

3/11/2014 DATE IN	SUSPENSE	PRG ENGINEER	3/11/2014 LOGGED IN	WFX TYPE	PMAM1407052489 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

- 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

#### 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]

- [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 R-12981

- WFX  
 - Apache Corp  
 873  
 well  
 - West Blinbry  
 Drinkard Unit  
 30-025-41543  
 West Blinbry  
 Drinkard Unit  
 30-025-41543

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

- [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

- Eunice, Bl-T-DR,  
 North  
 22900


#### [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.

Brian Wood	See Application	Consultant	02-18-2014
Print or Type Name	Signature	Title	Date
		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?        Yes        No
- II. OPERATOR: APACHE CORPORATION 2014 FEB 20 A 10: 31  
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 R-12981  
If yes, give the Division order number authorizing the project:
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail. **WEST BLINEBRY DRINKARD UNIT 152**  
**30-025-41543**
- 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: FEB. 18, 2014  
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.

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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 CORPORATION

WELL NAME & NUMBER: WEST BLINEBRY DRINKARD UNIT 152

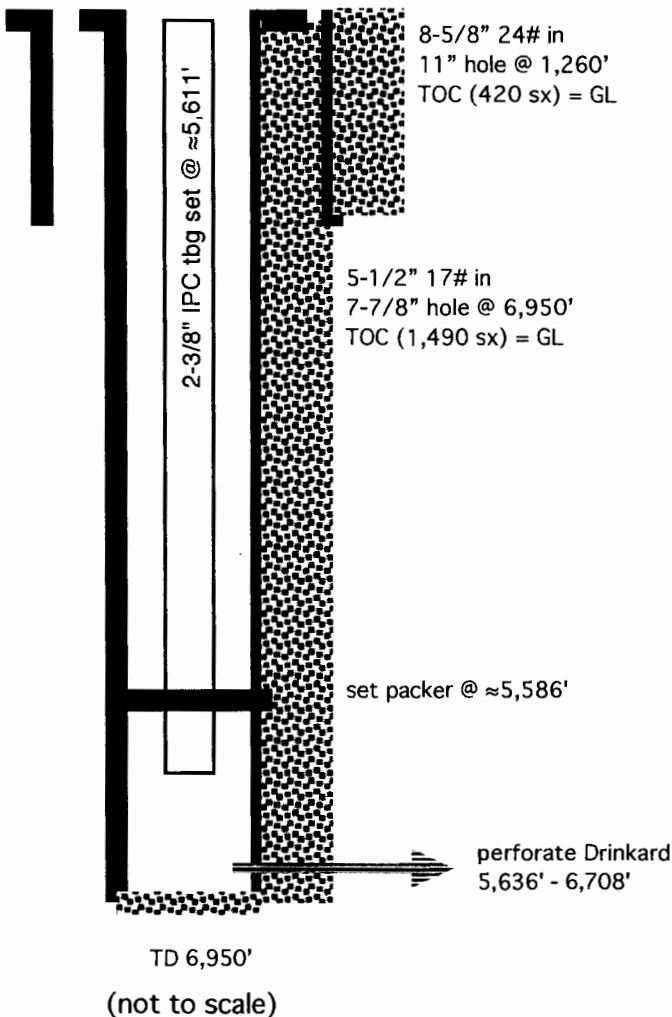
WELL LOCATION: 820' FSL & 820' FWL                      M                      16                      21 S                      37 E  
FOOTAGE LOCATION                      UNIT LETTER                      SECTION                      TOWNSHIP                      RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

“Proposed”



Hole Size: 11"                      Casing Size: 8-5/8"

Cemented with: 420 sx.                      or                      ft<sup>3</sup>

Top of Cement: SURFACE                      Method Determined: VISUAL

Intermediate Casing

Hole Size:                                           Casing Size:                    

Cemented with:                      sx.                      or                      ft<sup>3</sup>

Top of Cement:                                           Method Determined:                    

Production Casing

Hole Size: 7-7/8"                      Casing Size: 5-1/2"

Cemented with: 1,490 sx.                      or                      ft<sup>3</sup>

Top of Cement: SURFACE                      Method Determined: VISUAL

Total Depth: 6,950'

Injection Interval

5,636'                      feet to 6,708'

(Perforated or Open Hole; indicate which)  
■■■■■■■■■■

**INJECTION WELL DATA SHEET**Tubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COATType of Packer: LOCK SET INJECTIONPacker Setting Depth: ≈5,586'

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

**Additional Data**

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

If no, for what purpose was the well originally drilled? \_\_\_\_\_

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 (3,775'), SAN ANDRES (4,010')

UNDER: FUSSELMAN (7,250')

APACHE CORPORATION  
WEST BLINEBRY DRINKARD UNIT 152  
820 FSL & 820 FWL  
SEC. 16, T. 21 S., R. 37 E., LEA COUNTY, NM

PAGE 1

30-025-41543

I. Purpose is to drill a water injection well to increase oil recovery. The well will inject (5,636' - 6,708') 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 West Blinebry Drinkard Unit (Unit Number 300341, Case Numbers 14125 and 14126, both Order Number R-12981) that was established in 2008 by Apache. There have been two subsequent WFX approvals, WFX-854 and WFX-857. This is an active water flood. There are currently 25 active water injectors in the unit.

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: NMSLO B081050004  
Lease Size: 160 acres (see Exhibit A for maps and C-102)  
Closest Lease Line: 500'  
Lease Area: S2S2 of Section 16, T. 21 S., R. 37 E.  
Unit Size: 2,480 acres  
Closest Unit Line: 820'  
Unit Area: T. 21 S., R. 37 E.  
Section 4: Lot 15, S2SW4, & SE4  
Section 8: E2, NENW, & E2SW  
Sections 9 & 16: all  
Section 17: E2 & E2SW4  
Section 21: E2NE4

A. (2) Surface casing (8-5/8", 24#) will be set at 1,260' in an 11" hole.  
Cement will be circulated to the surface with 420 sacks.

Production casing (5-1/2", 17#) will be set at 6,950' (TD) in a 7-7/8" hole. Cement will be circulated to the surface with 1,490 sacks.

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

- A. (3) Tubing specifications are 2-3/8", J-55, 4.7#, and internally plastic coated. Setting depth will be  $\approx$ 5,611'. (Disposal interval will be 5,636' to 6,708'.)
- A. (4) A lock set injection packer will be set at  $\approx$ 5,586' ( $\approx$ 50' above the highest proposed perforation of 5,636').
- B. (1) Injection zone will be the Blinebry, Tubb, and Drinkard carbonates. The zones are 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 5,636' to 6,708'. The well will be a cased hole. See attached well profile for more perforation information.
- B. (3) The well has not yet been drilled. It will be completed as a water injection well after approval.
- B. (4) The well will be perforated from 5,636' to 6,708' with 2 shots per foot. Shot diameter = 0.40".
- B. (5) Next higher oil or gas zone in the area of review is the San Andres. Its estimated bottom is at 4,362'. Injection will occur in the Blinebry - Drinkard interval. Blinebry top is at 5,636'. Injection interval will be 5,636' to 6,708'. The injection interval is part of the Eunice; Blinebry-Tubb-Drinkard, North Pool (NMOCD pool code number = 22900). The San Andres is part of the Hare; San Andres (Gas) Pool (NMOCD pool code number = 78080).

The next lower oil or gas zone in the area of review is the Wantz; Fusselman (Pool Code = 62710). Its top is at 7,142'. Deepest perforation in the injection interval will be 6,708'.

IV. This is not a horizontal or vertical expansion of an existing injection project. The case file for the unit approval (R-12981) includes a discussion of the water flood. There have been 2 water flood expansions (WFX-854 & WFX-857) since then. Closest unit boundary is 820' south. Two injection wells are within a half-mile radius, both of which are in the unit (see Exhibit B).

V. Exhibit B shows all 44 existing wells (42 oil wells + 2 water injection wells) within a half-mile radius, regardless of depth. Exhibit C shows all 723 existing wells (581 oil or gas producing wells + 57 injection or disposal wells + 60 P & A wells + 25 water wells) within a two-mile radius.

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

<u>T. 21 S., R. 37 E.</u>	<u>Lessor</u>	<u>Lease</u>	<u>Operator</u>
SWNE Sec. 16	NMSLO	B017320001	Apache
S2NW4 Sec. 16	NMSLO	B015570002	Apache
N2SW4 & NWSE	NMSLO	B000850016	Apache
S2SW4 & SWSE	NMSLO	B081050004	Apache
SENE & NESE Sec. 17	BLM	NMLC-032096A	Apache
NWSE Sec. 17	fee	W. W. Weatherly	Apache
S2SE4 Sec. 17	fee	Hardy Blinebry	Apache
NENE Sec. 20	fee	A. M. York	Chevron
NWNE Sec. 20	fee	W. E. Lee	Campbell & Hedrick
SENE Sec. 20	fee	York Gas Com	Chevron
NW4 & NWNE Sec. 21	fee	Weatherly	Stephens & Johnson

Exhibit E shows all lessors (BLM, fee, and state) within a two-mile radius.



**APACHE CORPORATION**  
**WEST BLINEBRY DRINKARD UNIT 152**  
**820 FSL & 820 FWL**  
**SEC. 16, T. 21 S., R. 37 E., LEA COUNTY, NM**

**PAGE 4**

**30-025-41543**

VI. There are 44 existing wells within a half-mile radius. Twenty-four of the wells penetrated the Blinebry, Tubb, or Drinkard. The penetrators include 22 oil wells and 2 water injection wells. A table abstracting the well construction details and histories of the penetrators are in Exhibit F. None of the penetrators have been plugged and abandoned. The 44 wells and their distances from the 152 are:

API	Operator	Well	T21S, R37E Section	TVD	Status	Zone(s)	Distance (feet)
3002506630	Apache	State Land 15 001	16	6700	O	Penrose Skelly;Grayburg	217
3002539606	Apache	State Land 15 019	16	4414	O	Penrose Skelly;Grayburg	260
3002537364	Apache	State Land 15 007	16	4402	O	Penrose Skelly;Grayburg	683
3002537537	Apache	WBDU 094	16	7290	O	Eunice BLI-TU-DR, North	740
3002538414	Apache	WBDU 083	16	6850	O	Eunice BLI-TU-DR, North	836
3002537365	Apache	State Land 15 008	16	4435	O	Penrose Skelly;Grayburg	1000
3002539958	Apache	WBDU 126	17	6920	O	Eunice BLI-TU-DR, North	1034
3002539280	Apache	WBDU 129	17	7120	O	Eunice BLI-TU-DR, North	1035
3002537864	Apache	State DA 014	16	4375	O	Penrose Skelly;Grayburg	1052
3002534245	Apache	State DA 006	16	4000	O	Penrose Skelly;Grayburg	1148
3002506615	Apache	WBDU 075	16	6650	O	Eunice BLI-TU-DR, North	1156
3002536787	Apache	State DA 011	16	4350	O	Penrose Skelly;Grayburg	1188
3002506631	Apache	State Land 15 002	16	6700	O	Penrose Skelly;Grayburg	1208
3002536056	Apache	Percy Hardy 010	17	4350	O	Penrose Skelly;Grayburg	1232
3002506652	Apache	WBDU 085	17	6657	O	Eunice BLI-TU-DR, North	1468

**APACHE CORPORATION  
WEST BLINEBRY DRINKARD UNIT 152  
820 FSL & 820 FWL  
SEC. 16, T. 21 S., R. 37 E., LEA COUNTY, NM**

**PAGE 5**

**30-025-41543**

3002506720	Stephens & Johnson	Weatherly 002	21	6629	O	Blinebry Oil and Gas (Oil)	1498
3002538799	Stephens & Johnson	Weatherly 012	21	4244	O	Penrose Skelly;Grayburg	1569
3002506616	Apache	WBDU 076	16	6654	I	Eunice BLI-TU-DR, North	1655
3002536646	Apache	Weatherly 21 005	21	4250	O	Penrose Skelly;Grayburg	1742
3002538220	Apache	WBDU 080	16	6875	O	Eunice BLI-TU-DR, North	1756
3002523831	Apache	Percy Hardy 005	17	3849	O	Penrose Skelly;Grayburg	1797
3002535516	Apache	State DA 007	16	4200	O	Penrose Skelly;Grayburg	1817
3002536617	Apache	State DA 009	16	4350	O	Penrose Skelly;Grayburg	1826
3002506637	Apache	Lockhart A 17 002	17	6630	O	Penrose Skelly;Grayburg	1858
3002538415	Apache	WBDU 084	16	6835	O	Eunice BLI-TU-DR, North	1913
3002506721	Stephens & Johnson	Weatherly 003	21	6624	O	Blinebry Oil and Gas (Oil)	1914
3002536614	Apache	State C Tract 12 018	16	4350	O	Penrose Skelly;Grayburg	1920
3002537536	Apache	WBDU 093	16	7102	O	Eunice BLI-TU-DR, North	1928
3002538204	Apache	WBDU 069	17	6829	O	Eunice BLI-TU-DR, North	2020
3002509924	Chevron	A M York 002	20	6637	O	Blinebry Oil and Gas (Oil)	2084
3002538800	Stephens & Johnson	Weatherly 011	21	6750	O	Eunice BLI-TU-DR, North	2152
3002539986	Apache	WBDU 121	17	6970	O	Eunice BLI-TU-DR, North	2169
3002539172	Apache	WBDU 123	17	7200	O	Eunice BLI-TU-DR, North	2240
3002537482	Apache	State Land 15 013	16	4392	G	Penrose Skelly;Grayburg	2324

APACHE CORPORATION  
 WEST BLINEBRY DRINKARD UNIT 152  
 820 FSL & 820 FWL  
 SEC. 16, T. 21 S., R. 37 E., LEA COUNTY, NM

PAGE 6

30-025-41543

3002536477	Apache	Percy Hardy 009	17	4350	O	Penrose Skelly;Grayburg	2375
3002506625	Apache	WBDU 058	16	6660	I	Eunice BLI-TU-DR, North	2474
3002506632	Apache	WBDU 088	16	6660	O	Eunice BLI-TU-DR, North	2500
3002535709	Apache	State C Tract 12 011	16	4200	O	Penrose Skelly;Grayburg	2514
3002536159	Apache	Lockhart A 17 007	17	4100	O	Penrose Skelly;Grayburg	2540
3002535765	Apache	State DA 008	16	4200	O	Penrose Skelly;Grayburg	2543
3002538230	Apache	WBDU 081	16	6793	O	Eunice BLI-TU-DR, North	2561
3002536725	Apache	State C Tract 12 019	16	4350	O	Penrose Skelly;Grayburg	2568
3002536659	Apache	W W Weatherly 008	17	4215	O	Penrose Skelly;Grayburg	2588
3002535523	Apache	Weatherly 21 002	21	7152	O	Penrose Skelly;Grayburg	2602
3002506626	Apache	WBDU 059	16	7502	O	Eunice BLI-TU-DR, North	2728

- VII. 1. Average injection rate will be  $\approx$ 2,500 bwpd. Maximum injection rate will be  $\approx$ 3,000 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  $\approx$ 1,000 psi. Maximum injection pressure will be 1,127 psi ( $= 0.2$  psi/foot  $\times$  5,636' (highest perforation)).
4. Water source will be water pumped from two existing  $\approx$ 4,000' 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 tank before being piped to the injection wells. A comparison of nearby analyses and San Andres follows. No compatibility problems have reported from the 22,883,768 barrels that have been injected to date in the unit.

	NEDU Injection Pump Discharge	San Andres 919-S
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 from 110 wells 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 1° to 2°. The injection interval is Leonardian in age, 1072' thick, and consists of tan to dark gray shallow marine carbonates, many of which have been dolomitized. Core filling and replacement anhydrite are common in the limestone. Nodular anhydrite is common in the

dolomite. Five per cent porosity cut off is used to determine pay zones. Impermeable shale and carbonates vertically confine the interval.

There are currently 109 Blinebry injection wells, 129 Tubb injection wells, and 159 Drinkard injection wells in the state. Some of these wells inject into 2 or more zones. The West Blinebry Drinkard Unit shares its east border with Apache's Northeast Drinkard Unit. Three other similar water floods (East Blinebry Drinkard Units, Central Drinkard Unit, and Warren Blinebry Unit) are within a mile of the West Blinebry Drinkard Unit. The Central Drinkard Unit has been under water flood since the 1960s.

Formation depths are:

Quaternary = 0'  
Santa Rosa = 950'  
Anhydrite = 1,210'  
Top salt = 1,325'  
Base salt = 2,446'  
Yates = 2,620'  
Seven Rivers = 2,860'  
Queen = 3,410'  
Penrose = 3,585'  
Grayburg = 3,670'  
San Andres = 4,010'  
Glorieta = 5,175'  
Paddock = 5,300'  
Blinebry = 5,625'  
Tubb = 6,130'  
Drinkard = 6,560'  
Abo = 6,715'  
Total Depth = 6,950'

No fresh water well is within a mile radius. This conclusion is based on a January 7, 2014 field inspection and a review of the State Engineer's records. A water well 5,960' southeast in Section 22 (Exhibit G) was sampled. Deepest water well within a 6,456' (2,000 meter) radius is 167'. No existing underground drinking water sources are below the injection interval within a mile radius. The well is 2-1/2 miles outside and south of the Ogallala aquifer boundary.

There will be >5,000' of vertical separation and 1,236' of salt and anhydrite between the bottom of the only likely underground fresh water source and the top of the injection interval.

Produced water is currently being injected (178 wells) or disposed (9 wells) into the Blinebry-Tubb-Drinkard, San Andres, Grayburg, Queen, Seven Rivers, and Yates within T. 21 S., R. 37 E.

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

X. Spectral gamma ray, spectral density/compensated neutron, dual laterolog/MSFL, and sonic logs are planned.

XI. No fresh water well is within a mile. An analysis from a well that is 5,960' southeast is attached (Exhibit G).

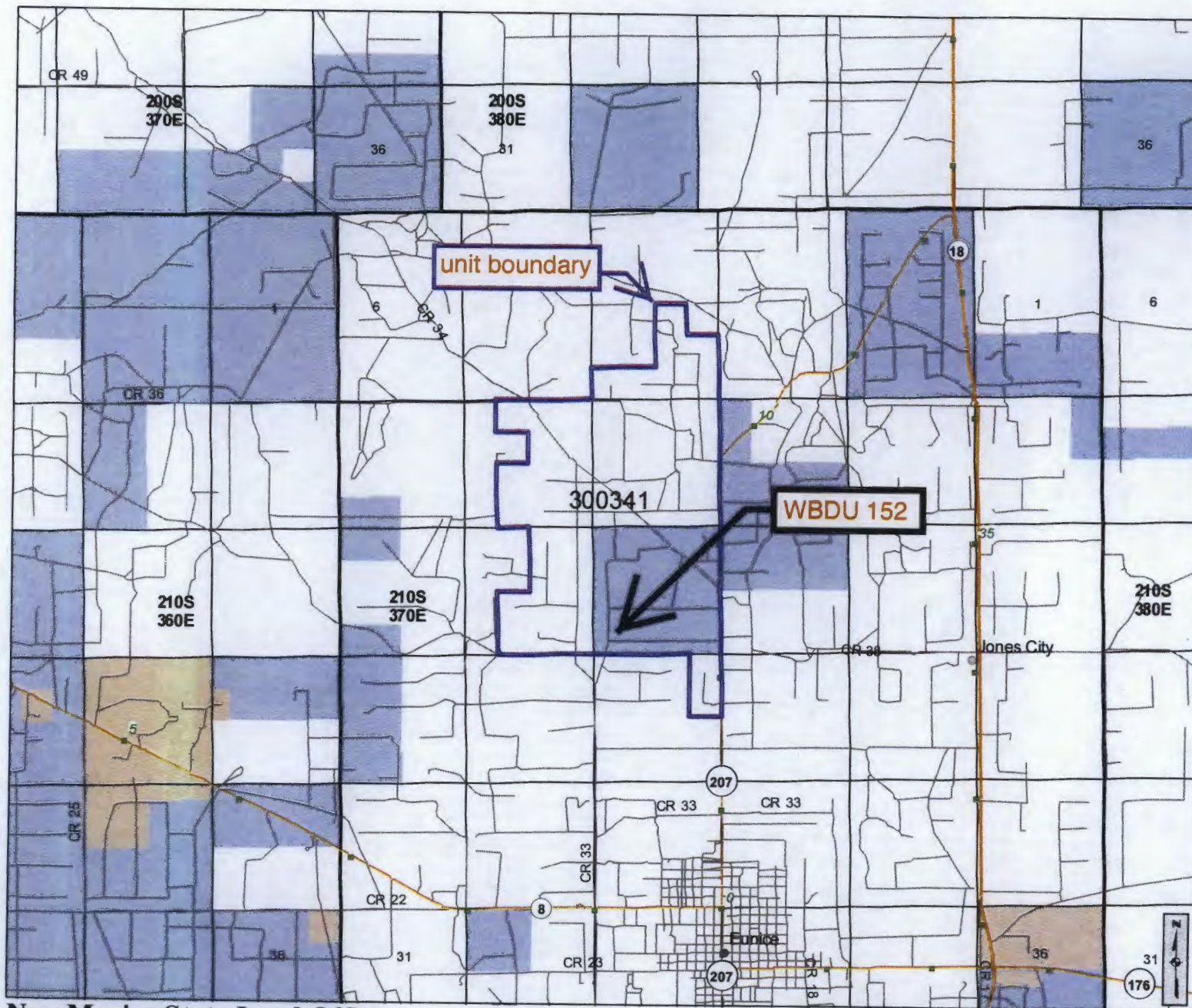
XII. Apache is not aware of any geologic or engineering data that may indicate the injection interval is in hydrologic connection with any underground sources of water. Closest Quaternary faults are >100 miles west and southwest (Exhibit H). At least 161 injection or saltwater disposal wells are active in the Blinebry, Tubb, or Drinkard in the New Mexico. Previously approved water flood expansions in the unit include:

WFX-854 (August 28, 2009)  
WFX-857 (December 22, 2009)

XIII. Notice (this application) has been sent (Exhibit I) to the surface owner (NM State Land Office), BLM, the offset Blinebry, Tubb, and Drinkard operators (Campbell & Hedrick, Chevron, and Stephens & Johnson), and other leasehold operating rights holders (ConocoPhillips, Six Aches).

A legal ad (see Exhibit J) was published on January 14, 2014.





# **New Mexico State Land Office** **Oil, Gas and Minerals**

0 0.25 0.5 1 1.5 2 Miles  
Universal Transverse Mercator Projection, Zone 13  
1983 North American Datum

**EXHIBIT A**

The New Mexico State Land Office assumes no responsibility or liability for, or in connection with, the accuracy, reliability or use of the information provided here, in State Land Office data layers or any other data layer.

Land Office Geographic Information Center  
logic@slo.state.nm.us

## **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**

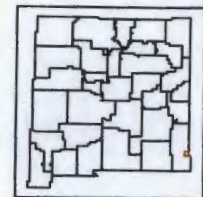
- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

## **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**

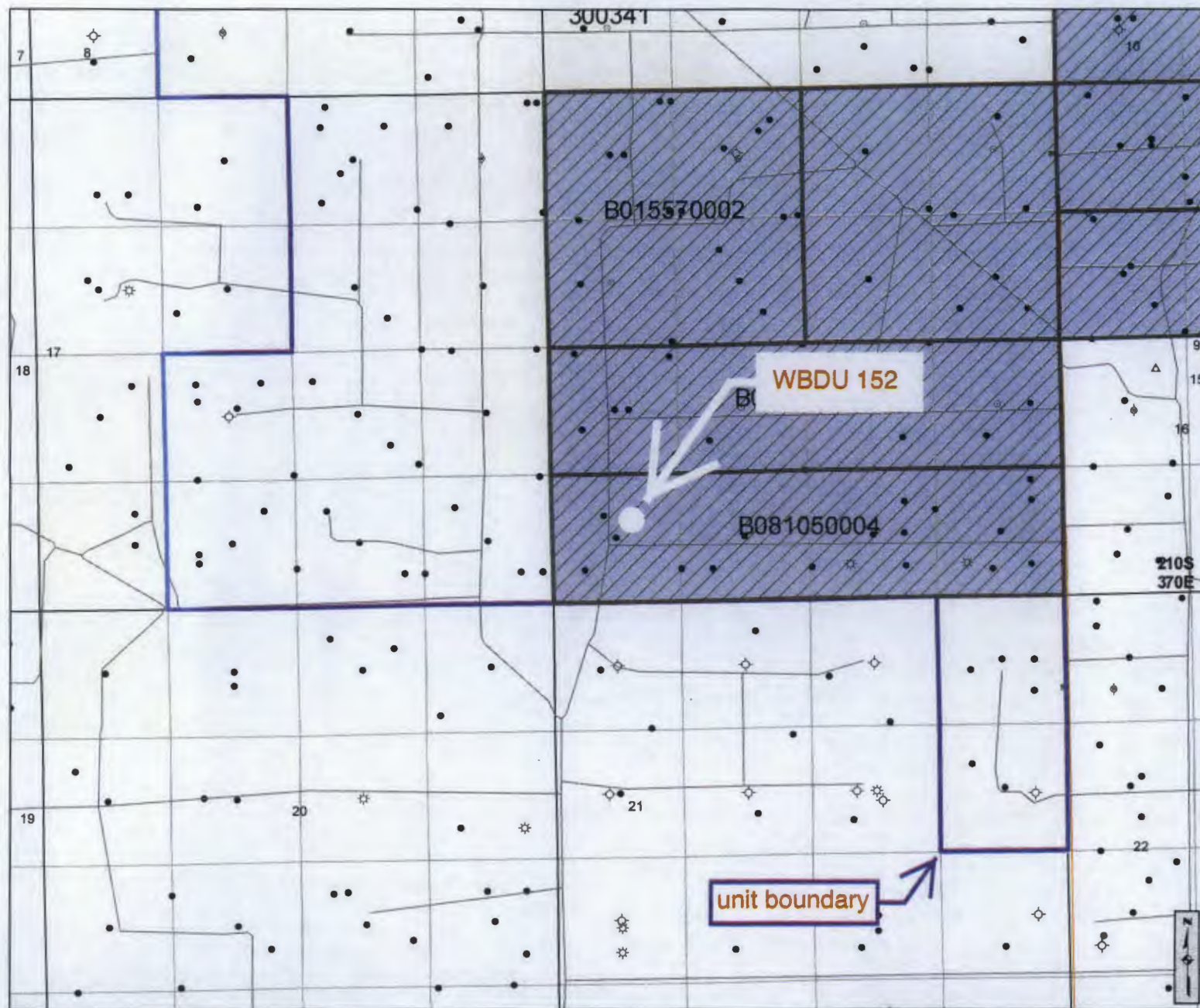
- CO<sub>2</sub>
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA



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### 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

- CO<sub>2</sub>
- Injection
- Oil
- Water
- Gas
- Miscellaneous
- Salt Water Disposal
- DA or PA

## New Mexico State Land Office

### Oil, Gas and Minerals

0 0.04 0.09 0.18 0.27 0.36 Miles

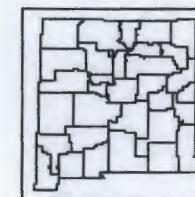
Universal Transverse Mercator Projection, Zone 13  
1983 North American Datum

EXHIBIT A

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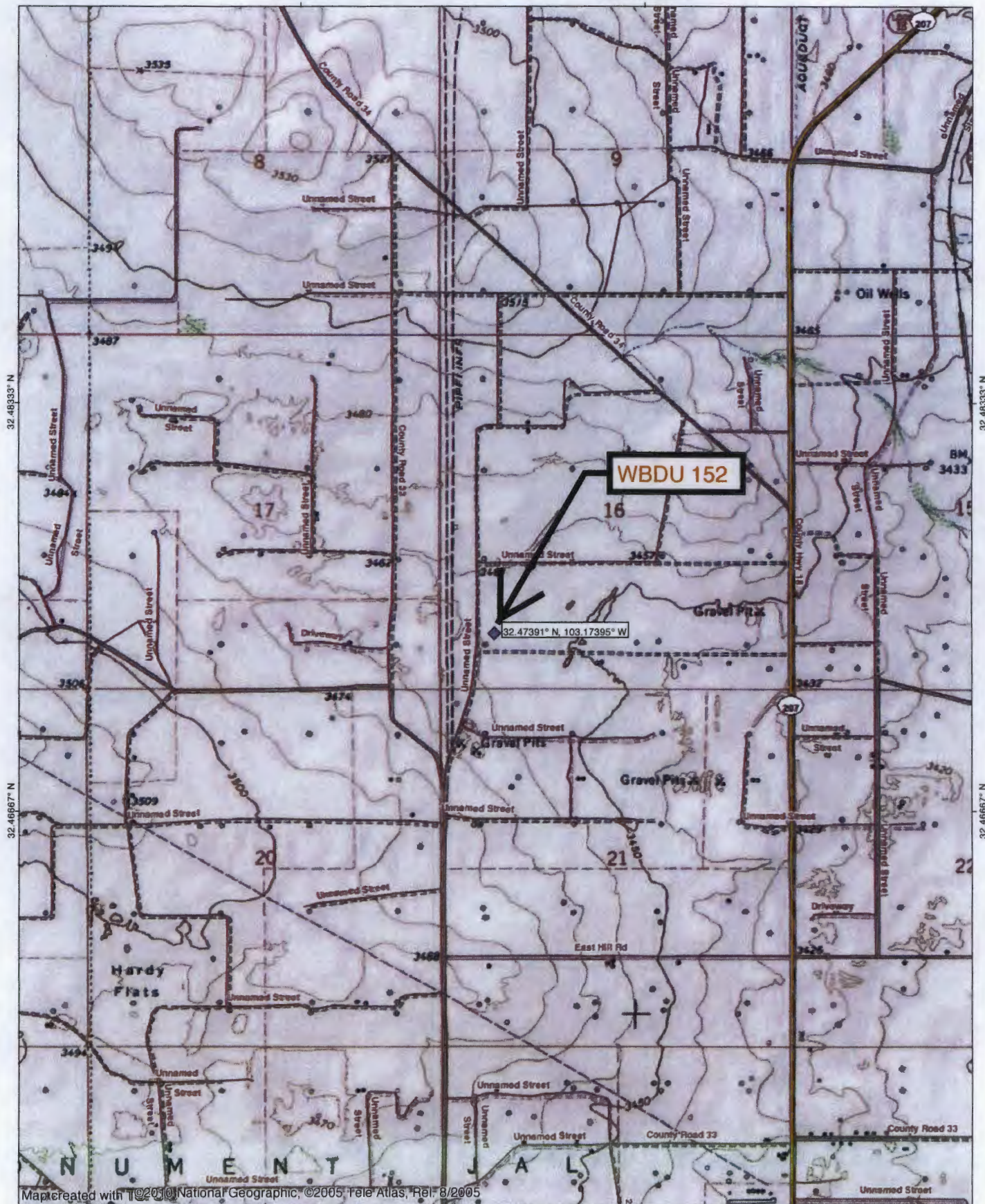


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103.18333° W

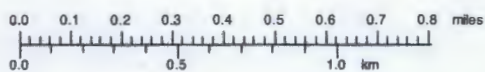
WGS84 103.18667° W



Map created with TOPO! National Geographic, ©2005, Tele Atlas, Rel: 8/2005

103.18333° W

WGS84 103.18667° W



TN+MN

7"

02/15/14

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
DISTRICT II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
DISTRICT III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

DAMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-</b>	Pool Code <b>222900</b>	Pool Name <b>Eunice, BLI-TU-DR, North</b>
Property Code	Property Name <b>WBDU</b>	Well Number <b>152W</b>
OGRID No. <b>873</b>	Operator Name <b>APACHE CORPORATION</b>	Elevation <b>3456'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>M</b>	<b>16</b>	<b>21-S</b>	<b>37-E</b>		<b>820</b>	<b>SOUTH</b>	<b>820</b>	<b>WEST</b>	<b>LEA</b>

Bottom Hole Location If Different From Surface

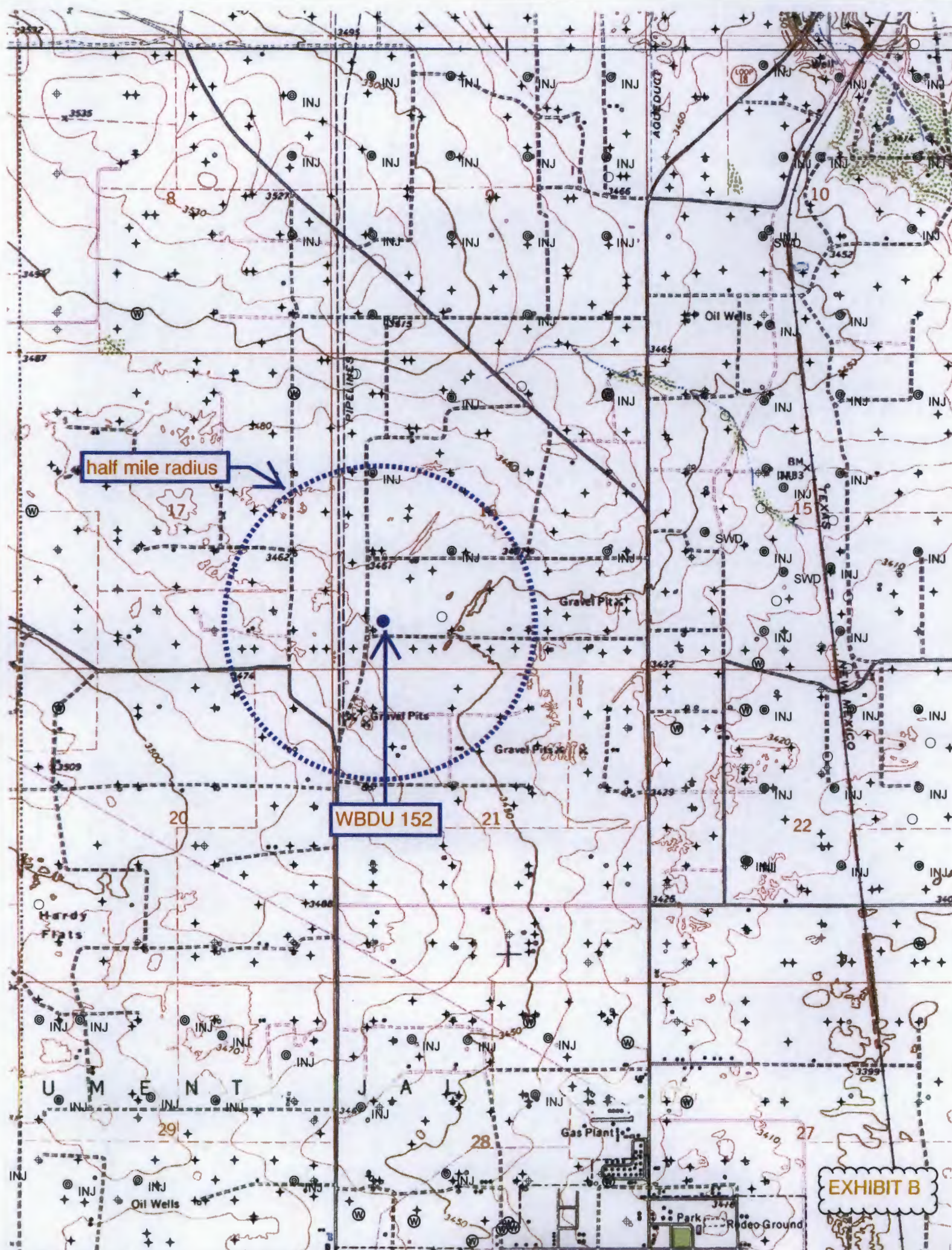
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres <b>40</b>	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p>GEODETIC COORDINATES NAD 27 NME</p> <p>SURFACE LOCATION Y=538023.8 N X=857699.0 E</p> <p>LAT.=32.473795° N LONG.=103.173476° W</p> <p>LAT.=32° 28' 25.7" N LONG.=103° 10' 24.5" W</p>		<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Michelle Cooper</i> 12-10-13 Signature Date</p> <p><i>Michelle Cooper</i> Printed Name</p> <p><i>michelle.cooper@apachecorp.com</i> E-mail Address</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat 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 belief.</p> <p>NOVEMBER 19, 2013</p> <p>Date of Survey</p> <p>Signature &amp; Seal of Professional Surveyor</p>		
	<p> </p> <p><i>Ronald J. Eidson</i> 12/03/2013 Certification Number Gary G. Eidson 12641 Ronald J. Eidson 3239</p>		
	<p>BKL JWSC W.O. 13.11.1274</p>		

EXHIBIT A



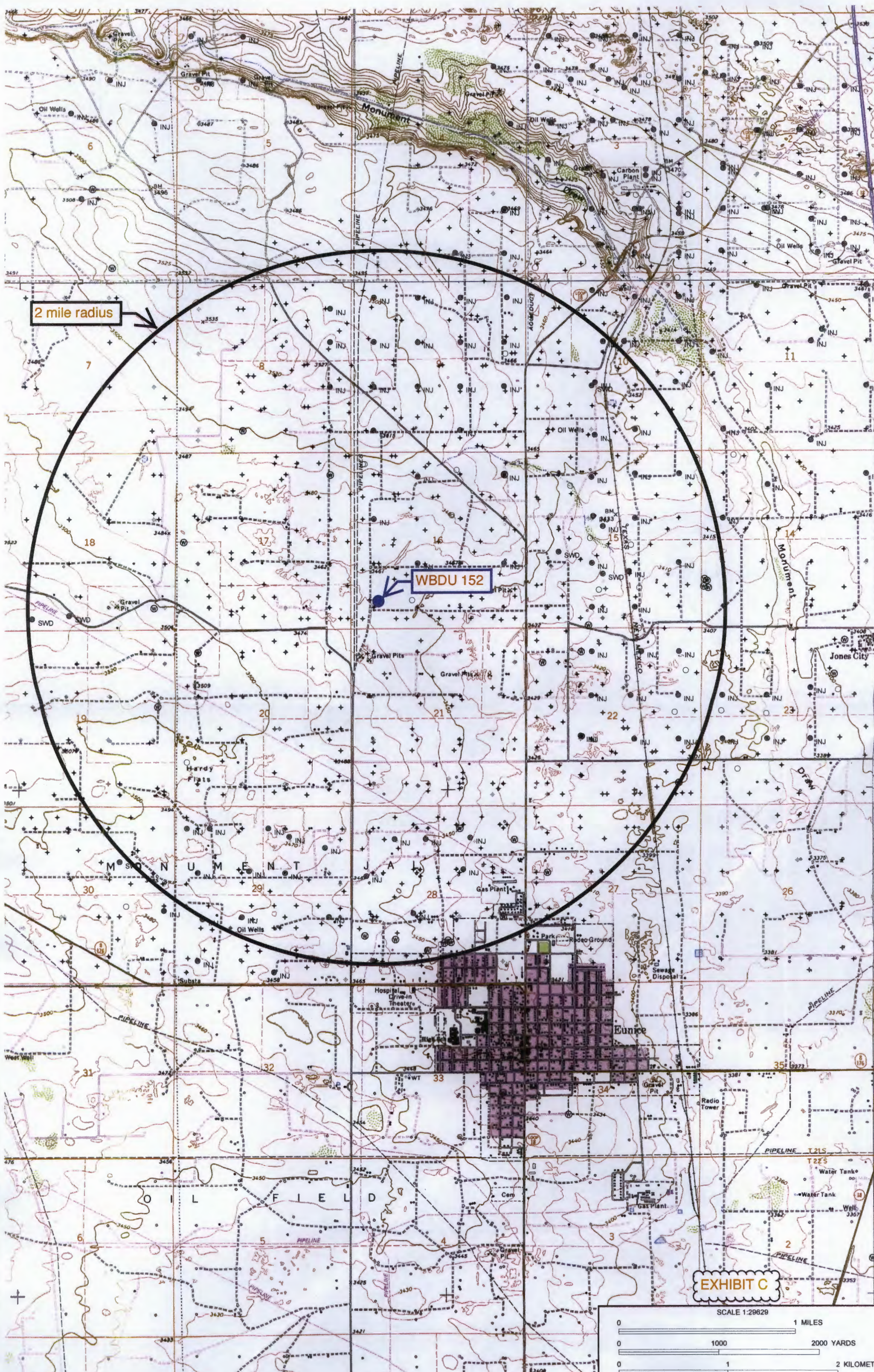


half mile radius

WBDU 152

EXHIBIT B

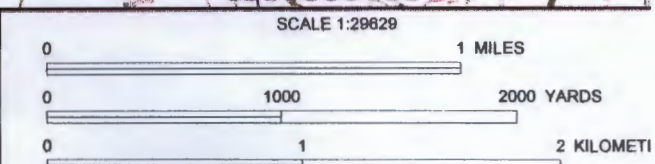




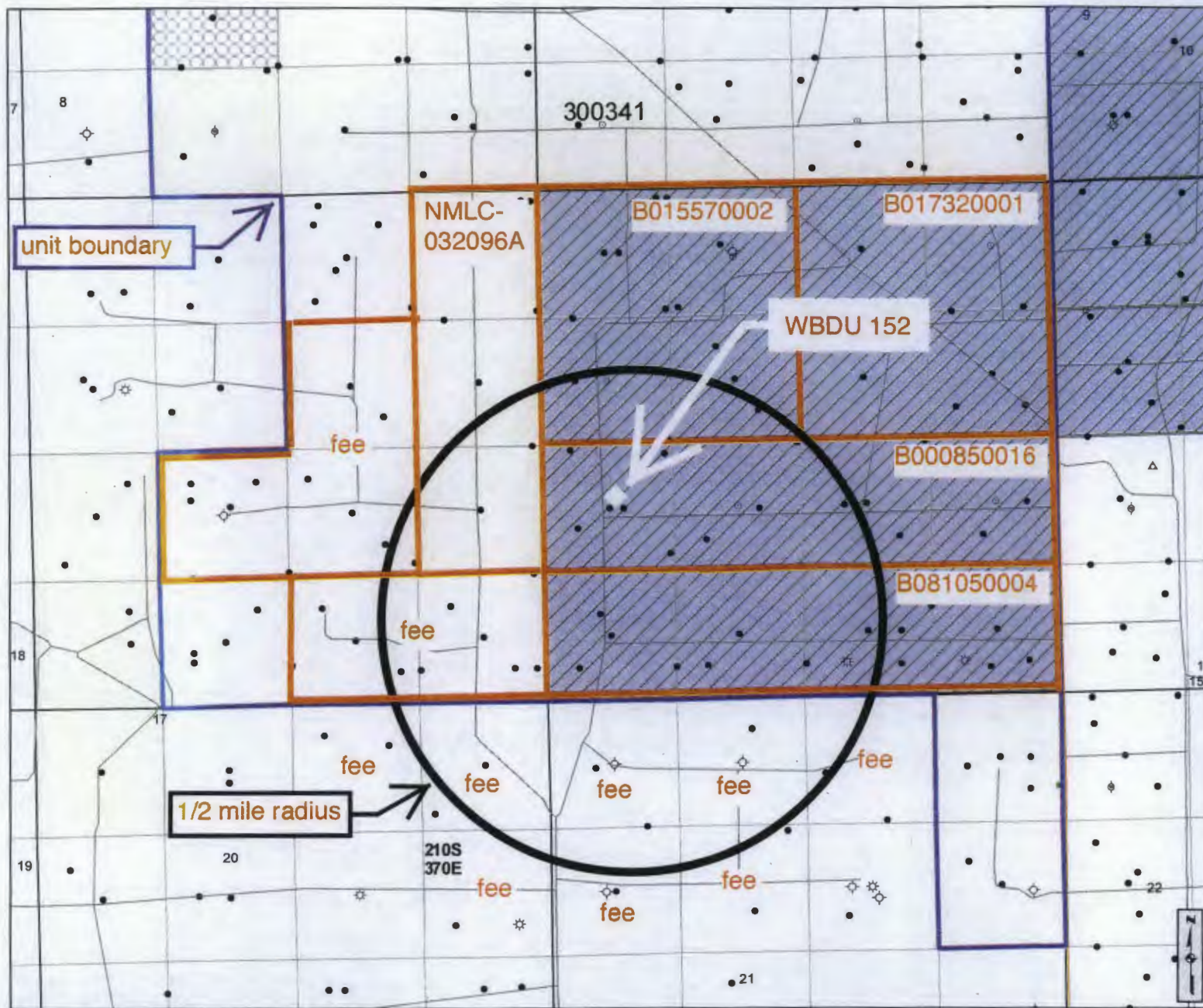
2 mile radius

WBDU 152

EXHIBIT C







### Cartographic Features

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- Salt Water Disposal
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## 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

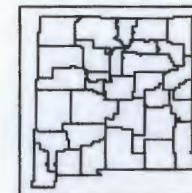
1983 North American Datum

EXHIBIT D

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Sorted by distance from WBDU 152

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
State Land 15 001	1/17/47	6700	Penrose Skelly; Grayburg	Oil	17	13.375	334	300 sx	no report	no report
30-025-06630					12	9.625	2849	2100 sx	no report	no report
M-16-21s-37e					8.75	7	6699	500 sx	4850	temperature survey
WBDU 094	5/25/06	7290	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1207	500 sx	GL	circulate to surface
30-025-37537					7.875	5.5	7290	1050 sx	280	CBL
N-16-21s-37e										
WBDU 083	6/23/07	6850	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1273	575 sx	GL	circulate to surface
30-025-38414					7.875	5.5	6850	1300 sx	186	CBL
L-16-21s-37e										
WBDU 126	1/11/11	6920	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1283	665 sx	GL	circulate 222 sx to surf.
30-025-39958					7.875	5.5	6920	1340 sx	GL	circulate 130 sx to GL
P-17-21s-37e										
WBDU 129	4/28/10	7120	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1286	650 sx	GL	circulated to surface
30-025-39280					7.875	5.5	7120	1150 sx	GL	circulated to surface
P-17-21s-37e										
WBDU 075	3/24/47	6650	Eunice; Blinebry-Tubb-Drinkard, North	Oil	17.25	13.375	216	200 sx	no report	no report
30-025-06615					11	8.625	2812	1200 sx	1300	temperature survey
L-16-21s-37e					7.375	5.5	6686	400 sx	no report	no report
State Land 15 002	3/17/47	6700	Penrose Skelly; Grayburg	Oil	17	13.375	320	300 sx	no report	no report
30-025-06631					11	8.625	2864	1600 sx	no report	no report
N-16-21s-37e					7.75	5.5	6699	500 sx	4670	calculated
WBDU 085	4/24/47	6657	Eunice; Blinebry-Tubb-Drinkard, North	Gas	17.25	13.375	297	300 sx	no report	no report
30-025-06652					11	8.625	2814	1200 sx	no report	no report
P-17-21s-37e					7.875	5.5	6641	500 sx	no report	no report



Sorted by distance from WBDU 152

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
Weatherly 002	5/9/47	6629	Eunice; Blinebry-Tubb-Drinkard, North	Oil	17.5	12.5	280	250 sx	no report	no report
30-025-06720					11	8.625	2890	1200 sx	no report	no report
D-21-21s-37e					7.375	5.5	6629	500 sx	no report	no report
WBDU 076	5/14/47	6654	Eunice; Blinebry-Tubb-Drinkard, North	WIW	17.5	13.375	214	200 sx	did not circ.	
30-025-06616					11	8.625	2815	1250 sx	1325	temperature survey
K-16-21s-37e					7.375	5.5	6654	500 sx	2850	temperature survey
WBDU 080	1/19/07	6875	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1227	575 sx	GL	circulated to surface
30-025-38220					7.875	5.5	6875	1425 sx	225	CBL
L-16-21s-37e										
Lockhart A 17 002	3/26/47	6630	Penrose Skelly; Grayburg	Oil	17.5	13.375	195	200 sx	GL	circulated
30-025-06637					12.25	9.625	2538	450 sx	1364	temperature survey
I-17-21s-37e					7.875	5.5	6629	500 sx	3510	temperature survey
WBDU 084	7/3/07	6835	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1265	650 sx	GL	circulated to surface
30-025-38415					7.875	5.5	6835	1400 sx	890	CBL
K-16-21s-37e										
Weatherly 003	9/3/47	6624	Eunice; Blinebry-Tubb-Drinkard, North	Oil	17	12.75	225	175 sx	no report	no report
30-025-06721					11	8.625	2900	1200 sx	no report	no report
C-21-21s-37e					7.75	5.5	6623	500 sx	no report	no report
WBDU 093	12/14/05	7102	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1225	550 sx	GL	circulated 129 sx
30-025-37536					7.875	5.5	7102	1250 sx	1940	CBL
O-16-21s-37e										
WBDU 069	2/22/07	6829	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1303	600 sx	GL	circulated to surface
30-025-38204					7.875	5.5	6875	1075 sx	440	CBL
1-7-21s-37e										



Sorted by distance from WBDU 152

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
A M York 002	12/9/87	6637	Eunice; Blinebry-Tubb-Drinkard, North	Oil	17.5	13.375	306	300 sx	GL	circulated
30-025-09924					12.25	9.625	2795	1000 sx	592	temperature survey
A-20-21s-37e					8.75	7	6636	500 sx	3172	temperature survey
Weatherly 011	9/5/08	6750	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1237	550 sx	no report	no report
30-025-38800					7.875	5.5	6748	1400 sx	no report	no report
D-21-21s-37e										
WBDU 121	1/1/11	6970	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1300	665 sx	GL	circulated 95 sx to surf.
30-025-39986					7.875	5.5	6970	1370 sx	GL	full returns
P-17-21s-37e										
WBDU 123	5/21/10	7200	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1248	650 sx	GL	circulated to surface
30-025-39172					7.875	5.5	7200	1150 sx	GL	circulated to surface
J-17-21s-37e										
WBDU 058	7/19/47	6660	Penrose Skelly; Grayburg	WIW	17.5	13.375	322	300 sx	GL	circulated
30-025-06625					12	9.625	2900	1500 sx	1560	no report
E-16-21s-37e					8.75	7	6660	775 sx	1900	temperature survey
WBDU 088	5/13/47	6660	Eunice; Blinebry-Tubb-Drinkard, North	Oil	17	13.375	215	250 sx	no report	no report
30-025-06632					11	8.625	2866	1600 sx	no report	no report
O-16-21s-37e					7.75	5.5	6659	500 sx	4425	calculated
WBDU 081	2/28/07	6793	Eunice; Blinebry-Tubb-Drinkard, North	Oil	12.25	8.625	1255	600 sx	GL	circulated to surface
30-025-38230					7875	5.5	6793	1200 sx	GL	CBL
K-16-21s-37e										
Weatherly 21 002	4/27/02	7152	Penrose Skelly; Grayburg	Oil	14.75	11.75	395	305 sx	GL	circulated 25 sx to pit
30-025-35523					11	8.625	3003	850 sx	GL	circulated 50 sx to pit
B-21-21s-37e					7.875	5.5	7152	750 sx	2690	temperature survey

Sorted by distance from WBDU 152

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 059	9/17/47	7502	Eunice; Blinbry-Tubb- Drinkard, North	Oil	17	13.375	316	324 sx	GL	circulated
30-025-06626					12	9.625	2900	500 sx	1325	temperature survey
F-16-21s-37e					8.75	7	6656	700 sx	2800	temperature survey



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

1639 meters  
= 5375 feet

dry on 1-7-14

(acre ft per annum)

(R=POD has been replaced  
and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	q q q					X	Y	Distance	
									Source	6416 4	Sec	Tws	Rng				
<u>CP 00554</u>		STK		3 MILLARD DECK	LE	<u>CP 00554</u>			Shallow	2	2	16	21S 37E	672744	3595610*	1639	
<u>CP 00895</u>		DOM		3 JOE R. SIMS	LE	<u>CP 00895</u>			Shallow	1	1	20	21S 37E	669957	3593956*	1711	
<u>CP 01026</u>		DOM		1 DAVID KERBO	LE	<u>CP 01026 POD1</u>			Shallow	1	1	3	17	21S 37E	669809	3594958	1865
<u>CP 01141</u>		MON		0 STRAUB CORPORATION	LE	<u>CP 01141 POD5</u>				3	4	3	15	21S 37E	673514	3594253	1923
					LE	<u>CP 01141 POD1</u>				3	4	3	15	21S 37E	673530	3594263	1937
					LE	<u>CP 01141 POD2</u>			Shallow	3	4	3	15	21S 37E	673541	3594250	1949
					LE	<u>CP 01141 POD3</u>			Shallow	3	4	3	15	21S 37E	673541	3594250	1949
					LE	<u>CP 01141 POD4</u>			Shallow	3	4	3	15	21S 37E	673541	3594250	1949
<u>CP 00447</u>		STK		JOE E. SIMS	LE	<u>CP 00447 DCL</u>				2	4	4	18	21S 37E	669647	3594451*	1953

Record Count: 9

### UTMNA83 Radius Search (in meters):

Easting: 671600

Northing (Y): 3594435

Radius: 2000

Sorted by: Distance

EXHIBIT G

\*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.

2/15/14 3:17 PM

Page 1 of 1

ACTIVE & INACTIVE POINTS OF DIVERSION



# 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)

1639 meters  
= 5375 feet

POD Number	POD Sub-Code	basin	County	Q	Q	Q	4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00554	← dry on 1-7-14		LE	2	2	16	21S	37E			672744	3595610*	1639	80	70	10
CP 00895			LE	1	1	20	21S	37E			669957	3593956*	1711	163		
CP 01026 POD1			LE	1	1	3	17	21S	37E		669809	3594958	1865	167	95	72
CP 01141 POD2			LE	3	4	3	15	21S	37E		673541	3594250	1949	40		
CP 01141 POD3			LE	3	4	3	15	21S	37E		673541	3594250	1949	40		
CP 01141 POD4			LE	3	4	3	15	21S	37E		673541	3594250	1949	45		

Average Depth to Water: **82 feet**

Minimum Depth: **70 feet**

Maximum Depth: **95 feet**

**Record Count:** 6

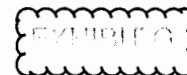
**UTMNAD83 Radius Search (in meters):**

Easting (X): 671600

Northing (Y): 3594435

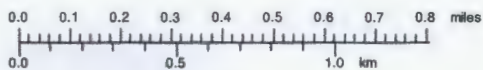
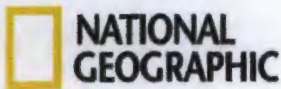
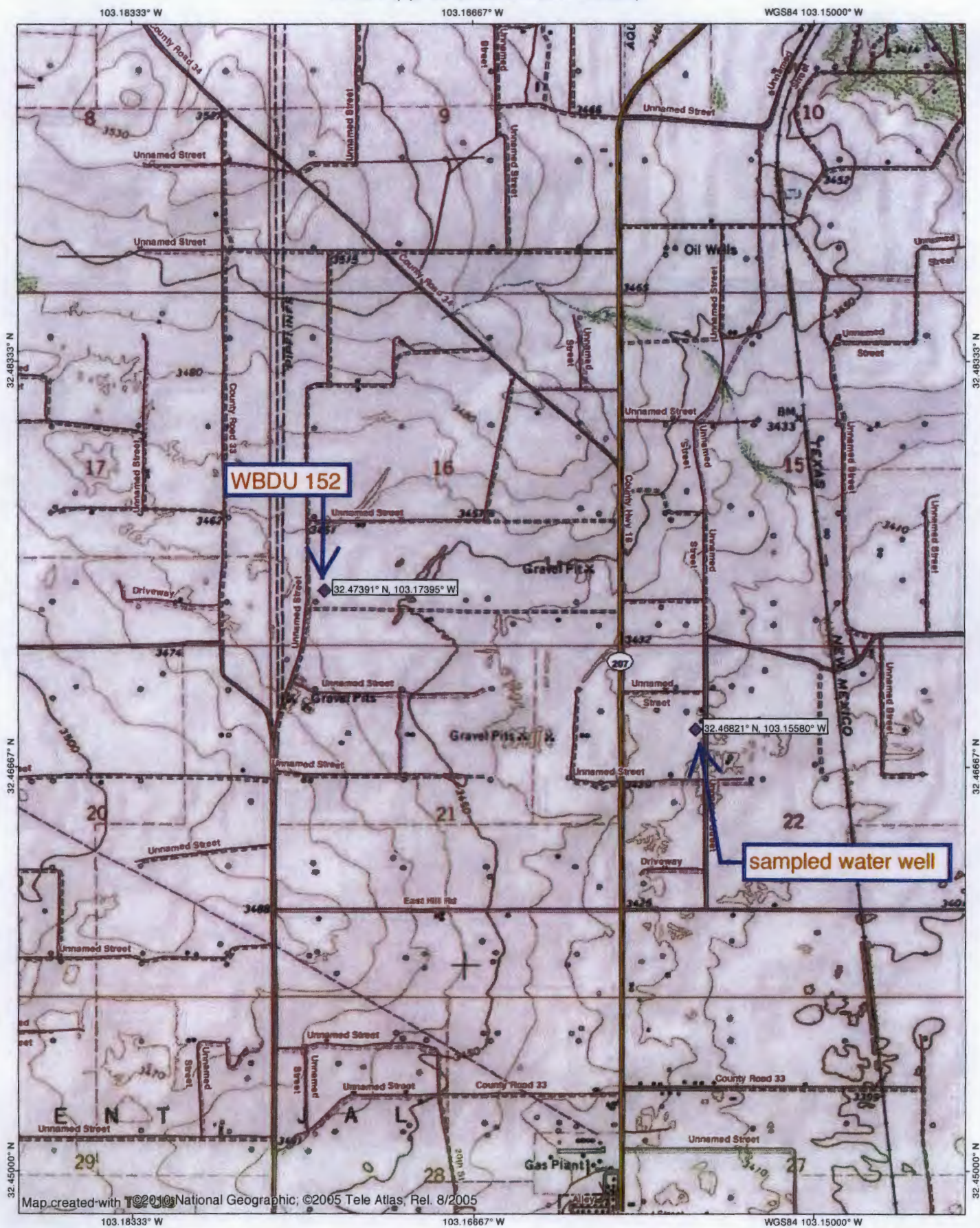
Radius: 2000

\*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.





# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1401402

Date Reported: 1/20/2014

**CLIENT:** Permits West

**Client Sample ID:** AP0WBD-NW Sec 22

**Project:** Apache SWD Water Samples

**Collection Date:** 1/7/2014 1:41:00 PM

**Lab ID:** 1401402-001

**Matrix:** AQUEOUS

**Received Date:** 1/10/2014 11:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	210	50		mg/L	100	1/10/2014 7:47:25 PM	R16037
<b>EPA METHOD 1664A</b>							Analyst: JDC
N-Hexane Extractable Material	ND	5.1		mg/L	1	1/15/2014	11189
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: KS
Total Dissolved Solids	779	20.0	*	mg/L	1	1/14/2014 7:27:00 PM	11204

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Page 1 of 5

EXHIBIT G

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1401402

20-Jan-14

Client: Permits West  
Project: Apache SWD Water Samples

Sample ID	MB-11189	SampType:	MBLK	TestCode:	EPA Method 1664A					
Client ID:	PBW	Batch ID:	11189	RunNo:	16085					
Prep Date:	1/13/2014	Analysis Date:	1/15/2014	SeqNo:	463280	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	5.0								

Sample ID	LCS-11189	SampType:	LCS	TestCode:	EPA Method 1664A					
Client ID:	LCSW	Batch ID:	11189	RunNo:	16085					
Prep Date:	1/13/2014	Analysis Date:	1/15/2014	SeqNo:	463281	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	36	5.0	40.00	0	89.5	78	114			

## Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level         | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

Page 2 of 5

EXHIBIT G



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1401402

20-Jan-14

Client: Permits West  
Project: Apache SWD Water Samples

Sample ID	A6	SampType:	CCV_6	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R16037	RunNo:	16037					
Prep Date:		Analysis Date:	1/10/2014	SeqNo:	461898	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	101	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R16037	RunNo:	16037					
Prep Date:		Analysis Date:	1/10/2014	SeqNo:	461902	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS-b	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R16037	RunNo:	16037					
Prep Date:		Analysis Date:	1/10/2014	SeqNo:	461904	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	95.3	90	110			

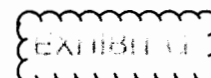
Sample ID	A4	SampType:	CCV_4	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R16037	RunNo:	16037					
Prep Date:		Analysis Date:	1/10/2014	SeqNo:	461910	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.3	90	110			

Sample ID	A5	SampType:	CCV_5	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R16037	RunNo:	16037					
Prep Date:		Analysis Date:	1/10/2014	SeqNo:	461922	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.9	0.50	8.000	0	98.2	90	110			

Sample ID	A6	SampType:	CCV_6	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R16037	RunNo:	16037					
Prep Date:		Analysis Date:	1/10/2014	SeqNo:	461934	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	102	90	110			

### Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |





# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1401402

20-Jan-14

Client: Permits West  
Project: Apache SWD Water Samples

Sample ID	A4	SampType	CCV_4	TestCode	EPA Method 300.0: Anions					
Client ID	BatchQC	Batch ID	R16037	RunNo	16037					
Prep Date		Analysis Date	1/10/2014	SeqNo	461946	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.4	90	110			

Sample ID	A5	SampType	CCV_5	TestCode	EPA Method 300.0: Anions					
Client ID	BatchQC	Batch ID	R16037	RunNo	16037					
Prep Date		Analysis Date	1/10/2014	SeqNo	461958	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.9	0.50	8.000	0	98.6	90	110			

Sample ID	A6	SampType	CCV_6	TestCode	EPA Method 300.0: Anions					
Client ID	BatchQC	Batch ID	R16037	RunNo	16037					
Prep Date		Analysis Date	1/11/2014	SeqNo	461966	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	102	90	110			

## Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2 for VOA and TOC only      |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

Page 4 of 5

EXHIBIT G

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1401402

20-Jan-14

Client: Permits West  
Project: Apache SWD Water Samples

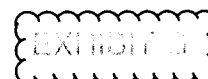
Sample ID	MB-11204	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	11204	RunNo:	16069					
Prep Date:	1/13/2014	Analysis Date:	1/14/2014	SeqNo:	462742	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-11204	SampType	LCS	TestCode	SM2540C MOD: Total Dissolved Solids					
Client ID	LCSW	Batch ID	11204	RunNo	16069					
Prep Date	1/13/2014	Analysis Date	1/14/2014	SeqNo	462743	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1040	20.0	1000	0	104	80	120			

## Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2 for VOA and TOC only      |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

Page 5 of 5



Ogallala boundary



WBDU 152



34247391 40417195

11

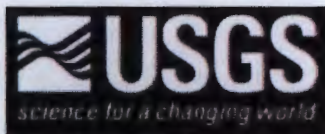
EXHIBIT G

Google earth

Survey

2011 Census





## Geologic Hazards Science Center

### EHP Quaternary Faults

Search for fault:  Select a state or region map:



EXHIBIT H

February 18, 2014

NM State Land Office  
 P. O. Box 1148  
 Santa Fe, NM 87504-1148

Apache Corporation is applying (see attached application) to drill its West Blinebry Drinkard Unit 152 well as 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 152 (state lease) ID = 6,950'  
Proposed Injection Zone: Blinebry, Tubb, & Drinkard from 5,636' to 6,708'  
Location: 820' FSL & 820' FWL Sec. 16, T. 21 S., R. 37 E., Lea County, NM  
Approximate Location: 2 air miles north 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*

Brian Wood

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Total Postage & Fees \$	
Sent To: <i>NM SCO</i> Street, Apt. No., or P.O. Box No.: City, State, ZIP+4:	

EXHIBIT 1

February 18, 2014

BLM  
 620 E. Greene St.  
 Carlsbad NM 88220

Apache Corporation is applying (see attached application) to drill its West Blinebry Drinkard Unit 152 well as 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 152 (state lease) ID = 6,950'  
Proposed Injection Zone: Blinebry, Tubb, & Drinkard from 5,636' to 6,708'  
Location: 820' FSL & 820' FWL Sec. 16, T. 21 S., R. 37 E., Lea County, NM  
Approximate Location: 2 air miles north 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*

Brian Wood

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees \$	
Sent To: <i>BLM</i> Street, Apt. No., or P.O. Box No.: City, State, ZIP+4:	



February 18, 2014

Chevron USA Inc.  
P. O. Box 1635  
Houston TX 77251

Apache Corporation is applying (see attached application) to drill its West Blinebry Drinkard Unit 152 well as 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 152 (state lease) ID = 6,950'  
Proposed Injection Zone: Blinebry, Tubb, & Drinkard from 5,636' to 6,708'  
Location: 820' FSL & 820' FWL Sec. 16, T. 21 S., R. 37 E., Lea County, NM  
Approximate Location: 2 air miles north 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

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Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees \$	
Sent To <u>Chevron</u> Street, Apt. No., or PO Box No. <u>1635</u> City, State, ZIP+4	

EXHIBIT 1



February 18, 2014

Chevron USA Inc.  
P. O. Box 2100  
Houston TX 77252

Apache Corporation is applying (see attached application) to drill its West Blinebry Drinkard Unit 152 well as 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 152 (state lease) ID = 6,950'  
Proposed Injection Zone: Blinebry, Tubb, & Drinkard from 5,636' to 6,708'  
Location: 820' FSL & 820' FWL Sec. 16, T. 21 S., R. 37 E., Lea County, NM  
Approximate Location: 2 air miles north 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,

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Postage \$	
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees \$	
Sent To <u>Chevron</u> Street, Apt. No., or PO Box No. <u>2100</u> City, State, ZIP+4	

See Reverse for Instructions



February 18, 2014

Campbell & Hedrick  
P. O. Box 401  
Midland TX 79701

Apache Corporation is applying (see attached application) to drill its West Blinbry Drinkard Unit 152 well as 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 152 (state lease) ID = 6,950'  
Proposed Injection Zone: Blinbry, Tubb, & Drinkard from 5,636' to 6,708'  
Location: 820' FSL & 820' FWL Sec. 16, T. 21 S., R. 37 E., Lea County, NM  
Approximate Location: 2 air miles north 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



February 18, 2014

ConocoPhillips  
P. O. Box 7500  
Bartlesville OK 74005

Apache Corporation is applying (see attached application) to drill its West Blinbry Drinkard Unit 152 well as 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 152 (state lease) ID = 6,950'  
Proposed Injection Zone: Blinbry, Tubb, & Drinkard from 5,636' to 6,708'  
Location: 820' FSL & 820' FWL Sec. 16, T. 21 S., R. 37 E., Lea County, NM  
Approximate Location: 2 air miles north 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

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Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
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City, State, ZIP+4	

EXHIBIT

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Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$
Sent To: ConocoPhillips	
Street, Apt. No., or PO Box No.	
City, State, ZIP+4	





February 18, 2014

Six Aeches Co.  
P. O. Box 481  
Midland TX 79702-0481

Apache Corporation is applying (see attached application) to drill its West Blinebry Drinkard Unit 152 well as 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.

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Location: 820' FSL & 820' FWL Sec. 16, T. 21 S., R. 37 E., Lea County, NM  
Approximate Location: 2 air miles north 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

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$
Sent To	
Attention, Apt. No., or P.O. Box No. City, State, ZIP+4	

EXHIBIT 1



February 18, 2014

Stephens & Johnson Operating Co.  
P. O. Box 2249  
Wichita Falls TX 76307

Apache Corporation is applying (see attached application) to drill its West Blinebry Drinkard Unit 152 well as 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.

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Location: 820' FSL & 820' FWL Sec. 16, T. 21 S., R. 37 E., Lea County, NM  
Approximate Location: 2 air miles north 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

<b>U.S. Postal Service™</b>	
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<i>(Domestic Mail Only; No Insurance Coverage Provided)</i>	
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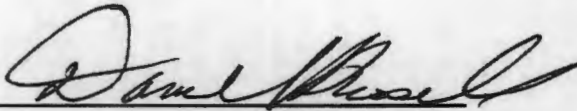


# Affidavit of Publication

State of New Mexico,  
County of Lea.

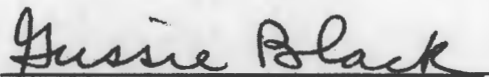
I, DANIEL RUSSELL  
PUBLISHER  
of the Hobbs News-Sun, a  
newspaper published at Hobbs, New  
Mexico, do solemnly swear that the  
clipping attached hereto was  
published in the regular and entire  
issue of said newspaper, and not a  
supplement thereof for a period

of 1 issue(s).  
Beginning with the issue dated  
January 14, 2014  
and ending with the issue dated  
January 14, 2014



PUBLISHER

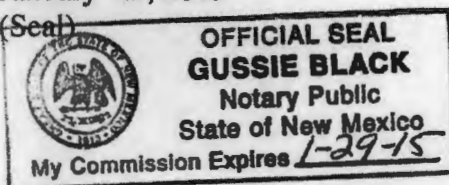
Sworn and subscribed to before me  
this 14th day of  
January, 2014



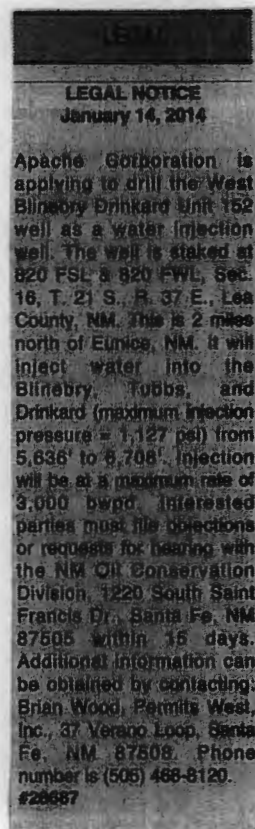
Notary Public

My commission expires  
January 29, 2015

(Seal)



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  
publication has been made.



02108485

00129051

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

EXHIBIT J



C-108 Review Checklist: Received 3-11 Add. Request:        Reply Date:        Suspended:        [Ver 13]

PERMIT TYPE: WFX PMX / SWD Number: 922 Permit Date: 03/28/14 Legacy Permits/Orders: R-12981

Well No. 152 Well Name(s): West Blinberry Drink And Unit

API: 30-0 25-41543 Spud Date: NA New or Old: New (UIC Class II Primacy 03/07/1982)

Footages 820 FSL, 820 FWL Lot        or Unit M Sec 6 Tsp 21S Rge 37E County Lee

General Location: NORTH OF EUNICE Pool: EUNICE, BLINBERRY-THBB-DRINKAND Pool No.: 22900

BLM 100K Map: SW Operator: Apache Corporation GRID: 873 Contact: Brian Wood

COMPLIANCE RULE 5.9: Total Wells: 2903 Inactive: 5 Fincl Assur: X Compl. Order? No IS 5.9 OK? X Date: 5-28-14

WELL FILE REVIEWED ☒ Current Status: Proposed

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

Planned Rehab Work to Well: None

Well Construction Details:		Sizes (in)	Setting	Cement	Cement Top and
		Borehole / Pipe	Depths (ft)	Sx or Cf	Determination Method
Planned <input checked="" type="checkbox"/> or Existing <u>Surface</u>	<u>11" / 8-5/8"</u>	<u>1260</u>	Stage Tool	<u>420</u>	<u>Surface</u>
Planned <input type="checkbox"/> or Existing <u>Interm/Prod</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
Planned <input type="checkbox"/> or Existing <u>Interm/Prod</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
Planned <input checked="" type="checkbox"/> or Existing <u>Prod/Liner</u>	<u>7-7/8 5-1/2</u>	<u>6950</u>	<u>None</u>	<u>1490</u>	<u>Surface</u>
Planned <input type="checkbox"/> or Existing <u>Liner</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
Planned <input checked="" type="checkbox"/> or Existing <u>OH (PERF)</u>	<u>5 1/2</u>	<u>5636 to 6708</u>	Inj Length	Completion/Operation Details:	
Injection Stratigraphic Units:		Depths (ft)	Injection or Confining Units	Tops	Drilled TD <u>6950</u> PBDT <u>      </u>
Adjacent Unit: Litho. Struc. <u>Por</u>			<u>SAN ANDRES</u>		NEW TD <u>      </u> NEW PBDT <u>      </u>
Confining Unit: Litho. Struc. <u>Por</u>			<u>GLORIETA</u>		NEW Open Hole <input type="checkbox"/> or NEW Perfs <input checked="" type="checkbox"/>
Proposed Inj Interval TOP:			<u>5636</u>		Tubing Size <u>2-3/8</u> in. Inter Coated? <u>X</u>
Proposed Inj Interval BOTTOM:			<u>6708</u>		Proposed Packer Depth <u>5586</u> ft
Confining Unit: Litho. Struc. <u>Por</u>			<u>A60</u>		Min. Packer Depth <u>5536</u> (100-ft limit)
Adjacent Unit: Litho. Struc. <u>Por</u>					Proposed Max. Surface Press. <u>1127</u> psi
					Admin. Inj. Press. <u>1120</u> (0.2 psi per ft)
AOR: Hydrologic and Geologic Information					
POTASH: R-111-P <input checked="" type="checkbox"/> Noticed? <u>NA</u> BLM Sec Ord <input checked="" type="checkbox"/> WIPP <input checked="" type="checkbox"/> Noticed? <u>NA</u> SALT/SALADO T: <u>      </u> B: <u>      </u> CLIFF HOUSE <u>NA</u>					
FRESH WATER: Aquifer <u>Capitana / alluvial</u> Max Depth <u>167</u> HYDRO AFFIRM STATEMENT By Qualified Person <input checked="" type="checkbox"/>					
NMOSE Basin: <u>CAPITANA</u> CAPITAN REEF: thru <input type="checkbox"/> adj <input type="checkbox"/> NAC <input checked="" type="checkbox"/> No. Wells within 1-Mile Radius <u>0</u> FW Analysis <input checked="" type="checkbox"/>					
Disposal Fluid: Formation Source(s) <u>SAN ANDRES</u> Analysis? <u>X</u> On Lease <input checked="" type="checkbox"/> Operator Only <input type="checkbox"/> or Commercial <input type="checkbox"/>					
Disposal Int: Inject Rate (Avg/Max BWPD): <u>3000</u> Protectable Waters? <u>NA</u> Source: <u>NA</u> System: Closed <input type="checkbox"/> or Open <input type="checkbox"/>					
HC Potential: Producing Interval? <u>X</u> Formerly Producing? <u>      </u> Method: Logs/DST/P&A/Other <u>Logs</u> 2-Mile Radius Pool Map <input checked="" type="checkbox"/>					
AOR Wells: 1/2-M Radius Map? <u>      </u> Well List? <u>44</u> Total No. Wells Penetrating Interval: <u>24</u> Horizontals? <u>0</u>					
Penetrating Wells: No. Active Wells <u>24</u> Num Repairs? <u>0</u> on which well(s)? <u>      </u> Diagrams? <u>NA</u>					
Penetrating Wells: No. P&A Wells <u>0</u> Num Repairs? <u>0</u> on which well(s)? <u>      </u> Diagrams? <u>NA</u>					
NOTICE: Newspaper Date <u>1-14-14</u> Mineral Owner <u>NMSLO</u> Surface Owner <u>NMSLO</u> N. Date <u>2-18-14</u>					
RULE 26.7(A): Identified Tracts? <u>Yes</u> Affected Persons: <u>BLM, CHEVRON, CONVOLOPHIIPS</u> N. Date <u>2-18-14</u>					

Permit Conditions: Issues: None

Add Permit Cond: None