9/11/2014 DATE IN	SUSPENSE	PRG ENGINEER	9/4/2014 LOGGED IN	WFX TYPE	PMAM1425446266 APP NO.

ABOVE THIS LINE FOR DIVISION USE ONLY

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

RECEIVED OCD
2014 SEP 11 P 12:15

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

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

- WFX 938
- Apache Corporation
- 873
- well
- Northeast Drinkard Unit #301
- 30-025-06388
- Pool
- Eunice; Bli-Tu-Dr, North
- 22900

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
■ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ■ Offset Operators, Leaseholders or Surface Owner

[C] ■ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ■ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **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.

David Catanach	David Catanach	Agent-Apache Corporation
Print or Type Name	Signature	Title
	9/11/14	drcatanach@netscape.com
	Date	E-Mail Address

September 11, 2014

Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Attention: Ms. Jami Bailey, CPG
Division Director

HAND DELIVERED

Re: Form C-108
Apache Corporation
Northeast Drinkard Unit Well No. 301 (API No. 30-025-06388)
Section 3, Township 21 South, Range 37 East, NMPM,
North Eunice Blinebry-Tubb-Drinkard Pool (22900)
Lea County, New Mexico

Dear Ms. Bailey,

Enclosed please find a Division Form C-108 (Application for Authorization to Inject) to expand the Northeast Drinkard Unit Waterflood Project. Division Order No. R-8540, dated November 9, 1987 approved the statutory unitization of the Northeast Drinkard Unit Area ("Unit Area") and Division Order No. R-8541, as amended, dated November 9, 1987 approved secondary recovery operations within the Unit Area. Apache Corporation proposes to convert the Northeast Drinkard Unit No. 301 located 1980 feet from the South line and 660 feet from the West line (Unit T) of Section 3, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, to injection in order to complete an efficient production/injection pattern within the Unit Area.

All the required information is enclosed. If additional information is needed, please contact me at (505) 690-9453.

Sincerely,

David Catanach

David Catanach
Agent for Apache Corporation
303 Veterans Airpark Lane, Suite 3000
Midland, Texas 79705

Xc: OCD-Hobbs

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: __X__ Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? __X__ *Yes* _____ *No*

II. OPERATOR: Apache Corporation (OGRID-873)

ADDRESS: 303 Veterans Airpark Lane, Suite 3000 Midland, Texas 79705

CONTACT PARTY: David Catanach-Agent PHONE: (505) 690-9453

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? __X__ Yes _____ No
If yes, give the Division order number authorizing the project: Order No. R-8541, as amended, entered in Case No. 9232 on November 9, 1987.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate 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: David Catanach TITLE: Agent-Apache Corporation

SIGNATURE: David Catanach DATE: 9/11/14

E-MAIL ADDRESS: drcatanach@netscape.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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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.

C-108 Application
Apache Corporation
Northeast Drinkard Unit No. 301
Section 3, T-21S, R-37E, NMPM
Lea County, New Mexico

I. The purpose of the application is to request approval to convert the Northeast Drinkard Unit Well No. 301 to water injection within the Northeast Drinkard Unit Waterflood Project, North Eunice Blinebry-Tubb-Drinkard Pool, Lea County, New Mexico, in order to complete an efficient production/injection pattern within this secondary recovery project.

II. Apache Corporation ("Apache")
303 Veterans Airpark Lane, Suite 3000
Midland, Texas 79705
Contact Party: Mr. David Catanach (505) 690-9453

III. Well schematic diagrams showing the current and proposed wellbore configurations are attached. Also included are work-over procedures detailing how the Northeast Drinkard Unit No. 301 is going to be converted from a producing well to an injection well. **Please note that Apache proposes to initially complete the subject well only within the Blinebry-Tubb formation through perforations from 5,741 feet to 6,151 feet. The Drinkard interval may be perforated at a later date, and consequently, Apache requests that the approved injection interval comprise the "Unitized Formation" as defined by Order No. R-8541 as "the Blinebry, Tubb and Drinkard formations which extend from an upper limit of 5,530 feet (2,101feet sub-sea) to a lower limit of 6,680 feet (3,251 feet sub-sea) on the log run June 21, 1951 on the Shell Argo Well No. 8 located 660 feet from the South line and 2310 feet from the West line of Section 15, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico".**

IV. This is an expansion of the Northeast Drinkard Unit Waterflood Project. Division Order No. R-8540 dated November 9, 1987 approved the statutory unitization of the Northeast Drinkard Unit Area ("Unit Area") and Division Order No. R-8541 dated November 9, 1987 approved secondary recovery operations within the Unit Area.

V. Enclosed is a map that identify all wells/leases within a 2-mile radius of the proposed injection well and a map that identifies the ½ mile "Area of Review" ("AOR").

VI. Attached is the complete listing of wells within the AOR of the Northeast Drinkard Unit No. 301. An examination of AOR well data indicates that all wells are constructed and/or plugged in such a manner so as to confine the injected fluid to the proposed injection interval.

VII. 1. The average water injection rate is 250 BWPD, and the maximum injection rate is 500 BWPD. If the average or maximum rates increase in the future, the Division will be notified.

2. This will be a closed system.

3. The proposed surface injection pressure will be in compliance with Division Order No. IPI-185 dated August 13, 2002 (copy attached), which order authorized a surface injection pressure of 1,375 psi on a unit-wide basis within the Northeast Drinkard Unit. If a higher injection pressure is necessary, Apache will conduct a step rate injection test to determine the fracture pressure of the injection interval.

4. Produced water from the North Eunice Blinebry-Tubb-Drinkard Pool originating from wells within the Unit Area will be re-injected into the subject injection well. If additional make-up water is necessary Apache will utilize San Andres produced water from a water source well.

5. Injection is to occur into a formation that is oil productive.

VIII. The formations being targeted for water injection are the Blinebry and Drinkard at depths ranging from approximately 5,500 feet to 6,800 feet. These formations are Leonardian in age and are a sequence of shallow marine carbonates, which have for the most part been dolomatized. A five percent porosity cut off is used to determine "pay" as porosity less than this is considered non-productive at the existing and proposed reservoir pressures and reservoir fluid regimes. The vertical extent of the reservoir is limited top and bottom by impermeable shales and carbonates. Data obtained from the New Mexico State Engineer indicates that there two Ogallala fresh water wells in this area that are approximately 90 feet deep.

IX. A stimulation treatment may be performed on the injection well with a 15% HCL-NE-FE BXDX acid w/scale inhibitor and rock salt in 3 equal stages at +/- 10 BPM.

X. Logs were filed at the time of drilling.

XI. This data was previously submitted in Case No. 9232. If necessary, Apache can obtain an additional fresh water sample and provide a water analysis to the Division.

XII. Affirmative statement is enclosed.

XIII. Proof of Notice is enclosed.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State [ ] Fee [X]
5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name

2. Name of Operator: SHELL OIL COMPANY

8. Farm or Lease Name: LIVINGSTON

3. Address of Operator: P. O. BOX 991, HOUSTON, TX 77001

9. Well No.: 11

4. Location of Well: UNIT LETTER M, 3300 FEET FROM THE SOUTH LINE AND 660 FEET FROM THE WEST LINE, SECTION 3 TOWNSHIP 21-S RANGE 37-E NMPM.

10. Field and Pool, or Wildcat: TUBB OIL AND GAS

15. Elevation (Show whether DF, RT, GR, etc.): 3434' GL, 3443' DF

12. County: LEA

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER ABANDON BLINEBRY AND DRINKARD ZONES [X]	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

3-15-83: Pumped 25 sx poz mix cement down Drinkard tbg @ 6520'. WOC 24 hrs.
3-16-83: Pumped 25 sx 75/25 poz mix cement down Blinebry tbg @ 5620'. WOC 24 hrs.
3-17-83: Tagged TOC in Drinkard tbg @ 5836'. Spotted 5 sx cement plug @ 5705'. WOC 24 hrs.
3-18-83: Spotted 5 sx cement plug in Drinkard tbg @ 3987', 3430' and 2600'. Tagged TOC in Blinebry tbg @ 5450'. WOC 24 hrs.
3-23-83: Spotted 5 sx cement plugs in Blinebry tbg 3987', 3430', 2600' and 1050'. Spotted 5 sx cement plug in Drinkard tbg @ 1050'. Pumped 115 sx Class "C" cement down Drinkard tbg and 185 sx Class "C" cement down Blinebry tbg. WOC 24 hrs.
3-25 to 3-29-83: Found leak in Tubb tbg string between 709' and 810'. Pumped 50 sx Class "C" neat cement followed by 10 sx Class "C" w/.4% HR-5. WOC 24 hrs. Tagged TOC @ 661'. Drilled out cement to 765' and cleaned out to 6140'.
4-03-83: Began flowing well to test tank. Tubb zone returned to production.

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

SIGNED A. J. FORE TITLE SUPERVISOR REG. & PERMITTING DATE JULY 28, 1983

ORIGINAL SIGNED BY JERRY SEXTON
DISTRICT I SUPERVISOR

AUG 1 1983

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

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

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.

5. Indicate Type of Lease STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: NORTHEAST DRINKARD UNIT

1. Type of Well: OIL WELL ☐ GAS WELL ☐ OTHER INJECTOR

2. Name of Operator: SHELL WESTERN E & P INC. (4435 WCK)

8. Well No.: 205

3. Address of Operator: P.O. BOX 576, Houston, TX 77001-0576

9. Pool name or Wildcat: NORTH EUNICE BLINEBRY-TUBB-DRINKARD OIL & GAS

4. Well Location
Unit Letter M : 3300 Feet From The South Line and 660 Feet From The West Line

Section 3 Township 21-S Range 37-E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3434' GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	PLUG AND ABANDONMENT	☐
PULL OR ALTER CASING	☐			CASING TEST AND CEMENT JOB	☐		
OTHER:	☐			OTHER: Cmt sqzd, perf'd, acd & CTI (Order #R-8541)	☒		

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

2-27 to 3-23-89:
POH w/prod equip (2-1/16" tbg). Could not estab inj rt. Dmpd 210 gals 15% NEFE HCl dwn tbg. Tagged fill @ 6190'. CO to 6370', could not make further hole. Tagged fill @ 6365'. Set pkr @ 5597'. Sqzd Tubb perfs 6133' - 6363' w/25 SX Cls "C" cmt + .3% CF-1 followed by 25 sx Cls "C" cmt + 2% $CaCl_2$. POH w/pkr. DO cmt 5596' - 6302'. Pres tstd sqz to 500#, held OK. Cont drlg cmt to 6363'. Drld on fill 6363' - 6430'. Pres tstd hole to 500#, held OK. Perf'd Blinebry/Tubb 5714' - 6145' (1 JSPF & 1 JSP2F). Acd perfs 5783'-6145' w/4200 gals 15% HCl. DO CIBP @ 6430' & pushed remains to btm. Drld up BP & CO to 6688'. Perf'd Drinkard 6508' - 6687' (1 JSPF & 1 JSP2F). Acd perfs 6508'-6687' w/3150 gals 15% HCl.
week of 3-27-89: Began tempory inj dwn csg to obtain tracer survey.

(CONT'D ON REVERSE SIDE)

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

SIGNATURE J. H. Smitherman TITLE REGULATORY SUPV. DATE 5-18-89

TYPE OR PRINT NAME J. H. SMITHERMAN (713) 870-3797 TELEPHONE NO.

(This space for State Use)

APPROVED BY ORIGINAL SIGNED BY JERRY SEXTON DISTRICT I SUPERVISOR TITLE DATE MAY 23 1989

CONDITIONS OF APPROVAL, IF ANY:

E

Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

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

OIL CONSERVATION DIVISION

P.O. BOX 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.
30-025-06521

5. Indicate Type of Lease ☐ STATE ☑ FEE

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
NE Drinkard Unit

1. Type of Well:
☑ OIL WELL ☐ GAS WELL ☐ OTHER

2. Name of Operator
APACHE CORPORATION

8. Well No.
205

3. Address of Operator
2000 POST OAK BLVD., SUITE 100, HOUSTON, TX 77056-4400

9. Pool name or Wildcat
Eunice N, BTD

4. Well Location
Unit Letter M : 3300' Feet From The South Line and 660' Feet From The West Line
Section 3 Township 21S Range 37E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)
GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
☐ Perform Remedial Work	☐ Plug and Abandon	☐ Remedial Work	☐ Altering Casing
☐ Temporarily Abandon	☐ Change Plans	☐ Commence Drilling Operations	☑ Plug and Abandonment
☐ Pull or Alter Casing		☐ Casing Test and Cement Job	
☐ Other		☐ Other	

12. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

2/22/96 Filled 2-7/8" csg. to surface with cement. Cut off csg & wellhead and installed dry hole marker. Cleaned location. Well permanently abandoned.

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

SIGNATURE Deborah K. Hoyt TITLE Engineering Technician DATE 7/15/98

TYPE OR PRINT NAME Deborah K. Hoyt TELEPHONE NO. 713-296-7152

(This space for State Use)

APPROVED BY Terry W. Gilbert TITLE OIL & GAS INSPECTOR DATE AUG 18 1998

CONDITIONS OF APPROVAL, IF ANY:

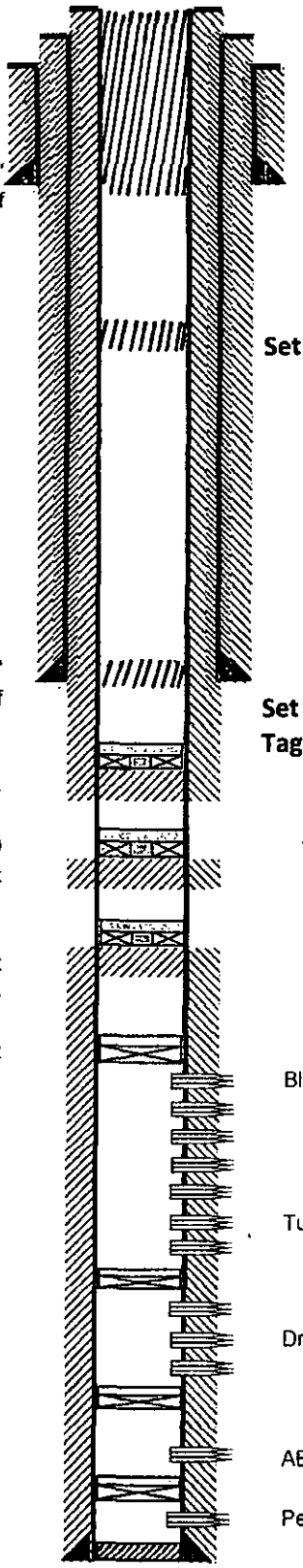
HWW
JCS

dp

Apache

WELL BORE INFO.

LEASE NAME	NORTHEAST DRINKARD UNIT
WELL #	203
API #	30-025-06398
COUNTY	LEA



Set 40 sx. cmt. plug 333'-Surface

13 3/8" csg @ 283'
w/250 sx cmt to surf

Set 25 sx. cmt. plug @ 1,572'

8 5/8" csg @ 3151'
w/2300 sx cmt CIRC to surf

Set 40 sx. cmt. plug @ 3,201'
Tagged @ 2,851'

CICR @ 3670
Sqzd w/650 sx CIRC

CICR @ 3830
w/50 sx cmt wouldn't sqz

CICR @ 4123'
Sqzd w/115 sx cmt
TOC 4255' by TS

CIBP @ 5500' w/35' cmt

Blinebry perfs @ 5552'-6001'

Tubb perfs @ 6106'-6463'

CIBP @ 6525' w/35' cmt

Drinkard perfs @ 6572'-6784'

CIBP @ 6900' w/35' cmt

CIBP @ 7320' W/ 1 sx cmt

ABO perfs @ 7024'-7284'

Perfs @ 7350'-7388'

5-1/2" csg @ 7435'
w/550 sx cmt TOC 4255' by TS

TD @ 7436'

Apache Corporation
Form C-108: NEDU No. 301
PA Schematic
NEDU Well No. 203

Submit 3 Copies To Appropriate District Office
District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W. Grand Ave , Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S St Francis Dr., Santa Fe, NM 87505

HOBBS OCD
OCT 0 5 2011
RECEIVED

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

WELL API NO.	30-025-06398
5. Indicate Type of Lease	STATE ☐ FEE ☒
6. State Oil & Gas Lease No.	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS)

7. Lease Name or Unit Agreement Name	Northeast Drinkard Unit (NEDU)
8. Well Number	203
1. Type of Well: Oil Well ☒ Gas Well ☐ Other	
2. Name of Operator	Apache Corporation
9. OGRID Number	873
3. Address of Operator	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
10. Pool name or Wildcat	Eunice; Bl-Tu-Dr, North (22900)

4. Well Location
Unit Letter P : 3200' feet from the S line and 660' feet from the E line
Section 4 Township 21S Range 37E NMPM County Lea

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 3474' GL

Pit or Below-grade Tank Application ☐ or Closure ☐
Pit type_____ Depth to Groundwater_____ Distance from nearest fresh water well_____ Distance from nearest surface water N/A
Pit Liner Thickness: ____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☒
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
OTHER: drill out & add Plugs ☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

9/23/11 **Tagged existing CICR @ 3670'. Circ hole w/mlf.** Pressure test to 500 #SI Held.
TBG @ 3201' combine plugs (3201' – 2945'). Spot 40 sxs & tag @ 2851'. (OCD advised)

9/26/11 **TBG @ 1572'. Spot 25 sxs disp toc to 1325'.**
TBG @ 333'. Circ 40 sxs cmt to surface. RDMO. Cut off WH, anchors, install dry hole marker, and clean location.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE Randall Minear TITLE **P &A Supervisor (Basic Energy Services)** DATE **9-30-11**

Type or print name: **Randall Minear** E-mail address: Telephone No. 432-563-3355

For State Use Only

APPROVED BY: E Rogers TITLE STAFF MGR DATE 10-6-2011
Conditions of Approval (if any):

Approved for plugging of well bore only. Liability under bond is retained pending receipt of C-103 (Subsequent Report of Well Plugging) which may be found at OCD Web Page under Forms, www.emnrd.state.nm.us/ocd.

OCT 0 6 2011

Baker Petrolite

from WFX-784

South Permian Basin Region
10520 West I-20 East
Odessa, TX 79765
(915) 498-9191
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	
Sampling Date:	10/3/02
Analysis Date:	10/4/02
Analyst:	SHEILA HERNANDE
TDS (mg/l or g/m3):	20702.9
Density (g/cm3, tonne/m3):	1.015
Anion/Cation Ratio:	1.000000
Carbon Dioxide:	80 PPM
Oxygen:	
Comments:	

Analysis of Sample 223099 @ 75 °F

Anions	mg/l	meq/l
Chloride:	10085.0	284.49
Bicarbonate:	671.0	11.
Carbonate:	0.0	0.
Sulfate	2465.0	51.32
Phosphate:		
Borate:		
Silicate:		
Hydrogen Sulfide:		90 PPM
pH at time of sampling:		7.5
pH at time of analysis:		
pH used in Calculation:		7.5

Cations	mg/l	meq/l
Sodium:	5799.5	252.26
Magnesium:	439.0	36.11
Calcium:	1099.0	54.84
Strontium:	28.0	0.64
Barium:	0.1	0.
Iron:	0.3	0.01
Potassium:	115.0	2.94
Aluminum:		
Chromium:		
Copper:		
Lead:		
Manganese:		
Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
		Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$		CO_2 Press
Temp	Gauge Press.	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
°F	psi											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	-0.08	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	3.76	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 G

Apache Corporation
Form C-108: NEDU No. 301
Produced Water Analysis

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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00552			LE	2	4	04	21S	37E		672700	3598022*	90	75	15
CP 00553			LE	2	4	04	21S	37E		672700	3598022*	90	75	15

Average Depth to Water: **75 feet**

Minimum Depth: **75 feet**

Maximum Depth: **75 feet**

Record Count: 2

PLSS Search:

Section(s): 3, 4, 9, 10 **Township:** 21S **Range:** 37E

Apache Corporation
Form C-108: NEDU No. 301
Fresh Water Well Data

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

Form C-108
Affirmative Statement
Apache Corporation
Northeast Drinkard Unit No. 301
Section 3, T-21 South, R-37 East, NMPM,
Lea County, New Mexico

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.

David Catanach
Agent for Apache Corporation

9/11/14
Date

Apache Corporation
Form C-108: Northeast Drinkard Unit No. 301
Section 3, T-21 South, R-37 East, NMPM
Lea County, New Mexico

Offset Operator/Leasehold Owner/Surface Owner Notification List

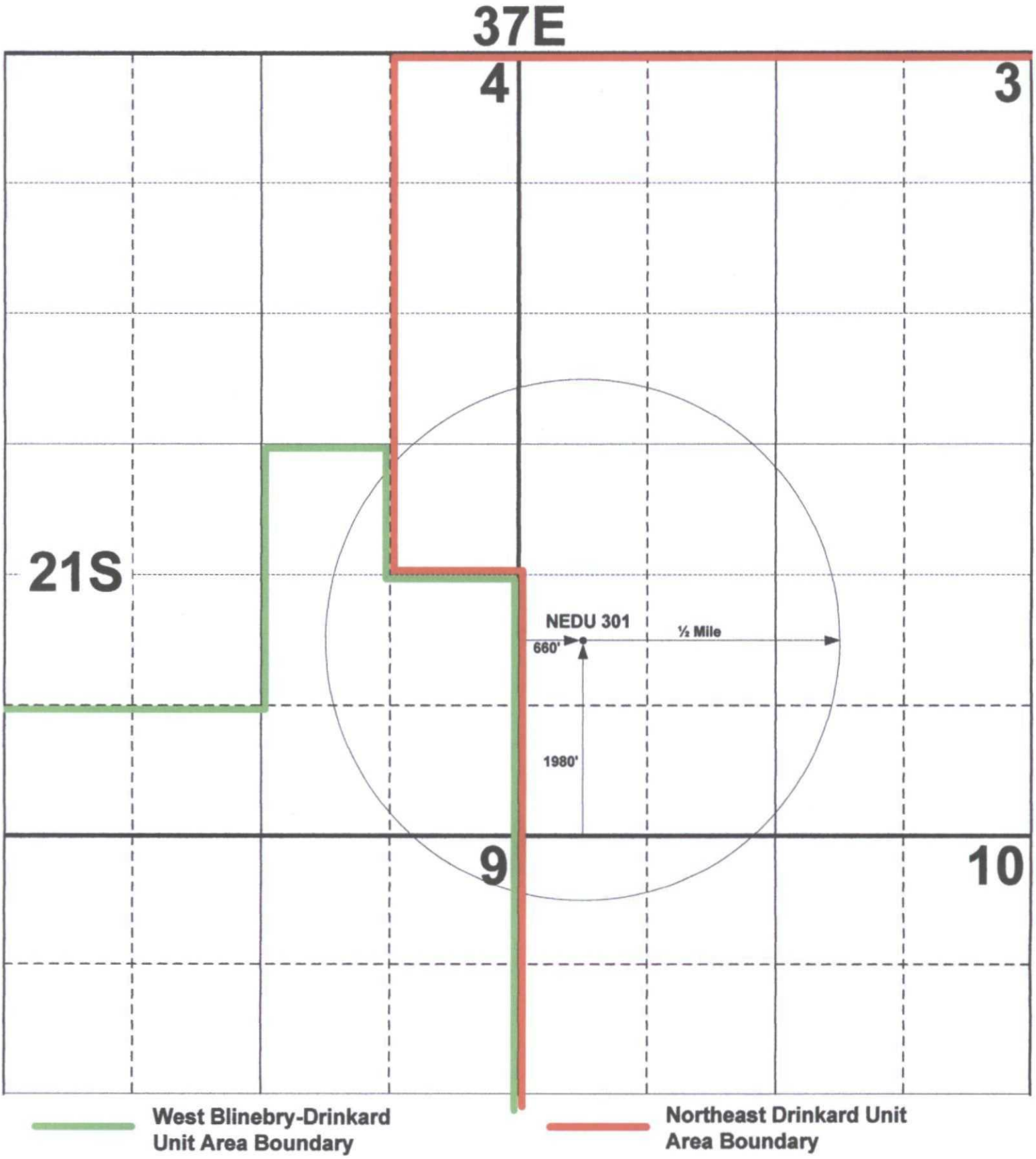
All acreage within the ½ mile notice area for the Northeast Drinkard Unit No. 301 is located within the Northeast Drinkard Unit Waterflood Project or the West Blinebry Drinkard Unit Waterflood Project. Both of these Units/Secondary Recovery Projects are operated by Apache Corporation in the North Eunice Blinebry-Tubb-Drinkard Pool (**See Attached Lease Map**). The surface owner at the well location of the Northeast Drinkard Unit No. 301 is Vanguard Permian, LLC. In accordance with Division rules, notice of this application is being provided as follows:

Surface Owner: Northeast Drinkard Unit No. 301

Vanguard Permian, LLC
4001 Penbrook, Suite 201
Odessa, Texas 79762
Attn: Vickie Tompkins

Additional Notice

OCD-Hobbs District Office



Apache Corporation
Form C-108: NEDU Well No. 301
½ Mile Notice Area Map

September 11, 2014

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

TO: Vanguard Permian, LLC
4001 Penbrook, Suite 201
Odessa, Texas 79762
Attn: Vickie Tompkins

Re: Apache Corporation
Form C-108 (Application for Authorization to Inject)
Northeast Drinkard Unit No. 301
Section 3, T-21S, R-37E, NMPM,
Lea County, New Mexico

Ladies & Gentlemen:

Enclosed please find a copy of Oil Conservation Division Form C-108 (Application for Authorization to Inject) for the Apache Corporation Northeast Drinkard Unit No. 301. As the owner of the surface where the injection well is located, you are being provided a copy of the application as per Division rules. Apache Corporation proposes to convert the Northeast Drinkard Unit No. 301 to injection within the existing Northeast Drinkard Unit Waterflood Project in order to complete an efficient production/injection pattern within the Northeast Drinkard Unit ("Unit Area"). The Unit Area and the waterflood project were previously approved by Division Orders No. R-8540 and R-8541, respectively, dated November 9, 1987. Injection into this well will occur into the Unitized Formation which comprises the Blinbry-Tubb-Drinkard formation from a depth of approximately 5,530 feet to 6,680 feet as found within the Shell Argo Well No. 8 located in Unit N of Section 15, T-21S, R-37E.

Objections must be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days.

If you should have any questions, please contact me at (505) 690-9453.

Sincerely,

David Catanach

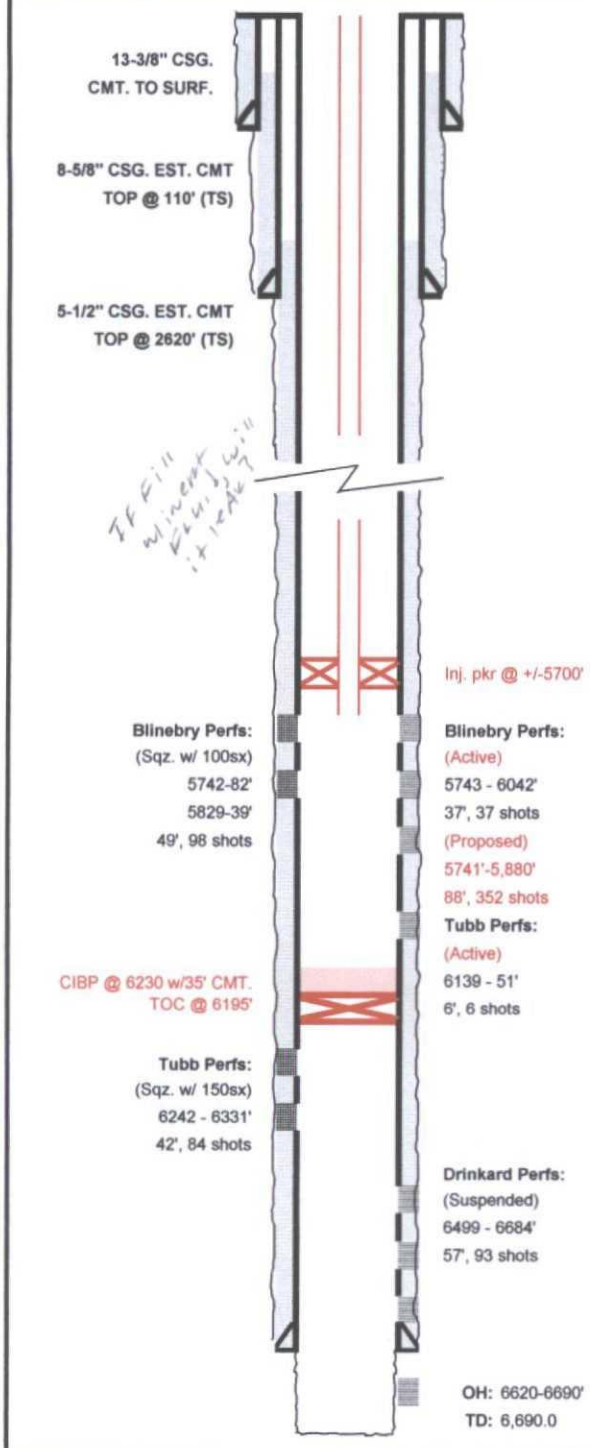
David Catanach-Agent
Apache Corporation
303 Veterans Airpark Lane, Suite 3000
Midland, Texas 79705

Enclosure

Apache Corporation

NEDU #301 (Former: Estlack #1)

WELL DIAGRAM (PROPOSED CONFIGURATION)



WELL NAME:	NEDU #301 (Former: Estlack #1)	**API:**	30-025-06388
LOCATION:	1980' FSL & 660' FWL Unit T, Sec. 3, T-21S, R-37E	**COUNTY:**	Lea Co., NM
SPUD/TD DATE:	1/18/1950 - 3/2/1950	**COMP. DATE:**	4/24/1950
PREPARED BY:	Michael Hunter	**DATE:**	5/28/2014
TD (ft): 6,690.0	**KB Elev. (ft):** 3469.0	**KB to Ground (ft)**	10.0
PBTD (ft): 5,655.0	**Ground Elev. (ft):** 3459.0		

CASING/TUBING	SIZE (IN)	WEIGHT (LB/FT)	GRADE	DEPTHS (FT)	
Surface Casing	13-3/8" (Cmt. w/ 300sx., Circ.)	48.00	H-40	0.00	286.00
Int. Casing	8-5/8" (Cmt. w/ 1800sx, TOC @ 110')	28/32	H-40	0.00	2,972.00
Prod. Casing	5-1/2" (Cmt. w/ 600sx, TOC @ 2620')	15.50	J-55	0.00	6,620.00
Openhole	4-3/4" (Suspended)			6,620.00	6,690.00
Tubing	2-3/8"	4.70	J-55 IPC	0.00	5,714.90

INJECTION TBG STRING

ITEM	DESCRIPTION	LENGTH (FT)	Depth (FT)
1	2-3/8" 4.7 LB/FT J-55 IPC 1505 TBG	5,692.00	5692.00
2	2-3/8" ON/OFF TOOL W/ 1.78 F PROFILE	1.80	5693.80
3	2-3/8" X 5-1/2" NICKLE PLATED ARROW-SET PKR	6.20	5700.00
4	2-3/8" 4.7 LB/FT J-55 IPC TBG	8.00	5708.00
5	2-3/8" PROFILE NIPPLE 1.50 R	0.90	5708.90
6	2-3/8" 4.7 LB/FT J-55 IPC TBG	6.00	5,714.90
7			
8			
9			
10			

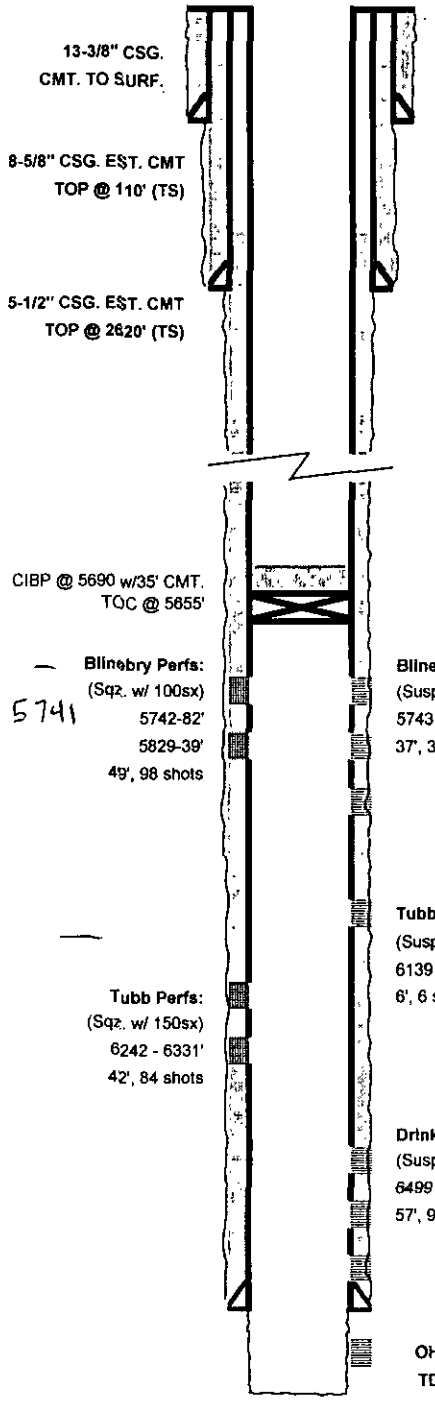
PERFORATIONS

Form.	Intervals	FT	SPF
Blinebry	Proposed: 5741-63', 68-84', 5827-42', 45-58', 61-69', 71-80'	88	4
	Active: 5743', 46', 53', 55', 57', 62', 69', 71', 73', 77', 79', 83', 5828', 31', 34', 36', 42', 47', 53', 55', 65', 69', 73', 91', 97', 5917', 19', 22', 44', 49', 60', 74', 76', 6025', 38', 40', 42'	37	1
	Sqz w/ 100sx: 5742-64', 68-82', 5829-39'	49	2
Tubb	Active: 6139', 42', 45', 47', 49', 51'	6	1
	Sqz w/ 150sx: 6242-48', 60-65', 79-94', 6307-19', 27-31'	42	2
Drinkard	Susp: 6499', 6502', 04', 06', 11', 43', 45', 81', 86', 6631', 33', 35', 40', 42', 44', 54', 56', 71', 73', 82', 84'	21	1
	Susp: 6527-37', 54-62', 6590-6608'	36	2

Apache Corporation

NEDU #301 (Former: Estlack #1)

WELL DIAGRAM (CURRENT CONFIGURATION)



WELL NAME:	NEDU #301 (Former: Estlack #1)	**API:**	30-025-06388
LOCATION:	1980' FSL & 660' FWL Unit T, Sec. 3, T-21S, R-37E	**COUNTY:**	Lea Co., NM
SPUD/TD DATE:	1/18/1950 - 3/2/1950	**COMP. DATE:**	4/24/1950
PREPARED BY:	Michael Hunter	**DATE:**	5/28/2014
TD (ft): 6,690.0	**KB Elev. (ft):** 3469.0	**KB to Ground (ft)**	10.0
PBTD (ft): 5,655.0	**Ground Elev. (ft):** 3459.0		

CASING/TUBING	SIZE (IN)	WEIGHT (LB/FT)	GRADE	DEPTHS (FT)	
Surface Casing	13-3/8" (Cmt. w/ 300sx., Circ.)	48.00	H-40	0.00	286.00
Int. Casing	8-5/8" (Cmt. w/ 1800sx, TOC @ 110')	28/32	H-40	0.00	2,972.00
Prod. Casing	5-1/2" (Cmt. w/ 600sx, TOC @ 2620')	15.50	J-55	0.00	6,620.00
Openhole	4-3/4"			6,620.00	6,690.00
Tubing					

INJECTION TBG STRING

ITEM	DESCRIPTION	LENGTH (FT)	Depth (FT)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

PERFORATIONS

Form.	Intervals	FT	SPF
Blinebry	Susp: 5743', 46', 53', 55', 57', 62', 69', 71', 73', 77', 79', 83', 5828', 31', 34', 36', 42', 47', 53', 55', 65', 69', 73', 91', 97', 5917', 19', 22', 44', 49', 60', 74', 76', 6025', 38', 40', 42'	37	1
	Sqz w/ 100sx: 5742-64', 68-82', 5829-39'	49	2
Tubb	Susp: 6139', 42', 45', 47', 49', 51'	6	1
	Sqz w/ 150sx: 6242-48', 60-65', 79-94', 6307-19', 27-31'	42	2
Drinkard	Susp: 6499', 6502', 04', 06', 11', 43', 45', 81', 86', 6631', 33', 35', 40', 42', 44', 54', 56', 71', 73', 82', 84'	21	1
	Susp: 6527-37', 54-62', 6590-6608'	36	2

NEDU 301 (API: 30-025-06388) Proposed Procedure: Convert Well to Injection

July 14, 2014

Day 1: MIRU SR. NU BOPs & PU & RIH w/ 4-3/4" bit on 2-7/8" work string

Day 2: Cont. RIH w/bit on 2-7/8" work string, drill out cement and CIBP @ 5655'. Drill out/push CIBP to below 6240'

Day 3: MIRU WL, RIH w/CIBP and set @ +/-6230', POOH. RIH w/dump bailer and dump bail approximately 35' of cement on top of plug, POOH & WOC. RIH and tag TOC, POOH

RIH and log well with GR/CBL/CCL from PBTD to surface to evaluate quality of cement within injection zone and confirm TOC, POOH

Day 4: PU and RIH w/ 3-3/8" TAGs loaded with SDP charges, correlate depths to Welex Radioactivity log dated 12/6/1960. Perforate the Blinebry from 5741-63', 68-84', 5827-42', 45-58', 61-69', 71-80' @ 4 SPF, 90 deg phasing (total 88', 352 shots), POOH

PU and RIH w/RBP & treating packer on 2-7/8" work string. Set RBP @ +/-5910', PUH & set packer @ +/-5700'

Day 5: MIRU acidizers. Acidize the Blinebry w/6,000 gals 15% HCl and rock salt in 3 equal stages **@ +/- 3 BPM (attempt to keep STP below 2,000 psi if possible to avoid fracturing the formation)**

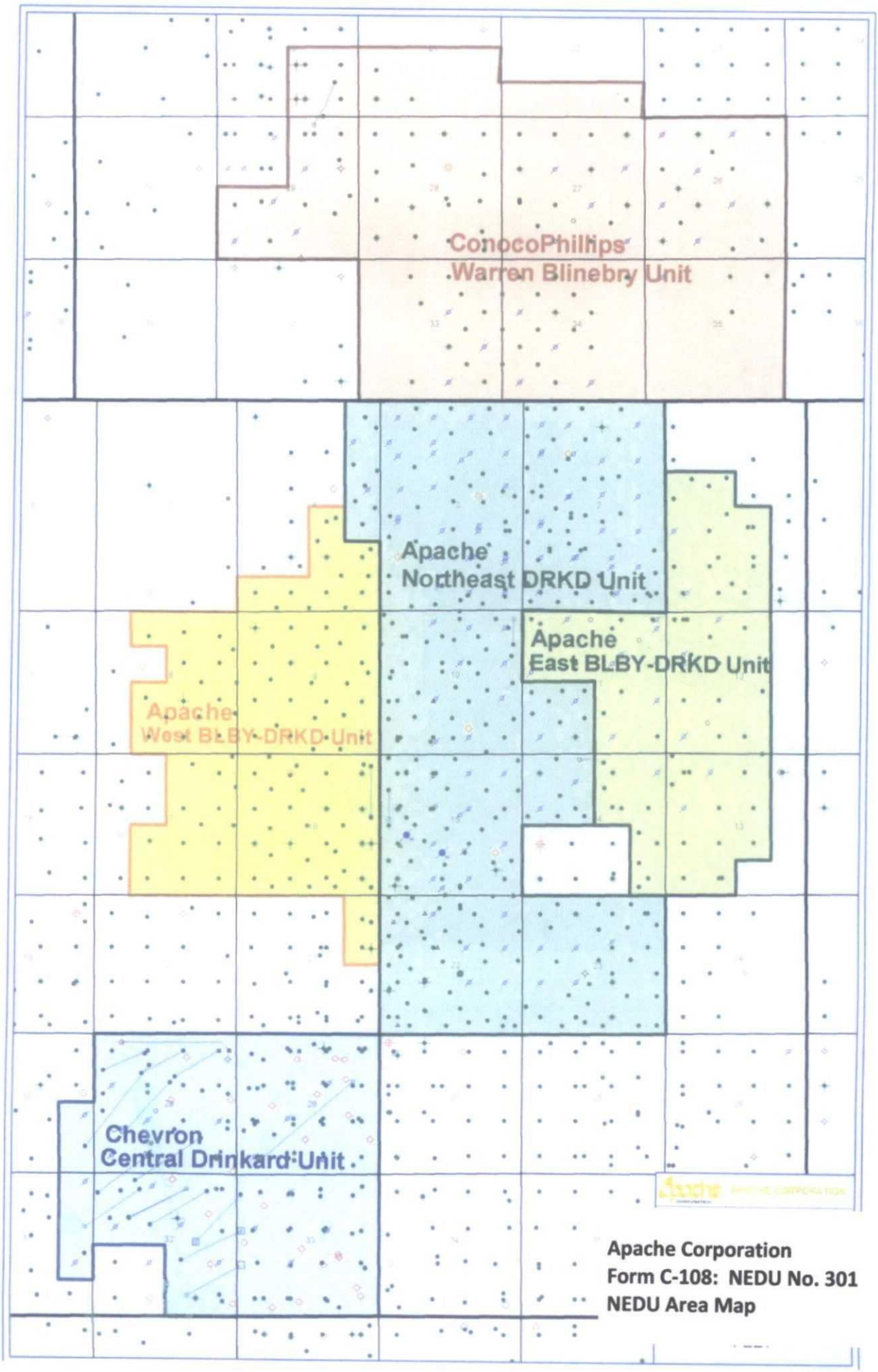
Release packer and wash out salt. POOH

Day 6: PU and RIH with 5-1/2" injection packer with 2-3/8" IPC tubing subs, upper and lower profile nipples, and on/off tool on 2-7/8" work string. Set packer @ +/-5700'. Release on/off tool and pressure test casing to 500 psi. POOH and LD 2-7/8" work string

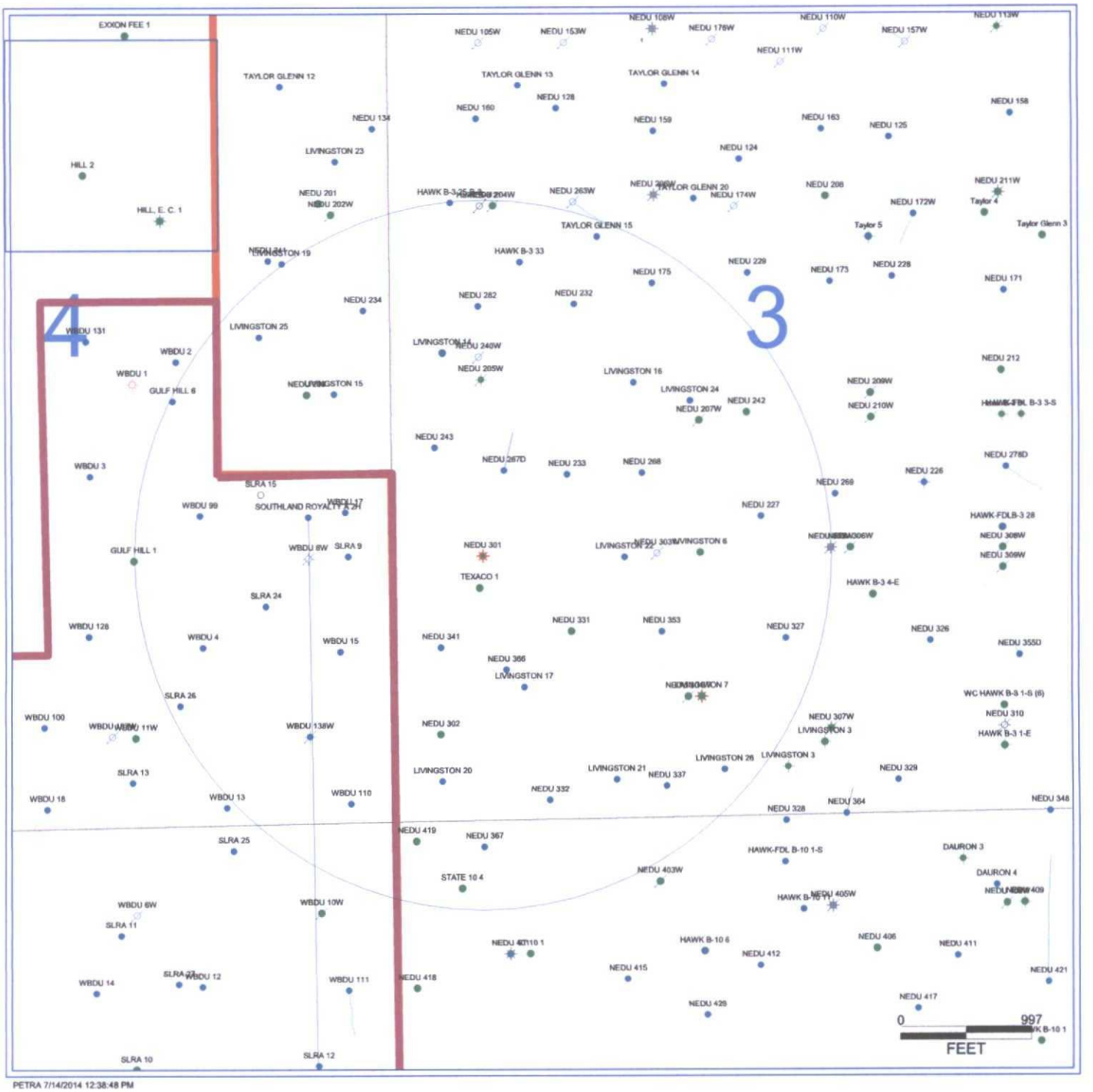
Day 7: PU & RIH w/2-3/8" IPC 1505 tubing and on/off tool. Circulate packer fluid and latch onto packer with on/off tool. ND BOPs and NU WH. Pressure test casing to 500 psi. RDMO SR

Day 8: Perform chart-recorded MIT for the NM OCD

Leave well shut-in for 14 days and perform WL static pressure survey. Place well on injection



Apache Corporation
Form C-108: NEDU No. 301
NEDU Area Map



PETRA 7/14/2014 12:38:48 PM

Apache Corporation
Form C-108: NEDU No. 301
½ Mile AOR Map

APACHE CORPORATION

FORM C-108: NEDU WELL NO. 301

AREA OF REVIEW WELL LIST

WELLS THAT DO NOT PENETRATE INJECTION ZONE

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	TOTAL DEPTH	REMARKS
30-025-06511	Continental Oil Co.	Hawk B 3	21	P	PA	3300'	N	660'	W	L	3	21S	37E	2,665'	
30-025-35225	Apache Corporation	Livingston	16	P	Active	3240'	S	1839'	W	N	3	21S	37E	4,500'	Grayburg
30-025-35226	Apache Corporation	Livingston	17	P	Active	990'	S	990'	W	U	3	21S	37E	4,455'	Grayburg
30-025-35227	Apache Corporation	Hawk B 3	25	P	Active	4600'	S	467'	W	L	3	21S	37E	4,450'	Grayburg
30-025-35354	Apache Corporation	Taylor Glenn	15	P	Active	3448'	N	1576'	W	K	3	21S	37E	4,450'	Grayburg
30-025-35373	Vanguard Permian, LLC	Texaco	1	P	Active	1730'	S	660'	W	T	3	21S	37E	4,422	Grayburg
30-025-37725	Apache Corporation	Livingston	20	P	Active	330'	S	330'	W	U	3	21S	37E	4,380'	Grayburg
30-025-37726	Apache Corporation	Livingston	21	P	Active	330'	S	1650'	W	V	3	21S	37E	4,380'	Grayburg
30-025-37727	Apache Corporation	Livingston	22	P	Active	1940'	S	1760'	W	S	3	21S	37E	4,275'	Grayburg
30-025-38382	Apache Corporation	Livingston	24	P	Active	3095'	S	2270'	W	N	3	21S	37E	4,153'	Grayburg
30-025-39510	Apache Corporation	Hawk B 3	33	P	Active	3630'	N	990'	W	L	3	21S	37E	4,400'	Grayburg
30-025-39526	Apache Corporation	Livingston	26	P	Active	350'	S	2500'	W	V	3	21S	37E	4,507'	Grayburg
30-025-35224	Apache Corporation	Livingston	15	P	Active	3196'	S	426'	E	P	4	21S	37E	4,482'	Grayburg
30-025-35341	Apache Corporation	Livingston	19	P	Active	3630'	N	810'	E	I	4	21S	37E	4,450'	Grayburg
30-025-35350	Apache Corporation	Southland Royalty A	9	P	Active	1980'	S	330'	E	Q	4	21S	37E	4,450'	Grayburg
30-025-35493	Apache Corporation	Gulf Hill	6	P	Active	3168'	S	1650'	E	O	4	21S	37E	4,450'	Grayburg
30-025-36141	Apache Corporation	Southland Royalty A	15	SWD	PA	2460'	S	990'	E	Q	4	21S	37E	4,150'	Grayburg
30-025-37970	Apache Corporation	Southland Royalty A	24	P	Active	1920'	S	990'	E	Q	4	21S	37E	4,385'	Grayburg
30-025-38134	Apache Corporation	Southland Royalty A	26	P	Active	920'	S	1650'	E	W	4	21S	37E	4,200'	Grayburg
30-025-39447	Apache Corporation	Livingston	25	P	Active	3630'	S	990'	E	P	4	21S	37E	4,505'	Grayburg

APACHE CORPORATION
FORM C-108: NORTHEAST DRINKARD UNIT NO. 301
AREA OF REVIEW WELL LIST
WELLS THAT PENETRATE INJECTION INTERVAL (Page 1)

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TOTAL DEPTH	HOLE SIZE	CSG. SIZE	SET AT	SX. CMT.	CMT. TOP	MTD.	HOLE SIZE	CSG. SIZE	SET AT	SX. CMT.	CMT. TOP	MTD.	COMPLETION	REMARKS
30-025-06493	Apache Corporation	NEDU	305	I	Active	1980'	S	1980'	E	R	3	21S	37E	Sep-55	6,747'	17 1/2"	13 3/8"	199'	250	Surface	Circ.	12 1/4"	9 5/8"	2,969'	1525	725'	T.S.	6,535'-6,689' Perf.	Drinkard Completion
																						8 3/4"	7"	6,746'	875	3,000'	T.S.		
30-025-06506	Apache Corporation	NEDU	204	I	Active	3300'	N	760'	W	L	3	21S	37E	Aug-62	6,800'	10 3/4"	9 5/8"	1,310'	625	Surface	Circ.	8 3/4"	7"	6,800'	650	2,200' *	T.S.	5,811'-6,740' Perf.	Blinebry-Tubb-Drinkard Completion
* 7" casing perforated @ 1,430' & squeezed w/375 sx.																													
30-025-06512	Apache Corporation	NEDU	303	I	Active	1980'	S	1980'	W	S	3	21S	37E	Sep-49	6,700'	17 1/2"	13 3/8"	228'	300	Surface	Calc.	11"	8 5/8"	2,916'	2000	Surface	Circ.	5,725'-5,870' Perf.	Blinebry Completion; PBTD: 5,870'
																						7 7/8"	5 1/2"	6,674'	600	3,475'	Calc.		Perfs & O.H. Abandoned: 5,870'-6,700'
30-025-06516	Apache Corporation	NEDU	302	P	Active	660'	S	330'	W	U	3	21S	37E	Jan-52	6,690'	17 1/2"	13 3/8"	218'	250	Surface	Circ.	11"	8 5/8"	3,152'	2640	Surface	Circ.	5,812'-6,646' Perf.	Blinebry-Tubb-Drinkard Completion
																						7 7/8"	5 1/2"	2,953'-6,689'	700	Liner Top	Circ.		
30-025-06517	Apache Corporation	Livingston	6	P	Active	1980'	S	2308'	W	S	3	21S	37E	Jun-52	8,230'	17 1/4"	13 3/8"	222'	250	Surface	Circ.	11"	8 5/8"	3,147'	2200	Surface	Circ.	3,865'-3,970' Perf.	Grayburg Completion; PBTD: 5,465'**
																						7 7/8"	5 1/2"	2,944'-8,228'	895	Liner Top	Circ.		
** Ellenburger Perfs: 8,172'-8212'; CIBP @ 8,125' w/10' cmt.; McKee Perfs: 7,805'-8,075'; Squeezed w/35 sx. cmt. CIBP @ 7,430' + 1 sx. cmt.; Abo Perfs: 7,127'-7,326'; CIBP @ 7,115' + 1 sx. cmt.; Abo Perfs: 6,980'-7,088'; CIBP @ 6,919' + 35' cmt.; Blinebry Perfs: 5,575'-5,875'; Squeezed w/200 sx. cmt. CIBP @ 5,500' + 35' cmt.																													
30-025-06518	Apache Corporation	Livingston	7	P	Active	915'	S	2308'	W	V	3	21S	37E	Jul-52	8,130'	17 1/4"	13 3/8"	222'	250	Surface	Circ.	11"	8 5/8"	3,142'	2000	Surface	Circ.	3,852'-3,960' Perf.	Grayburg Completion; PBTD: 5,943'**
																						7 7/8"	5 1/2"	2,930'-8,129'	800	Liner Top	Circ.		
** Simpson Perfs: 7,760'-7,925'; Squeezed w/75 sx. cmt. Abo Perfs: 6,960'-7,142'; CIBP @ 6,901' w/35' cmt. Drinkard Perfs: 6,491'-6,639'; Squeezed w/250 sx. cmt. CIBP @ 6,440' w/35' cmt. Tubb Perfs: 6,067'-6,392'; Squeezed w/700 sx. cmt. CIBP @ 5,991' + 35' cmt.																													
30-025-06519	Apache Corporation	NEDU	207	I	Active	2970'	S	2308'	W	N	3	21S	37E	Jul-52	8,030'	17 1/2"	13 3/8"	215'	250	Surface	Circ.	11"	8 5/8"	3,153'	1600	Surface	Circ.	5,819'-6,813' Perf.	Blinebry-Tubb-Drinkard Completion: PBTD:
																						7 7/8"	5 1/2"	2,648'-7,000'	810	Liner Top	Circ.		6,885'; 250 sx. cmt. 7,400'-8,030'; CIBP @
																													6,885'
30-025-06520	Apache Corporation	NEDU	304	I	Active	915'	S	2208'	W	V	3	21S	37E	Oct-52	6,659'	17"	13 3/8"	237'	250	Surface	Circ.	11"	8 5/8"	3,151'	2000	Surface	Circ.	5,558'-6,625' Perf.	Blinebry-Tubb-Drinkard Completion:
																						7 7/8"	5 1/2"	2,950'-6,584'	700	Liner Top	Circ.	& O.H.	PBTD: 6,625'
30-025-06521	Apache Corporation	NEDU	205	I	PA	3300'	S	660'	W	M	3	21S	37E	Nov-61	6,730'	12 1/4"	9 5/8"	271'	250	Surface	Circ.	8 3/4"	3-2 7/8"	6,724'	635	2,400'	T.S.	5,714'-6,687' Perf.	Blinebry-Tubb-Drinkard Completion:
3 Strings of 2 7/8" casing were set and cemented in the well to separately produce the Blinebry, Tubb and Drinkard Intervals. TOC @ 2,400' by T.S.																													Well PA'd 2/96. Schematic Attached
30-025-28671	Apache Corporation	Livingston	14	P	Active	3500'	S	367'	W	M	3	21S	37E	Apr-84	7,745'	17 1/4"	13 3/8"	481'	475	Surface	Circ.	12 1/4"	8 5/8"	2,470'	1425	Surface	Circ.	3,845'-3,946' Perf.	Grayburg Completion: PBTD: 6,884'
																						7 7/8"	5 1/2"	7,745'	1530	364' *	Calc		Abo Perfs Abandoned: 7,080'-7,208'
*5 1/2 csg. stage cemented. 1st stage: 1070 sx. 2nd stage: 460 sx. DV Tool @ 2,995'																													CIBP @ 6,919' + 35' cmt. on top
30-025-34366	Apache Corporation	NEDU	327	P	Active	1348'	S	2330'	E	R	3	21S	37E	May-98	6,800'	16"	13 3/8"	40'	Redi	Surface	Circ.	11"	8 5/8"	1,320'	410	Surface	Circ.	5,711'-6,679' Perf.	Blinebry-Drinkard Completion:
																			Mix			7 7/8"	5 1/2"	6,800'	1230	Surface	Circ.		
30-025-34428	Apache Corporation	NEDU	227	P	Active	2225'	S	2507'	E	R	3	21S	37E	Oct-98	6,890'	17 1/2"	13 3/8"	40'	Redi	Surface	Circ.	11"	8 5/8"	1,310'	410	Surface	Circ.	5,638'-6,728' Perf.	Blinebry-Tubb-Drinkard Completion:
																			Mix			7 7/8"	5 1/2"	6,890'	1315	Surface	Circ.		
30-025-34430	Apache Corporation	NEDU	232	P	Active	3428'	S	1397'	W	N	3	21S	37E	Oct-98	6,890'	11"	8 5/8"	1,302'	410	Surface	Circ.	7 7/8"	5 1/2"	6,890'	1225	Surface	Circ.	5,628'-6,754' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-34431	Apache Corporation	NEDU	233	P	Active	2,562'	S	1330'	W	S	3	21S	37E	Sep-98	6,870'	11"	8 5/8"	1,285'	410	Surface	Circ.	7 7/8"	5 1/2"	6,870'	1300	Surface	Circ.	5,602'-6,732' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-34433	Apache Corporation	NEDU	331	P	TA	1400'	S	1350'	W	S	3	21S	37E	Sep-98	6,865'	11"	8 5/8"	1,328'	410	Surface	Circ.	7 7/8"	5 1/2"	6,865'	1450'	Surface	Circ.	5,624'-6,730' Perf.	Blinebry-Drinkard Completion:
Tubing stuck @ 5,630'. Cut tubing @ 5,588'. Set CIBP @ 5,550. Well is TA'd																													
30-025-34739	Apache Corporation	NEDU	332	P	Active	140'	S	1174'	W	U	3	21S	37E	Feb-00	6,890'	12 1/4"	8 5/8"	1,305'	460	Surface	Circ.	7 7/8"	5 1/2"	6,890'	1425	Surface	Circ.	5,647'-6,698' Perf.	Blinebry-Tubb-Drinkard Completion:

TA	P&A	Active	Total	Cmts
1	1	19	16	16

APACHE CORPORATION
FORM C-108: NORTHEAST DRINKARD UNIT NO. 301
AREA OF REVIEW WELL LIST
WELLS THAT PENETRATE INJECTION INTERVAL (Page 2)

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TOTAL DEPTH	HOLE SIZE	CSG. SIZE	SET AT	SX. CMT.	CMT. TOP	MTD.	HOLE SIZE	CSG. SIZE	SET AT	SX. CMT.	CMT. TOP	MTD.	COMPLETION	REMARKS
30-025-35904	Apache Corporation	NEDU	143	I	Active	330'	N	1330'	W	C	3	21S	37E	Jul-02	6,850'	12 1/4"	8 5/8"	1,268'	550	Surface	Circ.	7 7/8"	5 1/2"	6,850'	1500	Surface	Circ.	5,718'-6,734' Perf.	Blinebry-Drinkard Completion:
30-025-37678	Apache Corporation	NEDU	337	P	Active	230'	S	2060'	W	V	3	21S	37E	Mar-06	6,900'	12 1/4"	8 5/8"	1,194'	550	Surface	Circ.	7 7/8"	5 1/2"	6,900'	1000	216'	CBL	5,638'-6,740' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-37875	Apache Corporation	NEDU	242	P	Active	3050'	S	2595'	E	N	3	21S	37E	Jun-06	6,950'	12 1/4"	8 5/8"	1,325'	575	Surface	Circ.	7 7/8"	5 1/2"	6,950'	1000	Surface	Circ.	5,667'-6,716' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-38152	Apache Corporation	NEDU	243	P	Active	2780'	S	330'	W	M	3	21S	37E	May-07	6,955'	12 1/4"	8 5/8"	1,290'	575	Surface	Circ.	7 7/8"	5 1/2"	6,955'	1250	212'	CBL	5,602'-6,714' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-38154	Apache Corporation	NEDU	341	P	Active	1330'	S	330'	W	T	3	21S	37E	Jun-07	6,906'	12 1/4"	8 5/8"	1,329'	575	Surface	Circ.	7 7/8"	5 1/2"	6,906'	1400	128'	CBL	5,633'-6,728' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-40499	Apache Corporation	NEDU	282	P	Active	3850'	S	660'	W	M	3	21S	37E	Sep-12	7,050'	12 1/4"	8 5/8"	1,356'	670	Surface	Circ.	7 7/8"	5 1/2"	7,050'	1515	Surface	Calc.	5,725'-6,739' Perf.	Blinebry-Drinkard Completion: 5 1/2" csg. stage cemented: 1st-490 sx. 2nd-1025 sx. DV Tool @ 4,641'
30-025-40516	Apache Corporation	NEDU	175	P	Active	3785'	N	1980'	W	K	3	21S	37E	Aug-12	7,050'	12 1/4"	8 5/8"	1,371'	700	Surface	Circ.	7 7/8"	5 1/2"	7,050'	1150	Surface	Circ.	5,746'-6,723' Perf.	Blinebry-Drinkard Completion:
30-025-40779	Apache Corporation	NEDU	268	P	Active	2590'	S	1890'	W	S	3	21S	37E	Oct-12	7,000'	12 1/4"	8 5/8"	1,293'	500	Surface	Circ.	7 7/8"	5 1/2"	7,000'	1210	Surface	Circ.	5,731'-6,747' Perf.	Blinebry-Drinkard Completion:
30-025-40785	Apache Corporation	NEDU	353	P	Active	1255'	S	2160'	W	V	3	21S	37E	Nov-12	7,003'	11"	8 5/8"	1,327'	475	Surface	Circ.	7 7/8"	5 1/2"	7,003'	1160	Surface	Circ.	5,697'-5,955' Perf.	Blinebry Completion: PBTD: 6,402'
					BHL	1404'	S	2134'	W	S	3	21S	37E																
30-025-40787	Apache Corporation	NEDU	366	P	Active	1145'	S	850'	W	U	3	21S	37E	Oct-12	7,000'	11"	8 5/8"	1,302'	500	Surface	Circ.	7 7/8"	5 1/2"	7,000'	1205	Surface	Circ.	5,751'-6,791' Perf	Blinebry-Drinkard Completion:
30-025-40824	Apache Corporation	NEDU	267	P	Active	2890'	S	920'	W	M	3	21S	37E	Nov-12	7,010'	11"	8 5/8"	1,283'	485	Surface	Circ.	7 7/8"	5 1/2"	7,009'	1090	Surface	Circ.	5,711'-6,778' Perf.	Blinebry-Drinkard Completion:
					BHL	2590'	S	861'	W	T	3	21S	37E																
30-025-40849	Apache Corporation	NEDU	263	P	Active	3345'	N	1620'	W	K	3	21S	37E	Sep-13	7,000'	11"	8 5/8"	1,330'	475	Surface	Circ.	7 7/8"	5 1/2"	7,000'	1350	Surface	Circ.	6,621'-6,727' Perf.	Drinkard Completion
					BHL	3175'	N	1387'	W	K	3	21S	37E																
30-025-06396	Apache Corporation	WBDU	138	I	Active	660'	S	660'	E	X	4	21S	37E	Oct-51	6,750'	17 1/2"	13 3/8"	300'	300	Surface	Circ.	11"	8 5/8"	2,905'	475	1,750'	T.S.	5,767'-6,570' Perf.	Blinebry-Tubb-Drinkard Completion:
																						7 7/8"	5 1/2"	6,748'	900	Surface **	Circ.		
** Original TOC on 5 1/2" casing is 4,570'. 5 1/2" casing was perforated @ 4,150' and circulated to surface w/675 sx. cmt. Grayburg perforations from 3,891'-4,007' squeezed w/500 sx. cmt.																													
30-025-06397	Apache Corporation	WBDU	8	I	Active	1980'	S	660'	E	Q	4	21S	37E	Oct-52	6,756'	17 1/2"	13 3/8"	300'	300	Surface	Circ.	11"	8 5/8"	2,882'	400	1,365'	T.S.	5,610'-6,670' Perf.	Blinebry-Drinkard Completion: PBTD: 6,675'
																						7 7/8"	5 1/2"	6,742'	1140	Surface **	Circ.		
** Original TOC on 5 1/2" casing is 5,425'. 5 1/2" casing was perforated @ 4,600' and squeezed w/560 sx. cmt. TOC @ 2,890'. 5 1/2" csg. was perforated @ 2,360' and squeezed w/400 sx. cmt. TOC @ Surface																													
30-025-06398	Apache Corporation	NEDU	203	P	PA	3200'	S	660'	E	P	4	21S	37E	Jan-53	7,436'	17 1/2"	13 3/8"	270'	250	Surface	Circ.	11"	8 5/8"	3,139'	2300	Surface	Circ.	N/A	Well PA'd 9/2011. Schematic Attached
																						7 7/8"	5 1/2"	7,425'	1200	Surface **	Circ.		
** Original TOC on 5 1/2" casing is 4,255'. 5 1/2" casing was perforated @ 3,670' and squeezed w/650 sx. cmt. TOC @ Surface																													
30-025-06401	Apache Corporation	Gulf Hill	1	P	Active	1980'	S	1980'	E	R	4	21S	37E	Apr-54	5,974'	17 1/2"	13 3/8"	156'	150	Surface	Circ.	11"	8 5/8"	2,933'	600	218'	Calc.	3,897'-4,019' Perf.	Grayburg Completion: Perfs Abandoned:
																						7 7/8"	5 1/2"	5,970'	375	3,470'	CBL		Blinebry-5,652'-5,956'; CIPB @ 5,600' w/15' of cmt. on top
30-025-34738	Apache Corporation	NEDU	234	P	Active	3810'	S	200'	E	P	4	21S	37E	Jan-00	6,900'	12 1/4"	8 5/8"	1,275'	460	Surface	Circ.	7 7/8"	5 1/2"	6,900'	1425	Surface	Circ.	5,623'-6,692' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-37031	Apache Corporation	WBDU	15	P	Active	1310'	S	430'	E	X	4	21S	37E	Mar-05	6,950'	12 1/4"	8 5/8"	1,172'	575	Surface	Circ.	7 7/8"	5 1/2"	6,950'	1150	188'	CBL	5,691'-6,700' Perf.	Blinebry-Tubb-Drinkard Completion:

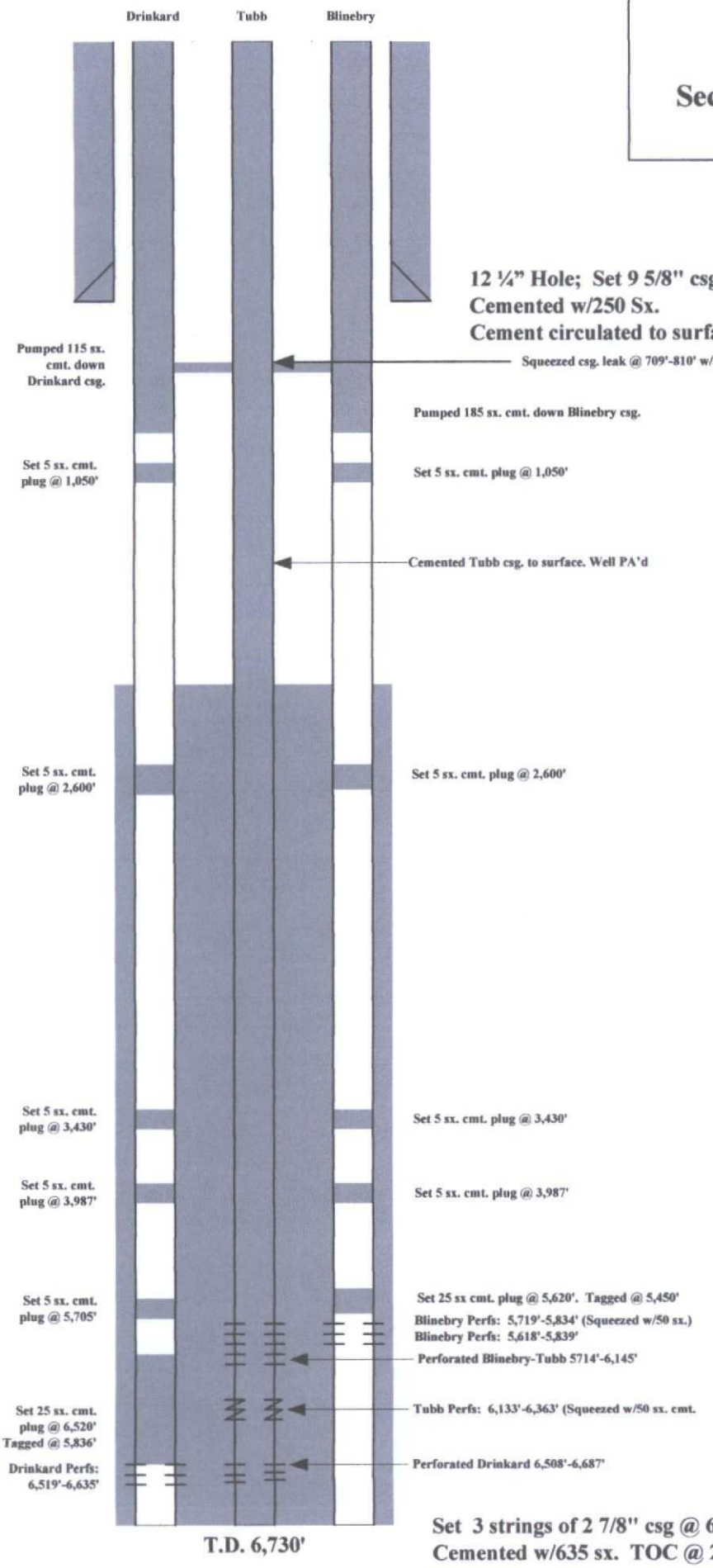
TA PA Active Total Cum
Ø 1 17 18 34

FORM C-108: NORTHEAST DRINKARD UNIT NO. 301
AREA OF REVIEW WELL LIST
WELLS THAT PENETRATE INJECTION INTERVAL (Page 3)

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP	RNG.	DATE DRILLED	TOTAL DEPTH	HOLE SIZE	CSG. SIZE	SET AT	SX. CMT.	CMT. TOP	MTD.	HOLE SIZE	CSG. SIZE	SET AT	SX. CMT.	CMT. TOP	MTD.	COMPLETION	REMARKS
30-025-37483	Apache Corporation	WBDU	17	P	Active	2310'	S	350'	E	Q	4	21S	37E	Oct-05	7,267'	12 1/4"	8 5/8"	1,195'	575	Surface	Circ.	7 7/8"	5 1/2"	7,267'	1400	270'	CBL	5,675'-6,726' Perf.	Blinebry-Tubb-Drinkard Completion
																													Abo Perfs: 6,862'-6,976'; CIBP @ 6,850'
30-025-38229	Apache Corporation	WBDU	4	P	Active	1330'	S	1440'	E	R	4	21S	37E	Feb-07	6,975'	12 1/4"	8 5/8"	1,222'	600	Surface	Circ.	7 7/8"	5 1/2"	6,975'	1200	153'	CBL	5,656'-6,786' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-39267	Apache Corporation	WBDU	99	P	Active	2310'	S	1450'	E	R	4	21S	37E	Jun-09	6,985'	12 1/4"	8 5/8"	1,315'	650	Surface	Circ.	7 7/8"	5 1/2"	6,985'	1135	Surface	Circ.	5,661'-6,804' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-39494	Apache Corporation	WBDU	110	P	Active	140'	S	330'	E	X	4	21S	37E	Oct-09	6,867'	12 1/4"	8 5/8"	1,293'	650	Surface	Circ.	7 7/8"	5 1/2"	6,867'	1000	Surface	Circ.	5,633'-6,752' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-36367	Apache Corporation	NEDU	419	P	Active	150'	N	160'	W	D	10	21S	37E	Oct-03	6,900'	12 1/4"	8 5/8"	1,327'	600	Surface	Circ.	7 7/8"	5 1/2"	6,900'	1250	90'	CBL	5,622'-6,686' Perf.	Blinebry-Tubb-Drinkard Completion:
30-025-37148	Breck Operating Corp.	State 10	4	P	Active	467'	N	467'	W	D	10	21S	37E	May-05	5,510'	12 1/4"	8 5/8"	1,284'	595	Surface	Circ.	7 7/8"	5 1/2"	5,510'	785	Surface	Circ.	4,011'-4,113' Perf.	San Andres Completion: PBTD: 4,325'
30-025-40788	Apache Corporation	NEDU	367	P	Active	175'	N	870'	W	D	10	21S	37E	Nov-12	7,005'	11"	8 5/8"	1,320'	475	Surface	Circ.	7 7/8"	5 1/2"	7,005'	450	4,605'	Calc.	5,747'-6,719' Perf.	Blinebry-Drinkard Completion:

TA	PA	Active	Total	Comm
0	0	7	7	41

Apache Corporation
NEDU Well No. 205
API No. 30-025-06521
3300' FSL & 660' FWL (Unit M)
Section 3, T-21 South, R-37 East, NMPM



Drilled: 11/1961
Plugged: 2/1996

Apache Corporation
Form C-108: NEDU No. 301
PA Schematic
NEDU Well No. 205

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, do 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
August 13, 2014
and ending with the issue dated
August 13, 2014

PUBLISHER
Sworn and subscribed to before me
this 13th day of
August, 2014

Notary Public

My commission expires
January 29, 2015
(Seal)

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-15

This newspaper is duly qualified to publish legal notices or advertisments within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

LEGAL LEGAL LEGAL

LEGAL NOTICE
August 13, 2014

Apache Corporation, 303 Veterans Airpark Lane, Suite 3000, Midland Texas 79705 has filed a Form C-108 (Application for Authorization to Inject) with the Oil Conservation Division seeking administrative approval to convert the following-described well to water injection within the Northeast Drinkard Unit ("NEDU") Waterflood Project, North Eunice Blinebry-Tubb-Drinkard Pool, Lea County, New Mexico:

NEDU Well No. 301, API No. 30-025-06388, 1980' FSL & 660' FWL (Unit T)
Section 3, T-21 South, R-37 East,
Injection Interval (Estimated): Initially: 5,741'-6,151' (Blinebry-Tubb Perforated) later to be expanded to include the entire "Unitized Formation" (Blinebry, Tubb & Drinkard Formations which extend from an upper limit of 5,530' (2,101 feet sub-sea) to a lower limit of 6,680' (3,251 feet sub-sea) on the log run on the Shell Argo Well No. 8 located in Unit N of Section 15, T-21S, R-37E.

Produced water and San Andres make-up water will be injected into the well at average and maximum rates of 250 BWPD and 500 BWPD, respectively. The initial surface injection pressure is anticipated to be in compliance with Division Order No. IPI-185, which authorized a unit-wide injection pressure of 1375 psi., and the maximum surface injection pressure will be determined by a step rate injection test.

Interested parties must file objections with the New Mexico Oil Conservation Division, 1220 S. St Francis Drive, Santa Fe, New Mexico 87505, within 15 days of the date of this publication. Additional information can be obtained by contacting Mr. David Catanach, Agent for Apache Corporation at (505) 690-9453.
#29293

67109591 00142137
DAVID CATANACH
REGULATORY CONSULTANT
1142 VUELTA DE LAS ACEQUIAS
SANTA FE, NM 87507

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

August 13, 2002

Lori Wrotenbery
Director
Oil Conservation Division

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 (wvj)
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

Injection Well	Top Perf Depth Feet	Maximum Surface Injection Pressure PSIG	Order Number
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

(1315PSI) 8/13/02 entered Finally on 1/7/03 WJJ

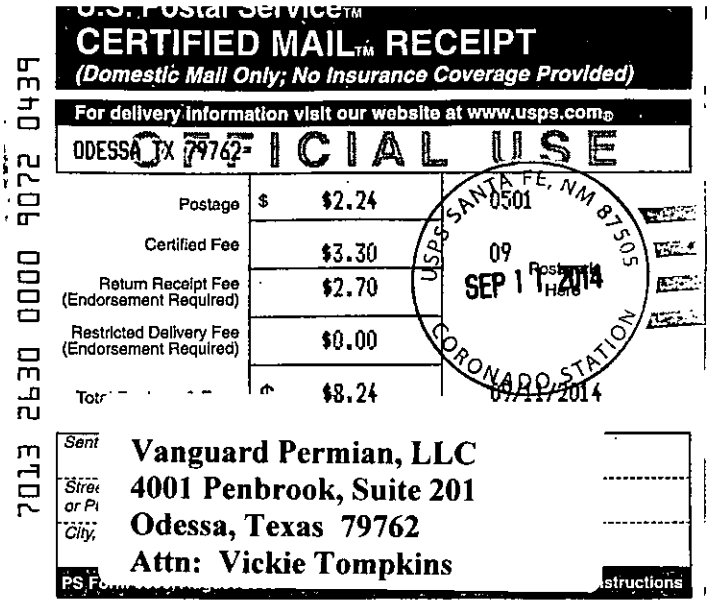
API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf Owner	UL	Sec	Twn	N/S	Rng	W/E	Feet	NS	Feet	EW
30-025-06339-00-00	NORTHEAST DRINKARD UNIT	615	APACHE CORP	I	A	Lea	P	E	14	21	S	37	E	1980	N	660	W
30-025-06340-00-00	NORTHEAST DRINKARD UNIT	115	APACHE CORP	I	S	Lea	S	1	2	21	S	37	E	5940	S	660	W
30-025-06341-00-00	NORTHEAST DRINKARD UNIT	215	APACHE CORP	I	A	Lea	S	1	2	21	S	37	E	3175	S	660	W
30-025-06344-00-00	NORTHEAST DRINKARD UNIT	114	APACHE CORP	I	A	Lea	S	4	2	21	S	37	E	906	N	660	W
30-025-06345-00-00	NORTHEAST DRINKARD UNIT	117	APACHE CORP	I	A	Lea	S	3	2	21	S	37	E	921	N	1650	W
30-025-06346-00-00	NORTHEAST DRINKARD UNIT	116	APACHE CORP	I	A	Lea	S	5	2	21	S	37	E	5790	S	660	W
30-025-06350-00-00	NORTHEAST DRINKARD UNIT	221	APACHE CORP	I	A	Lea	S	O	2	21	S	37	E	2983	S	2317	E
30-025-06351-00-00	NORTHEAST DRINKARD UNIT	224	APACHE CORP	I	A	Lea	S	J	2	21	S	37	E	4303	S	2317	E
30-025-06353-00-00	NORTHEAST DRINKARD UNIT	319	APACHE CORP	I	A	Lea	S	I	2	21	S	37	E	1650	S	990	E
30-025-06354-00-00	NORTHEAST DRINKARD UNIT	121	APACHE CORP	I	A	Lea	S	1	2	21	S	37	E	2220	N	2307	E
30-025-06356-00-00	NORTHEAST DRINKARD UNIT	222	APACHE CORP	I	A	Lea	S	9	2	21	S	37	E	3534	N	990	E
30-025-06360-00-00	NORTHEAST DRINKARD UNIT	123	APACHE CORP	I	A	Lea	S	8	2	21	S	37	E	2217	N	989	E
30-025-06365-00-00	NORTHEAST DRINKARD UNIT	318	APACHE CORP	I	A	Lea	S	J	2	21	S	37	E	1650	S	1980	E
30-025-06366-00-00	NORTHEAST DRINKARD UNIT	320	APACHE CORP	I	A	Lea	S	O	2	21	S	37	E	660	S	1780	E
30-025-06367-00-00	NORTHEAST DRINKARD UNIT	311	APACHE CORP	I	A	Lea	S	L	2	21	S	37	E	1980	S	660	W
30-025-06370-00-00	NORTHEAST DRINKARD UNIT	313	APACHE CORP	I	A	Lea	S	M	2	21	S	37	E	710	S	610	W
30-025-06372-00-00	NORTHEAST DRINKARD UNIT	322	APACHE CORP	I	A	Lea	S	K	2	21	S	37	E	1980	S	1980	W

30-025-06375-00-00	NORTHEAST DRINKARD UNIT	315	APACHE CORP	I	A	Lea	S	K	2	21	S	37	E	1980	S	1880	W
30-025-06381-00-00	NORTHEAST DRINKARD UNIT	211	APACHE CORP	I	A	Lea	P	I	3	21	S	37	E	4620	S	660	E
30-025-06386-00-00	NORTHEAST DRINKARD UNIT	104	APACHE CORP	I	A	Lea	P	5	3	21	S	37	E	1582	N	330	W
30-025-06400-00-00	NORTHEAST DRINKARD UNIT	102	APACHE CORP	I	A	Lea	P	7	4	21	S	37	E	1582	N	990	E
30-025-06449-00-00	NORTHEAST DRINKARD UNIT	403	APACHE CORP	I	A	Lea	F	C	10	21	S	37	E	460	N	1980	W
30-025-06450-00-00	NORTHEAST DRINKARD UNIT	405	APACHE CORP	I	A	Lea	F	B	10	21	S	37	E	660	N	1980	E
30-025-06453-00-00	NORTHEAST DRINKARD UNIT	410	APACHE CORP	I	A	Lea	F	H	10	21	S	37	E	1980	N	660	E
30-025-06456-00-00	NORTHEAST DRINKARD UNIT	407	APACHE CORP	I	A	Lea	F	G	10	21	S	37	E	1980	N	2310	E
30-025-06465-00-00	NORTHEAST DRINKARD UNIT	506	APACHE CORP	I	A	Lea	S	O	10	21	S	37	E	660	S	1980	E
30-025-06466-00-00	NORTHEAST DRINKARD UNIT	525	APACHE CORP	I	A	Lea	S	N	10	21	S	37	E	500	S	2080	W
30-025-06470-00-00	NORTHEAST DRINKARD UNIT	507	APACHE CORP	I	A	Lea	S	I	10	21	S	37	E	2100	S	760	E
30-025-06473-00-00	NORTHEAST DRINKARD UNIT	503	APACHE CORP	I	A	Lea	S	K	10	21	S	37	E	2080	S	2080	W
30-025-06483-00-00	NORTHEAST DRINKARD UNIT	216	APACHE CORP	I	A	Lea	S	K	2	21	S	37	E	3546	N	1650	W
30-025-06484-00-00	NORTHEAST DRINKARD UNIT	218	APACHE CORP	I	A	Lea	S	1	2	21	S	37	E	3546	N	1700	W
30-025-06491-00-00	NORTHEAST DRINKARD UNIT	214	APACHE CORP	I	A	Lea	S	M	2	21	S	37	E	3300	S	660	W
30-025-06493-00-00	NORTHEAST DRINKARD UNIT	305	APACHE CORP	I	A	Lea	F	J	3	21	S	37	E	1980	S	1980	E
30-025-06494-00-00	NORTHEAST DRINKARD UNIT	308	APACHE CORP	I	A	Lea	F	I	3	21	S	37	E	1980	S	660	E

30-025-06495-00-00	NORTHEAST DRINKARD UNIT	110	APACHE CORP	I	A	Lea	F	7	3	21	S	37	E	1980	N	1980	E
30-025-06496-00-00	NORTHEAST DRINKARD UNIT	113	APACHE CORP	I	A	Lea	F	8	3	21	S	37	E	1980	N	660	E
30-025-06497-00-00	NORTHEAST DRINKARD UNIT	310	APACHE CORP	I	A	Lea	F	P	3	21	S	37	E	660	S	660	E
30-025-06499-00-00	NORTHEAST DRINKARD UNIT	309	APACHE CORP	I	A	Lea	F	I	3	21	S	37	E	1830	S	660	E
30-025-06502-00-00	NORTHEAST DRINKARD UNIT	210	APACHE CORP	I	A	Lea	F	1	3	21	S	37	E	2970	S	1650	E
30-025-06506-00-00	NORTHEAST DRINKARD UNIT	204	APACHE CORP	I	A	Lea	F	1	3	21	S	37	E	3300	N	760	W
30-025-06507-00-00	NORTHEAST DRINKARD UNIT	306	APACHE CORP	I	A	Lea	F	J	3	21	S	37	E	1980	S	1830	E
30-025-06508-00-00	NORTHEAST DRINKARD UNIT	209	APACHE CORP	I	A	Lea	F	O	3	21	S	37	E	3150	S	1650	E
30-025-06510-00-00	NORTHEAST DRINKARD UNIT	109	APACHE CORP	I	A	Lea	F	2	3	21	S	37	E	660	N	1980	E
30-025-06512-00-00	NORTHEAST DRINKARD UNIT	303	APACHE CORP	I	A	Lea	P	K	3	21	S	37	E	1980	S	1980	W
30-025-06513-00-00	NORTHEAST DRINKARD UNIT	307	APACHE CORP	I	A	Lea	P	O	3	21	S	37	E	660	S	1980	E
30-025-06519-00-00	NORTHEAST DRINKARD UNIT	207	APACHE CORP	I	A	Lea	P	1	3	21	S	37	E	2970	S	2308	W
30-025-06520-00-00	NORTHEAST DRINKARD UNIT	304	APACHE CORP	I	A	Lea	P	N	3	21	S	37	E	915	S	2208	W
30-025-06521-00-00	NORTHEAST DRINKARD UNIT	205	APACHE CORP	I	P	Lea	P	M	3	21	S	37	E	3300	S	660	W
30-025-06522-00-00	NORTHEAST DRINKARD UNIT	208	APACHE CORP	I	A	Lea	P	K	3	21	S	37	E	3226	N	1980	W
30-025-06532-00-00	NORTHEAST DRINKARD UNIT	511	APACHE CORP	I	A	Lea	P	M	11	21	S	37	E	660	S	660	W
30-025-06534-00-00	NORTHEAST DRINKARD UNIT	512	APACHE CORP	I	A	Lea	P	K	11	21	S	37	E	1980	S	1980	W

30-025-06581-00-00	NORTHEAST DRINKARD UNIT	616	APACHE CORP	I	A	Lea	P	C	14	21	S	37	E	990	N	1980	W
30-025-06587-00-00	NORTHEAST DRINKARD UNIT	606	APACHE CORP	I	A	Lea	S	F	15	21	S	37	E	3375	S	3225	E
30-025-06588-00-00	NORTHEAST DRINKARD UNIT	610	APACHE CORP	I	A	Lea	S	G	15	21	S	37	E	2210	N	2310	W
30-025-06593-00-00	NORTHEAST DRINKARD UNIT	708	APACHE CORP	I	A	Lea	P	O	15	21	S	37	E	660	S	1980	E
30-025-06595-00-00	NORTHEAST DRINKARD UNIT	709	APACHE CORP	I	A	Lea	P	I	15	21	S	37	E	1980	S	660	E
30-025-06601-00-00	NORTHEAST DRINKARD UNIT	707	APACHE CORP	I	A	Lea	P	J	15	21	S	37	E	1725	S	2149	E
30-025-06610-00-00	NORTHEAST DRINKARD UNIT	609	APACHE CORP	I	A	Lea	S	B	15	21	S	37	E	660	N	1980	E
30-025-06613-00-00	NORTHEAST DRINKARD UNIT	605	APACHE CORP	I	A	Lea	S	C	15	21	S	37	E	760	N	1980	W
30-025-06727-00-00	NORTHEAST DRINKARD UNIT	806	APACHE CORP	I	A	Lea	P	B	22	21	S	37	E	660	N	1780	E
30-025-06728-00-00	NORTHEAST DRINKARD UNIT	808	APACHE CORP	I	A	Lea	P	A	22	21	S	37	E	660	N	660	E
30-025-06729-00-00	NORTHEAST DRINKARD UNIT	807	APACHE CORP	I	A	Lea	P	G	22	21	S	37	E	1980	N	2080	E
30-025-06730-00-00	NORTHEAST DRINKARD UNIT	809	APACHE CORP	I	A	Lea	P	H	22	21	S	37	E	1980	N	660	E
30-025-06738-00-00	NORTHEAST DRINKARD UNIT	805	APACHE CORP	I	A	Lea	P	F	22	21	S	37	E	1980	N	1980	W
30-025-06745-00-00	NORTHEAST DRINKARD UNIT	907	APACHE CORP	I	A	Lea	P	J	22	21	S	37	E	1980	S	1980	E
30-025-06747-00-00	NORTHEAST DRINKARD UNIT	909	APACHE CORP	I	A	Lea	P	I	22	21	S	37	E	1980	S	660	E
30-025-06752-00-00	NORTHEAST DRINKARD UNIT	902	APACHE CORP	I	A	Lea	P	K	22	21	S	37	E	2080	S	1650	W
30-025-06754-00-00	NORTHEAST DRINKARD UNIT	904	APACHE CORP	I	A	Lea	P	K	22	21	S	37	E	2065	S	1700	W

30-025-06760-00-00	NORTHEAST DRINKARD UNIT	911	APACHE CORP	I	A	Lea	P	L	23	21	S	37	E	1980	S	660	W
30-025-06766-00-00	NORTHEAST DRINKARD UNIT	915	APACHE CORP	I	A	Lea	P	J	23	21	S	37	E	1980	S	1980	E
30-025-06771-00-00	NORTHEAST DRINKARD UNIT	811	APACHE CORP	I	A	Lea	P	E	23	21	S	37	E	1980	N	660	W
30-025-06772-00-00	NORTHEAST DRINKARD UNIT	813	APACHE CORP	I	A	Lea	P	F	23	21	S	37	E	1980	N	1980	W
30-025-09897-00-00	NORTHEAST DRINKARD UNIT	103	APACHE CORP	I	A	Lea	F	4	3	21	S	37	E	660	N	660	W
30-025-09912-00-00	NORTHEAST DRINKARD UNIT	611	APACHE CORP	I	A	Lea	S	G	15	21	S	37	E	1980	N	1978	E
30-025-09917-00-00	NORTHEAST DRINKARD UNIT	704	APACHE CORP	I	A	Lea	P	N	15	21	S	37	E	660	S	1980	W
30-025-09918-00-00	NORTHEAST DRINKARD UNIT	703	APACHE CORP	I	A	Lea	P	K	15	21	S	37	E	1980	S	1980	W
30-025-09929-00-00	NORTHEAST DRINKARD UNIT	803	APACHE CORP	I	A	Lea	P	C	22	21	S	37	E	660	N	1980	W
30-025-09932-00-00	NORTHEAST DRINKARD UNIT	913	APACHE CORP	I	A	Lea	P	K	23	21	S	37	E	1980	S	1980	W
30-025-20315-00-00	NORTHEAST DRINKARD UNIT	107	APACHE CORP	I	A	Lea	P	6	3	21	S	37	E	1585	N	1980	W
30-025-20567-00-00	NORTHEAST DRINKARD UNIT	612	APACHE CORP	I	A	Lea	S	A	15	21	S	37	E	660	N	660	E
30-025-21347-00-00	NORTHEAST DRINKARD UNIT	815	APACHE CORP	I	A	Lea	P	G	23	21	S	37	E	1750	N	1980	E
30-025-25008-00-00	NORTHEAST DRINKARD UNIT	105	APACHE CORP	I	A	Lea	P	1	3	21	S	37	E	2080	N	660	W
30-025-26670-00-00	NORTHEAST DRINKARD UNIT	111	APACHE CORP	I	A	Lea	F	1	3	21	S	37	E	2232	N	2310	E
30-025-26990-00-00	NORTHEAST DRINKARD UNIT	202	APACHE CORP	I	A	Lea	P	9	4	21	S	37	E	3330	N	467	E



U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
ODESSA TX 79762 OFFICIAL USE

Postage	$ $2.24
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total	$8.24

USPS SANTA FE, NM 87505 0501 09 SEP 11 2014 CORONADO STATION
Postmark Here
07/11/2014

Sent
Street or PO
City,

Vanguard Permian, LLC
4001 Penbrook, Suite 201
Odessa, Texas 79762
Attn: Vickie Tompkins

PS Form ... Instructions

7013 2630 0000 9072 0439

C-108 Review Checklist: Received ________ Add. Request: ________ Reply Date: ________ Suspended: ________ [Ver 13]

PERMIT TYPE: (WFX) / PMX / SWD Number: ________ Permit Date: ________ Legacy Permits/Orders: ________

Well No. 301 Well Name(s): NEDU

API : 30-0 25-06388 Spud Date: ________ New or Old: Old (*UIC Class II Primacy 03/07/1982*)

Footages 1980FSL & 660FWL Lo. ___ or Unit I Sec 3 Tsp 21S Rge 37E County Lea

General Location: 4 miles / South Eunice Pool: ________ Pool No.: ________

BLM 100K Map: ________ Operator: Apache Corp OGRID: 873 Contact: David Catanach

COMPLIANCE RULE 5.9: Total Wells: ____ Inactive: ____ Fincl Assur: ____ Compl. Order? ____ **IS 5.9 OK?** ____ **Date:** ____

WELL FILE REVIEWED ◯ Current Status: Producer

WELL DIAGRAMS: NEW: Proposed ◯ or **RE-ENTER:** Before Conv. (X) After Conv. (X) Logs in Imaging: X

Planned Rehab Work to Well: ________

Well Construction Details:	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
Planned __or Existing __Surface	13 3/8" /	286		300	Surface/visual
Planned__or Existing __Interm/Prod					
Planned__or Existing __Interm/Prod	8 5/8" / 7"	2972		1800	110' / Temps
Planned__or Existing __Prod/Liner	5½" / 4 3/4"	6620		600	2620 / Temps
Planned__or Existing __Liner					
Planned__or Existing __OH / (PERF)			Inj Length		

Injection Stratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.			
Confining Unit: Litho. Struc. Por.			
Proposed Inj Interval TOP:	5700		
Proposed Inj Interval BOTTOM:	6151		
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:

Drilled TD 6690 PBTD 6230

NEW TD ________ NEW PBTD ________

NEW Open Hole ◯ or NEW Perfs ◯ ✓

Tubing Size 2 3/8 in. Inter Coated? X

Proposed Packer Depth 5700 ft

Min. Packer Depth 5641 (100-ft limit)

Proposed Max. Surface Press. 1375 psi

Admin. Inj. Press. 1148 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P ◯ *Noticed?* ____ **BLM Sec Ord** ◯ **WIPP** ◯ *Noticed?* ____ **SALT/SALADO** T: ____ B: ____ **CLIFF HOUSE** ____

FRESH WATER: Aquifer Ogallala Max Depth 75 **HYDRO AFFIRM STATEMENT By Qualified Person** ◯ —

NMOSE Basin: Capitan **CAPITAN REEF:** thru ◯ adj ◯ NA ◯ ✓ **No. Wells within 1-Mile Radius?** ____ FW Analysis ◯ —

Disposal Fluid: Formation Source(s) Formation Analysis? ____ On Lease ◯ Operator Only ◯ or Commercial ◯

Disposal Int: Inject Rate (Avg/Max BWPD): 250/500 Protectable Waters? ____ Source: ____ System: Closed ◯ ✓ or Open ◯

HC Potential: Producing Interval? X 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: 41 Horizontals? Ø

Penetrating Wells: No. Active Wells 39 Num Repairs? ✓ on which well(s)? ________ Diagrams? ____

Penetrating Wells: No. P&A Wells 2 Num Repairs? ____ on which well(s)? ________ Diagrams? X

NOTICE: Newspaper Date 8/13/ Mineral Owner ________ Surface Owner Vanguard Permian LLC N. Date 9/11/2014

RULE 26.7(A): Identified Tracts? ____ Affected Persons: ________ N. Date ____

Permit Conditions: Issues: ________

Add Permit Cond: ________

* 1 well is TA