C - 108 and ATTACHMENTS

BEFORE AN EXAMINER OF THE OIL CONSERVATION DIVISION

EXHIBIT NO.

19

CASE NO.:

10897

Submitted by: Conoco Inc.

Hearing Date: Jan 20, 1994

STATE OF NEW MEXICO ENERGY AND HINERALS DEPARTMENT

OIL CONSERVATION DIVISION

POST OFFICE BOX JUNG STATE LAND OFFICE INJURING SANTA FE, NEW MEXICU 8/301 FORM C-108 Revised 7-1-81

| II. | Operator: Conoco Inc. |
|-----|--|
| | Address: 10 Desta Drive West, Ste 100W, Midland, TX 79705 |
| | Contact party: Jerry W. Hoover Phone: (915) 686-6548 |
| 11. | 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 R-6906-B |
| ٧. | 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 whi 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. |
| II. | Attach data on the proposed operation, including: |
| | Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and 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.). |
| II. | Attach appropriate geological data on the injection zone including appropriate litholog 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. |
| ıx. | 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. |
| 11. | 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. |
| II. | Applicants must complete the "Proof of Notice" section on the reverse side of this form |
| ۲۷. | Certification |
| | I hereby certify that the information submitted with this application is true and correto the best of my knowledge and belief. |
| | Name: Joe M. Miller Title Engineer Signature: Date: Date: 17, 1993 |
| | Signature: Oct 0: Mill Date: Oct. 17 1993 |

III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
 - (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
 - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
 - (3) A description of the tubing to be used including its size, lining material, and setting depth.
 - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Woll Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
 - (1) The name of the injection formation and, if applicable, the field or pool name.
 - (2) The injection interval and whether it is perforated or open-hole.
 - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
 - (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each lessehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative amplications within 15 days from the date this application was mailed to them.

ATTACHMENT TO FORM C-108

Conoco's Application to Expand the Warren Blinebry-Tubb Waterflood Project

- III. The data as required by parts A. and B. (side 2) for each proposed injection well is attached in tabular and schematic form.
- V. A map identifying 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 is attached.
- VI. The tabulated data, requested by part VI., on all wells of public record within the area of review which penetrate the proposed injection zone is attached.
- VII. 1. Proposed average and maximum daily injection rates:

500 BWPD/well average 700 BWPD/well maximum

- 2. The injection system is open.
- 3. Proposed average and maximum injection pressure:

Average: 1100 psi surface injection pressure Maximum: .2 psi/ft to top of injection interval

- 4. The same water source will be used for this second expansion that is currently being used in the Warren Blinebry-Tubb Waterflood project for which compatibility analysis has been already been submitted.
- VIII. The proposed zones of injection are the Blinebry and Tubb formations. These zones are located at -2300' SSD and -2880' SSD respectively. Gross thickness are 570' for the Blinebry zone and 300' for the Tubb. Both zones are composed of dolomite and interbedded dolomite and anhydrite. The Blinebry zone is composed of primarily fine granular to fine crystalline silty dolomite with numerous small anhydrite inclusions and shale partings. The Tubb is characterized by numerous small anhydrite inclusions and shale partings. The Tubb is characterized by dolomite which is very familiar to the Blinebry, however, it contains a sandy dolomite interval. Both zones exhibit intercrystalline and intergranular porosity and fairly low permeability (5 md).

The only known, and the deepest, fresh water source overlying the proposed injection interval is the Ogallala aquifer with a maximum depth of +3400'.

- IX. The Blinebry and Tubb zones in each injection well will be separately stimulated with small sand fracs totaling approximately 25,000 gallons of cross-link gell and 50,000# of sand per well.
- X. Log sections of the injection interval for proposed injection wells that have already been drilled are attached.
- XI. Chemical analysis of the only active fresh water well within one mile of each injection well is attached. A list of four reported locations by the Roswell State Engineer's Office is attached, but only one of these wells is active and could be sampled.
- XII. There is no evidence of open faults or any other hydrologic connection between the injection interval and any underground source of drinking water.
- XIII. Notification of this application has been sent by certified mail to the owner of the surface of the land on which each proposed injection well is located and to each leasehold operator within one-half mile of the well locations. Proof of notice will be presented at the examiner hearing for this application.

C - 108 Attachment

III. INJECTION WELL DATA

INJECTION WELL DATA SHEET

| | Conoco Inc. | | Warren Unit | | | | | |
|------------|---------------------|---|-------------------------------|--------------------------------|----------------------|--|--|--|
| | OPERATOR | | L | EASE | | | | |
| | No. 10 | 660' FNL, 2310' FEL | Sec. 28 | T-20S, R-38 E, Lea | County NM | | | |
| | WELL NO. | FOOTAGE LOCATION | | TOWNSHIP | | | | |
| | | | | | | | | |
| | | <u>Tubular Data</u> | | | | | | |
| | | Surface Casing | | | | | | |
| | | Size <u>13-3/8*</u> | Cemented with | h 250 sx. | | | | |
| | | TOC Circ. fee | | | | | | |
| | | Hole size <u>17-1/2</u> * | | | | | | |
| | | Production Casi | | | | | | |
| | | Size <u>7'</u> (| _ | | | | | |
| | | | eet determined | by <u>TS</u> | | | | |
| | | Hole size 8-3/4" | 17 | | | | | |
| | | Total Depth 9381 | _ | | | | | |
| | | Injection interval | | | | | | |
| | | 5805'feet to | o <u>6628'</u> fee | et . | | | | |
| | | (perforated) | | | | | | |
| TO | C: 890 ' | Casing: Size 9-5/8* @ 299 7# J-55_ lined with | · | x set in a <u>7° Watson</u> | Arrowset 1-X | | | |
| | • | (m | aterial) | (brand and | model) | | | |
| pac | cker within 100' of | top perforation. | | | | | | |
| <u>Oth</u> | er Data | | | | | | | |
| 1. | | n formation <u>Blinebry/Tubl</u> | | | | | | |
| 2. | | Pool (if applicable) Warre | | Oil & Gas Pool | | | | |
| 3. | | drilled for injection? | | | | | | |
| | it no, for what pu | irpose was the well original | lly drilled? <u>Oil &</u> | Gas | | | | |
| 4. | Has the well eve | r been perforated in any ot | her zone(s)? Yo | | | | | |
| | List all such perfe | orated intervals and give pl | ugging detail (s | acks of cement or bri | dge plug(s) used) | | | |
| | Drinkard 6729-67 | 759 CIBP set at 6700 w/ 1 s | ex cmt on top. | | | | | |
| 5. | | and name of any overlying | and/or underly | ing oil or gas zones (p | pools) in this area. | | | |
| | Drinkard 6628' | | | | | | | |
| | | | | | | | | |

File: WU10inj.FRM

660' FNL, 2310' FEL, SEC. 28, T-20S, R-38E, LEA CO. NM

GLE:3550' KBE: 3562' Surface Casing: 13 3/8", 48# H-40 @ 265' W/ 250 SX. TOC @ CIRC HOLE SIZE: 17-1/2" INTERMEDIATE CASING 9-5/8",36 & 32.3# J-55 & H-40 @ 2999' W/ 1255 SX. TOC @ 890' HOLE SIZE: 12-1/4" **TUBING:** 2 3/8", 4.7#, J-55, EUE IPC PACKER: 7" WATSON ARROWSET 1-X PACKER **BLINEBRY/TUBB INJECTION** SET WITHIN 100' OF TOP PERFS INTERVAL (PERFORATED) 5805'-6628' CIBP @ 6700' W/ 1 SX PRODUCTION CASING DRINKARD: 6729'-6759' 7", 23# & 26# J-55 & N-80 @ 7498' W/ 1005 SX. TOC @ 2950' TEMP SURV

BY: JSS

HOLE SIZE: 8-3/4"

PBTD: 6767' TD: 9381'

DATE: 10-18-93

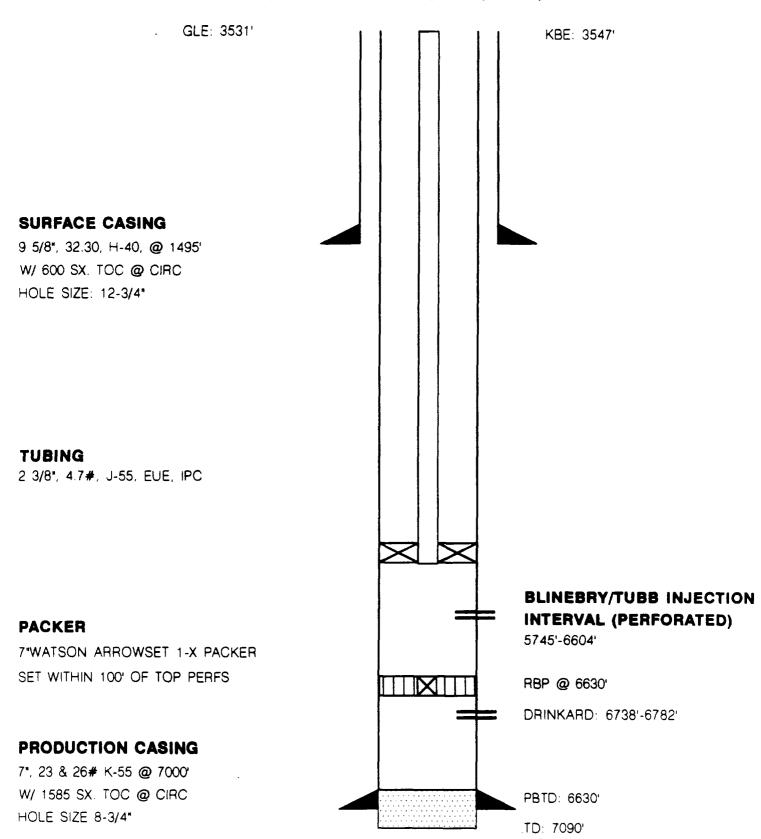
INJECTION WELL DATA SHEET

| | Conoco Inc. | | Warren Unit | | | | | |
|------------|-------------------------------------|---|-------------------------------|---------------------------|----------------------|--|--|--|
| OPERATOR | | | Ī | EASE | | | | |
| | No. 35 | 1880' FSL, 1980' FWL | Sec. 28 | T-20S, R-38 E, Le | a County, NM | | | |
| | WELL NO. | FOOTAGE LOCATION | SECTION | TOWNSHIP | RANGE | | | |
| | | Tubular Data | | | | | | |
| | | - | | | | | | |
| | | Surface Casing | | | | | | |
| | | Size <u>9-5/8</u> * | | | | | | |
| | | TOC <u>Circ.</u> fee | • | <i>'</i> | | | | |
| | | Hole size <u>12 3/4</u> | • | | | | | |
| | | Production Casi | ng | | | | | |
| | | | Cemented with _ | | | | | |
| | | | et determined b | y | | | | |
| | | Hole size <u>8-3/4*</u> Total Depth <u>709</u> | <u>o,</u> | | | | | |
| | | Injection interval | | | | | | |
| | | 5745' feet t | o 6604' fee | et . | | | | |
| | | (perforated) | | • | | | | |
| | | | | | | | | |
| Tub | oing size <u>2-3/8° 4.</u> | 7# J-55 lined with | | set in a <u>7° Watson</u> | Arrowset 1-X | | | |
| | | (m | aterial) | (brand and | modeľ) | | | |
| pac | ker within 100' of | top perforation. | | | | | | |
| Oth | er Data | | | | | | | |
| 1. | Name of injection | n formation <u>Blinebry/Tub</u> | h | | | | | |
| 2. | | Pool (if applicable) Warre | | Oil & Gas Pool | | | | |
| 3. | Is this a new wel | I drilled for injection? | Yes X No | | | | | |
| | If no, for what pu | rpose was the well origina | lly drilled? <u>Oil &</u> | Gas | | | | |
| 4. | Has the well eve | r been perforated in any of | ther zone(s)? Yo | | | | | |
| | List all such perfe | orated intervals and give pi 782, RBP set at 6630* | | | idge plug(s) used) | | | |
| | | | <u> </u> | | | | | |
| 5 . | Give the depth to Drinkard 6604' | and name of any overlying | g and/or underly | ing oil or gas zones (| pools) in this area. | | | |
| | | · · · · · · · · · · · · · · · · · · · | | | | | | |

File: WU35inj.FRM

NMFU

1880' FSL, 1980' FWL, SEC. 28, T-20S, R-38E, LEA CO. NM



DATE: 10/18/93

BY: JSS

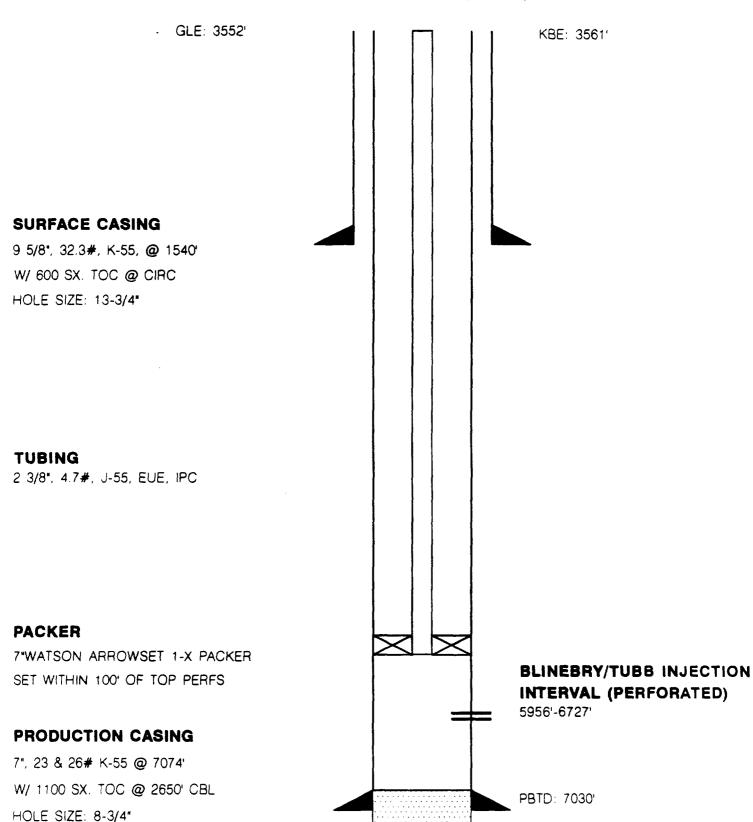
INJECTION WELL DATA SHEET

| | Conoco Inc. | | Warren Unit | | | | |
|------------|--|---|-------------------------|---------------------|--------------|--|--|
| | OPERATOR | | LEASE | | | | |
| | 36 660' FNL 66 | 60' FWL Sec. 27 | T-20S, R-38E, Lea | County, NM | | | |
| | WELL NO. FOO | TAGE LOCATION | SECTION | TOWNSHIP | RANGE | | |
| | | | | | | | |
| | | Tub | ular Data | | | | |
| | | Surface Casing | | | | | |
| | | | emented with 600sx. | | | | |
| | | TOC <u>Circ.</u> feet Hole size 13-3/4* | determined by | _ | | | |
| | | 11010 5120 10-014 | | | | | |
| | | Production Casing | | | | | |
| | | Size <u>7°</u> Ceme | nted with 1100sx. | | | | |
| | | TOC <u>2650</u> feet of Hole size <u>8-3/4*</u> | determined by CBL | | | | |
| | | Total Depth <u>7075'</u> | | | | | |
| | | Injection interval | | | | | |
| | | 5956 feet to 6727 fe | e t | | | | |
| | | (perforated) | | | | | |
| Tuk | oing size <u>2-3/8° 4.7# J-55</u> | lined with IPC ex | et in a TWatenn Armur | eat 1.Y | | | |
| 100 | лид акте <u>к-дго, гж ооо</u> | (material) | | and model) | | | |
| nac | ker within 100' of top per | foration | | | | | |
| • | • • | 10100011 | | | | | |
| <u>Oth</u> | er Data | | | | | | |
| 1. | Name of injection forma | | W T.A. 01 8 0 | DI | · | | |
| 2. 3. | Name of Field or Pool (it is this a new well drilled | | | as Pool | | | |
| | If no, for what purpose | | | | | | |
| 4. | Has the well ever been | perforated in any other | zone(s)? No | | | | |
| | List all such perforated | | | ement or bridge plu | g(s) used) | | |
| | | | | ····· | | | |
| 5. | Give the depth to and n | | nd/or underlying oil or | gas zones (pools) i | n this area. | | |
| | <u>Drinkard 6727', ABO 70</u> | 08. | | | | | |
| | | | | | | | |
| | | | | | | | |

File: WFD36INJ.FRM

NMFU

660' FNL, 660' FWL, SEC. 27, T-20S, R-38E, LEA CO. NM



BY: JSS

TD: 7075'

DATE: 10/18/93

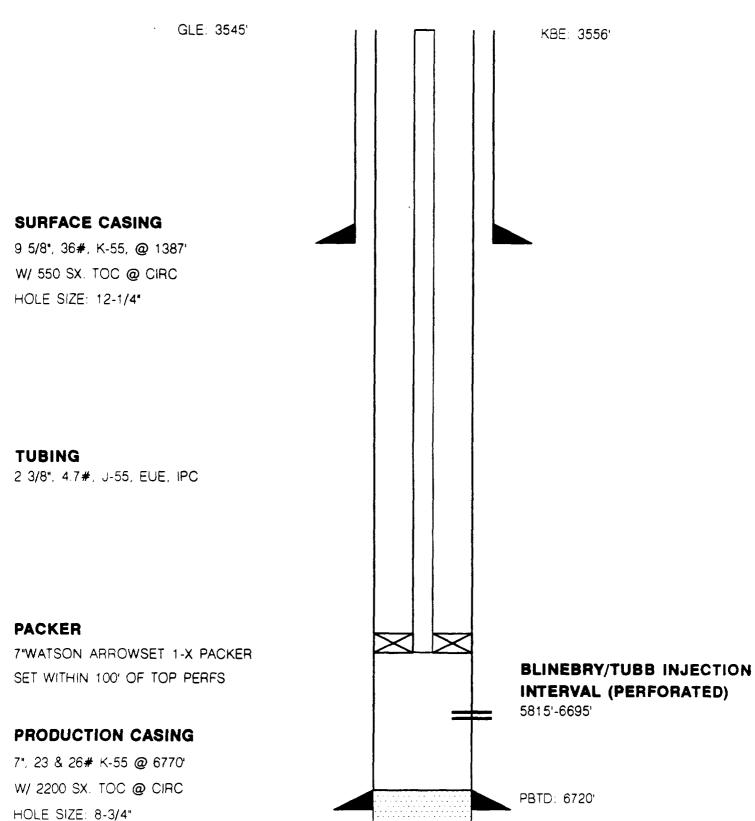
INJECTION WELL DATA SHEET

| | Conoco Inc. | | Warren Unit | | | | |
|-----------|--------------------------|---|---------------------------------------|---|----------------------|--|--|
| | OPERATOR | | | LEASE | | | |
| | No. 51 _ | 660' FNL 660' FEL | Sec. 29 | T-20S, R-38 E, Lea | County, NM | | |
| | WELL NO. | FOOTAGE LOCATION | SECTION | TOWNSHIP | RANGE | | |
| | | Tubular Data | | | | | |
| | | <u>, </u> | | | | | |
| | | Surface Casing | l | | | | |
| | | | Cemented wit | | | | |
| | | | eet determined (| by | | | |
| | | Hole size <u>12 1/</u> | <u>4-</u> | | | | |
| | | Production Cas | sing | | | | |
| | | Size <u>7°</u> | Cemented with | 2200 sx. | | | |
| | | | feet determined | by | | | |
| | | Hole size <u>8 3/4</u> Total Depth <u>67</u> | _ | | | | |
| | | Total Deput of | <u>70</u> | | | | |
| | | Injection intervi | BÌ | | | | |
| | | <u>5815'</u> feet (perforated) | to <u>6695'</u> f | ee t | | | |
| T. | ning sing 0.2/91.4° | 7.H i SS lineal with | IPC | not in a 71 Motoco | Amount d V | | |
| ıut | oing size <u>2-3/6-4</u> | 7# J-55 lined with(| material) | set in a <u>7" Watson</u> (brand and | | | |
| pac | cker within 100' of t | top perforation. | | | | | |
| Oth | ner Data | | | | | | |
| <u> </u> | | | | | | | |
| 1. | | formation Blinebry/Tu | | | | | |
| 2. | | Pool (if applicable) <u>Warn</u> drilled for injection? | | | | | |
| 3. | | rpose was the well origin | Yes <u>X</u> No vally drilled? Oil | | | | |
| | | | | <u></u> | | | |
| 4. | | been perforated in any corated intervals and give | ` , | | idaa alua(a) usad | | |
| | Loc dii sucii peri | NEGO II KOI YAID AIN YIYE | hoaana ooran | (secons or content of bi | | | |
| | | | | | | | |
| 5. | Give the depth to | and name of any overlying | ng and/or under | tying oil or gas zones (| pools) in this area. | | |
| | | BO 6943', McKee 8844' | | | | | |

File: WU51in|.FRM

NMFU

660' FNL, 660' FEL, SEC. 29, T-20S, R-38E, LEA CO. NM



TD: 6770'

DATE: 10/18/93

BY JSS

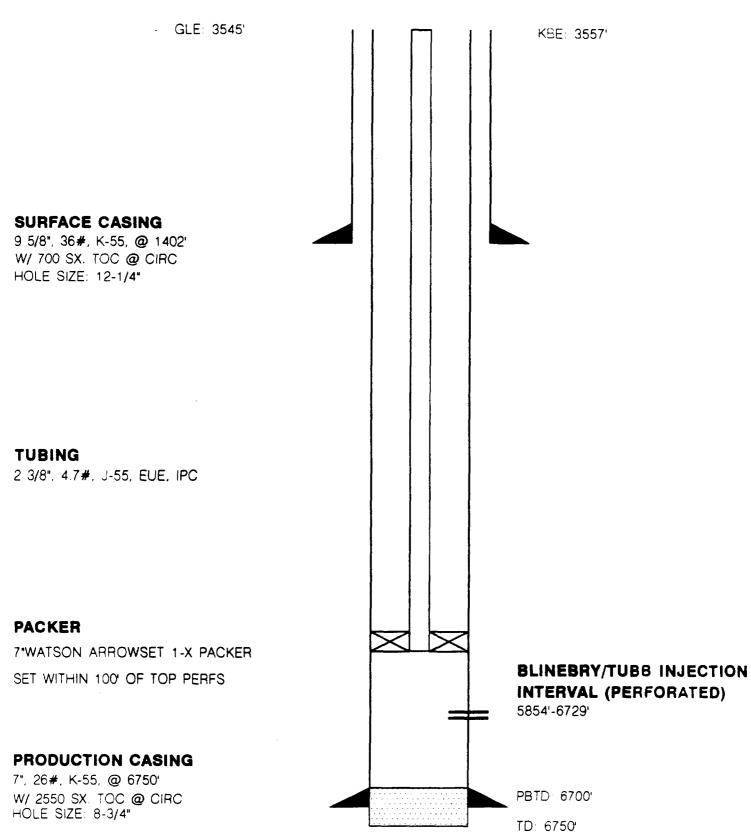
INJECTION WELL DATA SHEET

| | Conoco Inc. | | W | /arren Unit | | | | |
|------|---|---|--------------------|---|-----------------------|--|--|--|
| | OPERATOR | | | LEASE | | | | |
| | • | | | | | | | |
| | No. 61 | 660' FSL, 660' FWL | Sec. 21 | T-20S, R-38 E, L | ea County, NM | | | |
| | WELL NO. | FOOTAGE LOCATION | SECTION | TOWNSHIP | | | | |
| | | <u>Tubular Data</u> | | | | | | |
| | | Surface Casing | | | | | | |
| | | Size <u>9-5/8*</u> TOC <u>Circ. fee</u> Hole size <u>12 1/4</u> | et determined b | | | | | |
| | | Production Cas | ing | | | | | |
| | | Size <u>7°</u> (TOC <u>Circ.</u> f | | | | | | |
| | | Hole size 8 3/4" | Det Geteilimien | · y | | | | |
| | | Total Depth 675 | 50' | | | | | |
| | | Injection interval | | | | | | |
| | | 5854'feet t (perforated) | to <u>6729'</u> fe | et | | | | |
| Tubi | ng size <u>2-3/8° 4.7</u> | | IPC naterial) | set in a <u>7° Watsor</u> (brand and | | | | |
| paci | er within 100' of t | op perforation. | | | | | | |
| Othe | or Data | | | | | | | |
| | Name of injection formation <u>Blinebry/Tubb</u> Name of Field or Pool (if applicable) <u>Warren Blinebry-Tubb Oil & Gas Pool</u> Is this a new well drilled for injection? <u>Yes X</u> No If no, for what purpose was the well originally drilled? <u>Oil & Gas</u> | | | | | | | |
| 4. | | been perforated in any or orated intervals and give p | | | idge plug(s) used) | | | |
| 5. | | and name of any overlying ABO 6970', McKee 8,873' | g and/or underly | ying oil or gas zones (| (pools) in this area. | | | |

File: WU61inj.FRM

NMFU

660' FSL, 660' FWL, SEC. 21, T-20S, R-38E, LEA CO. NM



DATE: 10/18/33

BY: JSS

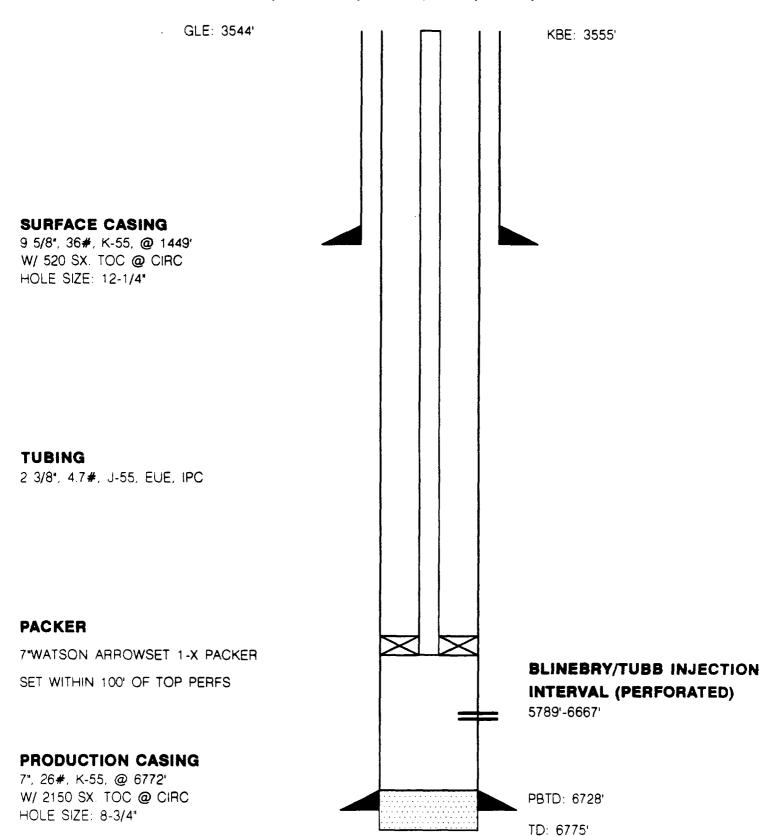
INJECTION WELL DATA SHEET

| | Conoco Inc. | | V | Varren Unit | | |
|------------|----------------------|---|--------------------------------|--------------------|-------------|----------------------|
| | OPERATOR | | | LEASE | | |
| | No. 63 | 660' FSL, 1980' FEL | Sec. 20 | T-20S | . R-38 E. L | ea County, NM |
| | WELL NO. | FOOTAGE LOCATIO | | | WNSHIP | |
| | | | | | | |
| | | Tubular Data | <u> </u> | | | |
| | | Surface Cas | ing | | | |
| | | Size <u>9-5/</u> | /8" Cemented wi | ith <u>520</u> sx. | | |
| | | | feet determined l | by | | |
| | | Hole size <u>12</u> | <u>! 1/4"</u> | | | |
| | | Production | Casing | | | |
| | | Size <u>7°</u> | Cemented with | 2150 sx. | | |
| | | | feet determined | by | | |
| | | Hole size <u>8 (</u> Total Depth | | | | |
| | | Injection inte | erval | | | |
| | | <u>5789'</u> for (perforated) | ee t to <u>6667'</u> fe | 98 t | | |
| Tub | ing size 2-3/8° 4.7 | 7# J-55 lined with | IPC | set in a | 7" Wateor | Arrowset 1-X |
| , 55 | g 0.20 <u>20/0 1</u> | <u> </u> | (material) | | (brand and | |
| pac | ker within 100' of t | op perforation. | | | | |
| <u>Oth</u> | er Data | | | | | |
| 1. | Name of injection | formation <u>Blinebry/</u> | Tubb | | | |
| 2. | Name of Field or | Pool (if applicable) W | | b Oil & Gas | Pool | |
| 3. | | drilled for injection? rpose was the well ori | Yes X No ginally drilled? Oil | | | |
| | | | | | | |
| 4. | | been perforated in ar prated intervals and given | | | ment or br | idge plug(s) used) |
| | | | - | | | |
| 5. | | and name of any over ABO 6970', McKee 8,8' | | lying oil or g | as zones (| pools) in this area. |
| | DAILINGIO U,UUI , F | TO COLO, MICINOS 0,0 | ,,, | | | |

File: WU63inj.FRM

NMFU

660' FSL, 1980' FEL, SEC.20, T-20S, R-38E, LEA CO. NM



DATE: 10/18/93

BY: JSS

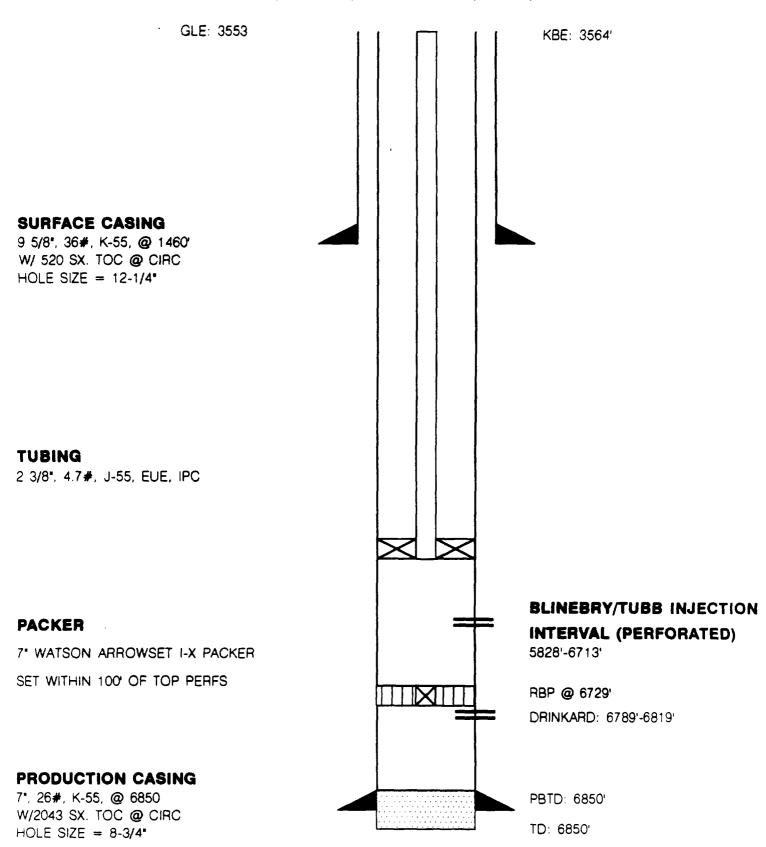
INJECTION WELL DATA SHEET

| | Conoco Inc. | | Warren Unit | | | | |
|----------------|--|---|-----------------------------|---|-----------------------|--|--|
| | OPERATOR | | ı | LEASE | | | |
| | No. 78 | 1980' FSL, 660' FEL | Sec. 20 | T-20S, R-38 E, L | ea County, NM | | |
| | WELL NO. | FOOTAGE LOCATION | | TOWNSHIP | | | |
| | | Tubular Data | | | | | |
| | | Surface Casing | | | | | |
| | | Size <u>9-5/8°</u> TOC <u>Circ.</u> fee Hole size <u>12 1/4</u> ° | at determined by | | | | |
| | | Production Cas | ing | | | | |
| | | Size <u>7'</u> C TOC <u>Circ.</u> fo Hole size <u>8 3/4'</u> Total Depth <u>685</u> | et determined | | | | |
| | | Injection interval | | | | | |
| | | <u>5828'</u> feet to (perforated) | o <u>6713'</u> fed | et . | | | |
| Tub | ning size <u>2-3/8° 4.7</u> | 7# J-55 lined with(m | IPC aterial) | set in a <u>7° Watsor</u> (brand and | | | |
| pac | ker within 100' of t | op perforation. | | | | | |
| <u>Oth</u> | er Data | | | | | | |
| 1. 2. 3. | Name of Field or Is this a new well | n formation <u>Blinebry/Tubl</u> Pool (if applicable) <u>Warre</u> drilled for injection? rpose was the well original | n Blinebry-Tubb Yes X No | | | | |
| 4. | List all such perfo | been perforated in any ot brated intervals and give pl 319', RBP set at 6729'. | , , , | | idge plug(s) used) | | |
| 5. | • | and name of any overlying BO 6900', McKee 8,800 | g and/or underly | ring oil or gas zones (| (pools) in this area. | | |

File: WU78inj.FRM

NMFU

1980' FSL, 660' FEL, SEC. 20, T-20S, R-38E, LEA CO. NM



DATE: 10/18/93

BY: JSS

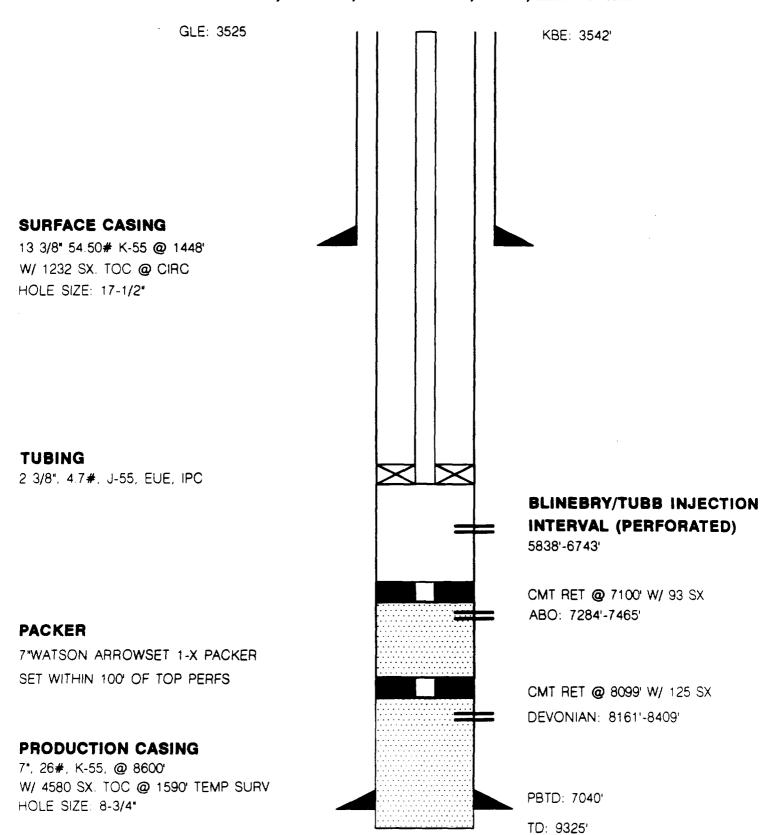
INJECTION WELL DATA SHEET

| | Conoco Inc. | | Warren Unit | | | | | |
|-----|------------------------|---------------------------------|-------------------|--------------------------|--|--|--|--|
| | OPERATOR | | | LEASE | | | | |
| | No. 86 | 1650'FSL 890' FEL | Sec. 29 | T-20S, R-38 E, Le | a County, NM | | | |
| _ | WELL NO. | FOOTAGE LOCATION | | TOWNSHIP | | | | |
| | | Tubular Data | | | | | | |
| | | Surface Casing | | | | | | |
| | | | | | | | | |
| | | Size <u>13-3/8</u> ° | | | | | | |
| | | TOC <u>Circ.</u> fee | | by | | | | |
| | | Hole size <u>17-1/2</u> | - | | | | | |
| | | Production Cas | ing | | | | | |
| | | Size <u>7'</u> | | | | | | |
| | | TOC <u>1590'</u> | feet determine | d by <u>TS</u> | | | | |
| | | Hole size <u>8-3/4*</u> | | | | | | |
| | | Total Depth 932 | <u>5</u> | | | | | |
| | | Injection interval | | | | | | |
| | | • | to <u>6743'</u> f | set | | | | |
| | | (perforated) | | | | | | |
| ТО | C: 890' | Casing: Size 9-5/8°, Cmt. | | set in a7" Watsor | n Arrowset 1-X | | | |
| | лид одо <u>доло ч.</u> | | naterial) | (brand and | | | | |
| | olena suddhim d 00° of | ton podenties | | | | | | |
| pac | cker within 100' of | top perioration. | | | | | | |
| Ott | ner Data | | | | | | | |
| 1. | Name of injection | n formation <u>Blinebry/Tub</u> | h | | | | | |
| | | Pool (if applicable) Warre | | ob Oil & Gas Pool | ······································ | | | |
| 3. | | Il drilled for injection? | Yes X No | | | | | |
| | If no, for what pu | urpose was the well origina | illy drilled? Oil | & Gas | | | | |
| 4. | Has the well eve | r been perforated in any o | ther zone(s)? | Yes | | | | |
| ٦. | | orated intervals and give p | | | ridge plug(s) used) | | | |
| | | 8409' squeezed with 125 sx | | | | | | |
| | ret. | | | | | | | |
| 5. | Give the denth to | and name of any overlyin | n and/or under | tving oil or gas zones i | (pools) in this area | | | |
| J. | | ABO 7052', McKee 9100' | | ming on or gas zones (| poole, in this carea. | | | |
| | | | | | | | | |

File: WUSSINJ,FRM

NMFU

1650' FSL, 890' FEL, SEC. 29 T-20S, R-38E, LEA CO. NM



DATE: 10/18/93

BY: JSS

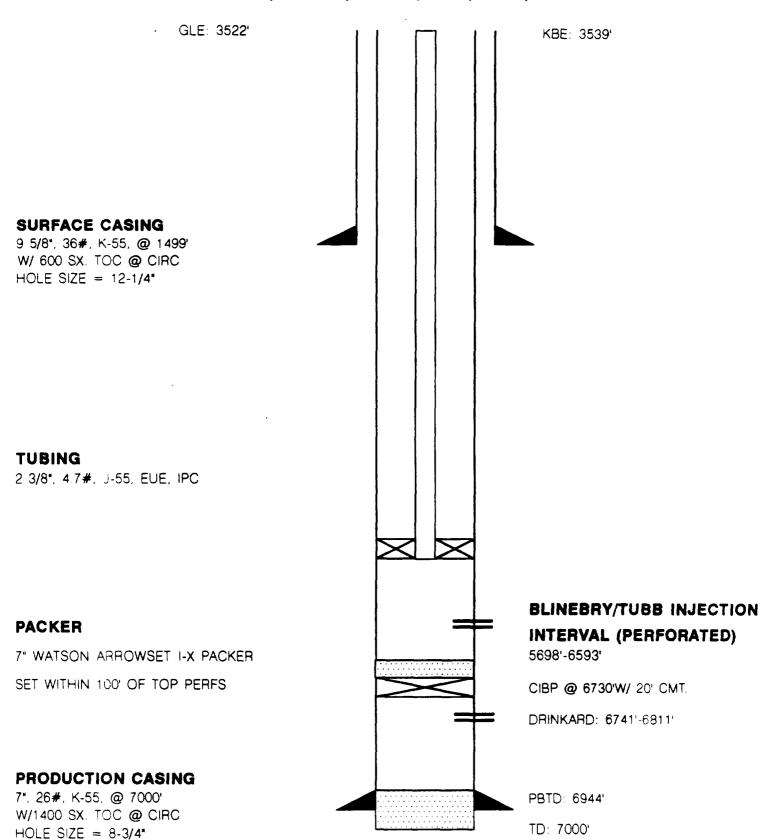
INJECTION WELL DATA SHEET

| | Conoco Inc. | | Warren Unit LEASE | | | | | |
|------------|-------------------------------------|---|-------------------------|---|--------------|--|--|--|
| | OPERATOR | | | | | | | |
| | • | | | | | | | |
| | No. 99 | 710' FNL 660' FEL | Sec. 33 | T-20S, R-38 E, Lea Count | ly, NM | | | |
| | WELL NO. | FOOTAGE LOCATION | SECTION | TOWNSHIP RANG | iΕ | | | |
| | | <u>Tubular Data</u> | | | | | | |
| | | Surface Casing | | | | | | |
| | | Size <u>9-5/8"</u> TOC <u>Circ.</u> fed Hole size <u>12 1/4</u> | et determined | | | | | |
| | | Production Cas | <u>Ing</u> | | | | | |
| | | Size <u>7°</u> (TOC <u>Circ.</u> f Hole size <u>8 3/4°</u> Total Depth <u>700</u> | eet determine | _ | | | | |
| | | Injection interval | | | | | | |
| | | 5698'feet ((perforated) | to <u>6593'</u> | i ee t | | | | |
| Tub | oing size 2-3/8° 4. | 7# J-55 lined with (m | IPC naterial) | set in a <u>7" Watson Arrows</u> (brand and model) | | | | |
| pac | ker within 100' of | top perforation. | | | | | | |
| <u>Oth</u> | er Data | | | | | | | |
| 1. | Name of injection | n formation Blinebry/Tub | b _ | | | | | |
| 2. | | Pool (if applicable) Warre | | | | | | |
| 3. | | I drilled for injection? | | | | | | |
| | If no, for what pu | rpose was the well original | ully drilled? <u>Oi</u> | l & Gas | | | | |
| 4. | List all such perf | r been perforated in any o orated intervals and give p 6811', CIBP set at 6730' v | lugging detail | (sacks of cement or bridge plu | g(s) used) | | | |
| 5. | Give the depth to Drinkard 6713' | o and name of any overlyin | g and/or unde | rtying oil or gas zones (pools) ir | n this area. | | | |
| | | | | | | | | |

File: WU99inj.FRM

NMFU

710' FNL, 660' FEL, SEC. 33, T-20S, R-38E, LEA CO. NM



DATE: 10/18/93

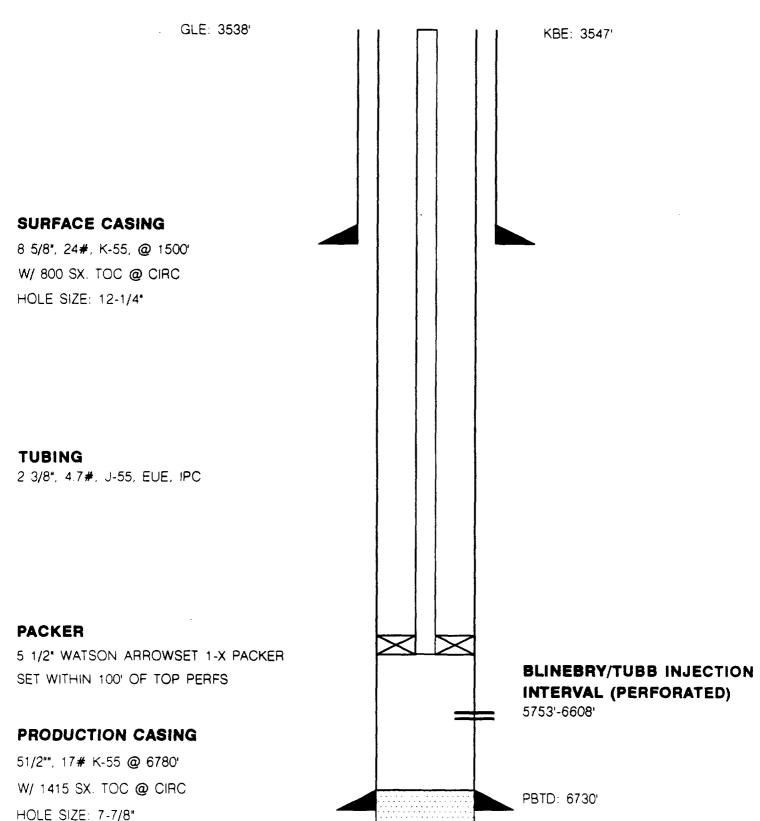
BY JSS

INJECTION WELL DATA SHEET

| Conc | Conoco Inc. | | | Warren Unit | | | | | |
|----------------------|-------------|--|---|---|---------------------------------|--------------|--|--|--|
| OPER | ATOR | | | LEASE | | | | | |
| 110 | 2060 | ' FSL, 660' FWL | Sec. 27 | T-20S, R-38E | Lea County, NM | | | | |
| WELL | NO. | FOOTAGE LOC | CATION | SECTION | TOWNSHIP | RANGE | | | |
| | | | | | | | | | |
| | | | <u>Tub</u> | uler Date | | | | | |
| | | Surface | e Casing | | | | | | |
| | | | | emented with 800s | | | | | |
| | | | <u>Circ.</u> feet ze <u>12-1/4"</u> | determined by | | | | | |
| | | Produc | tion Casing | | | | | | |
| | | Size | 5-1/2° Ce | emented with 1415 | SX. | | | | |
| | | | | letermined by | | | | | |
| | | | ze <u>7-7/8°</u> epth <u>6780'</u> | | | | | | |
| | | • | n interval set to <u>6606 fe</u> ated) | set | | | | | |
| Tubing size 2 | 2-3/8° 4.7 | # J-55 lined with | iPC se (material) | et in a <u>5-1/2° Watso</u> (bra | n Arrowset 1-X nd and model) | | | | |
| packer within | 100' of 1 | top perforation. | | | | | | | |
| Other Data | | | | | | | | | |
| 1. Name of | injection | formation Blinet | ory/Tubb | | | | | | |
| | | | | Blinebry - Tubb Oil | & Gas Pool | | | | |
| | | well drilled for injections was the we | | _Yes <u>X</u> No drilled? <u>Oil & Gas</u> | | | | | |
| 4. Has the | well ever | been perforated | in any other | 7 700e(e)? No | | | | | |
| | | | | | of cement or bridge plu | ıg(s) used) | | | |
| 5. Give the Drinkard | • | and name of any | overlying a | nd/or underlying oil | or gas zones (pools) i | n this area. | | | |
| | | | | | | | | | |
| Eller MED came i mar | • | | | | | | | | |
| File: WFD110INJ.FRIN | • | | | | | | | | |

NMFU

2060' FSL, 660' FWL, SEC. 27, T-20S, R-38E, LEA CO. NM



BY JSS

TD: 6780'

DATE: 10/18/93

INJECTION WELL DATA SHEET

| Conoco Inc. | | | | Warren Unit | | | | |
|----------------------|------------|-------------|---|---|----------|------------------------|--------------|--|
| OPER | ATOR | | | | LEASE | | | |
| 111 | 2180' | FNL, 660' | FEL Sec. 28 | T-20S, | R-38E | Lea County, NM | | |
| WELL | NO. | FOOTAG | E LOCATION | SECTIO | N | TOWNSHIP | RANGE | |
| | | | | | | | | |
| | | |] | <u> Tubular Data</u> | | | | |
| | | <u>s</u> | urtace Casing | | | | | |
| | | S | size 9-5/8° | Cemented with | n 500sx | | | |
| | | | OC <u>Circ.</u> fe | | by | | | |
| | | F | lole size <u>12-1/4'</u> | | | | | |
| | | P | roduction Cas | ina | | | | |
| | | _ | | ···· | | | | |
| | | _ | | Cemented with at determined b | | (. | | |
| | | | lole size <u>8-3/4"</u> | t Goton i i i i i i i i i i i i i i i i i i i | y | | | |
| | | | otal Depth 6850 | <u>)'</u> | | | | |
| | | lr | njection interval | | | | | |
| | | _ | 787 feet to <u>662</u> | <u>7_</u> feet | | | | |
| | | (1 | perforated) | | | | | |
| Tubing size 2 | 2/04 4 7. | # 1 EE line | and sealth IDC | aat in a 71 W | Mataan | American 4 V | | |
| lubing size <u>Z</u> | 3/5 4./1 | F J-33 IINB | id with <u>IPC</u> (material | | | nd and model) | | |
| packer within | 100' ~* +/ | no perform | tion | | | | | |
| packer within | 100 01 10 | ap perioral | IOT. | | | | | |
| Other Data | | | | | | | | |
| 1. Name of | injection | formation | Blinebry/Tubb | | | | | |
| | | | plicable) Warre | | | & Gas Pool | | |
| | | | injection? <u>X</u> the well origina | | | | | |
| · | <u> </u> | | | | | | | |
| | | | orated in any ot vals and give pl | | | f cement or bridge plu | ıg(s) used) | |
| | | | | | | | | |
| | • | and name | of any overtying | and/or underly | ying oil | or gas zones (pools) i | n this area. | |
| <u>Drinkard</u> | 6627' | | | | | | | |

File: WFD111INJ.FRM

NMFU

2180' FNL, 660' FEL,SEC. 28, T-20S, R-38E, LEA CO. NM



9 5/8", 36#, K-55, @ 1500'

W/ 500 SX. TOC @ CIRC

HOLE SIZE: 12-1/4"

TUBING

2 3/8", 4.7#, J-55, EUE, IPC

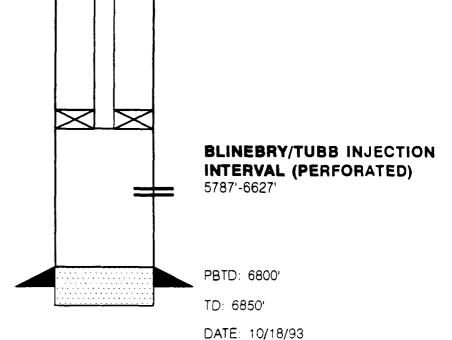
PACKER

7"WATSON ARROWSET 1-X PACKER SET WITHIN 100' OF TOP PERFS

PRODUCTION CASING

7", 23# K-55 @ 6700' W/ 2000 SX. TOC @ CIRC HOLE SIZE: 8-3/4"

BY: JSS



INJECTION WELL DATA SHEET

| | | Warren Unit | | |
|---|---|--------------------------|-----------|------------|
| OPERATOR | | LEASE | | |
| | SL, 1980' FEL Sec. 28 | T-20S, R-38E, Lea | | |
| WELL NO. | FOOTAGE LOCATION | SECTION | TOWNSHIP | RANG |
| | Tub | ular Data | | |
| | | CHET DELE | | |
| | Surface Casing | | | |
| | | emented with 500sx. | | |
| | Hole size 12-1/4" | determined by | | |
| | Production Casing | | | |
| | | mented with 2000sx. | | |
| | TOC <u>Circ.</u> feet d Hole size <u>8-3/4*</u> | letermined by | | |
| | Total Depth <u>6850'</u> | | | |
| | Injection interval | | | |
| | 5745 feet to 6620 fe (perforated) | e t | | |
| | (periorated) | | | |
| uhing size 2-3/8° 4 7# | J-55 lined with IPC | set in a 7° Watson Arro | wsat 1.Y | |
| 10111g SAZO <u>E-070 4.1 #</u> | (material) | <u> </u> | nd model) | |
| | | | | |
| acker within 100' of top | perroration. | | | |
| · | э репогасіоп. | | | |
| ther Data | | | | |
| ther Data Name of injection for | o perroration. ormation <u>Blinebry/Tubb</u> ool (if applicable) <u>Warren E</u> | Blinebry - Tubb Oil & Ga | as Pool | |
| ther Data Name of injection for Name of Field or Postal 3. Is this a new we | ormation <u>Blinebry/Tubb</u> ool (if applicable) <u>Warren E</u> Il drilled for injection? <u>X</u> | YesNo | as Pool | |
| ther Data Name of injection for Name of Field or Postal 3. Is this a new we | ormation <u>Blinebry/Tubb</u> ool (if applicable) <u>Warren E</u> | YesNo | as Pool | |
| Name of injection for Name of Field or Po 3. Is this a new we If no, for what purp | ormation <u>Blinebry/Tubb</u> ool (if applicable) <u>Warren E</u> Il drilled for injection? <u>X</u> ose was the well originally een perforated in any other | | | |
| Name of injection for Name of Field or Po 3. Is this a new we If no, for what purp | ormation <u>Blinebry/Tubb</u> ool (if applicable) <u>Warren E</u> If drilled for injection? <u>X</u> ose was the well originally | | | ng(s) used |

File: WFD113INJ.FRI

NMFU

660' FSL, 1980' FEL, SEC. 28, T-20S, R-38E, LEA CO. NM



9 5/8", 36#, K-55, @ 1500' W/ 500 SX. TOC @ CIRC HOLE SIZE: 12-1/4"

TUBING

2 3/8", 4.7#, J-55, EUE, IPC

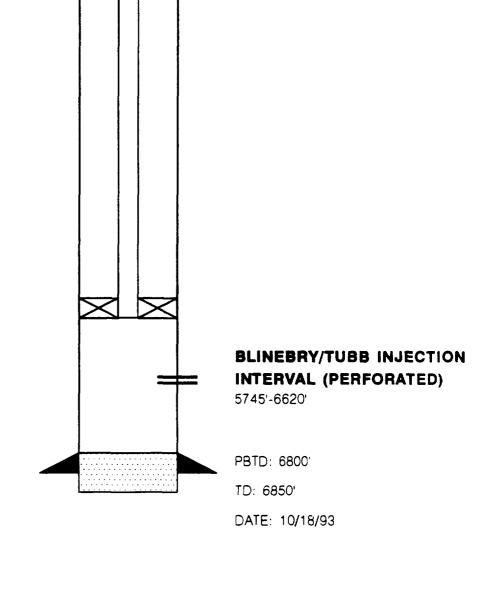
PACKER

7"WATSON ARROWSET 1-X PACKER SET WITHIN 100' OF TOP PERFS

PRODUCTION CASING

7", 23# K-55 @ 6700' W/ 2000 SX. TOC @ CIRC HOLE SIZE: 8-3/4"

BY: JSS



INJECTION WELL DATA SHEET

| OPER | Conoco Inc. | | Warren Unit | | | |
|---|--|---|--|--|----------------|------------|
| OPERATOR | | | LEASE | | | |
| 114 | 660' | FNL, 1980' FWL | Sec. 28 | T-20S, R-38E, | Lea County, NM | |
| | | FOOTAGE LOC | | SECTION | | RANGE |
| | | | <u>Tut</u> | oular Data | | |
| | | Surface | e Casing | | | |
| | | TOC | | emented with <u>500</u> sx. determined by | | |
| | | Produc | tion Casing | 1 | | |
| | | Hole si | | mented with <u>2000</u> sx determined by | • | |
| | | • | n interval set to <u>6635</u> fa ated) | set | | |
| | | # 1 SS limon with | ı <u>IPC</u> | set in a <u>7" Watson /</u> | | |
| ubing size <u>2</u> | 2-3/8° 4.7 | <u>#_ J-55</u> 배영대 WIU | (material) | (bran | nd and model) | |
| | | op perforation. | (material) | (bran | nd and model) | |
| | | | (material) | (bran | nd and model) | |
| acker within ther Data Name of Name of 3. Is this | 100' of the injection Field or the injection or the injection or the injection or the injection of the injec | op perforation. formation <u>Blinet</u> | ory/Tubb le) Warren l ection? X | Blinebry - Tubb Oil 8 _YesNo | · | |
| Name of 3. Is this if no, for | injection Field or a new what pu | op perforation. formation Blinet Pool (if applicable vell drilled for inject rpose was the weather | ory/Tubb le) <u>Warren l</u> ection? <u>X</u> ell originally in any othe | Blinebry - Tubb Oil & _YesNo drilled? r zone(s)? No | · | ug(s) used |

NMFU

660' FNL, 1980'FWL, SEC. 28, T-20S, R-38E, LEA CO. NM



9 5/8", 36#, K-55, @ 1500' W/ 500 SX. TOC @ CIRC HOLE SIZE 12-1/4"

TUBING

2 3/8", 4.7#, J-55, EUE, IPC

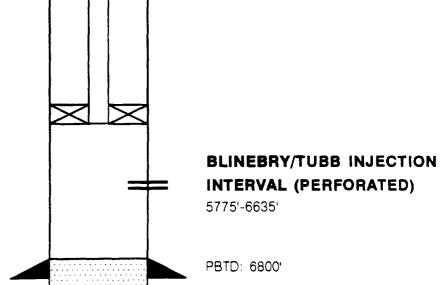
PACKER

7"WATSON ARROWSET 1-X PACKER SET WITHIN 100' OF TOP PERFS

PRODUCTION CASING

7", 23# K-55 @ 6700' W/ 2000 SX. TOC @ CIRC HOLE SIZE: 8-3/4"

BY JSS



TD: 6850'

DATE: 10/18/93

INJECTION WELL DATA SHEET

| OPERATOR | | Warren Unit | | | |
|--|---|--|-----------------------|----------|--|
| 2. 2 | | LEASE | | | |
| 115 198 | 0' FNL, 660' FWL Sec. 28 | T-20S, R-38E, Le | a County, NM | | |
| WELL NO. | FOOTAGE LOCATION | SECTION | TOWNSHIP | RANG | |
| | | | | | |
| | <u>Tu</u> | ibular Data | | | |
| | Surface Casing | | | | |
| | | Demented with 500sx. | | | |
| | TOC <u>Circ.</u> fee Hole size <u>12-1/4</u> " | at determined by | • | | |
| | , tele 020 <u>12.11 . </u> | | | | |
| | Production Casin | g. | | | |
| | Size <u>7'</u> C | emented with 2000sx. | | | |
| | | determined by | | | |
| | Hole size <u>8-3/4"</u> Total Depth 6850' | | | | |
| | Injection interval | | | | |
| | 5772 feet to 6637 | feet | | | |
| | (perforated) | | | | |
| hina aima 0.0/01 4 | 7.4 FF time to the 150 | | | | |
| Ding size <u>2-3/8° 4.</u> | 7# J-55 lined with IPC (material) | | wset 1-X nd model) | | |
| | top perforation | | · | | |
| cker within 100' of | top portoration. | | | | |
| cker within 100' of | | | | | |
| cker within 100' of her Data | | | | | |
| ner <u>Data</u> Name of injectio | on formation <u>Blinebry/Tubb</u> | | | | |
| ner <u>Data</u> Name of injectio Name of Field o | r Pool (if applicable) Warren | | is Pool | | |
| ner <u>Data</u> Name of injectio Name of Field of 3. Is this a new | | YesNo | is Pool | | |
| Name of injection Name of Field or 3. Is this a new If no, for what po | r Pool (if applicable) Warren well drilled for injection? _> urpose was the well originally | CYes No rdrilled? | is Pool | | |
| Name of injection Name of Field of 3. Is this a new If no, for what potentials the well even | r Pool (if applicable) <u>Warren</u> well drilled for injection? <u></u> | Yes No representation of the control | | g(s) use | |

File: WFD115INJ.FORM

NMFU

1980'FNL, 660' FWL, SEC. 28, T-20S, R-38E, LEA CO. NM



9 5/8", 36#, K-55, @ 1500' W/ 500 SX. TOC @ CIRC HOLE SIZE 12-1/4"

TUBING

2 3/8*, 4.7#, J-55, EUE, IPC

PACKER

7"WATSON ARROWSET 1-X PACKER SET WITHIN 100' OF TOP PERFS

PRODUCTION CASING

7", 23# K-55 @ 6700' W/ 2000 SX. TOC @ CIRC HOLE SIZE: 8-3/4"

BY: JS\$

BLINEBRY/TUBB INJECTION INTERVAL (PERFORATED)

5772'-6637'

PBTD: 6800'

TD: 6850'

DATE: 10/18/93

INJECTION WELL DATA SHEET

| Conoco Inc. | | Warren Unit | | | |
|--|---|--|--------------------|-------------|--|
| OPERATOR | | LEASE | | | |
| | 660' FWL Sec. 28 | T-20S, R-38E, Lea | | | |
| WELL NO. FOO | TAGE LOCATION | SECTION | TOWNSHIP | RANGE | |
| | Tub | ular Data | | | |
| | | CHEL DELE | | | |
| | Surface Casing | | | | |
| | Size <u>9-5/8</u> Ce | | | | |
| | TOC <u>Circ.</u> feet Hole size 12-1/4* | determined by | - | | |
| | | | | | |
| | Production Casing | | | | |
| | Size <u>7°</u> Cer | mented with 2000sx. | | | |
| | | etermined by | | | |
| | Hole size <u>8-3/4*</u> Total Depth <u>6850'</u> | | | | |
| | Injection interval | | | | |
| | 5801 feet to 6676 fe | et | | | |
| | (perforated) | | | | |
| | | | | | |
| oing size <u>2-3/8° 4.7# J-5</u> | | | | | |
| | (material) | (Drancia | and model) | | |
| cker within 100' of top pe | erforation. | | | | |
| ner Data | | | | | |
| | ation Blinebry/Tubb | | | | |
| Name of injection form | | T O'I A O | as Pool | | |
| Name of injection form Name of Field or Pool | (if applicable) <u>Warren B</u> | MINEORY - TUDO OH & G | | | |
| Name of Field or Pool 3. Is this a new well do | rilled for injection? X | YesNo | | | |
| Name of Field or Pool 3. Is this a new well do | (if applicable) Warren B rilled for injection? X was the well originally of | YesNo | | | |
| Name of Field or Pool 3. Is this a new well di If no, for what purpose Has the well ever been | was the well originally of perforated in any other | Yes No drilled? zone(s)? No | | | |
| Name of Field or Pool 3. Is this a new well di If no, for what purpose Has the well ever been | illed for injection? X was the well originally o | Yes No drilled? zone(s)? No | | ng(s) used | |
| Name of Field or Pool 3. Is this a new well do If no, for what purpose Has the well ever beer List all such perforated | was the well originally of perforated in any other intervals and give plugg | YesNo drilled? zone(s)? No ging detail (sacks of ce | ment or bridge plu | | |
| Name of Field or Pool 3. Is this a new well do If no, for what purpose Has the well ever beer List all such perforated | was the well originally of perforated in any other | YesNo drilled? zone(s)? No ging detail (sacks of ce | ment or bridge plu | | |

File: WFD118INJ.FORM

NMFU

660' FSL, 660' FWL, SEC. 28, T-20S, R-38E, LEA CO. NM



9 5/8*, 36#, K-55, @ 1500° W/ 500 SX. TOC @ CIRC

HOLE SIZE: 12-1/4"

TUBING

2 3/8", 4.7#, J-55, EUE, IPC

PACKER

7"WATSON ARROWSET 1-X PACKER SET WITHIN 100' OF TOP PERFS

PRODUCTION CASING

7", 23# K-55 @ 6700' W/ 2000 SX. TOC @ CIRC HOLE SIZE: 8-3/4"

BY: JSS

BLINEBRY/TUBB INJECTION INTERVAL (PERFORATED)

5801'-6676'

PBTD: 6800'

TD: 6850'

DATE: 10/18/93

INJECTION WELL DATA SHEET

| | Conoco Inc. | | | Warren Unit | | | |
|------------|--------------------|---------------------------------------|--|--|-------------------------------|--------------|--|
| | OPERATOR | | | LEASE | | | |
| | 120 | 1980' FNL, 1 | 650' FEL Sec. | 29 T-20S, R-38E | Lea County, NM | | |
| | WELL | NO. FOOT | AGE LOCATION | SECTION | TOWNSHIP | RANGE | |
| | | | | | | | |
| | | | | Tubular Data | | | |
| | | | Surface Casin | Ω | | | |
| | | | Size <u>9-5/8</u> * | Cemented with 500s | ۲. | | |
| | | | TOC <u>Circ.</u> Hole size 12-1/ | feet determined by | | | |
| | | | Hole Size <u>12-17</u> | <u></u> | | | |
| | | | Production Ca | neing | | | |
| | | | Size 7" | Cemented with 2000s: | Y . | | |
| | | | TOC Circ. f | eet determined by | ~ | | |
| | | | Hole size <u>8-3/4</u> Total Depth <u>68</u> | | | | |
| | | | | | | | |
| | | | Injection interv 5813 feet to 67 | | | | |
| | | | (perforated) | <u></u> | | | |
| | | | | | | | |
| Tul | oing size <u>2</u> | 3/8° 4.7# J-55 | | set in a 7" Watson | | | |
| | | | (mater | ial) (bra | nd and model) | | |
| pac | ker within | 100' of top perf | oration. | | | | |
| Ott | er Data | | | | | | |
| 1. | Name of | inlection format | ion Blinebry/Tubl | 3 | | | |
| 2. | Name of | Field or Pool (if | applicable) War | ren Blinebry - Tubb Oil | & Gas Pool | | |
| | | | ed for injection? ras the well origin | | | | |
| | | · · · · · · · · · · · · · · · · · · · | | | | | |
| 4. | | | | other zone(s)? No plugging detail (sacks o | of cement or bridge plu | na(s) riseq) | |
| | | | | proggarig colum (omorio d | - Communication of the graphs | | |
| 5 . | Give the | death to and na | me of any overlyi | ng and/or underlying oil | or das zonas (pools) ir | n this area | |
| ٠, | Drinkard | • | | | | | |
| | | | | | | | |
| | | | | | | | |

File: WFD120INJ.FORM

WELLBORE DIAGRAM WARREN UNIT NO. 120

NMFU

1980' FNL, 1650' FEL,SEC. 29, T-20S, R-38E, LEA CO. NM



9 5/8", 36#, K-55, @ 1500' W/ 500 SX. TOC @ CIRC HOLE SIZE: 12-1/4"

TUBING

2 3/8", 4.7#, J-55, EUE, IPC

PACKER

7"WATSON ARROWSET 1-X PACKER SET WITHIN 100' OF TOP PERFS

PRODUCTION CASING

7", 23# K-55 @ 6700' W/ 2000 SX TOC @ CIRC HOLE SIZE: 8-3/4"

BY: JSS

BLINEBRY/TUBB INJECTION INTERVAL (PERFORATED) 5813'-6718'

PBTD: 6800'

TD: 6850'

DATE: 10/18/93

PROPOSED WELL SCHEMATIC

INJECTION WELL DATA SHEET

| Conoco Inc. | | | Warren | <u>Unit</u> | |
|--|-------------------------|--|--|------------------------|-----------|
| OPERATOR | | | LEASE | | |
| | | | T-20S, R-38E, L | | |
| WELL NO. | FOOTAGE LO | CATION | SECTION | TOWNSHIP | RANGE |
| | | Tut | oular Data | | |
| | Surfac | e Casing | | | |
| | | | | | |
| | | | emented with <u>500</u> sx. determined by | | |
| | | ize <u>12-1/4</u> * | , | | |
| | Produ | ction Casing | ſ | | |
| | Size | _ <u>7*</u> Ce | mented with 2000sx. | | |
| | TOC | <u>Circ.</u> feet d ize <u>8-3/4*</u> | letermined by | | |
| | | Depth <u>6850'</u> | | | |
| | • | on interval | | | |
| | <u>5926</u> f (perfo | eet to <u>6746</u> fo | eet | | |
| | pono | ,,,,,, | | | |
| oing size 2-3/8° 4.7 | <u># J-55</u> lined wit | h IPC | set in a <u>7" Watson A</u> | Towset 1-X | |
| | | (material) | <u> </u> | and model) | |
| ker within 100' of t | op perforation. | | | | |
| er Data | | | | | |
| Name of injection | formation Bline | bry/Tubb | | | |
| | | | Slinebry - Tubb Oil & | Gas Pool | |
| 3. Is this a new will no, for what put | | | | | |
| Has the well ever | boon parforma | d in any other | r zono(a)2. No | | |
| | | | ging detail (sacks of (| cement or bridge plu | g(s) used |
| | | | | r gas zones (pools) ir | |

File: WFD121INJ.FOFM

WELLBORE DIAGRAM WARREN UNIT NO. 121

NMFU

660' FSL, 660' FEL, SEC. 21, T-20S, R-38E, LEA CO. NM



9 5/8", 36#, K-55, @ 1500' W/ 500 SX. TOC @ CIRC HOLE SIZE: 12-1/4"

TUBING

2 3/8", 4.7#, J-55, EUE, IPC

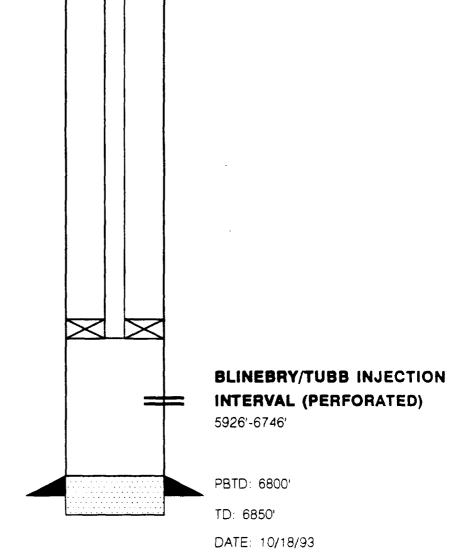
PACKER

7"WATSON ARROWSET 1-X PACKER SET WITHIN 100' OF TOP PERFS

PRODUCTION CASING

7", 23# K-55 @ 6700' W/ 2000 SX. TOC @ CIRC HOLE SIZE: 8-3/4"

BY: JSS



C - 108 Attachment

VI. DATA FOR ALL WELLS WITHIN 1/2 MILE AREA OF REVIEW

| Ţ | Ţ | | | | Ţ | - | | T | | | |
|-------------------|--|---|---|---|---|---|---|---|---|---|---|
| Pool Name | Warren Mckee | Blinebry Oil and Gas Warren Tubb Gas (DHC) | Blinebry Oil and Gas | Blinebry Oil and Gas Warren Tubb Gas (DHC) | Blinebry Oil and Gas Warren Tubb Gas (DHC) | Warren Mckee | Warren Mckee | Blinebry Oil and Gas Warren Tubb Gas (DHC) | Warren Mckœ | Blinebry Oil and Gas Warren Tubb Gas (DHC) | Warren Mckæ |
| TD/PBD | 9350'/9300' | 6760'16722' | 6840'/6768' | .0880./6850 | 6790'/6748' | 9218'/9170' | 9250'19186' | 7020'/6679' | .017.63.110. | 6700′/6658′ | .2606/.8616 |
| Compl. Date | 11/4/91 | 02/12/80 | 06/04/80 | 01/24/80 | 09/05/79 | 15/16/21 | 09/15/57 | <i>97172</i> 111 | 75/11/51 | 62/10/50 | 09/15/51 |
| Spud Date | 7/4/91 | 67/11/11 | 03/20/80 | 10/25/79 | 07/23/79 | 19//0/60 | 75/20/10 | 62/60/80 | 05/05/57 | 01/14/79 | 07/06/51 |
| TOC Method | Visual Returns | Vieuel Roturns | Vieual Returns | Visual Returns | Visual Returns | Temp. Surv. | Temp. Surv. | Visual Returns | Temp. Surv. | Visual Returns | Temp. Surv. |
| TOC | Cire. Cire. | Cire. | Circ. | Chr. | Clrr. | Circ. 1100' 5950' | Circ. 1500' 6160' | C Circ | Circ. 1400' 5950' | Circ. | Circ. 635' 5100' / |
| No. Sx Cement | 485 1770 1700 | 520 1571 | 520 2536 | 2043 | 520 | 300 825 550 | 250 1000 310 | 620 | 250 2000 500 15 | 625 2100 | 250 1420 260 |
| Casing Depth | 412' 4220' 9349' | 1430' | 1432' | 1460' 6850' | 1428' 6790' | 265° 2998° 9217° | 255° 3999° 9236° | 1385' | 229' 3999' 9022' 9209' | 1355' | 264° 2849° 9197° |
| Casing Size | 13-3/8" 9-5/8" 7" | 9-5/8" | 9-5/8" | 9-5/8" | 9-5/8" | 13-3/8" 9-5/8" 7" | 10-3/4" 7-5/8" 5-1/2" | 9-5/8" | 10-3/4" 7-5/8" 5-1/2" 4"(hydril) | 9-5/8" | 10-3/4" 7-5/8" 5-1/2" |
| Interval | 9118'-9223' | 5863'-6645' | 5916'-6024' | 5837'-6885' | 5832'-6672' | 90209138. | .9/161906 | 5786'-6774' | 9060:-9127 | 5795'-6629' | 8990'-9142' |
| Type | OPU | OPU | OPU | OPU | OPU | IWA | IWA | OPU | IWA | OPU | OPU |
| Location | 2310' FNL, 2010' FWL Sec.20-T20s-R38E | 1980' FNL, 1980' FEL Sec. 20-120s-R38E | 1980' FNL, 660' FEL Sec.20-T20s-R38E | 1980' FSL, 660' FEL Sec. 20-T20s-R38E | 1980' FSL, 1980' FEL Sec.20-T20s-R38E | 1980' FSL, 2310' FEL Sec. 20-T20s-R38E | 1980' FWL, 1980' FSL Sec. 20-T20s-R38E | 1980' FSL, 1650' FWL Sec.20-T20e-R38E | 660' FSL, 660' FWL Sec.20-T20s-R38E | 760' FSL, 1650' FWL Scc.20-T20s-R38E | 660' FSL, 1980' FWL Scc.20-T20s-R38E |
| Unit | 1. | 0 | # | - | - | - | x | × | Σ | z | z |
| Well and Operator | Burger B-20 No.4 Conoco, Inc. | Burger B-20 No.2 Conoco, Inc. | Burger B-20 No.3 Conoco, Inc. | Warren Unit No. 78 Conoco, Inc. | Warren Unit No. 77 Conoco, Inc. | Warren Mckee No. 28 Conoco, Inc. | Semu Mckee No. 62 Conoco, Inc. | Semu No. 104 Conoco, Inc. | Semu McKee No. 59 Conoco, Inc. | Semu No. 100 Conoco, Inc. | Semu Mckee No. 13 Conoco, Inc. |

| Unit Location Type Interval Casing Size Chasing Depth No. Sx Center 0 660° FSL, 2310° FEL Sec. 20-T20a-R38E ORP 8953°-9079° 10-344° 246° 260 0 660° FSL, 2310° FEL Sec. 20-T20a-R38E OPU 5808°-6651° 9-54° 1449° 520 0 660° FSL, 660° FWL Sec. 20-T20a-R38E OPU 5808°-6657° 9-54° 1443° 520 1 1780° FSL, 660° FWL Sec. 21-T20a-R38E OPU 5836°-6667° 9-54° 1443° 520 1 1780° FSL, 660° FWL Sec. 21-T20a-R38E OPU 5836°-6667° 9-54° 1443° 520 1 1780° FSL, 660° FWL Sec. 21-T20a-R38E OPU 5835°-6136° 9-54° 1443° 520 1 660° FSL, 660° FWL Sec. 21-T20a-R38E OPU 5835°-6136° 9-54° 1443° 520 1 660° FSL, 660° FWL Sec. 21-T20a-R38E OPU 5835°-682° 9-54° 1445° 625 2 586-21-T20a-R38E OPU 5881°-682° 9-54° 1540° | | | | | | 2950' | 1005 | 7498' | 7- | | | | | |
|--|----------------------------|-------------|----------|----------|-------------|-------|-------------|--------|---------|-------------|------|---------------------|------|------------------------|
| | Warren Tubb Gas (Dual) | | | | | 890' | 1255 | 2999' | 9-5/8" | 6404'-6625' | OFL | Sec. 28-T20s-R38E | | Conoco, Inc. |
| Casing C | Blinebry Oil and Gas | 9381'/6767' | 10/27/52 | 08/27/52 | Temp. Surv. | Cire. | 250 | 265' | 13-3/8" | 5805'-6234' | OTS | 660' FNL, 2310' FEL | æ | Warren Unit No. 10 |
| | Warren Tubb Gas (DHC) | | | | | 1600' | 1400 | 7050' | 7" | | | Sec.28-T20S-R38E | | Conoco, Inc. |
| Unit Location Type Interval Claining Sizz Chaining Depth Comment Comment TOC Spad Compt. 0 660° FSL, 2310° FEL Sec.20° TZOA-R386 ORP 8551°-9079° 10-34" 1-58" 246° 248" 200 247° Cine. Tomph Surv. 02/60 Date Date Date Date TD/PBD 0 660° FSL, 2310° FEL Sec.20° TZOA-R386 OPU 8306°-4655° 2-12° 9-548° 27° 1443° 27° 520 27° Cine. Vinati 210° 09/14/79 11/27/79 6775'9728' 0 660° FSL, 660° FEL 360° OPVL 260° FSL, 660° FML OPU 8366°-4705° 27° 9-548° 27° 1697 27° 6200 27° Cine. Vinati 27° 09/14/79 11/27/79 6775'972' 1 1780° FSL, 660° FML 360° OPVL 360° FSL, 660° FML OPU 8356°-4705° 27° 9-548° 27° 1607 27° Cine. Vinati 300° Cine. Maint 301/3780 09/14/79 10/27/79 6775'973' 1 1 1 1 1 1460° 27° | Blinebry Oil and Gas | 7050′/7001′ | 10/11/91 | 6/1/91 | CBL | Circ. | 600 | 1500' | 9-5/8" | S840'-6674' | OPU | 660' FNL, 660' FEL | > | Warren Unit No.98 |
| Caining Caining Caining Caining Compst TOC Spad Compst | | | | | | 4200' | 240 | 6679' | 7. | | | | | |
| Unit Location Type Interval Size Casing No. 5x TOC Spud Compl. 0 660° FSL, 2310° FEL ORP 8953°-9079* 10-34" 246 260 Circ. Temp. Surv. 02/60 09/60 1933°/9101° 0 660° FSL, 1980° FEL OPU 5808°-6657* 9-58" 1449* 520 Circ. Visual 09/1479 11/27/79 6775'/6728* P 660° FSL, 1980° FEL OPU 5808°-6657* 9-58" 1443* 520 Circ. Visual 09/1479 11/27/79 6775'/6728* P 660° FSL, 660° FEU OPU 5808°-6705* 9-58" 1507* 650 Circ. Redurns 09/1479 11/27/79 6795'/6755* P 660° FSL, 660° FWL OPU 5856°-6705* 9-58" 1507* 650 Circ. Redurns 09/1479 11/27/79 6795'/6755* P 580° FWL OPU 5856°-6705* 9-58" 1402* 700 Circ. | | | | | | 90, | 2000 | 3132' | 9-5/8" | | | Sec.27-T20S-R38E | | Conoco, Inc. |
| Unit Location Type Interval Casing Size No. 5x TOC Spud Compl. 0 660° FSL, 2310° FEL ORP 8953°-9079° 10-34" 246° 260 Circ. Modbed Date Date 170/PBD 0 660° FSL, 2310° FEL ORP 8953°-9079° 10-34" 246° 260 Circ. Modbed Date Date 170/PBD 0 660° FSL, 690° FEL OPU 5808°-6657° 9-58° 1449° 520 Circ. Visual 09/1479 11/27/79 6775/6728' 1 1730° FSL, 660° FEL OPU 5806°-6705° 9-58° 1507° 620 Circ. Redurns 09/1479 11/27/79 6795/6753' 1 1730° FSL, 660° FWL OPU 5806°-6705° 9-58° 1907° 620 Circ. Redurns 09/1479 11/27/79 6795/6753' 2 560° FSL, 660° FWL OPU 5802°-6136° 9-58° 1402° 700 Circ. Redurns < | Warren Blinebry-Tubb O & G | 6800'/6590' | 5/19/89 | 4/28/58 | Temp. Surv. | Circ. | 300 | 257' | 13-3/8" | 5786'-6586' | OPU | 660' FSL, 660' FWL | Z | Warren Unit B-T No. 26 |
| Unit Location Type Interval Size Depth Comment TOC Spad Compl. 0 660° FSL, 2310° FEL, 2310 | | | | | Returns | Circ. | 1415 | 6780' | 5-1/2" | | | Sec.27-T20S-R38E | | Conoco, Inc. |
| Unit Location Type Interval Casing Size No. Sx TOC Spad Compl. 0 660° FSL, 2310° FEL ORP 8953°-9079° 10–314° 246° 260° Circ. Temp. Surv. 02/60 95/60 9133'9101' 0 660° FSL, 2310° FEL ORP 8953°-9079° 10–314° 246° 260° Circ. Temp. Surv. 02/60 95/60 9133'9101' 0 660° FSL, 1980° FEL OPU \$900°-6651' 9–547° 1449° \$20 Circ. Visual 09/14/79 11/27/79 6772'0738' 0 660° FSL, 1980° FEL OPU \$385°-6667' 9–547° 1443° \$20 Circ. Returns 09/14/79 11/27/79 6772'0738' 1 1730° FSL, 660° FWL OPU \$385°-46/30' 9–547° 1900° Circ. Returns 09/14/79 11/27/79 6792'0733' 1 1730° FSL, 660° FWL OPU \$385°-4136' 9–547° 1900° Circ. Temp. Surv. 0 | Warren Blinebry-Tubb O & G | 6780'/6730' | 6/93 | 5/93 | Visual | Circ. | 800 | 1500' | 8-5/8" | 6070'-6597' | OFL | 2060' FSL, 660' FWL | _ | Warren Unit B-T No.110 |
| Unit Location Type Interval Size Depth Cement TOC Spad Compl. 0 660° ESL, 2310° FEL ORP 8953-9079° 10-3/4° 246° 200 Circ. Temp. Surv. 02/60 9133'9101' 0 660° ESL, 2310° FEL ORP 8953-9079° 10-3/4° 246° 200 Circ. Temp. Surv. 02/60 9133'9101' 0 660° ESL, 1980° FEL OPU 5808'-6651° 9-5/8° 1449° 520 Circ. Visual 09/14/79 11/27/79 6775'875/8728' 0 660° ESL, 1980° FEL OPU 5836'-6602° 9-5/8° 1443' 520 Circ. Returns 09/14/79 11/27/79 6775'875/8728' 1 1780° ESL, 660° FWL OPU 5866'-6705' 9-5/8° 1507' 650 Circ. Returns 09/14/79 11/27/79 6795/6753' 5 560° FSL, 1980° FWL OPU 5856'-6136' 9-5/8° 1402' 700 Circ. Returns | | | | | | 3622' | 943 | TTTS' | 5-1/2" | | | | | |
| Unit Location Type Interval Size Casing No. Sx TOC Spud Compl. 0 660° FSL, 2310° FEL ORP 8953°-9079° 10–3/4° 246° 290 Cin: Temp. Surv. 02/60 9133′9101° 0 660° FSL, 1980° FEL OPU 8908°-6651° 9-5/8° 1559 1010° 1559 1010° 0 660° FSL, 1980° FEL OPU 8908°-6651° 9-5/8° 1449° 520 Cin: Visual 09/14/79 11/27/79 6775'/6728° 0 660° FSL, 1980° FEL OPU 8336°-6657° 9-5/8° 1449° 520 Cin: Visual 09/14/79 11/27/79 6775'/6728° 1 1780° FSL, 660° FWL OPU 8356°-670° 9-5/8° 1557' 650 Cin: Redura 06/27/80 09/14/80 6795'/6753' 5ec.21-T20-R38E OPU 8356°-6136° 9-5/8° 1507' 650 Cin: Temp. Surv. 06/27/80 08/27/80 08/27/80 <t< td=""><td></td><td></td><td></td><td></td><td></td><td>1150'</td><td>1365</td><td>3050'</td><td>9-5/8-</td><td></td><td></td><td>Sec.27-T20S-R38E</td><td></td><td>Conoco, Inc.</td></t<> | | | | | | 1150' | 1365 | 3050' | 9-5/8- | | | Sec.27-T20S-R38E | | Conoco, Inc. |
| Unit Location Typo Interval Sizo Depth Cement TOC Spad Compl. | Warren Blinebry-Tubb O & G | 9392'/6344' | 2/29/88 | 3/21/51 | Temp. Surv. | Circ. | 250 | 269' | 13-3/8" | 5871'-6647' | OPU | 1980' FNL, 660' FWL | (II) | Warren Unit B-T No. 9 |
| Unit Location Typo Interval Sizo Depth Casing No. Sx TOC Spud Compt. | | | | | | 2650' | 1100 | 7074 | 7" | | | Sec.27-T20S-R38E | | Conoco, Inc. |
| Unit Location Type Interval Size Depth Cement TOC Spud Compl. | Warren Blinebry-Tubb O & G | 7075'/7030' | 9/25/84 | 10/16/75 | CBL | Circ. | 600 | 1540' | 9-5/8- | 5885'-6682' | OPU | 660' FNL, 660' FWL | D | Warren Unit B-T No. 36 |
| Unit Location Type Interval Size Depth Cement TOC Spud Compl. | Warren Tubb Gas (DHC) | | | | | 1100' | 1605 | 7025 | 7" | | | Soc.21-T20#-R38E | | Conoco, Inc. |
| Unit Location Type Interval Size Depth Cement TOC Spud Compl. 0 660' FSL, 2310' FEL ORP 8953'-9079' 10-3/4" 246' 260 Circ. Temp. Surv. 02/60 Date TD/PBD 0 660' FSL, 2310' FEL ORP 8953'-9079' 10-3/4" 246' 260 Circ. Temp. Surv. 02/60 95/60 9133'/9101' 0 660' FSL, 2310' FEL OPU \$908'-6651' 9-5/8" 1449' 520 Circ. Visual 09/14/79 11/27/79 6775'/6728' 0 660' FSL, 660' FSL, 660' FWL OPU \$336'-6667' 9-5/8" 1443' 520 Circ. Visual 04/27/80 07/14/80 6795'/6753' 1 1780' FSL, 660' FWL OPU \$386'-6705' 9-5/8" 1507' 650 Circ. Visual 04/27/80 08/25/80 6835'/6799' M 660' FSL, 660' FWL OPU \$386'-6136' 9-5/8" 16750' 2550 | Blinebry Oil and Gas | 7025'/6761' | 01/31/77 | 11/30/76 | CBL | Circ. | 625 | 1465' | 9-5/8" | 5902'-6596' | OPU | 660' FSL, 1980' FWL | Z | Warren Unit No. 43 |
| Unit Location Type Interval Size Depth Cement TOC Spud Compl. 0 660° FSL, 2310° FEL ORP 8953°-9079' 10-3/4* 246° 260 Circ. Temp. Surv. 02/60 05/60 9133′/9101′ 0 660° FSL, 2310° FEL ORP 8953°-9079' 10-3/4* 246° 260 Circ. Temp. Surv. 02/60 05/60 9133′/9101′ 0 660° FSL, 1980° FEL OPU 5808°-6651′ 9-5/8* 1449° 520 Circ. Visual 09/14/79 11/27/79 6775′/6728° P 660° FSL, 660° FEL OPU 5836°-6667′ 9-5/8* 1443° 520 Circ. Visual 04/27/80 07/14/80 6795′/6735° L 1780° FSL, 660° FWL OPU 5836°-6705′ 9-5/8* 1507° 650° Circ. Returns 04/27/80 07/14/80 6795′/6735° L 1780° FSL, 660° FWL OPU 5866′-6705′ 9-5/8* 1507° 650° | | | | | | | | | | | | | | |
| Unit Location Type Interval Size Depth Cement TOC Method Date Date TD/PBD | • | | | | Returns | Circ. | 2550 | 6750 | 7. | | | Sec. 21-T20a-R38E | | Conoco, Inc. |
| Unit Location Type Interval Size Depth Casing No. Sx TOC Spud Compl. 0 660' FSL, 2310' FEL ORP 8953'-9079' 10-3/4" 246' 260 Circ. Temp. Surv. 02/60 05/60 9133'/910' 0 660' FSL, 2310' FEL OPU 8908'-6651' 9-5/8" 1449' 520 Circ. Visual 09/14/79 11/27/79 6775'/6728' 0 660' FSL, 1980' FEL OPU 5908'-6651' 9-5/8" 1449' 520 Circ. Visual 09/14/79 11/27/79 6775'/6728' P 660' FSL, 660' FEL OPU 5836'-6667' 9-5/8" 1443' 520 Circ. Visual 09/14/79 11/27/79 6775'/6753' P 560' FSL, 660' FWL OPU 5866'-6705' 9-5/8" 1507' 650 Circ. Visual 04/27/80 07/14/80 6795'/6753' L 1790' FSL, 660' FWL OPU 5866'-6705' 9-5/8" 1507' | Blinebry Oil and Gas | 6750'/6700' | 09/01/81 | 07/15/81 | Visual | Circ. | 700 | 1402 | 9-5/8- | S856'-6136' | OPU | 660' FSL, 660' FWL | X | Warren Unit No. 61 |
| Casing Casing No. Sx TOC Spud Compl. | Warren Tubb Gas (DHC) | | | | | 1650' | 1781 | 6835' | 7- | | | Sec.21-T20s-R38E | | Conoco, Inc. |
| Unit Location Type Interval Size Depth Cement TOC Spud Compl. | Blinebry Oil and Gas | 6835'/6799' | 08/22/80 | 06/26/80 | Temp. Surv. | Circ. | 83 | 1507 | 9-5/8- | 5866'-6705' | OPU | 1780' FSL, 660' FWL | _ | Warren Unit No. 81 |
| Unit Location Type Interval Size Depth Coment TOC Spud Compl. 0 660' FSL, 2310' FEL ORP 8953'-9079' 10-3/4" 246' 260 Circ. Temp. Surv. 02/60 9133'/9101' 0 5cc.20-T20s-R38E OPU 5808'-6651' 9-5/8" 1449' 520 Circ. Visual 09/14/79 11/27/79 6775'/6728' 0 660' FSL, 1980' FEL OPU 5808'-6651' 9-5/8" 1449' 520 Circ. Visual 09/14/79 11/27/79 6775'/6728' P 660' FSL, 660' FEL OPU 5836'-6667' 9-5/8" 1443' 520 Circ. Visual 04/27/80 07/14/80 6795'/6753' | Warren Tubb Gas (DHC) | | | | Returns | Circ. | 2020 | 6795 | 7: | | | Sec. 20-T20s-R38E | | Conoco, Inc. |
| Unit Location Type Interval Size Casing No. Sx TOC Spud Compl. 0 660' FSL, 2310' FEL ORP 8953'-9079' 10-3/4" 246' 260 Circ. Temp. Surv. 02/60 05/60 9133'/9101' Sec. 20-T20s-R38E 5-1/2" 9108 475 3885' 11/27/79 6775'/6728' 0 660' FSL, 1980' FEL OPU 5808'-6651' 9-5/8" 1449' 520 Circ. Visual 09/14/79 11/27/79 6775'/6728' | Blinebry Oil and Gas | 6795'/6753' | 07/14/80 | 04/27/80 | Visual | Circ. | 520 | 1443 | 9-5/8- | 5836'-6667' | OPU | 660' FSL, 660' FEL | 7 | Warren Unit No. 62 |
| Unit Location Type Interval Size Depth Cement TOC Spud Compl. 0 660' FSL, 2310' FEL ORP 8953'-9079' 10-3/4" 246' 260 Circ. Temp. Surv. 02/60 05/60 9133'/9101' Sec. 20-T20s-R38E 5-1/2" 9108 475 3895' 1550 1010' 0 660' FSL, 1980' FEL OPU 5808'-6651' 9-5/8" 1449' 520 Circ. Visual 09/14/79 11/27/79 6775'/6728' | Warren Tubb Gas (DHC) | | | | Returns | Circ. | 2150 | 6772' | 7. | | | Sec. 20-T20s-R38E | | Conoco, Inc. |
| Unit Location Type Interval Size Depth Cement TOC Spud Compl. 0 660' FSL, 2310' FEL ORP 8953'-9079' 10-3/4" 246' 260 Circ. Temp. Surv. 02/60 9133'/9101' Sec.20-T20a-R38E 5-1/2" 9108 475 3885' | Blinebry Oil and Gas | 6775'/6728' | 11/27/79 | 09/14/79 | Visual | Circ. | 5 20 | 1449. | 9-5/8- | 5808'-6651' | OPU | 660' FSL, 1980' FEL | 0 | Warren Unit No. 63 |
| Unit Location Type Interval Size Depth Cement TOC Spud Compl. 0 660' FSL, 2310' FEL ORP 8953'-9079' 10-3/4" 246' 260 Circ. Temp. Surv. 02/60 9133'/9101' Sec.20-T20a-R38E 7-5/8" 3999' 1550 1010' | | | | | | 3885' | 475 | 9108 | 5-1/2" | | | | | |
| Unit Location Type Interval Size Depth Cement TOC Method Date Date TD/PBD O 660' FSL, 2310' FEL ORP 8953'-9079' 10-3/4" 246' 260 Circ. Temp. Surv. 02/60 05/60 9133'/9101' | | | | | | 1010' | 1550 | 3999' | 7-5/8" | | | Sec.20-T20s-R38E | | Conoco, Inc. |
| Casing Casing No. Sx TOC Spud Compl. Unit Location Type Interval Size Depth Coment TOC Method Date Date TD/PBD | Warren Mckee | 9133'/9101' | 05/60 | 02/60 | Temp. Surv. | Circ. | 260 | 246' | 10-3/4" | 8953'-9079' | ORP | 660' FSL, 2310' FEL | 0 | Warren Mckee No. 27 |
| Casing No. Sx TOC Spud | Pool Name | TD/PBD | Date | Date | Method | TOC | Cement | Depth | Sizo | Interval | Туро | Location | Unit | Well and Operator |
| | | | Compl. | Spud | Toc | | No. Sx | Casing | Casing | | | | | |

| l | Туре | Interval | Casing Sizo | Casing Depth | No. Sx Cement | T0C | TOC | Spud Date | Compl. Date | TD/PBD | Pool Name |
|---|------------|----------------------------|-----------------------------|------------------------|--------------------------------------|---------------------------------------|-------------------|--------------|-------------|-------------|--|
| 1340' FNL, 2020' FWL OPU 5 Sec.28-T20s-R38E OFL 6 | 4, 0 | 5815'-6281' 6600'-6777' | 13–3/8" | 1558° | 1200 | Cire. | Visual Returns | 09/30/88 | 12/06/88 | .0169/.005/ | Blinebry Oil and Gas Warren Drinkard (Dual) |
| 2130' FSL, 813' FEL OFL 60 Sec.28-T20S-R38E OFL 67 | 8 2 | 6049'-6195' 6749'-6824' | 13-3/8- | 1592' | 1460 3260 | Circ. \$75' | CBL | 06/61/6 | 11/25/90 | 7000'/6892" | Blinebry Oil and Gas Warren Drinkard (Dual) |
| 1980' FSL, 1980' FEL OPL 575 Sec.28-T20S-R38E OFL 636 | 575 636 | 5755°-6210° 6360°-6590° | 13-3/8" 9-5/8" 7" | 262' 2850' 6921' | 02 52 02 002 | Cire. 1000' 5325' | Temp. Surv. | 11/3/49 | 1/6/89 | 9072'/6692' | Blinebry Oil and Gas Warren Tubb Gas (Dual) |
| 1880' FSL, 1980' FWL GFO 579 Sec. 28-T20S-R38E GFL 634 | 8 8 | 5791°-5971° 6341°-6580° | 9-5/8" | 1495 | 600 | Clre. | Visual Returns | 9723/75 | 216/76 | 7090'/6630' | Blincbry Oil and Gas Warren Tubb Gas (Dual) |
| 330' FSL & 2310' FWL P&A Sec.28-T20S-R38E | | | 15" 12-1/2" 8" | 575° 800° 2922° | WELL DOES NOT PE ZONE OF INTEREST | L DOES NOT PENETRATE E OF INTEREST | ETRATE | 10/25/28 | 3/17/29 | 4213* | P& A |
| 660' FSL, 660' FEL OFL 6042'- Scc.28-T20S-R38E OFL 6570' | 6042 | 6042'-6170' 6570'-6792' | 13-3/8" | 1445° | 1200 | Cire. Cire. | Visual Returns | 9/23/89 | 1/11/90 | 7448'/6865' | Blinebry Oil and Gas Warren Drinkard (Dual) |
| 660' FNL, 660' FEL OPU 5826'-6695' Sec.29-T20s-R38E | -2826 | .5699 | 9-5/8" | 1387' | 550 | Cire. | Visual Returns | 09/20/78 | 11/13/78 | .0219/.0119 | Blinebry Oil and Gas Warren Tubb Gas (DHC) |
| 660' FNL, 1650' FEL OPU 5790'-6581' Sec.29-T20s-R38E | 0645 | .1859 | 9-5/8" | 1390' 6749' | 550 1870 | Cire. | Visual Returns | 09/03/78 | 10/20/78 | 6750′/6713° | Blincbry Oil and Gas Warren Tubb Gas (DHC) |
| 660' FNL, 1980' FEL ORP 8924'-9094' Sec.29-T20s-R38E | 8924'- | -9094. | 10-3/4" 7-5/8" 5-1/2" | 286' 2859' 9144' | 225 940 207 | Circ. 850' 5975' | Temp. Surv. | 2/52 | 5/52 | 9145'/9129' | Warren Mckee |
| 810' FNL, 2130' FWL IWA 8910' Sec.29-T20s-R38E | 8910. | 8910,-9014 | 10-3/4" 5-1/2" | 1421' | 918 3234 | Circ. 1880' | Temp. Surv. | 9/81 | 11/81 | 9100'/9044' | Warren Mckee |
| 660' FNL, 1980' FWL P & A Sec.29-T20s-R38E | | | 10-3/4" 7-5/8" 5-1/2" | 255° 4004° 9119° | 255 1800 525 | Cire. 1700' 4650' | Temp. Surv. | 03/10/57 | 05/23/57 | 9120'/9115' | P & A |
| 1980' FNL, 990' FWL IWA 8966' Sec.29-T208-R38E | .9968 | 8966'-9228' | 10-3/4" 7-5/8" 5-1/2" | 263° 3999° 9398° | 250 2150 250 | Circ. 800' 6300' | Temp. Surv. | 05/08/57 | 08/28/57 | 9400'/9151' | Warren Mckee |

| | Conoco, Inc. | Warren Mckee No. 25 0 | | Conoco, Inc. | Warren Mckee No. 6 N | Conoco, Inc. | Warren Unit No. 83 K | | Conoco, Inc. | Warren Mckee No. 22 K | | Conoco, Inc. | Warren Mckee No. 3 | Conoco, Inc. | Warren Unit No. 86 | Conoco, Inc. | | Warren Unit No. 52 | Continental Oil Co. | Warren Mckee No. 2 H | Conoco, Inc. | Warren Unit No. 47 H | | Conoco, Inc. | Warren Mckee No. 23 G | | Conoco, Inc. | Semu Mckee No. 10 F | Conoco, Inc. | Semu No. 99 F | Well and Operator Unit |
|-------|------------------|-----------------------|-------|-------------------|----------------------|------------------|----------------------|--------|------------------|-----------------------|-------|-------------------|----------------------|-----------------------|----------------------|-----------------------|-----|----------------------|---------------------|----------------------|-----------------------|----------------------|--------|-------------------|-----------------------|------|-------------------|----------------------|------------------|----------------------|------------------------|
| | Sec.29-T20s-R38E | 990' FSL, 2310' FEL | | Sec. 29-T20s-R38E | 660' FSL, 1980' FWL | Sec.29-T20s-R38E | 2100' FSL, 1650' FWL | | Sec.29-T20s-R38E | 2090' FSL, 2090' FWL | | Sec. 29-T20s-R38E | 1980' FSL, 1980' FEL | Sec.29-T20s-R38E | 1650' FSL, 890' FEL | Sec. 29-17/08-R38E | | 2310' FSL, 330' FEL | Sec.29-T20s-R38E | 1980' FNL, 660' FWL | Soc.29-T20s-R38E | 1650' FNL, 710' FEL | | Sec. 29-T20s-R38E | 1980' FNL, 1980' FEL | | Sec. 29-T20s-R38E | 1980' FNL, 1980' FWL | Sec.29-T20s-R38E | 1980' FNL, 1650' FWL | Location |
| | | IW A | | | OPU | | OPU | | | ΑWI | | | OPS | | OPU | OPS |) ! | OPU | | P & A | | OPU | | | IWA | | | ORP | | OPS | Туро |
| | | 9024'-9132' | | | 9011-9116 | | 5803'-6127' | | | 8954'-9123' | | | 8947'-9070' | | 5879'-6704' | | | 5812'-6717' | | | | 5891'-6678' | | | 8916'-9087' | | | 8881'-9017' | | 5790'-5942' | Interval |
| | 7-5/8" | 10-3/4" | 2/1-6 | 7-5/8 | 10-3/4" | 5-1/2" | 13-3/8" | 5-1/2" | 7-5/8" | 10-3/4" | 7" | .8 %-6 | 13-3/8" | 7- | 13-3/8" | 7 | } | 9-5/8- | 9-5/8" | 13-3/8" | 7- | 9-5/8" | 5-1/2" | 7-5/8" | 10-3/4" | 7- | 9-5/8- | 13/3/8" | 7" | 9-5/8- | Sizo |
| 72.00 | 97159 18159 | 263' | 4134 | 2893 | 243' | 6200' | 1400' | 9195 | 3998 | 256' | 8947' | 2989' | 262' | 8600 | 1448 | 6/88 | 1 | 1382' | 2883' | 250' | 6688' | 1407 | 9198. | 3999 | 279 | 9145 | 2906' | 226' | 6036' | 1399. | Dopth |
| 0.0 | 3350 | 250 | 1000 | 1145 | 200 | 2890 | 1094 | 270 | 700 | 250 | 8 | 625 | 250 | 4580 | 1232 | 1825 | | 550 | 500 | 250 | 1155 | 625 | 260 | 2660 | 250 | 900 | 5 0 | 250 | 1670 | 570 | Coment |
| 200 | 1575 | Circ. | 4650 | 800 | Circ. | Circ. | Chr | \$450 | 1375' | Circ. | 4330' | 1600; | Circ. | 1590' | Clrc. | Circ. |) ; | Circ. | 1829' | Circ. | 1617' | Circ. | 4675' | 1546 | Circ. | 4665 | 1989' | Circ. | Circ. | Circ. | 700 |
| | | Temp. Surv. | | | Temp. Surv. | Returns | Visual | | | Temp. Surv. | | | Temp. Surv. | | Temp. Surv. | Returns | , | Visual | | Calc: * | | Calc: • | | | Temp. Surv. | | | Temp. Surv. | Roturns | Visual | Method |
| | | 03/04/58 | | | 08/19/50 | | 05/06/80 | | | 07/12/57 | | | 9/48 | | 01/04/82 | | | 10/05/78 | | | | 04/05/78 | | | 09/02/57 | | | 03/03/49 | | 08/17/78 | Date |
| | | 05/06/58 | | | 10/16/50 | | 08/12/80 | | | 09/18/57 | | | 12/48 | | 06/04/82 | | | 10/19/78 | | 11/07/49 | | 06/19/78 | | | 11/06/57 | | | 07/05/49 | | 09/15/78 | Date |
| | | 9218'/9188' | | | 9160'/9085' | | 6200'/6157' | | | 9200'/9161' | | | 9070'/9070' | | 9325'/7040' | | | 6788'/6755' | | 9852′7730′ | | 6776'/6680' | | | 9198'/9160' | | | 9391'/9150' | | 6765'/5986' | TD/PBD |
| | | Warren Mckee | | | Warren Mckee | | Blinebry Oil and Gas | | | Warren Mckee | | | Warren Mckee | Warren Tubb Gas (DHC) | Blinebry Oil and Gas | Warren Tubb Gas (DHC) | | Blinebry Oil and Gas | | P & A | Warren Tubb Gas (DHC) | Blinebry Oil and Gas | | | Warren Mckee | | | Warren Mckee | | Blinebry Oil and Gas | Pool Name |

~ '

| 26 | 33 | | ubb O & G | nbb O & G | ubb O & G | nbb O & G | .npp O & G |
|-------------------|--|--|--|---|---|--|--|
| Pool Name | San Andres | P& A | Warren Blinebry-Tubb O & G | Warren Blinebry-Tubb O & G | Warron Blincbry-Tubb O & G | Warren Blinebry-Tubb O & G | Warren Blinebry-Tubb O & G |
| TD/PBD | 9240'/4760' | 9355'/9150' | 7000'/6944' | 6700'/6175' | 6170′/6123′ | 6314'/6295' | 6173′/6128° |
| Compl. Date | 12/16/57 | 4/2/51 | 9/17/91 | 5/11/82 | 18/61/11 | 9/2/90 | 1/12/83 |
| Spud Date | 10/16/57 | 2/1/51 | 5/15/91 | 11/13/56 | 8/9/81 | 1/12/82 | 4/2/80 |
| TOC | Temp. Surv. | Calc: • | Vienal Returns | Temp. Surv. | Visual Returns | Visual Returns | Visual Returns |
| TOC | Circ. 1650' 3921' | 72. | Che. | Clrc. 1225' 4825' | Chr. | Circ. | Clre. |
| No. Sx Cement | 250 | 200 | 1400 | 300 1500 400 | 2350 | 710 | 2010 |
| Casing Depth | 242' 3999' 4500' | 262' | 7000 | 274° 3049° 6699° | 1447' | 1430° | 1480° |
| Casing | 10-3/4" 7-5/8" 5-1/2" | 13-3/8" | 9-5/8" | 13-3/8" 9-5/8" 7" | 8-5/8" 5-1/2" | 8-5/8" | 8-5/8" |
| Interval | 4500'-4760' | | .60216323. | 5816'-6093' | 5792'-6078' | 5835'-6285' | 5815'-6043' |
| Туре | SWD | P&A | OP. | OPU | OPU | OPU | ΙWΑ |
| Location | 24' FSL, 2145' FEL Sec.29-T20s-R38E | 660' FNL, 660' FEL Sec.32-T20S-R38E | 710' FNL, 660' FEL Sec.33-T20S-R38E | 660' FNL, 1980' FEL Sec.33-T20S-R38E | 660' FNL, 1920' FWL Sec.33-T20S-R38E | 1650' FNL, 2310' FWL Sec.33-T20S-R38E | 1980' FNL, 1980' FEL Sec.33-T20S-R38E |
| Unit | 0 | < | < | m | ပ | Ľ. | Ö |
| Well and Operator | Warren Unit No. 24 Conoco, Inc. | Tidewater State No. 1 Mudge, E.W. Jr. | Warren Unit B-T No.99 Conoco, Inc. | Warren Unit B-T No. 21 Conoco, Inc. | Warren Unit B-T No. 84 Conoco, Inc. | Warren Unit B-T No. 91 Conoco, Inc. | Warren Unit B-T No. 80 Conoco, Inc. |

 Type of Well
 Type of Well

 GFL - Gas well flowing.
 OPL - Oil well produced by plunger lift.

 GFO - Gas well flowing oil.
 OPU - Oil well produced by pumping unit.

 IWA - Injection well active.
 OPS - Oil well permanently ahut—in.

 OFL - Oil well flowing.
 OTS - Oil well temporarily ahut—in.

Type of Well ORP - Oil well produced by submersible pump.

P&A - Well which has been plugged and abandoned.

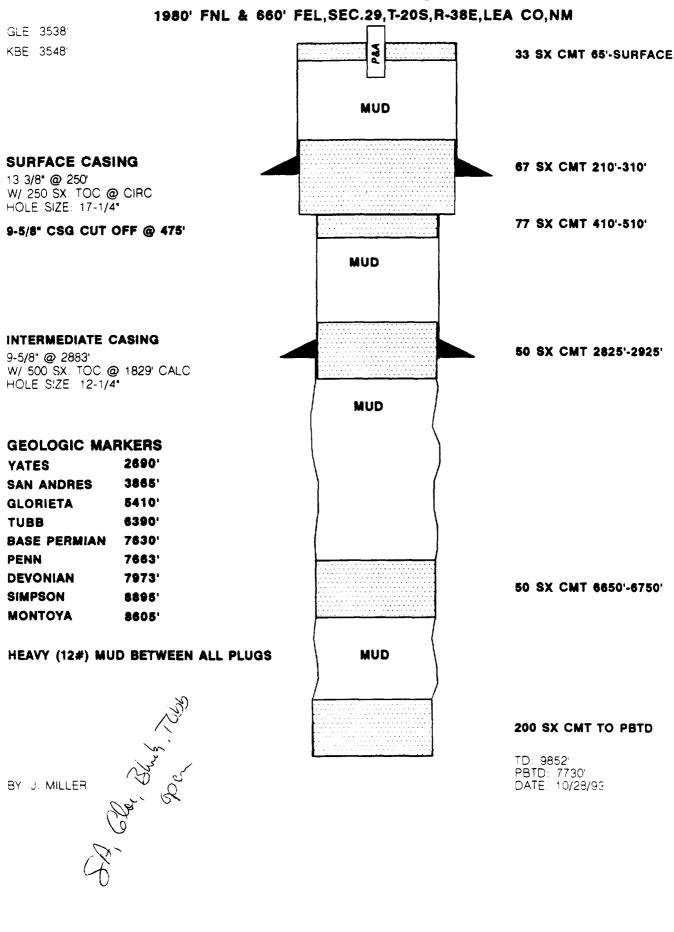
SWD - Active Salt Water Disposal Well.

* Calculated cement tops utilized a cement yield value of 0.66 ft3/sx.

C - 108 Attachment

VI. PLUGGED WELL SCHEMATICS WITHIN 1/2 MILE AREA OF REVIEW

P&A WELLBORE DIAGRAM WARREN MCKEE UNIT NO.2 NMFU



P&A WELLBORE DIAGRAM WARREN UNIT NO.29 NMFU

660' FNL & 660' FEL,SEC.33,T-20S,R-38E,LEA CO,NM GLE 3521' KBE 3534' 10 SX CMT 25'-SURFACE MUD 50 SX CMT 465'-615' 50 SX CMT 625'-775' SURFACE CASING MUD 8-5/8", 24#, J-55 @ 1428' W/ 450 SX. TOC @ CIRC HOLE SIZE: 12-1/4" 50 SX CMT 1375'-1485' MUD PRODUCTION CASING PULLED @ 2623' 50 SX CMT 2500'-2665' **GEOLOGIC MARKERS** 2703 YATES 2960' SEVEN RIVERS QUEEN MUD 3665 PENROSE 3851' **GRAYBURG** 20 SX CMT 2840'-3010' SAN ANDRES 4112' MUD 15 SX CMT 3395'-3540' HEAVY (12#) MUD BETWEEN ALL PLUGS MUD PRODUCTION CASING 5-1/2", 14#, J-55 @ 4250' 15 SX CMT 4075'-4220'

TD 4250°

DATE: 10/28/93

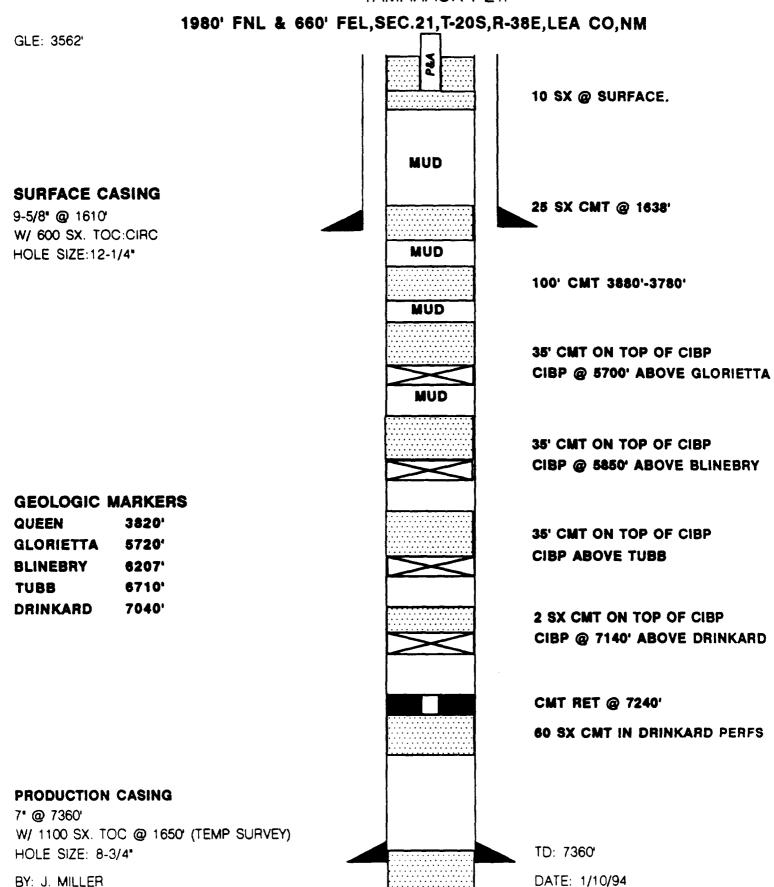
W/ 280 SX. TOC @ 2640' TEMP SURV

HOLE SIZE. 7-7/8"

BY J MILLER

P&A WELLBORE DIAGRAM KORNEGAY NO.1

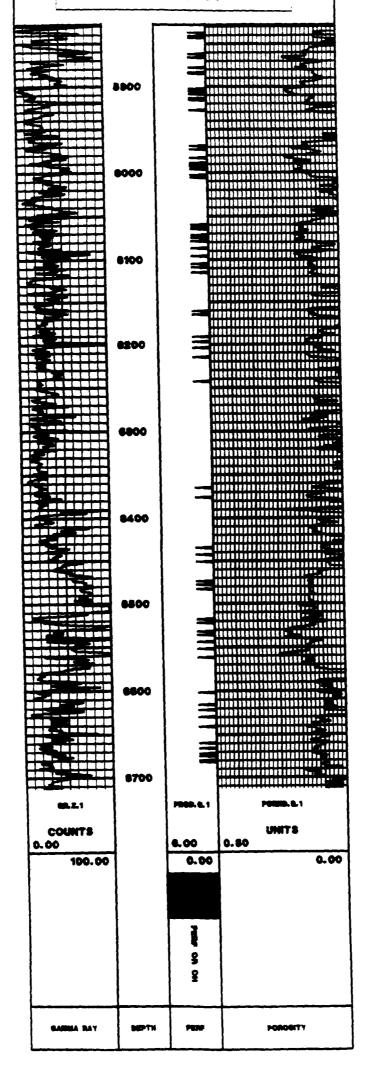
TAMARACK PET.



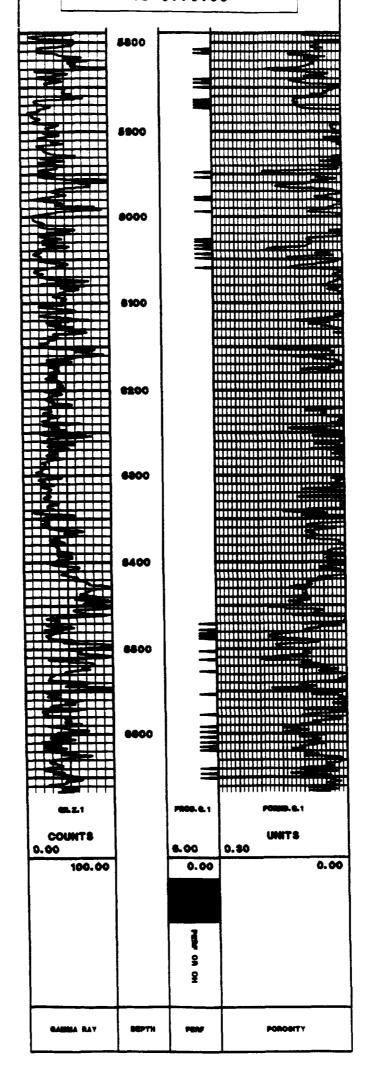
C - 108 Attachment

X. LOG SECTIONS FOR INJECTION INTERVAL OF PROPOSED INJECTORS

CONOCO INC. WU 86 KB: TD:9325.00 8800 6100 6200 6800 6400 6500 8600 6700 FEW.1.1 COUNTS 6.00 0.00



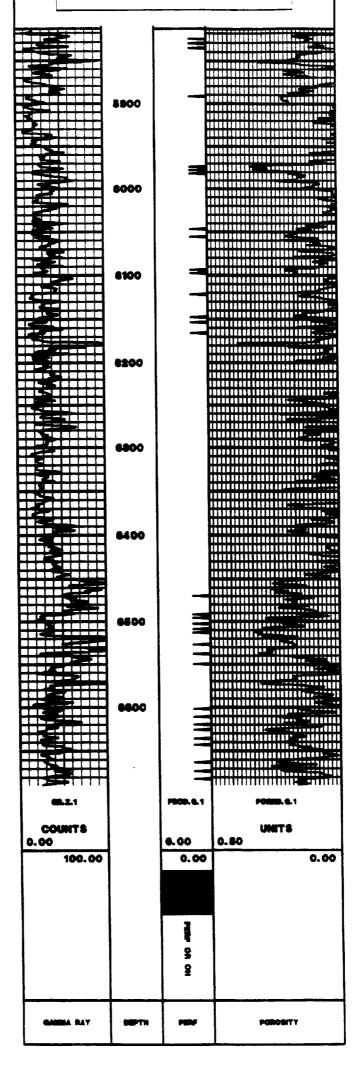
KB:3864.00 TD:6776.00



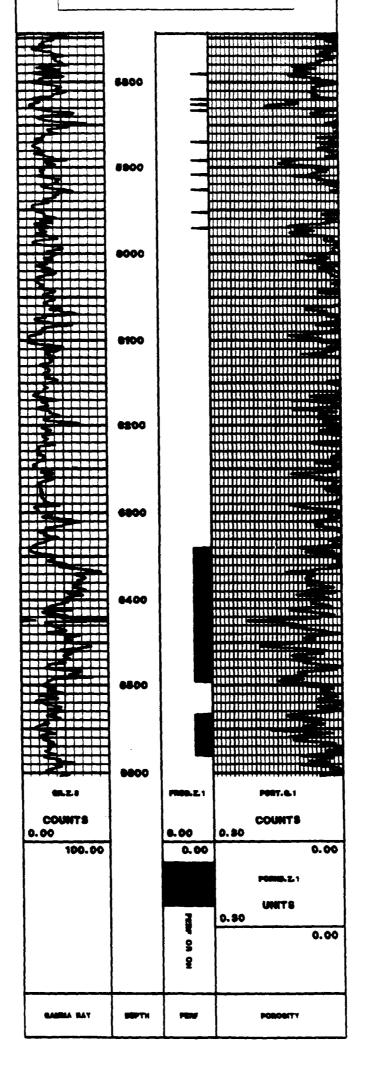
CONOCO INC. WU 61 KB:3666.00 TD:6780.00

| COUNTS 0.00 | 8700 | | Person E.1 UNITS 0.50 |
|----------------|-------------|---|-------------------------|
| | 8400 | | |
| | 6800 | | |
| | 6100 | | |
| | 8900 | ======================================= | |

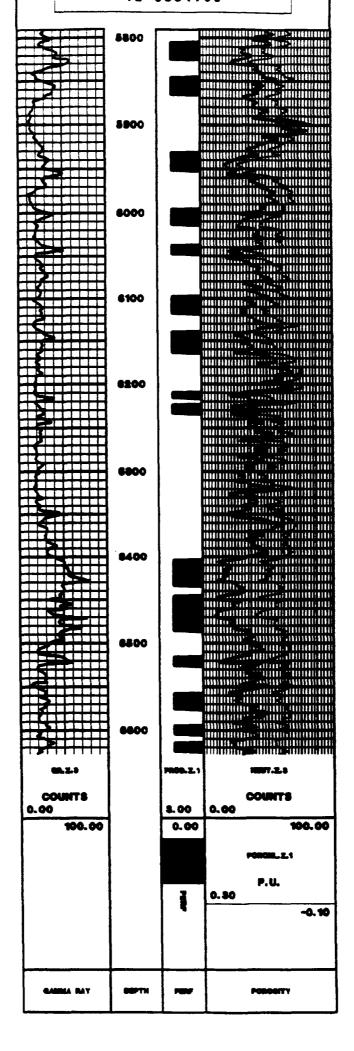
KB:3858.00 TD:6770.00



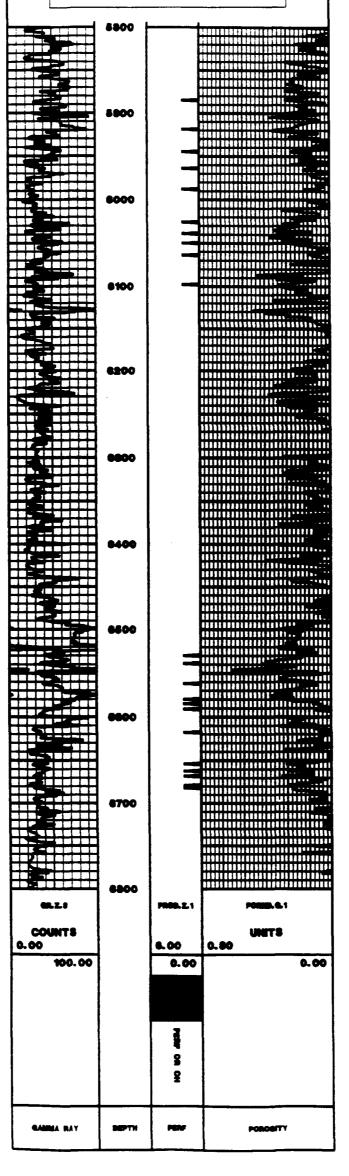
KB:3848.00 TD:7000.00



TD:9381.00



CONOCO INC. WU 36 KB:3562.00 TD:7075.00



CONOCO INC. WU 110 6800 6500 6700 COUNTS 0.00 6.00 0.30 0.00 0.00

C - 108 Attachment

XI. ANALYSES OF FRESH WATER WELLS WITHIN ONE MILE OF INJECTORS

FRESH WATER WELL LOCATIONS IN T-20S, R-38E IN THE WARREN UNIT AREA,

WITHIN ONE MILE OF PROPOSED NEW INJECTION WELLS IN THE SECOND WATERFLOOD EXPANSION

AS REPORTED BY MR. JOHNNY HERNANDEZ FROM THE FILES OF THE ROSWELL STATE ENGINEER'S OFFICE

| INFO | PRMATION FUI | RNISHED BY MR. HERNANDEZ | RESULTS OF FIELD SEARCH |
|------------|------------------------------------|--|--|
| 1. | Sec. 19 - NE Owner: Drilled: | E/4 - Stock Well S & W Cattle Co. 1945 | No remaining surface evidence of this well was found |
| 2 . | Sec. 21 - Se Owner: Drilled: | e/4 NW/4 - Stock Well Dallas or Robert McCasland 6/3/87 | No surface evidence of this well was found and Mr. McCasland has no knowledge of a well at this location |
| 3. | Sec. 34 - SV Owner: Drilled: | N/4 SW/4 NE/4 - Stock Well E. C. Hill 2/10/81 | This stock well was located, is still active, and a current water analysis was secured |
| 4. | Sec. 34 - S\ | N/4 SW/4 NE/4 - Stock Well | No remaining surface evidence of this |

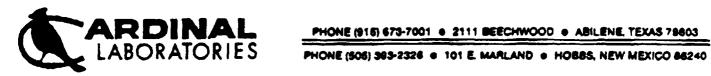
E. C. HiN

2/18/86

Owner:

Drilled:

well was found.



CHEMICAL ANALYSIS OF WATER

Company: Conoco, Inc.

City, St.: 10 Desta Dr., Suite 100W, Midland, TX 79705

Proj.Name: Warren McKee Waterflood Expansion

Location: 2.C. Hill Presh Water Well

Sample 1: Warren McKee Waterflood

PARAMETER

RESULT (mg/L) SAMPLE

1

| f | |
|-----------------------------|-------|
| PH | 7.1 |
| Hardness (CaCO3) | 304 |
| Calcium (CaCO3) | 248 |
| Magnesium (as $Cacco_3$) | 56 |
| Sulfate (804) | 117 |
| Chloride (Cl ⁻) | 200 |
| TDS | 709 |
| Carbonate | 0 |
| Bicarbonate | 200 |
| Hydroxide | 0 |
| Conductivity (mS/cm) | 1.26 |
| Barium | <0.05 |
| Strontium | 0.70 |

Michael R. Powler

14/15/93

WELLS WITHIN 1/2 MILE WHICH PENETRATE ZONE OF INTEREST WHICH DO NOT HAVE CEMENT TOPS ABOVE THE PROPOSED INJECTION INTERVAL

| Pool Name | Warren Mickoe | Warren Mekee | Warren Mckoe | Warren Mckee | Warren Mckee |
|-------------------|---|--|---|---|---|
| TD/PBD | 9218'/9170' | 9250'/9186' | 9210'/9210' | 9145'/9129' | 9400'/9151' |
| Compl. Date | 12/19/61 | 09/15/57 | 15/11/120 | 5/52 | 08/28/57 |
| Spud Date | 09/01/61 | 07/02/57 | 05/05/57 | 2/52 | 05/08/57 |
| TOC | Temp. Surv. | Temp. Surv. | Temp. Surv. | Temp. Surv. | Temp. Surv. |
| 70C | Cire. 1100' 5950' | Cire. 1500' 6160' | Circ. 1400' 5950' | Circ. 850' 5975' | Circ. 800' 6300' |
| No. Sx Cement | 300 825 550 | 250 1000 310 | 250 2000 500 15 | 225 940 207 | 250 2150 250 |
| Casing Depth | 265° 2998° 9217° | 255° 3999° 9236° | 229° 3999° 9022° 9209° | 286° 2859° 9144° | 263' 3999' 9398' |
| Casing Size | 13-3/8" 9-5/8" 7" | 10-3/4" 7-5/8" 5-1/2" | 10-3/4" 7-5/8" 5-1/2" 4"(hydril) | 10-3/4" 7-5/8" 5-1/2" | 10-3/4" 7-5/8" 5-1/2" |
| Interval | . 0 070,- 0 138. | 9067'-9176' | 9060'-9127' | 8924'-9094' | 8966'-9228' |
| Type | IWA | IWA | IWA | ORP | IWA |
| Location | 1980' FSL, 2310' FEL S∞.20-T20s-R38E | 1980' FWL, 1980' FSL Sec.20-T208-R38E | 660' FSL, 660' FWL Sec.20-T20s-R38E | 660' FNL, 1980' FEL Sec.29-T20s-R38E | 1980' FNL, 990' FWL Sec.29-T208-R38E |
| Unit | i-s, | × | × | æ | ъ |
| Well and Operator | Warren Mckee No. 28 Conoco, Inc. | Semu Mckee No. 62 Conoco, Inc. | Semu McKee No. 59 Conoco, Inc. | Warren Mckee No. 7 Conoco, Inc. | Semu Mckee No. 60 Conoco, Inc. |

Type of Well
ORP - Oil well produced by submersible pump.
IWA - Injection well active.

BEFORE AN EXAMINER OF THE OIL CONSERVATION DIVISION

EXHIBIT NO. 20
CASE NO.: 10897
Submitted by: Conoco Inc.
Hearing Date: Jan 20, 1994