

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF CHARLES B. GILLESPIE, JR. FOR AUTHORITY TO INSTITUTE A PRESSURE MAINTENANCE PROJECT AND FOR QUALIFICATION FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO

No. 11194

APPLICATION

Charles B. Gillespie, Jr. hereby applies for an order approving the institution of a natural gas injection project for pressure maintenance and for secondary recovery of hydrocarbons in the proposed West Lovington Strawn Unit located in Lea County, New Mexico, and to qualify the project for the recovered oil tax rate, and in support thereof, states:

1. Charles B. Gillespie, Jr., in a related application, has requested Division approval of statutory unitization and of the Unit Agreement and Unit Operating Agreement for the proposed West Lovington Strawn Unit in Lea County, New Mexico. The Unit Area, Unitized Formation, Unit Agreement, and Unit Operating Agreement are described in said application.

2. Charles B. Gillespie, Jr., the operator of the Unit, proposes to institute a natural gas injection project for pressure maintenance and secondary recovery of oil and gas from the Unitized Formation within the Unit Area.

3. By converting a presently producing well into an injection well, Charles B. Gillespie, Jr. proposes to inject natural gas into the Strawn Formation in the West Lovington Strawn Unit. Attached hereto as Exhibit 1 is a plat showing the location of all wells located within the Unit Area which are

proposed to be used as producing or injection wells.

4. The gas to be used for injection for the project is natural gas. Initially, 3 MMCFG per day will be injected, with an anticipated maximum injected volume of 6 MMCFG per day.

5. Approval of the pressure maintenance project will substantially increase recoverable reserves to be produced within the useful life of the new production and injection facilities which will be installed, thereby preventing waste and protecting correlative rights.

7. The Form C-108 relating to the proposed pressure maintenance project is attached hereto as Exhibit 2.

8. Applicant further requests qualification of the pressure maintenance project for the recovered oil tax rate pursuant to the Enhanced Oil Recovery Act, L. 1992, Ch. 38, and Division Order No. R-9708.

9. The initial project area, containing 1457.05 acres, is described on Exhibit 3, and a plat of the project area is attached as Exhibit 4. The leases, lessors, lessees, and other interest owners within the Unit Area are identified on Exhibit 5 attached hereto.

10. Project data includes:

- (a) Number of initial producing wells: 8
- (b) Number of initial injection wells: 1
- (c) Capital cost of additional facilities: \$50,000
- (d) Total project cost: \$1,500,000

(e) Estimated net value of secondary
production recovered from the
project: \$35,000,000 ¹

(f) Anticipated injection volumes: 3-6 MMCFGPD

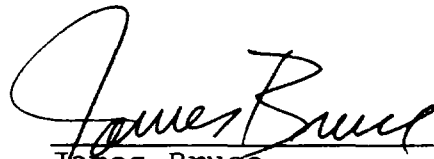
A listing of initial producing and injection wells in the Unit is attached hereto as Exhibit 6.

11. The production history of the project area is exhibited on the graph attached hereto as Exhibit 7. The projected oil production from the project area is exhibited on the graph attached hereto as Exhibit 8.

WHEREFORE, Charles B. Gillespie, Jr. requests that this application be set for hearing before the Division, and that after hearing the Division enter its order approving the pressure maintenance project and qualifying this project as an Enhanced Oil Recovery Project.

Respectfully submitted,

HINKLE, COX, EATON, COFFIELD
& HENSLEY



James Bruce
Post Office Box 2068
Santa Fe, New Mexico 87504-2068
(505) 982-4554

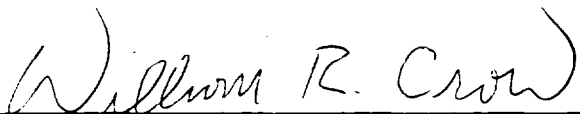
Attorneys for Charles B.
Gillespie, Jr.

¹ Based on oil at \$16 per barrel, escalated at 5% per year.

VERIFICATION

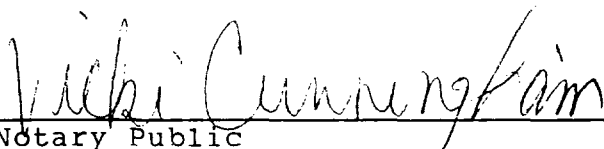
STATE OF TEXAS)
)ss.
COUNTY OF MIDLAND)

William R. Crow, being duly sworn upon his oath, deposes and states that: He is a geologist for and employee of Charles B. Gillespie, Jr., he is familiar with the matters set forth in the foregoing Application, and the statements therein are true and correct to the best of his knowledge.



William R. Crow

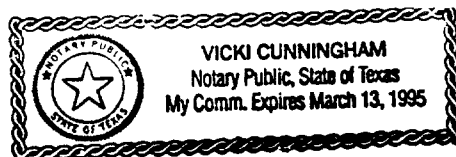
SUBSCRIBED AND SWORN TO before me this 13th day of December, 1994, by William R. Crow.



Notary Public

My Commission Expires:

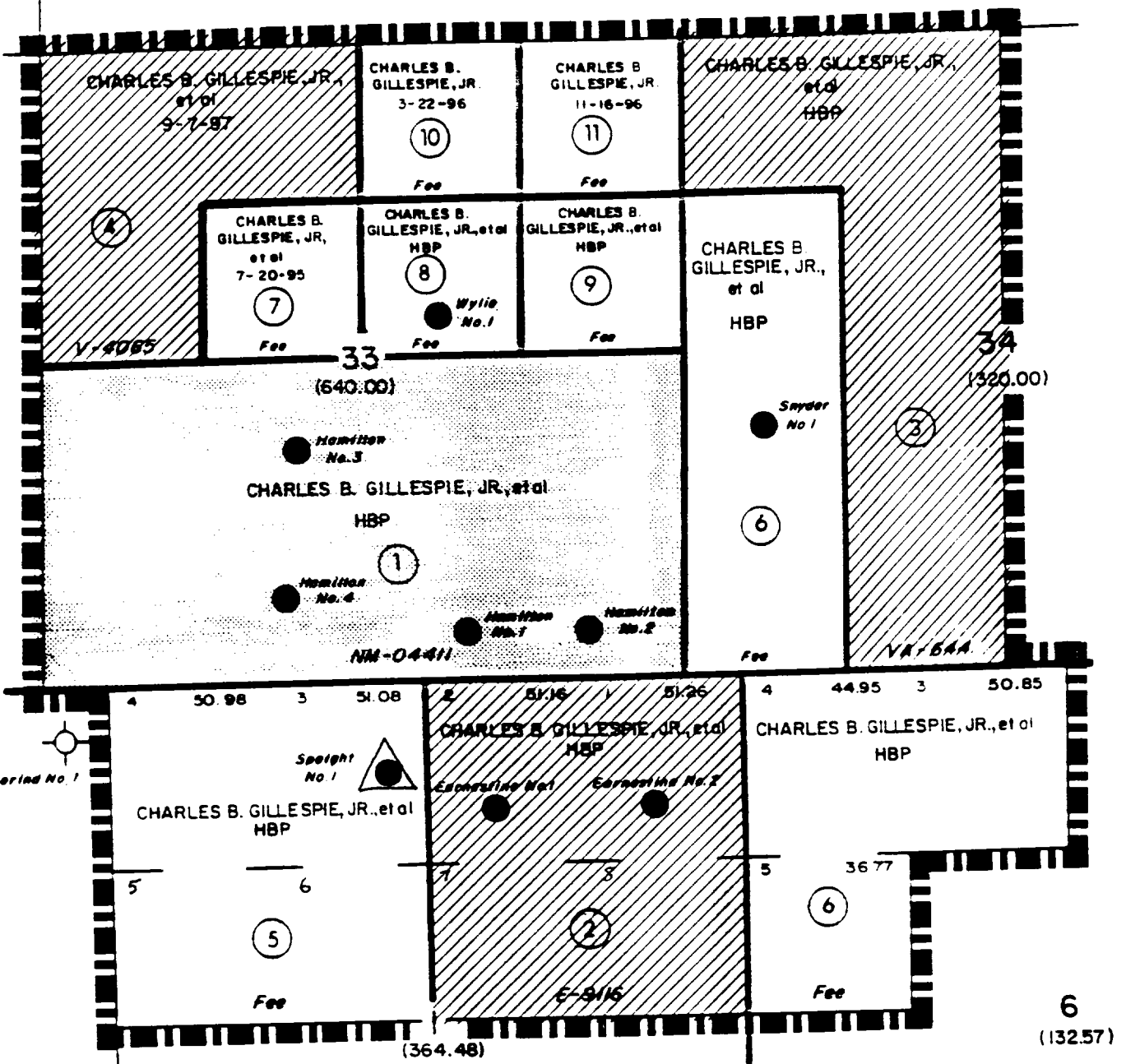
March 13, 1995



R 35 E

T
15
S

T
16
S



R 35 E

R 36 E

WEST LOVINGTON STRAWN UNIT AREA

- PRODUCING WELL
- △ INJECTION WELL

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION
APPLICATION FOR AUTHORIZATION TO INJECT
SPEIGHT FEE WELL NO. 1
Located 660' FNL & 2310' FWL Sec. 1-T16S-R35E
Lea County, New Mexico

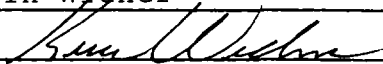
T A B L E O F C O N T E N T S

<u>Item</u>	<u>Attachment</u>
Application.....	Form C-108
Injection Well Data Sheet.....	C-108 III
Map of Area Showing Well and Lease Ownership.....	C-108 V
Tabulations of Well Data.....	C-108 VI
Data Sheet on Proposed Operations.....	C-108 VII
Injection Gas Analysis.....	C-108 VII (4)
Geological Data Sheet.....	C-108 VIII
Injection Well Stimulation Program.....	C-108 IX
Logging and Test Data.....	C-108 X
Map of Area Showing Locations of Water Wells.....	C-108 XI
List of Water Wells in Area.....	C-108 XI
Water Well Analysis.....	C-108 XI
Affirmative Statement.....	C-108 XII
Proof of Notice to Offset Operators.....	C-108 XIV
Proof of Notice by Publication.....	C-108 XIV



Case 11194

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☒ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: Charles B. Gillespie, Jr.
Address: P. O. Box 8 Midland, Texas 79702
Contact party: Kevin Widner Phone: (915) 683-1765
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: Kevin Widner Title: Production Manager
Signature:  Date: _____
- * 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. _____

INJECTION WELL DATA SHEET

Charles B. Gillespie, Jr.

Speight Fee

OPERATOR

LEASE

1

660 FNL & 2310 FWL

1

16-S

35-E

WELL NO.

FOOTAGE LOCATION

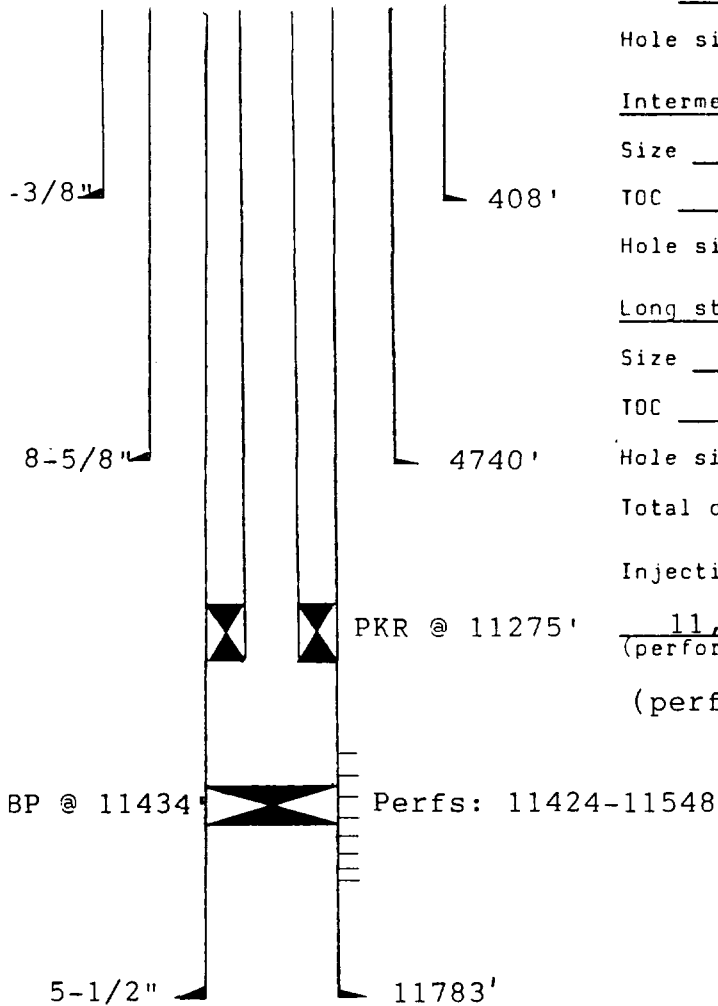
SECTION

TOWNSHIP

RANGE

SchematicTabular DataSurface CasingSize 13-3/8 " Cemented with 440 sx.TOC Surface feet determined by CirculationHole size 17-1/2"Intermediate CasingSize 8-5/8 " Cemented with 475 sx.TOC 2850 feet determined by Temp SurveyHole size 11"Long stringSize 5-1/2 " Cemented with 800 sx.TOC 8310 feet determined by Temp SurveyHole size 7-7/8"Total depth 11,784Injection interval11,424 feet to 11,434 feet
(perforated or open-hole, indicate which)

(perforated)

Tubing size 2-7/8" lined with None set in a
(material)Baker Lok-Set packer at 11,275 feet
(brand and model)

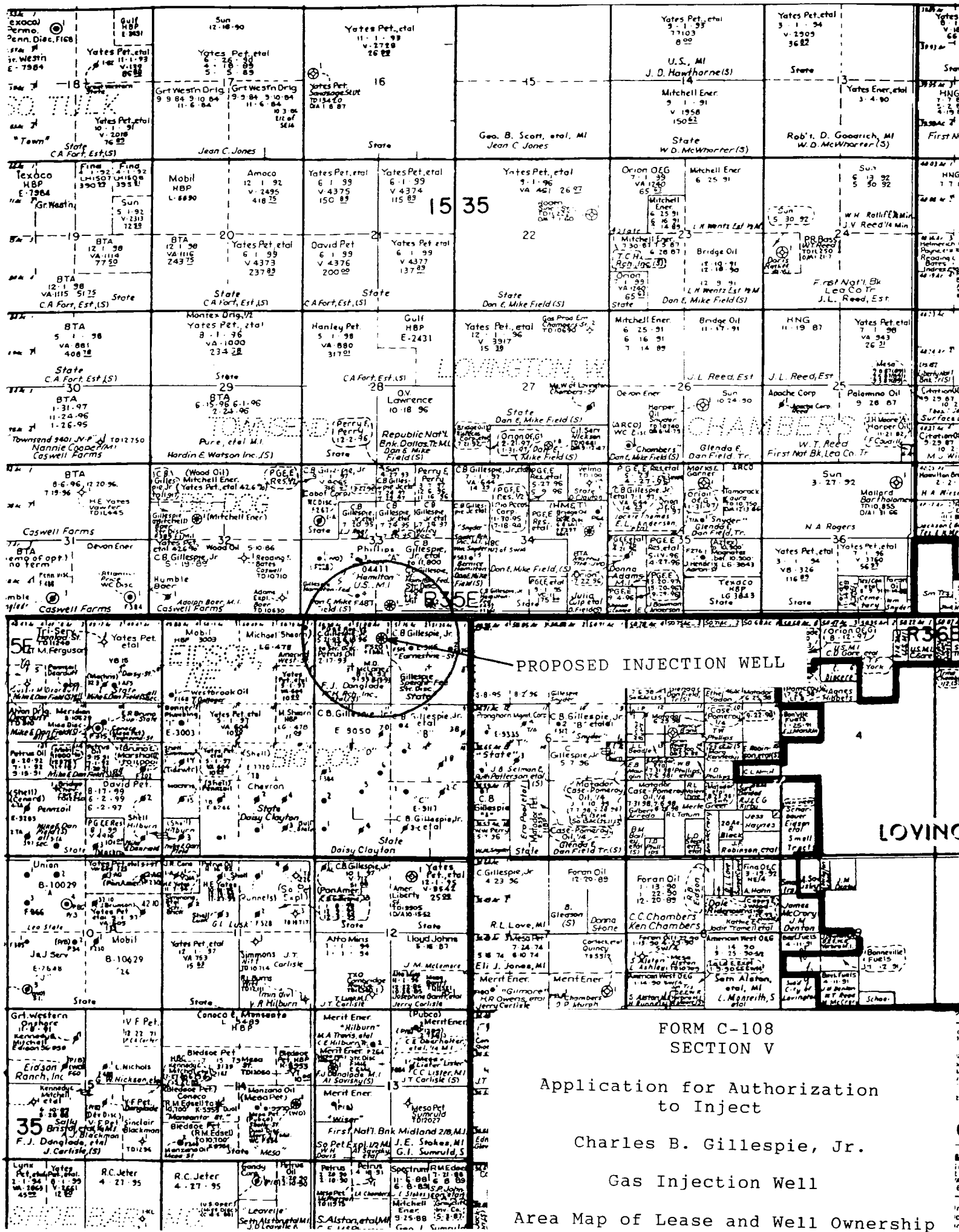
(or describe any other casing-tubing seal).

Other Data1. Name of the injection formation Strawn2. Name of Field or Pool (if applicable) West Lovington Strawn3. Is this a new well drilled for injection? ☐ Yes ☒ NoIf no, for what purpose was the well originally drilled? Producing oil and gas
well4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) NO

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

Wolfcamp-Townsend Permo Upper PennDepth 10,500 - 10,600'

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE



WELL DATA SHEET

Charles B. Gillespie, Jr.		Hamilton Federal		
OPERATOR	LEASE			
1	330 FSL & 2145 FEL	33	15-S	35-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Type of Well: Oil and Gas				

Tabular DataSurface Casing

Size 13-3/8 " Cemented with 440 sx.
 TOC Surface feet determined by Circulated
 Hole size 17-1/2"

Intermediate Casing

Size 8-5/8 " Cemented with 1200 sx.
 TOC 980 feet determined by Temp Survey
 Hole size 11"

Long string

Size 5-1/2 " Cemented with 800 sx.
 TOC 9100 feet determined by Temp Survey
 Hole size 7-7/8"
 Total depth 11,800

Perforations

11,500 feet to 11,570 feet
 (perforated or open-hole, indicate which)

FORM C-108
 SECTION VI

Application for Authorization
 to Inject

Charles B. Gillespie, Jr.

Gas Injection Well

Tabulation of Well Data

WELL DATA SHEET

Charles B. Gillespie, Jr.

Hamilton Federal

OPERATOR	LEASE			
2	330' FSL & 725' FEL	33	15-S	35-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Type of Well: Oil and Gas				

Tabular DataSurface CasingSize 13-3/8 " Cemented with 440 sx.TOC Surface feet determined by CirculatedHole size 17-1/2"Intermediate CasingSize 8-5/8 " Cemented with 1425 sx.TOC Surface feet determined by CirculatedHole size 11"Long stringSize 5-1/2 " Cemented with 750 sx.TOC 9200 feet determined by Temp SurveyHole size 7-7/8"Total depth 11,825Perforations11,538 feet to 11,580 feet
(perforated or open-hole, indicate which)FORM C-108
SECTION VIApplication for Authorization
to Inject

Charles B. Gillespie, Jr.

Gas Injection Well

Tabulation of Well Data

WELL DATA SHEET

Charles B. Gillespie, Jr.		Hamilton Federal		
OPERATOR	LEASE			
3	1880 FSL & 2080 FWL	33	15-S	35-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Type of Well: Oil and Gas				

Tabular DataSurface CasingSize 13-3/8 " Cemented with 525 sx.TOC Surface feet determined by CirculatedHole size 17-1/2"Intermediate CasingSize 8-5/8 " Cemented with 1580 sx.TOC Surface feet determined by CirculatedHole size 11"Long stringSize 5-1/2 " Cemented with 738 sx.TOC 8480 feet determined by Temp SurveyHole size 7-7/8"Total depth 11,834Perforations11,556 feet to 11,600 feet
(perforated or open-hole, indicate which)FORM C-108
SECTION VIApplication for Authorization
to Inject

Charles B. Gillespie, Jr.

Gas Injection Well

Tabulation of Well Data

WELL DATA SHEET

Charles B. Gillespie, Jr.		Hamilton Federal		
OPERATOR	LEASE			
4	1880 FSL & 2080 FWL	33	15-S	35-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Type of Well: Oil and Gas				

Tabular DataSurface CasingSize 13-3/8 " Cemented with 440 sx.TOC Surface feet determined by CirculatedHole size 17-1/2Intermediate CasingSize 8-5/8 " Cemented with 1504 sx.TOC Surface feet determined by CirculatedHole size 11"Long stringSize 5-1/2 " Cemented with 1100 sx.TOC 9590 feet determined by Temp SurveyHole size 7-7/8"Total depth 11,816Perforations11,532 feet to 11,576 feet
(perforated or open-hole, indicate which)FORM C-108
SECTION VIApplication for Authorization
to Inject

Charles B. Gillespie, Jr.

Gas Injection Well

Tabulation of Well Data

WELL DATA SHEET

Charles B. Gillespie, Jr. Earnestine
OPERATOR LEASE
1 990 FNL & 1980 FEL 1 16-S 35-E
WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE
Type of Well: Oil and Gas

Tabular DataSurface Casing

Size 13-3/8 " Cemented with 440 sx.
TOC Surface feet determined by Circulated
Hole size 17-1/2"

Intermediate Casing

Size 8-5/8 " Cemented with 750 sx.
TOC 2321 feet determined by Temp Survey
Hole size 11"

Long string

Size 5-1/2 " Cemented with 775 sx.
TOC 9200 feet determined by Calculated
Hole size 7-7/8"
Total depth 11,786

Perforations

11,474 feet to 11,514 feet
(perforated or open-hole, indicate which)

FORM C-108
SECTION VI

Application for Authorization
to Inject

Charles B. Gillespie, Jr.

Gas Injection Well

Tabulation of Well Data

WELL DATA SHEET

Charles B. Gillespie, Jr.		Earnestine		
OPERATOR	LEASE			
2	990 FNL & 660 FEL	1	16-S	35-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Type of Well: Oil and Gas				

Tabular DataSurface CasingSize 13-3/8 " Cemented with 440 sx.TOC Surface feet determined by CirculatedHole size 17-1/2"Intermediate CasingSize 8-5/8 " Cemented with 750 sx.TOC 2095 feet determined by Temp SurveyHole size 11"Long stringSize 5-1/2 " Cemented with 750 sx.TOC 8925 feet determined by Temp SurveyHole size 7-7/8"Total depth 11,800Perforations11,510 feet to 11,540 feet
(perforated or open-hole, indicate which)FORM C-108
SECTION VIApplication for Authorization
to Inject

Charles B. Gillespie, Jr.

Gas Injection Well

Tabulation of Well Data

WELL DATA SHEET

Amerind		West State		
OPERATOR		LEASE		
1	330 FNL & 330 FEL	2	16-S	35-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Type of Well: Oil and Gas				

Tabular DataSurface CasingSize 12-3/4 " Cemented with 400 sx.TOC Surface feet determined by CirculatedHole size 17-1/2"Intermediate CasingSize 8-5/8 " Cemented with 800 sx.TOC 2600 feet determined by CalculatedHole size 11"Long stringSize 5-1/2 " Cemented with 450 sx.TOC 9100 feet determined by CalculatedHole size 7-7/8"Total depth 11,177Perforations10,315 feet to 10,564 feet
(perforated or open-hole, indicate which)FORM C-108
SECTION VIApplication for Authorization
to Inject

Charles B. Gillespie, Jr.

Gas Injection Well

Tabulation of Well Data

FORM C-108

SECTION VII

- 1) Proposed Average Daily Injection Rate - 1.5 MMCFPD
 Proposed Maximum Daily Injection Rate - 9 MMCFPD
- 2) This will be a closed system.
- 3) Estimated Average Injection Pressure - 2700 psi
 Estimated Maximum Injection Pressure - 3000 psi
- 4) Gas Analysis is attached. Does not apply.
 Re-injecting produced natural gas from formation
- 5) Does not apply.

***** DAWSON NATURAL GAS SERVICES, INC. *****

1515 IDLEWILDE

P.O. BOX 7006 * MIDLAND, TEXAS 79708-0006

PHONE 915/694-6000

RUN NO: 14323
DATE RUN: 05/13/94

STATION NAME: 1121 - SPEIGHT FEE #1
COMPANY NAME: CHARLES B. GILLESPIE
LOCATION: LEA CO., NM SECURED BY: RH DATE: 05/10/94
SAMPLE CONDITIONS: PRESS: 14# TEMP: TIME:

***** FRACTIONAL ANALYSIS *****

@ 14.65 PSIA & 60 DEG. F.

	<u>MOL. %</u>		<u>CALC. SP.GR., (REAL)</u>	
CARBON			DRY BASIS	0.8285
DIOXIDE	1.14		SAT BASIS	0.8253
NITROGEN	2.23		<u>CALC SP.GR., (IDEAL)</u>	
OXYGEN			DRY BASIS	0.8247
H2S	0.00		SAT BASIS	0.8211
METHANE	66.32	<u>GPM (REAL)</u>		
ETHANE	15.92	4.254		
PROPANE	9.27	2.552	<u>BTU/CU.FT., (REAL)</u>	
ISO-BUTANE	0.98	0.320	DRY BASIS	1372
N-BUTANE	2.58	0.813	SAT BASIS	1349
ISO-PENTANE	0.47	0.172	<u>BTU/CU.FT., (IDEAL)</u>	
N-PENTANE	0.50	0.181	DRY BASIS	1366
HEXANES PLUS	0.59	0.256	SAT BASIS	1342
TOTAL	100.00	8.548		

***** ADDITIONAL DATA AND REMARKS *****

Z (SAT) 0.995 Z (DRY) 0.995

COPIES TO: JIS MEASUREMENT-STERLING
REMARKS: HYDROGEN SULFIDE BY STAIN

FORM C-108
SECTION VII(4)

Application for Authorization
to Inject

Charles B. Gillespie, Jr.

Gas Injection Well

Injection Gas Analysis

ATTACHMENT C-108 VIII

GEOLOGICAL DATA

Pressure maintenance is proposed for the Lovington Strawn, West Pool by injecting natural gas into the top of the Strawn reservoir in an interval from 11,424 feet to approximately 11,444 feet in the Charles B. Gillespie, Jr. Speight Fee No. 1 well located 660 feet from the North line and 2310 feet from the West line of Section 1, Township 16 South, Range 35 East, N.M.P.M., Lea County, New Mexico.

The Strawn formation in this well, as well as throughout the general area, is mostly a carbonate limestone interval underlying the Canyon shale section, however, there is a thin lower Strawn clastic section immediately overlying the Atoka formation, all of which are Pennsylvanian in age. The top of the Strawn formation in the proposed injection well occurs at 11,420 feet, while the base of the formation is found at 11,744 feet, for an overall thickness of 324 feet. The proposed injection well, like all the wells in the Lovington Strawn, West Pool, is producing oil and gas from a phylloid algal mound of Pennsylvanian (Strawn) age where porosity and permeability was greatly enhanced by fresh water dissolution of bioclastic material during periods of subaerial exposure.

Fresh water may be found in the Quaternary formation above the redbeds in the vicinity of the proposed injection well. This ground water is usually found at a depth between 100 feet and 200 feet, and all oil and gas wells drilled in the area have surface casing set and cemented to a depth of at least 375 feet.

There are no other known fresh water sands overlying the proposed injection zone and there are no known fresh water sands underlying the injection zone anywhere in the vicinity.

FORM C-108

SECTION IX

There will be no stimulation program.

FORM C-108

SECTION X

Original logs previously submitted with C-102 on
9/11/92.

ATTACHMENT C-108 XI

WATER WELLS WITHIN ONE MILE RADIUS OF PROPOSED INJECTION WELL

<u>DESCRIPTION</u>	<u>SERVICE</u>	<u>REMARKS</u>
SW/4 NW/4 of Sec. 33-T15S-R35E	Drilling	Out of Service
NW/4 NE/4 of Sec. 33-T15S-R35E	Livestock	Active
NW/4 SW/4 of Sec. 33-T15S-R35E	Drilling	Out of Service
SE/4 SW/4 of Sec. 33-T15S-R35E	Livestock	Active, Analysis Attached
SE/4 SW/4 of Sec. 33-T15S-R35E	Domestic	Active, Reynaldo B. Hernandez
SW/4 SE/4 of Sec. 33-T15S-R35E	Drilling	Inactive
Lot 3 of Sec. 1-T16S-R35E	Drilling	Inactive
Lot 4 of Sec. 1-T16S-R35E	Irrigation	Active
Lot 5 of Sec. 1-T16S-R35E	Livestock	Active
Lot 9 of Sec. 1-T16S-R35E	Drilling	Out of Service
Lot 11 of Sec. 1-T16S-R35E	Drilling	Out of Service
Lot 13 of Sec. 1-T16S-R35E	Drilling	Out of Service
Lot 2 of Sec. 2-T16S-R35E	Irrigation	Inactive
Lot 2 of Sec. 2-T16S-R35E	Irrigation	Inactive
Lot 4 of Sec. 6-T16S-R36E	Drilling	Out of Service



Water Analysis Report

Analysis Number : 000003359

Company.....: **C.b. Gillespie**
Location.....: SE SW Sec 33
Field.....:
Lease.....:
Sample Source....:

Date of Sampling.....: 12/07/94
Date of Analysis.....: 12/07/94
Baker Representative.: Steven Stroud
Well#.....:
Analysis by.....: Williams

DISSOLVED SOLIDS

CATIONS:	mg/l	me/l
Ca++	800.00	40.00
Mg++	976.00	80.00
Fe+++	0.00	0.00
8a++	0.00	0.00
Na+	0.00	0.00
Mn++	0.00	0.00

ANIONS:

Cl-	4058.72	114.33
SO4--	80.00	1.67
HCO3-	244.00	4.00
CO3--	0.00	0.00
OH-	0.00	0.00
S-	0.00	0.00

TOTAL HARDNESS.....	120.00
TOTAL SOLIDS (quantitative).....	6158.70
RESIDUAL HYDROCARBONS(ppm).....	0.00

Ø = not determined

DISSOLVED GASES

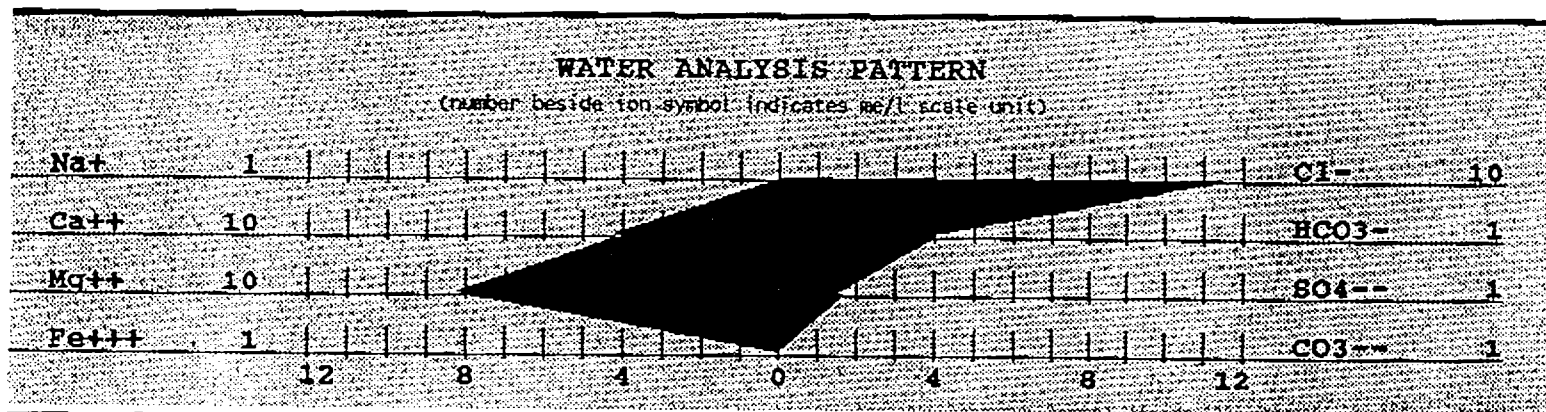
Hydrogen Sulfide, H ₂ S.....:	0.0
Carbon Dioxide, CO ₂:	0.4
Oxygen, O ₂:	0.0

PHYSICAL PROPERTIES

pH.....	7.4
Specific Gravity.....	1.010
TDS (calculated) ppm.....	6158.7
TIS (calculated)	0.2

SCALE STABILITIES

Temp.	°C	°F	CaCO ₃	CaSO ₄	BaSO ₄
	20	68	0.47	2011	0
	30	86	0.65	2083	0
	40	104	0.86	2117	0
	Max entropy, (calculated):			113	0



NOTES:

FORM C-108
SECTION XI

Application for Authorization to Inject

Charles B. Gillespie, Jr.

Gas Injection Well

Water Well Analysis

FORM C-108
SECTION XII

AFFIRMATIVE STATEMENT

Applicant hereby affirms that he has examined the available geologic and engineering data and finds no evidence of open faults or other hydrologic connection between the injection zone and any underground source of drinking water.

EXHIBIT 3

West Lovington Strawn Unit Area

Initial Project Area

Township 15 South, Range 35 East, N.M.P.M.

Section 33: All

Section 34: W $\frac{1}{2}$

Township 16 South, Range 35 East, N.M.P.M.

Section 1: Lots 1 through 8

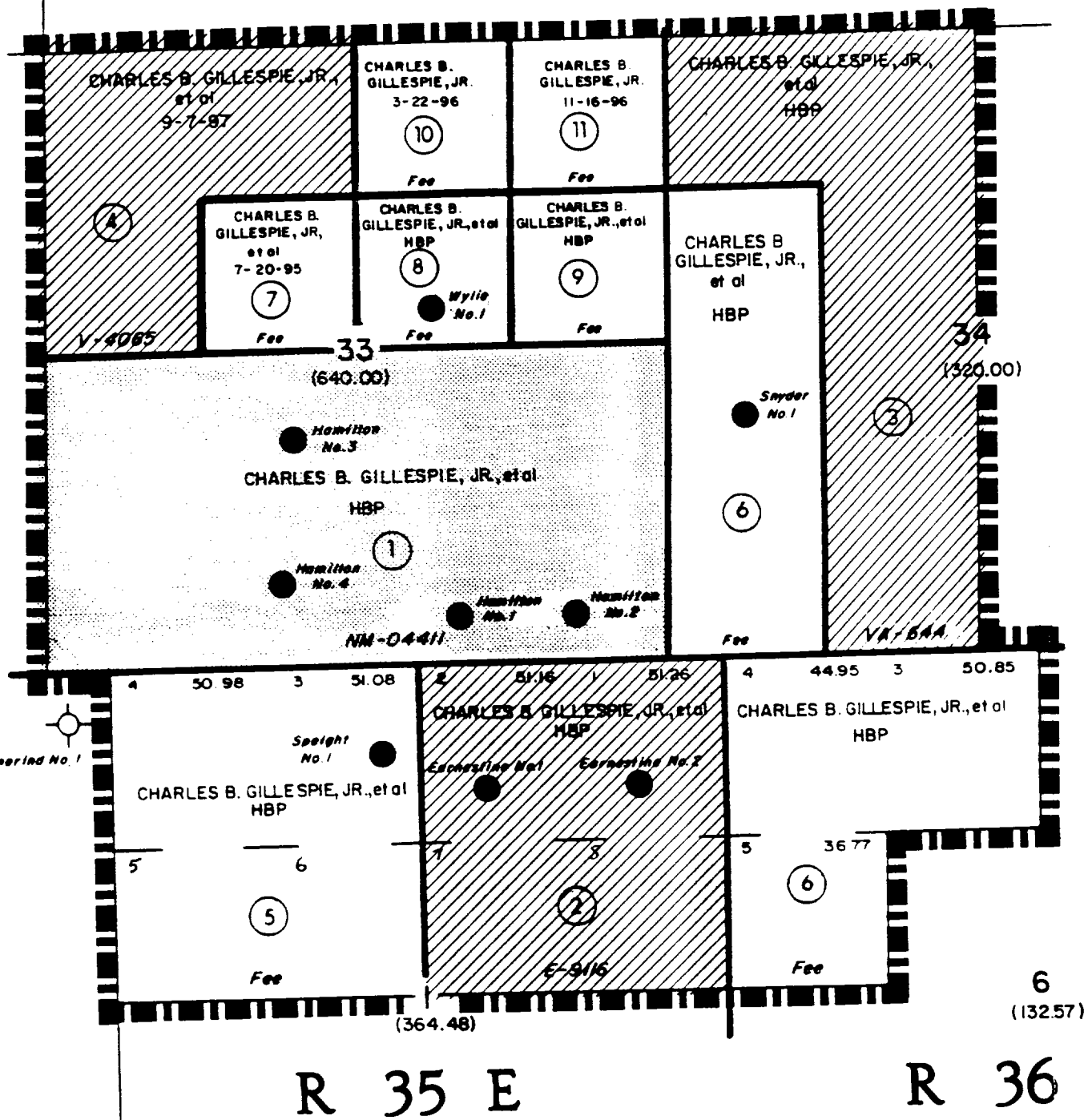
Township 16 South, Range 36 East, N.M.P.M.

Section 6: Lots 3, 4, and 5

R 35 E

T
15
S

T
16
S



WEST LOVINGTON STRAWN UNIT AREA
PROJECT AREA

EXHIBIT 5
SCHEDULE SHOWING THE PERCENTAGE AND KIND OF OWNERSHIP OF OIL AND GAS INTERESTS
WEST LOVINGTON (STRAWN) UNIT AREA
LEA COUNTY, NEW MEXICO

Ownership as to the Strawn Formation

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
<u>FEDERAL LANDS:</u>							
1.	T15S-R35E, N.M.P.M. Sec. 33: S/2	320.00	NM-04411 Effective 8-1-51 HBP	U.S.A. - All (12.5% royalty)	Phillips Petroleum Company 100%	Charles B. Gillespie, Jr. 2% Randall Capps, dba Xeric Oil & Gas Corp. 1.640625% William R. Crow .578125% GPC Oil & Gas Corp. .546875% Donald R. Curry .15625% Kevin L. Widner & Patricia Widner .078125%	Charles B. Gillespie, Jr. 37.5% DALEN Resources Oil & Gas Co. 37.5% Phillips Petroleum Company 25%
1	FEDERAL	TRACTS	TOTALING	320.00	ACRES	OR	21.96% OF UNIT AREA

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
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STATE LANDS:

2.	<u>T16S-R35E, N.M.P.M.</u> Sec. 1: Lots 1,2,7,8	182.42	E-9116 Effective 6-21-55 HBP	State of New Mexico - All (12.5% royalty)	Charles B. Gillespie, Jr. 50% DALEN Resources Oil & Gas Co. 50%	Ernestine Gillespie 5.46875%	Charles B. Gillespie, Jr. 50% DALEN Resources Oil & Gas Co. 50%
3.	<u>T15S-R35E, N.M.P.M.</u> Sec. 34: N/2NW/4, SE/4NW/4, E/2SW/4	200.00	VA-644 Effective 12-1-91 HBP	State of New Mexico - All (12.5% royalty)	Charles B. Gillespie, Jr. 50% DALEN Resources Oil & Gas Co. 50%	None	Charles B. Gillespie, Jr. 50% DALEN Resources Oil & Gas Co. 50%
4.	<u>T15S-R35E, N.M.P.M.</u> Sec. 33: N/2NW/4, SW/4NW/4	120.00	V-4065 Effective Expires 9-7-97	State of New Mexico - All (16.666667% royalty)	Charles B. Gillespie, Jr. 50% DALEN Resources Oil & Gas Co. 50%	None	Charles B. Gillespie, Jr. 50% DALEN Resources Oil & Gas Co. 50%

3	STATE	TRACTS	TOTALING	502.42	ACRES	OR	34.48%	OF	UNIT	AREA
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TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
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PATENTED LANDS:

5.	T16S-R35E, N.M.P.M. Sec. 1: Lots 3,4,5,6	182.06	HBP	June Danglede Speight 43.75% (25% royalty)	Charles B. Gillespie, Jr. 47.1875% DALEN Resources Oil & Gas Co. 47.1875% Monty D. McLaine 3.75% Rio Pecos Corporation .125% Pathfinder Exploration Co. .125% Cannon Exploration Co. .125% Hollyhock Corp. .125% TARA - JON Corp. .125%	Lawrence J. Seright .009375%	Charles B. Gillespie, Jr. 47.1875% DALEN Resources Oil & Gas Co. 47.1875% Monty D. McLaine 3.75% Rio Pecos Corporation .125% Pathfinder Exploration Co. .125% Cannon Exploration Co. .125% Hollyhock Corp. .125% TARA - JON Corp. .125%
			HBP	Dorothy Lee Lusk 9.271978% (16.667% royalty)			
			HBP	Marjorie Smart, Trustee of Marjorie C. Smart Revocable Trust dated 5/9/90 6.25% (16.667% royalty)			
			HBP	Clarence V. Shelfer 3.296703% (16.667% royalty)			
			HBP	Annie Laura Sturdivant 3.296703% (16.667% royalty)			
			HBP	Teddie Darrell Shelfer 3.296703% (16.667% royalty)			

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
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5. cont'd

HBP	Roy G. Barton, Jr., Trustee of the Roy G. Barton, Sr. and Opal Barton Revocable Trust 3.125% (25% royalty)						
HBP	Richard H. Power 2.747253% (16.667% royalty)						
HBP	Jean Benson 2.747253% (16.667% royalty)						
HBP	Betty Louise Pieper 2.08333% (18.75% royalty)						
HBP	Robert L. Brown 2.08333% (18.75% royalty)						
HBP	Effie Shelfer 1.648352% (16.667% royalty)						
HBP	James Darrell Shelfer 1.648352% (16.667% royalty)						
HBP	Jane Bowers Stoneman 1.25% (18.75% royalty)						

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
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5. cont'd

HBP Rickie Don Thompson
1.098901%
(16.667% royalty)

HBP Robert Gareth Thompson
1.098901%
(16.667% royalty)

HBP Treva Joyce Thompson
1.098901%
(16.667% royalty)

HBP Penelope Louise Holcomb
1.041667%
(18.75% royalty)

HBP Monty D. McLane
1.041667%
(16.667% royalty)

HBP Laverne W. Colby
.416667%
(18.75% royalty)

HBP Lester F. Colby
.416667%
(18.75% royalty)

HBP Dorothy C. Feltz
.416667%
(18.75% royalty)

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
5. cont'd							
			HBP	Milton M. Krasne .416666% (16.667% royalty)			
			HBP	Patrick J. Cesarano Revocable Trust .354167% (16.667% royalty)			
			HBP	Francis J. Moynihan, Jr. .208333% (18.75% royalty)			
			HBP	Berkeley N. Moynihan .208333% (18.75% royalty)			
			HBP	Barbara M. Gallagher .208333% (18.75% royalty)			
			HBP	Suzanne M. Chambers .138889% (16.667% royalty)			
			HBP	David Graham McDonald .138889% (16.667% royalty)			

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
5. cont'd			HBP	The Estate of John William McDonald, Anita M. McDonald as Independent Executrix .138889% (16.667% royalty)			
			HBP	Kelly H. Baxter .0625% (16.667% royalty)			
			HBP	Henry W. Lawton .625% (20% royalty)			
			HBP	Joan Sermak .625% (20% royalty)			
			HBP	Nancy O'Connor .625% (20% royalty)			
			HBP	Lewis E. McLaughlin .3125% (20% royalty)			
			HBP	Lois M. McLaughlin .3125% (20% royalty)			
			HBP	Michael Stadwick .15625% (25% royalty)			

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
5. cont'd							
			HBP	Cherie Weichel .15625% (25% royalty)			
			HBP	Lois H. Stadwick .15625% (25% royalty)			
			HBP	Robert Stadwick .15625% (25% royalty)			
			HBP	Todd Stadwick .15625% (25% royalty)			
			HBP	Harvard Stadwick, Jr. .15625% (25% royalty)			
			HBP	John Stadwick .15625% (25% royalty)			
			HBP	Keith Stadwick .15625% (25% royalty)			
			Unleased	Geraldine Anderson Hill .625% (12.5% royalty)	Unleased	100% None	Geraldine Anderson Hill .625%
			Unleased	Leonard S. Anderson, Jr. .625% (12.5% royalty)	Unleased	100% None	Leonard S. Anderson, Jr. .625%

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
6.	<u>T15S-R35E, N.M.P.M.</u> Sec. 34: W/2SW/4, SW/4NW/4	252.57	HBP	Snyder Ranches, Inc. 100% (20% royalty)	Charles B. Gillespie, Jr. DALEN Resources Oil & Gas Co. 50% 50%	None	Charles B. Gillespie, Jr. DALEN Resources Oil & Gas Co. 50% 50%
	<u>T16S-R36E, N.M.P.M.</u> Sec. 6: Lots 3,4,5						
7.	<u>T15S-R35E, N.M.P.M.</u> Sec. 33: SE/4NW/4	40.00	7-20-95	First Interstate Bank of Albuquerque, Trustee of the L. Jay Root Royalty Trust Agreement dated 4/28/83 100% (18.75% royalty)	Charles B. Gillespie, Jr. DALEN Resources Oil & Gas Co. 50% 50%	None	Charles B. Gillespie, Jr. DALEN Resources Oil & Gas Co. 50% 50%

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
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8. T15S-R35E, N.M.P.M.
Sec. 33: SW/4NE/4

40.00	HBP	United Bank of Lea County, Trustee for Chad L. and Norma B. Wiley	DALEN Resources Oil & Gas Co.	None	DALEN Resources Oil & Gas Co.
		50% (18.75% royalty)	Charles B. Gillespie, Jr.		Charles B. Gillespie, Jr.
			William R. Crow		William R. Crow

HBP

Mary Katherine Garrett Noble	25%
*(18.75% royalty)	

HBP

Billie Garrett Lytle	25%
*(18.75% royalty)	

*Subject to the following
Non-Participating
Royalty Owner:
Charles B. Gillespie, Jr. 3.125%

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
9.	T15S-R35E, N.M.P.M. Sec. 33; SE/4NE/4	40.00	HBP	*Mildred A. Wright, Trustee under Trust Agreement No. 1 dated 9/9/90 75% (12.5% royalty)	DALEN Resources Oil & Gas Co. 50% Charles B. Gillespie, Jr. 47.5% William R. Crow 2.5%	None	DALEN Resources Oil & Gas Co. 50% Charles B. Gillespie, Jr. 47.5% William R. Crow 2.5%
			HBP	Thomas W. Pettit 25% (12.5% royalty)			
				*Subject to the following			
				Non-Participating			
				Royalty Owners:			
				Parallel Petroleum Corporation			
					.46875%		
				Rebel Oil Company	.390625%		
				Robert H. Hannifin	.390625%		
				Eva H. Matson & Ephraim G.			
				Matson J/T	.390625%		
				Emily Irene Park & Thomas			
				S. Park	.3125%		
				Winfield S. Carson	.3125%		
				Wilbur W. Irvin & Jamaica S.			
				Irvin J/T	.234375%		
				Roy G. Barton, Jr., Trustee of			
				the Roy G. Barton, Sr. and			
				Opal Barton Revocable Trust			
					.15625%		
				Lanis Palmer	.15625%		
				The heirs or devisees of Paul			
				Paulk, apparently Selma Paulk			
					.15625%		
				Felix Corley	.15625%		
				C. R. Alderson & Arlene			
				Alderson (h&w)	.15625%		
				Total:	3.28125%		

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
10.	T15S-R35E, N.M.P.M. Sec. 33: NW/4NE/4	40.00	9-15-97	Roy G. Barton, Jr., Trustee of the Roy G. Barton, Sr. and Opal Barton Revocable Trust 40% (25% royalty)	David Petroleum Corp. 43.6458334% Charles B. Gillespie, Jr. 28.1770833% DALEN Resources Oil & Gas Co.	None	David Petroleum Corp. 43.6458334% DALEN Resources Oil & Gas Co. 26.1263023% Charles B. Gillespie, Jr. 24.7591153%
			7-29-97	Faye L. Lipsett Klein 25% (16.667% royalty)			
			12-2-96	Grace Starmer 5% (18.75% royalty)			
			3-22-96	Elaine Graham Krasne & Milton Krasne (w&h) 4.166667% (18.75% royalty)			
			7-24-97	The Grooms Trust u/a dated 12/15/82 3.75% (18.75% royalty)			
			Unleased	Charles B. Gillespie, Jr. 3.417968% (12.5% royalty)	Unleased	100%	Charles B. Gillespie, Jr. 3.417968%
			8-22-97	Vance Lee Mason 2.5% (18.75% royalty)			

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
10. cont'd			9-16-97	The Estate of John Sewell Randall 2.5% (25% royalty)			
			Unleased	DALEN Resources Oil & Gas Co. 2.050781% (12.5% royalty)	Unleased	100% None	DALEN Resources Oil & Gas Co. 2.050781%
			7-24-97	Dorothy Fuller Lundeen 1.822916% (18.75% royalty)			
			7-24-97	Russell Pang & Ann Pang (h&w) 1.5625% (18.75% royalty)			
			8-8-97	The Estate of John William McDonald 1.388889% (18.75 % royalty)			
			12-6-96	David Graham McDonald 1.388889% (18.75% royalty)			
			7-24-97	Margot Suzanne McDonald Chambers 1.388889% (18.75% royalty)			

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
10. cont'd							
			9-15-97	Heidi C. Barton 1.215278% (25% royalty)			
			9-15-97	Brett C. Barton 1.215278% (25% royalty)			
			9-15-97	Roy G. Barton, III 1.215278% (25% royalty)			
			7-24-97	Kelly H. Baxter .416667% (18.75% royalty)			
11. T15S-R35E, N.M.P.M. Sec. 33: NE/4NE/4		40.00	9-15-97	Roy G. Barton, Jr., Trustee of the Roy G. Barton, Sr. and Opal Barton Revocable Trust 25% (25% royalty)	David Petroleum Corp. 37.5% Charles B. Gillespie, Jr. 31.25% DALEN Resources Oil & Gas Co. 31.25%	None	David Petroleum Corp. 37.5% Charles B. Gillespie, Jr. 31.25% DALEN Resources Oil & Gas Co. 31.25%
			7-29-97	Faye L. Lipsett Klein 25% (16.667% royalty)			
			9-15-97	Roy G. Barton, Jr. 12.5% (25% royalty)			

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
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11. cont'd

3-7-97	Norma J. Chanley 12.5% (25% royalty)
12-6-96	Joan L. Yarnell Rine 12.5% (25% royalty)
11-16-96	William Robert Yarnell 12.5% (18.75% royalty)

7	PATENTED	TRACTS	TOTALING	634.63	ACRES	OR	43.56%	OF	UNIT	AREA
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11	TRACTS	TOTALING	1,457.05	ACRES	IN	UNIT	AREA
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EXHIBIT 6

West Lovington Strawn Unit Area

Initial Producing Wells

Wylie No. 1, Unit G, Section 33-Township 15 South-Range 35 East

Hamilton No. 3, Unit K, Section 33-Township 15 South-Range 35 East

Hamilton No. 4, Unit N, Section 33-Township 15 South-Range 35 East

Hamilton No. 1, Unit O, Section 33-Township 15 South-Range 35 East

Hamilton No. 2, Unit P, Section 33-Township 15 South-Range 35 East

Snyder No. 1, Unit L, Section 34-Township 15 South-Range 35 East

Earnestine No. 2, Unit A, Section 1-Township 16 South-Range 35 East

Earnestine No. 1, Unit B, Section 1-Township 16 South-Range 35 East

Initial Injection Well

Speight No. 1, Unit C, Section 1-Township 16 South-Range 35 East

EXHIBIT 7

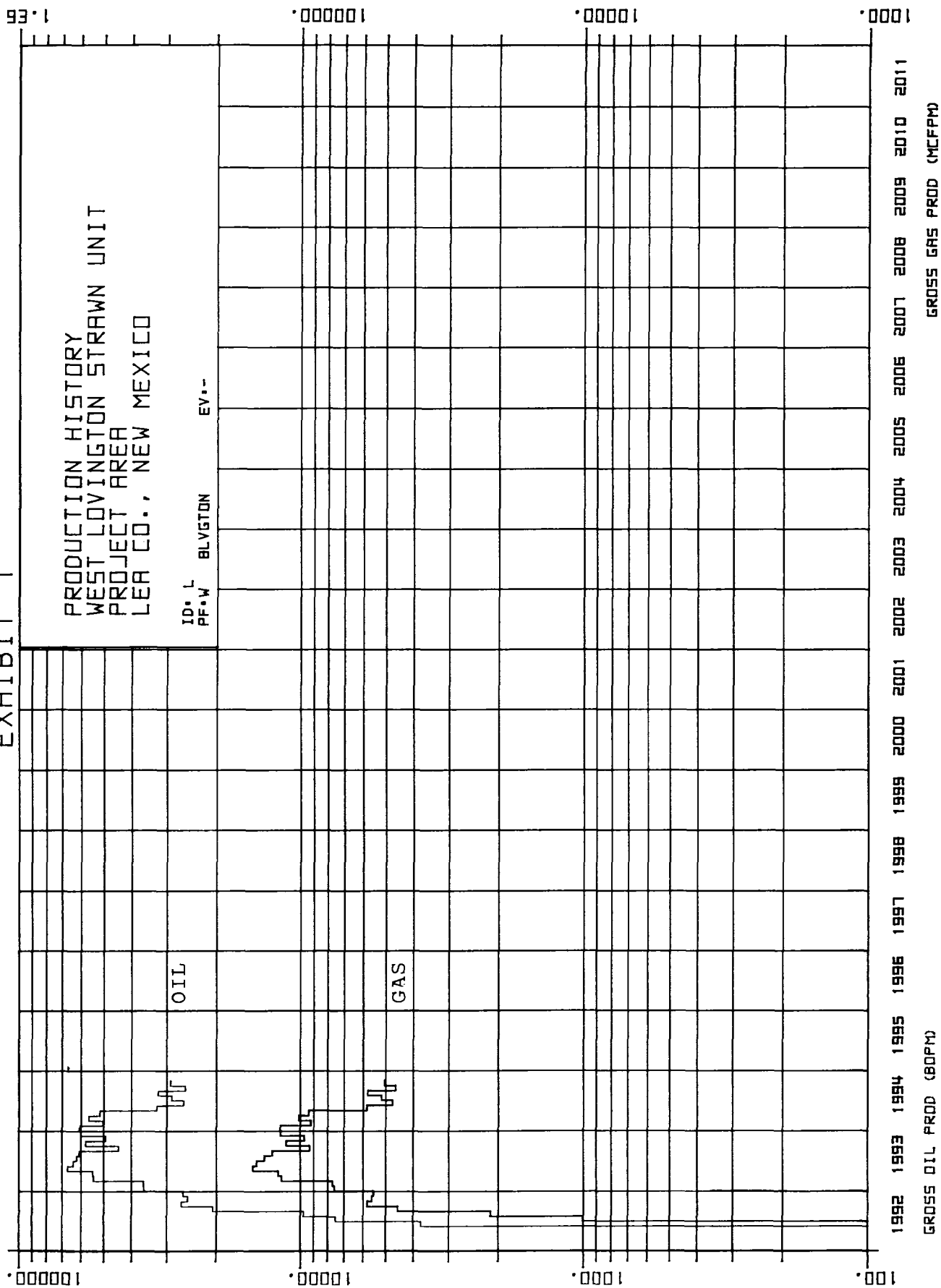


EXHIBIT B

PROJECTED PRODUCTION
WEST LOVINGTON STRAWN UNIT
PROJECT AREA
LER CO., NEW MEXICO

ID GAS PRES MAIN-50 MBOPM (25% DDIP)
PF-CBG EV. 5

