

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)

30 025-31109

5. Indicate Type of Lease

STATE ☒

FEE ☐

6. State Oil & Gas Lease No.

B7896

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work:

DRILL ☒

RE-ENTER ☐

DEEPEN ☐

PLUG BACK ☐

b. Type of Well:

OIL
WELL ☒

GAS
WELL ☐

OTHER ☐

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

7. Lease Name or Unit Agreement Name

Lovington Paddock Unit

2. Name of Operator

Greenhill Petroleum Corp

8. Well No.

95

3. Address of Operator

16010 Barkers Point, Ste., 325, Houston, TX 77079

9. Pool name or Wildcat

Lovington Paddock

4. Well Location
Unit Letter

L

: 1585

Feet From The

South

Line and

432

Feet From The

West

Line

Section 31

Township

16 South

Range

37 East

NMPM

Lea

County

10. Proposed Depth

6350

11. Formation

Paddock

12. Rotary or C.T.

Rotary

13. Elevations (Show whether DF, RT, GR, etc.)

3819

14. Kind & Status Plug. Bond

Blanket

15. Drilling Contractor

TBD

16. Approx. Date Work will start

1/10/91

17.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2	13 3/8	48#	350	350	Surf
12 1/4	8 5/8	24-32	3050	950	Surf
7 7/8	5 1/2	15.5	6350	500	3000

See directional plan attached

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 *Michael J. Newport*

TITLE Landman

DATE 12-13-90

TYPE OR PRINT NAME Michael J. Newport

TELEPHONE NO. 955-1146

(This space for State Use)

APPROVED BY _____

TITLE _____

DATE _____

CONDITIONS OF APPROVAL, IF ANY:

DB-55 (NS RHL)

Permit Expires 6 Months from Approval
Date Unless Drilling Underway

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

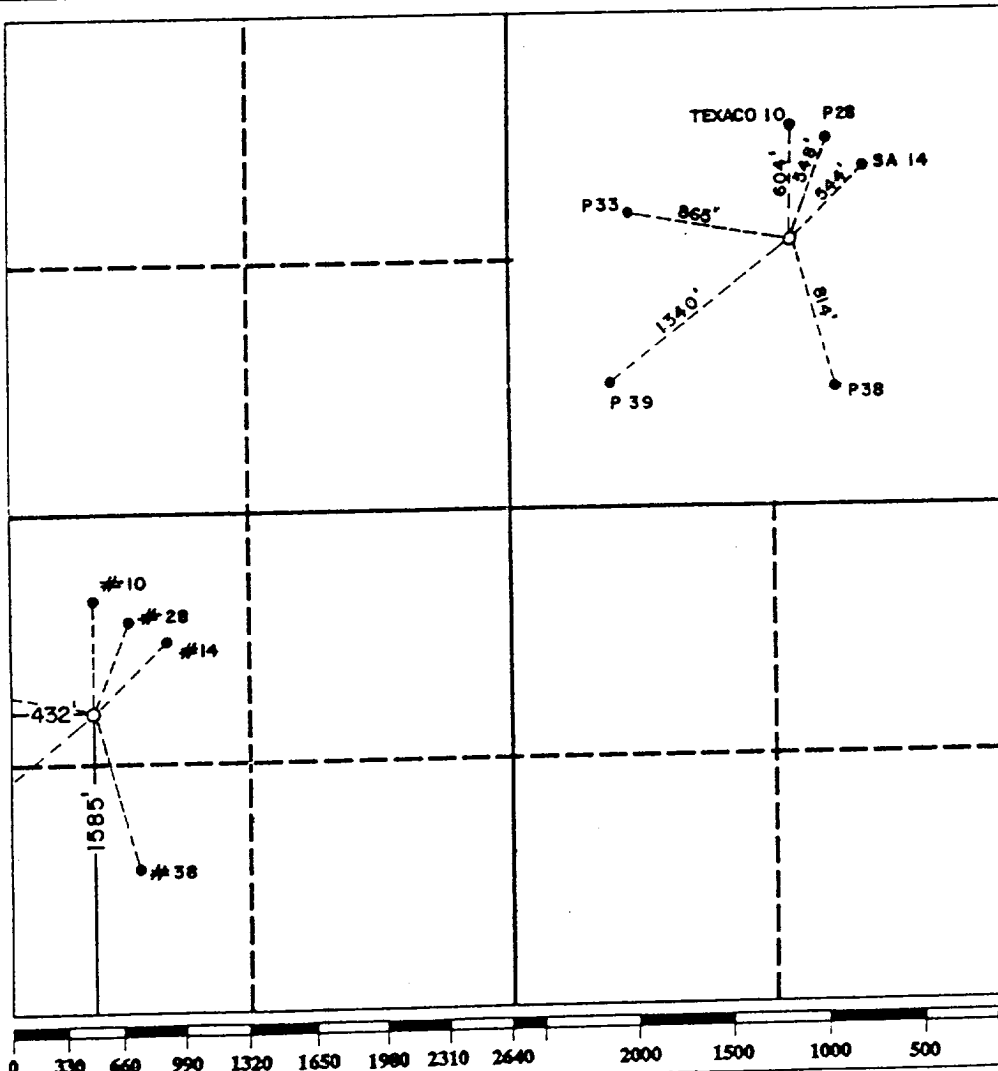
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator GREENHILL PETROLEUM CORP.			Lease LOVINGTON PADDOCK UNIT		Well No. 95
Unit Letter L	Section 31	Township 16 SOUTH	Range 37 EAST	County LEA	
Actual Footage Location of Well: 1585 feet from the SOUTH line and 432 feet from the WEST line					
Ground level Elev. 3818.6	Producing Formation Lovington Paddock		Pool Lovington Paddock		Dedicated Acreage: 40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 Unitized
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 Michael J. Newport
Printed Name Michael J. Newport
Position Landman
Company Greenhill Petroleum
Date 12-13-90

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 11-6-90

Signature & Seal of Professional Surveyor

Professional Surveyor Seal: JOHN W. WEST, 676
RONALD J. EIDSON, 3239
NEW MEXICO

GREENHILL PETROLEUM CORPORATION
BOP PROGRAM FOR
LOVINGTON PADDOCK WELL # 95

<u>Casing Program</u>				<u>BOP Program</u>	
Size	Depth	Wt	Grade	Configuration	Test Pressure
8 5/8"	2050'	24	H40, STC	RA	200 psi
5 1/2"	6350'	15.5	K55, STC	RR	250/1500 psi

* RR - Ram Ram

RA - Ram Annular

Diverter - Hydrill may be substituted for a diverter

**GREENHILL PETROLEUM CORPORATION
WELL PROGRAM**

WELL NAME: Lovington Paddock Unit #95 DIRECTIONAL
AFE NO. :
NMOCC PERMIT NO.:

Location: 1585' FSL & 432' FWL, Sec. 31-T16S-R37E, Lea County, NM
BHL 1270' FSL & 160' FWL
Directions:

GEOLOGICAL PROGNOSIS

Elevation: Est. 3850' KB (ACT KB 3835)

<u>Formations</u>	<u>Depth (Est.)</u>	<u>Subsea (Est.)</u>	ALL DEPTHS ARE TVD		
Ogalalla	260 (Base)	(+3590)	Top Yates	3100	(+750)
Red Beds	260-2050	(+1800)	Top Queen	3750	(+100)
Top Salt	2050	(+1800)	San Andres	4650	(-800)
Base Salt	3000	(+ 850)	Top Paddock	6000	(-2150)
			Total Depth	6350'	(-2500)

Log(s) at TD: 1) GR-CAL-DLL-MSFL 2) GR-LDT-CNL

Remarks:

Casing Program

<u>Intervals</u>	<u>Length</u>	<u>Casing</u>	<u>Burst PSI (DF)</u>	<u>Coll PSI (DF)</u>	<u>Ten Lbs (DF)</u>	<u>Torque Ft-Lbs Optimum</u>
0 - 350	350	13-3/8" 48# H-40, ST&C	1730	740	322M	3220
0 - 3050'	3050'	8-5/8" 24# J-55, ST&C, ERW	2950	1370	244M	2440
0 - 6350'	6400'	5-1/2" 15.5# J-55, LTC, ERW	4810	4040	217M	2170

Wellheads: 13-3/8": Larkin; 8-5/8": Larkin (weld on); 5-1/2": Larkin (threaded)

Remarks: Set 5-1/2" Csg. Head w/side outlets 8"-10" AGL

Cement Program

<u>Hole Size</u>	<u>Depth</u>	<u>Csg. Size</u>	<u>Cement</u>	<u>Yield CF/SX</u>	<u>Excess %</u>	<u>TOC</u>	<u>WOC Hr.</u>
17-1/2"	350	13-3/8"	350 sx C + 2% CaCl ₂ (14.8 ppg)	1.32	100	Surf	8
12-1/4"	3050'	8-5/8"	750 SX C + 16% gel + 0.2% disp + 2% salt Tail w/ 200sx C neat	2.63 1.32	130	Surf. Surf	8 8
7-7/8"	6350'	5-1/2"	500 SX C + Add. for 2-3 hr TTT, ϕ FW, $\pm$ 300 Fl, 14.8 PPG	1.32	60	$\pm$ 3000'	8

Remarks:

Surface Casing: Run a centralizer on joints 1, 2, 6, and top joint. Run GS, 1 jt, FC and csg. Threadlock bottom 2 joints.

Lovington Paddock Unit #8795

Intermediate Casing: Bottom 600' to be 32# K ST&C w/ a FS, 1 jt, FC & 10 centralizers.

Production Casing: Remove varnish from bottom 900' (sandblast). Run FS, 1 jt, FC. Threadlock the bottom 2 joints. Centralize 1 per jt to top of SA, and 1 every other jt to the top of the Yates. Displace with water after dropping plug.

Mud Program

<u>Interval</u>	<u>WT (LB/GAL)</u>	<u>VIS (SEC)</u>	<u>PH</u>	<u>WL (CC)</u>	<u>Type Mud & Additives</u>
0-350'	8.6-8.8	30-35		NC	Fresh wtr., lime, gel, paper
350'-3050' TVD	10.0-10.5	30-35	AS NEEDED		Native mud w/ additions of drilling oil & paper sweeps as needed. To be converted to saturated brine native mud prior to entering the salt.
3050'-6350'	9.0-9.5	30-45	AS NEEDED		Cut brine, w/additions of starch & salt gel as hole conditions dictate.

Remarks: Raise VIS to 40-45 (sec) for logging. Continue to use 10-15% X-S on caliper for top of cement 200' above Yates.

NOTIFICATION:

<u>Name</u>	<u>Title</u>	
Hugh Bezner	Drilling Manager	713/980-0808
Jeff Hughes	Drilling Superintendent	713/320-8088
Cy Jones	Production Foreman	504/394-2474
Charles Little	Operations Manager-TX/NM	713/251-5156
David Tilley	Production Engineer	713/868-1413
Norby Renaud	Production Engineer	713/320-0940
Ken Pfau	Production Geological Engineer	713/334-2072
Harry Faulkner	Production Petrophysical Engineer	713/556-6466
Greg Salvo	Production Drilling Engineer-TX/NM	713/376-8433
NMOCC	HOBBS	505/393-6161
GREENHILL - KATY	DRILLING OFFICE	713/558-0281
GREENHILL - JONES ROAD	PRODUCTION OFFICE	713/955-1146
GREENHILL - LOVINGTON	FIELD OFFICE	505/396-7503

GREENHILL PETROLEUM

Structure : LOVINGTON PADDOCK UNIT

Well : NO. 95

Field : NEW MEXICO

Location : LEA COUNTY

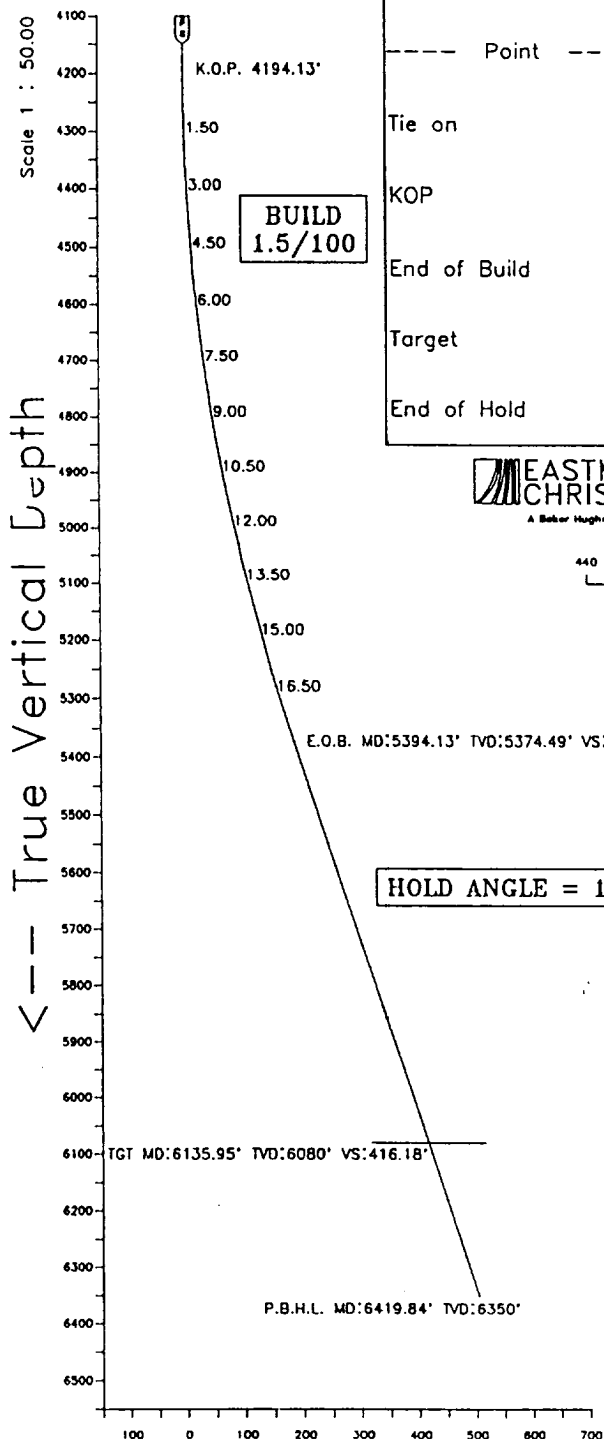
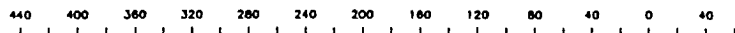
WELL PROFILE DATA

Point	MD	Inc	Dir	TVD	North	East
Tie on	0	0.00	220.81	0	0	0
KOP	4194	0.00	220.81	4194	0	0
End of Build	5394	18.00	220.81	5374	-141	-122
Target	6136	18.00	220.81	6080	-315	-272
End of Hold	6420	18.00	220.81	6350	-381	-329

**EASTMAN
CHRISTENSEN**
A Baker Hughes company

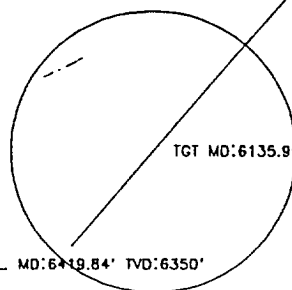
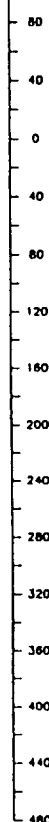
<-- West

Scale 1 : 20.00



Scale 1 : 20.00

South -->



Scale 1 : 50.00

Vertical Section on 370.51 azimuth with reference 0.00 N, 0.00 E from stat ft