

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] WFX-951
Apache Corporation (OGRID 873)
West Blinberry Drinkard Unit 10
30-025-06445
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.

Brian Wood

Print or Type Name

Signature

Consultant

Title

brian@permitswest.com

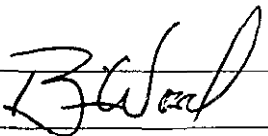
e-mail Address

1-23-16

Date

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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
ADDRESS: 303 VETERANS AIRPARK LANE, SUITE 3000, MIDLAND, TX 79705
CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? _____ Yes XXX No _____
If yes, give the Division order number authorizing the project: R-12981 et al
- 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 10
30-025-06445
- 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: JANUARY 22, 2016
E-MAIL ADDRESS: brian@permitswest.com
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

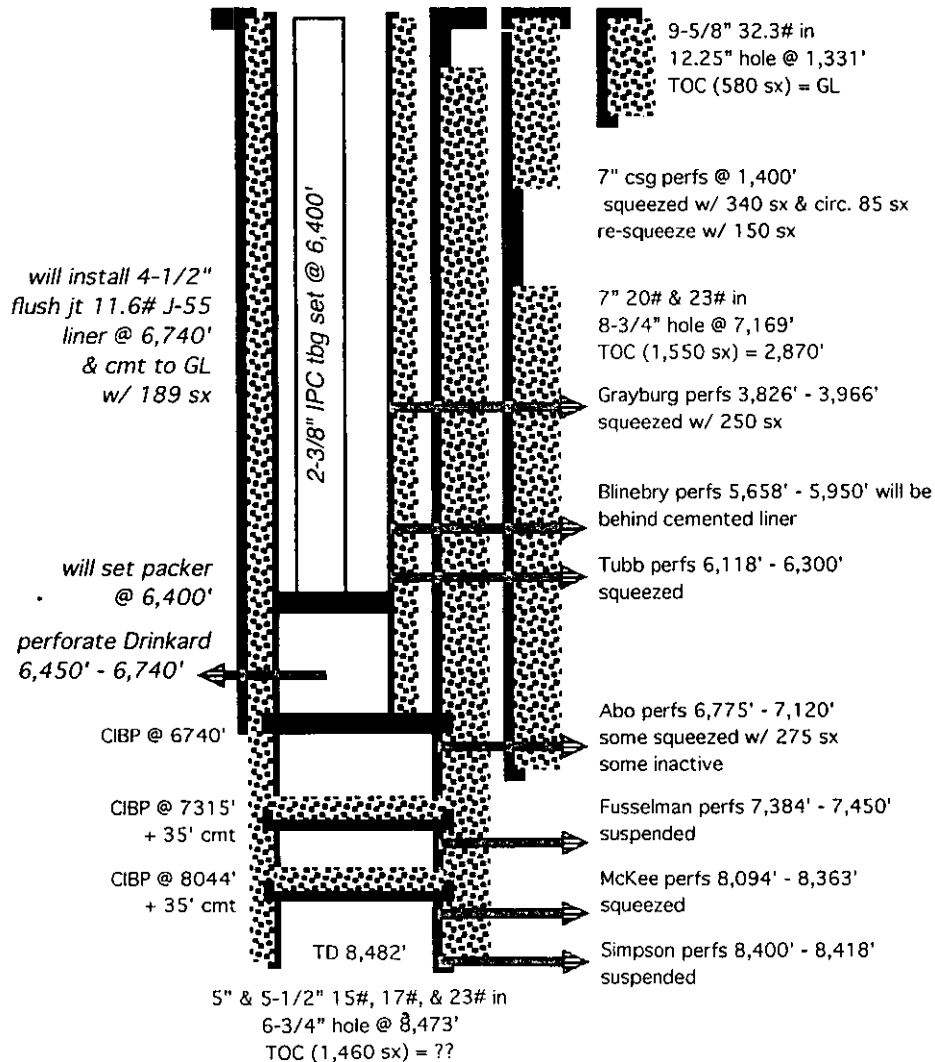
INJECTION WELL DATA SHEET

OPERATOR: APACHE CORPORATIONWELL NAME & NUMBER: WEST BLINEBRY DRINKARD UNIT 10

WELL LOCATION: <u>660' FNL & 585' FEL</u>	<u>A</u>	<u>9</u>	<u>21 S</u>	<u>37 E</u>
FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

(not to scale)

WELL CONSTRUCTION DATASurface Casing

Hole Size: 12.25" Casing Size: 9.625"

Cemented with: 580 sx. or ft³

Top of Cement: GL Method Determined: CIRCULATED

80 SX TO GL

Intermediate Casing

Hole Size: 8.75" Casing Size: 7"

Cemented with: 1,550 sx. or ft³

Top of Cement: 2,870' Method Determined: PIPE INSPECT. LOG

Production Casing

Hole Size: 6.75" Casing Size: 5.5"

Cemented with: 1,460 sx. or ft³

Top of Cement: no report Method Determined: no report

Total Depth: 8,482'

Injection Interval

6,450' feet to 6,745'

(Perforated or Open Hole; indicate which)

.....

INJECTION WELL DATA SHEETTubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COATType of Packer: LOCK SET INJECTIONPacker Setting Depth: 6,400'

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

Additional Data

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

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

2. Name of the Injection Formation: 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 (3,826'), SAN ANDRES (≈4,010'),

BLINEBRY (5,602'), & TUBB (6,132')

UNDER: ABO (6,765'), FUSSELMAN (7384'), McKEE (8094'), SIMPSON (8,400')

APACHE CORPORATION
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660' FNL & 585' FEL
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I. Goal is to change the injection interval of this existing water injection well (fka, Southland Royalty A 7) from its current 5,658' – 6,680' interval to a 6,450' – 6,740' interval. Both intervals are part of the Eunice; Blinebry-Tubb-Drinkard, North Pool (aka, Eunice; BLI-TU-DR, North and pool code = 22900).

The well and zone are part of the West Blinebry Drinkard Unit (Cases 14125 and 14126, both Order Number R-12981) that was established in 2008 by Apache. There have been eight subsequent WFX approvals: WFX-854, WFX-857, WFX-913, WFX-921, WFX-922, WFX-923, WFX-924, and WFX-948. Thirty-four water injectors are now active in the unit.

II. Operator: Apache Corporation (OGRID #873)
Operator phone number: (432) 818-1062
Operator address: 303 Veterans Airpark Lane, Suite 3000
Midland, TX 79705
Contact for Application: Brian Wood (Permits West, Inc.)
Phone: (505) 466-8120

III. A. (1) Lease: fee (Southland Royalty A)
Lease Size: 320 acres (see Exhibit A for maps and C-102)
Closest Lease Line: 585'
Lease Area: E2SE4, SWSE, & SESW Sec. 4, T. 21 S., R. 37 E.
and NE4 Section 9, T. 21 S., R. 37 E.
Unit Size: 2,480 acres Unit Numbers: 300341 & NMNM-120042X
Closest Unit Line: 585'
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

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- A. (2) Surface casing (9-5/8", 32.3#) was set in 1962 in a 12-1/4" hole at 1,331' and cemented with 580 sacks. Eighty sacks circulated to surface.

Intermediate casing (7", 20# & 23#, J-55 & N-80) was set in an 8-3/4" hole at 7,169' and cemented to 2,870' ("pipe inspection log") with 1,550 sacks.

A 5-1/2" liner (15# & 17#, K-55, FL 45) was set in 1987 in a 6-3/4" hole from 6,748' to 8,473. A DV tool was set at 6,830'. Liner was cemented with 710 sacks. Cement circulated.

A 5-1/2" liner (23#, J-55 & N-80) was set in 2000 at 6,689' and cemented with 750 sacks.

A 4-1/2" flush joint liner (11.6#, J-55) will be set at 6,740' and cemented to surface with 189 sacks.

- A. (3) Tubing will be internally plastic coated 2-3/8", J-55, 4.7#. Setting depth will be \approx 6,400'. (Injection interval will be 6,450' to 6,740'.)
- A. (4) A 2-3/8" x 4-1/2" nickel plated Arrow-set packer will be set at \approx 6,400' (\approx 50' above the highest perforation of 6,450').
- B. (1) Injection zone will be the Drinkard carbonates. Zone is part of the Eunice; Blinebry-Tubb-Drinkard, North Pool. Estimated fracture gradient is \approx 0.56 psi per foot.
- B. (2) Injection interval will be 6,450' to 6,740'. The well is a cased hole. Well is currently perforated in the Blinebry, Tubb, and Drinkard.
- B. (3) Well was originally drilled as an Abo oil well. Zones subsequently tested (from top to bottom) include Grayburg, Blinebry, Tubb, Drinkard,

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Fusselman, McKee, and Simpson. Only Grayburg, Blinebry, Tubb, and Drinkard produced in this well according to completion reports.

B. (4) Well perforation and isolation history is below.

DEPTH	NAME	STATUS	WHEN
3826 - 3966	Grayburg	squeezed w/ 250 sx	2010
5658 - 5950	Blinebry	open	
6118 - 6300	Tubb	squeezed	1987
6478 - 6616	Drinkard	open except for below	
6596 - 6675	Drinkard	squeezed w/ 95 sx	1962
6740	Drinkard	CIBP	2010
6775 - 7120	Abo	inactive	
6812 - 7002	Abo	squeezed	
7315		CIBP w/ 35' cmt	
7384 - 7450	Fusselman	suspended	1994
8044		CIBP w/ 35' cmt	
8094 - 8363	McKee	squeezed w/ 150 sx	1987
8400 - 8418	Simpson	suspended	
8482	TD		1962

B. (5) Next higher oil or gas zone in the area of review is the Tubb. It produced in this well and its top is at 6,132'. Injection will occur in the Drinkard from 6,450' to 6,740'.

Next lower oil or gas zone in the area of review is the Abo. It was penetrated by this well, but did not produce. Abo top is at 6,765. Abo is producing elsewhere in the area of review (e. g., 30-025-06460).

IV. This is not a horizontal or vertical expansion of an existing injection project. The case file for the unit approval (R-12981) describes the water flood. There have been eight water flood expansions since then. Closest unit boundary is 585' east. Seven existing injection wells are within a half-mile radius. Six are in the unit (see Exhibit C).

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V. Exhibit C shows all 59 existing wells (51 oil or gas wells + 7 water injection wells + 1 P&A well) within a half-mile radius, regardless of depth. Exhibit D shows all 706 existing wells (536 oil or gas wells + 111 injection or disposal wells + 47 P & A wells + 11 water supply wells + 1 brine well) within a two-mile radius.

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

Aliquot Parts in Area of Review (T21S, R37E)	Lessor(s)	Lease	Lessee(s) of Record	Blinebry, Tubb, &/or Drinkard operator, if any
NWSW Sec. 3	fee	Estlack	Apache	Apache
S2SW4 Sec. 3	fee	Livingston	Apache	Apache
E2SE4, SWSE, & SESW Sec. 4	fee	Southland Royalty A	Apache	Apache
NWSE Sec. 4	fee	Gulf Hill	Apache	Apache
NE4 Sec. 9	fee	Southland Royalty A	Apache	Apache
E2NW4 & N2SE4 Sec. 9	BLM	NMNM-090161	Apache & Chevron	Apache
E2NW4 Sec. 10	BLM	NMNM-002512	Apache & Chevron	Apache
W2NW4 Sec. 10	NMSLO	B1-1349-0001	Apache	Apache
NWSW Sec. 10	NMSLO	B0-0935-0000	ExxonMobil	Apache

VI. There are 59 existing wells within a half-mile radius. Forty of the wells penetrated the Drinkard (top = 6,450'). The penetrators include 33 oil or gas wells, 6 water injection wells, and 1 P&A well. A table abstracting the well construction details and histories of the penetrators is in Exhibit G. A diagram of the one P&A penetrator is in Exhibit G. The 59 existing wells (+ 5 approved, but not yet drilled, wells) and their distances from the #10 are:

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API	OPERATOR	WELL	TYPE	UNIT-SECTION	TVD	ZONE	FEET FROM WBDU 10
3002541875	Apache	WBDU 211	O	A-9	6950	Eunice; Bli-Tu-Dr, N	744
3002541877	Apache	WBDU 215	O	P-4	6950 plan	Eunice; Bli-Tu-Dr, N	801
3002538054	Apache	Southland Royalty A 025	O	A-9	4375	Penrose Skelly; Gray	838
3002539494	Apache	WBDU 110	O	P-4	6867	Eunice; Bli-Tu-Dr, N	839
3002536367	Apache	NEDU 419	O	D-10	6900	Eunice; Bli-Tu-Dr, N	904
3002541873	Apache	WBDU 206	O	H-9	6910	Eunice; Bli-Tu-Dr, N	910
3002536366	Apache	NEDU 418	O	D-10	6925	Eunice; Bli-Tu-Dr, N	947
3002540363	Apache	WBDU 111	O	H-9	7199	Eunice; Bli-Tu-Dr, N	975
3002536340	Apache	WBDU 012	O	B-9	6900	Eunice; Bli-Tu-Dr, N	1044
3002536314	Apache	WBDU 013	O	P-4	6900	Eunice; Bli-Tu-Dr, N	1050
3002537146	Breck	State 10 004	O	D-10	5510	Hare; San Andres, E	1074
3002535767	Apache	Southland Royalty A 012	O	H-9	4200	Penrose Skelly; Gray	1170
3002538416	Apache	Southland Royalty A 027	O	B-9	4157	Penrose Skelly; Gray	1190
3002506444	Apache	WBDU 009	I	H-9	7200	Eunice; Bli-Tu-Dr, N	1322
3002506396	Apache	WBDU 138	I	P-4	4570	Penrose Skelly; Gray	1323
3002537725	Apache	Livingston 020	O	M-3	4380	Penrose Skelly; Gray	1349
3002540788	Apache	NEDU 367	O	D-10	7005	Eunice; Bli-Tu-Dr, N	1350
3002506443	Apache	WBDU 006	I	B-9	6750	Eunice; Bli-Tu-Dr, N	1402

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3002506459	Apache	NEDU 401	O	D-10	7500	Eunice; Bli-Tu-Dr, N	1470
3002535766	Apache	Southland Royalty A 011	O	B-9	4200	Penrose Skelly; Gray	1509
3002541880	Apache	WBDU 241	O	P-4	6971	Eunice; Bli-Tu-Dr, N	1572
3002506516	Apache	NEDU 302	O	M-3	6690	Eunice; Bli-Tu-Dr, N	1607
3002541872	Apache	WBDU 202	O	G-9	6937	Eunice; Bli-Tu-Dr, N	1607
3002506474	Apache	NEDU 501	O	L-10	5990	Eunice; Bli-Tu-Dr, N	1611
3002506460	Breck	State 10 001	O	D-10	8285	Wantz; Abo	1617
3002541435	Apache	Southland Royalty A 002H	O	H-9	11232	Wantz; Abo	1651
3002541876	Apache	WBDU 214	O	O-4	6945	Eunice; Bli-Tu-Dr, N	1651
3002537200	Apache	WBDU 016	O	H-9	7298	Eunice; Bli-Tu-Dr, N	1658
3002539015	Apache	Southland Royalty A 028	O	H-9	4400	Eunice; Bli-Tu-Dr, N	1671
3002541870	Apache	WBDU 197	O	H-9	6950 plan	Eunice; Bli-Tu-Dr, N	1711
3002535768	Apache	Southland Royalty A 013	O	O-4	4200	Penrose Skelly; Gray	1720
3002535514	Apache	Southland Royalty A 010	O	G-9	4450	Penrose Skelly; Gray	1822
3002542273	Apache	NEDU 437	O	D-10	7450 plan	Eunice; Bli-Tu-Dr, N	1848
3002537030	Apache	WBDU 014	O	G-9	6900	Eunice; Bli-Tu-Dr, N	1856
3002538134	Apache	Southland Royalty A 026	O	O-4	4200	Penrose Skelly; Gray	1912
3002506442	Apache	WBDU 005	I	G-9	7569	Wantz; Abo	1922
3002520069	Apache	WBDU 011	P&A	O-4	6703	Eunice; Bli-Tu-Dr, N	1930

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3002536070	Breck	State 10 002	O	E-10	7505	Wantz; Abo	1931
3002534739	Apache	NEDU 332	O	M-3	6890	Eunice; Bli-Tu-Dr, N	1939
3002537031	Apache	WBDU 015	O	P-4	6950	Eunice; Bli-Tu-Dr, N	1976
3002541874	Apache	WBDU 210	O	B-9	6945	Eunice; Bli-Tu-Dr, N	1995
3002539574	Apache	WBDU 137	I	O-4	6914	Eunice; Bli-Tu-Dr, N	2056
3002506461	Apache	NEDU 402	O	E-10	8158	Eunice; Bli-Tu-Dr, N	2063
3002537444	Apache	NEDU 422	O	E-10	6900	Eunice; Bli-Tu-Dr, N	2087
3002538199	Apache	WBDU 053	O	I-9	6885	Eunice; Bli-Tu-Dr, N	2109
3002536686	Apache	Hawk Fed B 1 037	O	I-9	4350	Penrose Skelly; Gray	2155
3002538229	Apache	WBDU 004	O	J-4	6975	Eunice; Bli-Tu-Dr, N	2171
3002538154	Apache	NEDU 341	O	L-3	6906	Eunice; Bli-Tu-Dr, N	2190
3002538281	Apache	WBDU 018	O	O-4	6950	Eunice; Bli-Tu-Dr, N	2211
3002535226	Apache	Livingston 017	O	M3	4455	Penrose Skelly; Gray	2284
3002536736	Breck	State 10 003	O	E-10	4384	Hare; San Andres, E	2289
3002542649	Apache	WBDU 196	O	G-9	7000 plan	Eunice; Bli-Tu-Dr, N	2301
3002540787	Apache	NEDU 366	O	M-3	7000	Eunice; Bli-Tu-Dr, N	2308
3002534661	Apache	NEDU 415	O	C-10	6870	Eunice; Bli-Tu-Dr, N	2406
3002542261	Apache	NEDU 369	O	M-3	7450 plan	Eunice; Bli-Tu-Dr, N	2423
3002537726	Apache	Livingston 021	O	N-3	4380	Penrose Skelly; Gray	2453
3002539708	Apache	WBDU 100	O	N-4	7201	Eunice; Bli-Tu-Dr, N	2494

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3002535879	Apache	Hawk Fed B 1 023	O	C-9	4200	Penrose Skelly; Gray	2517
3002540851	Apache	NEDU 427	O	E-10	6955	Eunice; Bli- Tu-Dr, N	2531
3002506449	Apache	NEDU 403	I	C-10	6790	Eunice; Bli- Tu-Dr, N	2585
3002541871	Apache	WBDU 201	O	G-9	6957	Eunice; Bli- Tu-Dr, N	2606
3002537970	Apache	Southland Royalty A 024	O	I-4	4385	Eunice; Bli- Tu-Dr, N	2614
3002530913	Apache	NEDU 514	O	L-10	5990	Eunice; Bli- Tu-Dr, N	2630
3002520178	Apache	WBDU 042	I	I-9	6780	Eunice; Bli- Tu-Dr, N	2641

- 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 $\approx 1,100$ psi. Maximum injection pressure will be 1,290 psi ($= 0.2$ psi/ft \times 6,450' (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 38,670,251 barrels that have been injected to date in the unit since 2009.

APACHE CORPORATION
 WEST BLINEBRY DRINKARD UNIT 10
 660' FNL & 585' FEL
 SEC. 9, T. 21 S., R. 37 E.
 LEA COUNTY, NM

PAGE 9

30-025-06445

	WBDU 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. Apache currently has 109 active oil wells, 34 active injection wells, and 11 approved, but not yet drilled, oil 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 Blinebry/Tubb/Drinkard interval is Leonardian in age, 1163' 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 155 Drinkard injection wells in New Mexico. 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

APACHE CORPORATION
WEST BLINEBRY DRINKARD UNIT 10
660' FNL & 585' FEL
SEC. 9, T. 21 S., R. 37 E.
LEA COUNTY, NM

PAGE 10

30-025-06445

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'
Anhydrite = 1,263'
Top salt = 1,362'
Bottom salt = 2,614'
Grayburg = 3,826'
Glorieta = 5,206'
Blinebry = 5,602'
injection interval = 5,658' - 6,740'
Tubb = 6,132'
Drinkard = 6,450'
Abo = 6,765'
PBTD = 8,009'
Simpson = 8,094'
TD = 8,473'

There are 4 water wells within a 1-mile radius according to the State Engineer (Exhibit H). Deepest is 120'. Two are dry and two were sampled. Their analyses are in Exhibit I. Ogallala is >5 miles northeast.

No existing underground drinking water sources are below the injection interval within a mile radius.

There will be 4,395' of vertical separation and 1,351' of salt and anhydrite between the bottom of the only likely underground fresh water source (red beds) and the top of the injection interval. Produced water is currently being injected (194 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.

APACHE CORPORATION
WEST BLINEBRY DRINKARD UNIT 10
660' FNL & 585' FEL
SEC. 9, T. 21 S., R. 37 E.
LEA COUNTY, NM

PAGE 11

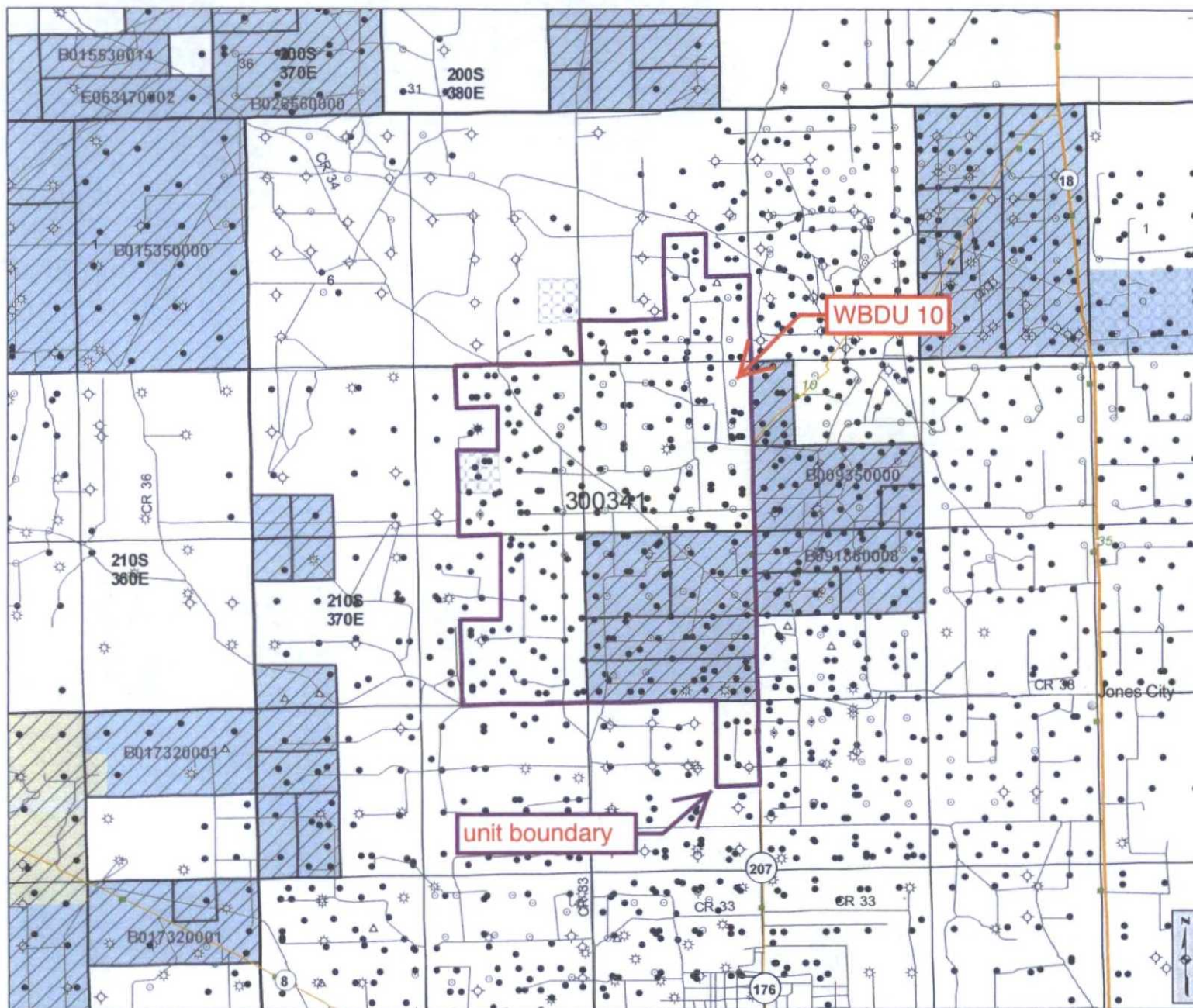
30-025-06445

X. Gama ray neutron, spectral density dual spaced neutron, and dual laterolog microguard logs were run and are on file with NMOCD.

XI. Two fresh water wells are within a mile. Analyses from those wells are attached as Exhibit I.

XII. Apache (Exhibit J) 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. There are 155 active Drinkard injection wells in New Mexico. Previously approved water flood expansions (WFX-) in the unit include 854, 857, 913, 921, 922, 923, 924, and 948.

XIII. A legal ad (see Exhibit K) was published January 13, 2016. Notice (this application) has been sent (Exhibit L) to the surface owner (Millard Deck Estate), offset Drinkard operators (only Apache), other lessees or leasehold operating rights holders (BLM, Chevron USA, ConocoPhillips, Devon Energy Production Co. LP, Energen Resources Co., ExxonMobil, John H. Hendrix Corp., Kerr-McGee OG Onshore LP, NM State Land Office, Oxy USA WTP LP, Penroc Oil Corp., Petro Strategies Inc., and St. Croix Corp.), and non-Drinkard operators (Breck, Vanguard) in the area of review.



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- Not Available for Oil and Gas Leasing
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- Participating Areas in Units
- Geologic Regions
- Volcanic Vents
- NMOC D Order R-111-P
- Potash Enclave Outline

NMOC D Oil and Gas Wells

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

New Mexico State Land Office Oil, Gas and Minerals

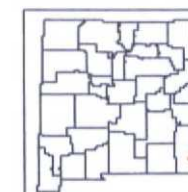
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Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

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EXHIBIT A



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Cartographic Features

- County Boundaries
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NMOC Oil and Gas Wells

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New Mexico State Land Office Oil, Gas and Minerals

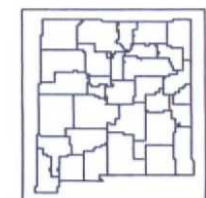
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Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

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EXHIBIT A

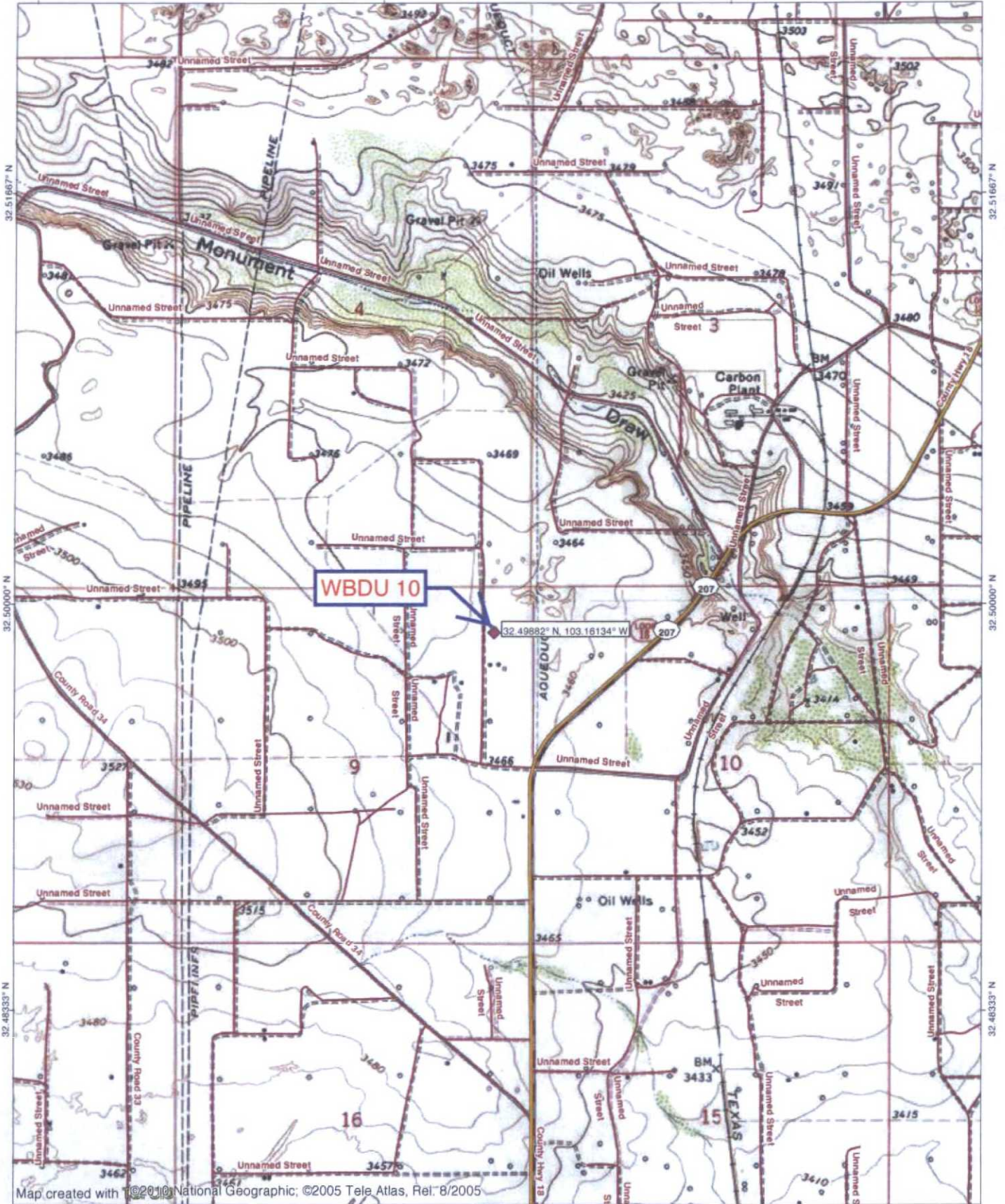


www.nmstatelands.org

103.18333° W

103.16667° W

WGS84 103.15000° W



Map created with 10/20/10 National Geographic; ©2005 Tele Atlas, Rel. 8/2005

103.18333° W

103.16667° W

WGS84 103.15000° W

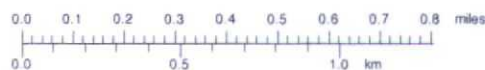


EXHIBIT A

TN MN

7°

01/10/16

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

FORM C-126
 Revised 5/1/57

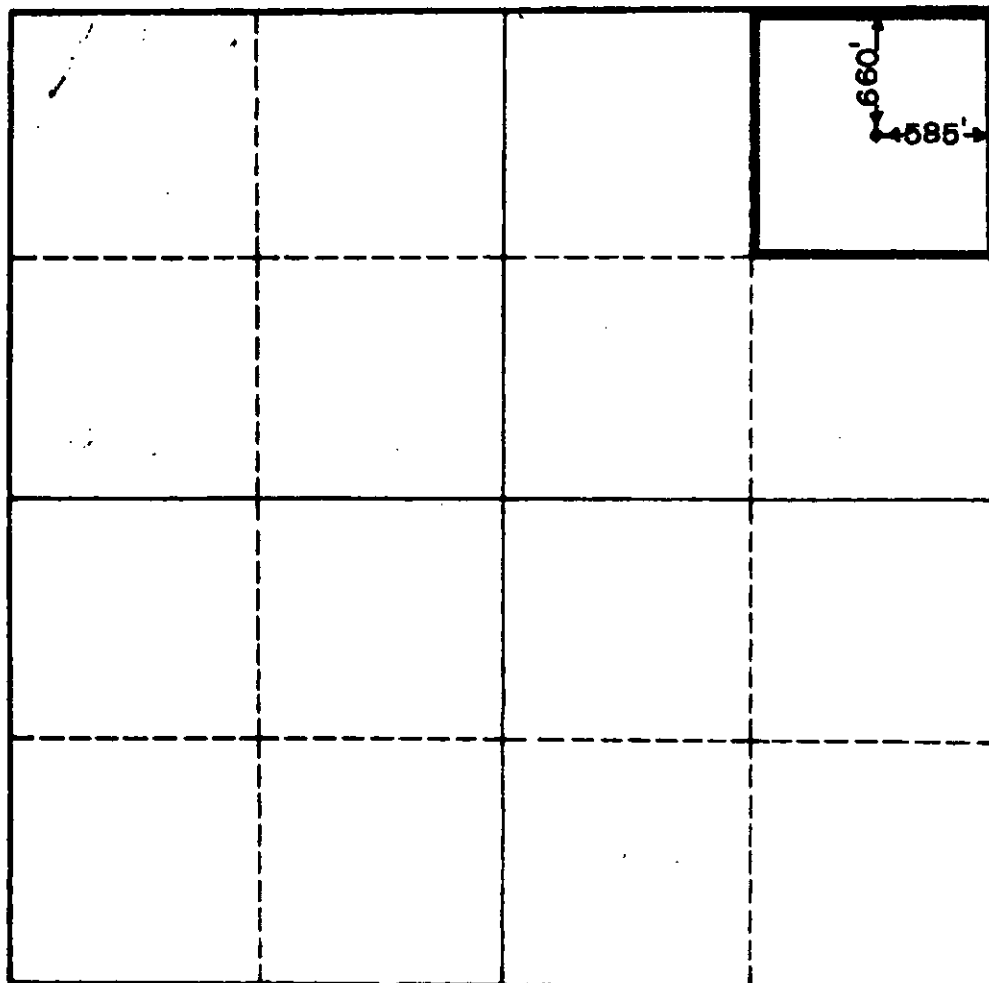
SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

Operator Pan American Pet. Corp.		Lease 1962 MAY 4 PM 2:48		Well No. 7
Unit Letter A	Section 9	Township 21 South	Range 37 East	County Lea
Actual Footage Location of Well: 660 feet from the North line and 585 feet from the East line				
Ground Level Elev. NXA	Producing Formation Abo	Pool Wanta-Abo	Dedicated Acreage: 40 Acres	

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

Owner	Land Description

SECTION B



CERTIFICATION

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

Name Original Signed by:
Y. E. STALL

Position
Area Superintendent

Company
Pan American Petroleum Corp.

Date
May 4, 1962

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

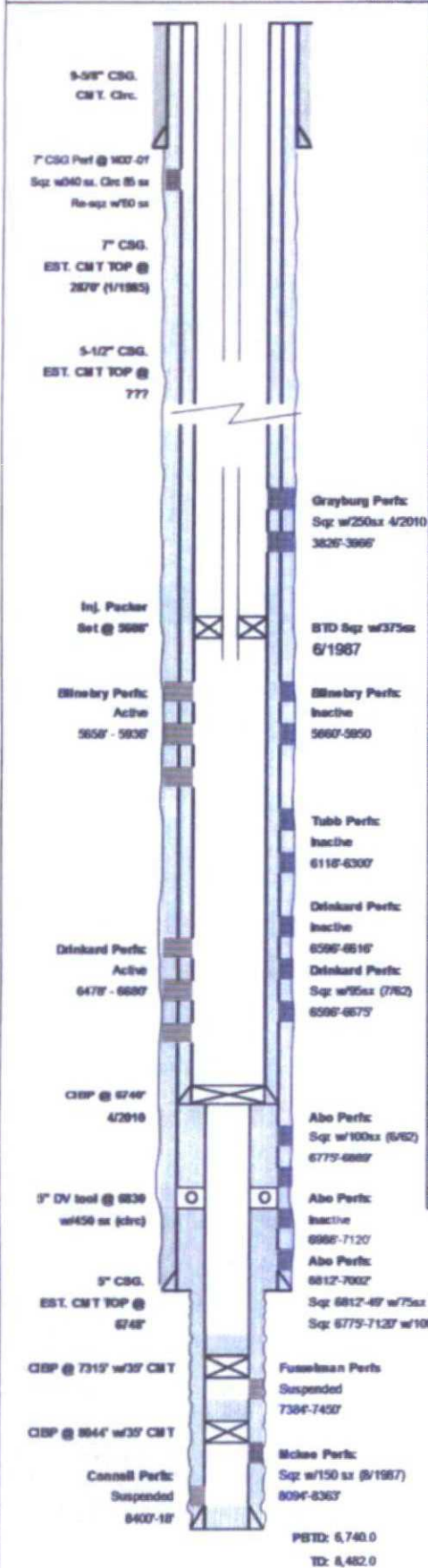
Date Surveyed
4-24-62

Registered Professional Engineer and/or Land Surveyor, **JOHN W. WEST**

Certificate No. **EXHIBIT A**
 N. M. - P. E. & L. S. NO. 676

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500

Apache Corporation
WBDU #10W (Southland Royalty A #7)
WELL DIAGRAM (CURRENT CONFIGURATION)

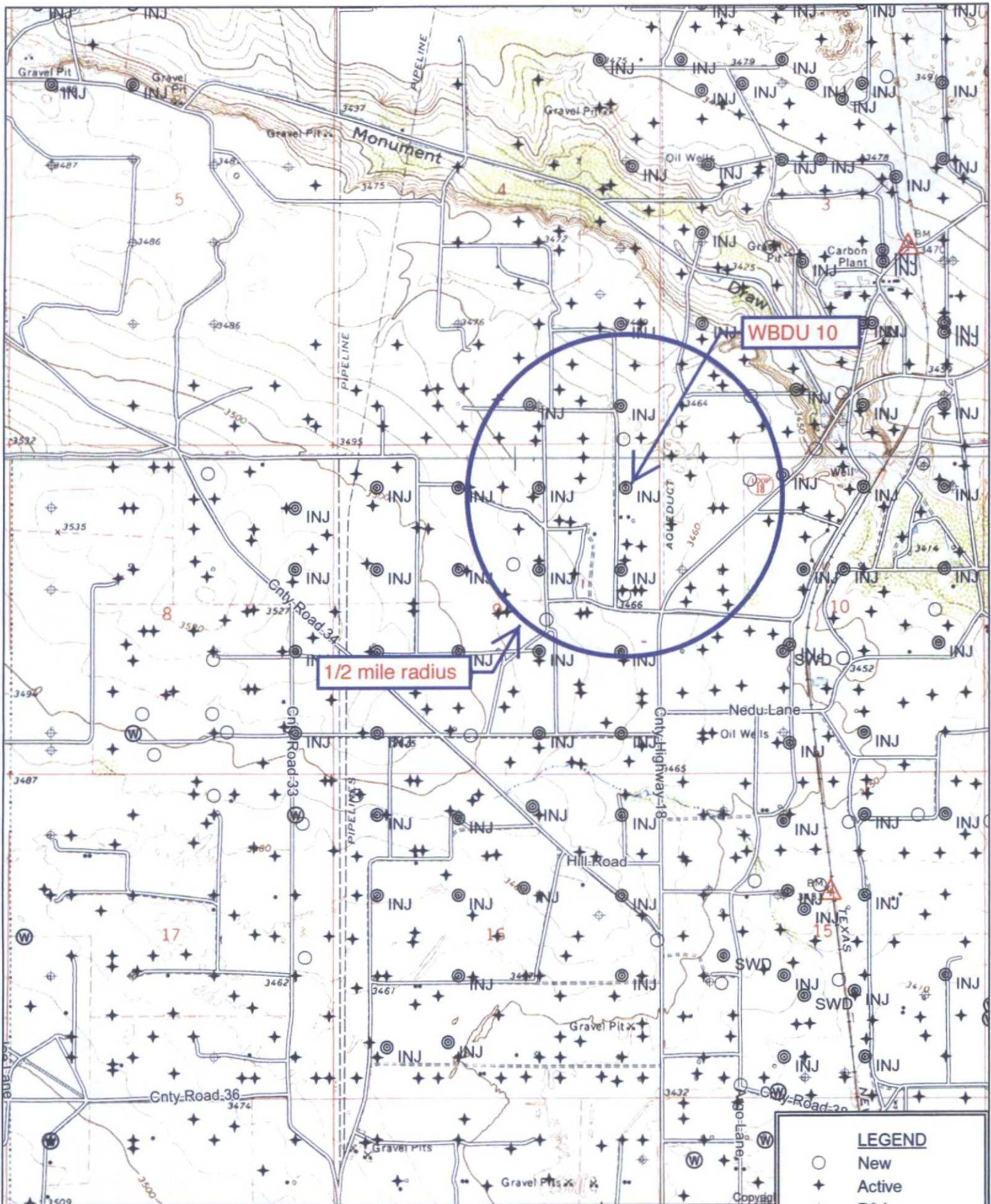


WELL NAME: WBDU #10W (Southland Royalty A #7)			API: 30-025-06445	
LOCATION: 660' FNL, 585' FEL, Sec 9, T-21S, R-37E			COUNTY: Lea Co., NM	
SPUD/TO DATE: 5/8/1962 - 5/28/1962			COMP. DATE: 8/30/1962	
PREPARED BY: Bret Shapolt			DATE: 12/22/2015	
TD (ft): 8,482.0	KB Elev. (ft): 3480.0	KB to Ground (ft) 12.0		
PSTD (ft): 6,740.0	Ground Elev. (ft): 3488.0			
CASING/TUBING	SIZE (IN)	WEIGHT (LB/FT)	GRADE	DEPTHS (FT)
Surface Casing	9-5/8" (Cmt. w/ 580sx , Circ.)	32.30	H-40	0.00 1,331.00
Int. Casing	7" (Cmt. w/ 1550sx, Circ.)	20 / 23	J-55 N-80	0.00 7,169.00
Liner 1 7/1987	5" (Cmt. w/ 260 sx, Circ.) DV tool @ 6830', 450 sx circ	14.87	K-55 FL 45	6,748.00 8,473.00
Liner 2 10/2000 ?	5-1/2" (Cmt. w/ 750 sx)	23.00	J-55 N-80	0.00 8,689.00

INJECTION TBG STRING			
ITEM	DESCRIPTION	LENGTH (FT)	Btm (FT)
1	177 JTS 2-3/8" IPC Tubing		
2	Baker Lob-set packer w/on-off tool		
3			
4			
5			
6			
7			
8			
9			
10			

PERFORATIONS			
Form	Intervals	FT	SPF
Grayburg	(Squeezed) 3626-44', 52'-64', 72'-78', 90'-98', 3910'-30', 3956'-66'		4
	5858'-70', 5724'-28', 32'-44', 54'-60', 67'-71', 5777', 83', 90', 97', 5800'-04', 08'-12', 26'-30', 37', 40', 46', 62', 68'-70', 84'-90', 5600', 10'-12', 15'-18', 27'-36'		2
Blainebr	(Inactive) 5819'-21', 30'-32', 40'-42', 62'-64', 71'-73', 86'-88', 5800'-02', 10'-12', 34'-36', 48'-50'		2
	(Inactive) 5860'-78', 5724'-28', 29', 33'-37', 41'-47', 56'-61'		2
Tubb	(Squeezed) 6118'-26', 36'-50', 6238'-48', 63'-72', 95'-6300'		4
	6478'-82', 6520'-24', 6562'-6600', 6603'-06', 11'-16', 29'-31', 37'-41', 54'-56', 66'-72', 77'-80'		2
Drinkard	(Inactive) 6478'-84', 6518'-30'		4
	(Sqr w/95sx 7/1962) 6596'-6616', 36'-42', 53'-58', 67'-75'		2
	(Inactive) 6596' - 6616'		2
Abo	(Inactive) 6668'-97', 7038'-44', 60'-65', 7115'-20'		2
Abo	(Inactive) 6775'-79', 6813'-18', 39'-49', 83'-89'		2
Abo	(Squeezed) 6812'-16', 26'-33', 39'-49', 63'-6910', 6668'-7002'		4
Fussell	(Suspended) 7384' - 7422', 7430' - 50'		4
	(Squeezed) 8236'-42', 50'-60', 80'-83', 8300'-04', 42'-46', 56'-63'		4
McKee	(Squeezed) 8094'-8100', 8112'-29', 30'-36', 42'-50', 56'-60', 64'-68', 72'-80', 94'-8210'		4
Connell	(Suspended) 8400'-18'		4

EXHIBIT B

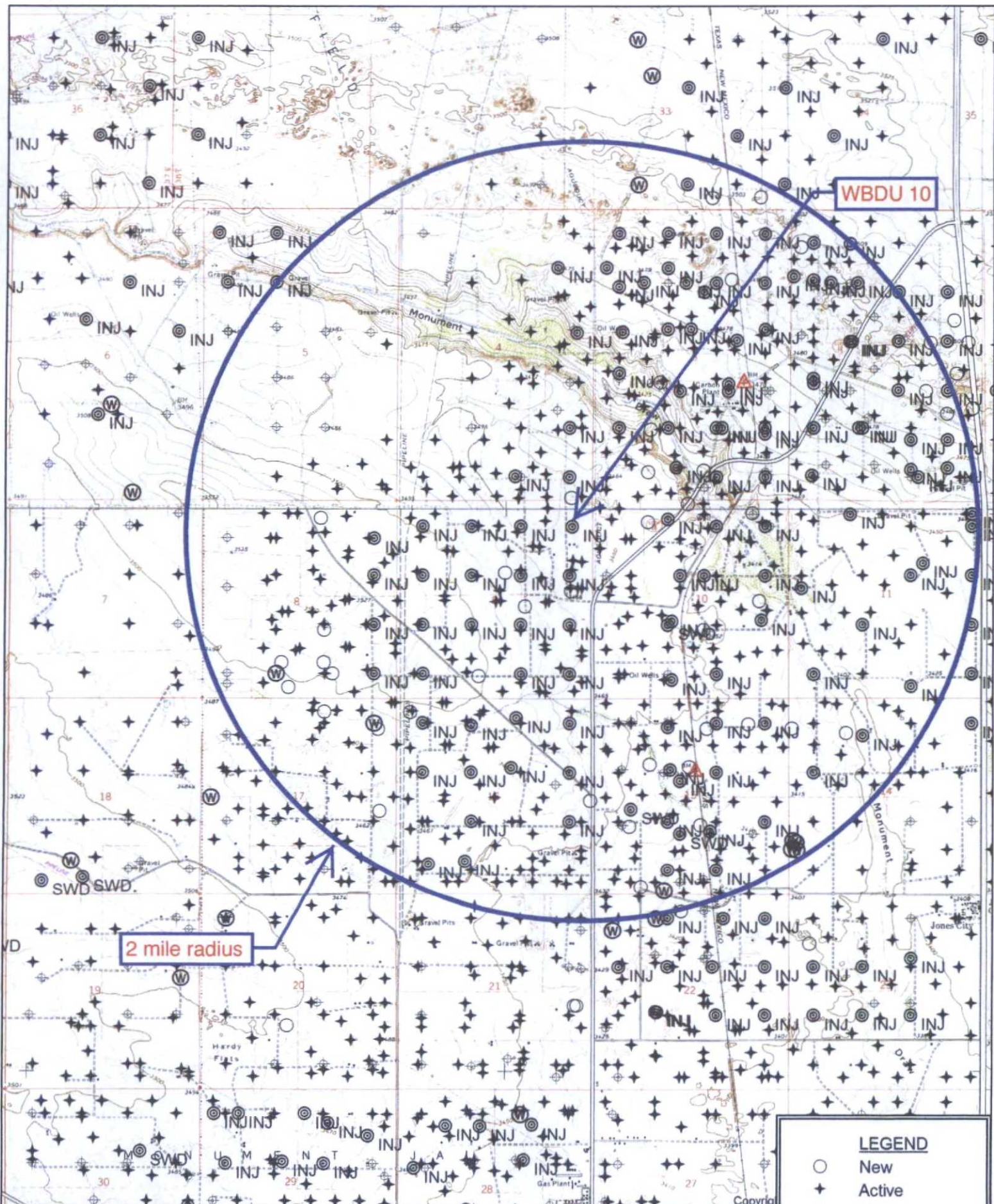


Quad: EUNICE
Scale: 1 inch = 2,000 ft.

EXHIBIT C

LEGEND

- New
- ✦ Active
- ⊕ P&A
- ⊙ INJ
- ⊙ SWD
- ⊙ Water



2 mile radius

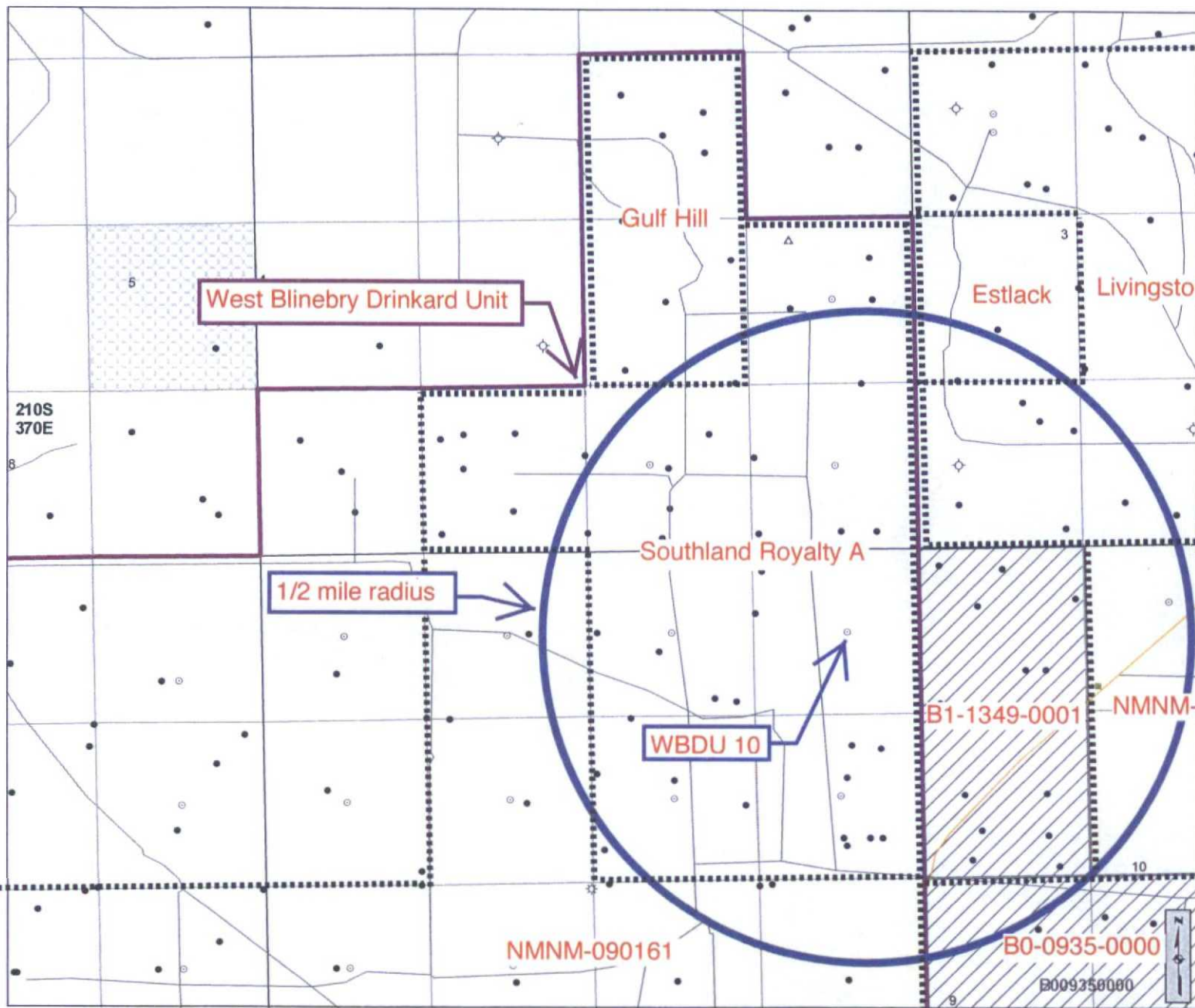
WBDU 10

LEGEND

- New
- + Active
- ⊕ P&A
- ⊙ INJ
- ⊗ SWD
- ⊕ Water

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

EXHIBIT D



New Mexico State Land Office Oil, Gas and Minerals

0 0.05 0.1 0.2 0.3 0.4
Miles
Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

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EXHIBIT E

Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
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- Hwy Mileposts
- Interstate
- NM Hwy
- Continental Divide
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- All Minerals
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- Oil, Gas and Coal Only
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State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

State Leases

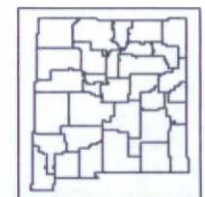
- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

Oil and Gas Related Features

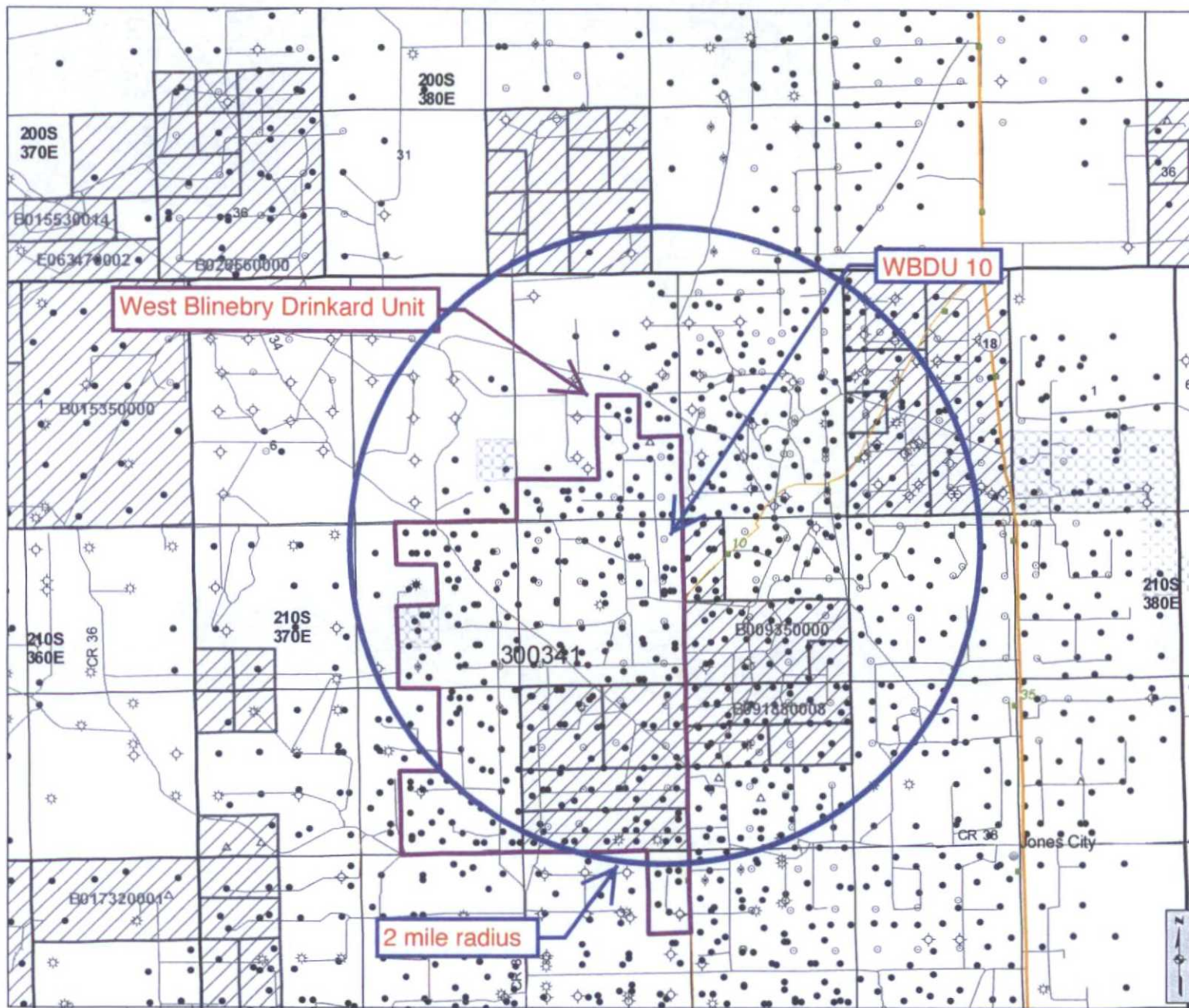
- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- Volcanic Vents
- NMOCD Order R-111-P
- Potash Enclave Outline

NMOCD Oil and Gas Wells

- CO₂
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- Salt Water Disposal
- DA or PA



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New Mexico State Land Office Oil, Gas and Minerals

0 0.2 0.4 0.8 1.2 1.6 Miles
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EXHIBIT F



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Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 211	09/02/2014	6950	Eunice; Bli-Tu-Dr, North	O	11	8.625	1320	450 sx	surface	circ. 99 sx
30-025-41875					7.875	5.5	6950	1200 sx	surface	circ. 125 sx
A-9-21S-37E										
WBDU 215	N/A	Prop at 6950	Eunice; Bli-Tu-Dr, North	O	11	8.625	1320	450 sx	surface	N/A
30-025-41877					7.875	5.5	6950	900 sx	surface	N/A
P-4-21S-37E										
WBDU 110	10/07/2009	6867	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1293	650 sx	surface	circulated
30-025-39494					7.875	5.5	6867	1000 sx	surface	circulated
P-4-21S-37E										
NEDU 419	10/12/2003	6900	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1327	600 sx	surface	circ. 155 sx
30-025-36367					7.875	5.5	6900	1250 sx	90	CBL
D-10-21S-37E										
WBDU 206	10/15/2014	6910	Eunice; Bli-Tu-Dr, North	O	11	8.625	1333	450 sx	surface	circ. 64 sx
30-025-41873					7.875	5.5	6930	1450 sx	surface	circ. 210 sx
H-9-21S-37E										

Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
NEDU 418	09/29/2003	6925	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1330	600 sx	surface	circ. 125 sx
30-025-36366					7.875	5.5	6925	1250 sx	80	CBL
D-10-21S-37E										
WBDU 111	02/04/2012	7199	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1345	675 sx	surface	circ. 234 sx
30-025-40363					7.875	5.5	7215	980 sx	1880	estimate
H-9-21S-37E										
WBDU 012	09/03/2003	6900	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1285	600 sx	surface	circ. 237 sx
30-025-36340					7.875	5.5	6900	1275 sx	50	CBL
B-9-21S-37E										
WBDU 013	08/08/2003	6900	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1286	700 sx	surface	circ. 186 sx
30-025-36314					7.875	5.5	6900	1100 sx	1050	CBL
X-4-21S-37E										
WBDU 009	05/23/1953	7200	Eunice; Bli-Tu-Dr, North	I	17.5	13.725	252	275 sx	surface	circulated
30-025-06444					12.25	9	2856	1380 sx	820	temp survey
H-9-21S-37E					7.875	5.5	6892	280 sx	5325	temp survey

Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
NEDU 367	11/08/2012	7005	Eunice; Bli-Tu-Dr, North	O	11	8.625	1320	475 sx	surface	circ. 100 sx
30-025-40788					7.875	5.5	7005	450 sx	1470	estimated
D-10-21S-37E										
WBDU 006	10/12/1962	6750	Eunice; Bli-Tu-Dr, North	I	17	13.725	225	150 sx	surface	circulated
30-025-06443					12.25	9.625	1408	700 sx	surface	circulated
B-9-21S-37E					8.75	7	6694	3000 sx	4525	temp survey
NEDU 401	05/18/1953	7500	Eunice; Bli-Tu-Dr, North	O	no report	13.725	240	250 sx	surface	circulated
30-025-06459					no report	9.625	3150	1612 sx	surface	circulated
D-10-21S-37E					no report	7	7499	835 sx	surface	circulated
WBDU 241	09/11/2014	6971	Eunice; Bli-Tu-Dr, North	O	11	8.625	1305	450 sx	surface	circ. 112 sx
30-025-41880					7.875	5.5	6971	1550 sx	surface	circ. 125 sx
P-4-21S-37E										
NEDU 302	01/18/1952	6690	Eunice; Bli-Tu-Dr, North	O	17.25	13.725	218	250 sx	surface	circ. 35 sx
30-025-06516					11	8.625	3152	2640 sx	surface	circulated
U-3-21S-37E						5.5	6639	400 sx	2964	TOL

Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 202	08/25/2014	6937	Eunice; Bli-Tu-Dr, North	O	11	8.625	1331	450 sx	surface	circ. 103 sx
30-025-41872					7.875	5.5	6939	1300 sx	surface	circ. 140 sx
G-9-21S-37E										
State 10 001	<Null>	8285	Wantz; Abo	O	17.5	13.725	235	250 sx	surface	circulated
30-025-06460					12.75	9.625	3128	1308 sx	1200	temp survey
D-10-21S-37E						7	8279	1330 sx	3060	temp survey
Southland Royalty A 2H	11/28/2013	11232	Wantz; Abo	O	17.5	13.375	1304	1085 sx	surface	circ. 96 sx
30-025-41435		6926 TVD			11	8.625	6204	1225 sx	surface	circulated
H-9-21S-37E					7.875	5.5	11229	1300 sx	surface	circ. 73 sx
WBDU 214	09/24/2014	6945	Eunice; Bli-Tu-Dr, North	O	11	8.625	1340	450 sx	surface	circ. 106 sx
30-025-41876					7.875	5.5	6945	1300 sx	surface	circ. 168 sx
O-4-21S-37E										
WBDU 016	06/07/2005	7298	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1282	625 sx	surface	circ. 149 sx
30-025-37200					7.875	5.5	7298	1450 sx	110	CBL
H-9-21S-37E										

Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 197	N/A	Prop at 6950	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1320	450 sx	surface	N/A
30-025-41870					7.875	5.5	6950	900 sx	surface	N/A
H-9-21S-37E										
NEDU 437	N/A	Prop at 7450	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1296	475 sx	surface	N/A
30-025-42273					7.875	5.5	7450	1250 sx	surface	N/A
D-10-21S-37E										
WBDU 014	02/16/2005	6900	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1216	575 sx	surface	circ. 116 sx
30-025-37030					7.875	5.5	6900	1100 sx	250	CBL
G-9-21S-37E										
WBDU 005	07/07/1947	7569	Wantz; Abo	I	17.5	13.725	237	225 sx	surface	circulated
30-025-06442					12	9.625	3860	1500 sx	2050	estimate
G-9-21S-37E					8.75	7	6684	600 sx	5175	temp survey
						4.5	7000	144 sx	6385	TOL

Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 011	12/12/1962	6703	Eunice; Bli-Tu-Dr, North	P&A	12.25	9.625	1347	580 sx	surface	circulated
30-025-20069					8.75	7	6703	500 sx	2450	no report
W-4-21S-37E										
State 10 002	01/18/2003	7505	Wantz; Abo	O	12.25	8.625	1350	600 sx	no report	no report
30-025-36070					7.875	5.5	7500	1850 sx	2240	CBL
E-10-21S-37E										
NEDU 332	02/16/2000	6890	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1305	460 sx	surface	circ. 95 sx
30-025-34739					7.875	5.5	6890	1425 sx	surface	circ. 115 sx
U-3-21S-37E										
WBDU 015	03/04/2005	6950	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1172	575 sx	surface	circ. 156 sx
30-025-37031					7.875	5.5	6950	1150 sx	188	CBL
P-4-21S-37E										
WBDU 210	10/03/2014	6945	Eunice; Bli-Tu-Dr, North	O	11	8.625	1304	450 sx	surface	circ. 128 sx
30-025-41874					7.875	5.5	6945	1350 sx	235	CBL
B-9-21S-37E										

Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 137	01/09/2010	6914	Eunice; Bli-Tu-Dr, North	I	12.25	8.625	1307	650 sx	surface	circulated
30-025-39574					7.875	5.5	6914	1050 sx	surface	circulated
W-4-21S-37E										
NEDU 402	02/25/1953	8158	Eunice; Bli-Tu-Dr, North	O	13.375	10.75	257	250 sx	surface	circulated
30-025-06461					9.625	7.625	3128	1310 sx	1360	circulated
E-10-21S-37E					7	5.5	7669	450 sx	3180	no report
NEDU 422	10/04/2005	6900	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1267	575 sx	surface	circ. 98 sx
30-025-37444					7.875	5.5	6900	1400 sx	250	CBL
E-10-21S-37E										
WBDU 053	02/16/2007	6885	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1300	600 sx	surface	circulated
30-025-38199					7.875	5.5	6885	1100 sx	170	CBL
I-9-21S-37E										
WBDU 004	02/08/2007	6975	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1222	600 sx	surface	circulated
30-025-38229					7.875	5.5	6975	1200 sx	153	CBL
R-4-21S-37E										

Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
NEDU 341	06/04/2007	6906	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1329	575 sx	surface	circulated
30-025-38154					7.875	5.5	6906	1400 sx	128	CBL
L-3-21S-37E										
WBDU 018	03/29/2007	6950	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1282	575 sx	surface	circulated
30-025-38281					7.875	5.5	6950	1050 sx	surface	CBL
W-4-21S-37E										
WBDU 196	N/A	Prop at 7000	Eunice; Bli-Tu-Dr, North	O	11	8.625	1300	715	surface	N/A
30-025-42649					7.875	5.5	7000	950	surface	N/A
G-9-21S-37E										
NEDU 366	10/24/2012	7000	Eunice; Bli-Tu-Dr, North	O	11	8.625	1302	500 sx	surface	circulated
30-025-40787					7.875	5.5	7000	1205 sx	200	CBL
M-3-21S-37E										
NEDU 415	09/12/1999	6870	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1365	460 sx	surface	circ. 65 sx
30-025-34661					7.875	5.5	6870	1500 sx	surface	circ. 125 sx
C-10-21S-37E										

Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
NEDU 369	N/A	Prop at 7450	N/A	O	N/A	N/A	N/A	N/A	N/A	N/A
30-025-42261										
M-3-21S-37E										
WBDU 100	04/17/2010	7201	Eunice; Bli-Tu-Dr, North	O	12.25	8.625	1260	650 sx	surface	circulated
30-025-39708					7.875	5.5	7201	1050 sx	surface	circulated
V-4-21S-37E										
NEDU 427	03/10/2013	6955	Eunice; Bli-Tu-Dr, North	O	11	8.625	1299	485 sx	surface	circ. 145 sx
30-025-40851					7.875	5.5	6955	1025 sx	458	no report
E-10-21S-37E										
NEDU 403	04/30/1962	6790	Eunice; Bli-Tu-Dr, North	I	no report	13.725	337	300 sx	surface	circulated
30-025-06449					no report	8.625	3000	300 sx	1900	temp survey
C-10-21S-37E					no report	5.5	6485	505 sx	3150	temp survey
WBDU 201	08/14/2014	6957	Eunice; Bli-Tu-Dr, North	O	11	8.625	1337	450 sx	surface	circ. 74 sx
30-025-41871					7.875	5.5	6957	1330 sx	surface	circ. 250 sx
G-9-21S-37E										

Sorted by distance from WBDU 10

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 042	04/13/1963	6780	Eunice; Bli-Tu-Dr, North	I	no report	9.625	1294	450 sx	surface	circulated
30-025-20178					no report	5.5	6780	700 sx	2300	temp survey
I-9-21S-37E										

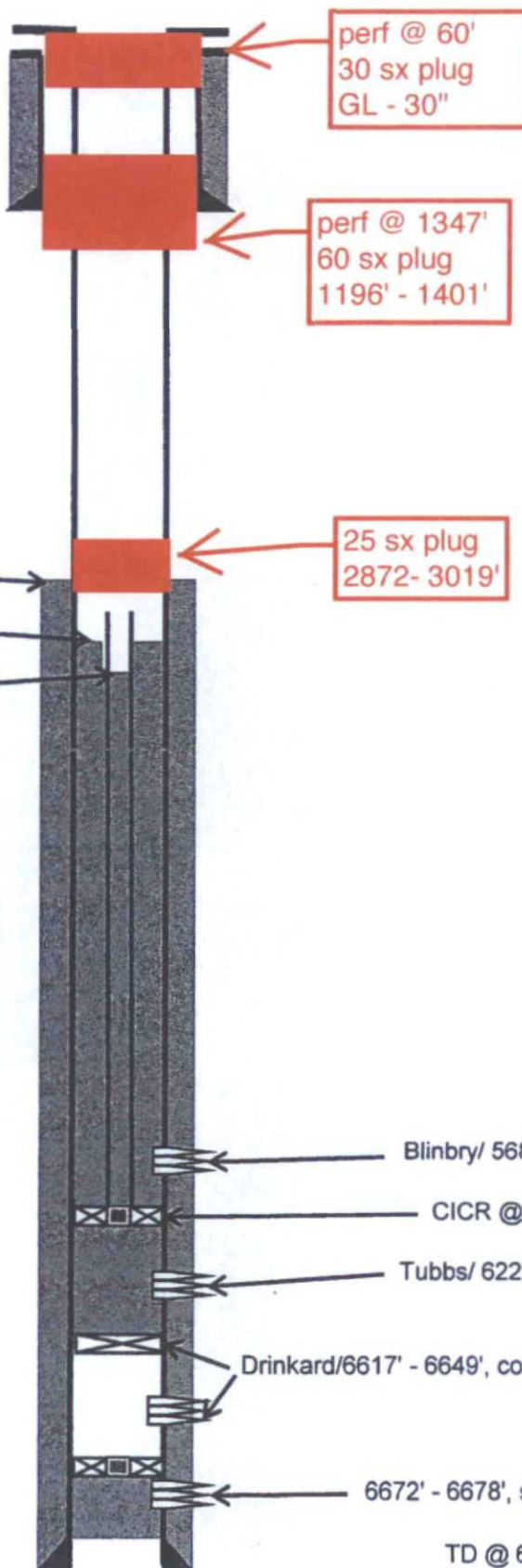


Current WB Dia.

LEASE NAME	WBDU (Southland Royalty A-#8)
WELL #	11
API #	30-025-20069
COUNTY	Lea, NM

4-21s-37e
spud 12-12-62
P&A 11-14-09

9 5/8" 32#, @ 1347' w/580 sx cmt,
Circ to surf.



TOC @ 2972'

TOC inside csg/outside tbg @ 3050'

TOC inside tbg @ 3565'

10/15/09- RIH w/CICR & set @ 6179', EIR 3 bpm @ 1450# psi, pmpd 250 sx cmt w/ additives @ 3 bpm/150# psi, pmpd 250 sx Class "C" neat @ 3 bpm @ 100# psi, well on vac. Over displaced cmt w/ 60 bbls wtr @ 3 bpm, 600# psi. SD 4 hrs, EIR 1 bpm @ 1500# psi, pmpd 194 of LCM cmt @ 1.5 bpm @ 1750# psi, displaced cmt w/ 21.5 bbls wtr @ 1 bpm @ 2000# psi. Could not sting out of CICR, loaded backside w/ 50 bbls wtr. Tbg and CICR stuck in hole.

10-16-09- RU WL/ tag cmt inside 2 3/8" tbg @ 3565'. Ran free point on tbg, free @ 3025' and stuck @ 3050', chem cut tbg @ 3019'.

Blinbry/ 5688'-5784'

CICR @ 6179'

Tubbs/ 6229' - 6327'

Drinkard/6617' - 6649', covered w/ CIBP @ 6373'

6672' - 6678', sqz w/ 30 sx

7", 20/23# @ 6703' w/ 500 sx cmt
TOC @ 2972'

TD @ 6703'

EXHIBIT G

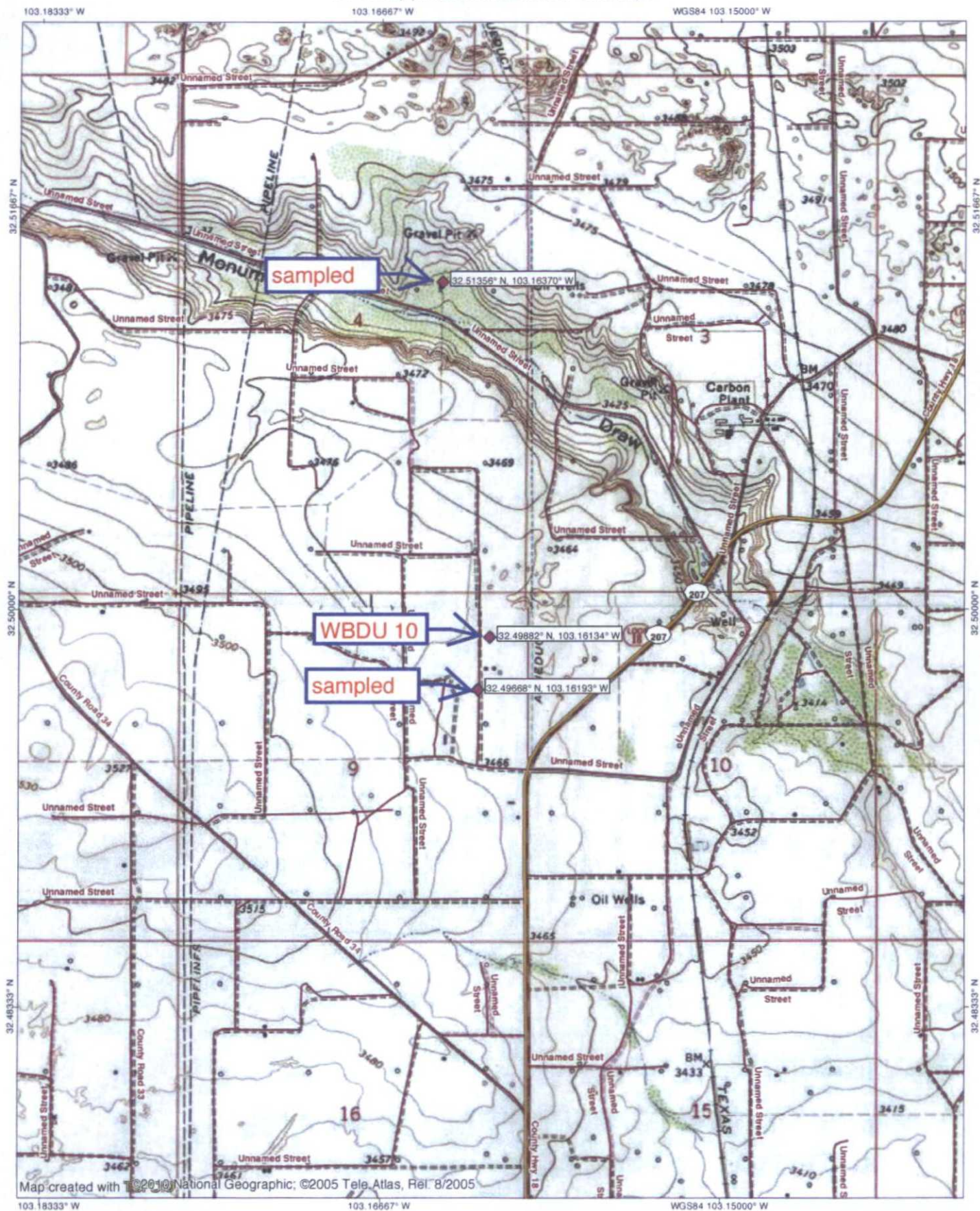


EXHIBIT H



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	Distance	Depth Well	Depth Water	Water Column
CP 00162			LE	1	4	2	09	21S	37E	672621	3596915*	324	120		
CP 00163			LE	1	4	2	09	21S	37E	672621	3596915*	324	120		
CP 00552			LE		2	4	04	21S	37E	672700	3598022*	804	90	75	15
CP 00553			LE		2	4	04	21S	37E	672700	3598022*	804	90	75	15
CP 00554			LE		2	2	16	21S	37E	672744	3595610*	1608	80	70	10
CP 00212			LE	2	2	1	14	21S	37E	675254	3595753*	2912	46		
CP 01141 POD2			LE	3	4	3	15	21S	37E	673541	3594250	3074	40		
CP 01141 POD3			LE	3	4	3	15	21S	37E	673541	3594250	3074	40		
CP 01141 POD4			LE	3	4	3	15	21S	37E	673541	3594250	3074	45		
CP 01575 POD1	CP		LE	1	2	1	22	21S	37E	673543	3594200	3123	40	35	5
CP 01185 POD1			LE		1	3	14	21S	37E	674598	3594689	3140	70		
CP 01575 POD2	CP		LE	2	2	1	22	21S	37E	673610	3594192	3149	35	35	0
CP 01185 POD2			LE		1	3	14	21S	37E	674623	3594674	3166	70		
CP 01574 POD1	CP		LE	2	4	4	15	21S	37E	674563	3594599	3191	68	57	11
CP 01185 POD3			LE		1	3	14	21S	37E	674592	3594620	3192	70		

Average Depth to Water: 57 feet

Minimum Depth: 35 feet

Maximum Depth: 75 feet

Record Count: 15

UTMNAD83 Radius Search (in meters):

Easting (X): 672737

Northing (Y): 3597218

Radius: 3220

*UTM location was derived from PLSS - see Help

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



New Mexico Office of the State Engineer










Active & Inactive Points of Diversion

(with Ownership Information)

(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)									
File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q	6416 4	Sec	Tws	Rng	X	Y	Distance		
00162		PLS		3 SAM W GRAVES	LE	CP 00162					1	4	2	09	21S	37E	672621	3596915*	324
00163		PLS		3 SAM W GRAVES	LE	CP 00163					1	4	2	09	21S	37E	672621	3596915*	324
00552		STK		3 MILLARD DECK	LE	CP 00552			Shallow		2	4	04	21S	37E	672700	3598022*	804	
00553		STK		3 MILLARD DECK	LE	CP 00553			Shallow		2	4	04	21S	37E	672700	3598022*	804	
01037		EXP		0 MCNEILL RANCH	LE	CP 01037 POD1					2	2	2	10	21S	37E	674322	3597345	1591
00554		STK		3 MILLARD DECK	LE	CP 00554			Shallow		2	2	16	21S	37E	672744	3595610*	1608	
00212		PDL		3 J.M. OWENS	LE	CP 00212					2	2	1	14	21S	37E	675254	3595753*	2912
01486		DOL		3 MCCASLAND RANCH INC	LE	CP 01486 POD1	NON				4	2	1	05	21S	37E	670332	3599085	3044
01141		MON		0 SOUTHERN UNION GAS SERVICES	LE	CP 01141 POD1					3	4	3	15	21S	37E	673530	3594263	3059
					LE	CP 01141 POD5					3	4	3	15	21S	37E	673514	3594253	3064
					LE	CP 01141 POD2			Shallow		3	4	3	15	21S	37E	673541	3594250	3074
					LE	CP 01141 POD3			Shallow		3	4	3	15	21S	37E	673541	3594250	3074
					LE	CP 01141 POD4			Shallow		3	4	3	15	21S	37E	673541	3594250	3074
01436		MON		0 REGENCY FIELD SERVICES LLC	LE	CP 01436 POD1					3	4	3	15	21S	37E	673562	3594229	3100
01575		MON		0 ENERGY TRANSFER COMPANY REGENCY FIELD SERVICES INC	LE	CP 01575 POD1	NON		Shallow		1	2	1	22	21S	37E	673542	3594200	3123
01185		MON		0 STRAUB CORPORATION	LE	CP 01185 POD1			Shallow		1	3	14	21S	37E	674598	3594689	3140	
01575		MON		0 GHD SERVICES INC	LE	CP 01575 POD2	NON		Shallow		2	2	1	22	21S	37E	673609	3594192	3149
01110		MON		0 STRAUB CORPORATION	LE	CP 01110 POD1					1	3	14	21S	37E	674585	3594648	3165	

A location was derived from PLSS - see Help

(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)

(acre ft per annum)					C=the file is closed)		(quarters are smallest to largest)					(NAD83 UTM in meters)						
File Nbr	Sub basIn	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	6416 4	Sec	Tws	Rng	X	Y	Distance		
					LE	<u>CP 01110 POD2</u>				1	3	14	21S	37E	674585	3594648 	3165	
					LE	<u>CP 01110 POD3</u>				1	3	14	21S	37E	674585	3594648 	3165	
					LE	<u>CP 01110 POD4</u>				1	3	14	21S	37E	674585	3594648 	3165	
					LE	<u>CP 01110 POD5</u>				1	3	14	21S	37E	674585	3594648 	3165	
<u>01185</u>		MON		0 SOUTHERN UNION GAS SERVICES	LE	<u>CP 01185 POD2</u>			Shallow	1	3	14	21S	37E	674623	3594674 	3166	
<u>01121</u>		EXP		0 SOUTHERN UNION GAS SERVICES	LE	<u>CP 01121 POD1</u>				3	1	3	14	21S	37E	674605	3594639 	3184
<u>639</u>	L	CLS		0 SOUTHERN UNION GAS SERVICES	LE	<u>L 12639 POD1</u>		C		3	1	3	14	21S	37E	674605	3594639 	3184
<u>01574</u>		MON		0 GHD SERVICES INC	LE	<u>CP 01574 POD1</u>		NON	Shallow	2	4	4	15	21S	37E	674562	3594599 	3191
<u>01185</u>		MON		0 SOUTHERN UNION GAS SERVICES	LE	<u>CP 01185 POD3</u>			Shallow	1	3	14	21S	37E	674592	3594620 	3192	

Word Count: 27

UTMNAD83 Radius Search (in meters):

Easting (X): 672737

Northing (Y): 3597218

Radius: 3220

Sorted by: Distance

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.

7/16 10:08 AM

Page 2 of 2

EXHIBIT H

ACTIVE & INACTIVE POINTS OF DIVERSION

Ogallala boundary



EXHIBIT H

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1507A44**

Date Reported: 7/30/2015

CLIENT: Permits West

Project: Apache WBDV36

Lab ID: 1507A44-001

Client Sample ID: A-WBDU-Sec 4 **21S-37E**

Collection Date: 7/21/2015 8:49:00 AM

Received Date: 7/22/2015 1:06:00 PM

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664A							Analyst: MRA
N-Hexane Extractable Material	ND	9.8		mg/L	1	7/23/2015	20400
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	180	50		mg/L	100	7/24/2015 1:04:03 AM	R27720
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	1000	20.0	*	mg/L	1	7/27/2015 11:49:00 AM	20433

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

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

EXHIBIT I

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1506A89

Date Reported: 7/9/2015

CLIENT: Permits West

Project: Apache WBDUSWD

Lab ID: 1506A89-002

Client Sample ID: Apache WBDU #2 9-21S-37E

Collection Date: 6/18/2015 9:45:00 AM

Received Date: 6/23/2015 1:44:00 PM

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664A							Analyst: MRA
N-Hexane Extractable Material	ND	9.8		mg/L	1	6/25/2015 2:00:00 PM	19939
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	18	5.0		mg/L	10	7/8/2015 1:28:10 AM	R27345
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	206	20.0		mg/L	1	6/25/2015 9:14:00 PM	19903

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

EXHIBIT I

From: Oldani, Martin Martin.Oldani@apachecorp.com
Subject: FW: shallow faulting in the vicinity of WBDU
Date: January 11, 2016 at 4:27 PM
To: brian@permitswest.com
Cc: Shapot, Bret Bret.Shapot@apachecorp.com



Brian,

As per Mark's comments below, our G&G staff has taken a look at the potential issue of shallow faulting in the WBDU area and have concluded there is none present across the area and no danger of shallow faulting as a conduit to groundwater contamination.

Regards,

MARTIN J. OLDANI
PERMIAN REGION EXPLORATION & EXPLOITATION MANAGER
Apache main (432) 818 1000 | *fax* (432) 818 1982
office 6100A | *direct* (432) 818 1030 | *mobile* (432) 234-1925
martin.oldani@apachecorp.com
APACHE CORPORATION - PERMIAN REGION
303 Veterans Airway Park
Midland, TX 79705

From: Pasley, Mark
Sent: Monday, January 11, 2016 4:48 PM
To: Oldani, Martin <Martin.Oldani@apachecorp.com>
Cc: O'Shay, Justin <Justin.O'Shay@apachecorp.com>; Riley, Brent <Brent.Riley@apachecorp.com>;
Shapot, Bret <Bret.Shapot@apachecorp.com>; Piggott, Fiona <fiona.piggott@apachecorp.com>
Subject: shallow faulting in the vicinity of WBDU

Martin:

In reference to the meeting this morning where we discussed the possibility of shallow faulting in the WBDU area and its potential impact on the permitting of the injection well(s) into the Drinkard, I submit to you the attached slide set from me and Justin. You will see that we have done several extractions on the seismic data and there is no indication of faulting above the Glorieta which is well above the Drinkard and below the younger evaporites. Also, as we suspected, there are no surface faults mapped in the area – the nearest being more than 50 miles away.

Please contact me or Justin if you have further questions.

Sincerely,

DR. MARK PASLEY
GEOLOGICAL ADVISOR
direct +1 432.818.1835 | *mobile* +1 832.943.9040 | *office* 6112A
APACHE PERMIAN
303 Veterans Airpark Lane
Midland, TX 79705 USA
ApacheCorp.com | [LinkedIn](#) | [Facebook](#) | [Twitter](#) | [StockTwits](#) | [YouTube](#)





Geologic Hazards Science Center

EHP Quaternary Faults

Search for fault:

Select a state or region map:

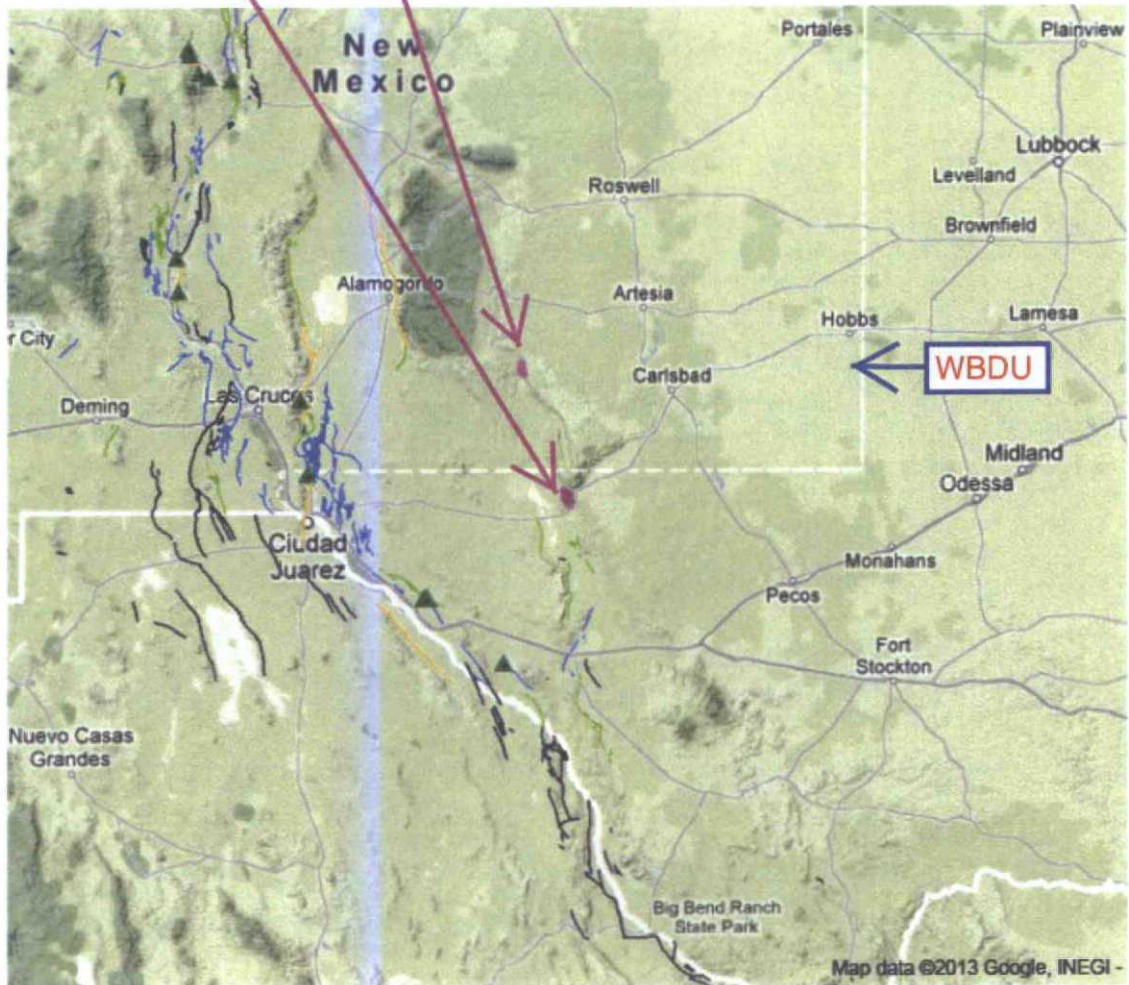


EXHIBIT J

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

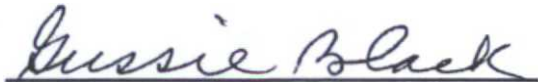
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
January 13, 2016
and ending with the issue dated
January 13, 2016.



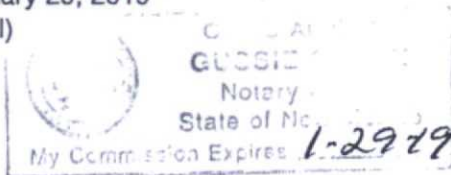
Publisher

Sworn and subscribed to before me this
13th day of January 2016.



Business Manager

My commission expires
January 29, 2019
(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

LEGAL NOTICE January 13, 2016

Apache Corporation is applying to increase the injection interval of its West Blinberry Drinkard Unit 10 water injection well. The well is at 660 FNL & 585 FEL, Sec. 9, T. 21 S., R. 37 E., Lea County, NM. This is 4 miles north of Eunice, NM. It will inject water into the Blinberry, Tubb, and Drinkard (maximum injection pressure = 1,131 psi) from 5,658' to 6,745'. Injection will be at a maximum rate of 3,000 bwpd. Interested parties must file objections or requests for hearing with the NM Oil Conservation Division, 1220 South Saint Francis Dr., Santa Fe, NM 87505 within 15 days. Additional information can be obtained by contacting: Brian Wood, Permits West, Inc., 37 Verano Loop, Santa Fe, NM 87508. Phone number is (505) 466-8120. #30610

02108485

00169037

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

EXHIBIT K

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87503 (505) 466-8120

January 21, 2016

Millard Deck Estate
3903 Bellaire Blvd
Houston TX 77025

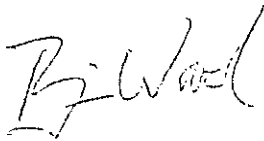
Apache Corporation is applying (see attached application) to increase the depth of the water injection interval in its West Blinbry Drinkard Unit 10 well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection well. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: West Blinbry Drinkard Unit 10 (fee lease) TD = 8,482'
Proposed Injection Zone: Drinkard from 6,450' to 6,745'
Location: 660' FNL & 585' FEL Sec. 9, T. 21 S., R. 37 E., Lea County, NM
Approximate Location: 4 air miles north of Eunice, NM
Applicant Name: Apache Corporation (432) 818-1062
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

2015 0640 0000 6227 9478

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<input type="checkbox"/> Adult Signature Restricted Delivery	\$
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City, State, ZIP+4® EXHIBIT L	

Postmark: **PEEOS NM**, **JAN 23**, **87552**



January 21, 2016

Breck Operating Corp
PO Box 911
Breckendridge CO 76424

Apache Corporation is applying (see attached application) to increase the depth of the water injection interval in its West Blinberry Drinkard Unit 10 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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Please call me if you have any questions.

Sincerely,

Brian Wood

Brian Wood

EXHIBIT L

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JAN 23 2016
87552

Breck Operating Corp.
PO Box 911
Breckendridge CO 76424
Sent to
Street and Apt. No., or P.O. Box
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9017 See Reverse for Instructions



January 21, 2016

BLM
620 E. Greene Street
Carlsbad NM 88220

Apache Corporation is applying (see attached application) to increase the depth of the water injection interval in its West Blinberry Drinkard Unit 10 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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Please call me if you have any questions.

Sincerely,

Brian Wood

Brian Wood

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City, State, ZIP+4®

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January 21, 2016

Chevron USA
PO Box 1635
Houston TX 77251

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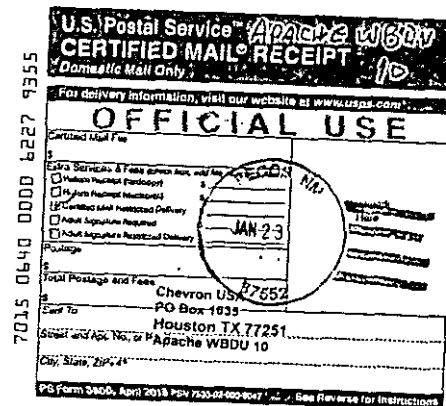
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Please call me if you have any questions.

Sincerely,

Brian Wood

EXHIBIT L



January 21, 2016

Conoco Phillips Co
PO Box 7500
Houston TX 74005-7500

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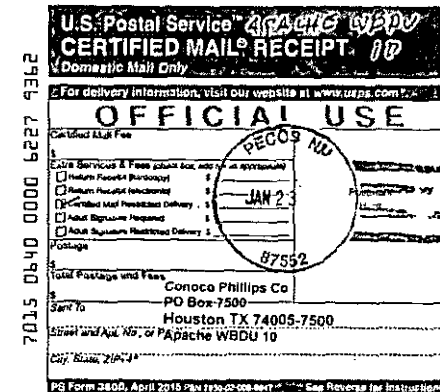
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Please call me if you have any questions.

Sincerely,

Brian Wood





January 21, 2016

Devon Energy Prod Co LP
333 W. Sheridan Ave
Oklahoma City OK 73102-5010

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Sincerely,

Brian Wood

Brian Wood

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Oklahoma City OK 73102-5010
Street and Apt. No., or PO Box
City, State, ZIP+4®

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



January 21, 2016

Energen Resources Co
605 Richard Arrington Jr Blvd
Birmingham AL 35203-2707

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Please call me if you have any questions.

Sincerely,

Brian Wood

Brian Wood

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605 Richard Arrington Jr Blvd
Birmingham AL 35203-2707
Street and Apt. No., or PO Box
City, State, ZIP+4®

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



January 21, 2016

Kerr-McGee OG Onshore LP
1999 Broadway #3700
Denver CO 80202

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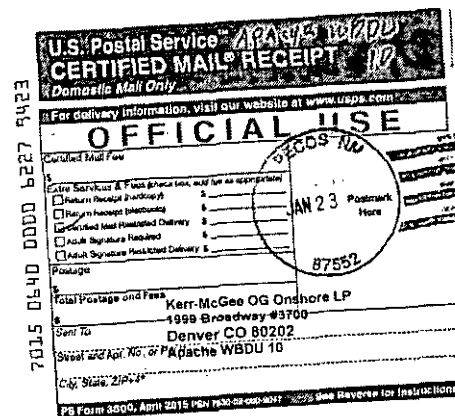
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Please call me if you have any questions.

Sincerely,

Brian Wood

EXHIBIT L



January 21, 2016

John H. Hendrix
110 N. Marienfeld
Midland TX 79701

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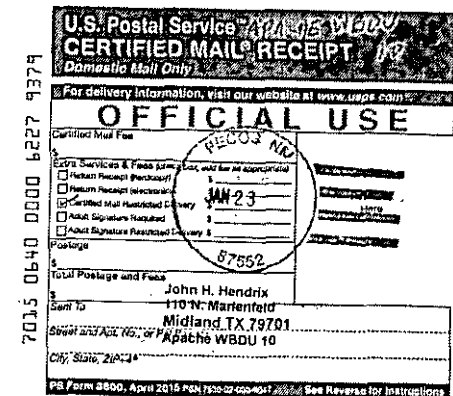
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Please call me if you have any questions.

Sincerely,

Brian Wood





January 21, 2016

Oxy USA WTP LP
6 Desta Drive #6000
Midland TX 79705-5505

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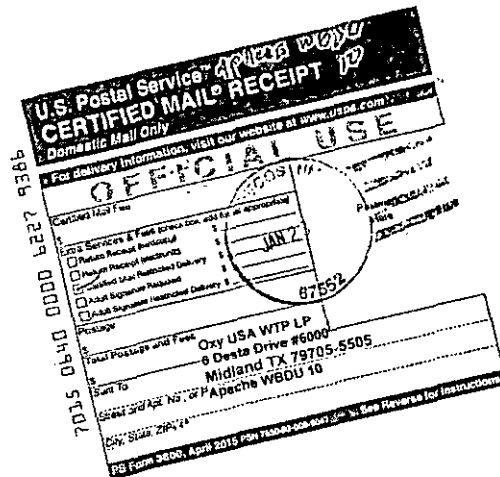
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Sincerely,

Brian Wood

EXHIBIT L



January 21, 2016

NMSLO
PO Box 1148
Santa Fe NM 87504

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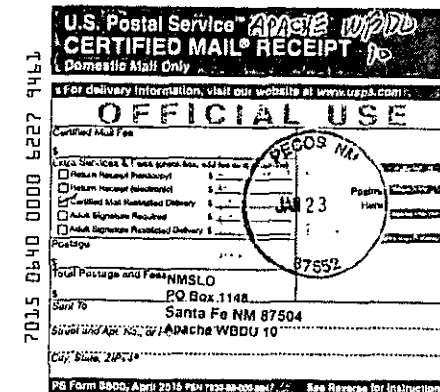
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Please call me if you have any questions.

Sincerely,

Brian Wood





January 21, 2016

Petro Strategies Inc
PO Box 5562
Midland TX 79704

Apache Corporation is applying (see attached application) to increase the depth of the water injection interval in its West Blinbry Drinkard Unit 10 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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Please call me if you have any questions.

Sincerely,

B. Wood

Brian Wood

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Certified Mail Signature Restricted Delivery \$ 1.25
Postage \$ 1.25
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Sent To Petro Strategies Inc
PO Box 5562
Midland TX 79704
Street and Apt. No., or P.O. Box and ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9017-1 See Reverse for Instructions



January 21, 2016

Penroc Oil Corp
PO Box 2769
Hobbs NM 88241

Apache Corporation is applying (see attached application) to increase the depth of the water injection interval in its West Blinbry Drinkard Unit 10 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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Please call me if you have any questions.

Sincerely,

B. Wood

Brian Wood

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Hobbs NM 88241
Street and Apt. No., or P.O. Box and ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9017-1 See Reverse for Instructions



January 21, 2016

Vanguard Operating LLC
1209 S. Main Street
Lovington NM 88260

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Applicant Name: Apache Corporation (432) 818-1062
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

EXHIBIT L

U.S. Postal Service™ **APACHE WBDU**
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com

OFFICIAL USE

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Extra Services & Fees (check box, add fee as necessary)
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☐ Return Receipt (electronic) \$
☐ Certified Mail Restricted Delivery \$
☐ Adult Signature Required \$
☐ Adult Signature Restricted Delivery \$
Postage \$
Total Postage and Fees \$
Sent To Vanguard Operating LLC
1209 S. Main Street
Lovington NM 88260
Street and Apt. No., or P.O. Box, or Apache WBDU 10
City, State, ZIP+4®
PS Form 3800, April 2013 PSN 7530-02-000-9047-9 See Reverse for Instructions

7015 0640 0000 6227 9348



January 21, 2016

St. Croix Corp
13601 Preston #406E
Dallas TX 75240

Apache Corporation is applying (see attached application) to increase the depth of the water injection interval in its West Blinberry Drinkard Unit 10 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: West Blinberry Drinkard Unit 10 (fee lease) TD = 8,482'
Proposed Injection Zone: Drinkard from 6,450' to 6,745'
Location: 660' FNL & 585' FEL Sec. 9, T. 21 S., R. 37 E., Lea County, NM
Approximate Location: 4 air miles north of Eunice, NM
Applicant Name: Apache Corporation (432) 818-1062
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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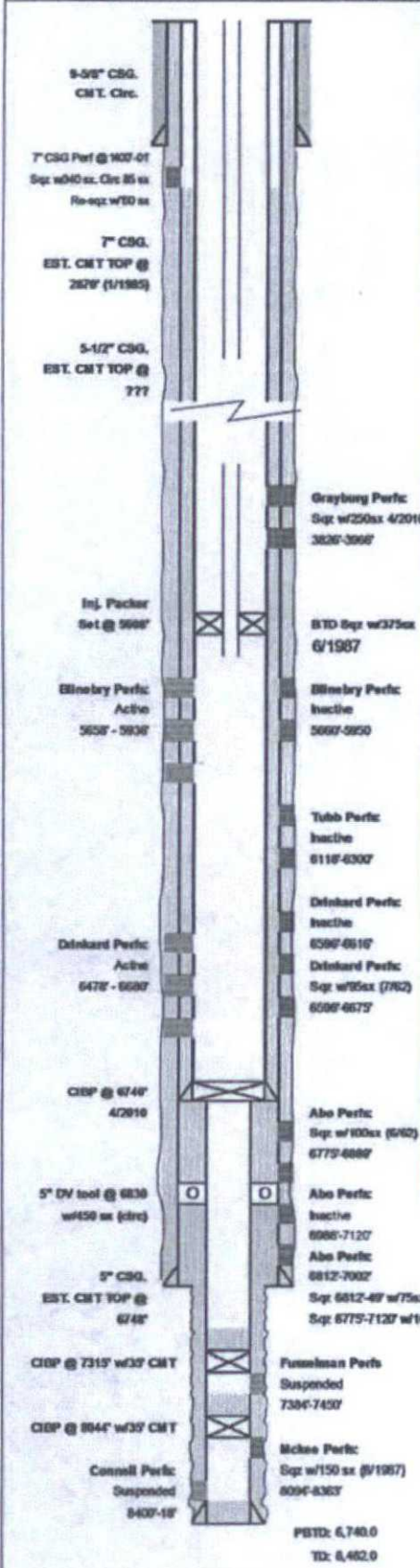
OFFICIAL USE

Certified Mail Fee \$
Extra Services & Fees (check box, add fee as necessary)
☐ Return Receipt (hardcopy) \$
☐ Return Receipt (electronic) \$
☐ Certified Mail Restricted Delivery \$
☐ Adult Signature Required \$
☐ Adult Signature Restricted Delivery \$
Postage \$
Total Postage and Fees \$
Sent To St. Croix Corp
13601 Preston #406E
Dallas TX 75240
Street and Apt. No., or P.O. Box, or Apache WBDU 10
City, State, ZIP+4®
PS Form 3800, April 2013 PSN 7530-02-000-9047-9 See Reverse for Instructions

7015 0640 0000 6227 9447

Apache Corporation
WBDU #10W (Southland Royalty A #7)
WELL DIAGRAM (CURRENT CONFIGURATION)

Apache



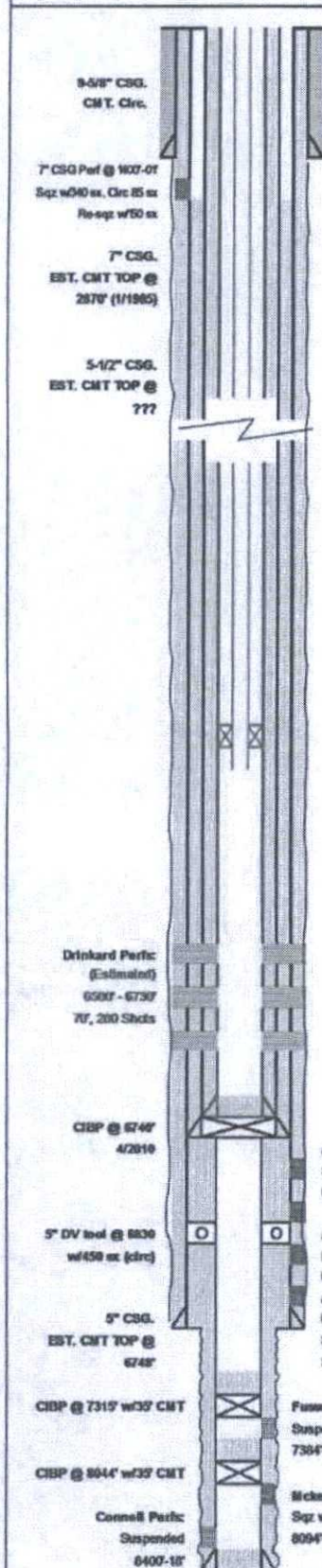
WELL NAME:		WBDU #10W (Southland Royalty A #7)		API:		30-025-06445					
LOCATION:		660' FNL, 585' FEL, Sec 9, T-21S, R-37E		COUNTY:		Lea Co., NM					
SPUD/TO DATE: 5/8/1962 - 5/28/1962				COMP. DATE: 8/30/1962							
PREPARED BY: Brent Shapott				DATE: 12/2/2015							
TD (ft): 8,482.0		KB Elev. (ft): 3480.0		KB to Ground (ft)		12.0					
PSTD (ft): 6,740.0		Ground Elev. (ft): 3486.0									
CASING/TUBING		SIZE (IN)		WEIGHT (LB/FT)		GRADE		DEPTHS (FT)			
Surface Casing		9-5/8" (Cmt. w/ 580ss., Circ.)		32.30		H-40		0.00 1,331.00			
Int. Casing		7" (Cmt. w/ 1550ss., Circ.)		20 / 23		J-55 N-80		0.00 7,169.00			
Liner 1 7/1967		5" (Cmt. w/ 260 ss., Circ.) DV tool @ 6830', 450' ss circ		14.87		K-55 FL 45		6,748.00 8,473.00			
Liner 2 10/2000 ?		5-1/2" (Cmt. w/ 750 ss)		23.00		J-55 N-80		0.00 6,686.00			
INJECTION TBG STRING											
ITEM		DESCRIPTION						LENGTH (FT)		Blm (FT)	
1		177 JTS 2-3/4" IPC Tubing									
2		Baker Lok-nd packer w/on-off tool									
3											
4											
5											
6											
7											
8											
9											
10											
PERFORATIONS											
Form.		Intervals						FT		SPF	
Grayburg		(Squeezed) 3626'-44', 52'-64', 72'-76', 90'-96', 3910'-30', 3956'-66'								4	
Blinebry		5658'-70', 5724'-26', 32'-44', 54'-60', 67'-71', 5777', 83', 90', 97', 5800'-04', 08'-12', 28'-30', 37', 40', 46', 62', 68'-70', 84'-90', 5900', 10'-12', 15'-18', 27'-30'								2	
		(Inactive) 5818'-21', 30'-32', 40'-42', 62'-64', 71'-73', 86'-88', 5900'-02', 10'-12', 34'-36', 48'-50'								2	
		(Inactive) 5900'-70', 5724'-26', 29', 33'-37', 41'-47', 58'-61'								2	
Tubb		(Squeezed) 6118'-26', 36'-50', 6238'-46', 63'-72', 95'-6300'								4	
Drinkard		6478'-82', 6520'-24', 6582'-0800', 6603'-08', 11'-16', 29'-31', 37'-41', 54'-58', 68'-72', 77'-80'								2	
		(Inactive) 6478'-84', 6518'-30'								4	
		(Sqr w/95ss 7/1962) 6506'-6616', 36'-42', 53'-58', 67'-75'								2	
		(Inactive) 6506' - 6616'								2	
Abo		(Inactive) 6665'-97', 7038'-44', 60'-65', 7115'-20'								2	
Abo		(Inactive) 6775'-79', 6813'-18', 39'-49', 83'-89'								2	
Abo		(Squeezed) 6812'-16', 26'-33', 39'-46', 83'-8910', 6668'-7002'								4	
Fussel		(Suspended) 7364' - 7422', 7430' - 50'								4	
		(Squeezed) 8238'-42', 50'-60', 80'-83', 8300'-04', 42'-48', 56'-63'								4	
McKee		(Squeezed) 8094'-8100', 8112'-25', 30'-36', 42'-50', 58'-60', 64'-68', 72'-80', 94'-8210'								4	
Connell		(Suspended) 8400'-18'								4	

11 before 11

PSTD: 6,740.0
 TD: 8,482.0

Apache Corporation
WBDU #10W (Southland Royalty A #7)
WELL DIAGRAM (PROPOSED CONFIGURATION)

Apache



WELL NAME: WBDU #10W (Southland Royalty A #7)		API: 30-025-06445			
LOCATION: 660' FNL, 585' FEL, Sec 9, T-21S, R-37E		COUNTY: Lea Co., NM			
SPUD/TD DATE: 5/8/1962 - 5/28/1962		COMP. DATE: 8/30/1962			
PREPARED BY: Bret Shaput		DATE: 12/2/2015			
TD (ft): 8,482.0	KB Elev. (ft): 3480.0	KB to Ground (ft): 12.0			
PBTD (ft): 8,735.0	Ground Elev. (ft): 3468.0				
CASING/TUBING	SIZE (IN)	WEIGHT (LB/FT)	GRADE	DEPTHS (FT)	
Surface Casing	9-5/8" (Cmt. w/ 580sx, Circ.)	32.30	H-40	0.00 1,331.00	
Int. Casing	7" (Cmt. w/ 1550sx, Circ.)	20 / 23	J-55 N-80	0.00 7,169.00	
Liner 1 7/1967	5" (Cmt. w/ 260 sx, Circ.) DV tool @ 6830', 450 sx circ	14.87	K-55 FL 45	8,748.00 8,473.00	
Liner 2 10/2000 ?	5-1/2" (Cmt. w/ 750 sx)	23.00	J-55 N-80	0.00 8,689.00	
Liner 3	4-1/2" Cmt. To surf	11.60	J-55	0.00 8,740.00	
INJECTION TBG STRING					
ITEM	DESCRIPTION			LENGTH (FT)	Btm (FT)
1	2-3/8" 4.7 LB/FT J-55 IPC TBG			8,492.00	8492.00
2	2-3/8" ON/OFF TOOL W/ 1 7/8" F PROFILE			1.80	8493.80
3	2-3/8" X 4-1/2" NICKLE PLATED ARROW-SET PKR			8.20	8500.00
4	2-3/8" 4.7 LB/FT J-55 IPC TBG			8.00	8508.00
5	2-3/8" PROFILE NIPPLE 1.50 R			0.90	8508.90
6	2-3/8" 4.7 LB/FT J-55 IPC TBG			6.00	8514.90
7					
8					
9					
10					
PERFORATIONS					
Form.	Intervals			FT	SPF
Drinkard	(Estimated) 6500' - 6730'			70	4
Abo	(Inactive) 6868'-97', 7038'-44', 80'-68', 7115'-20'				2
Abo	(Inactive) 6775'-79', 6813'-18', 39'-49', 83'-88'				2
Abo	(Squeezed) 6812'-18', 28'-33', 39'-49', 83'-8910', 6868'-7002'				4
Fussell	(Suspended) 7384' - 7422', 7430' - 50'				4
	(Squeezed) 8238'-42', 50'-60', 80'-83', 8300'-04', 42'-46', 58'-63'				4
McKee	(Squeezed) 8094'-8100', 8112'-25', 30'-36', 42'-50', 58'-60', 64'-88', 72'-80', 94'-8210'				4
Connell	(Suspended) 8400'-18'				4

u After 11



C-108 Review Checklist: Received 1/25 Add. Request: _____ Reply Date: _____ Suspended: _____ [Ver 15]

ORDER TYPE: WFX / PMX / SWD Number: _____ Order Date: _____ Legacy Permits/Orders: R-12-581

Well No. 10 Well Name(s): West Blingbury Drinkard

API: 30-0 25-06445 Spud Date: 5-08-1962 New or Old: 0 (UIC Class II Primacy 03/07/1982)

Footages 660 FUL
585 FEL Lot _____ or Unit A Sec 9 Tsp 21 S Rge 37 E County LEC

General Location: 2 3/4 miles N/E Unde Pool: T4-DN Pool No.: 22900
Brian Wood;

BLM 100K Map: JAL Operator: A Pacific Corp OGRID: 873 Contact: Agent

COMPLIANCE RULE 5.9: Total Wells: 3081 Inactive: 2 Fincl Assur: Y Compl. Order? NA IS 5.9 OK? Y Date: 2-08-2004

WELL FILE REVIEWED ☒ Current Status: injector well 5658-6680

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

Planned Rehab Work to Well: * Inj pni = 1120 psi (part of R-12581)

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned ___ or Existing ___ Surface	<u>12 1/4 / 9 7/8</u>	<u>1331</u>	<u>580</u>	<u>SURFACE / U/S 40</u>
Planned ___ or Existing ___ Interm/Prod	<u>8 3/4 / 7</u>	<u>1400</u>	<u>575</u>	<u>SURFACE / U/S 40</u>
Planned ___ or Existing ___ Interm/Prod	<u>8 3/4 / 7</u>	<u>7169</u>	<u>1550</u>	<u>2870 / CBL</u>
Planned ___ or Existing ___ Prod/Liner	<u>6 3/4 / 5 1/2</u>	<u>8482</u>	<u>1460</u>	<u>NID / NID</u>
Planned ___ or Existing <u>(Liner)</u>	<u>4 1/2</u>	<u>6740</u>	<u>189</u>	<u>SURFACE / U/S 40</u>
Planned ___ or Existing <u>(PERF)</u>	<u>6450 / 6745</u>		<u>Inj Length</u> <u>295</u>	

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.			
Confining Unit: Litho. Struc. Por.			
Proposed Inj Interval TOP:	<u>6450</u>	<u>Ce Poplb</u>	<u>6450</u>
Proposed Inj Interval BOTTOM:	<u>6745</u>	<u>WC</u>	<u>6780</u>
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:	
Drilled TD	<u>8482</u> PBDT <u>6740</u>
NEW TD	NEW PBDT <u>6740</u>
NEW Open Hole <input type="checkbox"/> or NEW Perfs <input checked="" type="checkbox"/>	
Tubing Size <u>2 3/8</u> in. Inter Coated? <u>Y</u>	
Proposed Packer Depth <u>6400</u> ft	
Min. Packer Depth <u>6350</u> (100-ft limit)	
Proposed Max. Surface Press. <u>1290</u> psi	
Admin. Inj. Press. <u>1290</u> (0.2 psi per ft)	

AOR: Hydrologic and Geologic Information

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

FRESH WATER: Aquifer Quaternary Max Depth 90 HYDRO AFFIRM STATEMENT By Qualified Person ☒

NMOSE Basin: CAPITAN CAPITAN REEF: thru adj NA No. Wells within 1-Mile Radius? 3 FW Analysis Y

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

Disposal Int: Inject Rate (Avg/Max BWPD): 2500/3000 Protectable Waters? _____ Source: _____ System: Closed or Open

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

AOR Wells: 1/2-M Radius Map? Y Well List? 59 Total No. Wells Penetrating Interval: 59 Horizontals? NA

Penetrating Wells: No. Active Wells 59 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

Penetrating Wells: No. P&A Wells 1 Num Repairs? _____ on which well(s)? _____ Diagrams? X

NOTICE: Newspaper Date JAN 23 Mineral Owner WILLIAM DEGEN Surface Owner WMSLO N. Date JAN 23

RULE 26.7(A): Identified Tracts? _____ Affected Persons: Devon, Engen, BCM, Oxy N. Date JAN 23

Order Conditions: Issues: _____

Add Order Cond: * Part of Unitized interval