STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

EXHIBIT NO. 2

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [ ] yes [X] no

II. Operator: MEWBOURNE OIL COMPANY

Address: 3901 S. BROADWAY, TYLER, TEXAS 75701

Contact party: K. MAYES/K.CALVERT Phone: (903) 561-2900

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? [X] yes [ ] no
If yes, give the Division order number authorizing the project R-9737.

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.

NEW MEXICO
OIL CONSERVATION DIVISION

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.)

EXHIBIT 4

* 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.

CASE NO. 10769/10762

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 Mayes Title Project Engineer

Signature: Kevin Mayes Date: 5/28/93

KEVIN MAYES NEW MEXICO 11576 REGISTERED PROFESSIONAL ENGINEER

* 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.

Distribution: Original and one copy to Santa

ITEM III OF NEW MEXICO OCD FORM C-108

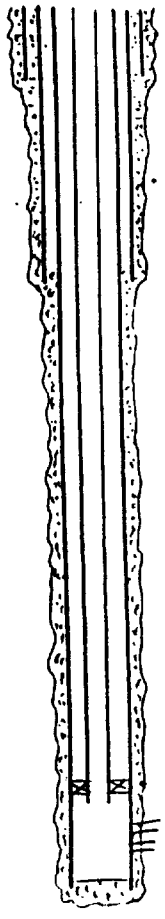
INJECTION WELL DATA SHEET

SANTA FE ENERGY
MEWBOURNE OIL CO. * — OPERATOR

SHINNERY 14 FEDERAL — LEASE

WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
14-4	1980 FSL, 660 FEL	14	18S	32E

Schematic



1.08 cuft/sx
No collars
25% excess

TD = 8750'

Tabular Data

Surface Casing

Size 13 3/8" Cemented with 500 sx.
TOC Surface feet determined by Circ.
Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" Cemented with 1500 sx.
TOC Surface feet determined by Circ.
Hole size 12 1/4"

Long string

Size 5 1/2" Cemented with 1325 sx.
TOC 2632 feet determined by Calcn.
Hole size 7 7/8" SFE interp. of CMT OK @ 2760'
Total depth 8750'

Injection interval

8412 feet to 8490 feet
(perforated)

Tubing size 2 7/8" lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8312 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of Field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ☐ Yes ☒ No
   If no, for what purpose was the well originally drilled? Oil Production
4. 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.
   Overlying - San Andres Top at ± 4800'
   Underlying - Lower Bone Spring at ± 8650'

* After Unitization

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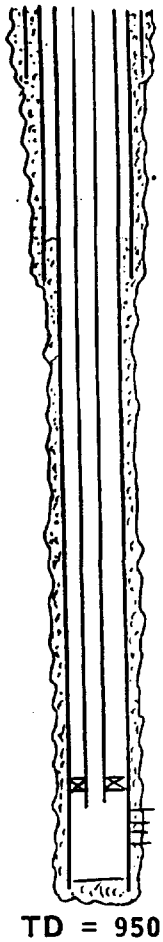
ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

SANTA FE ENERGY
MEWBOURNE OIL CO. * (OPERATOR) SHINNERY 14 FEDERAL (LEASE)

14-3	1980 FSL, 1980 FEL	14	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



TD = 9500'

Tabular Data

Surface Casing

Size 13 3/8" Cemented with 500 sx.
TOC Surface feet determined by Circ.
Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" Cemented with 1550 sx.
TOC Surface feet determined by Circ.
Hole size 12 1/4"

Long string

Size 5 1/2" Cemented with 1600 sx.
TOC 2112 feet determined by Calcn.
Hole size 7 7/8" SFE interp. of CMT OK @ 2746'
Total depth 9500'

Injection interval
8478 feet to 8504 feet
(perforated)

Tubing size 2 7/8" lined with Bare Steel (material) set in a
Otis Permalatch (brand and model) packer at 8378 feet
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ☐ Yes ☒ No
   If no, for what purpose was the well originally drilled? Oil Production
4. 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.
   Overlying - San Andres top at ± 4800'
   Underlying - Lower Bone Spring at ± at 8650'

* After Unitization

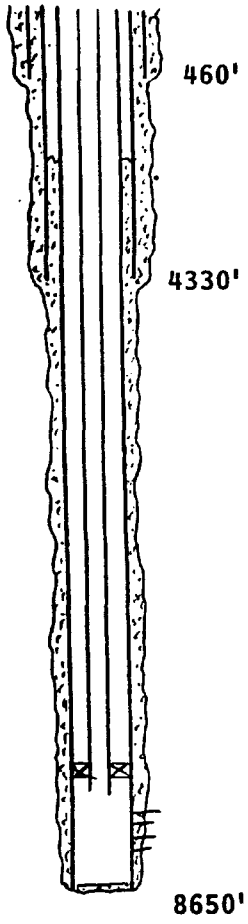
ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

MEWBOURNE OIL CO. (OPERATOR) FEDERAL L (LEASE)

5	660 FNL, 660 FEL	23	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



TD = 8650'

Tabular Data

Surface Casing

Size 13 3/8" Cemented with 400 sx.

TOC Surface feet determined by Circ.

Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" Cemented with 1575 sx.

TOC Surface feet determined by Circ.

Hole size 12 1/4"

Long string

Size 5 1/2" Cemented with 1275 sx.

TOC 2763 feet determined by Calcn.

Hole size 7 7/8" CBL 8600'-4770

Total depth 8650' CMT OK @ 4770

Injection interval

8430 feet to 8574 feet

(perforated)

Tubing size 2 7/8" lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8330 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of Field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil Production
4. 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.

   Overlying - San Andres top at ± 4800'

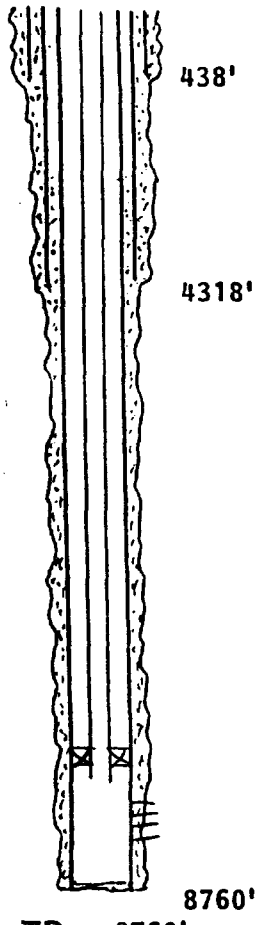
   Underlying - Lower Bone Spring top at ± 8650'

ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
MEWBOURNE OIL CO.	FEDERAL L			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
4	660 FNL, 1650 FEL	23	18S	32E

Schematic



TD = 8760'

Tabular Data

Surface Casing

Size 13 3/8 " Cemented with 400 sx.

TOC Surface feet determined by Circ.

Hole size 17 1/2"

Intermediate Casing

Size 8 5/8 " Cemented with 1600 sx.

TOC Surface feet determined by Circ.

Hole size 12 1/4"

Long string

Size 5 1/2 " Cemented with 1325 sx.

TOC 2642 feet determined by Calcn.

Hole size 7 7/8" CBL 8683'-4300' CMT OK @ 4656'

Total depth 8760'

Injection interval

8431 feet to 8506 feet

(perforated)

Tubing size 2 7/8" lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8331 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of Field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil Production
4. 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.

   Overlying - San Andres top at ± 4800'

   Underlying - Lower Bone Spring top at ± 8650'

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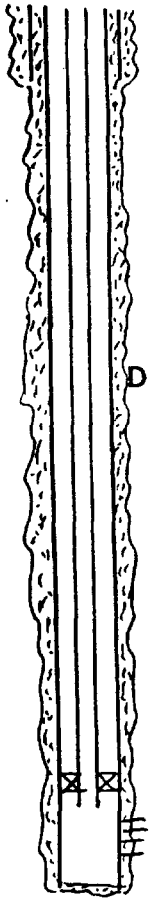
INJECTION WELL DATA SHEET

MEWBOURNE OIL CO.	FEDERAL L			
OPERATOR	LEASE			
7	2310 FSL, 990 FEL	23	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



TD = 8670'

Tabular Data

Surface Casing

Size 8 5/8" Cemented with 250 sx.

TOC Surface feet determined by Circ.

Hole size 11"

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5 1/2" Cemented with 4630 sx.

TOC Surface feet determined by Calcn.& Circ

Hole size 7 7/8" CBL 8623'-6600'
~~CMT~~ OK @ 6640'

Total depth 8670'

Injection interval

8485 feet to 8552 feet

(perforated)

Tubing size 2 7/8" lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8385 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand

2. Name of Field or Pool (if applicable) Querecho Plains

3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil Production

4. 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.

   Overlying - San Andres top at ± 4800'

   Underlying - Lower Bone Spring top at ± 8650'

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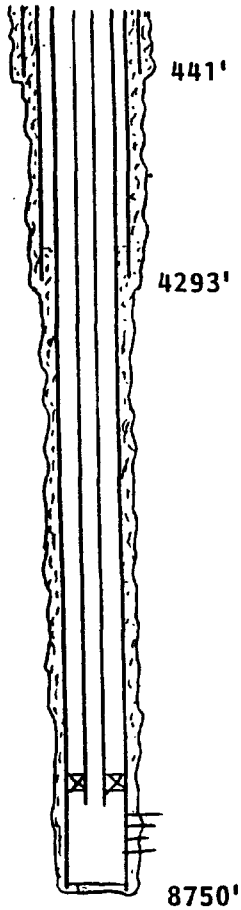
INJECTION WELL DATA SHEET

MEWBOURNE OIL CO. (OPERATOR) FEDERAL L (LEASE)

2	2130 FSL, 2030 FEL	23	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



TD = 8750'

Tabular Data

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 1800 sx.

TOC Surface feet determined by Circ.

Hole size 12 1/4"

Long string

Size 5 1/2 " Cemented with 925 sx.

TOC 4479 feet determined by Calcn.

Hole size 7 7/8" CBL 8652'-3000' CMT OK @ 3538'

Total depth 8750'

Injection interval

8458 feet to 8531 feet

(perforated)

Tubing size 2 7/8 lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8358 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of Field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil Production
4. 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.

   Overlying - San Andres top at ± 4800'

   Underlying - Lower Bone Spring top at ± 8650'

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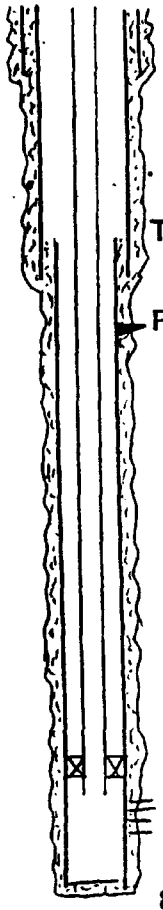
ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

MEWBOURNE OIL CO. (OPERATOR) GOVERNMENT K (LEASE)

2	1950 FSL, 1980 FWL	23	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



Tabular Data

Surface Casing

Size 13 3/8" Cemented with 700 sx.

TOC Surface feet determined by Circ.

Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" Cemented with 3100 sx.

TOC Surface feet determined by Circ.

Hole size 12 1/4"

Long string

Size 5 1/2" Cemented with 900 sx.

TOC 4408 feet determined by Calcn. CBL 8842'-4408'

Hole size 7 7/8" CMT OK @ 4876'

Total depth 8901'

Injection interval

8343 feet to 8515 feet

(perforated)

Note: Already converted to injection in August 1992 per Division Order R-9737.

Tubing size 2 7/8" lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8365' feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of Field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil Production
4. 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)

   4 perforation at 4859'. Squeeze with 225 sxs. Pressure test to 1700 psi OK.
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

   Overlying - San Andres top at ± 4800'

   Underlying - Lower Bone Spring to at ± 8650'

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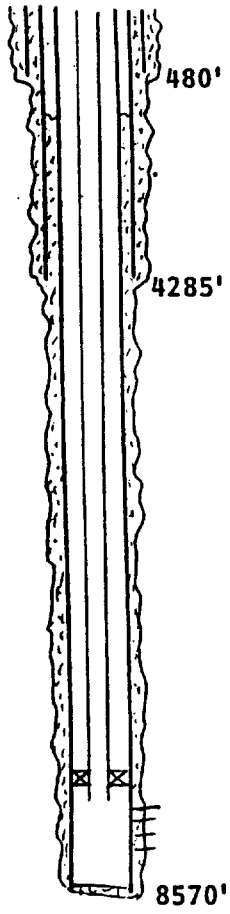
ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

MEWBOURNE OIL CO. (OPERATOR) FEDERAL F (LEASE)

3	1980 FSL, 990 FWL	23	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



TD = 8570'

Tabular Data

Surface Casing

Size 13 3/8" Cemented with 275 sx.

TOC Surface feet determined by Circ.

Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" Cemented with 1700 sx.

TOC Surface feet determined by Circ.

Hole size 12 1/4"

Long string

Size 5 1/2" Cemented with 1375 sx.

TOC 1713 feet determined by Calcn.

Hole size 7 7/8" CBL 8430'-7000' CMT OK @ 7000'

Total depth 8570'

Injection interval

8362 feet to 8436 feet

(perforated)

Tubing size 2 7/8" lined with Bare Steel (material) set in a Otis Permalatch (brand and model) packer at 8262 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of Field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil Production
4. 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.

   Overlying - San Andres top at ± 4800'

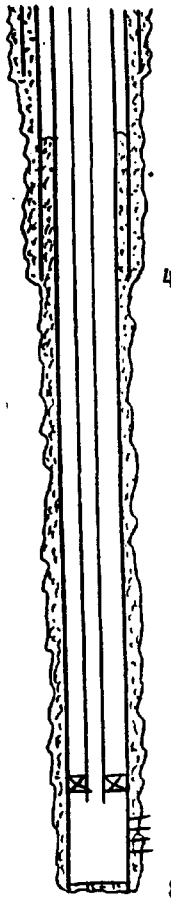
   Underlying - Lower Bone Spring top at ± 8650'

ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
MEWBOURNE OIL CO.	FEDERAL P			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
1	660 FNL, 660 FWL	24	18S	32E

Schematic



TD = 8680'

Tabular Data

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 1600 sx.

TOC Surface feet determined by Circ.

Hole size 12 1/4"

Long string

Size 5 1/2" Cemented with 1425 sx.

TOC 2100 feet determined by Calcn.

Hole size 7 7/8"

Total depth 8680'

Injection interval

8473 feet to 8545 feet

(perforated [redacted])

Tubing size 2 7/8" lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8373 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand

2. Name of Field or Pool (if applicable) Querecho Plains

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Oil Production

4. 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.

Overlying - San Andres top at ± 4800'

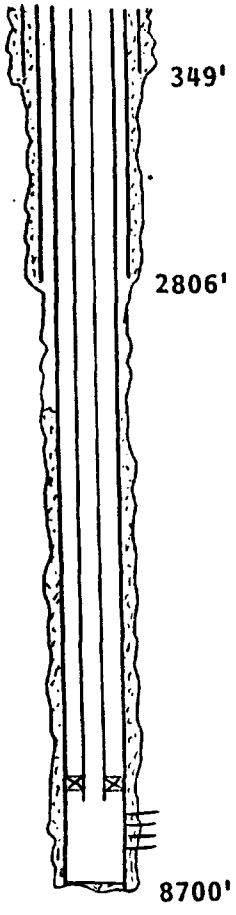
Underlying - Lower Bone Spring top at ± 8650'

ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
MEWBOURNE OIL CO.	BURLESON FEDERAL			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
2	660 FNL, 660 FEL	26	18S	32E

Schematic



TD = 8700'

Tabular Data

Surface Casing

Size 11 3/4" Cemented with 485 sx.

TOC Surface feet determined by Circ.

Hole size 15"

Intermediate Casing

Size 8 5/8" Cemented with 2100 sx.

TOC Surface feet determined by Circ.

Hole size 11"

Long string

Size 4 1/2" Cemented with 1200 sx.

TOC 4149 feet determined by Calcn.

Hole size 7 7/8"

Total depth 8700'

Injection interval

8515 feet to 8584 feet

(perforated [redacted])

Tubing size 2 3/8" lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8415 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand

2. Name of Field or Pool (if applicable) Querecho Plains

3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil Production

4. 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.

   Overlying - San Andres top at ± 4800'

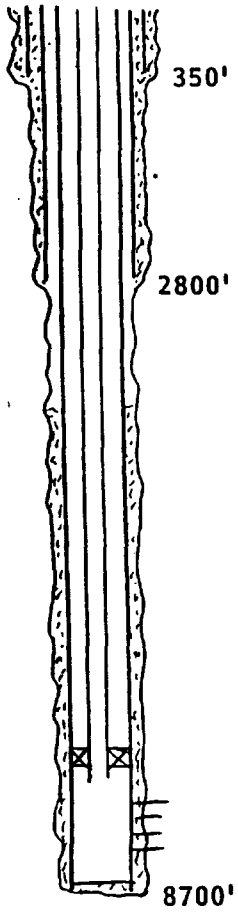
   Underlying - Lower Bone Spring top at ± 8650'

ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
MEWBOURNE OIL CO.	BURLESON FEDERAL			
1	660 FNL, 2310 FEL	26	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



TD = 8700'

Tabular Data

Surface Casing

Size 11 3/4 " Cemented with 485 sx.

TOC Surface feet determined by Circ.

Hole size 15"

Intermediate Casing

Size 8 5/8 " Cemented with 2250 sx.

TOC Surface feet determined by Circ.

Hole size 11"

Long string

Size 4 1/2 " Cemented with 1205 sx.

TOC 4130 feet determined by Calcn.

Hole size 7 7/8"

Total depth 8700'

Injection interval

8512 feet to 8572 feet

(perforated)

Tubing size 2 3/8" lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8412 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand

2. Name of Field or Pool (if applicable) Querecho Plains

3. Is this a new well drilled for injection? [ ] Yes [X] No

   If no, for what purpose was the well originally drilled? Oil Production

4. 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.

   Overlying - San Andres top at ± 4800'

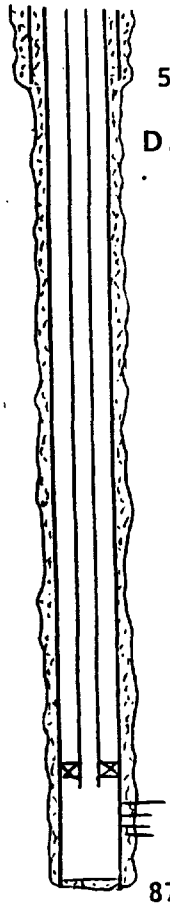
   Underlying - Lower Bone Spring top at ± 8650'

ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
MEWBOURNE OIL CO.	SPRINKLE FEDERAL			
WELL NO.	**FOOTAGE LOCATION**	**SECTION**	**TOWNSHIP**	**RANGE**
2	660 FNL, 1980 FWL	26	18S	32E

Schematic



TD = 8711'

Tabular Data

Surface Casing

Size 8 5/8" Cemented with 400 sx.

TOC Surface feet determined by Circ.

Hole size Assume 11"

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5 1/2" Cemented with 1950 sx.

TOC Surface feet determined by Calcn.

Hole size 7 7/8" 2nd stage circ.

Total depth 8711'

Injection interval

8542 feet to 8574 feet

(perforated)

Tubing size 2 7/8" lined with Bare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8442 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of Field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ___ Yes X No

   If no, for what purpose was the well originally drilled? Oil Production
4. 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.

   Overlying - San Andres top at ± 4800'

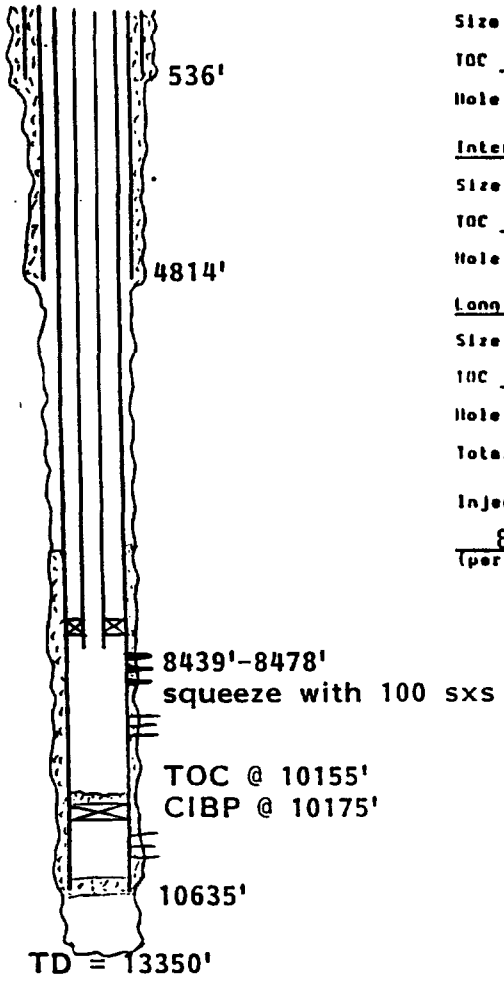
   Underlying - Lower Bone Spring top at ± 8650'

ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
MEWBOURNE OIL CO.	SPRINKLE FEDERAL			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
1	660 FNL, 660 FWL	26	18S	32E

Schematic



Tabular Data

Surface Casing

Size 13 3/8" Cemented with 500 sx.

TOC Surface feet determined by Circ.

Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" Cemented with 2825 sx.

TOC Surface feet determined by Circ.

Hole size 12 1/4"

Long string

Size 4 1/2" Cemented with 735 sx.

TOC 7847 feet determined by Calcn.

Hole size 7 7/8"

Total depth 13350'

Injection interval

8507 feet to 8532 feet

(perforated)

Tubing size 2 3/8" lined with Rare Steel (material) set in a

Otis Permalatch (brand and model) packer at 8407 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand

2. Name of field or Pool (if applicable) Querecho Plains

3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil Production

4. 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)

   10196'-10350' CIBP with 20' cement at 10175'

   8439'-8478' squeeze with 100 sxs cement

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

   Overlying - San Andres top at ± 4800'

   Underlying - Lower Bone Spring top at ± 8650'

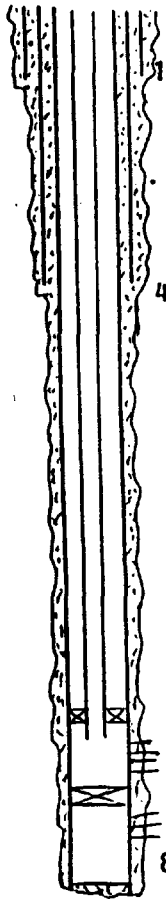
ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

MEWBOURNE OIL CO. (OPERATOR) FEDERAL E (LEASE)

11	660 FNL, 530 FEL	27	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



TD = 8972'

Tabular Data

Surface Casing

Size 13 3/8" Cemented with 1120 sx.

TOC Surface feet determined by Circ.

Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" Cemented with 2400 sx.

TOC Surface feet determined by Circ.

Hole size 11"

Long string

Size 5 1/2" Cemented with 1625 sx.

TOC Surface feet determined by Calcn.

Hole size 7 7/8" CBL 8869'-4650'
CMT OK @ 4650'

Total depth 8972'

Injection interval

8360 feet to 8388 feet
(perforated)
and 8450 feet to 8486 feet.

Note: Already converted to injection in August 1992 per Division Order R-9737.

Tubing size 2 7/8" lined with Bare Steel (material) set in a Otis Permalatch (brand and model) packer at 8270 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of Field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ☐ Yes ☒ No
   If no, for what purpose was the well originally drilled? Oil Production
4. 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)
   Bone Spring Carbonate 8826'-70' (non-productive). Isolated from above perfs by CIBP at 8800'.
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
   Overlying - San Andres top at 4836'
   Underlying - Lower Bone Spring top at 8660'

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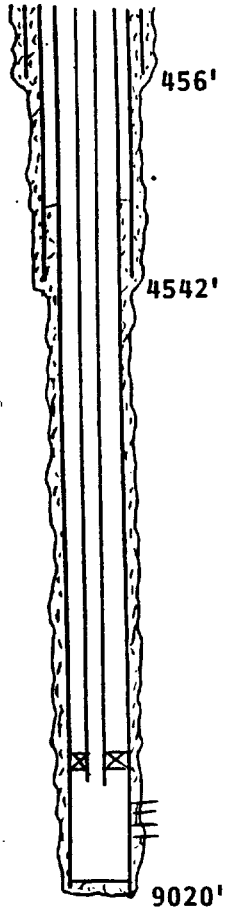
ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

MEWBOURNE OIL CO.	FEDERAL E			
OPERATOR	LEASE			
10	2310 FNL, 2310 FEL	27	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



TD = 9020'

Tabular Data

Surface Casing

Size 13 3/8" Cemented with 475 sx.

TOC Surface feet determined by Circ.

Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" Cemented with 2600 sx.

TOC Surface feet determined by Circ.

Hole size 12 1/4"

Long string

Size 5 1/2" Cemented with 1400 sx.

TOC 2038 feet determined by Calcn.

Hole size 7 7/8" CBL 8922'-2600'
~~TOC~~ 3118'

Total depth 9020'

Injection interval

8501 feet to 8530 feet
(perforated)

Tubing size 2 7/8" lined with Bare Steel (material) set in a

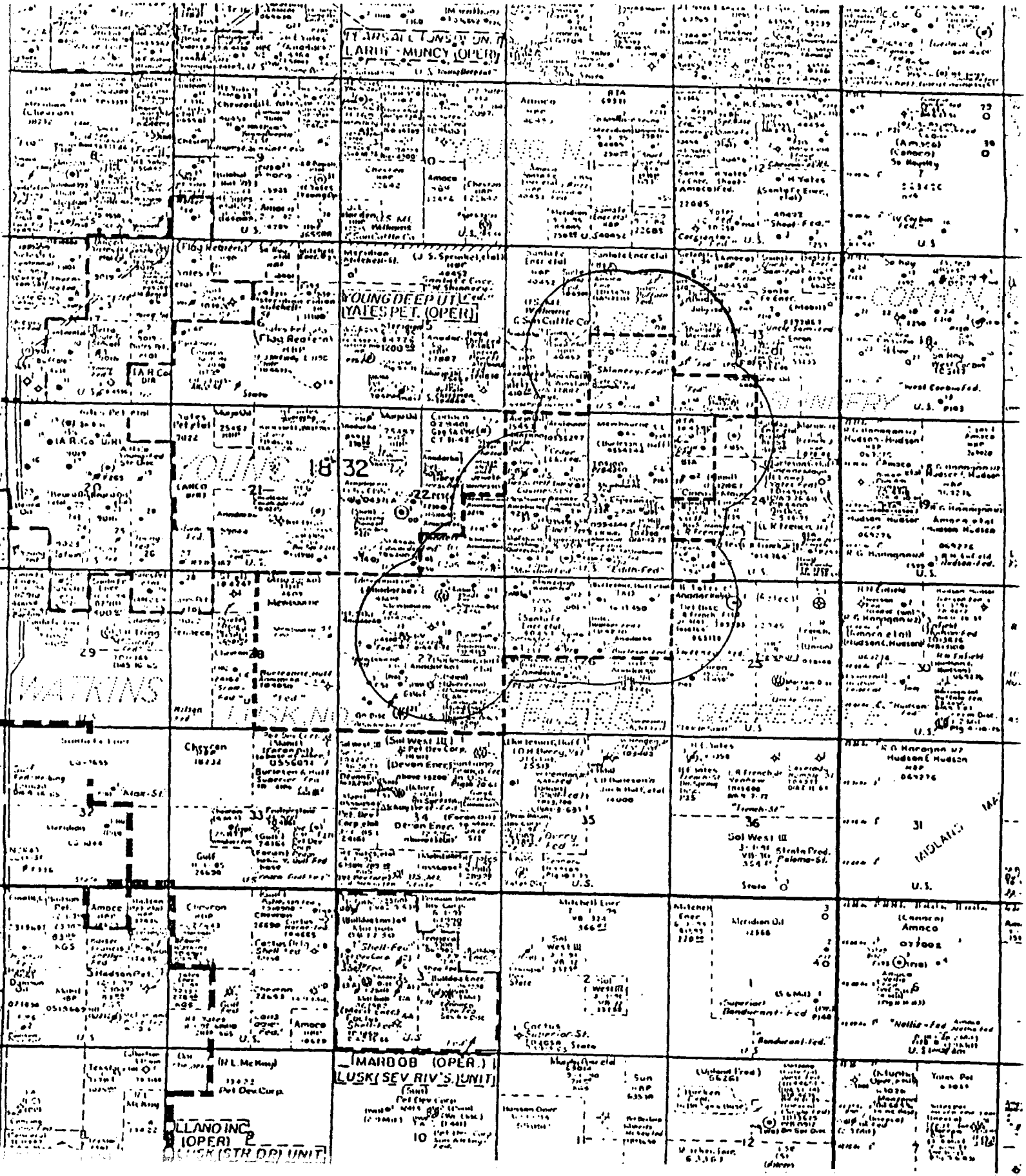
Otis Permalatch (brand and model) packer at 8401 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of Field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? ☐ Yes ☒ No
   If no, for what purpose was the well originally drilled? Oil Production
4. 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.
   Overlying - San Andres top at ± 4800'
   Underlying - Lower Bone Spring top at ± 8650'

ITEM V OF NEW MEXICO OCD FORM C-108
MAP OF ALL WELLS WITHIN 2 MILES OF INJECTORS
QUERECHO PLAINS BONE SPRING SAND UNIT



ITEM VI OF NEW MEXICO FORM C-108
WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
QUERECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASE/WELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
SIETE O&G	ERIE FED #1	T18S, R32E, SEC 13 800 FNL, 660 FWL	OIL	13 3/8 @ 400' CMT W/ 600SX 8 5/8 @ 3140' CMT W/ 375 SX 5 1/2 @ 5350' CMT W/ 510 SX	SURFACE 2178' 2807'	6/2/90	8975'	CMT PLUGS 8450'-8650' 6550'-6650' 5550 W/ 70 SX 5460 W/ 30 SX OPEN PERFS 4990'-5017'
MERIDIAN OIL CO	SHINNERY FED #1	T18S, R32E, SEC 13 1980 FSL, 1980 FWL	OIL	13 3/8 @ 383' CMT W/ 350 SX 9 5/8 @ 2904' CMT W/ 1655 SX 5 1/2 @ 12498' CMT W 2965 SX	SURFACE SURFACE SURFACE	3/6/88	12500'	PERF & PROD 11200'-11204' CIBP @ 11140' PERF & TEST 9710'-9752' RET @ 8540' PERF & TEST 5012'-5076' RET @ 4944' PERF & PROD 4006'-4552' SQZ 4006'-4552', 5012'-5076', 9710'-9752' OPEN PERFS 10882'-11426'
MEWBOURNE OIL CO.	FED M #1	T18S, R32E, SEC 13 330 FSL, 330 FWL	OIL	13 3/8 @ 450' CMT W/ 200 SX 8 5/8 @ 4332 CMT W/ 1320 SX 5 1/2 @ 8670' CMT W/ 1425 SX	SURFACE(V) SURFACE(V) SURFACE(V)	2/18/89	8670'	OPEN PERFS 8424'-8514'
AMOCO	FED BY #1	T18S, R32E, SEC 14 660 FNL, 1980 FEL	D&A	13 3/8 @ 674' CMT W/ 700 SX 9 5/8 @ 4900' CMT W/ 2950 SX 5 1/2 @ 13430' CMT W/ 3270 SX	(SEE ATTACH)	4/11/82	13430'	PERF & TEST 13226'-13317' CIBP @ 13115' PERF & TEST 12334'-12354' PERF & TEST 10598'-10606' PERF & TEST 4962'-4980' P&A
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #5	T18S, R32E, SEC 14 2310 FNL, 660 FEL	SWD	13 3/8 @ 410' CMT W/ 500 SX 8 5/8 @ 2744 CMT W/ 1300 SX 5 1/2 @ 8781' CMT W/ 1376 SX	SURFACE(V) SURFACE(V) 2555'(CBL)	10/31/89	8782'	PERF & TEST 8660'-8694' CIBP @ 8550' OPEN PERFS 4990'-6790'
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #4	T18S, R32E, SEC 14 1980 FSL, 660FEL	OIL	13 3/8 @ 415' CMT W/ 500 SX 8 5/8 @ 2723' CMT W/ 1500 SX 5 1/2 @ 8740' CMT W/ 1325 SX	SURFACE(V) SURFACE(V) 2760'(CBL)	6/22/89	8750'	OPEN PERFS 8412'-8490'
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #3	T18S, R32E, SEC 14 1980 FSL, 1980 FEL	OIL	13 3/8 @ 444' CMT W/ 500 SX 8 5/8 @ 2727' CMT W/ 1550 SX 5 1/2 @ 9489' CMT W/ 1600 SX	SURFACE(V) SURFACE(V) 2746'(CBL)	4/05/89	9500'	OPEN PERFS 8478'-8504'
SIETE O&G	QUANAH FED #1	T18S, R32E, SEC 14 330 FSL, 2310 FWL	OIL	13 3/8 @ 423' CMT W/ 395 SX 8 5/8 @ 3001' CMT W/ 1225 SX 5 1/2 @ 11243' CMT W/ 1910 SX	SURFACE SURFACE 1718'	8/24/88	11243'	PERF & TEST 10818'-10860' BRPG 10800' PERF & TEST 10216'-10244' BRPG 10200' PERF & TEST 10008'-10029' BRPG 9900' PERF & TEST 9714'-9822'

ITEM VI OF NEW MEXICO FORM C-108
WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
QUERECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASE/WELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
								BRPG 9110' PERF & TEST 8681'-9014' BRPG 8665' PERF & PROD 8448'-8516' CLEAN OUT TO 9900' CIBP @ 9420' PERF & TEST 9252'-9400' RETR BP @ 5970' OPEN PERFS 4850'-5871'
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #1	T18S, R32E, SEC 14 330 FSL, 1650 FEL	OIL	13 3/8 @ 423' CMT W/ 500 SX 8 5/8 @ 2745' CMT W/ 1400 SX 5 1/2 @ 10241' CMT W/ 1600 SX	SURFACE SURFACE 1267'	11/19/88	10241'	PERF & TEST 9776'-9790' RET @ 9770', SQZ W/ 42 SX PERF & TEST 9734'-9757' RET @ 9600', SQZ W/ 50 SX REPERF & TEST 9735'-9745' BRPG 9642' OPEN PERFS 8481'-8510'
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #2	T18S, R32E, SEC 14 330 FSL, 660 FEL	OIL	13 3/8 @ 435' CMT W/ 500 SX 8 5/8 @ 2750' CMT W/ 2875 SX 5 1/2 @ 9910' CMT W/ 1325 SX	SURFACE SURFACE 3305'	3/10/89	9931'	PERF & TEST 9726'-9732' BRPG 9615' OPEN PERFS 8496'-8526'
MEWBOURNE OIL CO.	FED H #2	T18S, R32E, SEC 22 330 FSL, 330 FEL	OIL	13 3/8 @ 440' CMT W/ 400 SX 8 5/8 @ 4472' CMT W/ 2100 SX 5 1/2 @ 8960' CMT W/ 1700 SX	SURFACE(V) SURFACE(V) SURFACE(V)	2/18/86	8960'	OPEN PERFS 8396'-8460'
MEWBOURNE OIL CO.	FED L #5	T18S, R32E, SEC 23 660 FNL, 660 FEL	OIL	13 3/8 @ 460' CMT W/ 400 SX 8 5/8 @ 4330' CMT W/ 1575 SX 5 1/2 @ 8650' CMT W/ 1275 SX	SURFACE(V) SURFACE(V) 2763'	4/17/88	8650'	OPEN PERFS 8430'-8574'
MEWBOURNE OIL CO.	FED L #4	T18S, R32E, SEC 23 660 FNL, 1650 FEL	OIL	13 3/8 @ 438' CMT W/ 400 SX 8 5/8 @ 4318' CMT W/ 1600 SX 5 1/2 @ 8760' CMT W/ 1325 SX	SURFACE(V) SURFACE(V) 2642'	11/3/87	8760'	OPEN PERFS 8431'-8506'
MANZANO OIL CO.	MURJO FED #1	T18S, R32E, SEC 23 1850 FNL, 990 FWL	OIL	13 3/8 @ 350' CMT W/ 350 SX 8 5/8 @ 2777' CMT W/ 1200 SX 5 1/2 @ 10800' CMT W/ 650 SX	SURFACE(V) SURFACE(V) 7559'	6/25/87	11780'	PERF & TEST 10648'-10726 PERF & TEST 10172'-10223' PERF & TEST 9619'-9670' SQZ PERFS 9619'-9670' W/ 1150 TOC CALC @ 3935' PERF & TEST 9726'-9743' PERF & TEST 9192'-9210' CIBP @ 9560' OPEN PERFS 8283'-8426' RETR BP @ 8506'
MEWBOURNE OIL CO.	CEDAR LAKE FED #2	T18S, R32E, SEC 23 1980 FNL, 1980 FWL	OIL	13 3/8 @ 478' CMT W/ 500 SX 8 5/8 @ 4286' CMT W/ 1400 SX	SURFACE(V) SURFACE(V)	11/10/86	8700'	OPEN PERFS 8435'-8501'

ITEM VI OF NEW MEXICO FORM C-108
WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
QUERECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASE/WELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
				5 1/2 @ 8708' CMT W/ 1075 SX	3347'			
MEWBOURNE OIL CO.	FED L#3	T18S, R32E, SEC 23 1980 FNL, 1650 FEL	OIL	13 3/8 @ 450' CMT W/ 416 SX 8 5/8 @ 4315' CMT W/ 1700 SX 5 1/2 @ 8698' CMT W/ 1475 SX	SURFACE(V) SURFACE(V) 1342'	6/19/87	8698'	PERF & TEST 8598'-8610' CIBP @ 8585' OPEN PERFS 8446'-8530'
MEWBOURNE OIL CO.	FED L#6	T18S, R32E, SEC 23 1880 FNL, 660 FEL	OIL	13 3/8 @ 448' CMT W/ 475 SX 8 5/8 @ 4330' CMT W/ 1575 SX 5 1/2 @ 8650' CMT W/ 1400 SX	SURFACE(V) SURFACE(V) SURFACE(V)	7/24/88	8650'	OPEN PERFS 8436'-8520'
MEWBOURNE OIL CO.	FED L#7 old(EDITH FED #1)	T18S, R32E, SEC 23 2310 FSL, 990 FEL	OIL	8 5/8 @ 356' CMT W/ 250 SX 5 1/2 @ 8670' CMT W/ 4630 SX	SURFACE(V) SURFACE(V)	5/14/88	8670'	DEEPEN FROM OTD @ 4281' (1 OPEN PERFS 8485'-8552'
MEWBOURNE OIL CO.	FED L#2	T18S, R32E, SEC 23 2310 FSL, 2030 FEL	OIL	13 3/8 @ 441' CMT W/ 450 SX 8 5/8 @ 4293' CMT W/ 1800 SX 5 1/2 @ 8750' CMT W/ 925 SX	SURFACE(V) SURFACE(V) 3538'(CBL)	10/14/86	8750'	OPEN PERFS 8458'-8531'
MEWBOURNE OIL CO.	GOVERNMENT K #2	T18S, R32E, SEC 23 1950 FSL, 1980 FWL	INJ	13 3/8 @ 700' CMT W/ 700 SX 8 5/8 @ 4800' CMT W/ 3100 SX 5 1/2 f/ 4408'-8900' CMT W/ 900 SX	SURFACE(V) SURFACE(V) 4408'	9/19/86	8900'	PERF & PROD 8343'-8515' CIBP @ 5059' PERF & TEST 4859' SQZ 4859' W/ 225 SX CLEAN OUT OPEN PERFS 8343'-8515'
MEWBOURNE OIL CO.	FED F#3	T18S, R32E, SEC 23 1980 FSL, 990 FWL	OIL	13 3/8 @ 480' CMT W/ 275 SX 8 5/8 @ 4285' CMT W/ 1700 SX 5 1/2 @ 8570' CMT W/ 1375 SX	SURFACE(V) SURFACE(V) 1713'	12/31/86	8570'	OPEN PERFS 8362'-8448'
MEWBOURNE OIL CO.	QUERECHO FED #1	T18S, R32E, SEC 23 610 FSL, 760 FWL	OIL	13 3/8 @ 354' CMT W/ 385 SX 8 5/8 @ 3047' CMT W/ 1475 SX 5 1/2 @ 8565' CMT W/ 1250 SX	SURFACE SURFACE 2331'	12/31/85	9580'	OPEN PERFS 8414'-8447'
MEWBOURNE OIL CO.	QUERECHO FED #2	T18S, R32E, SEC 23 760 FSL, 2310 FWL	OIL	13 3/8 @ 374' CMT W/ 385 SX 8 5/8 @ 3010' CMT W/ 1300 SX 5 1/2 @ 8703' CMT W/ 1100 SX	SURFACE SURFACE 3217'	5/6/86	9100'	OPEN PERFS 8459'-8526'
MEWBOURNE OIL CO.	FED L#1	T18S, R32E, SEC 23 660 FSL, 1980 FEL	OIL	13 3/8 @ 459' CMT W/ 400 SX 8 5/8 @ 4345' CMT W/ 1700 SX 5 1/2 @ 9050' CMT W/ 1050 SX	SURFACE(V) SURFACE(V) 3814'	4/22/86	9050'	OPEN PERFS 8474'-8538'
BTA	CINCO DE MAYO FED #1	T18S, R32E, SEC 24 660 FNL, 1980 FWL	P&A	13 3/8 @ 757' CMT W/ 1050 SX 9 5/8 @ 4657' CMT W/ 1500 SX 5 1/2 @ 14700' CMT W/4000 SX	SURFACE(V) SURFACE(V) SURFACE(V)	3/29/61	14905'	PB 4400' PERF & PROD 4014'-4090' P&A
MEWBOURNE OIL CO.	FED P#1	T18S, R32E, SEC 24 660 FNL, 660 FWL	OIL	13 3/8 @ 452' CMT W/ 450 SX 8 5/8 @ 4347' CMT W/ 1600 SX	SURFACE(V) SURFACE(V)	3/31/89	8680'	OPEN PERFS 8473'-8545'

ITEM VI OF NEW MEXICO FORM C-108
WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
QUERECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASE/WELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
				5 1/2 @ 8680' CMT W/ 1425 SX	2100'			
MEWBOURNE OIL CO.	FED P#2	T18S, R32E, SEC 24 1980 FNL, 330 FWL	OIL	13 3/8 @ 430' CMT W/ 450 SX 8 5/8 @ 4330' CMT W/ 1950 SX 5 1/2 @ 8725' CMT W/ 1425 SX	SURFACE SURFACE 1618'	8/05/89	8725'	OPEN PERFS 8468'-8524'
HANLEY PETRO.	HANLEY "24" FED #1	T18S, R32E, SEC 24 2310 FSL, 330 FWL	P&A	13 3/8 @ 410' CMT W/ 400 SX 8 5/8 @ 3015' CMT W/ 1125 SX 4 1/2 @ 8700' CMT W/ 1930 SX	SURFACE SURFACE 1380'	12/30/90	8700'	PERF & PROD 8492'-8567' P&A
MEWBOURNE OIL CO.	FRENCH FED #1	T18S, R32E, SEC 24 660 FSL, 660 FWL	OIL	11 3/4 @ 350' CMT W/ 725 SX 8 5/8 @ 2800' CMT W/ 2000 SX 4 1/2 @ 8700' CMT W/ 780 SX	SURFACE SURFACE 5742'	2/15/86	8700'	PERF & PROD 8534'-8568' CIBP @ 8440' OPEN PERFS 6650'-6670' SQZ 6650'-6670' W/ 219SX CLEAN OUT TO 8654' OPEN PERFS 8534'-8568'
HAYCO	SWEENY FED #1	T18S, R32E, SEC 25 660 FNL, 1980 FWL	OIL	13 5/8 @ 1533' CMT W/ 100 SX 8 5/8 @ 1534' CMT W/ 150 SX 7 @ 2747' CMT W/ 100 SX 4 1/2 @ 8890' CMT W/ 265 SX	1381' 1150' 997' 6658'	1/25/58	9593'	PERF & TEST 8651'-8655' SQZ 8651'-8655' W/ 50SX PERF & TEST 8612'-8620' SQZ 8612'-8620' W/ 75SX OPEN PERFS 6860'-6875'
ENRON	U.S. 25 FED COM #1	T18S, R32E, SEC 25 1980 FSL, 660 FWL	OIL	13 3/8 @ 492' CMT W/ 550 SX 8 5/8 @ 4539' CMT W/ 1320 SX 5 1/2 @ 13747' CMT W/ 500 SX	SURFACE(V) SURFACE(V) 11253'	12/3/83	13750'	PERF & TEST 13186'-13530' SQZ HOLES @ 8850 W/ 200 SX RET @ 8820', PB 8777' TOC @ 7853' OPEN PERFS 8604'-8644'
MEWBOURNE OIL CO.	BURLESON FED #2	T18S, R32E, SEC 26 660 FNL, 660 FEL	OIL	11 3/4 @ 349' CMT W/ 485 SX 8 5/8 @ 2806' CMT W/ 2100 SX 4 1/2 @ 8700' CMT W/ 1200 SX	SURFACE SURFACE 4149'	1/2/86	8700'	OPEN PERFS 8515'-8554'
MEWBOURNE OIL CO.	BURLESON FED #1	T18S, R32E, SEC 26 660 FNL, 2310 FEL	OIL	11 3/4 @ 350' CMT W/ 485 SX 8 5/8 @ 2800' CMT W/ 2250 SX 4 1/2 @ 8700' CMT W/ 1205 SX	SURFACE(V) SURFACE(V) 4130'	11/2/85	8700'	OPEN PERFS 8512'-8572'
MEWBOURNE OIL CO.	SPRINKLE FED #2 old(WALKER FED #1)	T18S, R32E, SEC 26 660 FNL, 1980 FWL	OIL	8 5/8 @ 547' CMT W/ 400 SX 5 1/2 @ 8711' CMT W/ 1950 SX	SURFACE(V) SURFACE(V)	10/3/85	8711'	RE-ENTRY OF D&A WELL OPEN PERFS 8542'-8574'
MEWBOURNE OIL CO.	SPRINKLE FED #1	T18S, R32E, SEC 26 660 FNL, 660 FWL	OIL	13 3/8 @ 536' CMT W/ 500 SX 8 5/8 @ 4814' CMT W/ 2825 SX 4 1/2 @ 10635' CMT W/ 735 SX	SURFACE(V) SURFACE(V) 7847'	5/11/85	13350'	PERF & TEST 10196'-10350' PB 10175' PERF & TEST 8439'-8532' SQZ 8439'-8478' OPEN PERFS 8507'-8532'
MEWBOURNE OIL CO.	SPRINKLE FED #3	T18S, R32E, SEC 26	OIL	11 3/4 @ 350' CMT W/ 485 SX	SURFACE	3/9/86	8710'	OPEN PERFS 8502'-8568'

ITEM VI OF NEW MEXICO FORM C-108
WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
QUERECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASE/WELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
		2310 FNL, 330 FWL		8 5/8 @ 2767' CMT W/ 1700 SX 5 1/2 @ 8710' CMT W/ 700 SX	SURFACE 5219'			
SANTA FE ENERGY	SPRINKLE FED #4	T18S, R32E, SEC 26 2310 FNL, 1650 FWL	OIL	13 3/8 @ 353' CMT W/ 370 SX 8 5/8 @ 2810' CMT W/ 1050 SX 5 1/2 @ 9700' CMT W/ 900 SX	SURFACE SURFACE 5212'	1/28/87	9700'	PERF & PROD 8823'-8836' CIBP @ 8805' OPEN PERFS 8541'-8587' RBP W/ 20'SAND @ 8500' OPEN PERFS 5626'-5638'
ANADARKO PETRO. CORP.	BURLESON FED#3	T18S, R32E, SEC 26 2310 FNL, 2310 FEL	OIL	11 3/4 @ 350' CMT W/ 485 SX 8 5/8 @ 2804' CMT W/ 2000 SX 4 1/2 @ 8729' CMT W/ 1700 SX	SURFACE SURFACE 2281'	1/26/86	8730'	PERF & TEST 8547'-8616' RET @ 8566' PROD 8547'-8557' PB TO 8475' OPEN PERFS 5652'-5667'
ANADARKO PETRO. CORP.	PE-JE-AN #1	T18S, R32E, SEC 26 1980 FSL, 1980 FWL	OIL	13 3/8 @ 352' CMT W/ 350 SX 8 5/8 @ 3008' CMT W/ 1500 SX 5 1/2 @ 10779' CMT W/ 600 SX	SURFACE(V) SURFACE(V) 7122'	2/25/86	11150'	PERF & TEST 10471'-10584' BP @ 10455' PERF & TEST 9876'-9952' BP @ 9805' PERF & TEST 8536'-8606' SQZ 8536'-8606' PERF & PROD 9374'-9567' CIBP @ 9309' OPEN PERFS 5620'-5632'
MEWBOURNE OIL CO.	FED E#11	T18S, R32E, SEC 27 660 FNL, 530 FEL	INJ	13 3/8 @ 1125' CMT W/ 1120 SX 8 5/8 @ 4480' CMT W/ 2400 SX 5 1/2 @ 8972' CMT W/ 1625 SX	SURFACE SURFACE 868'	11/30/85	8971'	OPEN PERFS 8360'-8486' PERF & TEST 8826'-8870' CIBP @ 8800'
MEWBOURNE OIL CO.	FED E#1	T18S, R32E, SEC 27 660 FNL, 1980 FEL	OIL	13 3/8 @ 650' CMT W/ 650 SX 9 5/8 @ 4540' CMT W/ 2975 SX 5 1/2 @ 12898' CMT W/ 550 SX	SURFACE(V) SURFACE(V) 10327'	10/31/76	12898'	OPEN PERFS 12625'-12791'
MEWBOURNE OIL CO.	FED E#13	T18S, R32E, SEC 27 1980 FNL, 1980 FWL	OIL	13 3/8 @ 460' CMT W/ 485 SX 8 5/8 @ 4248' CMT W/ 1500 SX 5 1/2 @ 9020' CMT W/ 1225 SX	SURFACE(V) SURFACE(V) 2911'	8/12/87	9020'	OPEN PERFS 8504'-8534'
MEWBOURNE OIL CO.	FED E#10	T18S, R32E, SEC 27 2310 FNL, 2310 FEL	OIL	13 3/8 @ 456' CMT W/ 475 SX 8 5/8 @ 4542' CMT W/ 2600 SX 5 1/2 @ 9020' CMT W/ 1400 SX	SURFACE(V) SURFACE(V) 3118(CBL)	5/14/85	9020'	OPEN PERFS 8501'-8530'
MEWBOURNE OIL CO.	FED E#12	T18S, R32E, SEC 27 1980 FNL, 330 FEL	OIL	13 3/8 @ 440' CMT W/ 450 SX 8 5/8 @ 4310' CMT W/ 1800 SX 5 1/2 @ 9052' CMT W/ 835 SX	SURFACE(V) SURFACE(V) 4888'	3/16/86	9050'	OPEN PERFS 8470'-8532'
MEWBOURNE OIL CO.	FED G#1	T18S, R32E, SEC 27 1980 FSL, 1980 FWL	OIL	13 3/8 @ 441' CMT W/ 550 SX 8 5/8 @ 4505' CMT W/ 1500 SX	SURFACE SURFACE	6/23/78	13061'	PERF & PROD 12693'-12814' PERF & TEST 9910'-9978'

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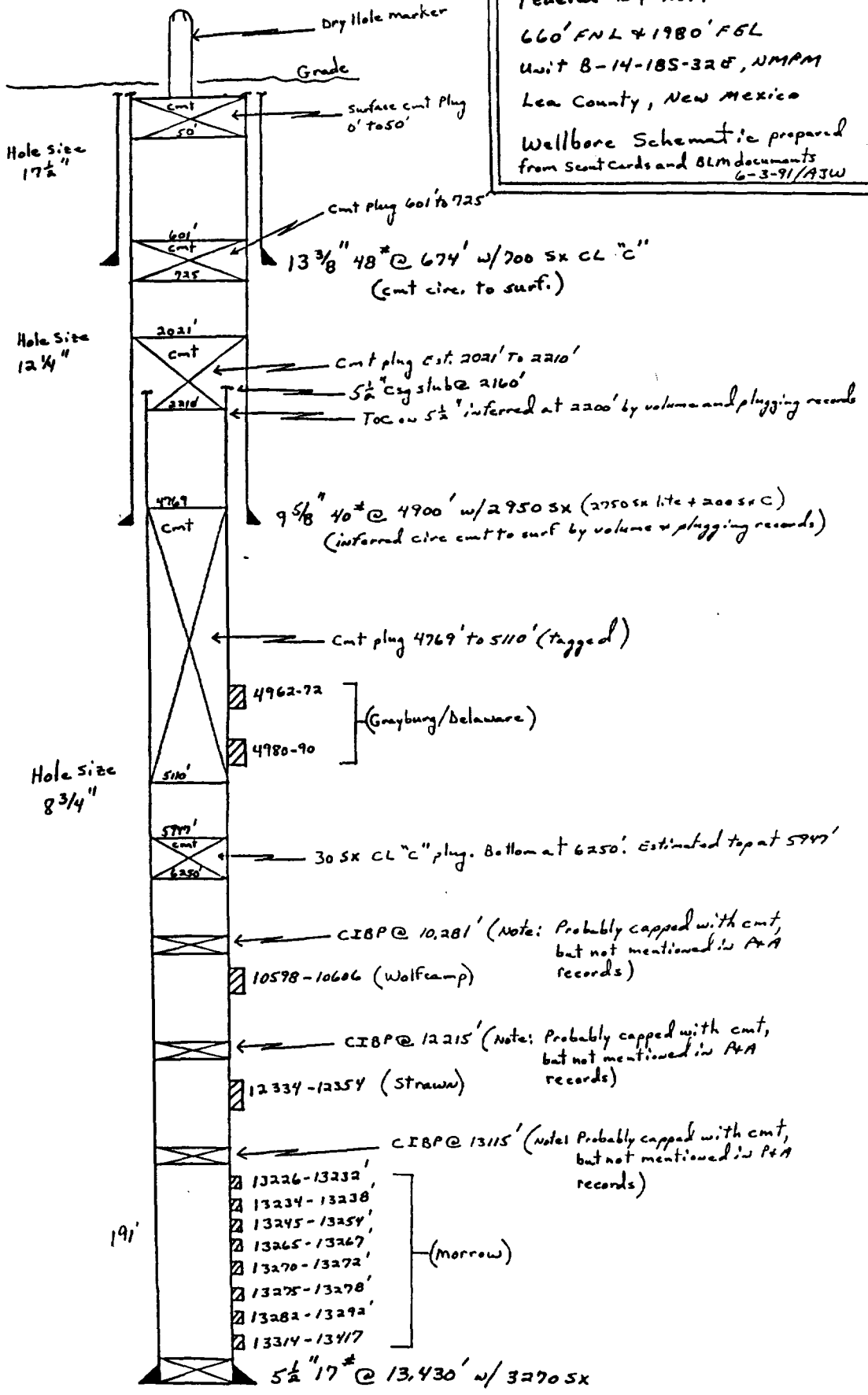
ITEM VI OF NEW MEXICO FORM C-108
WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
QUERECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASE/WELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
				5 1/2 @ 13061' CMT W/ 1395 SX	6831'			RET @ 9950' CIBP @ 9850' W/ 10SX PERF & PROD 9750'-9778' CIBP @ 9700' PERF & PROD 8862'-8924' CIBP @ 8800' W/ 15' CMT OPEN PERFS 8506'-8538'
MEWBOURNE OIL CO.	ANADARDO #1 old(Q. P. UNIT #2)	T18S, R32E, SEC 27 660 FSL, 1980 FWL	P&A	13 3/8 @ 753' CMT W/ 750 SX 9 5/8 @ 4548' CMT W/ 1300 SX 5 1/2 @ 13004' CMT W/ 1750 SX 5 1/2 @ 8700' CMT W/ 600 SX	SURFACE SURFACE 7284' 6419'	2/7/58	14330'	PERF & TEST 12723'-12838' PERF & TEST 11922'-11935' CUT 5 1/2 & RESET @ 8700' PERF & PROD 8538'-8560' CIBP @ 6400' PERF & TEST 6254'-6277' CIBP 4200' PERF & PROD 3910'-4035' P&A

ad 4-11-82
P&A'd 5-27-83

Amoco Production Co,
Federal BY No. 1
660' FNL & 1980' FEL
Unit B-14-18S-32E, NMPM
Lea County, New Mexico
Wellbore Schematic prepared from sent cards and BLM documents 6-3-91/AJW



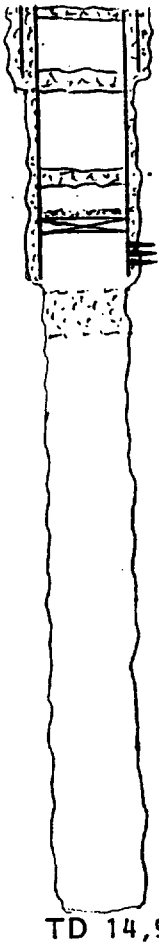
ITEM VI OF NEW MEXICO OCD FORM C-108

Plugged Well Detail

BTA (OPERATOR) — Cinco De Mayo Federal (LEASE)

1	660' FNL & 1980' FWL	24	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



15 sx. @ 50'

757'

50 sx. @ 810'

50 sx. @ 2000'

CIBP @ 3900'
4014'-4290' sqz.
w/30 sx.

Shoe @ 4657'
Cement 4667'-4767'

TD 14,905'

Tabular Data

Surface Casing

Size 13-3/8" Cemented with 1050 sx.

TOC Surface feet determined by circ.

Hole size 16"

Intermediate Casing

Size 9-5/8" Cemented with 1500 sx.

TOC Surface feet determined by circ.

Hole size 10-3/4"

Long string

Size N.A." Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Total depth 14,905'

Injection interval

_____ feet to _____ feet

(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ (material) set in a

_____ (brand and model) 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? ☐ Yes ☐ No

   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 detail (sacks of cement or bridge plug(s) used) _____

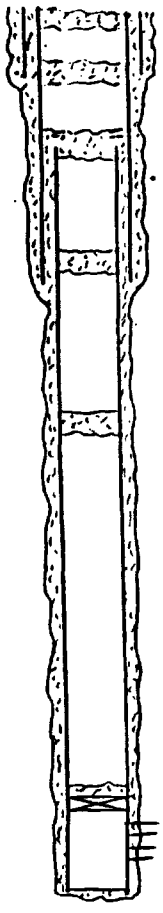
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

ITEM VI OF NEW MEXICO OCD FORM C-108
PLUGGED WELL DETAIL

HANLEY PETRO. INC. (OPERATOR) HANLEY 24 FEDERAL (LEASE)

1	2310 FSL, 330 FWL	24	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



20 sxs @ 55'

410'

35 sxs @ 460'

CMT 1981'-1825'

25 sxs @ 3000'

3015'

25 sxs @ 4900'

CIBP @ 8375' with 20 sxs cement

Perfs 8492'-8567'

8700'

Tabular Data

Surface Casing

Size 13 3/8" Cemented with 400 sx.

TOC Surface feet determined by Calcn.

Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" Cemented with 1125 sx.

TOC Surface feet determined by Calcn.

Hole size 11"

Long string

Size 4 1/2" Cemented with 1930 sx.

TOC 1380' feet determined by Calcn.

Hole size 7 7/8"

Total depth 8700'

Injection interval

_____ feet to _____ feet

(perforated or open-hole, indicate which)

NOTE: Cut and pulled 1932' of 4 1/2"

Tubing size _____ lined with _____ (material) set in a

_____ (brand and model) 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? ☐ Yes ☐ No

   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 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. _____

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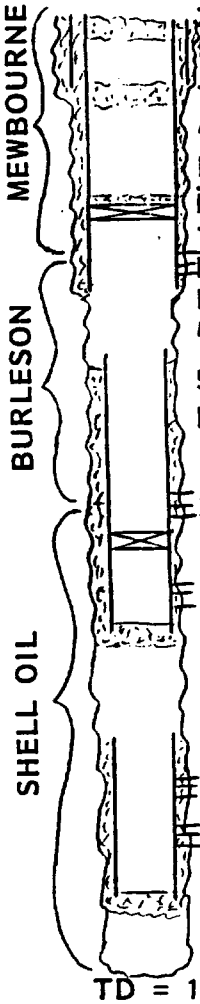
ITEM VI OF NEW MEXICO OCD FORM C-108
PLUGGED WELL DETAIL

MEWBOURNE OIL CO. (OPERATOR) ANADARKO FEDERAL (LEASE)

1	660 FSL, 1980 FWL	27	18S	32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



TOC calcn. @ 5947'

Tabular Data

Surface Casing

Size 13 3/8" Cemented with 750 sx.

TOC Surface feet determined by Calcn.

Hole size 16"

Intermediate Casing

Size 9 5/8" Cemented with 1300 sx.

TOC Surface feet determined by Calcn.

Hole size 10 3/4"

Long string (See Schematic)

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Total depth _____

Injection interval

_____ feet to _____ feet

(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ (material) set in a _____ (brand and model) 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? ☐ Yes ☐ No

   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 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. _____

ITEM VII OF NEW MEXICO OCD FORM C-108
DATA ON PROPOSED OPERATIONS
QUERECHO PLAINS BONE SPRING SAND UNIT

ITEM VII (1) Anticipated average injection rate is 650 bwpd/ injector.
Proposed maximum injection rate is 10000 bwpd for the unit.

ITEM VII (2) The injection system will be operated as a closed system.

ITEM VII (3) As a result of no detrimental results from injecting a heavy (.50 psi/ft) Delaware water in test injection wells Federal E#11 and Government K#2, Mewbourne requests a maximum injection pressure of 2000 psi. A less heavy (.45 psi/ft) mixture of Double Eagle, Bone Spring and Delaware water is planned for the full flood. Anticipated average injection pressure is 1800 psi.

ITEM VII (4) The source of injection water for the subject unit will be fresh water supplied by the City of Carlsbad's Double Eagle system, Delaware produced water and Bone Spring produced water. Agreement has been secured with the City of Carlsbad for the rights of up to 12000 BWPD. A copy of this water rights agreement, as well as a copy of the water analysis and core test results using this water is attached.

ITEM VII (5) Not applicable.

ITEM VIII OF NEW MEXICO OCD FORM C-108
GEOLOGIC DATA ON THE INJECTION ZONE & UNDERGROUND DRINKING WATER
QUERECHO PLAINS BONE SPRINGS SAND UNIT

The zone being targeted for water injection at Querecho Plains is the First Bone Spring sand at depths from 8328'-8620' in the well Federal L NO. 4, Section 23, T18S, R32E. The First Bone Spring sands are a sequence of well consolidated sandstone, siltstone, and shale strata, with localized carbonate deposition, of Permian age cemented with calcareous material. An eight percent porosity cut off is used to determine net pay as porosity less than eight percent is considered impermeable at the existing and proposed reservoir pressure and reservoir fluid regimes. Net pay isopach maps contained in the engineering report portion of the unit plan show the areal extent of the targeted sands. Impermeable carbonate deposits exist above and below the targeted sands thus defining the permeable limits of the reservoir. All injected fluids should remain in the reservoir with the exception of cycling to the surface though wellbores.

Based on communications with the New Mexico State Engineer's Roswell office (Ken Fresquez) and OCD files at Hobbs there appears to be only one fresh water well within T18S & R32E. This well's total depth was 270' and is located in the NW, NW, SE, SE, NW of section 20 (3 miles away from the nearest proposed injector). The source strata tapped by this well is the Triassic "Red Beds" and the only other strata Mr. Fresquez referred to as potentially fresh was the Alluvium which is shallower than the "Red Beds". There are no known fresh water strata underlying the Bone Spring.

ITEMS IX THROUGH XII OF NEW MEXICO OCD FORM C-108
QUERECHO PLAINS BONE SPRING SAND UNIT

ITEM IX. All wells of the proposed unit have an existing fracture stimulation. It is anticipated that all wells will be treated with acid at least once during the life of the unit.

ITEM X. All logging and test data for the existing wellbores exist on file with the state of New Mexico Oil Conservation Division (OCD) and will not be resubmitted with this application.

ITEM XI. As stated in ITEM VIII, it appears the only strata within one mile of our proposed unit which contains water of possible drinking quality is confined to 270' and shallower. No contamination of this drinking water should occur as all existing wellbores which penetrate the Bone Spring have surface casing set at a minimum depth of 350' with cement completely circulated behind this casing from setting depth to surface. In addition and to the best of my knowledge there are no fresh water wells within one mile of our proposed injectors.

ITEM XII. After reviewing the geology of the Bone Spring Sand strata in a one and one-half mile radius around the proposed unit area, no evidence appears of fractures or any hydrologic connection between the target sands and any overlying or underlying strata.

CAPROCK LABORATORIES, INC.
3312 BANKHEAD HIGHWAY
MIDLAND, TEXAS 79701
(915) 689 - 7252

May 21, 1992

Mewburne Oil Company
P. O. Box 7698
Tyler, Texas 75711

Attention: Kevin Mays

Subject: Water Compatibility Study

Gentlemen:

Presented in this report are the final results of a water compatibility study performed on 5 samples of produced water provided to this laboratory by Core Laboratory on behalf of Mewburne Oil Company. API Water Analysis was performed on each of the samples to determine their ionic characteristics. Based on these analyses, the scaling tendency with respect to cacium carbonate and calcium sufate were calculated and reported on May 19, 1992 (our Job Number 9205032). The samples were physically mixed to determine if precipitates would form. Turbidity was measured as percent transmittance on each of the combinations at 420 nanometers wavelength on a Milton Roy Model 601 Spectrophotometer.

The turbidity data are presented in this report and indicated ~~that~~ that the water from the Federal "E" #5 tank battery (Queen Formation) and the water from the Cedardrake Federal #4 well formed precipitates whe combined in the ratios tested (very slight decreaces in transmittance were observed). Additional analyses were performed on the waters to determine their barium concentrations and are also presented in this report. Based on calculations from theoretical combinations, all of the waters have a tendency to form both calcium carbonate and calcium sulfate scale on their own and these tendencies do not increase when mixed. The fresh water from Double Eagle and the Delaware produced water from the Cedardrake Federal #4 well both have barium and therefore presents the possibility of barium sulfate scale formation when combined with waters high in sulfate.

In conclusion, based on all of the analyses and physical combinations of these waters, the Delaware produced water from the Jewitt Feed #1 appears to be the most compatible water to the Bone Springs water from the Federal "L" lease.

Respectfully yours,

James L. Pritchard, Lab Manager
Caprock Laboratories, Inc.

CAPROCK LABORATORIES, INC.
3312 Bankhead Hwy.
Midland, Texas 79701
(915) 689-7252
FAX # (915) 689-0130

WATER ANALYSIS REPORT

SAMPLE

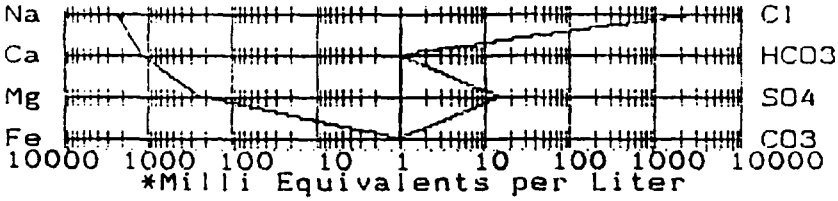
Oil Co. : MANZANO OIL
Lease : JEWITT FEED
Well No.: #1
Job No.: 9205032

Sample Loc. : DELAWARE PROD.
Date Sampled :
Attention :
Analysis No. : 2

ANALYSIS

		MG/L	EQ. WT.	*MEQ/L
1.	pH	6.550		
2.	Specific Gravity 60/60 F.	1.165		
3.	$CaCO_3$ Saturation Index @ 80 F.	+1.052		
	@ 140 F.	+2.812		
	Dissolved Gasses			
4.	Hydrogen Sulfide	0.0		
5.	Carbon Dioxide	Not Determined		
6.	Dissolved Oxygen	Not Determined		
	Cations			
7.	Calcium (Ca^{++})	24,529	/ 20.1 =	1,220.35
8.	Magnesium (Mg^{++})	2,772	/ 12.2 =	227.21
9.	Sodium (Na^{+}) (Calculated)	52,982	/ 23.0 =	2,303.57
10.	Barium (Ba^{++})	0.0		
	Anions			
11.	Hydroxyl (OH^{-})	0	/ 17.0 =	0.00
12.	Carbonate (CO_3^{--})	0	/ 30.0 =	0.00
13.	Bicarbonate (HCO_3^{-})	61	/ 61.1 =	1.00
14.	Sulfate (SO_4^{--})	750	/ 48.8 =	15.37
15.	Chloride (Cl^{-})	132,594	/ 35.5 =	3,735.04
16.	Total Dissolved Solids	213,688		
17.	Total Iron (Fe)	15	/ 18.2 =	0.84
18.	Total Hardness As $CaCO_3$	72,665		
19.	Resistivity @ 75 F. (Calculated)	0.001 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



*Milli Equivalents per Liter

Calculated Calcium Sulfate solubility in this brine is 590 mg/L. at 90 F.

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	1.00	81
$CaSO_4$	68.07	15.37	1,046
$CaCl_2$	55.50	1,203.98	66,821
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	0.00	0
$MgCl_2$	47.62	227.21	10,820
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	2,303.85	134,683

Analyst

Remarks and Comments:

CAPROCK
LABORATORIES, INC.
3312 Bankhead Hwy.
Midland, Texas 79701
(915) 689-7252
FAX # (915) 689-0130

WATER ANALYSIS REPORT

SAMPLE

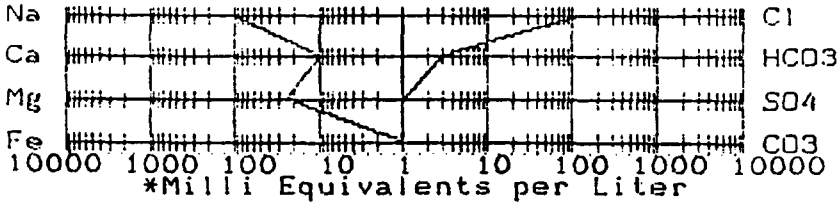
Oil Co. :
Lease : DOUBLE EAGLE
Well No.: FRESH WATER
Job No.: 9205032

Sample Loc. :
Date Sampled :
Attention :
Analysis No. : 3

ANALYSIS

		MG/L	EQ. WT.	*MEQ/L
1.	pH	9.100		
2.	Specific Gravity 60/60 F.	0.996		
3.	$CaCO_3$ Saturation Index @ 80 F.	+1.548		
	@ 140 F.	+2.388		
	Dissolved Gasses			
4.	Hydrogen Sulfide	0.0		
5.	Carbon Dioxide	Not Determined		
6.	Dissolved Oxygen	Not Determined		
	Cations			
7.	Calcium (Ca^{++})	200	/ 20.1 =	9.95
8.	Magnesium (Mg^{++})	304	/ 12.2 =	24.92
9.	Sodium (Na^{+}) (Calculated)	2,507	/ 23.0 =	109.00
10.	Barium (Ba^{++})	6	/ 68.7 =	0.09
	Anions			
11.	Hydroxyl (OH^{-})	0	/ 17.0 =	0.00
12.	Carbonate (CO_3^{--})	0	/ 30.0 =	0.00
13.	Bicarbonate (HCO_3^{-})	183	/ 61.1 =	3.00
14.	Sulfate (SO_4^{--})	50	/ 48.8 =	1.02
15.	Chloride (Cl^{-})	4,963	/ 35.5 =	139.80
16.	Total Dissolved Solids	8,213		
17.	Total Iron (Fe)	1	/ 18.2 =	0.05
18.	Total Hardness As $CaCO_3$	1,752		
19.	Resistivity @ 75 F. (Calculated)	0.685 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



*Milli Equivalents per Liter

Calculated Calcium Sulfate solubility in this brine is 2,814 mg/L. at 90 F.

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	3.00	243
$CaSO_4$	68.07	0.94	64
$CaCl_2$	55.50	6.02	334
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	0.00	0
$MgCl_2$	47.62	24.92	1,187
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	108.87	6,364

Analyst

Remarks and Comments:

CAPROCK LABORATORIES, INC.
3312 Bankhead Hwy.
Midland, Texas 79701
(915) 689-7252
FAX # (915) 689-0130

WATER ANALYSIS REPORT

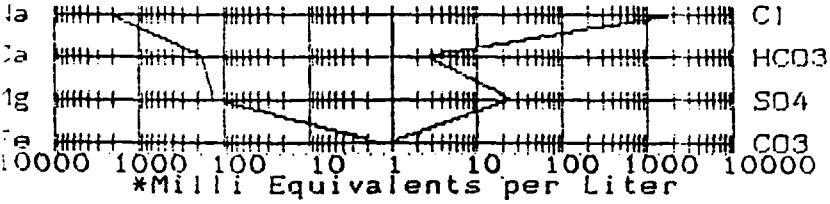
SAMPLE

il Co. :	MEWBOURNE OIL CO.	Sample Loc. :	BONE SPRINGS PROD. WATER
Lease :	FEDERAL L LEASE	Date Sampled :	
ell No.:		Attention :	
Job No.:	9205032	Analysis No. :	5

ANALYSIS

		MG/L	EQ. WT.	*MEQ/L
1.	pH	7.550		
2.	Specific Gravity 60/60 F.	1.110		
3.	$CaCO_3$ Saturation Index @ 80 F.	+0.842		
	@ 140 F.	+1.722		
	Dissolved Gasses			
4.	Hydrogen Sulfide	0.0		
5.	Carbon Dioxide	Not Determined		
6.	Dissolved Oxygen	Not Determined		
	Cations			
7.	Calcium (Ca^{++})	3,527	/ 20.1 =	175.47
8.	Magnesium (Mg^{++})	1,556	/ 12.2 =	127.54
9.	Sodium (Na^{+}) (Calculated)	52,547	/ 23.0 =	2,284.65
10.	Barium (Ba^{++})	Not Determined		
	Anions			
11.	Hydroxyl (OH^{-})	0	/ 17.0 =	0.00
12.	Carbonate (CO_3^{--})	0	/ 30.0 =	0.00
13.	Bicarbonate (HCO_3^{-})	159	/ 61.1 =	2.60
14.	Sulfate (SO_4^{--})	1,300	/ 48.8 =	26.64
15.	Chloride (Cl^{-})	90,760	/ 35.5 =	2,556.62
16.	Total Dissolved Solids	149,849		
17.	Total Iron (Fe)	28	/ 18.2 =	1.51
18.	Total Hardness As $CaCO_3$	15,214		
19.	Resistivity @ 75 F. (Calculated)	0.037 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



*Milli Equivalents per Liter

Calculated Calcium Sulfate solubility in this brine is 4,032 mg/L. at 90 F.

PROBABLE MINERAL COMPOSITION

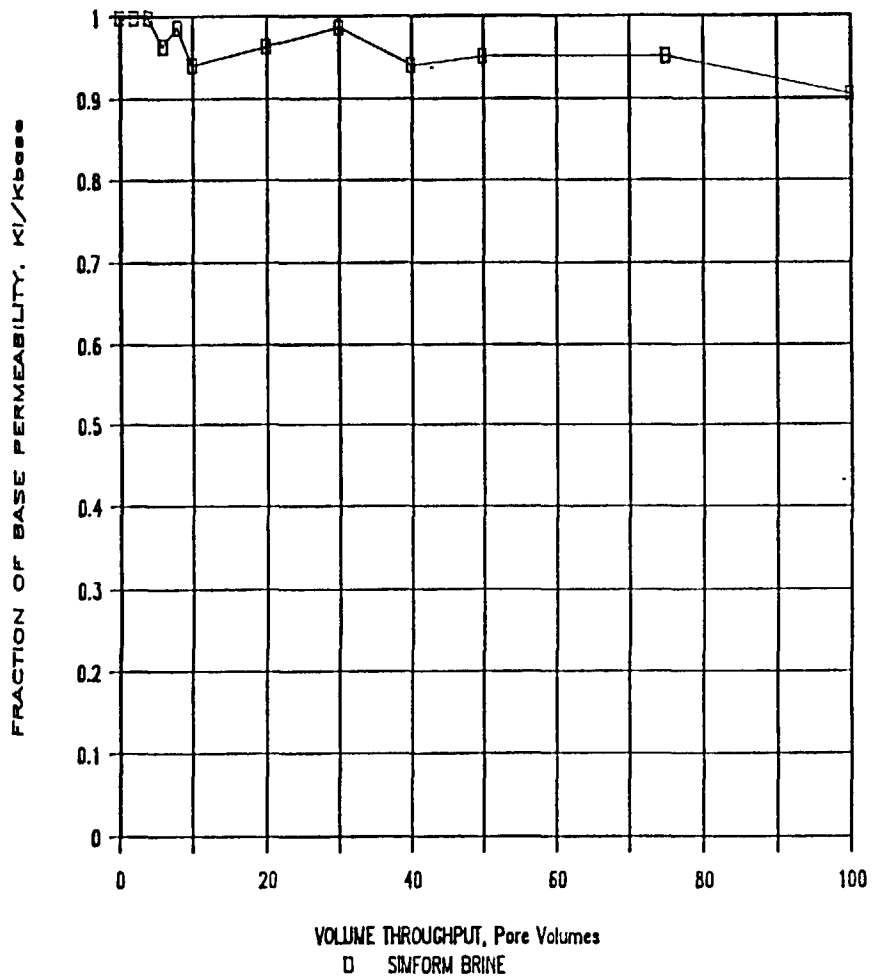
COMPOUND	EQ. WT.	X *meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	2.60	211
$CaSO_4$	68.07	26.64	1,813
$CaCl_2$	55.50	146.23	8,116
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	0.00	0
$MgCL_2$	47.62	127.54	6,074
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	2,282.85	133,455

Analyst K Rea

Remarks and Comments:

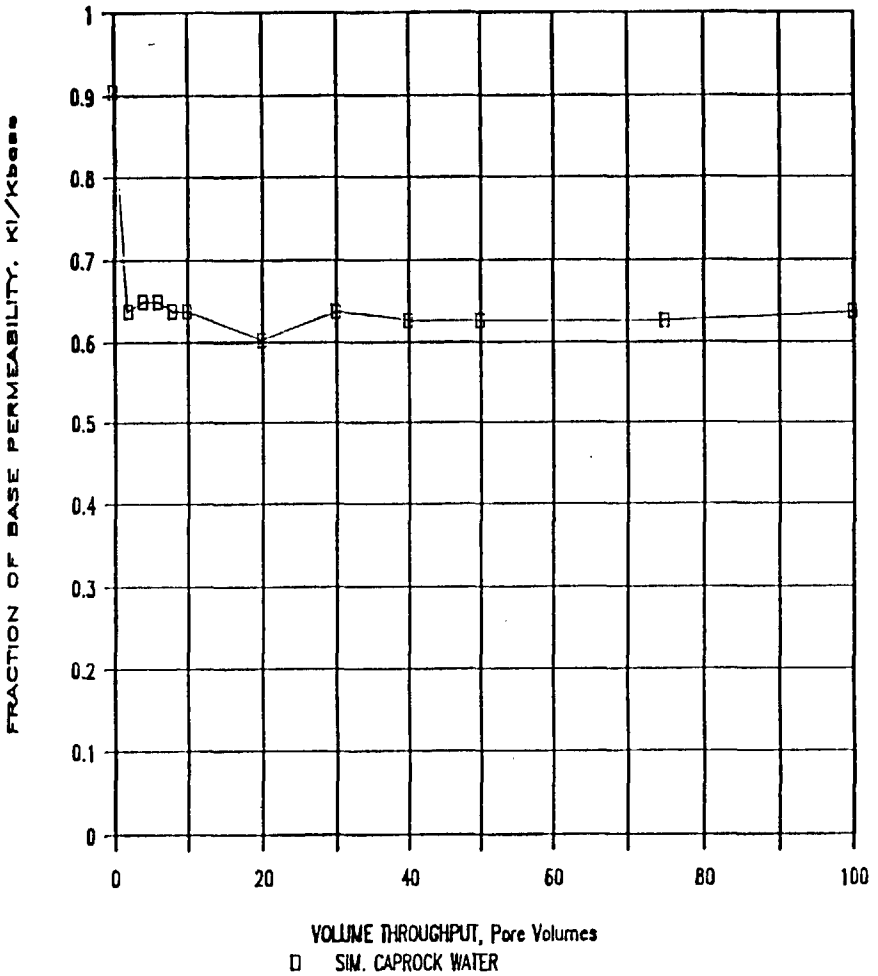
PERMEABILITY vs VOLUME THROUGHPUT

SAMPLE 4F



PERMEABILITY vs VOLUME THROUGHPUT

SAMPLE 4F

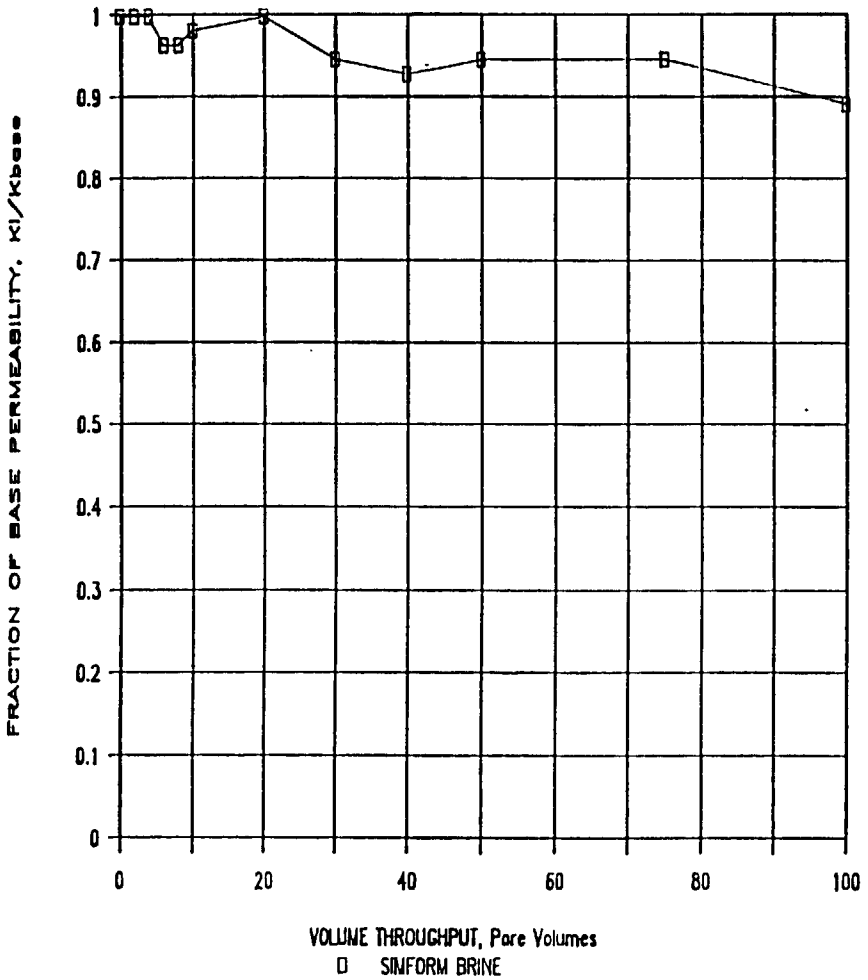


Western Atlas International
A Litton/Dresser Company

CORE LABORATORIES

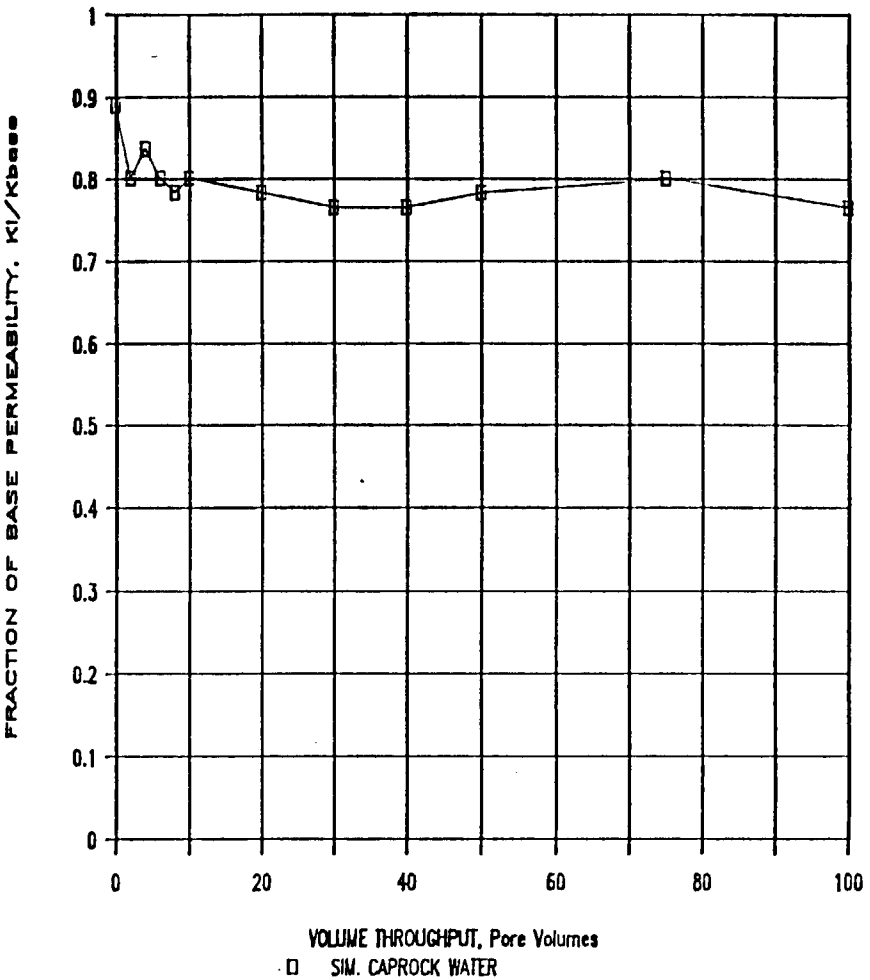
PERMEABILITY vs VOLUME THROUGHPUT

SAMPLE 1G



PERMEABILITY vs VOLUME THROUGHPUT

SAMPLE 1G



WATER CONTRACT

This agreement made and entered into as of the 1st day of January ,1993, by and between the City of Carlsbad, New Mexico hereinafter referred to as "Seller," and Mewbourne Oil Company, P. O. Box 7698, Tyler, TX 75711, hereinafter referred to as "Buyer,"

WITNESSETH:

WHEREAS, Buyer is the owner and/or operator of certain oil and gas leases covering lands situated in Lea County, New Mexico, and being more particularly described in Exhibit "A" attached hereto and made a part hereof for all purposes, and hereinafter referred to as "the property;" and desires to purchase water from Seller for use in waterflood operations on "the property" upon and subject to the terms and conditions hereinafter set forth, to-wit:

ARTICLE I

Initial Term

Section 1. Buyer agrees that for a period of three (3) years from date of first delivery of water hereunder, herein referred to as "initial term," Buyer will purchase from Seller all water required by Buyer (up to the "maximum daily requirement" of ~~20,000~~ 12,000 bbls) in Buyer's waterflood operations of "the property." Seller agrees to sell and deliver to Buyer such water as Buyer's waterflood operations require, said water to be supplied from Seller's water leases and water rights situated in Lea and Eddy Counties, New Mexico.

Section 2. Buyer is aware of the costs and expenses incurred and to be incurred by Seller in securing a sufficient supply of water for Buyer's needs and transporting the same to the delivery point, and in consideration of such costs and expense Buyer agrees to purchase exclusively from Seller all water, up to the maximum daily quantity, required by Buyer for the waterflood operations of "the property" during the initial term of this contract, provided Seller is not in default of the terms of this contract.

ARTICLE II

Price

During the initial term of this contract Buyer agrees to pay to Seller for all water delivered to Buyer under the terms of this agreement the sum of $0.15 (15¢) per barrel of water delivered (a barrel being defined as 42 U.S. gallons), such payments to be made on a monthly basis. The price shall be adjusted on the same percentage basis as the rate per 1,000 gallons is adjusted for the citizens of the City of Carlsbad, New Mexico. A minimum billing of $150/month will be required during the initial term of this contract.

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ARTICLE III

Delivery Point

Delivery of water to Buyer by Seller shall be at the following location:

Section 20, Township 18 South, Range ~~31~~ 32 East

Title to such water shall pass from Seller to Buyer at the delivery point. The above mentioned delivery point shall be changed only by the mutual agreement of Seller and Buyer.

ARTICLE IV

Delivery Obligations

Buyer agrees to notify Seller immediately if sufficient water to meet its requirements (but not in excess of the maximum daily quantity) is not being supplied and Seller agrees that upon receipt of such notice it will promptly take measures to remedy such condition. Buyer agrees to give Seller thirty (30) days written notice if Buyer intends to increase the amount of water which it will require by more than 20% of the average amount required during the previous calendar month. Upon receipt of such notice by Seller, Seller will within thirty (30) days from such receipt have available for Buyer an amount of water sufficient to meet Buyer's requirements up to the maximum daily quantity per day.

ARTICLE V

Option to Purchase Additional Water

At such time as Buyer shall have purchased water for the initial term provided in Article I and shall not be otherwise in default hereunder, Buyer shall have the option to continue to purchase water from Seller on a consecutive year to year basis for a period not to exceed fifteen (15) years from the date of this agreement for waterflood purposes in connection with "the property." Such additional purchases shall not exceed (unless otherwise mutually agreed to by Buyer and Seller) the maximum daily quantity per day. The buyer shall have the option to terminate this agreement during this option period with thirty (30) days notice. However, as long as a meter connection is maintained a minimum billing of $150/month will be required.

ARTICLE VI

Metering

Seller shall install at its sole cost and expense a valve and totalizing meter at the delivery point to measure the water so delivered. Buyer may, at

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its option and expense, install and maintain a check meter or meters downstream from Seller's meter. Buyer shall have the right to inspect Seller's meter in the presence of Seller's representatives. If the accuracy of Seller's meter is questioned, the metering instruments shall be tested and properly adjusted upon the demand of Buyer or Seller, but the measurement shall not be considered inaccurate for accounting purposes unless it is in error by more than five percent (5%). Should any test show an error in excess of 5%, correction shall be made for volumes delivered for one-half of the period elapsed since the last test; but in no event shall the correction be applied for a period in excess of thirty (30) days. In the event any test demanded by Buyer shows an error of more than 5%, the cost of such test shall be borne by the Seller; however, if any error is less than 5%, such cost shall be borne by the Buyer.

ARTICLE VII

Law, Regulations and Force Majeure

Section 1. This agreement shall be subject to all valid and applicable laws, orders, rules and regulations of any duly constituted governmental authority.

Section 2. Except for Buyer's obligations to make payments for water delivered hereunder, neither party hereto shall be liable for any failure to perform the terms of this agreement when such failure is due to "force majeure" as hereinafter defined, provided that the party claiming "force majeure" which results in a substantial failure of performance shall give the other prompt written notice thereof. The term "force majeure" as employed in this agreement shall mean acts of God, strikes, lockouts, or industrial disturbances, civil disturbances, arrests and restraints from rules and people, interruptions by government or court orders, present and future valid orders of any regulatory body having proper jurisdiction, acts of the public enemy, wars, riots, blockades, insurrections, inability to secure labor or materials, including inability to secure materials as a result of allocations promulgated by authorized governmental agencies, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or pipe lines, partial or entire failure of water supply, or any other cause, whether of the kind herein enumerated or otherwise, not reasonably within the control of the party claiming "force majeure." Nothing herein contained; however, shall be construed to require either party to settle a labor dispute against its will.

ARTICLE VIII

Use of Water

The water furnished by Seller to Buyer is to be used only for waterflooding and repressuring on "the property." In this connection, the Buyer shall have the exclusive right to transport water sold under this agreement from the delivery point to any portion of "the property" for the uses specified herein.

ARTICLE IX

Notices

All notices permitted or required to be given under the provisions hereof shall be sent by certified or registered mail, or by Western Union Telegram prepaid, addressed to the parties hereto as follows:

City of Carlsbad, New Mexico
P. O. Box 1569
Carlsbad, New Mexico
88221

Mewbourne Oil Company
P. O. Box 7698
Tyler, TX 75711

ARTICLE X

Miscellaneous

Section 1. Buyer agrees to maintain storage facilities adequate to hold not less than a ~~twelve~~ ~~(12)~~ six (6) hour supply of water for the properties to be waterflooded.

Section 2. Buyer agrees to pay to Seller all sums due for water delivered under this contract to Buyer within twenty (20) days after receipt of Seller's invoice. If payment is not made within thirty (30) days after receipt of Seller's invoice the unpaid balance shall bear interest at the rate of eight percent (8%) per annum from due date until paid and Seller shall have the right to suspend the delivery of any further water to Buyer until payment in full without liability of any kind. Seller is hereby granted a lien upon all equipment and property of Buyer on "the property" and upon the working interest and leasehold estate of Buyer therein to secure the payment of all sums due under the terms of this contract.

Section 3. The Buyer agrees to pay the Seller a $200.00 connection fee.

Section 4. The Buyer agrees to install an air gap at its point of intake and allow representatives of the Seller to inspect to assure compliance.

Section 5. Seller reserves the right to suspend service temporarily to make necessary repairs or improvements to its water system, provided, however,

Seller shall notify Buyer of any such interruptions and shall prosecute the work with due diligence and with the least possible delay in service.

Section 6. This agreement may be assigned by either party hereto, provided, however, that no assignment or transfer shall relieve either party of its obligations hereunder unless the prior consent of the party is first obtained in writing.

Section 7. This contract will not be considered legal and binding on Mewbourne Oil Company unless or until they obtain a legal right-of-way access to the delivery point on the Carlsbad City System.

IN WITNESS WHEREOF, this instrument is executed as of the day and year first above written.

ATTEST: CITY OF CARLSBAD, NEW MEXICO

Wanda S Ryder By: Bob Faint
Mayor

SELLER

ATTEST:

Daylon Thompson By: James Allen Brunson
Attorney-In-Fact

BUYER