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|-------------------------|-----------|--------------|--------------------------|
| RECEIVED: 10/18/2017 | REVIEWER: | TYPE: WFX | APP NO: DMA1729156788 |
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505

**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND
 REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

| | |
|---|--------------------------|
| Applicant: Apache Corporation | OGRID Number: 873 |
| Well Name: Northeast Drinkard Unit 701 | API: 30-025-09916 |
| Pool: Eunice; BLI-TU-DR, North | Pool Code: 22900 |

**SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION
 INDICATED BELOW**

WFX-974

1) TYPE OF APPLICATION: Check those which apply for [A]

A. Location - Spacing Unit - Simultaneous Dedication

☐ NSL☐ NSP (PROJECT AREA)☐ NSP (PRORATION UNIT)☐ SD

B. Check one only for [I] or [II]

[I] Commingling - Storage - Measurement

☐ DHC☐ CTB☐ PLC☐ PC☐ OLS☐ OLM

[II] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☒ WFX☐ PMX☐ SWD☐ IPI☐ EOR☐ PPR**2) NOTIFICATION REQUIRED TO:** Check those which apply.A. ☒ Offset operators or lease holdersB. ☐ Royalty, overriding royalty owners, revenue ownersC. ☒ Application requires published noticeD. ☒ Notification and/or concurrent approval by SLOE. ☐ Notification and/or concurrent approval by BLMF. ☒ Surface ownerG. ☒ For all of the above, proof of notification or publication is attached, and/or,H. ☐ No notice required**FOR OCD ONLY**

☐ Notice Complete

☐ Application
Content
Complete

- 3) CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Brian Wood

10-17-17

Date

Print or Type Name

505 466-8120

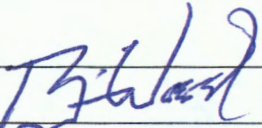
Phone Number

Signature

brian@permitswest.com

e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: XXX Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage _____
Application qualifies for administrative approval? XXX Yes _____ No _____
- II. OPERATOR: APACHE CORPORATION
ADDRESS: 303 VETERANS AIRPARK LANE, SUITE 3000, MIDLAND, TX 79705
CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? _____ Yes XXX No _____
If yes, give the Division order number authorizing the project: R-8541
- 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.
NORTHEAST DRINKARD UNIT 701
30-025-09916
- 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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources 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: BRIAN WOOD TITLE: CONSULTANT
SIGNATURE:  DATE: OCT. 2, 2017
E-MAIL ADDRESS: brian@permitswest.com
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

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 Well 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 the 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 leasehold 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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 applications within 15 days from the date this application was mailed to them.

INJECTION WELL DATA SHEET

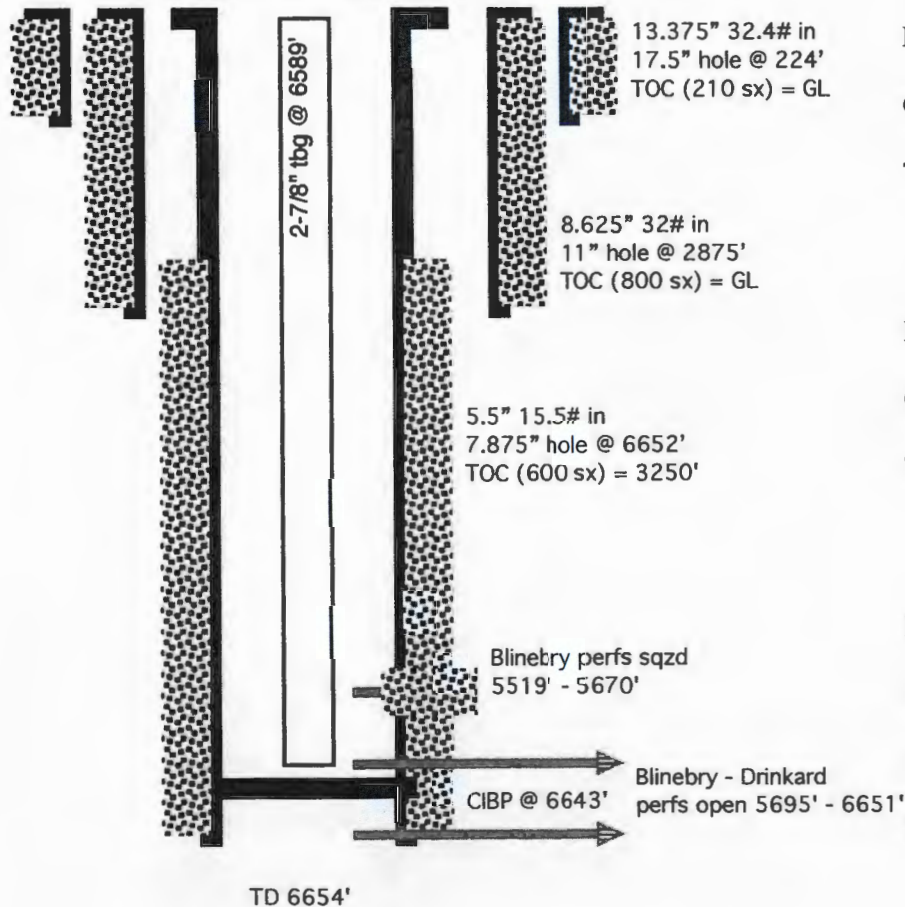
OPERATOR: APACHE CORPORATIONWELL NAME & NUMBER: NORTHEAST DRINKARD UNIT 701

WELL LOCATION: 1980' FSL & 660' FWL L 15 21 S 37 E
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

"AS IS"

(not to scale)

WELL CONSTRUCTION DATASurface Casing

Hole Size: 17.5" Casing Size: 13.375"
 Cemented with: 210 sx. or _____ ft³
 Top of Cement: SURFACE Method Determined: CIRC. 25 SX

Intermediate Casing

Hole Size: 11" Casing Size: 8.625"
 Cemented with: 800 sx. or _____ ft³
 Top of Cement: SURFACE Method Determined: NO REPORT,

JUST SKETCH

Production Casing

Hole Size: 7.875" Casing Size: 5.5"
 Cemented with: 600 sx. or _____ ft³
 Top of Cement: 3250' Method Determined: ESTIMATED
 Total Depth: 6654'

Injection Interval

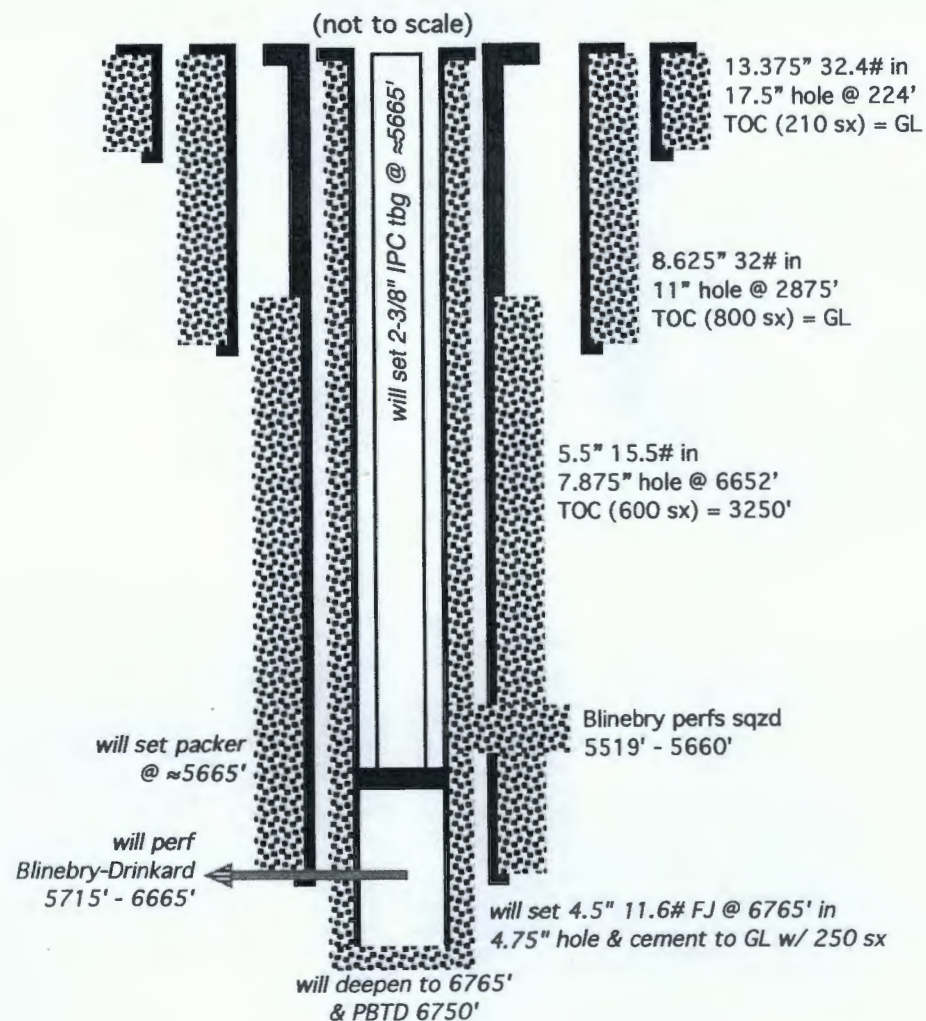
5715' feet to 6665'

(Perforated or Open Hole; indicate which)

■■■■■■■■■■

| WELL LOCATION: | 1980' FSL & 660' FWL | L | 15 | 21 S | 37 E |
|----------------|----------------------|-------------|---------|----------|-------|
| | FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE |

WELL CONSTRUCTION DATA
Surface Casing



Hole Size: 17.5" Casing Size: 13.375"
Cemented with: 210 sx. *or* ft³
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Top of Cement: 3250' Method Determined: ESTIMATED
Total Depth: 6654'

Injection Interval

5715' feet to 6665'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COATType of Packer: LOCK SET INJECTIONPacker Setting Depth: ≈5665'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____ Yes XXX No

If no, for what purpose was the well originally drilled? DRINKARD OIL WELL

2. Name of the Injection Formation: BLINEBRY, TUBB, & DRINKARD

3. Name of Field or Pool (if applicable): EUNICE; BLI-TU-DR, NORTH (POOL CODE 22900)

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NO

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

OVER: GRAYBURG (3740'), SAN ANDRES (3970')

UNDER: ABO (6675'), SIMPSON (7300'), McKEE (7500'), ELLENBURGER (7650')

APACHE CORPORATION
NORTHEAST DRINKARD UNIT 701
1980' FSL & 660' FWL
SEC. 15, T. 21 S., R. 37 E., LEA COUNTY, NM

PAGE 1

30-025-09916

I. Purpose is to deepen (from 6654' to 6765') and convert an oil well to a water injection well. The well will inject (5715' - 6665') into the Blinebry, Tubb, and Drinkard, which are part of the Eunice; Blinebry-Tubb-Drinkard, North Pool (aka, Eunice; BLI-TU-DR, North and pool code = 22900). The well and zones are part of the Northeast Drinkard Unit (Unit Number 300160, Case Number 9231, Order Number R-8540) that was established in 1987 by Shell. The unit was subsequently operated by Altura, and now, by Apache. It is an active water flood.

II. Operator: Apache Corporation (OGRID #873)
Operator phone number: (432) 818-1167
Operator address: 303 Veterans Airpark Lane, Suite 3000
Midland, TX 79705
Contact for Application: Brian Wood (Permits West, Inc.)
Phone: (505) 466-8120

III. A. (1) Lease: Fee "Argo"
Lease Size: 160 acres (see Exhibit A for C-102 and map)
Closest Lease Line: 660'
Lease Area: SW4 of Section 15, T. 21 S., R. 37 E.
Unit Size: 4,938 acres
Closest Unit Line: 660'
Unit Area: T. 21 S., R. 37 E.
Section 2: all
Section 3: all
Section 4: Lots 1, 8, 9, & 16
Section 10: all
Section 11: SW4
Section 14: NW4
Section 15, 22, & 23: all

A. (2) Surface casing (13.375", 32.4#, H-40) was set in 1947 at 224' in a 17.5" hole and cemented to GL with 210 sacks, of which 25 circulated.

Intermediate casing (8.625", 32#, H-40) was set at 2875' in an 11" hole and cemented to GL (per diagram) with 800 sacks.

Production casing (5.5", 15.5#, J-55) was set at 6652' in a 7.875" hole and cemented with 600 sacks to 3250' (estimated).

A 4.75" hole will be drilled to 6765' and 4.5" 11.6" flush joint casing run. Casing will be cemented to GL with 250 sacks.

Mechanical integrity of the casing will be assured by hydraulically pressure testing to 500 psi for 30 minutes.

- A. (3) Tubing specifications are 2.375", J-55, 4.7#, and internally plastic coated. Setting depth will be \approx 5665'. (Top perforation will be 5715'.)
- A. (4) A lock set injection packer will be set at \approx 5665' (\approx 50' above the top perforation of 5715').
- B. (1) Injection zone will be the Blinebry - Drinkard interval. The interval is part of the Eunice; Blinebry-Tubb-Drinkard, North Pool. Estimated fracture gradient is \approx 0.56 psi per foot.
- B. (2) Injection interval will be 5715' to 6665'. The well is and will be cased.
- B. (3) Well was originally drilled as a Drinkard oil well.
- B. (4) Will perforate from 5715' to 6665' with 2 shots per foot at 90°.
- B. (5) Next higher oil or gas zone within the area of review is the Grayburg. Its estimated bottom is at 3970'. Injection will occur in the Blinebry through Drinkard. Blinebry top is at 5549'. Injection interval will be 5715' to 6665'. Next lower oil or gas zone within the area of review is the Abo. Its estimated top is at 6675'.

IV. This is not a horizontal or vertical expansion of an existing injection project. The case file for the unit approval (R-8540) includes a discussion of the Drinkard water flood. The water flood (R-8541) was approved at the same time in 1987.

Sixteen water flood expansions have been approved since then. Closest unit boundary is 660' west. Eight injection wells are within a half-mile radius. The injection wells are in all four cardinal directions (see Exhibit B).

V. Exhibit B shows and tabulates all 64 existing wells (47 producers + 8 injectors + 6 P&A + 2 SWD + 1 brine supply) within a half-mile radius, regardless of depth. Exhibit C shows all 839 existing wells (616 oil or gas producing wells + 111 injection or disposal wells + 59 P & A wells + 3 waterflood supply wells + 1 brine well + 49 fresh water wells) within a two-mile radius.

Exhibit D shows all leases (BLM, fee, and State) within a half-mile radius. Exhibit E shows all lessors (BLM, fee, and State) within a two-mile radius. Details on the leases within a half-mile are:

| Aliquot Parts in Area of Review (T21S, R37E) | Lessor | Lease | Lessee(s) of Record | Blinebry, Tubb, or Drinkard operator |
|--|--------|--------------|--|--------------------------------------|
| N2NW4 Sec. 15 | NMSLO | B0-9188-0007 | Chevron USA | Apache |
| S2NW4 Sec. 15 | NMSLO | B0-1481-0018 | Oxy USA WTP | Apache |
| SWNE Sec. 15 | NMSLO | B0-9188-0007 | Occidental Permian | Apache |
| SW Sec. 15 | fee | Argo | Apache | Apache |
| W2SE4 Sec. 15 | fee | L G Warlick | Apache | Apache |
| NENE & S2NE4 Sec. 16 | NMSLO | B0-1732-0001 | Chevron USA | Apache |
| N2SE4 Sec. 16 | NMSLO | B0-0085-0016 | Apache | Apache |
| S2SE4 Sec. 16 | NMSLO | B0-8105-0004 | Apache | Apache |
| NENE Sec. 21 | BLM | NMLC-032591A | Apache, Elliott Hall, & Elliott Industries | Apache |
| N2NW4 Sec. 22 | fee | Argo A | Apache | Apache |

VI. Sixty-four existing wells are within a half-mile. Fifty-two of the wells penetrated the Blinebry (top = 5549'). The penetrators include 37 oil wells, 10 water injection or SWD wells, and 5 P&A wells. A table abstracting the well

construction details and histories of the Blinebry penetrators is in Exhibit F. Diagrams illustrating the P & A penetrators are in Appendix G.

- VII. 1. Average injection rate will be ≈ 1500 bwpd.
 Maximum injection rate will be ≈ 2000 bwpd.
2. System will be closed. The well will be tied into the existing Unit pipeline system. The system consists of a branched injection system with centrifugal injection pumps.
3. Average injection pressure will be ≈ 1000 psi. Standard maximum injection pressure would be 1143 psi ($= 0.2$ psi/foot $\times 5715'$ (top perforation)). However, in accordance with IPI-185, Apache requests a maximum injection pressure of 1375 psi.
4. Water source will be water pumped from existing $\approx 4000'$ deep San Andres water supply wells plus produced water from Blinebry, Tubb, and Drinkard zones. The source water and produced water are collected in separate skim tanks. The two water streams (source and produced) are commingled in a storage tank before being piped to injection wells. Commingling began in the 1970s. A comparison of analyses from the discharge pump and San Andres follows. Complete analyses are in Exhibit H.

| | <u>Injection Pump Discharge</u> | <u>San Andres 919-S</u> |
|--------------------|---------------------------------|-------------------------|
| Anion/Cation Ratio | 1.0 | N/A |
| Barium | 0.1 mg/l | 0.38 mg/l |
| Bicarbonate | 671.0 mg/l | 562.0 mg/l |
| Calcium | 1,099.0 mg/l | 608.0 mg/l |
| Carbon Dioxide | 80.0 ppm | 80.0 ppm |
| Chloride | 10,086.0 mg/l | 6,200.0 mg/l |
| Hydrogen Sulfide | 90.0 ppm | 408.0 ppm |
| Iron | 0.3 mg/l | 0.0 mg/l |
| Magnesium | 439.0 mg/l | 244.0 mg/l |
| Manganese | N/A | 0.01 mg/l |

| | | |
|------------------------|---------------|---------------|
| pH | 7.5 | 6.49 |
| Potassium | 115.0 mg/l | N/A |
| Sodium | 5,799.5 mg/l | 3,909.0 mg/l |
| Strontium | 28.0 mg/l | 19.0 mg/l |
| Sulfate | 2,465.0 mg/l | 1,750.0 mg/l |
| Total Dissolved Solids | 20,702.9 mg/l | 13,273.0 mg/l |

5. The Blinebry, Tubb, and Drinkard currently produce in the Unit. It is the goal of the project to increase production.

VIII. The Unit is on the north end of a north-northwest to south-southeast trending anticline. It is part of the Penrose Skelly trend and parallels the west edge of the Central Basin Platform. Dips are $\approx 1^\circ$ to $\approx 2^\circ$. Core data summary shows:

| | Blinebry | Tubb | Drinkard |
|-------------------|---------------------|----------------|----------------------------------|
| Porosity (%) | 9.79 | 8.28 | 11 |
| Permeability (md) | 2.45 | 1.19 | 2.45 |
| Lithology | dolomite, packstone | sandy dolomite | limestone, packstone, grainstone |

Adjacent to the Northeast Drinkard Unit are three other Drinkard water floods (Apache's West Blinebry Drinkard and East Blinebry Drinkard Units and Chevron's Central Drinkard Unit). The Central Drinkard Unit has been under water flood since the 1960s.

Notable depths are:

Quaternary = 0'
 Rustler = 1260'
 Yates = 2605'
 Grayburg = 3740'
 San Andres = 3970'
 Glorieta = 5135'
 Blinebry = 5549'
Injection interval = 5715' - 6665'
 Tubb = 6119'
 Drinkard = 6442'

Current Total Depth = 6654'
Abo = 6675'
Proposed Total Depth = 6765'

State Engineer (Exhibit I) shows four water wells are $\geq 6633'$ deep and within a 2-mile radius. All four were oil wells that were plugged back to produce from the San Andres for water floods. San Andres water had a TDS of 13,273 in NEDU 919S (Exhibit H). Excluding those four wells, then the deepest water well within 2-miles is 136'. NEDU 701 is 2-1/4 miles southwest of the Ogallala aquifer. No existing underground drinking water sources are below the Drinkard within a mile radius. Produced water has been disposed into two zones (Grayburg and San Andres) above the Blinbry within T. 21 S., R. 37 E.

IX. The well will be stimulated with acid to clean out scale or fill.

X. A gamma ray neutron log is on file. GR/CBL/CCL/CNL log suite will be run.

XI. Water sample analyses from four water wells are in Exhibit I. The Section 15 water well is the only water well within a mile that could be found within a mile during a March 24, 2017 field inspection.

XII. Apache (Exhibit J) is not aware of any geologic or engineering data that may indicate the Blinbry-Drinkard interval is in hydrologic connection with any underground sources of water. Closest Quaternary fault is 109 miles southwest (Exhibit J). There are 106 Blinbry, 124 Tubb, and 152 Drinkard active or new injectors in the state. Previously approved water flood expansions in the Unit are WFX-583, -674, -722, -740, -752, -759, -774, -784, -881, -882, -896, -906, -907, -910, -911, and -971.

APACHE CORPORATION
NORTHEAST DRINKARD UNIT 701
1980' FSL & 660' FWL
SEC. 15, T. 21 S., R. 37 E., LEA COUNTY, NM

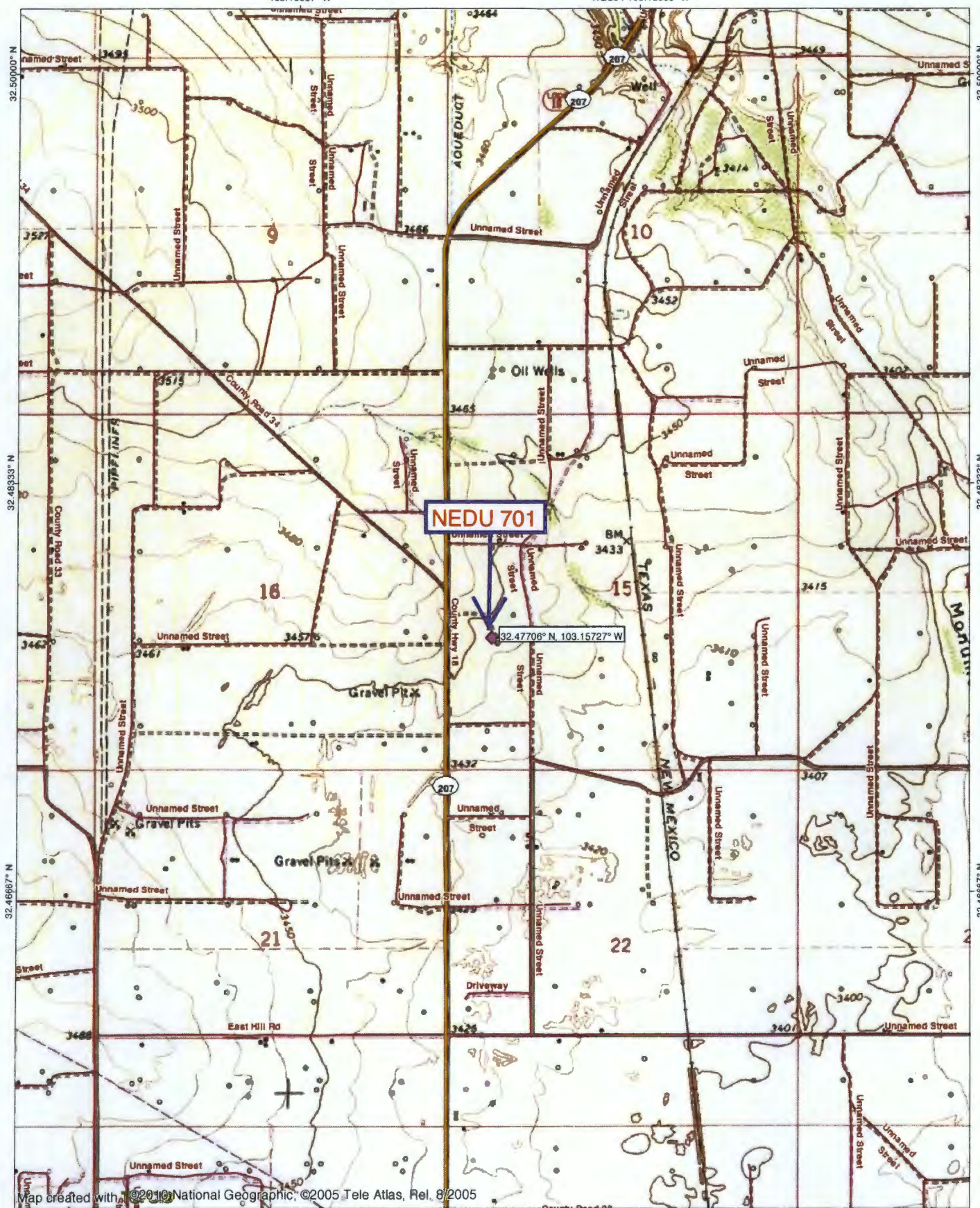
PAGE 7

30-025-09916

XIII. A legal ad (see Exhibit K) was published on September 24, 2017. Notice (this application) has been sent (Exhibit L) to the lessees of record (Chevron, Elliott Hall, Elliott Industries, Occidental Permian, Oxy USA WTP) with leases in the area of review, government lessors (BLM, NMSLO), and all well operators (Chevron, Key) within the area of review. Apache Corporation is the surface owner.

103.16667° W

WGS84 103.15000° W



Map created with ©2010 National Geographic, ©2005 Tele Atlas, Rel. 8/2005

103.16667° W

WGS84 103.15000° W



EXHIBIT A

TN 1 MN
8.5°
09/24/17

| | |
|---------------------------|---------|
| NUMBER OF COPIES RECEIVED | |
| DISTRIBUTION | |
| SANTA FE | |
| FILE | |
| U.S.G.S | |
| LAND OFFICE | |
| TRANSPORTER | OIL GAS |
| PRODUCTION OFFICE | |
| OPERATOR | |

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT
 SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

FORM C-128
 Revised 5/1/57

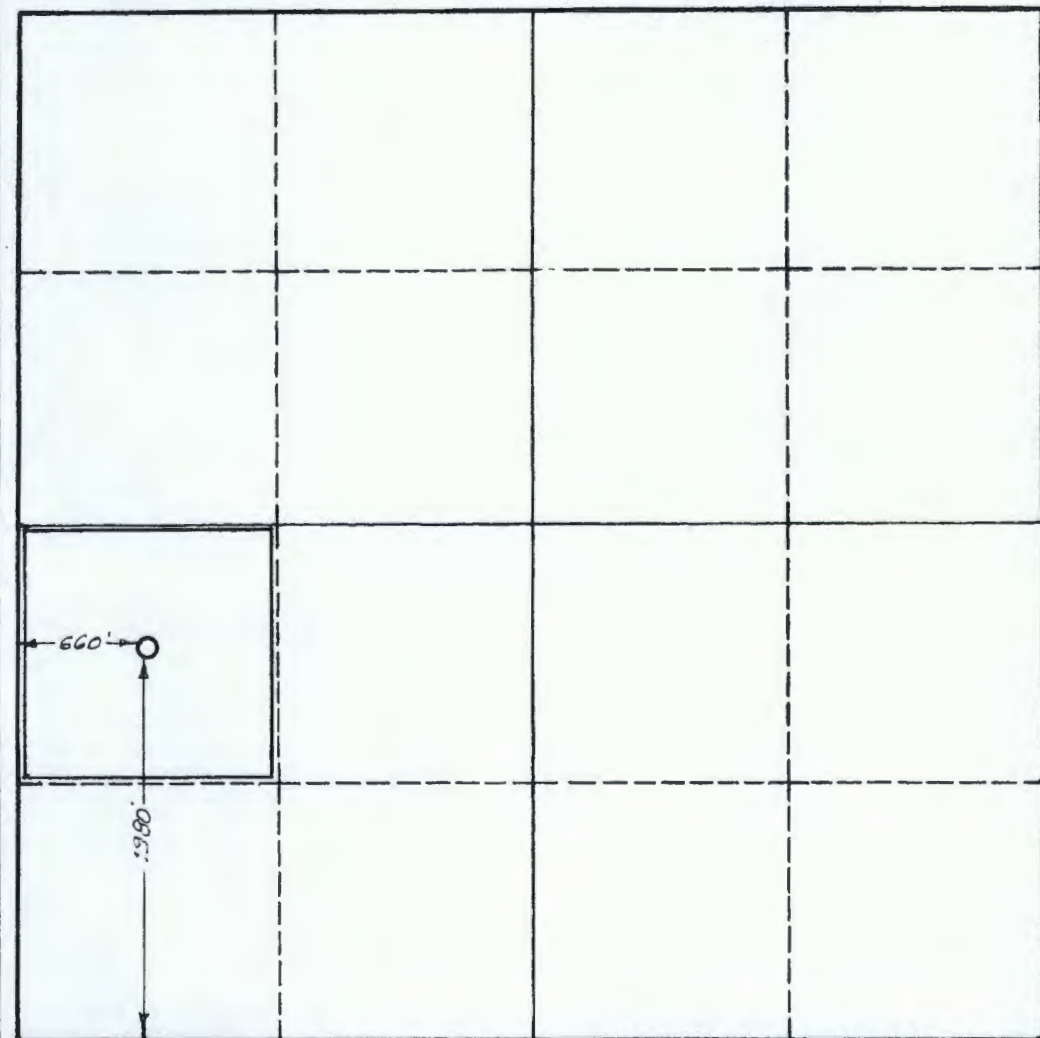
SECTION A

| | | | | | |
|---|---------------------------------------|------------------------------|---------------------------------------|----------------------|--|
| Operator Shell Oil Company | | Lease Argo | | Well No. 2 | |
| Unit Letter L | Section 15 | Township 21S | Range 37E | County Lea | |
| Actual Footage Location of Well: 1980 feet from the south line and 660 feet from the west line | | | | | |
| Ground Level Elev. 3442' | Producing Formation Blinbry | Pool Blinbry (Oil) | Dedicated Acreage: 40 Acres | | |

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES ☒ NO ☐ . ("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1935 Comp.)
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES ☐ NO ☐ . If answer is "yes," Type of Consolidation _____
3. If the answer to question two is "no," list all the owners and their respective interests below:

| Owner | Land Description |
|-------|------------------|
| | |

SECTION B



CERTIFICATION

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

Original Signed By

Name **R. A. LOWERY**

Position **District Exploitation Engineer**

Company **Shell Oil Company**

Date **July 2, 1963**

Dual Completed w/existing Drinkard as per Administrative Order No. MC-1335 dated June 5, 1963.

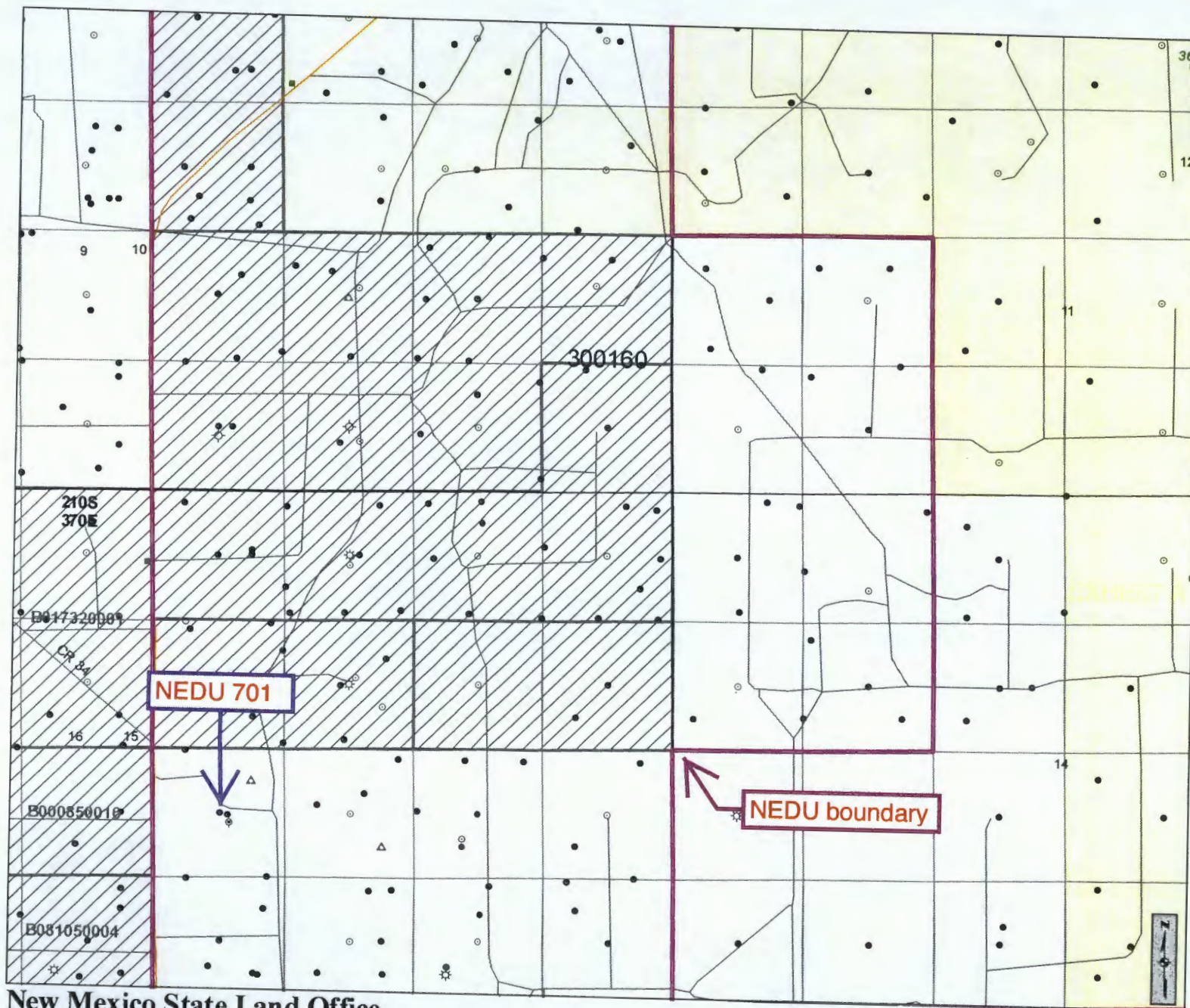
I hereby certify that the well location shown on the plat in SECTION B was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

EXHIBIT A



Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
- SLO District Boundary
- Hwy Mileposts
- Interstate
- US Hwy
- NM Hwy
- Local Road
- Continental Divide

Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

State Leases

- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

Oil and Gas Related Features

- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions

- Volcanic Vents

- NMOCD Order R-111-P
- Potash Enclave Outline

NMOCD Oil and Gas Wells

- CO₂
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

New Mexico State Land Office Oil, Gas and Minerals

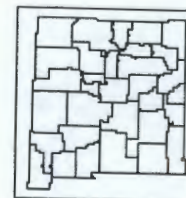
0 0.04 0.09 0.18 0.27 0.36
Miles

Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

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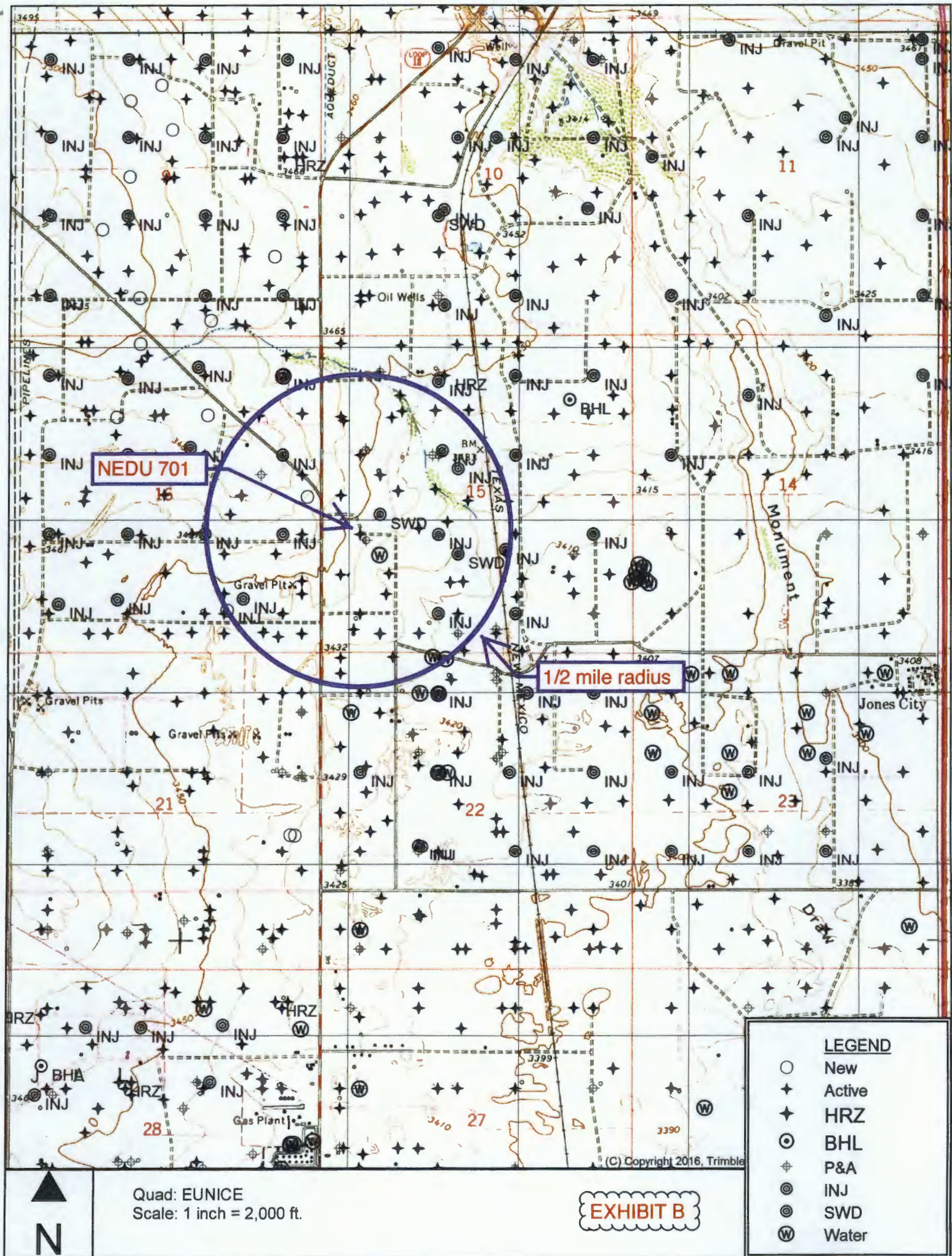
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EXHIBIT A



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SORTED BY DISTANCE FROM NEDU 701

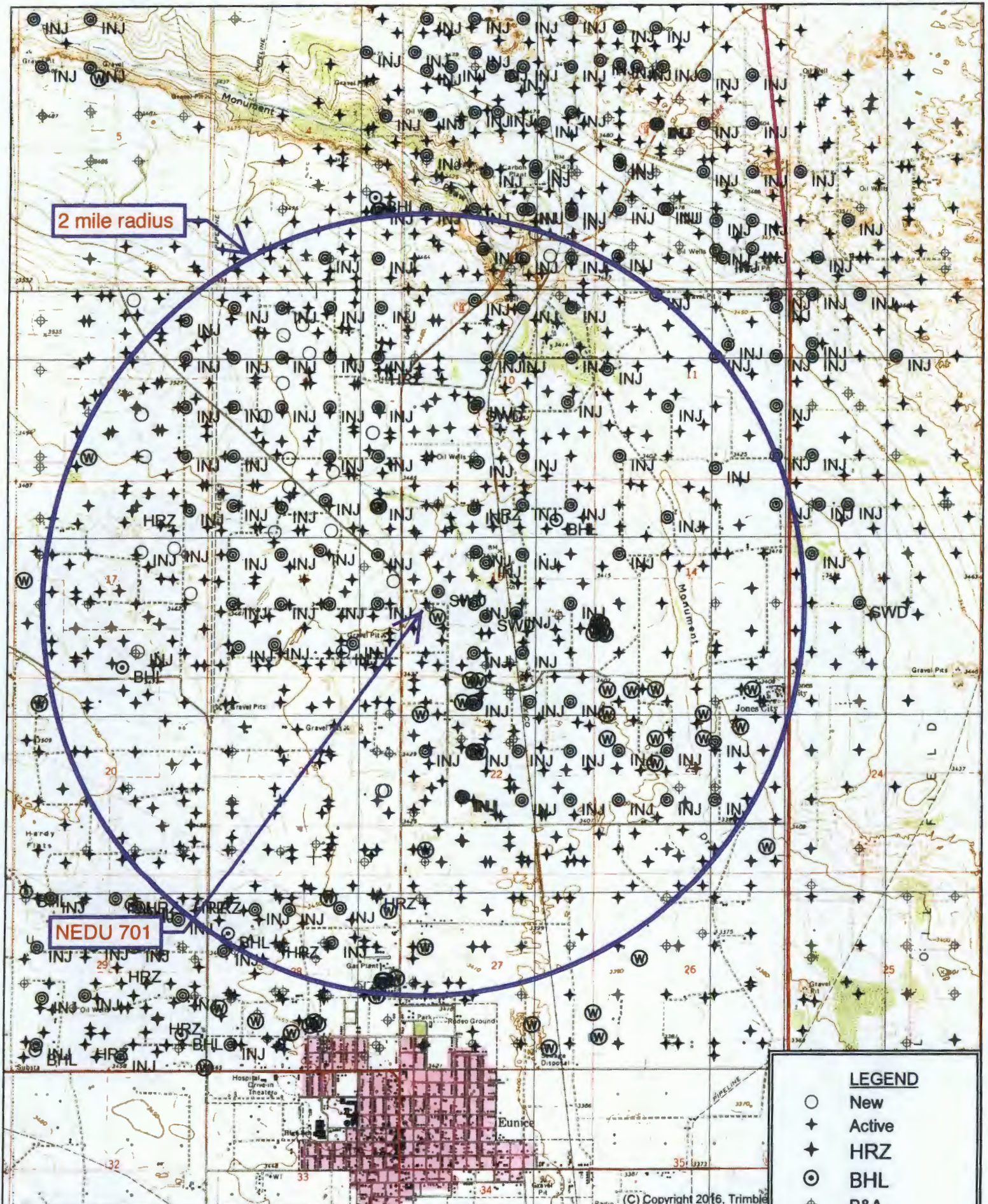
| API | OPERATOR | WELL | UNIT- SECTION T21S-R37E | TVD | TYPE | ZONE | FEET FROM NEDU 701 |
|------------|----------|----------------------------|-------------------------------|------|------|-----------------------------|-----------------------|
| 3002506606 | Apache | Argo 010 | L-15 | 8015 | P&A | Hare; SA (Gas) | 142 |
| 3002509915 | Apache | Argo 007 | L-15 | 8193 | S | SWD; San Andres | 485 |
| 3002537238 | Apache | NEDU 629 | L-15 | 6900 | O | Eunice; Bli-Tu- Dr, N | 730 |
| 3002537243 | Apache | NEDU 721 | M-15 | 6850 | O | Eunice; Bli-Tu- Dr, N | 748 |
| 3002534888 | Apache | NEDU 713 | L-15 | 6790 | O | Eunice; Bli-Tu- Dr, N | 811 |
| 3002535271 | Apache | NEDU 625 | E-15 | 6840 | O | Eunice; Bli-Tu- Dr, N | 965 |
| 3002506617 | Apache | State DA 005 | I-16 | 8330 | O | Paddock | 995 |
| 3002506607 | Apache | Argo 011 | K-15 | 7891 | O | Penrose Skelly; Grayburg | 1000 |
| 3002539557 | Apache | Argo 013 | M-15 | 4401 | O | Penrose Skelly; Grayburg | 1034 |
| 3002506591 | Apache | NEDU 604 | E-15 | 8193 | O | Eunice; Bli-Tu- Dr, N | 1044 |
| 3002539963 | Apache | WBDU 114 | P-16 | 6970 | O | Eunice; Bli-Tu- Dr, N | 1251 |
| 3002509914 | Apache | NEDU 602 | E-15 | 6669 | O | Eunice; Bli-Tu- Dr, N | 1320 |
| 3002509911 | Apache | NEDU 702 | M-15 | 6646 | O | Eunice; Bli-Tu- Dr, N | 1320 |
| 3002509918 | Apache | NEDU 703 | K-15 | 6645 | I | Eunice; Bli-Tu- Dr, N | 1327 |
| 3002506619 | Apache | WBDU 078 | I-16 | 6644 | I | Eunice; Bli-Tu- Dr, N | 1327 |
| 3002539449 | Apache | State Land 15 017 | P-16 | 4415 | O | Penrose Skelly; Grayburg | 1383 |
| 3002506624 | Chevron | Harry Leonard NCT E 005 | H-16 | 8220 | O | Penrose Skelly; Grayburg | 1404 |
| 3002509913 | Shell | NEDU 603 | E-15 | 8182 | P&A | Eunice; Bli-Tu- Dr, N | 1412 |
| 3002541275 | Apache | NEDU 650 | F-15 | 6858 | O | Eunice; Bli-Tu- Dr, N | 1467 |
| 3002539828 | Apache | Argo 014 | K-15 | 4403 | O | Penrose Skelly; Grayburg | 1472 |
| 3002537916 | Apache | State DA 013 | I-16 | 4398 | O | Penrose Skelly; Grayburg | 1497 |

SORTED BY DISTANCE FROM NEDU 701

| | | | | | | | |
|------------|---------|----------------------------|------|------|-----|-----------------------------|------|
| 3002506608 | Apache | Argo 012 | M-15 | 8035 | O | Penrose Skelly; Grayburg | 1584 |
| 3002506605 | Apache | NEDU 723 | M-15 | 8179 | O | Eunice; Bli-Tu- Dr, N | 1683 |
| 3002541276 | Apache | NEDU 726 | N-15 | 6860 | O | Eunice; Bli-Tu- Dr, N | 1687 |
| 3002506603 | Apache | Argo 006 | K-15 | 7991 | S | SWD; San Andres | 1691 |
| 3002506590 | Apache | NEDU 608 | F-15 | 7850 | P&A | Eunice; Bli-Tu- Dr, N | 1801 |
| 3002506633 | Apache | WBDU 089 | P-16 | 6665 | O | Eunice; Bli-Tu- Dr, N | 1870 |
| 3002506585 | Apache | Cities S State 002 | F-15 | 6676 | P&A | Eunice; Bli-Tu- Dr, N | 1871 |
| 3002509917 | Apache | NEDU 704 | N-15 | 6630 | I | Eunice; Bli-Tu- Dr, N | 1872 |
| 3002506621 | Apache | WBDU 056 | H-16 | 6780 | I | Eunice; Bli-Tu- Dr, N | 1873 |
| 3002539829 | Apache | Argo 015 | N-15 | 4408 | O | Penrose Skelly; Grayburg | 1881 |
| 3002537223 | Apache | NEDU 628 | E-15 | 6976 | O | Eunice; Bli-Tu- Dr, N | 1911 |
| 3002534657 | Apache | NEDU 623 | K-15 | 6840 | O | Eunice; Bli-Tu- Dr, N | 1915 |
| 3002535272 | Apache | NEDU 714 | N-15 | 6780 | O | Eunice; Bli-Tu- Dr, N | 1915 |
| 3002506634 | Apache | WBDU 090 | P-16 | 8261 | O | Eunice; Bli-Tu- Dr, N | 1926 |
| 3002506587 | Apache | NEDU 606 | F-15 | 8032 | I | Eunice; Bli-Tu- Dr, N | 1953 |
| 3002506588 | Apache | NEDU 610 | G-15 | 7798 | I | Eunice; Bli-Tu- Dr, N | 1984 |
| 3002533547 | Key | State 001 | E-15 | 2200 | M | BSW-Salado | 1988 |
| 3002537834 | Chevron | Harry Leonard NCT E 008 | H-16 | 4300 | P&A | Penrose Skelly; Grayburg | 2005 |
| 3002541600 | Apache | NEDU 544 | E-15 | 6948 | O | Eunice; Bli-Tu- Dr, N | 2032 |
| 3002536806 | Apache | NEDU 720 | D-22 | 6850 | O | Eunice; Bli-Tu- Dr, N | 2077 |
| 3002534660 | Apache | NEDU 716 | D-22 | 6810 | O | Eunice; Bli-Tu- Dr, N | 2115 |
| 3002506604 | Apache | Argo 008 | N-15 | 8002 | O | Paddock | 2120 |
| 3002534887 | Apache | NEDU 624 | C-15 | 6860 | O | Eunice; Bli-Tu- Dr, N | 2170 |

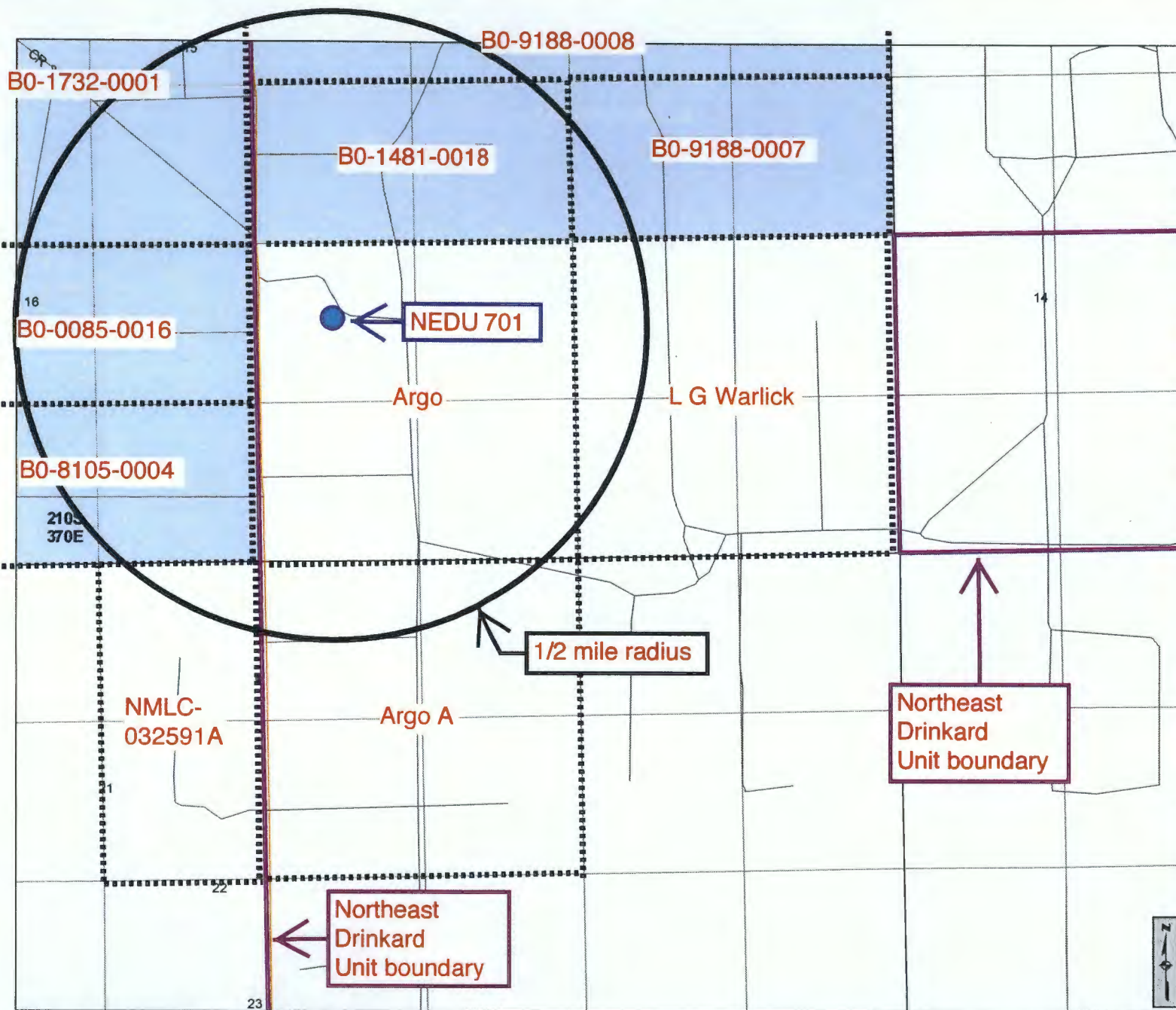
SORTED BY DISTANCE FROM NEDU 701

| | | | | | | | |
|------------|---------|-------------------------|------|------|-----|--------------------------|------|
| 3002539300 | Apache | WBDU 115 | P-16 | 7022 | O | Eunice; Bli-Tu-Dr, N | 2180 |
| 3002536786 | Apache | State DA 010 | J-16 | 4345 | O | Penrose Skelly; Grayburg | 2246 |
| 3002537535 | Apache | WBDU 092 | O-16 | 7284 | I | Eunice; Bli-Tu-Dr, N | 2264 |
| 3002539277 | Apache | WBDU 113 | A-16 | 6912 | O | Eunice; Bli-Tu-Dr, N | 2277 |
| 3002539686 | Apache | Argo A 014 | D-22 | 4400 | O | Penrose Skelly; Grayburg | 2286 |
| 3002537496 | Apache | State Land 15 012 | P-16 | 4415 | G | Hare; SA (Gas) | 2304 |
| 3002506602 | Apache | NEDU 705 | N-15 | 8091 | P&A | Eunice; Bli-Tu-Dr, N | 2340 |
| 3002537201 | Apache | WBDU 079 | J-16 | 7310 | O | Eunice; Bli-Tu-Dr, N | 2344 |
| 3002541485 | Chevron | State S 012 | C-15 | 4110 | O | Penrose Skelly; Grayburg | 2421 |
| 3002541583 | Apache | NEDU 661 | C-15 | 6963 | O | Eunice; Bli-Tu-Dr, N | 2430 |
| 3002506601 | Apache | NEDU 707 | J-15 | 7670 | I | Eunice; Bli-Tu-Dr, N | 2462 |
| 3002506597 | Apache | L G Warlick C 006 | J-15 | 7847 | O | Hare; Simpson | 2480 |
| 3002538378 | Apache | State Land 15 016 | O-16 | 4135 | O | Penrose Skelly; Grayburg | 2525 |
| 3002541285 | Apache | NEDU 651 | J-15 | 6857 | O | Eunice; Bli-Tu-Dr, N | 2554 |
| 3002535274 | Apache | NEDU 717 | N-15 | 6684 | O | Eunice; Bli-Tu-Dr, N | 2580 |
| 3002506592 | Apache | NEDU 706 | J-15 | 6629 | O | Eunice; Bli-Tu-Dr, N | 2618 |
| 3002536741 | Chevron | Harry Leonard NCT E 007 | H-16 | 4345 | O | Penrose Skelly; Grayburg | 2630 |
| 3002506586 | Chevron | State S 001 | D-15 | 6660 | O | Penrose Skelly; Grayburg | 2640 |
| 3002509928 | Apache | NEDU 801 | D-22 | 6636 | O | Eunice; Bli-Tu-Dr, N | 2640 |
| 3002506618 | Apache | WBDU 077 | J-16 | 6701 | I | Eunice; Bli-Tu-Dr, N | 2653 |



Quad: EUNICE
Scale: 1 inch = 3,333 ft.

EXHIBIT C



Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
- SLO District Boundary
- Hwy Mileposts
- Interstate
- US Hwy
- NM Hwy
- Local Road
- Continental Divide

Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

State Leases

- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

Oil and Gas Related Features

- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- Volcanic Vents
- NMOCD Order R-111-P
- Potash Enclave Outline

NMOCD Oil and Gas Wells

- CO₂
- Injection
- Oil
- Water
- Gas
- Miscellaneous
- Salt Water Disposal
- DA or PA

New Mexico State Land Office Oil, Gas and Minerals

0.0375075 0.15 0.225 0.3
Miles

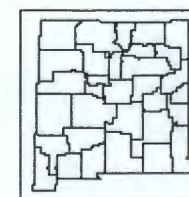
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1983 North American Datum

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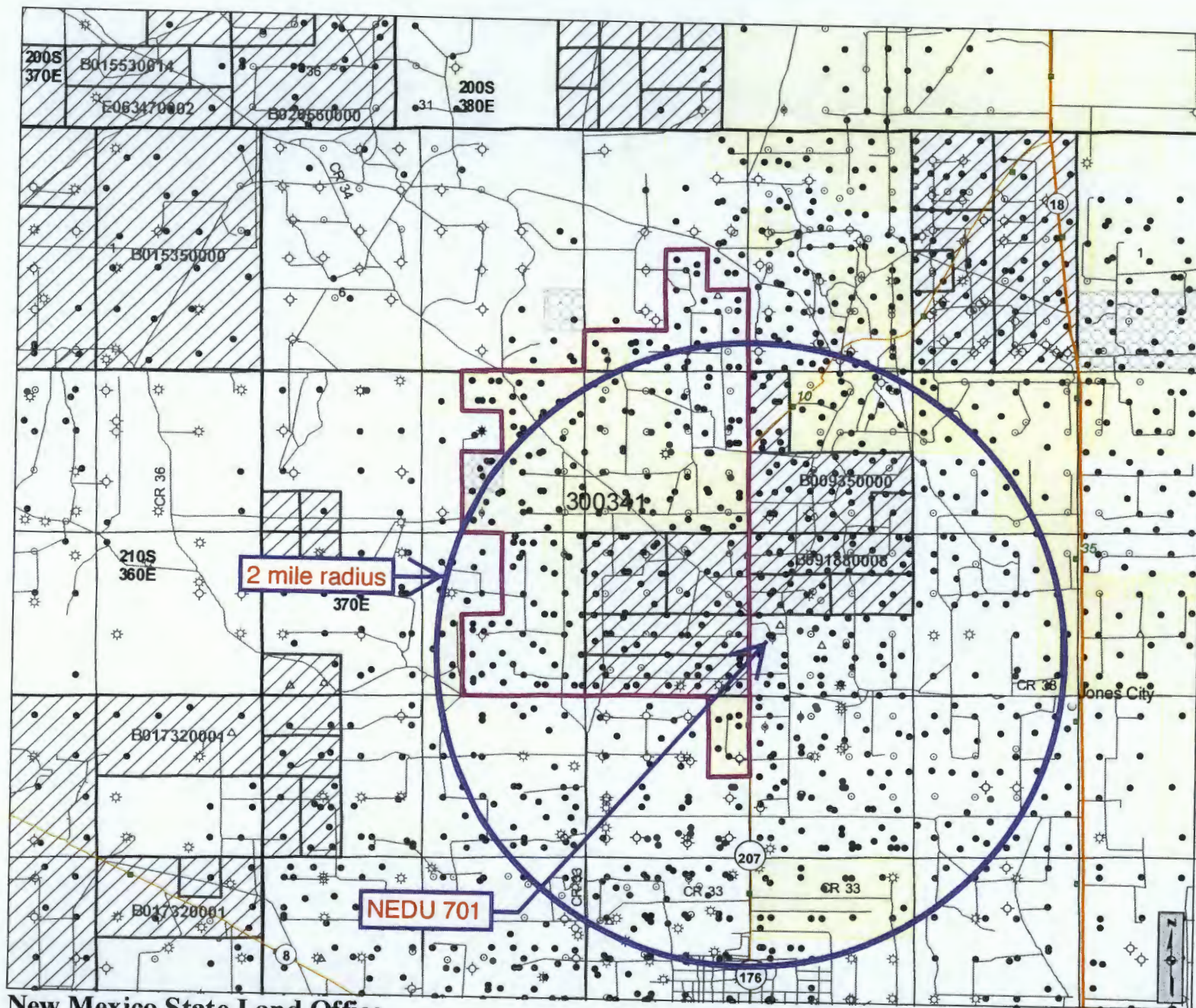
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EXHIBIT D



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New Mexico State Land Office Oil, Gas and Minerals

0 0.2 0.4 0.8 1.2 1.6
Miles
Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

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EXHIBIT E

Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
- SLO District Boundary
- Hwy Mileposts
- Interstate
- US Hwy
- NM Hwy
- Local Road
- Continental Divide

Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

State Leases

- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

Oil and Gas Related Features

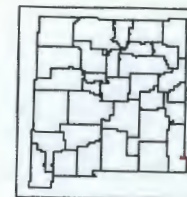
- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions

- Volcanic Vents

- NMOC Order R-111-P Potash Enclave Outline

NMOC Oil and Gas Wells

- CO₂
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA



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Sorted by distance from NEDU 701

| WELL | SPUD | TD | POOL | WELL TYPE | HOLE O.D. | CASING O.D. | SET @ | CEMENT | TOC | HOW TOC DETERMINED |
|--------------|---------|------|-----------------------------|--------------|--------------|----------------|-------|---------|------|-----------------------|
| Argo 010 | 7/19/51 | 8015 | Hare; SA (Gas) | P&A | 17.25 | 13.375 | 241 | 250 sx | GL | Circ 50 sx |
| 30-025-06606 | | | | | 11 | 8.625 | 2907 | 1700 sx | GL | Circ 287 sx |
| L-15-21S-37E | | | | | 7.875 | 5.5 | 8012 | 875 sx | 2660 | TOL |
| | | | | | | | | | | |
| Argo 007 | 4/13/51 | 8193 | Penrose Skelly; Grayburg | S | 17.25 | 13.375 | 223 | 250 sx | GL | Circ |
| 30-025-09915 | | | | | 11 | 8.625 | 2907 | 1900 sx | GL | Circ |
| L-15-21S-37E | | | | | 7.875 | 5.5 | 8016 | 779 sx | 3280 | CBL |
| | | | | | | | | | | |
| NEDU 629 | 6/25/05 | 6900 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1200 | 575 sx | GL | Circ |
| 30-025-37238 | | | | | 7.875 | 5.5 | 6900 | 1300 sx | 130 | CBL |
| L-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 721 | 9/16/05 | 6850 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1275 | 575 sx | GL | Circ 119 sx |
| 30-025-37243 | | | | | 7.875 | 5.5 | 6850 | 1300 sx | 408 | CBL |
| M-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |

Sorted by distance from NEDU 701

| | | | | | | | | | | |
|--------------|---------|------|-----------------------------|---|-------|--------|---------------|---------|------|-------------|
| NEDU 713 | 9/25/00 | 6790 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1245 | 460 sx | GL | Circ 121 sx |
| 30-025-34888 | | | | | 7.875 | 5.5 | 6790 | 1525 sx | GL | Circ 156 sx |
| L-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 625 | 6/5/01 | 6840 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1219 | 460 sx | GL | Circ 81 sx |
| 30-025-35271 | | | | | 7.875 | 5.5 | 6840 | 1450 sx | GL | Circ 117 sx |
| E-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| State DA 005 | 8/8/96 | 8225 | Paddock | O | 17.5 | 13.375 | 258 | 200 sx | GL | Circ |
| 30-025-06617 | | | | | 11 | 8.625 | 2820 | 1500 sx | 565 | Temp Surv |
| I-16-21S-37E | | | | | 7.875 | 5.5 | 8225 | 500 sx | 3448 | Temp Surv |
| | | | | | | | | | | |
| Argo 011 | 7/14/51 | 7891 | Penrose Skelly; Grayburg | O | 17.5 | 13.375 | 228 | 250 sx | GL | Circ |
| 30-025-06607 | | | | | 11 | 8.625 | 2902 | 1950 sx | GL | Circ |
| K-15-21S-37E | | | | | 7.875 | 5.5 | 2680- 7890 | 800 sx | 3025 | CBL |
| | | | | | | | | | | |
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Sorted by distance from NEDU 701

| | | | | | | | | | | |
|--------------|----------|------|----------------------|---|-------|--------|------|---------|-----------|-------------|
| NEDU 604 | 8/28/51 | 8193 | Eunice; Bli-Tu-Dr, N | O | 17.25 | 13.375 | 336 | 350 sx | GL | Circ |
| 30-025-06591 | | | | | 11.25 | 8.625 | 2835 | 500 sx | No report | No report |
| E-15-21S-37E | | | | | 7.875 | 5.5 | 8042 | 400 sx | 4650 | CBL |
| | | | | | | | | | | |
| WBDU 114 | 12/19/10 | 6970 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1297 | 665 sx | GL | Circ 171 sx |
| 30-025-39963 | | | | | 7.875 | 5.5 | 6952 | 1195 sx | 800 | CBL |
| P-16-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 602 | 4/11/48 | 6669 | Eunice; Bli-Tu-Dr, N | O | 17.25 | 13.375 | 297 | 300 sx | No report | No report |
| 30-025-09914 | | | | | 11.25 | 8.625 | 2799 | 800 sx | No report | No report |
| E-15-21S-37E | | | | | 7.875 | 5.5 | 6625 | 350 sx | 4250 | Temp Survey |
| | | | | | | | | | | |
| NEDU 702 | 8/8/47 | 6646 | Eunice; Bli-Tu-Dr, N | O | 17.5 | 13.375 | 316 | 250 sx | GL | Circ |
| 30-025-09911 | | | | | 11 | 8.625 | 2839 | 800 sx | GL | Circ |
| M-15-21S-37E | | | | | 7.875 | 5.5 | 6529 | 500 sx | 3650 | Est |
| | | | | | | | | | | |
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Sorted by distance from NEDU 701

| | | | | | | | | | | |
|----------------------------|---------|------|-----------------------------|-------|-------|--------|------|---------|------|-------------|
| NEDU 703 | 2/29/48 | 6645 | Eunice; Bli-Tu-Dr, N | I | 17.5 | 13.375 | 208 | 250 sx | GL | Circ 15 sx |
| 30-025-09918 | | | | | 11 | 8.625 | 2891 | 1500 sx | GL | Circ 200 sx |
| K-15-21S-37E | | | | | 7.875 | 5.5 | 6495 | 600 sx | 2280 | CBL |
| | | | | | | | | | | |
| WBDU 078 | 8/12/47 | 6644 | Eunice; Bli-Tu-Dr, N | I | 17.25 | 13.375 | 213 | 200 sx | GL | Circ |
| 30-025-06619 | | | | | 11 | 8.625 | 2807 | 1550 sx | GL | Circ |
| I-16-21S-37E | | | | | 7.375 | 5.5 | 6644 | 500 sx | GL | Circ |
| | | | | | | | | | | |
| Harry Leonard NCT E 005 | 6/22/52 | 8220 | Penrose Skelly; Grayburg | O | 17.25 | 12.75 | 268 | 325 sx | GL | Circ |
| 30-025-06624 | | | | | 11 | 8.625 | 2799 | 1100 sx | 2290 | Temp Survey |
| H-16-21S-37E | | | | | 7.875 | 5.5 | 7999 | 131 sx | 7540 | Temp Survey |
| | | | | | | | | | | |
| NEDU 603 | 2/18/51 | 8182 | Penrose Skelly; Grayburg | P & A | 17.25 | 13.375 | 312 | 325 sx | GL | Circ |
| 30-025-09913 | | | | | 11.25 | 8.625 | 2818 | 500 sx | GL | Circ |
| E-15-21S-37E | | | | | 7.875 | 5.5 | 8030 | 400 sx | 5700 | CBL |
| | | | | | | | | | | |
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Sorted by distance from NEDU 701

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|--------------|----------|------|-----------------------------|---|-------|--------|---------------|---------|------|-------------|
| NEDU 650 | 11/7/13 | 6858 | Eunice; Bli-Tu-Dr, N | O | 11 | 8.625 | 1309 | 465 sx | GL | Circ 96 sx |
| 30-025-41275 | | | | | 7.875 | 5.5 | 6858 | 1300 sx | GL | Circ 100 sx |
| F-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| Argo 012 | 8/5/86 | 8035 | Penrose Skelly; Grayburg | O | 17.5 | 13.375 | 227 | 250 sx | GL | Circ 60 sx |
| 30-025-06608 | | | | | 11 | 8.625 | 2882 | 1900 sx | GL | Circ 300 sx |
| M-15-21S-37E | | | | | 7.875 | 5.5 | 2662- 8033 | 900 sx | 3480 | CBL |
| | | | | | | | | | | |
| NEDU 723 | 5/29/51 | 8179 | Eunice; Bli-Tu-Dr, N | O | 17.25 | 13.375 | 225 | 250 sx | GL | Circ |
| 30-025-06605 | | | | | 11 | 8.625 | 2917 | 1700 sx | GL | Circ |
| M-15-21S-37E | | | | | 7.875 | 5.5 | 8000 | 925 sx | 2701 | CBL |
| | | | | | | | | | | |
| NEDU 726 | 10/16/13 | 6860 | Eunice; Bli-Tu-Dr, N | O | 11 | 8.625 | 1300 | 469 sx | GL | Circ 112 sx |
| 30-025-41276 | | | | | 7.875 | 5.5 | 6879 | 1320 sx | GL | Circ 126 sx |
| N-15-21S-37E | | | | | | | | | | |
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Sorted by distance from NEDU 701

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|--------------------|----------|------|----------------------|-----|-------|--------|------|---------|-----------|-------------|
| Argo 006 | 2/27/51 | 7991 | Eunice; Bli-Tu-Dr, N | S | 17.5 | 13.375 | 225 | 250 sx | GL | Circ |
| 30-025-06603 | | | | | 11 | 8.625 | 3100 | 200 sx | GL | Circ |
| K-15-21S-37E | | | | | 7.875 | 5.5 | 7790 | 500 sx | 5070 | CBL |
| | | | | | | | | | | |
| NEDU 608 | 7/9/51 | 7850 | Eunice; Bli-Tu-Dr, N | P&A | 17.5 | 13.375 | 315 | 325 sx | GL | Circ |
| 30-025-06590 | | | | | 11 | 8.625 | 2805 | 500 x | GL | Circ |
| F-15-21S-37E | | | | | 7.875 | 5.5 | 7850 | 350 sx | 4700 | Temp survey |
| | | | | | | | | | | |
| WBDU 089 | 11/24/47 | 6665 | Eunice; Bli-Tu-Dr, N | O | 17.5 | 13.375 | 219 | 250 sx | No report | No report |
| 30-025-06633 | | | | | 11 | 8.625 | 2864 | 1700 sx | No report | No report |
| P-16-21S-37E | | | | | 7.875 | 5.5 | 6664 | 400 sx | No report | No report |
| | | | | | | | | | | |
| Cities S State 002 | 6/1/48 | 6676 | Eunice; Bli-Tu-Dr, N | P&A | 17.25 | 13.375 | 297 | 300 sx | GL | Circ |
| 30-025-06585 | | | | | 11.25 | 8.625 | 2791 | 500 sx | 675 | Calc |
| F-15-21S-37E | | | | | 6.75 | 5.5 | 6585 | 125 sx | 5120 | no report |
| | | | | | | | | | | |
| | | | | | | | | | | |

Sorted by distance from NEDU 701

| | | | | | | | | | | |
|--------------|----------|------|----------------------|---|-------|--------|------|---------|------|-------------|
| NEDU 704 | 5/27/63 | 6630 | Eunice; Bli-Tu-Dr, N | I | 17.5 | 13.375 | 210 | 250 sx | GL | Circ 15 sx |
| 30-025-09917 | | | | | 12.25 | 9.625 | 2883 | 1500 sx | GL | Circ 460 sx |
| N-15-21S-37E | | | | | 8.75 | 7 | 6560 | 1000 sx | 2500 | Calc |
| | | | | | | | | | | |
| WBDU 056 | 11/24/47 | 6780 | Eunice; Bli-Tu-Dr, N | I | 17.5 | 13.375 | 301 | 300 sx | GL | Circ |
| 30-025-06621 | | | | | 12.25 | 9.625 | 2952 | 1300 sx | 1370 | No report |
| H-16-21S-37E | | | | | 8.75 | 7 | 6547 | 700 sx | 2715 | Temp Survey |
| | | | | | | | | | | |
| NEDU 628 | 12/30/05 | 7106 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1198 | 575 sx | GL | Circ 160 sx |
| 30-025-37223 | | | | | 7.875 | 5.5 | 6889 | 1800 sx | 1202 | CBL |
| E-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 623 | 8/29/99 | 6840 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1283 | 460 sx | GL | Circ 48 sx |
| 30-025-34657 | | | | | 7.875 | 5.5 | 6840 | 1650 sx | GL | Circ 102 sx |
| K-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 714 | 5/15/01 | 6780 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1214 | 460 sx | GL | Circ 40 sx |

Sorted by distance from NEDU 701

| | | | | | | | | | | |
|--------------|----------|------|----------------------|---|--------------|--------|------|---------|------|-------------|
| 30-025-35272 | | | | | 7.875 | 5.5 | 6780 | 1175 sx | GL | Circ 102 sx |
| N-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| WBDU 090 | 4/12/52 | 8261 | Eunice; Bli-Tu-Dr, N | O | 17.5 | 13.375 | 258 | 250 sx | GL | Circ |
| 30-025-06634 | | | | | 8.625 | 8.375 | 2861 | 1500 sx | GL | Circ |
| P-16-21S-37E | | | | | No report | 5.5 | 8259 | 400 sx | 3376 | Temp Survey |
| | | | | | | | | | | |
| NEDU 606 | 12/16/50 | 8032 | Eunice; Bli-Tu-Dr, N | I | 17.5 | 13.375 | 330 | 350 sx | GL | Circ |
| 30-025-06587 | | | | | 11 | 8.625 | 2803 | 500 sx | 1115 | Calc |
| F-15-21S-37E | | | | | 7.875 | 5.5 | 8032 | 1200 sx | GL | Circ |
| | | | | | | | | | | |
| NEDU 610 | 1/10/51 | 7798 | Eunice; Bli-Tu-Dr, N | I | 17.25 | 13.375 | 222 | 250 sx | GL | Circ 35 sx |
| 30-025-06588 | | | | | 11 | 8.625 | 2925 | 2000 sx | GL | Circ |
| G-15-21S-37E | | | | | 7.875 | 5.5 | 7635 | 500 sx | 5050 | Calc |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Sorted by distance from NEDU 701

| | | | | | | | | | | |
|--------------|----------|------|----------------------|---|-------|--------|------|---------|-----|-------------|
| NEDU 544 | 2/9/14 | 6948 | Eunice; Bli-Tu-Dr, N | O | 11 | 8.625 | 1269 | 430 sx | GL | Circ 45 sx |
| 30-025-41600 | | | | | 7.875 | 5.5 | 6954 | 1250 sx | GL | Circ 176 sx |
| E-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 720 | 10/16/04 | 6850 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1195 | 600 sx | GL | Circ 130 sx |
| 30-025-36806 | | | | | 7.875 | 5.5 | 6850 | 1150 sx | 460 | no report |
| D-22-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 716 | 8/1/99 | 6810 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1269 | 460 sx | GL | Circ 92 sx |
| 30-025-34660 | | | | | 7.875 | 5.5 | 6810 | 1550 sx | GL | Circ 20 sx |
| D-22-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| Argo 008 | 5/11/51 | 8002 | Paddock | O | 17.5 | 13.375 | 226 | 300 sx | GL | Circ |
| 30-025-06604 | | | | | 11 | 8.625 | 2915 | 1800 sx | GL | Circ |
| N-15-21S-37E | | | | | 7.875 | 5.5 | 8002 | 1220 sx | 50 | CBL |
| | | | | | | | | | | |
| | | | | | | | | | | |

Sorted by distance from NEDU 701

| | | | | | | | | | | |
|--------------|---------|------|----------------------|---|-------|-------|------|---------|-----|-------------|
| NEDU 624 | 4/17/00 | 6860 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1213 | 460 sx | GL | Circ 82 sx |
| 30-025-34887 | | | | | 7.875 | 5.5 | 6860 | 1400 sx | 170 | CBL |
| C-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| WBDU 082 | 4/8/07 | 6875 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1285 | 650 sx | GL | Circ |
| 30-025-38231 | | | | | 7.875 | 5.5 | 6875 | 1250 sx | 320 | CBL |
| J-16-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| WBDU 115 | 5/8/10 | 7225 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1273 | 650 sx | GL | Circ |
| 30-025-39300 | | | | | 7.875 | 5.5 | 7225 | 1300 sx | GL | Circ |
| P-16-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| WBDU 092 | 12/1/05 | 7284 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1197 | 575 sx | GL | Circ 171 sx |
| 30-025-37535 | | | | | 7.875 | 5.5 | 7284 | 1150 sx | 650 | CBL |
| O-16-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Sorted by distance from NEDU 701

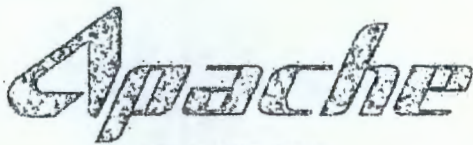
| | | | | | | | | | | |
|--------------|---------|------|-----------------------------|-----|-------|--------|------|---------|------|-------------|
| WBDU 113 | 9/15/09 | 6912 | Penrose Skelly; Grayburg | O | 12.25 | 8.625 | 1342 | 650 sx | GL | Circ |
| 30-025-39277 | | | | | 7.875 | 5.5 | 6912 | 1000 sx | GL | Circ |
| A-16-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 705 | 7/27/50 | 8091 | Eunice; Bli-Tu-Dr, N | P&A | 17.25 | 13.375 | 225 | 300 sx | GL | Circ |
| 30-025-06602 | | | | | 11 | 8.625 | 2903 | 2000 sx | GL | Circ |
| N-15-21S-37E | | | | | 7.875 | 5.5 | 7773 | 500 sx | 4412 | No report |
| | | | | | | | | | | |
| WBDU 079 | 6/24/05 | 7310 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1289 | 600 sx | GL | Circ 92 sx |
| 30-025-37201 | | | | | 7.875 | 5.5 | 7310 | 1600 sx | 270 | CBL |
| J-16-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 661 | 2/2/14 | 6963 | Eunice; Bli-Tu-Dr, N | O | 11 | 8.625 | 1264 | 440 sx | GL | Circ 134 sx |
| 30-025-41583 | | | | | 7.875 | 5.5 | 6963 | 1250 sx | GL | Circ 135 sx |
| C-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Sorted by distance from NEDU 701

| | | | | | | | | | | |
|-------------------|----------|------|----------------------|---|-------|--------|------|---------|------|-------------|
| NEDU 707 | 5/5/52 | 7670 | Eunice; Bli-Tu-Dr, N | I | 17.5 | 13.375 | 325 | 250 sx | GL | Circ |
| 30-025-06601 | | | | | 11 | 8.625 | 2852 | 1200 sx | GL | Circ |
| J-15-21S-37E | | | | | 7.875 | 5.5 | 7665 | 1155 sx | GL | Circ |
| | | | | | | | | | | |
| L G Warlick C 006 | 10/29/50 | 7847 | Hare; Simpson | O | 17 | 13.375 | 303 | 300 sx | GL | Circ |
| 30-025-06597 | | | | | 11 | 8.625 | 2797 | 1200 sx | 275 | no report |
| J-15-21S-37E | | | | | 8 | 5.5 | 7700 | 575 sx | 3230 | Temp survey |
| | | | | | | | | | | |
| NEDU 651 | 11/21/13 | 6857 | Eunice; Bli-Tu-Dr, N | O | 11 | 8.625 | 1307 | 460 sx | GL | Circ 116 sx |
| 30-025-41285 | | | | | 7.875 | 5.5 | 6859 | 1265 sx | 216 | CBL |
| J-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| NEDU 717 | 4/29/01 | 6684 | Eunice; Bli-Tu-Dr, N | O | 12.25 | 8.625 | 1265 | 460 sx | GL | Circ 49 sx |
| 30-025-35274 | | | | | 7.875 | 5.5 | 6780 | 1075 sx | 150 | CBL |
| N-15-21S-37E | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Sorted by distance from NEDU 701

| | | | | | | | | | | |
|--------------|---------|------|-----------------------------|---|-------|--------|------|---------|------|------------|
| NEDU 706 | 6/7/48 | 6629 | Eunice; Bli-Tu-Dr, N | O | 17 | 13.375 | 299 | 250 sx | GL | Circ |
| 30-025-06592 | | | | | 11 | 8.625 | 2800 | 1500 sx | GL | Circ |
| J-15-21S-37E | | | | | 8 | 5.5 | 6597 | 750 sx | 2400 | no report |
| | | | | | | | | | | |
| State S 001 | 6/24/48 | 6660 | Penrose Skelly; Grayburg | O | 17.25 | 13.375 | 293 | 300 sx | GL | Circ 10 sx |
| 30-025-06586 | | | | | 11 | 8.625 | 2797 | 1200 sx | GL | Calc |
| D-15-21S-37E | | | | | 7.875 | 5.5 | 6625 | 400 sx | 3100 | CBL |
| | | | | | | | | | | |
| NEDU 801 | 8/21/47 | 6636 | Eunice; Bli-Tu-Dr, N | O | 17.25 | 13.375 | 222 | 250 sx | GL | Circ 50 sx |
| 30-025-09928 | | | | | 11 | 8.625 | 1233 | 600 sx | GL | Circ |
| D-22-21S-37E | | | | | 7.875 | 5.5 | 6635 | 800 sx | 2734 | Calc |



WELL BORE INFO.

LEASE NAME

Cities "S" State

WELL #

2 (NEDU 607S)

API #

30-025-06585

COUNTY

Lea

F-15-21S-37E

spud 6-1-48

P&A 9-9-11

WELL BORE INFO.

13 3/8" csg @ 297'
w/300 sx cmt CIRC to surf

280 sx GL - 347'

8 5/8" csg @ 2791'
w/500 sx cal TOC @ 675'

50 sx 1402' - 1563'

135 sx 2220' - 2841'

TOC @ 3050'

CIBP @ 3970' w/35' cmt

San Andres perfs @ 4061'-4900

25 sx 3731' - 3970'

Csg lk @ 5030' sqzd w/200 sx cmt

TOC @ 5120'

CIBP @ 5990' w/35' cmt
Tubb perfs @ 6044'-6235'

CIBP @ 6500' w/35' cmt

5 1/2" csg @ 6586'
w/125 sx

Stuck Pkr @ 6530'
Stuck Pkr @ 6586'

OH 6586'-6676'

PBTD 6655'
TD 6676'

EXHIBIT G

from SWD-860

Northeast Drinkard Unit #608
Eunice N. Blinebry-Tubb-Drinkard (22900)
1980' FNL & 1880' FWL
Unit F, Sec 15, T-21S, R-37E
Lea County, New Mexico
30-025-06590
spud 7-9-51
P&A 10-5-01

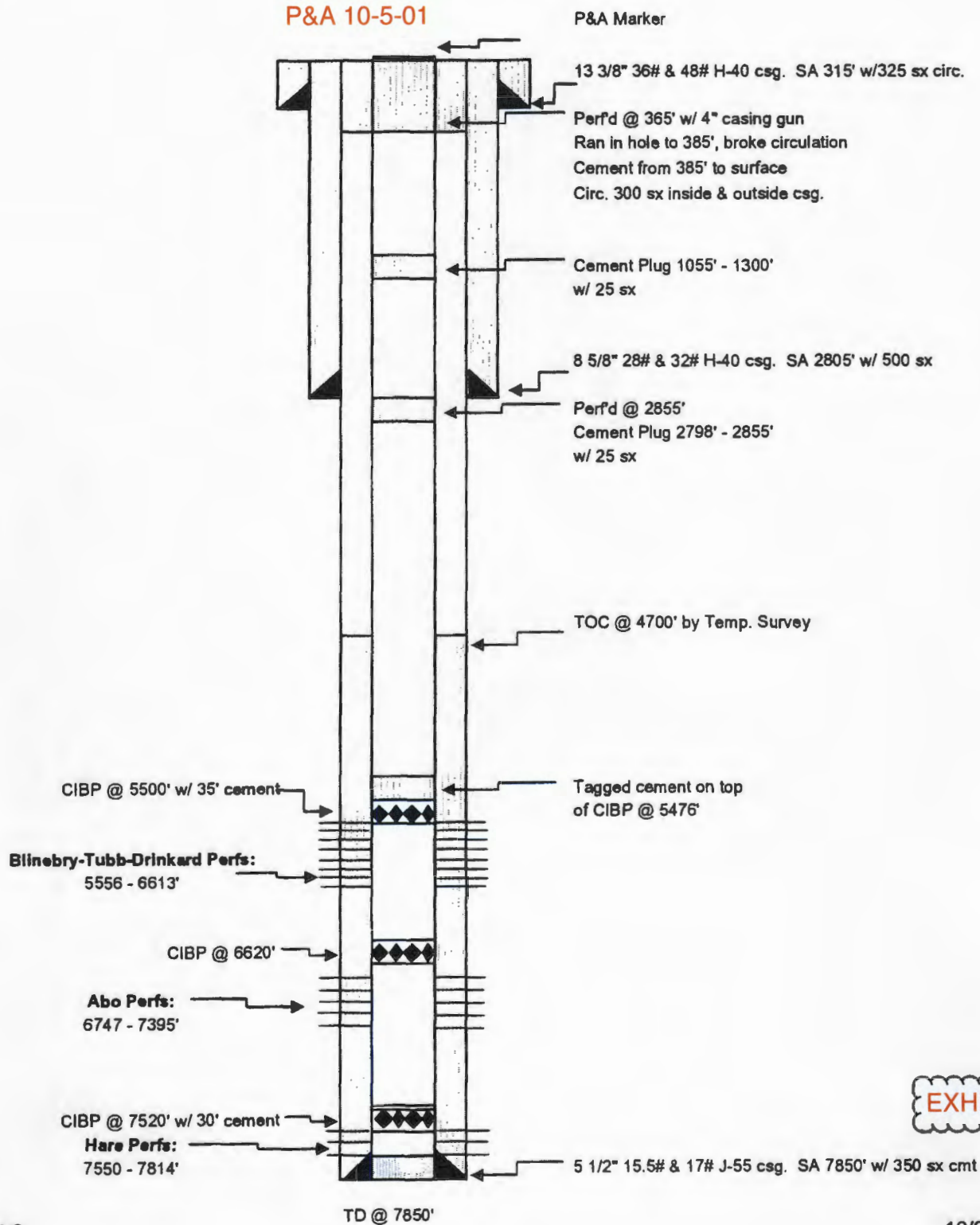


EXHIBIT G



WELL BORE INFO.

| | |
|------------|-------------------------|
| LEASE NAME | Northeast Drinkard Unit |
| WELL # | 705 |
| API # | 30-025-06602 |
| COUNTY | Lea |

N-15-21s-37e
spud 7-27-50
P&A 10-7-11

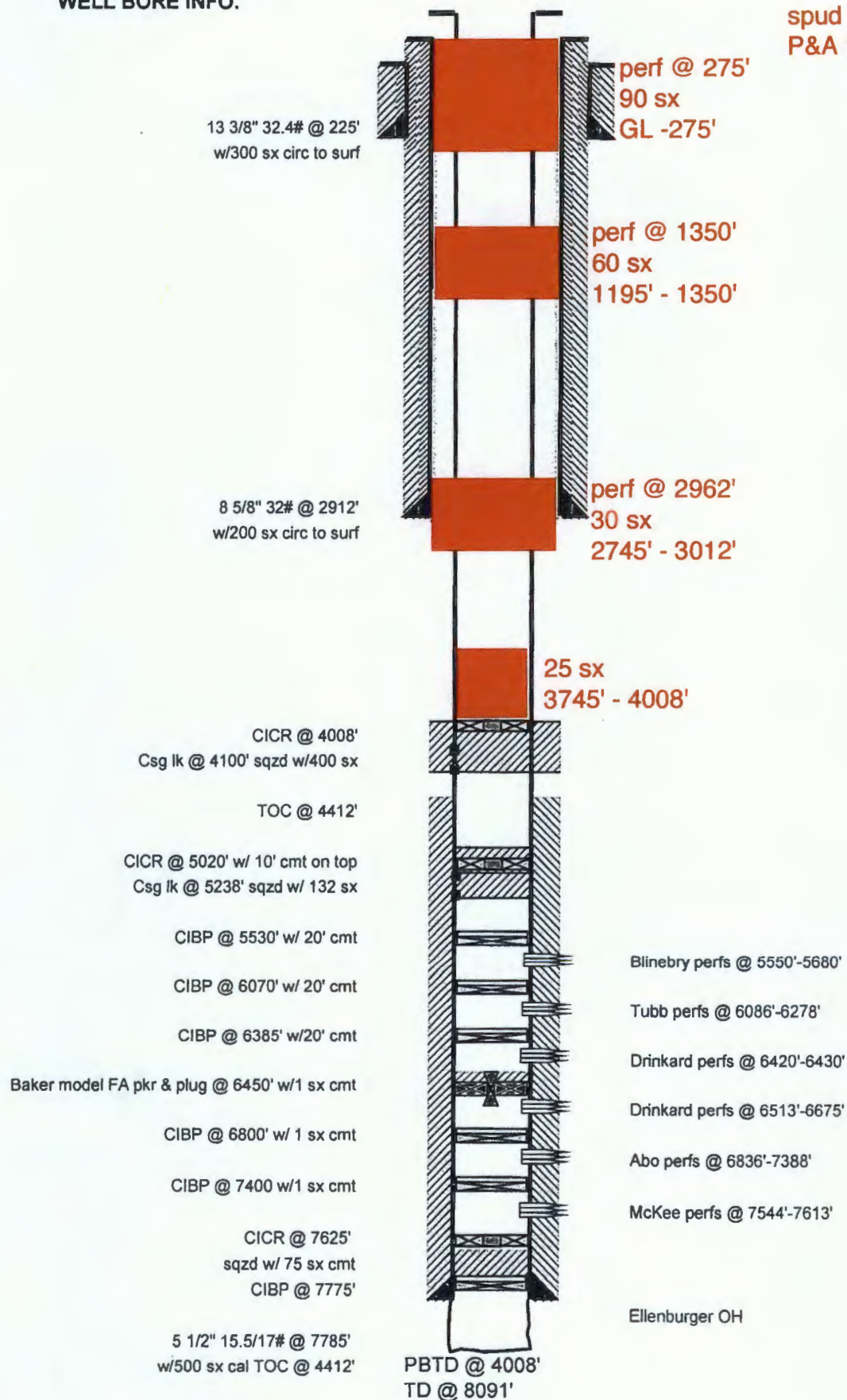


EXHIBIT G



WELL BORE INFO.

| | | |
|------------|--------------|-------------|
| LEASE NAME | Argo | (NEDU 712S) |
| WELL # | 10 | |
| API # | 30-025-06606 | |
| COUNTY | Lea | |

L-15-21s-37e
spud 7-19-51
P&A 11-1-11

13 3/8" 48# @ 241'
w/250 sx to surf

Casing leak identified & sqzd to surf
w/ 33.5 bbls of cmt above 345' in 8 5/8" csg

8 5/8" 32# @ 2907'
w/1700 sx to surf

CIBP @ 3960' w/ 35 sx TOC @ 3830'
SA perfs @ 4016'-4100'

CIBP @ 6375' w/ 35' cmt
DI perfs @ 6421'-6498'
DI perfs @ 6419'-6481'
CICR @ 6530' w/ 250 sx
Casing leaks @ 6550'-6680'
CICR @ 6680'
Abo perfs @ 6686'-7214'
CIBP @ 7600' w/ 1sx cmt
Hare perfs @ 7647'-7960'

5 1/2" 15.5-17# liner @ 2660'-8912'
w/ 875 sx circ TOL

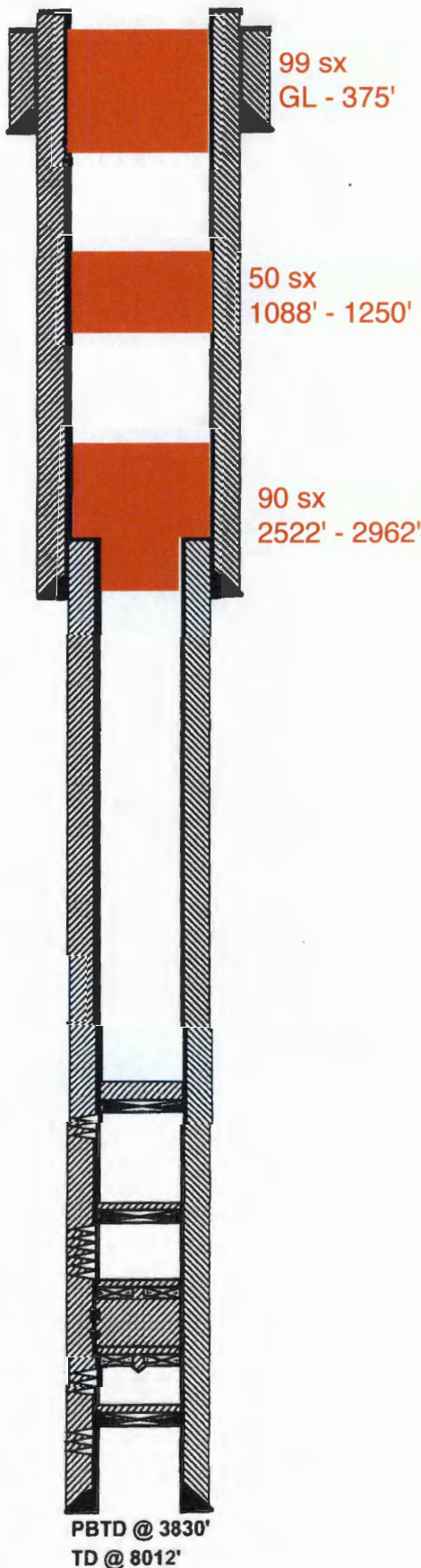


EXHIBIT G

| | |
|-----------|---|
| Well: | Northeast Drinkard Unit # 603 |
| Field: | Eunice N. Blinebry-Tubb-Drinkard |
| Location: | 3390' FNL & 760' FWL Unit E, Sec. 15, T21S, R37E Lea County, New Mexico |
| API #: | 30-025-09913 |

spud 2-18-51
P&A 11-22-93

CICR @ 750'
Perf 5-1/2" casing @ 800'
Cmt to Surface inside & outside
casing

CICR @ 2802' (63 sx)
Perf 5-1/2" casing @ 2875'
Cmt sqz 5-1/2" x 8-5/8" annulus (400 sx)
TOC @ 850' (TS)

Blinebry Perfs:
5715-5974 (59 Holes)

Tubb Perfs:
5993-6080 (23 Holes)

Drinkard Perfs:
6466-6682 (58 Holes)

Abo Perfs:
6723-7231 (26 Holes)
Cmt sqz w/ 350 sx

CIBP @ 7281' (2 sx)

Hare Perfs:
7742-7938 (596 Holes)

CIBP @ 7950' (2 sx)

Hare Perfs:
7974-90 (108 Holes)

CIBP @ 8010' (1 sx)

Ellenburger Open Hole:
8030-8067

17-1/2" Hole
13-3/8" 36# H-40 CSA 312'
Cement w / 325 sx
Circulated to Surface

11" Hole
8-5/8" 24# J-55 CSA 2818'
Cement w / 500 sx
Circulated to Surface

CICR @ 4841' w/ 126' cmt
Cmt sqz leak 4934-65 w /
200 sx

CICR @ 5651' w/ 185' cmt
Cmt sqz perfs 5715-6682 w /
250 sx

CIBP @ 6696' w/ 35' cmt

7-7/8" Hole
5-1/2" 15.5/17# J-55 CSA 8030'
Cement w / 500 sx
TOC @ 5115' (Temp Survey)

TD @ 8182'

EXHIBIT G



from WFX-784

South Permian Basin Region

10520 West I-20 East

Odessa, TX 79765

(915) 498-0191

Lab Team Leader - Sheila Hernandez

(915) 495-7240

Water Analysis Report by Baker Petrolite

| | | | |
|---------------------|--------------------------|------------------|-----------------------------|
| Company: | APACHE CORPORATION | Sales RDT: | 33102 |
| Region: | PERMIAN BASIN | Account Manager: | MIKE EDWARDS (505) 910-9517 |
| Area: | EUNICE, NM | Sample #: | 223099 |
| Lease/Platform: | NORTHEAST DRINKARD UNIT | Analysis ID #: | 28971 |
| Entity (or well #): | WATER INJECTION STATION | Analysis Cost | \$40.00 |
| Formation: | UNKNOWN | | |
| Sample Point: | INJECTION PUMP DISCHARGE | | |

| Summary | | Analysis of Sample 223099 @ 75 °F | | | | | |
|----------------------------|------------------|-----------------------------------|---------|--------|------------|--------|--------|
| Sampling Date: | 10/3/02 | Anions | mg/l | meq/l | Cations | mg/l | meq/l |
| Analysis Date: | 10/4/02 | Chloride: | 10086.0 | 284.49 | Sodium: | 5789.8 | 252.25 |
| Analyst: | SHEILA HERNANDEZ | Bicarbonate: | 871.0 | 11. | Magnesium: | 439.0 | 36.11 |
| TDS (mg/l or g/m3): | 20702.9 | Carbonate: | 0.0 | 0. | Calcium: | 1098.0 | 54.84 |
| Density (g/cm3, tonne/m3): | 1.015 | Sulfate: | 2485.0 | 51.32 | Strontium: | 28.0 | 0.84 |
| Anion/Cation Ratio: | 1.000000 | Phosphate: | | | Barium: | 0.1 | 0. |
| | | Borate: | | | Iron: | 0.3 | 0.01 |
| | | Silicate: | | | Potassium: | 115.0 | 2.84 |
| | | | | | Aluminum: | | |
| Carbon Dioxide: | 80 PPM | Hydrogen Sulfide: | | 90 PPM | Chromium: | | |
| Oxygen: | | pH at time of sampling: | | 7.5 | Copper: | | |
| Comments: | | pH at time of analysis: | | | Lead: | | |
| | | pH used in Calculation: | | 7.5 | Manganese: | | |
| | | | | | Nickel: | | |

| Conditions | | Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl | | | | | | | | | | |
|------------|--------------|---|--------|--|--------|--------------------------------|--------|--------------------------------|--------|-----------------------------|--------|-----------------------|
| Temp | Gauge Press. | Calcite CaCO ₃ | | Gypsum CaSO ₄ ·2H ₂ O | | Anhydrite CaSO ₄ | | Celestite SrSO ₄ | | Barite BaSO ₄ | | CO ₂ Press |
| °F | psi | Index | Amount | Index | Amount | Index | Amount | Index | Amount | Index | Amount | psi |
| 80 | 0 | 1.18 | 75.54 | -0.08 | 0.00 | -0.14 | 0.00 | 0.07 | 2.75 | 0.75 | 0.00 | 0.21 |
| 100 | 0 | 1.25 | 85.15 | -0.09 | 0.00 | -0.09 | 0.00 | 0.07 | 3.09 | 0.60 | 0.00 | 0.3 |
| 120 | 0 | 1.33 | 95.11 | -0.10 | 0.00 | -0.02 | 0.00 | 0.09 | 3.78 | 0.47 | 0.00 | 0.42 |
| 140 | 0 | 1.41 | 105.41 | -0.10 | 0.00 | 0.08 | 128.07 | 0.11 | 4.46 | 0.36 | 0.00 | 0.56 |

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO₂ pressure is actually the calculated CO₂ fugacity. It is usually nearly the same as the CO₂ partial pressure.

EXHIBIT H

UNICHEM

A Division of BJ Services Company

Lab Test No. 23748

Apache

Sample Date: 3/10/99

Water Analysis

Listed below please find water analysis report from: NEDU

#919-S

Specific Gravity: 1.009
 Total Dissolved Solids: 13273
 pH: 6.49
 Conductivity (umhos):
 Ionic Strength: 0.265

WFX-774 application indicates
 this is San Andres source water

| Cations: | | mg/l |
|------------------|----------|--------------|
| Calcium | (Ca++): | 608 |
| Magnesium | (Mg++): | 244 |
| Sodium | (Na+): | 3909 |
| Iron | (Fe++): | 0.00 |
| Dissolved Iron | (Fe++): | |
| Barium | (Ba++): | 0.38 |
| Strontium | (Sr): | 19 |
| Manganese | (Mn++): | 0.01 |
| Resistivity: | | |
| Anions: | | ppm |
| Bicarbonate | (HCO3-): | 562 |
| Carbonate | (CO3--): | |
| Hydroxide | (OH-): | 0 |
| Sulfate | (SO4--): | 1750 |
| Chloride | (Cl-): | 6200 |
| Gases: | | ppm |
| Carbon Dioxide | (CO2): | 80.00 |
| Hydrogen Sulfide | (H2S): | 408.00 |
| | | Oxygen (O2): |

Scale Index (positive values indicates scale tendency) a blank indicates some tests were not run

| Temperature | CaCO3 SI | CaSO4 SI |
|-------------|----------|----------|
| 86F 30.0C | -0.14 | -17.28 |
| 104F 40.0C | 0.09 | -17.28 |
| 122F 50.0C | 0.35 | -17.28 |
| 140F 60.0C | 0.57 | -16.80 |
| 168F 70.0C | 0.87 | -15.02 |
| 176F 80.0C | 1.20 | -15.51 |

Comments:

cc: Jerry White
 Jay Brown

P.O. Box 61427 • Midland, TX 79711 • 4312 S. County Rd. 1208, Midland, TX 79765
 Office: (915) 563-0241 • Fax: (915) 563-0243

010/200.2 05204

UNICHEM LAB

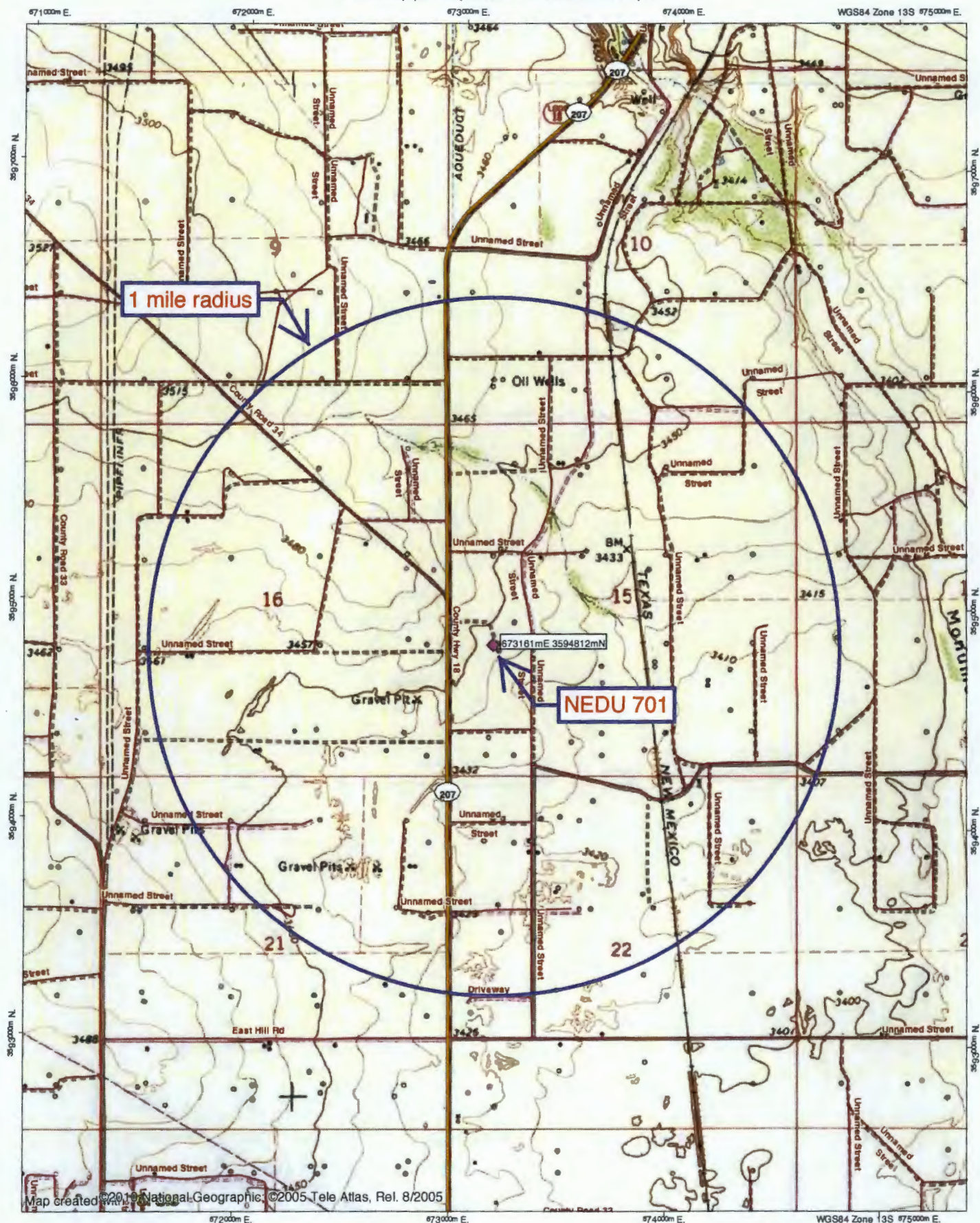
MAR 25 1999 15:26 915 563 0243

EXHIBIT H

APR-05-1999 15:15

3942740

96%





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW#### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)
































(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

| POD Number | Code | POD Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | Distance | DepthWell | DepthWater | Water Column |
|-------------------------------|------|---------------|--------|------|------|-----|-----|-----|-----|--------|----------|----------|-----------|------------|--------------|
| CP 00729 POD1 | | CP | LE | 4 | 1 | 3 | 15 | 21S | 37E | 673259 | 3594711* | 140 | 8015 | | |
| CP 01141 POD3 | | CP | LE | | | | 15 | 21S | 37E | 673520 | 3594272 | 647 | 40 | | |
| CP 01141 POD2 | | CP | LE | | | | 15 | 21S | 37E | 673543 | 3594250 | 679 | 40 | | |
| CP 01141 POD4 | | CP | LE | | | | 15 | 21S | 37E | 673556 | 3594239 | 695 | 45 | | |
| CP 01575 POD1 | | CP | LE | 1 | 2 | 1 | 22 | 21S | 37E | 673544 | 3594204 | 718 | 40 | 35 | 5 |
| CP 01575 POD2 | | CP | LE | 2 | 2 | 1 | 22 | 21S | 37E | 673615 | 3594181 | 777 | 35 | 35 | 0 |
| CP 00731 POD1 | | CP | LE | | 2 | 1 | 22 | 21S | 37E | 673577 | 3594015* | 899 | 8130 | | |
| CP 00554 | | CP | LE | | 2 | 2 | 16 | 21S | 37E | 672744 | 3595610* | 900 | 80 | 70 | 10 |
| CP 00732 POD1 | | CP | LE | | 4 | 1 | 22 | 21S | 37E | 673584 | 3593613* | 1271 | 6633 | | |
| CP 01574 POD1 | | CP | LE | 2 | 4 | 4 | 15 | 21S | 37E | 674559 | 3594598 | 1413 | 68 | 57 | 11 |
| CP 01110 POD1 | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 70 | | |
| CP 01110 POD2 | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 70 | | |
| CP 01110 POD3 | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 70 | | |
| CP 01110 POD4 | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 20 | | |
| CP 01110 POD5 | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 20 | | |
| CP 01185 POD1 | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674598 | 3594689 | 1442 | 70 | | |
| CP 01185 POD3 | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674592 | 3594620 | 1444 | 70 | | |
| CP 01185 POD2 | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674623 | 3594674 | 1468 | 70 | | |
| CP 01185 POD4 | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674633 | 3594610 | 1485 | 70 | | |
| CP 01574 POD2 | | CP | LE | 1 | 3 | 3 | 14 | 21S | 37E | 674666 | 3594578 | 1523 | 68 | 57 | 11 |
| CP 00235 POD3 | | CP | LE | 1 | 1 | 1 | 23 | 21S | 37E | 674681 | 3594137* | 1663 | 90 | 61 | 29 |
| CP 00235 POD7 | | CP | LE | 3 | 1 | 1 | 23 | 21S | 37E | 674681 | 3593937* | 1753 | 85 | 65 | 20 |
| CP 00235 POD6 | | CP | LE | 2 | 1 | 1 | 23 | 21S | 37E | 674881 | 3594137* | 1847 | 85 | 65 | 20 |
| CP 00235 POD4 | | CP | LE | 1 | 3 | 1 | 23 | 21S | 37E | 674688 | 3593735* | 1868 | 100 | 80 | 20 |
| CP 00733 POD1 | | CP | LE | | 3 | 3 | 22 | 21S | 37E | 673196 | 3592801* | 2011 | 7864 | | |
| CP 00235 POD2 | | CP | LE | 1 | 2 | 1 | 23 | 21S | 37E | 675083 | 3594144* | 2034 | 96 | 65 | 31 |
| CP 00251 POD1 | | CP | LE | 2 | 3 | 4 | 22 | 21S | 37E | 674099 | 3592915* | 2116 | 103 | | |
| CP 00252 POD1 | | CP | LE | 4 | 2 | 4 | 22 | 21S | 37E | 674493 | 3593125* | 2149 | 106 | 78 | 28 |

1 mile =
1610 m

| | | | | | | | | | | | | | | | |
|--------------------------------|----|----|---|---|---|----|-----|-----|--------|----------|---|------|-----|----|----|
| CP.00235.POD5 | CP | LE | 1 | 4 | 1 | 23 | 21S | 37E | 675090 | 3593742* |  | 2205 | 90 | 70 | 20 |
| CP.00235.POD1 | CP | LE | 2 | 2 | 1 | 23 | 21S | 37E | 675283 | 3594144* |  | 2224 | 81 | | |
| CP.00240.POD1 | CP | LE | 4 | 2 | 1 | 23 | 21S | 37E | 675283 | 3593944* |  | 2292 | | | |
| CP.00241.POD1 | CP | LE | 4 | 2 | 1 | 23 | 21S | 37E | 675283 | 3593944* |  | 2292 | 79 | | |
| CP.00235.POD9 | CP | LE | 3 | 4 | 1 | 23 | 21S | 37E | 675090 | 3593542* |  | 2309 | 94 | 58 | 36 |
| CP.00881 | CP | LE | | 4 | 4 | 22 | 21S | 37E | 674402 | 3592824* |  | 2343 | 95 | 53 | 42 |
| CP.00239.POD1 | CP | LE | 1 | 1 | 2 | 23 | 21S | 37E | 675485 | 3594152* |  | 2415 | 89 | 61 | 28 |
| CP.00235.POD8 | CP | LE | 3 | 1 | 2 | 23 | 21S | 37E | 675485 | 3593952* |  | 2478 | 94 | 58 | 36 |
| CP.00236.POD1 | CP | LE | 3 | 1 | 2 | 23 | 21S | 37E | 675485 | 3593952* |  | 2478 | 83 | | |
| CP.00017.POD1 | CP | LE | 2 | 1 | 2 | 27 | 21S | 37E | 674106 | 3592513* |  | 2485 | 101 | | |
| CP.00711 | CP | LE | 4 | 2 | 2 | 28 | 21S | 37E | 672900 | 3592291* |  | 2534 | 100 | 65 | 35 |
| CP.00235.POD10 | CP | LE | 1 | 3 | 2 | 23 | 21S | 37E | 675492 | 3593749* |  | 2561 | 92 | 60 | 32 |
| CP.00235.POD11 | CP | LE | 1 | 3 | 2 | 23 | 21S | 37E | 675492 | 3593749* |  | 2561 | 97 | 60 | 37 |
| CP.00237.POD1 | CP | LE | 1 | 3 | 2 | 23 | 21S | 37E | 675492 | 3593749* |  | 2561 | 84 | | |
| CP.00285.POD1 | CP | LE | 3 | 1 | 2 | 27 | 21S | 37E | 673906 | 3592313* |  | 2607 | 80 | | |
| CP.00238.POD1 | CP | LE | 3 | 3 | 2 | 23 | 21S | 37E | 675492 | 3593549* |  | 2651 | 81 | | |
| CP.00286.POD1 | CP | LE | 2 | 1 | 2 | 10 | 21S | 37E | 674019 | 3597338* |  | 2667 | 70 | | |
| CP.00294.POD1 | CP | LE | 1 | 3 | 1 | 27 | 21S | 37E | 673110 | 3592096* |  | 2716 | | | |
| CP.00293.POD1 | CP | LE | 2 | 4 | 1 | 27 | 21S | 37E | 673711 | 3592104* |  | 2763 | 80 | | |
| CP.00700 | CP | LE | | 2 | | 23 | 21S | 37E | 675794 | 3593851* |  | 2802 | 75 | 65 | 10 |
| CP.00562 | CP | LE | 1 | 2 | 2 | 23 | 21S | 37E | 675887 | 3594159* |  | 2803 | 136 | 65 | 71 |
| CP.00736 | CP | LE | | 3 | 1 | 27 | 21S | 37E | 673211 | 3591997* |  | 2815 | 120 | 76 | 44 |
| CP.00249.POD1 | CP | LE | 2 | 3 | 2 | 27 | 21S | 37E | 674113 | 3592111* |  | 2863 | 102 | | |
| CP.00250.POD1 | CP | LE | 2 | 3 | 2 | 27 | 21S | 37E | 674113 | 3592111* |  | 2863 | 101 | | |
| CP.00242.POD1 | CP | LE | 3 | 4 | 2 | 28 | 21S | 37E | 672708 | 3591889* |  | 2957 | | | |
| CP.01096.POD2 | CP | LE | 2 | 2 | 4 | 28 | 21S | 37E | 672976 | 3591731 |  | 3085 | 98 | 48 | 50 |
| CP.01095.POD2 | CP | LE | 2 | 2 | 4 | 28 | 21S | 37E | 672876 | 3591714 |  | 3110 | 109 | 48 | 61 |
| CP.01095.POD1 | CP | LE | 2 | 2 | 4 | 28 | 21S | 37E | 672859 | 3591714 |  | 3111 | 108 | 48 | 60 |
| CP.00253.POD1 | CP | LE | 3 | 4 | 2 | 27 | 21S | 37E | 674315 | 3591918* |  | 3115 | 101 | | |
| CP.01096.POD1 | CP | LE | 2 | 2 | 4 | 28 | 21S | 37E | 672861 | 3591708 |  | 3118 | 108 | 48 | 60 |
| CP.00134.POD1 | CP | LE | 1 | 1 | 1 | 24 | 21S | 37E | 676289 | 3594166* |  | 3194 | 85 | | |

Average Depth to Water: 59 feet

Minimum Depth: 35 feet

Maximum Depth: 80 feet

Record Count: 59

UTMNAD83 Radius Search (in meters):

EXHIBIT I

Easting (X): 673161

Northing (Y): 3594812

Radius: 3220

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

9/25/17 11:57 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

EXHIBIT I

Ogallala aquifer

207

2-1/4 miles

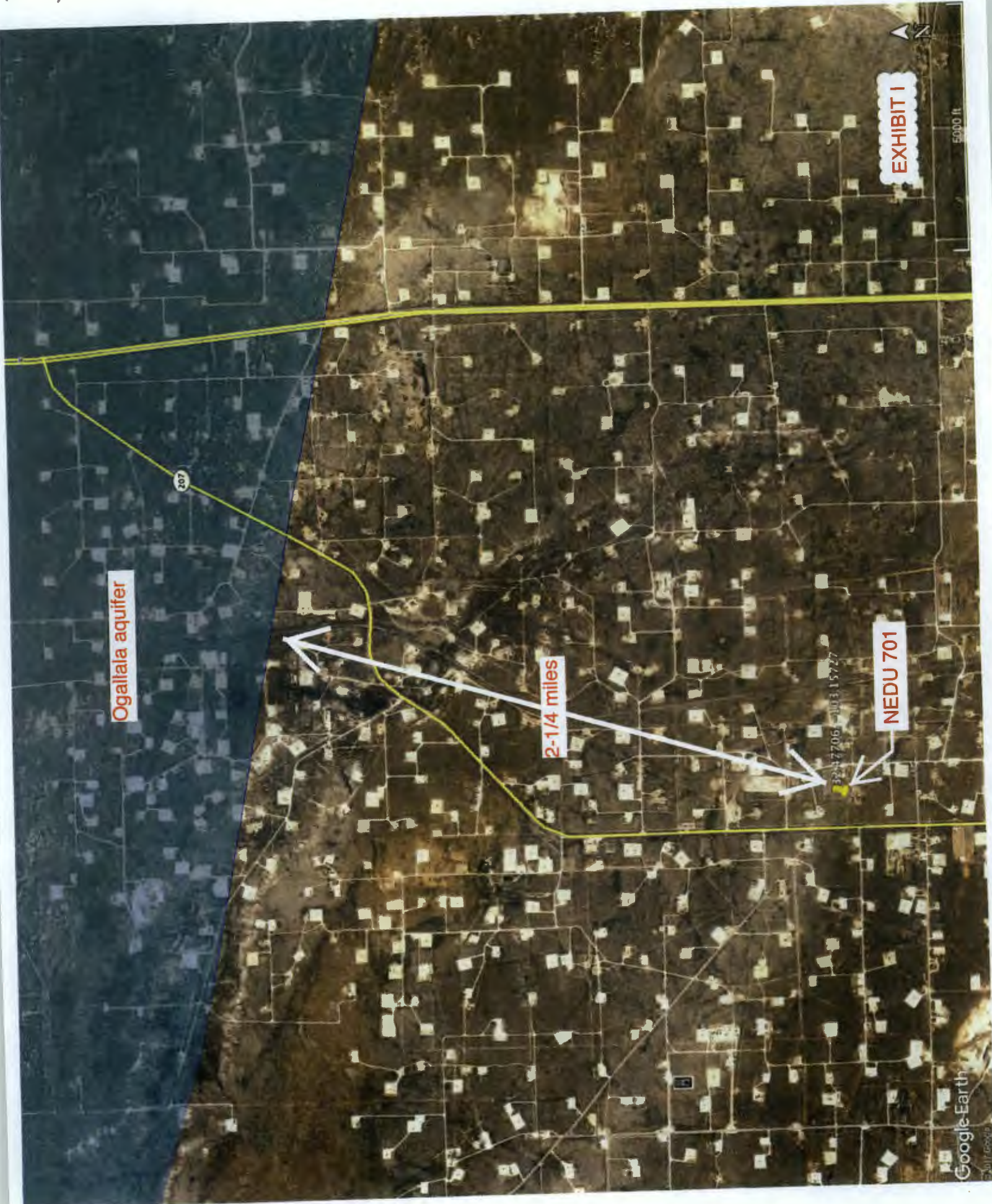
NEDU 701

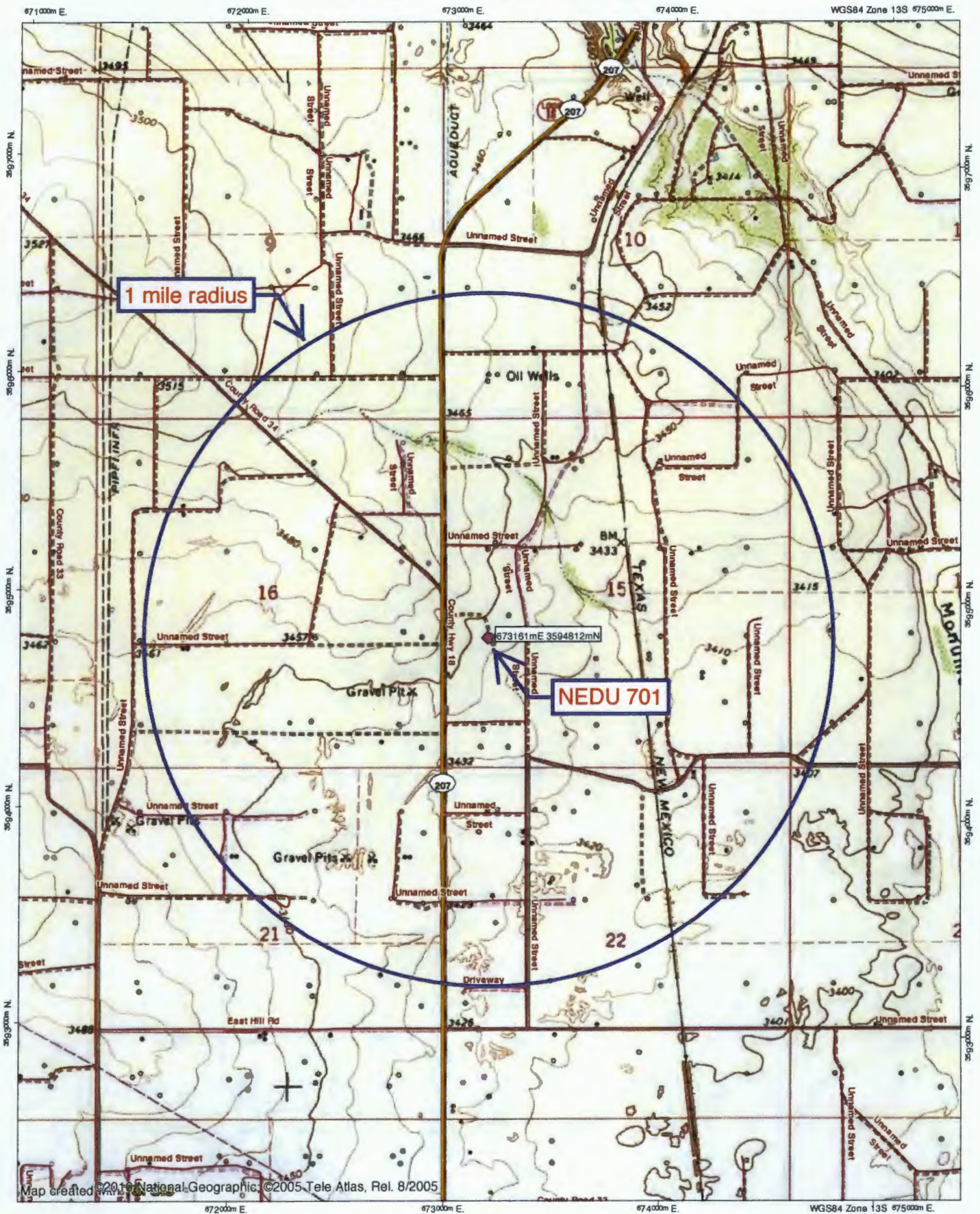
39.47706, -103.15727

EXHIBIT I

5000 ft

Google Earth







New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW#### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,

O=orphaned,

C=the file is closed)
































(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

| POD Number | Code | POD Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec 15 | Tws 21S | Rng 37E | X | Y | Distance | DepthWell | DepthWater | Water Column |
|----------------------|------|---------------|--------|------|------|-----|--------|---------|---------|--------|----------|----------|-----------|------------|--------------|
| <u>CP 00729 POD1</u> | | CP | LE | 4 | 1 | 3 | 15 | 21S | 37E | 673259 | 3594711* | 140 | 8015 | | |
| <u>CP 01141 POD3</u> | | CP | LE | | | | 15 | 21S | 37E | 673520 | 3594272 | 647 | 40 | | |
| <u>CP 01141 POD2</u> | | CP | LE | | | | 15 | 21S | 37E | 673543 | 3594250 | 679 | 40 | | |
| <u>CP 01141 POD4</u> | | CP | LE | | | | 15 | 21S | 37E | 673556 | 3594239 | 695 | 45 | | |
| <u>CP 01575 POD1</u> | | CP | LE | 1 | 2 | 1 | 22 | 21S | 37E | 673544 | 3594204 | 718 | 40 | 35 | 5 |
| <u>CP 01575 POD2</u> | | CP | LE | 2 | 2 | 1 | 22 | 21S | 37E | 673615 | 3594181 | 777 | 35 | 35 | 0 |
| <u>CP 00731 POD1</u> | | CP | LE | | 2 | 1 | 22 | 21S | 37E | 673577 | 3594015* | 899 | 8130 | | |
| <u>CP 00554</u> | | CP | LE | | 2 | 2 | 16 | 21S | 37E | 672744 | 3595610* | 900 | 80 | 70 | 10 |
| <u>CP 00732 POD1</u> | | CP | LE | | 4 | 1 | 22 | 21S | 37E | 673584 | 3593613* | 1271 | 6633 | | |
| <u>CP 01574 POD1</u> | | CP | LE | 2 | 4 | 4 | 15 | 21S | 37E | 674559 | 3594598 | 1413 | 68 | 57 | 11 |
| <u>CP 01110 POD1</u> | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 70 | | |
| <u>CP 01110 POD2</u> | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 70 | | |
| <u>CP 01110 POD3</u> | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 70 | | |
| <u>CP 01110 POD4</u> | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 20 | | |
| <u>CP 01110 POD5</u> | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674586 | 3594648 | 1433 | 20 | | |
| <u>CP 01185 POD1</u> | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674598 | 3594689 | 1442 | 70 | | |
| <u>CP 01185 POD3</u> | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674592 | 3594620 | 1444 | 70 | | |
| <u>CP 01185 POD2</u> | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674623 | 3594674 | 1468 | 70 | | |
| <u>CP 01185 POD4</u> | | CP | LE | | 1 | 3 | 14 | 21S | 37E | 674633 | 3594610 | 1485 | 70 | | |
| <u>CP 01574 POD2</u> | | CP | LE | 1 | 3 | 3 | 14 | 21S | 37E | 674666 | 3594578 | 1523 | 68 | 57 | 11 |
| <u>CP 00235 POD3</u> | | CP | LE | 1 | 1 | 1 | 23 | 21S | 37E | 674681 | 3594137* | 1663 | 90 | 61 | 29 |
| <u>CP 00235 POD7</u> | | CP | LE | 3 | 1 | 1 | 23 | 21S | 37E | 674681 | 3593937* | 1753 | 85 | 65 | 20 |
| <u>CP 00235 POD6</u> | | CP | LE | 2 | 1 | 1 | 23 | 21S | 37E | 674881 | 3594137* | 1847 | 85 | 65 | 20 |
| <u>CP 00235 POD4</u> | | CP | LE | 1 | 3 | 1 | 23 | 21S | 37E | 674688 | 3593735* | 1868 | 100 | 80 | 20 |
| <u>CP 00733 POD1</u> | | CP | LE | | 3 | 3 | 22 | 21S | 37E | 673196 | 3592801* | 2011 | 7864 | | |
| <u>CP 00235 POD2</u> | | CP | LE | 1 | 2 | 1 | 23 | 21S | 37E | 675083 | 3594144* | 2034 | 96 | 65 | 31 |
| <u>CP 00251 POD1</u> | | CP | LE | 2 | 3 | 4 | 22 | 21S | 37E | 674099 | 3592915* | 2116 | 103 | | |
| <u>CP 00252 POD1</u> | | CP | LE | 4 | 2 | 4 | 22 | 21S | 37E | 674493 | 3593125* | 2149 | 106 | 78 | 28 |

1 mile =
1610 m

| | | | | | | | | | | | | | | | |
|--------------------------------|----|----|---|---|---|----|-----|-----|--------|----------|---|------|-----|----|----|
| CP 00235 POD5 | CP | LE | 1 | 4 | 1 | 23 | 21S | 37E | 675090 | 3593742* |  | 2205 | 90 | 70 | 20 |
| CP 00235 POD1 | CP | LE | 2 | 2 | 1 | 23 | 21S | 37E | 675283 | 3594144* |  | 2224 | 81 | | |
| CP 00240 POD1 | CP | LE | 4 | 2 | 1 | 23 | 21S | 37E | 675283 | 3593944* |  | 2292 | | | |
| CP 00241 POD1 | CP | LE | 4 | 2 | 1 | 23 | 21S | 37E | 675283 | 3593944* |  | 2292 | 79 | | |
| CP 00235 POD9 | CP | LE | 3 | 4 | 1 | 23 | 21S | 37E | 675090 | 3593542* |  | 2309 | 94 | 58 | 36 |
| CP 00881 | CP | LE | | 4 | 4 | 22 | 21S | 37E | 674402 | 3592824* |  | 2343 | 95 | 53 | 42 |
| CP 00239 POD1 | CP | LE | 1 | 1 | 2 | 23 | 21S | 37E | 675485 | 3594152* |  | 2415 | 89 | 61 | 28 |
| CP 00235 POD8 | CP | LE | 3 | 1 | 2 | 23 | 21S | 37E | 675485 | 3593952* |  | 2478 | 94 | 58 | 36 |
| CP 00236 POD1 | CP | LE | 3 | 1 | 2 | 23 | 21S | 37E | 675485 | 3593952* |  | 2478 | 83 | | |
| CP 00017 POD1 | CP | LE | 2 | 1 | 2 | 27 | 21S | 37E | 674106 | 3592513* |  | 2485 | 101 | | |
| CP 00711 | CP | LE | 4 | 2 | 2 | 28 | 21S | 37E | 672900 | 3592291* |  | 2534 | 100 | 65 | 35 |
| CP 00235 POD10 | CP | LE | 1 | 3 | 2 | 23 | 21S | 37E | 675492 | 3593749* |  | 2561 | 92 | 60 | 32 |
| CP 00235 POD11 | CP | LE | 1 | 3 | 2 | 23 | 21S | 37E | 675492 | 3593749* |  | 2561 | 97 | 60 | 37 |
| CP 00237 POD1 | CP | LE | 1 | 3 | 2 | 23 | 21S | 37E | 675492 | 3593749* |  | 2561 | 84 | | |
| CP 00285 POD1 | CP | LE | 3 | 1 | 2 | 27 | 21S | 37E | 673906 | 3592313* |  | 2607 | 80 | | |
| CP 00238 POD1 | CP | LE | 3 | 3 | 2 | 23 | 21S | 37E | 675492 | 3593549* |  | 2651 | 81 | | |
| CP 00286 POD1 | CP | LE | 2 | 1 | 2 | 10 | 21S | 37E | 674019 | 3597338* |  | 2667 | 70 | | |
| CP 00294 POD1 | CP | LE | 1 | 3 | 1 | 27 | 21S | 37E | 673110 | 3592096* |  | 2716 | | | |
| CP 00293 POD1 | CP | LE | 2 | 4 | 1 | 27 | 21S | 37E | 673711 | 3592104* |  | 2763 | 80 | | |
| CP 00700 | CP | LE | | 2 | | 23 | 21S | 37E | 675794 | 3593851* |  | 2802 | 75 | 65 | 10 |
| CP 00562 | CP | LE | 1 | 2 | 2 | 23 | 21S | 37E | 675887 | 3594159* |  | 2803 | 136 | 65 | 71 |
| CP 00736 | CP | LE | | 3 | 1 | 27 | 21S | 37E | 673211 | 3591997* |  | 2815 | 120 | 76 | 44 |
| CP 00249 POD1 | CP | LE | 2 | 3 | 2 | 27 | 21S | 37E | 674113 | 3592111* |  | 2863 | 102 | | |
| CP 00250 POD1 | CP | LE | 2 | 3 | 2 | 27 | 21S | 37E | 674113 | 3592111* |  | 2863 | 101 | | |
| CP 00242 POD1 | CP | LE | 3 | 4 | 2 | 28 | 21S | 37E | 672708 | 3591889* |  | 2957 | | | |
| CP 01096 POD2 | CP | LE | 2 | 2 | 4 | 28 | 21S | 37E | 672976 | 3591731 |  | 3085 | 98 | 48 | 50 |
| CP 01095 POD2 | CP | LE | 2 | 2 | 4 | 28 | 21S | 37E | 672876 | 3591714 |  | 3110 | 109 | 48 | 61 |
| CP 01095 POD1 | CP | LE | 2 | 2 | 4 | 28 | 21S | 37E | 672859 | 3591714 |  | 3111 | 108 | 48 | 60 |
| CP 00253 POD1 | CP | LE | 3 | 4 | 2 | 27 | 21S | 37E | 674315 | 3591918* |  | 3115 | 101 | | |
| CP 01096 POD1 | CP | LE | 2 | 2 | 4 | 28 | 21S | 37E | 672861 | 3591708 |  | 3118 | 108 | 48 | 60 |
| CP 00134 POD1 | CP | LE | 1 | 1 | 1 | 24 | 21S | 37E | 676289 | 3594166* |  | 3194 | 85 | | |

Average Depth to Water: 59 feet

Minimum Depth: 35 feet

Maximum Depth: 80 feet

Record Count: 59

UTMNAD83 Radius Search (in meters):

EXHIBIT I

Easting (X): 673161

Northing (Y): 3594812

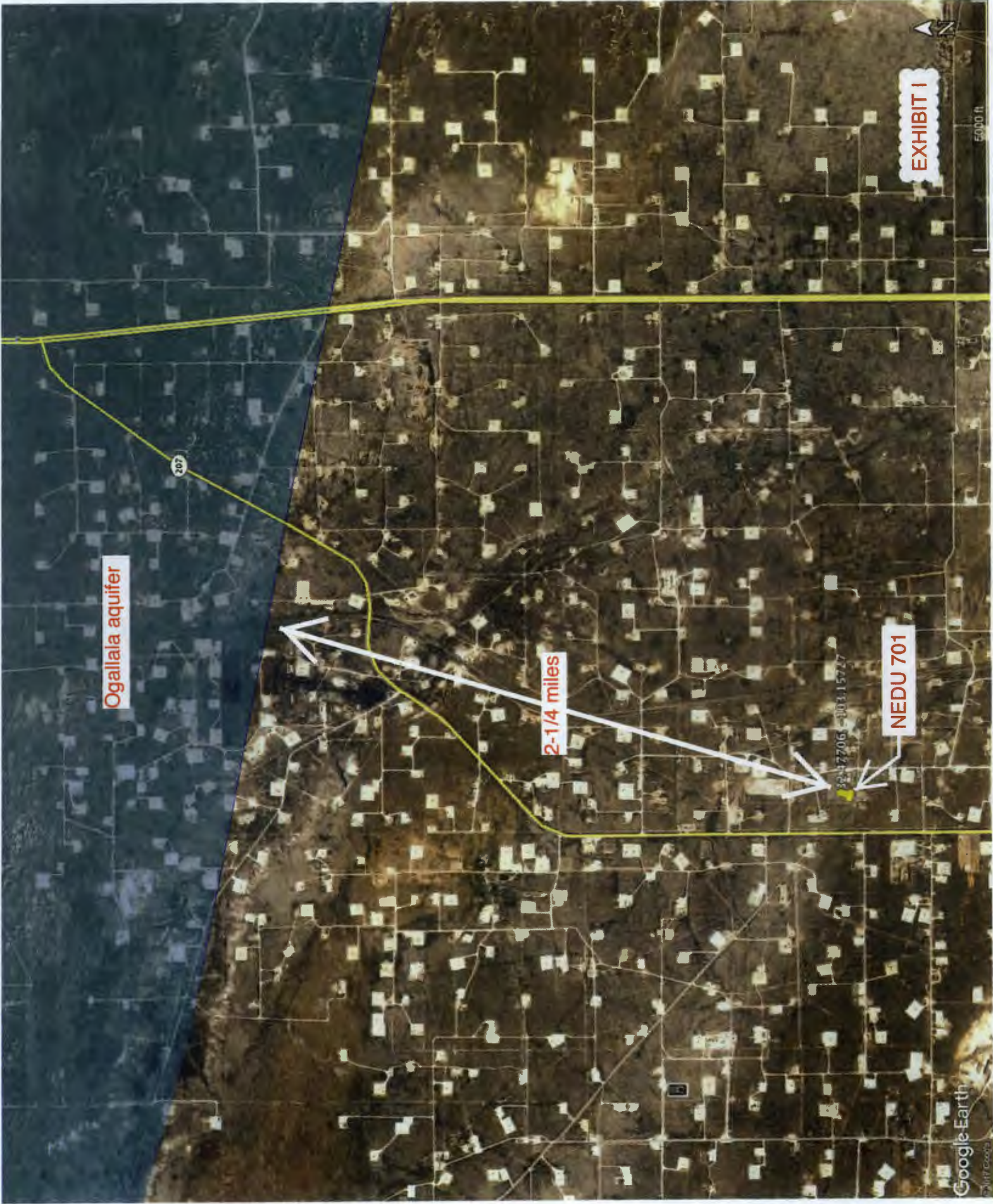
Radius: 3220

***UTM location was derived from PLSS - see Help**

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

9/25/17 11:57 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER**EXHIBIT I**



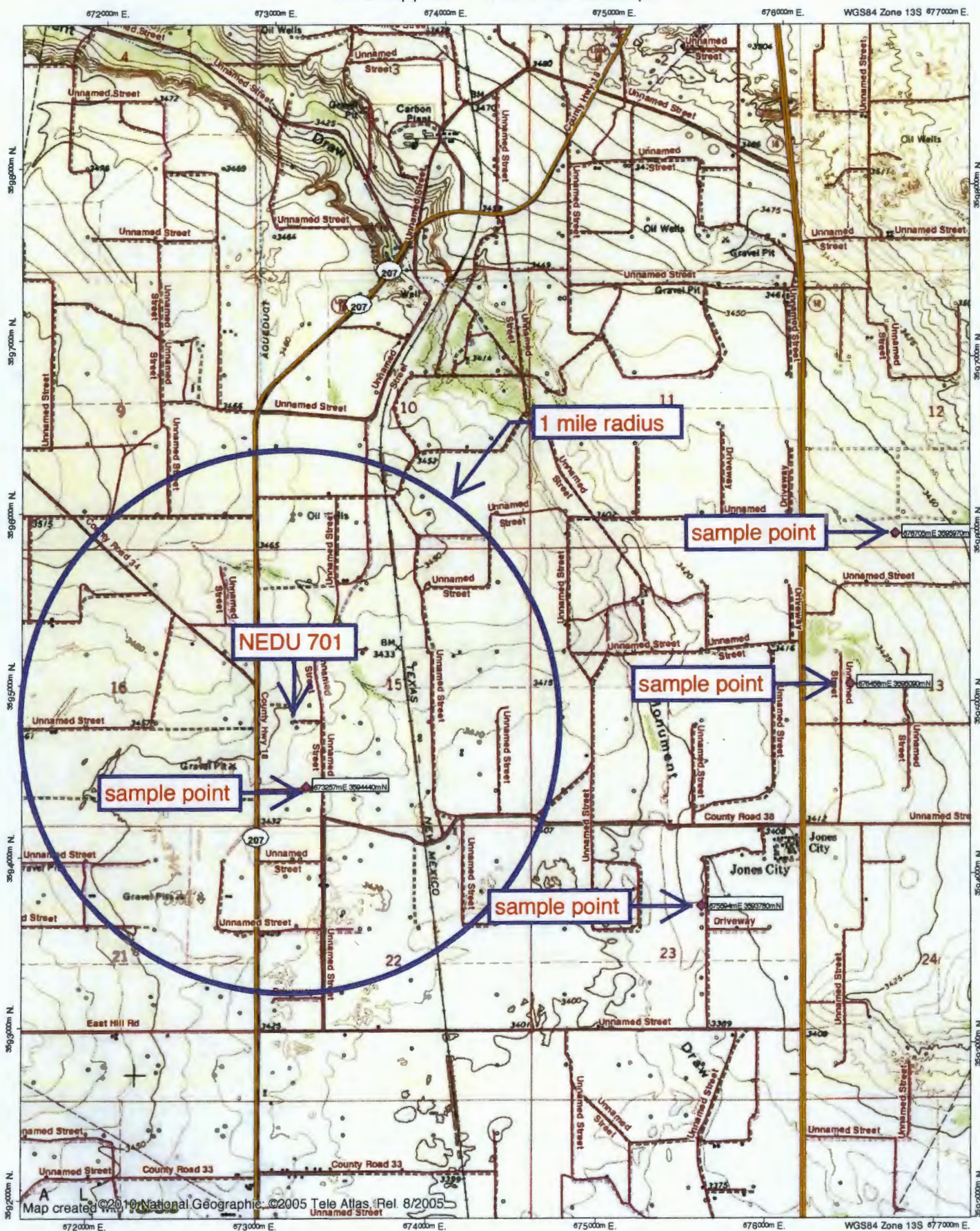
Ogallala aquifer

2-1/4 miles

NEDU 701

38°47'06" N 103°15'27" W

EXHIBIT I



Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703D96

Date Reported: 4/6/2017

CLIENT: Permits West

Project: Apache EDBU

Lab ID: 1703D96-001

Client Sample ID: EDBU Sec 15 Decky

Collection Date: 3/23/2017 5:20:00 PM

Received Date: 3/28/2017 2:48:00 PM

Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|--|--------|------|------|-------|----|----------------------|
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: LGT |
| Chloride | 760 | 25 | * | mg/L | 50 | 4/4/2017 8:53:46 PM |
| EPA METHOD 1664B | | | | | | Analyst: tnc |
| N-Hexane Extractable Material | ND | 10.1 | | mg/L | 1 | 3/29/2017 |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 1880 | 20.0 | * | mg/L | 1 | 3/31/2017 4:08:00 PM |

EXHIBIT I

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|---|---|
| Qualifiers: | * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| | D Sample Diluted Due to Matrix | E Value above quantitation range |
| | H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| | ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| | R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| | S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1703D96
Date Reported: 4/6/2017

CLIENT: Permits West
Project: Apache EDBU
Lab ID: 1703D96-002

Matrix: AQUEOUS

Client Sample ID: EDBU Sec 13 WM
Collection Date: 3/24/2017 9:41:00 AM
Received Date: 3/28/2017 2:48:00 PM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|--|--------|------|------|-------|----|----------------------|
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 330 | 10 | * | mg/L | 20 | 3/30/2017 8:55:56 PM |
| EPA METHOD 1664B | | | | | | Analyst: tnc |
| N-Hexane Extractable Material | ND | 9.69 | | mg/L | 1 | 3/29/2017 |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 1020 | 20.0 | * | mg/L | 1 | 3/31/2017 4:08:00 PM |

EXHIBIT I

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not InRange |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703D96

Date Reported: 4/6/2017

CLIENT: Permits West

Client Sample ID: EDBU Sec 23 Tank

Project: Apache EDBU

Collection Date: 3/24/2017 11:33:00 AM

Lab ID: 1703D96-003

Matrix: AQUEOUS

Received Date: 3/28/2017 2:48:00 PM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|--|--------|------|------|-------|----|----------------------|
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: LGT |
| Chloride | 490 | 25 | * | mg/L | 50 | 4/4/2017 9:06:11 PM |
| EPA METHOD 1664B | | | | | | Analyst: tnc |
| N-Hexane Extractable Material | ND | 10.9 | | mg/L | 1 | 3/29/2017 |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 1300 | 20.0 | * | mg/L | 1 | 3/31/2017 4:08:00 PM |

EXHIBIT I

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|---|---|
| Qualifiers: | * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| | D Sample Diluted Due to Matrix | E Value above quantitation range |
| | H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| | ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| | R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| | S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Analytical Report

Lab Order 1703D96

Date Reported: 4/6/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Permits West**Client Sample ID:** EDBU Sec 12 Tank**Project:** Apache EDBU**Collection Date:** 3/24/2017 1:16:00 PM**Lab ID:** 1703D96-004**Matrix:** AQUEOUS**Received Date:** 3/28/2017 2:48:00 PM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|--|--------|------|------|-------|----|----------------------|
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: LGT |
| Chloride | 800 | 25 | * | mg/L | 50 | 4/4/2017 9:18:35 PM |
| EPA METHOD 1664B | | | | | | Analyst: tnc |
| N-Hexane Extractable Material | ND | 9.89 | | mg/L | 1 | 3/29/2017 |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 2070 | 20.0 | * | mg/L | 1 | 3/31/2017 4:08:00 PM |

EXHIBIT I

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | | |
|--------------------|----|---|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 4 of 7 |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified | |
| | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703D96

06-Apr-17

Client: Permits West
Project: Apache EDBU

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|------------------|----------|-----------|------|----------|------|
| Sample ID | MB-30955 | SampType: | MBLK | TestCode: | EPA Method 1664B | | | | | |
| Client ID: | PBW | Batch ID: | 30955 | RunNo: | 41740 | | | | | |
| Prep Date: | 3/29/2017 | Analysis Date: | 3/29/2017 | SeqNo: | 1310477 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| N-Hexane Extractable Material | ND | 10.0 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-30955 | SampType: | LCS | TestCode: | EPA Method 1664B | | | | | |
| Client ID: | LCSW | Batch ID: | 30955 | RunNo: | 41740 | | | | | |
| Prep Date: | 3/29/2017 | Analysis Date: | 3/29/2017 | SeqNo: | 1310478 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| N-Hexane Extractable Material | 38.6 | 10.0 | 40.00 | 0 | 96.5 | 78 | 114 | | | |

EXHIBIT I

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703D96

06-Apr-17

Client: Permits West
Project: Apache EDBU

| | | | | | | | | | | |
|------------|--------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | MB | SampType: | MBLK | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | PBW | Batch ID: | R41765 | RunNo: | 41765 | | | | | |
| Prep Date: | | Analysis Date: | 3/30/2017 | SeqNo: | 1311558 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 0.50 | | | | | | | | |

| | | | | | | | | | | |
|------------|--------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS | SampType: | LCS | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSW | Batch ID: | R41765 | RunNo: | 41765 | | | | | |
| Prep Date: | | Analysis Date: | 3/30/2017 | SeqNo: | 1311559 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 4.8 | 0.50 | 5.000 | 0 | 96.5 | 90 | 110 | | | |

| | | | | | | | | | | |
|------------|--------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | MB | SampType: | MBLK | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | PBW | Batch ID: | A41898 | RunNo: | 41898 | | | | | |
| Prep Date: | | Analysis Date: | 4/4/2017 | SeqNo: | 1315920 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 0.50 | | | | | | | | |

| | | | | | | | | | | |
|------------|--------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS | SampType: | LCS | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSW | Batch ID: | A41898 | RunNo: | 41898 | | | | | |
| Prep Date: | | Analysis Date: | 4/4/2017 | SeqNo: | 1315921 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 4.6 | 0.50 | 5.000 | 0 | 92.1 | 90 | 110 | | | |

EXHIBIT I

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703D96

06-Apr-17

Client: Permits West
Project: Apache EDBU

| | | | | | |
|------------------------|-----------|----------------|-----------|-------------|--|
| Sample ID | MB-30994 | SampType: | MBLK | TestCode: | SM2540C MOD: Total Dissolved Solids |
| Client ID: | PBW | Batch ID: | 30994 | RunNo: | 41814 |
| Prep Date: | 3/30/2017 | Analysis Date: | 3/31/2017 | SeqNo: | 1312561 Units: mg/L |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Total Dissolved Solids | ND | 20.0 | | | |

| | | | | | |
|------------------------|-----------|----------------|-----------|-------------|--|
| Sample ID | LCS-30994 | SampType: | LCS | TestCode: | SM2540C MOD: Total Dissolved Solids |
| Client ID: | LCSW | Batch ID: | 30994 | RunNo: | 41814 |
| Prep Date: | 3/30/2017 | Analysis Date: | 3/31/2017 | SeqNo: | 1312562 Units: mg/L |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Total Dissolved Solids | 1020 | 20.0 | 1000 | 0 | 102 80 120 |

EXHIBIT I

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Form C-108
Affirmative Statement
Apache Corporation
Northeast Drinkard Unit
Section 15, T-21-S, R-37-E
Lea County, New Mexico

The extractions from the seismic data show no evidence of faulting at (or above) the Glorieta in this area and surface mapping from the USGS confirms that no faults are known at the surface. In addition, we have no empirical evidence that our injection operations at NEDU are affected by faulting at the Glorieta level, the evaporites, or the surface. Available geologic and engineering data has been examined and no evidence of open faults or hydrological connection between the injection zone and any underground sources of drinking water has been found.

A handwritten signature in black ink, appearing to read "J. Wagner", is written over a horizontal line.

Justin Wagner
Geologist I

8/14/2017

Date

EXHIBIT J

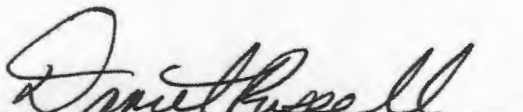


Affidavit of Publication

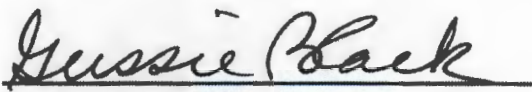
STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
September 24, 2017
and ending with the issue dated
September 24, 2017.

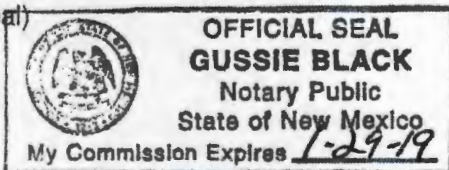

Publisher

Sworn and subscribed to before me this
24th day of September 2017.


Business Manager

My commission expires
January 29, 2019

(Seal)



LEGAL NOTICE
September 24, 2017

Apache Corporation is applying to convert the Northeast Drinkard Unit 701 well to a water injection well. The well is at 1980 FSL & 680 FWL, Sec. 15, T. 21 S., R. 37 E., Lea County, NM. This is 3 miles NNE of Eunice, NM. It will inject water into the Blinbry, Tubb, and Drinkard (maximum injection pressure = 1,375 psi) from 5,715' to 6,665'. Injection will be at a maximum rate of 2,000 bwpd. Interested parties must file objections or requests for hearing with the NM Oil Conservation Division, 1220 South Saint Francis Dr., Santa Fe, NM 87505 within 15 days. Additional information can be obtained by contacting: Brian Wood, Permits West, Inc., 37 Verano Loop, Santa Fe, NM 87508. Phone number is (505) 466-8120. #32097

02108485

00200011

BRIAN WOOD
PERMITS WEST
37 VERANO LOOP
SANTA FE, NM 87508

EXHIBIT K

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

PERMITS WEST, INC.

PROVIDING PERMITS for LAND USERS

37 Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

October 2, 2017

BLM
620 E. Greene
Carlsbad NM 88220

TYPICAL LETTER

Apache Corporation is planning (see attached application) to deepen and convert its Northeast Drinkard Unit 701 oil well to a water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection well. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: Northeast Drinkard Unit 701 (fee lease) ID: from 6654' to 6765

Proposed Injection Zones: Blinebry, Tubb, & Drinkard from 5715' to 6665'

Where: 1980' FSL & 660' FWL Sec. 15, T. 21 S., R. 37 E., Lea County, NM

Approximate Location: 3 air miles NNE of Eunice, NM

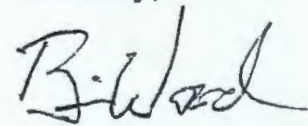
Applicant Name: Apache Corporation (432) 818-1167

Applicant's Address: 303 Veterans Airpark Lane, #3000, Midland, TX 79705

Submittal Information: Application for a water injection well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,



Brian Wood

7015 1660 0000 1563 1181

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☐ Adult Signature Required \$

☐ Adult Signature Restricted Delivery \$

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Total Postage and Fees \$ 8.34

Sent To BLM
620 E. Greene
Carlsbad NM 88220
APC NEDU 701

Street and Apt. No., or P.O. Box
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

QUICK SEND - CFC
OCT 03 2017
Postmark Here

EXHIBIT L

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☐ Return Receipt (electronic) \$

☐ Certified Mail Restricted Delivery \$

☐ Adult Signature Required \$

☐ Adult Signature Restricted Delivery \$

Postage \$ 224

Total Postage and Fees \$ 834

Sent To **Chevron USA Inc.**
6301 Deauville Blvd.
Midland-TX 79706
APC NEDU 701

Street and Apt. No., or P.O. Box
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Extra Services & Fees (check box, add fee as appropriate)

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☐ Return Receipt (electronic) \$

☐ Certified Mail Restricted Delivery \$

☐ Adult Signature Required \$

☐ Adult Signature Restricted Delivery \$

Postage \$ 224

Total Postage and Fees \$ 834

Sent To **Chevron USA Inc.**
PO Box 1635
Houston-TX 77254
APC NEDU 701

Street and Apt. No., or P.O. Box
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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☒ Return Receipt (hardcopy) \$ 275

☐ Return Receipt (electronic) \$

☐ Certified Mail Restricted Delivery \$

☐ Adult Signature Required \$

☐ Adult Signature Restricted Delivery \$

Postage \$ 224

Total Postage and Fees \$ 834

Sent To **Elliott Hall Co. UT LP**
PO Box 1231
Ogden UT 84402
APC NEDU 701

Street and Apt. No., or P.O. Box
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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☐ Return Receipt (electronic) \$

☐ Certified Mail Restricted Delivery \$

☐ Adult Signature Required \$

☐ Adult Signature Restricted Delivery \$

Postage \$ 224

Total Postage and Fees \$ 834

Sent To **Elliott Industries LP**
PO Box 1328
Santa Fe NM 87504
APC NEDU 701

Street and Apt. No., or P.O. Box
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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☒ Return Receipt (hardcopy) \$ 275

☐ Return Receipt (electronic) \$

☐ Certified Mail Restricted Delivery \$

☐ Adult Signature Required \$

☐ Adult Signature Restricted Delivery \$

Postage \$ 224

Total Postage and Fees \$ 834

Sent To **Key Energy Services, LLC**
1301 McKinney St., #1800
Houston TX 77010
APC NEDU 701

Street and Apt. No., or P.O. Box
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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☐ Certified Mail Restricted Delivery \$

☐ Adult Signature Required \$

☐ Adult Signature Restricted Delivery \$

Postage \$ 224

Total Postage and Fees \$ 834

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PO Box 1148
Santa Fe NM 87504
APC NEDU 701

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City, State, ZIP+4®

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☒ Return Receipt (hardcopy) \$ 275

☐ Return Receipt (electronic) \$

☐ Certified Mail Restricted Delivery \$

☐ Adult Signature Required \$

☐ Adult Signature Restricted Delivery \$

Postage \$ 224

Total Postage and Fees \$ 834

Sent To **Occidental Petroleum Ltd.**
PO Box 4294
Houston TX 77210
APC NEDU 701

Street and Apt. No., or P.O. Box
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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OFFICIAL USE

Certified Mail Fee \$ 335

Extra Services & Fees (check box, add fee as appropriate)

☒ Return Receipt (hardcopy) \$ 275

☐ Return Receipt (electronic) \$

☐ Certified Mail Restricted Delivery \$

☐ Adult Signature Required \$

☐ Adult Signature Restricted Delivery \$

Postage \$ 224

Total Postage and Fees \$ 834

Sent To **Oxy USA WTL LP**
PO Box 4294
Houston TX 77210
APC NEDU 701

Street and Apt. No., or P.O. Box
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

EXHIBIT L

SENDER: COMPLETE THIS SECTION

■ Complete items 1, 2, and 3.
■ Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to:

[Redacted]

2. Article Number (Transfer from service label)

7015 1660 0000 1583 1181

PS Form 3811, July 2015 PSN 7530-02-000-9003

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [Signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery
[Signature] 10/16/17

D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

BLM
620 E. Greene
Carlsbad NM 88220

3. Service Type
☐ Adult Signature ☐ Priority Mail Express®
☐ Adult Signature Restricted Delivery ☐ Registered Mail™
☐ Certified Mail® ☐ Registered Mail Restricted Delivery
☐ Certified Mail Restricted Delivery ☐ Return Receipt for Merchandise
☐ Collect on Delivery ☐ Signature Confirmation™
☐ Collect on Delivery Restricted Delivery ☐ Signature Confirmation Restricted Delivery
☐ Insured Mail ☐ Signature Confirmation Restricted Delivery (over \$500)
☐ Insured Mail Restricted Delivery (over \$500)

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

■ Complete items 1, 2, and 3.
■ Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to:

[Redacted]

2. Article Number (Transfer from service label)

7015 1660 0000 1583 1211

PS Form 3811, July 2015 PSN 7530-02-000-9003

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [Signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery
[Signature] 10/16/17

D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

Chevron USA Inc.
6301 Deauville Blvd.
Midland TX 79706

3. Service Type
☐ Adult Signature ☐ Priority Mail Express®
☐ Adult Signature Restricted Delivery ☐ Registered Mail™
☐ Certified Mail® ☐ Registered Mail Restricted Delivery
☐ Certified Mail Restricted Delivery ☐ Return Receipt for Merchandise
☐ Collect on Delivery ☐ Signature Confirmation™
☐ Collect on Delivery Restricted Delivery ☐ Signature Confirmation Restricted Delivery
☐ Insured Mail ☐ Signature Confirmation Restricted Delivery (over \$500)
☐ Insured Mail Restricted Delivery (over \$500)

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

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■ Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to:

[Redacted]

2. Article Number (Transfer from service label)

7015 1660 0000 1583 1259

PS Form 3811, July 2015 PSN 7530-02-000-9003

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [Signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery
[Signature] 10/10/17

D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

Key Energy Services, LLC
1301 McKinney St., #1800
Houston TX 77010

3. Service Type
☐ Adult Signature ☐ Priority Mail Express®
☐ Adult Signature Restricted Delivery ☐ Registered Mail™
☐ Certified Mail® ☐ Registered Mail Restricted Delivery
☐ Certified Mail Restricted Delivery ☐ Return Receipt for Merchandise
☐ Collect on Delivery ☐ Signature Confirmation™
☐ Collect on Delivery Restricted Delivery ☐ Signature Confirmation Restricted Delivery
☐ Insured Mail ☐ Signature Confirmation Restricted Delivery (over \$500)
☐ Insured Mail Restricted Delivery (over \$500)

Domestic Return Receipt

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1. Article Addressed to:

[Redacted]

2. Article Number (Transfer from service label)

7015 1660 0000 1583 1242

Form 3811, July 2015 PSN 7530-02-000-9003

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [Signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery
[Signature] 10/10/17

D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

Ellioo Industries LP
PO Box 1328
Santa Fe NM 87504

3. Service Type
☐ Adult Signature ☐ Priority Mail Express®
☐ Adult Signature Restricted Delivery ☐ Registered Mail™
☐ Certified Mail® ☐ Registered Mail Restricted Delivery
☐ Certified Mail Restricted Delivery ☐ Return Receipt for Merchandise
☐ Collect on Delivery ☐ Signature Confirmation™
☐ Collect on Delivery Restricted Delivery ☐ Signature Confirmation Restricted Delivery
☐ Insured Mail ☐ Signature Confirmation Restricted Delivery (over \$500)
☐ Insured Mail Restricted Delivery (over \$500)

Domestic Return Receipt

EXHIBIT L

SENDER: COMPLETE THIS SECTION

Complete items 1, 2, and 3.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

2. Article Number (Transfer from service label)

7015 1660 0000 1583 1235

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X

☒ Agent
☐ Addressee

B. Received by (Printed Name)
T. Jackson

C. Date of Delivery
10/12/17

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

Elliott Hall Co. UT LP
PO Box 1231
Ogden UT 84402

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery (\$500)

☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

SENDER: COMPLETE THIS SECTION

Complete items 1, 2, and 3.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

Article Number (Transfer from service label)

7015 1660 0000 1583 1266

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X

☐ Agent
☐ Addressee

B. Received by (Printed Name)
JULIA - 6 2017

C. Date of Delivery
JUL 6 2017

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

NM State Land Office
PO Box 1148
Santa Fe NM 87504

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery (\$500)

☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

SENDER: COMPLETE THIS SECTION

Complete items 1, 2, and 3.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

Article Number (Transfer from service label)

7015 1660 0000 1583 1273

Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X

☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

Occidental Permian Ltd.
PO Box 4294
Houston TX 77210

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery (\$500)

☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

SENDER: COMPLETE THIS SECTION

Complete items 1, 2, and 3.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

Article Number (Transfer from service label)

9590 9402 2329 6225 4771 26

Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X

☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

Oxy USA WTP LP
PO Box 4294
Houston TX 77210

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery (over \$500)

☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

EXHIBIT L



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON

August 13, 2002

Lori Wrotenbery

Director

Oil Conservation Division

Governor
Betty Rivera
Cabinet Secretary

Apache Corporation
6120 S. Yale, Suite 1500
Tulsa, Oklahoma 74136

Attn: Mr. Kevin Mayes

**RE: Injection Pressure Increase, -185
Northeast Drinkard Unit
Waterflood Project
Lea County, New Mexico**

Dear Mr. Mayes:

Reference is made to your request dated July 25, 2002, to increase the surface injection pressure on all injection wells within the above-referenced water flood project. This request is based on recent step rate tests conducted on twelve (12) injection wells during 2002. Test results have been reviewed, and we feel an increase in injection pressure is justified at this time.

You are therefore authorized to increase the surface injection pressure on all current injection wells within this water flood to a maximum surface injection pressure of 1375 psig. In addition, you are authorized to increase the surface injection pressures on the twelve (12) test wells to the pressures as shown on the attached Exhibit "A".

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected fluid is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

Lori Wrotenbery (wv)
Lori Wrotenbery
Director

LW/wvj

cc: Oil Conservation Division - Hobbs

Files: R-8541; IPI-2002; WFX-576, 579, 583, 624, 674, 722, 740, 752, 759, and 774
Attachment

Exhibit "A"
Apache Corporation
Northeast Drinkard Unit (NEDU)
Township 21 South, Range 37 East, NMPM, Lea County, New Mexico
Injection Pressure Increases

| <i>Injection Well</i> | <i>Top Perf Depth Feet</i> | <i>Maximum Surface Injection Pressure PSIG</i> | <i>Order Number</i> |
|---|------------------------------------|--|-------------------------|
| NEDU Well No. 111, API No. 30-025-26670 | 5807 | 2160 | R-8541 |
| NEDU Well No. 115, API No. 30-025-06340 | 5866 | 2240 | R-8541 |
| NEDU Well No. 210, API No. 30-025-06502 | 6576 | 2250 | WFX-722 |
| NEDU Well No. 215, API No. 30-025-06341 | 5767 | 1970 | WFX-722 |
| NEDU Well No. 303, API No. 30-025-06512 | 6528 | 1710 | R-8541 |
| NEDU Well No. 308, API No. 30-025-06494 | 6566 | 1920 | WFX-674 |
| NEDU Well No. 403, API No. 30-025-06449 | 5716 | 1900 | R-8541 |
| NEDU Well No. 605, API No. 30-025-06613 | 5698 | 1375 | R-8541 |
| NEDU Well No. 709, API No. 30-025-06595 | 5748 | 1790 | R-8541 |
| NEDU Well No. 806, API No. 30-025-06727 | 5578 | 1400 | WFX-759 |
| NEDU Well No. 911, API No. 30-025-06760 | 5469 | 1375 | WFX-759 |
| NEDU Well No. 913, API No. 30-025-09932 | 5557 | 1375 | WFX-579 |



C-108 Review Checklist: Received 10/18/2017 Add. Request: _____ Reply Date: _____ Suspended: _____ [Ver 15]

ORDER TYPE: WFX / PMX / SWD Number: _____ Order Date: _____ Legacy Permits/Orders: 11-8544
FBI-185

Well No. 701 Well Name(s): WBD 4

10-10-9947 Q

API: 30-0 25-09 916 Spud Date: _____ New or Old: _____ (UIC Class II Primacy 03/07/1982)

Footages 1980 FSL 660 FUL Lot _____ or Unit L Sec 15 Tsp 215 Rge 37E County LEG

General Location: 2 miles W/Elnora Pool: ELNORA, BLI-TU-DRE, WORTH Pool No.: 22900

BLM 100K Map: JAL Operator: Apache Corp OGRID: 873 Contact: Wood's Agent

COMPLIANCE RULE 5.9: Total Wells: 2943 Inactive: 2 Fincl Assur: OK Compl. Order? Y IS 5.9 OK? OK Date: 11-03-2017

WELL FILE REVIEWED ☐ Current Status: Active

WELL DIAGRAMS: NEW: Proposed ☒ or RE-ENTER: Before Conv. ☐ After Conv. ☐ Logs in Imaging: _____

Planned Rehab Work to Well: _____

| Well Construction Details | | Sizes (in) Borehole / Pipe | Setting Depths (ft) | Cement Sx or Cf | Cement Top and Determination Method |
|-----------------------------|-------------|-------------------------------|------------------------|--------------------|-------------------------------------|
| Planned ___ or Existing ___ | Surface | <u>17 1/2" / 13 3/8"</u> | <u>224</u> | <u>210</u> | <u>SURFACE / VISUAL</u> |
| Planned ___ or Existing ___ | Interm/Prod | <u>11 7/8"</u> | <u>285</u> | <u>8W</u> | <u>SURFACE / VISUAL</u> |
| Planned ___ or Existing ___ | Interm/Prod | <u>7 7/8" / 5 1/2"</u> | <u>6652</u> | <u>600</u> | <u>325' / Calculated</u> |
| Planned ___ or Existing ___ | Prod Line | <u>4 3/4" / 4 1/2"</u> | <u>6765</u> | <u>250</u> | <u>SURFACE</u> |
| Planned ___ or Existing ___ | Liner | | | | |
| Planned ___ or Existing ___ | OH / PERF | <u>5715 / 6663</u> | | | |

| Injection Lithostratigraphic Units | Depths (ft) | Injection or Confining Units | Tops | Completion/Operation Details: |
|------------------------------------|-------------|------------------------------|-------------|--|
| Adjacent Unit: Litho. Struc. Por. | | <u>BL</u> | <u>5549</u> | Drilled TD <u>6654</u> PBDT _____ |
| Confining Unit: Litho. Struc. Por. | | <u>TL</u> | <u>645</u> | NEW TD <u>6765</u> NEW PBDT <u>6750</u> |
| Proposed Inj Interval TOP: | | <u>DR</u> | <u>6442</u> | NEW Open Hole <input type="radio"/> or NEW Perf <input checked="" type="radio"/> |
| Proposed Inj Interval BOTTOM: | | <u>ALU</u> | <u>6678</u> | Tubing Size _____ in. Inter Coated? _____ |
| Confining Unit: Litho. Struc. Por. | | | | Proposed Packer Depth _____ ft |
| Adjacent Unit: Litho. Struc. Por. | | | | Min. Packer Depth _____ (100-ft limit) |
| | | | | Proposed Max. Surface Press. _____ psi |
| | | | | Admin. Inj. Press. _____ (0.2 psi per ft) |

AOR: Hydrologic and Geologic Information

POTASH: R-111-P _____ Noticed? _____ BLM Sec Ord ☐ WIPP ☐ Noticed? _____ Salt/Salado T: _____ B: _____ NW: Cliff House fm _____

FRESH WATER: Aquifer Quaternary Max Depth 80 HYDRO AFFIRM STATEMENT By Qualified Person ☐

NMOSE Basin: Capitan CAPITAN REEF: thru adj NA No. Wells within 1-Mile Radius? 4 FW Analysis Y

Disposal Fluid: Formation Source(s) Produced H₂O Analysis? Y On Lease ☒ Operator Only ☐ or Commercial ☐

Disposal Int: Inject Rate (Avg/Max BWPD): 1.5K/2.0K Protectable Waters? _____ Source: _____ System: Closed or Open

HC Potential: Producing Interval? Y Formerly Producing? _____ Method: Logs/DST/P&A/Other _____ 2-Mile Radius Pool Map ☐

AOR Wells: 1/2-M Radius Map? _____ Well List? _____ Total No. Wells Penetrating Interval: _____ Horizontals? _____

Penetrating Wells: No. Active Wells 47 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

Penetrating Wells: No. P&A Wells 5 Num Repairs? _____ on which well(s)? _____ Diagrams? X

NOTICE: Newspaper Date Sept 24, 2017 Mineral Owner BLM Surface Owner Apache N. Date 10/16/2017

RULE 26.7(A): Identified Tracts? Y Affected Persons: Chevron, Elliott Hall, Oxy N. Date _____

Order Conditions: Issues: NR ** Provide GR/CBL COLLECTION logs

add Order Cond: Run C-B-L from base line to

Success