



# GREENHILL PETROLEUM CORPORATION

16010 BARKER'S POINT LANE, SUITE 325  
HOUSTON, TEXAS 77079  
TELEPHONE (713) 870-0606  
FAX. (713) 870-1831

Incorporated in Delaware, U.S.A.

December 5, 1989

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

Re: Unorthodox Location and Drilling Permit  
Proposed Well No. 61  
Lovington Grayburg San Andres Field  
Lovington San Andres Unit  
Lea County, New Mexico

Gentlemen:

Greenhill Petroleum Corporation respectfully requests the State of New Mexico Oil Conservation Division grant approval of the proposed unorthodox location and the attached permit to drill well No. 61 in the Lovington Grayburg San Andres Field, Lovington San Andres Unit, located in Lea County, New Mexico.

The Lovington San Andres Unit is presently developed and being waterflooded utilizing a 40-acre well density. It is believed that infill development using a 20-acre well density will improve waterflood sweep efficiency and will increase secondary oil recovery. The proposed location for well No. 61 is located in the interior of the unit and is not competitive with offset wells outside the unit. Information gathered as a result of drilling this infill well will be utilized in evaluating additional infill development potential in the unit and ultimately may be used to evaluate the feasibility of tertiary recovery.

Greenhill Petroleum Corporation wishes to commence drilling operations on the two proposed wells as soon as possible and would appreciate a response to this request at your earliest convenience.

Sincerely,

GREENHILL PETROLEUM CORPORATION

  
Gene Linton  
Production Coordinator

GL/tlc

Enclosures

89 DEC 6 PM 12 45  
OIL CONSERVATION DIVISION  
RECEIVED



Submit to Appropriate District Office  
 State Lease - 6 copies  
 Fee Lease - 5 copies

State of New Mexico  
 Energy, Minerals and Natural Resources Department

Form C-101  
 Revised 1-1-89

**OIL CONSERVATION DIVISION**  
 P.O. Box 2088  
 Santa Fe, New Mexico 87504-2088

**DISTRICT I**  
 P.O. Box 1980, Hobbs, NM 88240

**DISTRICT II**  
 P.O. Drawer DD, Artesia, NM 88210

**DISTRICT III**  
 1000 Rio Brazos Rd., Aztec, NM 87410

|   |
|---|
| API NO. ( assigned by OCD on New Wells)   |
| 5. Indicate Type of Lease<br>STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/> |
| 6. State Oil & Gas Lease No.  |

|   |                |   |                                |   |  |
|---|----------------|---|--------------------------------|---|--|
| <b>APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK</b>  |                |   |                                |   |  |
| 1a. Type of Work:<br>DRILL <input checked="" type="checkbox"/> RE-ENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>   |                |   |                                | 7. Lease Name or Unit Agreement Name<br>Lovington San Andres Unit |  |
| b. Type of Well:<br>OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/> |                |   |                                | 8. Well No.<br>61   |  |
| 2. Name of Operator<br>Greenhill Petroleum Corp.  |                |   |                                | 9. Pool name or Wildcat<br>Lovington Grayburg San Andre           |  |
| 3. Address of Operator<br>16010 Barker's Point Lane, #325, Houston, TX 77079  |                |   |                                |   |  |
| 4. Well Location<br>Unit Letter <u>E</u> : <u>2545</u> Feet From The <u>North</u> Line and <u>100</u> Feet From The <u>West</u> Line<br>Section <u>6</u> Township <u>17S</u> Range <u>37E</u> NMPM Lea County |                |   |                                |   |  |
|   |                | 10. Proposed Depth<br>5300'                     |                                | 11. Formation<br>San Andres                                       | 12. Rotary or C.T.<br>Rotary               |
| 13. Elevations (Show whether DF, RT, GR, etc.)<br>3818' GL  |                | 14. Kind & Status Plug. Bond<br>Blanket on file | 15. Drilling Contractor<br>TBD |   | 16. Approx. Date Work will start<br>1-1-90 |
| <b>17. PROPOSED CASING AND CEMENT PROGRAM</b>   |                |   |                                |   |  |
| SIZE OF HOLE  | SIZE OF CASING | WEIGHT PER FOOT                                 | SETTING DEPTH                  | SACKS OF CEMENT   | EST. TOP                                   |
| 17-1/2"   | 13-3/8"        | 48#   | 350'                           | 450   | Surface                                    |
| 11"   | 8-5/8"         | 24#   | 2050'                          | 700   | Surface                                    |
| 7-7/8"  | 5-1/2"         | 15.5#   | 5300'                          | 200   | 4150'                                      |

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Gene Linton TITLE Production Coord. DATE 12/5/89

TYPE OR PRINT NAME Gene Linton (713) 870-0606 TELEPHONE NO.

(This space for State Use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

GREENHILL PETROLEUM CORPORATION  
BOP PROGRAM FOR  
LOVINGTON SAN ANDRES UNIT #61

| <u>Casing Program</u> |       |     | <u>BOP Program</u> |               |               |
|-----------------------|-------|-----|--------------------|---------------|---------------|
| Size                  | Depth | Wt  | Grade              | Configuration | Test Pressure |
| 13 3/8"               | 350'  | 48# | H40, STC           | RA            | 200 psi       |
| 8 5/8"                | 2050' | 24# | K55, STC           | RR or RA      | 250/1500 psi  |
| 5 1/2"                | 5300' | 15# | K55, STC           | N/A           |               |

- \* RR - Ram Ram  
RA - Ram Annular  
Diverter - Hydrill may be substituted for a diverter.

Submit to Appropriate District Office  
 State Lease - 4 copies  
 Fee Lease - 3 copies

State of New Mexico  
 Energy, Minerals and Natural Resources Department

Form C-102  
 Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088  
 Santa Fe, New Mexico 87504-2088

DISTRICT I  
 P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
 P.O. Drawer DD, Artesia, NM 88210

DISTRICT III  
 1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

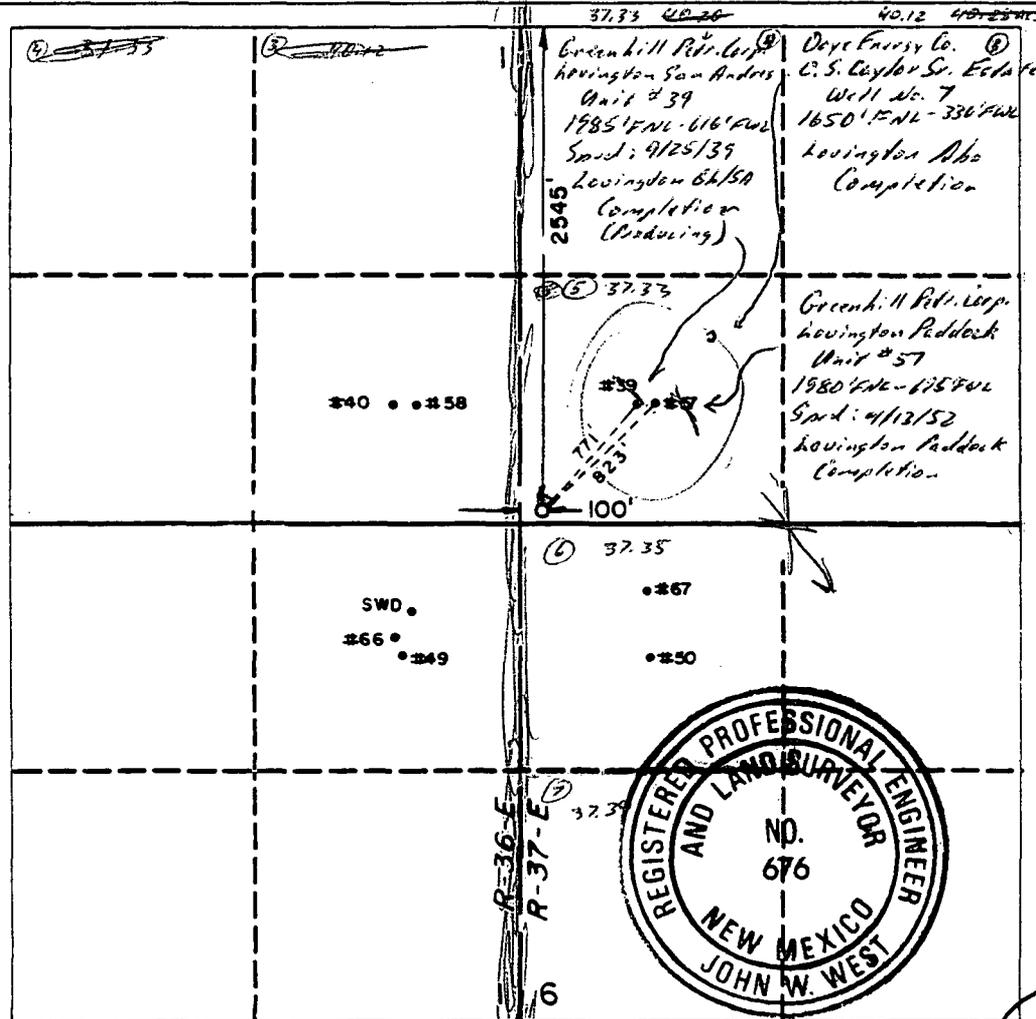
All Distances must be from the outer boundaries of the section

|   |                                   |                  |                                       |               |                                |
|---|-----------------------------------|------------------|---------------------------------------|---------------|--------------------------------|
| Operator<br>GREENHILL PETROLEUM CORPORATION   |                                   |                  | Lease<br>LOVINGTON SAN ANDRES UNIT    |               | Well No.<br>61                 |
| Unit Letter<br>E  | Section<br>6                      | Township<br>17-S | Range<br>37-E                         | County<br>LEA |                                |
| Actual Footage Location of Well:<br>2545 feet from the NORTH line and 100 feet from the WEST line |                                   |                  |                                       |               |                                |
| Ground level Elev.<br>3818.0  | Producing Formation<br>San Andres |                  | Pool<br>Lovington Grayburg San Andres |               | Dedicated Acreage:<br>20 Acres |

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?  
 Yes  No If answer is "yes" type of consolidation \_\_\_\_\_

If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature  
 Gene Linton  
 Printed Name  
 Production Coordinator  
 Position  
 Greenhill Petroleum Corp  
 Company  
 12/5/89  
 Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed  
 NOVEMBER 16, 1989

Signature & Seal of Professional Surveyor

Signature  
 Certificate No. JOHN W. WEST, 676  
 RONALD J. EIDSON, 3239

PROVIDED HOWEVER, That the Kennedy Johnson A Well No. 4 and the well to be drilled in Unit M shall not be placed on injection prior to September 1, 1962.

(2) That the waterflood project shall be governed by Rule 701, including the allowable provisions thereof.

PROVIDED HOWEVER, That unless otherwise agreed to by all parties and evidence thereof furnished the Commission, the transfer of allowables within the project area of this waterflood shall be authorized only insofar as the transfer is made between wells having common royalty ownership.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

LOVINGTON-SAN ANDRES POOL  
(Skelly Unit Waterflood)  
Lea County, New Mexico

Order No. R-2278, Authorizing Skelly Oil Company to Institute a Secondary Recovery Project in the Lovington San Andres Unit Area in the Lovington-San Andres Pool, Lea County, New Mexico, July 12, 1962.

Application of Skelly Oil Company for Approval of a Secondary Recovery Project, Lea County, New Mexico.

CASE NO. 2592  
Order No. R-2278

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on June 28, 1962, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 12th day of July, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(LOVINGTON-SAN ANDRES (SKELLY UNIT WATERFLOOD) POOL—Cont'd.)

(2) That the applicant, Skelly Oil Company, seeks permission to institute a secondary recovery project in the Lovington-San Andres Pool in the Lovington San Andres Unit Area comprising portions of Townships 16 and 17 South, Ranges 36 and 37 East, NMPM, Lea County, New Mexico, by the injection of water into the San Andres formation through 17 wells located in said unit area.

(3) That the wells in the proposed project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the waterflood project should be approved and should be governed by the provisions of Rule 701.

IT IS THEREFORE ORDERED:

(1) That the applicant, Skelly Oil Company, is hereby authorized to institute a waterflood project in the Lovington-San Andres Pool in the Lovington San Andres Unit Area comprising portions of Townships 16 and 17 South, Ranges 36 and 37 East, NMPM, Lea County, New Mexico, by the injection of water into the San Andres formation through the following-described 17 wells:

| Well                                      | Location                |
|---|-------------------------|
| Late Oil Co. Graham #1                    | Unit D, Sec. 31-16S-37E |
| Skelly - State "N" #1                     | Unit B, Sec. 36-16S-36E |
| Rodman Noel State "AE" #2 (to be drilled) | Unit L, Sec. 36-16S-36E |
| Tidewater - State "M" #2 (to be drilled)  | Unit J, Sec. 36-16S-36E |
| Skelly - State "O" #2                     | Unit L, Sec. 31-16S-37E |
| Skelly - State "O" #4                     | Unit J, Sec. 31-16S-37E |
| Tidewater - State "P" #2                  | Unit L, Sec. 32-16S-37E |
| Moran Shipp - State "A" #1                | Unit D, Sec. 5-17S-37E  |
| Skelly - Caylor #1                        | Unit B, Sec. 6-17S-37E  |
| Sunray DX - M. Caylor #1                  | Unit D, Sec. 6-17S-37E  |
| Amerada - State "LA" #6                   | Unit B, Sec. 1-17S-36E  |
| Pan American - State "E" #3               | Unit D, Sec. 1-17S-36E  |
| Pan American - State "E" #10              | Unit B, Sec. 2-17S-36E  |
| Mobil - State "R" #4                      | Unit J, Sec. 2-17S-36E  |
| Amerada - State "LA" #7                   | Unit L, Sec. 1-17S-36E  |
| Mobil - State "R" #1                      | Unit J, Sec. 1-17S-36E  |
| Pan American and Amerada - Caylor #1      | Unit L, Sec. 6-17S-37E  |

(2) That the subject waterflood project shall be governed by the provisions of Rule 701, including the allowable provisions thereof and including the provisions with respect to expansion of the waterflood project.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

Order  
Flood  
R-2278

Applic  
for th  
Count

BY  
9 o'cl  
before  
Consen  
to as  
Comm

NOV  
quorum  
eviden  
Elvis

FIN  
(1)  
by law  
subjec

(2)  
operat  
of Se  
NMPM  
projec  
No. 25

(3)  
the es  
zone in  
wells

(4)  
waterf  
area i

(5)  
applic

IT I  
(1)  
of Sec  
Eddy  
zone.

author  
at unr

(2)  
of such

DON  
above

**(PLAINS UNIT—Cont'd.)**

event of subsequent joinder by any party. the unit operator shall file with the Commission within 30 days after such action counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That this order shall become effective upon the approval of said unit agreement by the Director of the United States Geological Survey, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission in writing of such termination.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

**LOVINGTON SAN ANDRES UNIT**  
Lea County, New Mexico

Order No. R-2277, Approving the Lovington San Andres Unit Agreement, Lea County, New Mexico, July 12, 1962.

*Application of Skelly Oil Company for the approval of a unit agreement, Lea County, New Mexico.*

CASE NO. 2593  
Order No. R-2277

**ORDER OF THE COMMISSION**

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on June 28, 1962, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 12th day of July, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

**FINDS:**

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Skelly Oil Company, seeks approval of the Lovington San Andres Unit Agreement embracing 2,470 acres, more or less, in Township 16 and 17 South, Ranges 36 and 37 East, NMPM, Lea County, New Mexico.

(3) That the proposed unit plan will in principle tend to promote the conservation of oil and gas and the prevention of waste.

**IT IS THEREFORE ORDERED:**

(1) That the Lovington San Andres Unit Agreement is hereby approved.

PROVIDED HOWEVER, That notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the New Mexico Oil Conservation Commission by law relative to the supervision and control of operations for exploration and development of any lands committed to said Lovington San Andres Unit Agreement, or relative to the production of oil and gas therefrom.

(2) That the unit area shall be:

LEA COUNTY, NEW MEXICO

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Section 25: S/2 SE/4

Section 35: S/2 SE/4

Section 36: E/2, E/2 NW/4, and SW/4

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM

Section 31: Lots 1, 2, 3, 4, SE/4 NW/4, E/2 SW/4, SW/4 NE/4, and SE/4

Section 32: W/2 SW/4

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM

Section 1: Lots 1, 2, 3, 4, S/2 N/2, SE/4, N/2 SW/4, and SE/4 SW/4

Section 2: Lots 1, 2, S/2 NE/4, N/2 SE/4

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM

Section 5: Lot 4

Section 6: Lots 1, 2, 3, 4, 5, 6, and SE/4 NW/4 containing 2,470 acres, more or less.

(3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof. In the event of subsequent joinder by any party, the unit operator shall file with the Commission within 30 days after such action counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That this order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission in writing of such termination.

(5) That in the event of subsequent joinder by any party owning an interest in Federal lands, said joinder shall become effective only upon the approval of said unit agreement by the Director of the United States Geological Survey.

(6) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

HOBBS DISTRICT OFFICE

12-11-89

GARREY CARRUTHERS  
GOVERNOR

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

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

- MC \_\_\_\_\_
- DHC \_\_\_\_\_
- NSL  \_\_\_\_\_
- NSP \_\_\_\_\_
- SWD \_\_\_\_\_
- WFX \_\_\_\_\_
- PMX \_\_\_\_\_

Gentlemen:

I have examined the application for the:

Greenhill Petroleum Corp. Loving LA Unit #61-E 6-17-37  
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

*Jerry Sexton*  
Jerry Sexton  
Supervisor, District 1

/ed