 1/4

Intermediate Casing

Size: " Cemented with SXTOC: feet determined by Hole Size:

Long String

Size: 5 1/2 " Cemented with 400 SXTOC: 1832 feet determined by 80% calcHole Size: 7 1/4Total Depth: 4935'

Injection Interval

4623 feet to 5090 feet
(perforated or open-hole, indicate which)Tubing size 2 3/8 lined with IPC set in awater flood tension packer packer at 4603 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
- 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.

Underlying - GrayburgCompleted
9/17/46deepen to
5090

8 5/8"
2050'

4623'
5 1/2"

TO 4935'

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington San Andres

OPERATOR		LEASE		
#13	1760' FSL & 440' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular DataCompleted
12-16-39Surface CasingSize: 13 ~ Cemented with 225 SXTOC: Surface feet determined by calcHole size: ?Intermediate CasingSize: 8-5/8 ~ Cemented with 250 SXTOC: 2235 feet determined by calcHole Size: 11"Long StringSize: 5-1/2 ~ Cemented with 150 SXTOC: 2818 feet determined by calcHole Size: 6-3/4"Total Depth: 5068Injection Interval4518 feet to 5068 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
waterflood tension packer at 4445 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
- 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres		
OPERATOR		LEASE		
15	1650' FSL & 1650' FWL	31	16S	37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
6-1-39

Deepened
7-23-86

Surface Casing

Size: 13" Cemented with 200 SX

TOC: Surface feet determined by calc

Hole size: 17-1/4"

Intermediate Casing

Size: 9-5/8" Cemented with 500 400 SX

TOC: 1818 feet determined by calc

Hole Size: 12"

Long String

Size: 7" Cemented with 200 SX

TOC: 3840 feet determined by calc

Hole Size: 8-3/4"

Total Depth: 5110'

Injection Interval

4531 feet to 5110 feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
(material)
Waterflood tension packer at 4510 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

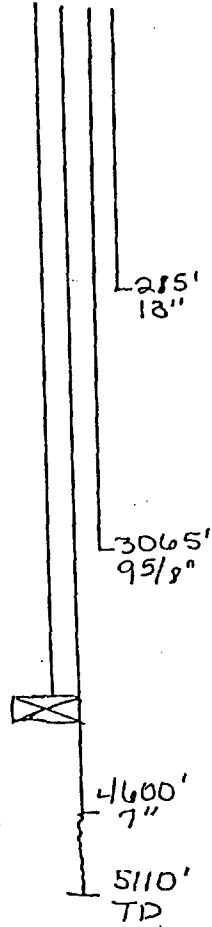
- Name of the injection formation San Andres
- Name of Field or Pool (If applicable) Lovington San Andres
- Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? Production
- Has the well ever be perforated in any other zone(s)? List all such perforated 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#10	1980' FNL & 1980' FEL	36	16S	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Completed
4-4-39



Surface Casing

Size: 13 " Cemented with 250 SX
 TOC: Surface feet determined by Circulation
 Hole size: 17-1/4"

Intermediate Casing

Size: 9-5/8 " Cemented with 250 SX
 TOC: 2246 feet determined by Calc
 Hole Size: 12"

Long String

Size: 7 " Cemented with 225 SX
 TOC: 3189 feet determined by Calc
 Hole Size: 8-3/4"

Total Depth: 5110'

Injection Interval

4600 feet to 5110 feet
 (perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with IPC set in a
 (material)
Water Flood-tension packer packer at 4580 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
- 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.
Underlying-Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#7	1980 FNL & 1980 FEL	31	T16S	R37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 485 SXTOC: Surface feet determined by Circ calc.Hole size: 10 1/4

Intermediate Casing

Size: " Cemented with SXTOC: feet determined by Hole Size:

Long String

Size: 5 1/2 " Cemented with 375 SXTOC: 1711 feet determined by 80% calc.Hole Size: 7 1/4Total Depth: 4955'

Injection Interval

4620 feet to 4990 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 " lined with IPC set in a
(material)
packer at 4530 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres
2. Name of Field or Pool (IF applicable) Lovington San Andres
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.
Underlying - Grayburg

Completed
1/5/49deepen to 4955'
49908 5/8"
2043'5 1/2"
4620'
TD 4955'

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation OPERATOR Lovington San Andres Unit LEASE

#5 660 FNL & 600 FEL 36 T16S R36E
WELL NO. FOOTAGE LOCATION SEC. TOWNSHIP RANGE

Tubular Data

Completed
1/30/40

2660

Surface Casing

Size: 8 5/8" Cemented with 500 400 SX

TOC: Surface feet determined by C+C calc

Hole size: 11"

Intermediate Casing

Size: 8 5/8" Cemented with 2160 2106 SX

TOC: feet determined by

Hole Size:

Long String

Size: 5 1/2" Cemented with 250 200 SX

TOC: 3535' feet determined by 80% calc

Hole Size: 7 7/8"

Total Depth: 5130'

Injection Interval

4625 feet to 5130 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with IPC set in a
(material)
waterflood tension packer packer at 4605 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
- 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.
Underlying - Grayburg

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington San Andres Unit		
OPERATOR		LEASE		
#62	1185 FNL & 152 FEL	2	T175 R36E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 275 SX
 TOC: surface feet determined by circulation
 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 2050 SX
 TOC: surface feet determined by circulation
 Hole Size: 7 7/8
 Total Depth: 5120

Injection Interval

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

Tubing size 2 7/8" lined with _____ IPC _____ set in a
 _____ (material)
 _____ packer at 4968 feet.
 (brand & model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation _____
- Name of Field or Pool (If applicable) Lovington Grayburg San Andres
- 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).

- 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

Lovington San Andres Unit

OPERATOR

LEASE

#64

80ENL & 1330 FWL

1

T17S-R36E

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 1525 SX

TOC: surface feet determined by circulation

Hole Size: 7 7/8

Total Depth: 5113

Injection Interval

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

Tubing size 2 7/8 lined with IPC set in a
 (material)
 packer at 4495 feet.

(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation
- Name of Field or Pool (If applicable) Lovington Grayburg San Andres
- Is this a new well drilled for injection?
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).
- 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		Lovington San Andres Unit		
OPERATOR		LEASE		
#65	1168 FSL & 1330 FWL	36	T16S R36E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 325 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 circ.

Hole Size: 7 7/8

Total Depth: 5112

Injection Interval

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

Tubing size 2 7/8 lined with IPC set in a
(material)
packer at 4712 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation NA
- Name of Field or Pool (If applicable) Lovington Grayburg San Andres
- 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).
- 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

Lovington San Andres Unit

OPERATOR

LEASE

#66

1244 FNL & 2592 FEL

36

T 16-S

R36 East

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 850 SX

TOC: 2780 feet determined by Bond Log

Hole Size: 7 7/8

Total Depth: 5130

Injection Interval

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

Tubing size 2 7/8 lined with IPC set in a
(material)
4703 packer at feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation NA
- Name of Field or Pool (If applicable) Lovington San Andres
- 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.

INJECTION WELL DATA SHEET

GREENHILL PETROLEUM CORPORATION		Lovington San Andres Unit		
OPERATOR		LEASE		
#67	2444 FSL & 281 FWL	31	T16S-R37E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 325 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 1550 SX

TOC: surface feet determined by circulation

Hole Size: 7 7/8

Total Depth: 5113

Injection Interval

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

Tubing size 2 7/8 lined with IPC set in a
(material)
 packer at 4588 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 Grayburg San Andres
- 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.
- 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		Lovington San Andres Unit		
OPERATOR		LEASE		
#68	238 FSL & 35 FWL	31	T16S-R37E	
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 625 SX

TOC: 750 feet determined by TS

Hole Size: 7 7/8

Total Depth: 5100

Injection Interval

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

Tubing size 2 7/8 lined with IPC set in a
(material)
packer at 4604 feet.
(brand & model)
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation
- Name of Field or Pool (If applicable) Lovington Grayburg San Andres
- 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.

INJECTION WELL DATA SHEET

Greenhill Petroleum		Lovington Paddock Unit		
OPERATOR		LEASE		
#86	1595 FNL & 2485 FEL	36	T16S-R36E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 1107 SX
 TOC: Surface feet determined by circulation
 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 1900 SX
 TOC: surface feet determined by circ.
 Hole Size: 7 7/8
 Total Depth: 6350

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).

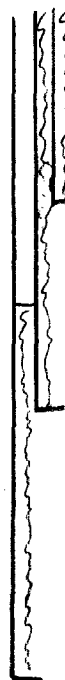
Other Data

- Name of the injection formation
- Name of Field or Pool (If applicable) Lovington Paddock
- 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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock Unit		
OPERATOR		LEASE		
#87	BrL 1645 FNL & 1162 FEL SL 1138 FNL & 1546 FEL	36	T16S-R36E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data



Surface Casing

Size: 13 3/8 " Cemented with 375 SX

TOC: Surface feet determined by circ.

Hole size: 17 1/2

Intermediate Casing

Size: 8 5/8 " Cemented with 850 SX

TOC: Surface feet determined by circ.

Hole Size: 12 1/4

Long String

Size: 5 1/2 " Cemented with 1205 SX

TOC: 1040 feet determined by bond long

Hole Size: 7 7/8

Total Depth: 6467

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) Lovington Paddock
- 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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington Paddock Unit

OPERATOR

LEASE

#88

1642 FNL & 302 FWL

31

T16S-R37E

WELL NO.

FOOTAGE LOCATION

SEC.

TOWNSHIP

RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 1350. SX

TOC: surface feet determined by circ.

Hole size: 12 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 2019 SX

TOC: 5 1/2 feet determined by 6349

Hole Size: 5 1/2

Long String

Size: 5 1/2 " Cemented with 1925 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8

Total Depth: 6350

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) Lovington Paddock
- 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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock Unit		
OPERATOR		LEASE		
#89	1275 FWL & 1745 FNL	31	T16S-R37E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 1350 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 1400 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8

Total Depth: 6350

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) Lovington Paddock
- 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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock Unit	
OPERATOR		LEASE	
#90	1355 FWL & 2535 FSL	36	T16S-R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP RANGE

Tubular DataSurface CasingSize: 8 5/8 " Cemented with 1150 SXTOC: surface feet determined by circ.Hole size: 12 1/4Intermediate Casing

Size: _____ " Cemented with _____ SX

TOC: _____ feet determined by _____

Hole Size: _____

Long StringSize: 5 1/2 " Cemented with 1550 SXTOC: surface feet determined by circ.Hole Size: 7 7/8Total Depth: 6350Injection 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) Lovington Paddock
- 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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington Paddock Unit

OPERATOR

LEASE

#93

2470 FSL & 1355 FWL

31

T16S-R37E

WELL NO.

FOOTAGE LOCATION

SEC.

TOWNSHIP

RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 1200 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 1750 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8

Total Depth: 6450

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) Lovington Paddock
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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock Unit	
OPERATOR		LEASE	
#95	SL 1585 FSL and 432 FWL BHL 1186 FSL and 147 FWL	31	T16S-R37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP RANGE

Tubular Data

Surface Casing

Size: 13 3/8" ~ Cemented with 350 SX

TOC: surface feet determined by circ.

Hole size: 17 1/2

Intermediate Casing

Size: 8 5/8" ~ Cemented with 1100 SX

TOC: surface feet determined by circ.

Hole Size: 12 1/4

Long String

Size: 5 1/2" ~ Cemented with 1341 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8

Total Depth: 6420

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) Lovington Paddock
- 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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock Unit		
OPERATOR		LEASE		
#96	1492 FWL & 1070 FSL	31	T16S-37E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8" Cemented with 1200 SX

TOC: surface feet determined by circ.

Hole size: 12 1/4

Intermediate Casing

Size: 8 5/8" Cemented with 1200 SX

TOC: surface feet determined by circ.

Hole Size: 12 1/4

Long String

Size: 5 1/2" Cemented with 1400 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8

Total Depth: 6330

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) Lovington Paddock
- 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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation	Lovington Paddock Unit		
OPERATOR	LEASE		
#97	1228 FEL & 132 FSL	36	T16S-R36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP RANGE

Tubular DataSurface Casing

Size: 8 5/8 " Cemented with 1275 SX
TOC: surface feet determined by circulation
Hole size: 12 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 2031 SX
TOC: 6330 feet determined by 5 1/2
Hole Size: 5 1/2

Long String

Size: 5 1/2 " Cemented with 2200 SX
TOC: surface feet determined by circ
Hole Size: 7 7/8
Total Depth: 6330

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) Lovington Paddock
- 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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation		Lovington Paddock Unit	
OPERATOR		LEASE	
#98	268 FSL & 35 FWL	31	T 16S R 37E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 1270 . SX

TOC: surface feet determined by circ.

Hole size: 12 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 2040 SX

TOC: 6330 feet determined by SH

Hole Size: 12 1/4

Long String

Size: 5 1/2 " Cemented with 2000 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8

Total Depth: 6330

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) Lovington Paddock
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.

INJECTION WELL DATA SHEET

Greenhill Petroleum Corporation

Lovington Paddock Unit

OPERATOR		LEASE		
#99	1540 FEL & 1270 FNL	6	T17S R37E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

Tubular Data

Surface Casing

Size: 8 5/8 " Cemented with 1200 SX

TOC: surface feet determined by circulation

Hole size: 12 1/4

Intermediate Casing

Size: 8 5/8 " Cemented with 1982 SX

TOC: 6499 feet determined by 5 1/2

Hole Size: 12 1/4

Long String

Size: 5 1/2 " Cemented with 1750 SX

TOC: surface feet determined by circ.

Hole Size: 7 7/8

Total Depth: 6500

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) Lovington Paddock
- 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.



GREENHILL PETROLEUM CORPORATION

Incorporated in Delaware, U.S.A.

11490 WESTHEIMER ROAD, SUITE 200
HOUSTON, TEXAS 77077-6841
TELEPHONE (713) 589-8484
FAX (713) 589-9399

OIL CONSERVATION DIVISION
RECEIVED
'91 OCT 7 AM 9 26

October 1, 1991

Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. David Catanach

Re: Lovington San Andres
Lea County, New Mexico

Dear Mr. Catanach:

Enclosed please find the affidavit of legal notice for the following conversion of producing wells to water injection wells in the Lovington San Andres Unit Area.

Well Numbers 9, 21, 24, 26, 29, 33 and 41

Also enclosed are the certified mail return receipts for the offset operators. Please advise if I can provide you with additional information.

Very truly yours,

Michael J. Newport
Land Manager-Permian Basin

MJN:sjs
91.167

Enclosures

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

Sept. 8, 19 91
and ending with the issue dated

Sept. 8, 19 91

Kathi Bearden
General Manager

Sworn and subscribed to before

me this 17 day of

Sept, 19 91

Paula Parrish
Notary Public

My Commission expires _____

Aug. 5, 19 91
(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

September 8, 1991

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 Lovington San Andres Field Area. The purpose of the proposed 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 Section 31, T16S-R37E, Section 36, T16S-R36E, Section 1 and 2, T17S-R36E, Lea County, New Mexico. Well numbers 9, 21, 24, 26, 29, 33 and 41. The injection intervals are approximately between the depths of 4334' and 5240' in the San Andres formation. The maximum injection rates and pressures are 2000 psi and 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.

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "TURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:
Mobil Exploration & Producing
12450 Greenspoint Drive
Houston, Texas 77060-4991
Attn: R. L. Fajkowski

4. Article Number
P 799 533 898

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X *Boudreaux*

7. Date of Delivery
9/11/91

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Apr. 1989

*U.S.G.P.O. 1989-238-815

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1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:
Marathon Oil Co.
5555 San Felipe Road
Houston, Texas 77056

4. Article Number
P 799 533 900

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X *Doug Stahlner*

6. Signature — Agent
X

7. Date of Delivery
9/10

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Apr. 1989

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1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:
Phillips Petroleum
P.O. Box 1967
Houston, Texas 77251-1967

4. Article Number
P 799 533 901

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X *M. Beech*

7. Date of Delivery

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Apr. 1989

*U.S.G.P.O. 1989-238-815

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1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:
Exxon
233 Benmar
Suite 970
Houston, Texas 77060

4. Article Number
P 799 533 902

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X *1001*

7. Date of Delivery

8. Addressee's Address (ONLY if requested and fee paid)



over

GREENHILL PETROLEUM CORPORATION
11490 WESTHEIMER, SUITE 200
HOUSTON, TEXAS 77077
Attn: Mike Newport

Print Sender's name, address, and ZIP Code in the space below.

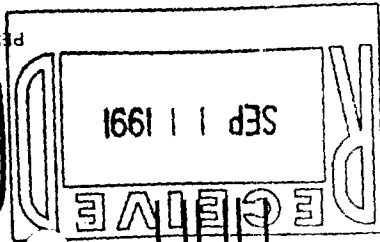
RETURN
TO

SENDER INSTRUCTIONS
Print your name, address and ZIP Code in the space below.
• Complete items 1, 2, 3, and 4 on the reverse.
• Attach to front of article if space permits, otherwise affix to back of article.
• Endorse article "Return Receipt Requested" adjacent to number.

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USE, \$300



GREENHILL PETROLEUM CORPORATION
11490 WESTHEIMER, SUITE 200
HOUSTON, TEXAS 77077
Attn: Mike Newport

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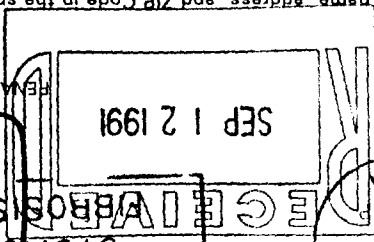
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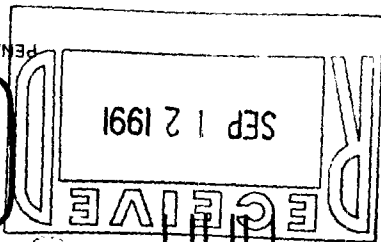
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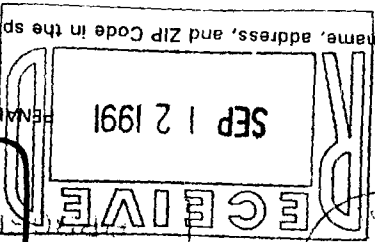
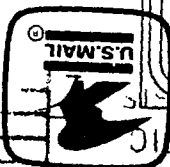
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1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: Texaco, USA P. O. Box 3109 Midland, Texas 79702	4. Article Number P 799 533 819 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

PS Form 3811, Apr. 1989

★ U.S.G.P.O. 1989-238-815

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1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: Amerada Hess P.O. Box 2040 218 West 6th St. Tulsa, Oklahoma 74102 Attn: Bob Cawood	4. Article Number P 799 533 905 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

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1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: City of Lovington P.O. Box 1268 Lovington, New Mexico 88260	4. Article Number P799533936 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature — Addressee X <i>[Signature]</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery 9-11-91	

PS Form 3811, Apr. 1989

★ U.S.G.P.O. 1989-238-815

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over

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OFFICIAL BUSINESS

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- Endorse article "Return Receipt Requested" adjacent to number.

RETURN TO

Greenhill Petroleum Corporation
Attention: Mike Newport
11490 Westheimer, Suite 200
Houston, Texas 77077

Print Sender's name, address, and ZIP Code in the space below.

SEP 16 1991

U.S. MAIL
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OFFICIAL BUSINESS

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SEP 13 1991

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UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

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Greenhill Petroleum Corporation
Attention: Mike Newport
11490 Westheimer, Suite 200
Houston, Texas 77077

Print Sender's name, address, and ZIP Code in the space below.

SEP 13 1991

U.S. MAIL
PENALTY FOR PRIVATE USE, \$300

SEP 13 1991
PM
AND TX

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: Rice Engineering Corp. 122 West Taylor Hobbs, NM 88240	4. Article Number P 799 533 903 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X <i>Ronie Rohloff</i>	
7. Date of Delivery 9-11-91	

PS Form 3811, Apr. 1989

*U.S.G.P.O. 1989-238-815

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1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: Penroc Oil Corporation P.O. Box 5970 5014 Carlsbad Hwy. Hobbs, New Mexico 88241	4. Article Number P 799 533 904 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature — Addressee X <i>[Signature]</i>	8. Addressee's Address (ONLY if requested and fee paid) IB
6. Signature — Agent X	
7. Date of Delivery 9-13-91	

PS Form 3811, Apr. 1989

*U.S.G.P.O. 1989-238-815

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● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: Oryx Energy Company P.O. Box 1861 Midland, Texas 79702-1861	4. Article Number P 799 533 906 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

PS Form 3811, Apr. 1989

*U.S.G.P.O. 1989-238-815

DOMESTIC RETURN RECEIPT

over



Attn: Mike Newport
11490 WESTHEIMER, SUITE 200
HOUSTON, TEXAS 77077
GREENHILL PETROLEUM CORPORATION

Print Sender's name, address, and ZIP Code in the space below.

RETURN

TO

SENDER INSTRUCTIONS

- Print your name, address and ZIP Code in the space below.
- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

OFFICIAL BUSINESS

UNITED STATES POSTAL SERVICE

PENALTY FOR PRIVATE USE, \$300



Attn: Mike Newport
11490 WESTHEIMER, SUITE 200
HOUSTON, TEXAS 77077
GREENHILL PETROLEUM CORPORATION

Print Sender's name, address, and ZIP Code in the space below.

RETURN

TO

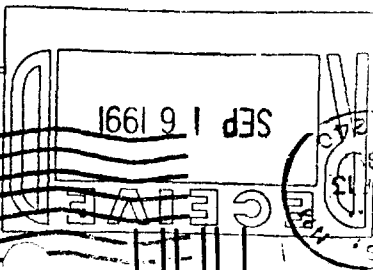
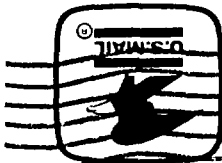
SENDER INSTRUCTIONS

- Print your name, address and ZIP Code in the space below.
- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

OFFICIAL BUSINESS

UNITED STATES POSTAL SERVICE

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11490 WESTHEIMER, SUITE 200
HOUSTON, TEXAS 77077
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