DATE IN 04/29/2013	SUSPENSE	ENGINEER PG	LOGGED IN 05/01/2013	TYPE WFX	APP NO. pPRG1312160415

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
X WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

Apache Corp.
Northeast Drinkard Unit 263
30-025-40849

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

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

[B] X Offset Operators, Leaseholders or Surface Owner

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

[F] ☐ Waivers are Attached

RECEIVED OCD
2013 APR 29 A 10:39

[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		Consultant	4-27-13
Print or Type Name	Signature	Title	Date

brian@permitswest.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: 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? XXX Yes ~~XXX~~ No
If yes, give the Division order number authorizing the project: R-8541

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

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

NORTHEAST DRINKARD UNIT 263
30-025-40849

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).

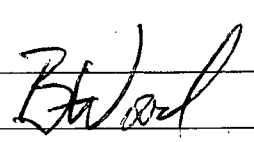
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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: APRIL 27, 2013

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: _____

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

III. WELL DATA

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

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

Side 1

INJECTION WELL DATA SHEET

OPERATOR: APACHE CORPORATION

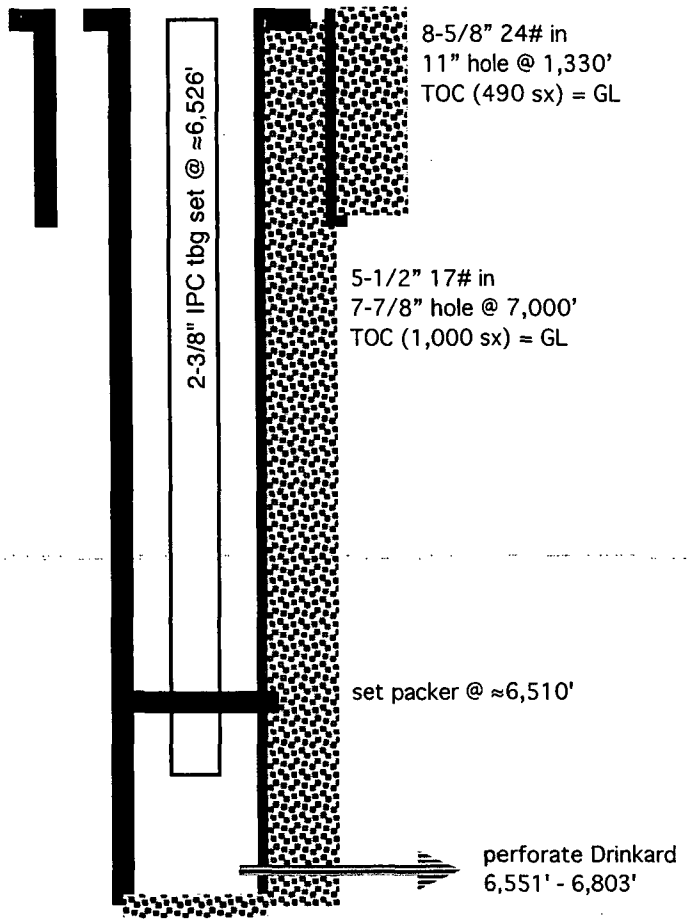
WELL NAME & NUMBER: NORTHEAST DRINKARD UNIT 263

WELL LOCATION:	SHL: 3345' FNL & 1620' FWL	C (LOT 11)	3	21 S	37 E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

BHL: 3175' FNL & 1375' FWL

WELLBORE SCHEMATIC

"Proposed"



(not to scale)

WELL CONSTRUCTION DATA

Surface Casing

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

Cemented with: 490 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: VISUAL

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. *or* _____ ft³

Top of Cement: _____ Method Determined: _____

Production Casing

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

Cemented with: 1,000 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: VISUAL

Total Depth: 7,050'

Injection Interval

6,551' feet to 6,803'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COAT

Type of Packer: LOCK SET INJECTION

Packer Setting Depth: ≈6,510'

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: 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: TUBB (6,085'), BLINEBRY (5,635'), GRAYBURG (3,775')

   UNDER: ABO (6,804'), HARE SIMPSON (8,000')

I. Purpose is to drill a water injection well to increase oil recovery. The well will inject (6,551' - 6,803') into the Drinkard, which is part of the Eunice; Blinebry-Tubb-Drinkard, North Pool (aka, Eunice; BLI-TU-DR, North and pool code = 22900). The discovery well was the Gulf Vivian #1 in 1944. The well and zone are part of the Northeast Drinkard Unit (Unit Number 300160, Case Number 9231, Order Number R-8540) that was established in 1987 by Shell. The unit was subsequently operated by Altura, and now, by Apache. This is an active water flood. The well will be directionally drilled because the BHL falls under a power line and buried pipeline.

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

III. A. (1) Lease: fee (Unit Tract 4, aka, Taylor-Glenn)
Lease Size: 240 acres (see Exhibit A for C-102 and map)
Closest Lease Line: 55'
Lease Area: Lots 5, 6, 9, 10, & 11 of Section 3
Lot 8 of Section 4
T. 21 S., R. 37 E.
Unit Size: 4,938 acres
Closest Unit Line: BHL: 2,695' SHL: 2,474'
Unit Area: T. 21 S., R. 37 E.
Section 2: all
Section 3: all
Section 4: Lots 1, 8, 9, & 16
Section 10: all
Section 11: SW4
Section 14: NW4
Section 15, 22, & 23: all

A. (2) Surface casing (8-5/8" and 24#) will be set at 1,330' in an 11" hole. Cement will be circulated to the surface with 490 sacks.

Production casing (5-1/2" and 17#) will be set at 7,000' (TD) in a 7-7/8" hole. Cement will be circulated to the surface with 1,000 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 ≈6,526'. (Disposal interval will be 6,551' to 6,803'.)

A. (4) A lock set injection packer will be set at ≈6,510' (≈50' above the highest proposed perforation of 6,551').

B. (1) Injection zone will be the grainstone and packstone member of the Drinkard limestone. The zone is part of the Eunice; Blinebry-Tubb-Drinkard, North Pool. Estimated fracture gradient is ≈0.56 psi per foot.

B. (2) Injection interval will be 6,551' to 6,803'. 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 6,551' to 6,803' with 2 shots per foot. Shot diameter = 0.40".

B. (5) The next higher oil or gas zone is the Tubb. Its estimated bottom is at 6,550'. Injection will occur in the Drinkard. Drinkard top is at 6,551'. Injection interval in the Drinkard will be 6,551' to 6,803'. The Tubb is unitized with the Blinebry and Drinkard. The Blinebry above the Tubb is productive in Section 3. The Blinebry is part of the

Eunice; Blinebry-Tubb-Drinkard, North Pool (NMOCD pool code number = 22900). Grayburg, above the Blinebry, is productive in Section 3. The Grayburg is part of the Penrose Skelly; Grayburg (NMOCD pool code number = 50350).

The next lower oil or gas zone is the Wantz; Abo (Pool Code = 62700). Its top is at 6,804'. There are six Abo producers in Section 3. Apache operates all six Abo producing wells. The Abo is not part of the Northeast Drinkard Unit. The Hare; Simpson is deeper than the Abo and is productive in Section 3.

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

There have been 18 water flood expansions (WFX-583, WFX-674, WFX-722, WFX-740, WFX-752, WFX-759, WFX-774, WFX-784, WFX-881, WFX-882, WFX-889, WFX-905, WFX-906, & WFX-907) since then. Closest unit boundary is 2,474' southwest of the SHL (and 2,695' west of the BHL). Fifteen injection wells are within a half-mile radius, all of which are in the unit. The injection wells are in all four cardinal directions (see Exhibit B).

V. Exhibit B shows all 64 existing wells (3 P & A + 15 water injection wells + 46 oil wells) within a half-mile radius, regardless of depth. Exhibit C shows all 523 existing wells (371 oil or gas producing wells + 101 injection or disposal wells + 46 P & A wells + 5 water wells) within a two-mile radius.

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

3-21s-37e	Lessor	Lease Number	Operator
Lots 2-4, 7, 8, 12, 15, & 16, & N2SE	BLM	NMNM-002512	Apache
Lots 5, 6, 9, 10, & 11	fee	Taylor-Glenn	Apache
Lots 13 & 14, & NESW	fee	Livingston	Apache
NWSW	fee	Estlack	Apache

4-21s-37e	Lessor	Lease Number	Operator
Lot 1	BLM	NMNM-002512	Apache
Lot 8	fee	Taylor-Glenn	Apache
Lots 9 & 16	fee	Livingston	Apache
NESE	fee	WBDU	Apache

Exhibit E shows all lessors (BLM, fee, and state) within a two-mile radius. Note that the ranges are offset from the normal pattern (T. 20 S., R. 38 E. is north of T. 21 S., R. 37 E.).

VI. There are 64 existing wells within a half-mile radius. Forty of the wells penetrated the Drinkard. The penetrators include 29 oil wells, 9 water injection wells, and 2 P & A wells. A table abstracting the well construction details and histories of the Drinkard penetrators is in Exhibit F. Diagrams illustrating the P & A penetrators are also in Appendix F. The forty wells and their distances from the 263 are:

OPERATOR	WELL	API # 30-025-	T 21 S, R 37 E	ZONE	STATUS	TD	DISTANCE
Apache	Taylor Glenn 15	35354	K-Sec. 3	Grayburg	oil	4450	128'
Apache	NEDU 206	06522	K-Sec. 3	Blinebry-Tubb-Drinkard	WIW	8590	385'
Apache	NEDU 175	40516	C-Sec. 3	Blinebry-Tubb-Drinkard	oil	7050	594'
Apache	Hawk B 3 33	39510	L-Sec. 3	Grayburg	oil	4400	606'
Apache	NEDU 204	06506	L-Sec. 3	Blinebry-Tubb-Drinkard	WIW	6800	626'
Apache	NEDU 128	34651	E-Sec. 3	Blinebry-Tubb-Drinkard	oil	6930	678'
Apache	Taylor Glenn 20	38687	C-Sec. 3	Grayburg	oil	4530	720'
Continental	Hawk B 3 21	06511	L-Sec. 3	casing parted	P & A	2665	724'
Apache	NEDU 232	34430	Lot 14-Sec. 3	Blinebry-Tubb-Drinkard	oil	6890	730'

shallow

Apache	NEDU 159	40497	C-Sec. 3	Blinebry-Tubb-Drinkard	oil	7024	776'
Apache	Taylor Glenn 13	35352	E-Sec. 3	Grayburg	oil	4450	927'
Apache	NEDU 160	40498	D-Sec. 3	Blinebry-Tubb-Drinkard	oil	7100	931'
Apache	NEDU 124	34424	K-Sec. 3	Blinebry-Tubb-Drinkard	oil	6910	1085'
Apache	NEDU 282	40499	E-Sec. 3	Blinebry-Tubb-Drinkard	oil	7050	1104'
Apache	Taylor Glenn 14	35353	F-Sec. 3	Grayburg	oil	4200	1112'
Apache	NEDU 229	34429	J-Sec. 3	Blinebry-Tubb-Drinkard	oil	6910	1125'
Apache	NEDU 105	25008	E-Sec. 3	Blinebry-Tubb-Drinkard	WIW	6870	1290'
Apache	Livingston 16	35225	Lot 14-Sec. 3	Grayburg	oil	4500	1308'
Apache	NEDU 108	24831	C-Sec. 3	Blinebry-Tubb-Drinkard	P & A	6805	1325'
Apache	NEDU 240	35904	M-Sec. 3	Blinebry-Tubb-Drinkard	WIW	6850	1428'
Apache	NEDU 205	06521	M-Sec. 3	Blinebry-Tubb-Drinkard	P & A	6730	1551'
Apache	Livingston 14	28671	E-Sec. 3	Grayburg	oil	7745	1561'
Apache	Livingston 16	38382	F-Sec. 3	Grayburg	oil	4153	1579'
Apache	NEDU 134	34737	H-Sec. 4	Blinebry-Tubb-Drinkard	oil	6900	1585'
Apache	NEDU 208	06385	J-Sec. 3	Blinebry-Tubb-Drinkard	oil	6707	1668'
Apache	NEDU 107	20315	F-Sec. 3	Blinebry-Tubb-Drinkard	WIW	6000	1685'
Apache	NEDU 207	06519	Lot 14-Sec. 3	Blinebry-Tubb-Drinkard	WIW	6885	1709'
Apache	NEDU 111	26670	G-Sec. 3	Blinebry-Tubb-Drinkard	WIW	6875	1720'
Apache	NEDU 173	40554	B-Sec. 3	Blinebry-Tubb-Drinkard	oil	7050	1729'
Apache	NEDU 163	39914	B-Sec. 3	Blinebry-Tubb-Drinkard	oil	7025	1747'
Apache	Livingston 18	36718	E-Sec. 3	Grayburg	oil	4350	1765'
Apache	Livingston 23	38383	I-Sec. 4	Grayburg	oil	4145	1798'

Apache	NEDU 234	34738	P-Sec. 4	Blinebry-Tubb-Drinkard	oil	6900	1805'
Apache	NEDU 242	37875	G-Sec. 3	Blinebry-Tubb-Drinkard	oil	6950	1811'
Apache	NEDU 202	26900	Lot 9-Sec. 4	Blinebry-Tubb-Drinkard	WIW	8156	1850'
Apache	NEDU 104	06386	D-Sec. 3	Blinebry-Tubb-Drinkard	WIW	5930	1890'
Apache	NEDU 201	06399	A-Sec. 4	Blinebry-Tubb-Drinkard	oil	6750	1937'
Apache	NEDU 268	40779	K-Sec. 3	Blinebry-Tubb-Drinkard	oil	7000	1958'
Apache	NEDU 233	34431	K-Sec. 3	Blinebry-Tubb-Drinkard	oil	6870	1984'
Apache	Taylor Glenn 5	06384	J-Sec. 3	Grayburg	oil	8361	2010'
Apache	NEDU 129	34938	D-Sec. 3	Blinebry-Tubb-Drinkard	oil	6980	2058'
Apache	Hawk B 3 26	35734	O-Sec. 3	Grayburg	oil	4476	2070'
Apache	NEDU 110	06495	G-Sec. 3	Blinebry-Tubb-Drinkard	WIW	5976	2135'
Apache	NEDU 243	06955	E-Sec. 3	Blinebry-Tubb-Drinkard	oil	6955	2167'
Apache	Hawk B 3 34	38960	D-Sec. 3	Grayburg	oil	4550	2199'
Apache	NEDU 228	34427	J-Sec. 3	Blinebry-Tubb-Drinkard	oil	6920	2201'
Apache	NEDU 125	34425	J-Sec. 3	Blinebry-Tubb-Drinkard	oil	6910	2215'
Apache	Livingston 19	35341	I-Sec. 4	Grayburg	oil	4450	2236'
Apache	NEDU 130	34617	F-Sec. 3	Blinebry-Tubb-Drinkard	oil	6950	2279'
Apache	Livingston 15	35224	P-Sec. 4	Grayburg	oil	4482	2342'
Apache	Taylor Glenn 12	35351	H-Sec. 4	Grayburg	oil	4200	2347'
Apache	NEDU 241	38526	A-Sec. 4	Blinebry-Tubb-Drinkard	oil	7000	2379'
Apache	NEDU 209	06508	O-Sec. 3	Blinebry-Tubb-Drinkard	WIW	8114	2427'
Apache	NEDU 146	37618	A-Sec. 4	Blinebry-Tubb-Drinkard	oil	6924	2499'
Apache	NEDU 203	06398	P-Sec. 4	Blinebry-Tubb-Drinkard	oil	7436	2524'

Apache	NEDU 210	06502	O-Sec. 3	Blinebry-Tubb-Drinkard	WIW	8302	2534'
Apache	NEDU 157	40696	B-Sec. 3	Blinebry-Tubb-Drinkard	oil	7036	2539'
Apache	NEDU 106	06410	C-Sec. 3	Blinebry-Tubb-Drinkard	WIW	6000	2568'
Apache	NEDU 227	34428	J-Sec. 3	Blinebry-Tubb-Drinkard	oil	6890	2568'
Apache	NEDU 303	06512	S-Sec. 3	Blinebry-Tubb-Drinkard	WIW	5700	2574'
Apache	Livingston 22	37727	K-Sec. 3	Grayburg	oil	4275	2591'
Apache	Livingston 25	39447	H-Sec. 4	Grayburg	oil	4505	2594'
Apache	NEDU 103	09897	D-Sec. 3	Blinebry-Tubb-Drinkard	WIW	6010	2597'
Apache	NEDU 137	35557	A-Sec. 4	Blinebry-Tubb-Drinkard	oil	6110	2603'
Apache	*Livingston 6*	*06517*	*S-Sec. 3*	*Grayburg*	*oil*	*8230*	*2643'*

VII. 1. Average injection rate will be ≈750 bwpd.
Maximum injection rate will be ≈1,000 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 ≈1,000 psi. Maximum injection pressure will be 1,310 psi (= 0.2 psi/foot x 6,551' (highest perforation)).

4. Water source will be water pumped from existing ≈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 storage tank before being piped to the injection wells. Commingling began in the 1970s. A comparison of analyses from the

discharge pump and San Andres follows. The complete analyses are in Exhibit G.

	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/	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 Drinkard currently produces in the unit. It is the goal of the project to increase production from the Drinkard. According to Go-Tech records, at least 2,139 wells have been approved to target the Drinkard in New Mexico.

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 Drinkard is 251' thick and consists of tan to dark gray limestone and dolomite. Core filling and replacement anhydrite are common in the limestone. Nodular anhydrite is common in the dolomite. The reservoir portion of the Drinkard consists of skeletal lime grindstone and lime packstone with some dolomitic packstone. Porosity is ≈11%. Permeability is ≈2.45 millidarcies.

There are currently 158 Drinkard injection wells in the state. Adjacent to the Northeast Drinkard Unit are three other Drinkard water floods (the Apache operated West Blinebry Drinkard and East Blinebry Drinkard Units and the Chevron operated Central Drinkard Unit). The Central Drinkard Unit has been under water flood since the 1960s.

Depths to formation are:

Quaternary = 0'
Rustler = 1,315'
Tansill = 2,480'
Yates = 2,635'
Seven Rivers = 2,870'
Queen = 3,440'
Penrose = 3,585'
Grayburg = 3,775'
San Andres = 4,075'
Glorieta = 5,220'
Paddock = 5,285'
Blinebry = 5,635'
Tubb = 6,085'
Drinkard = 6,551'
Abo = 6,804'
Total Depth = 7,000'

One fresh water well is within a mile radius. This conclusion is based on a November 15, 2012 field inspection and a review of the State Engineer's records. The closest water well is ≥3,348' west in Section 4 (Exhibit H). That water well, equipped with an electric pump, is 90' deep and probably produces from the Ogallala aquifer. Depth to water is 75'. No existing underground drinking water sources are below the Drinkard within a mile radius.

There will be >6,000' of vertical separation and the Rustler salt between the bottom of the only likely underground water source (Ogallala) and the top of the Drinkard.

Produced water has been injected or disposed into five zones above the Drinkard within T. 21 S., R. 37 E. and T. 20 S., R. 38 E. The five zones, from top to bottom, are the Grayburg, San Andres, Glorieta, Blinebry, and Tubb.

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. One fresh water well is within a mile. An analysis from that stock watering well is attached (Exhibit H).

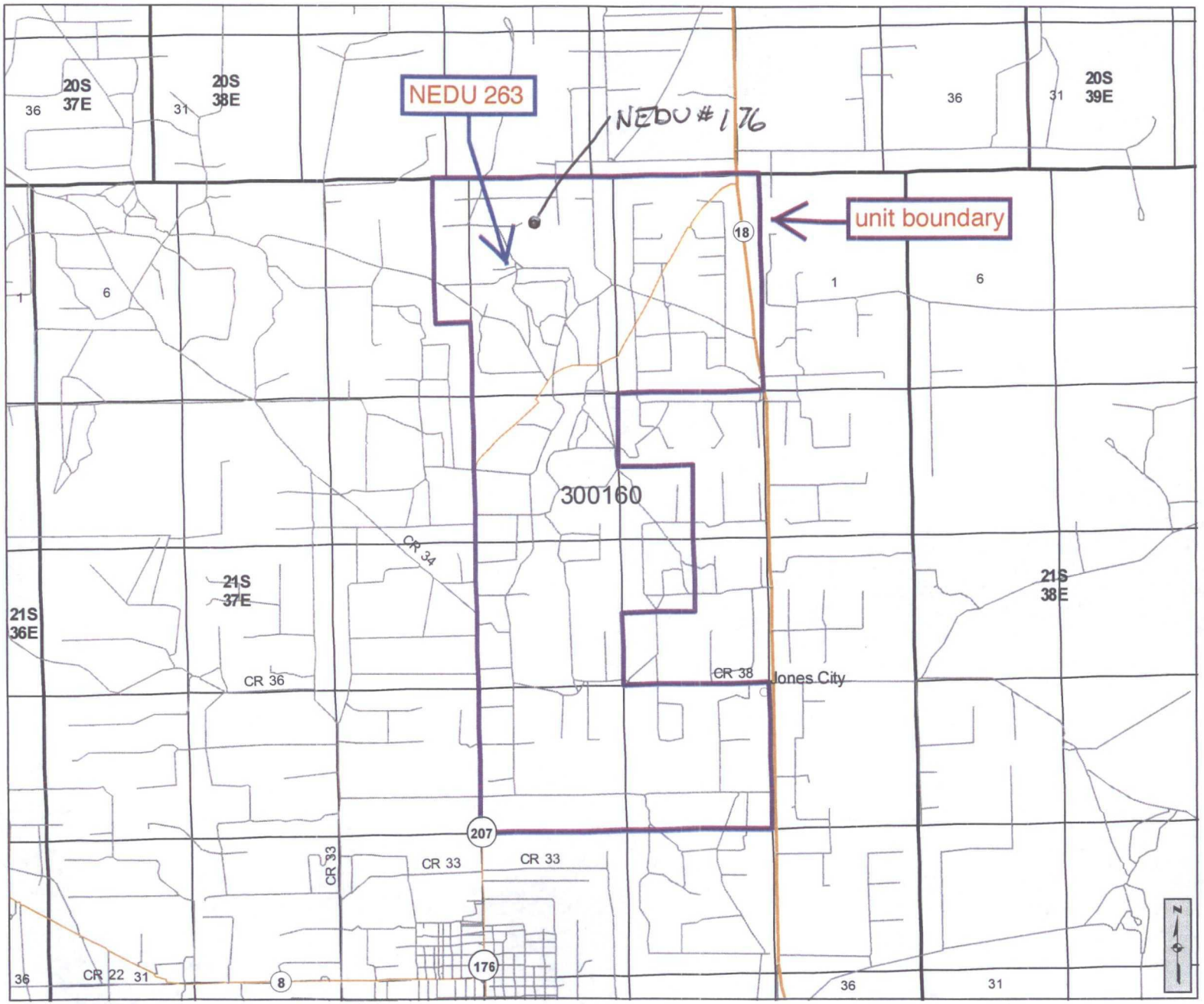
XII. Apache is not aware of any geologic or engineering data that may indicate the Drinkard is in hydrologic connection with any underground sources of water. This was attested to during sworn testimony (page 65, line 14, Order R-8540) presented in 1987. Closest Quaternary fault is over 75 miles west (Exhibit I). At least 256 injection or saltwater disposal wells have been drilled into the Drinkard in the New Mexico portion of the Permian Basin. Previously approved Drinkard water flood expansions in the unit include:

WFX-740 (October 13, 1998)
WFX-752 (July 6, 1999)
WFX-759 (May 8, 2000)
WFX-774 (June 7, 2001)
WFX-784 (October 29, 2002)
WFX-881 (March 14, 2011)
WFX-882 (March 16, 2011)
WFX-896 (March 6, 2012)
WFX-905 & WFX-906 (March 25, 2013)
WFX-907 (March 28, 2013)

XIII. Notice (this application) has been sent (Exhibit J) to the surface owners (Elizabeth Gervis Taylor, et al). Apache is the only Drinkard leasehold operator within a half-mile.

A legal ad (see Exhibit K) was published on April 17, 2013.

A



Point Locations
- County Seat
- SLO District Offices
- City, Town or Village
- Volcanic Vents
- Highway Mileposts

NMOCD Oil and Gas Wells
- Oil
- Gas
- Injection
- Water
- Carbon Dioxide
- DA or PA
- Miscellaneous
- Salt Water Disposal

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

State Trust Lands
- Surface Estate
- Subsurface Estate
- Both Estates

NMSLO Leasing
- Option Agreement
- Commercial Lease
- Minerals Lease
- Oil and Gas Lease
- Agricultural Lease
- Not Available for Oil and Gas Leasing
- Restriction Influences Oil and Gas Leasing

Other Boundaries
- Continental Divide
- State Boundary
- County Boundaries
- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- Potash Enclave (NMOCD R-111-P)

For detailed legend of the Geologic Map of New Mexico, please see http://geoinfo.nmt.edu/

New Mexico State Land Office

Oil, Gas, and Minerals

0 0.2 0.4 0.8 1.2 1.6 Miles

Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

EXHIBIT A

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

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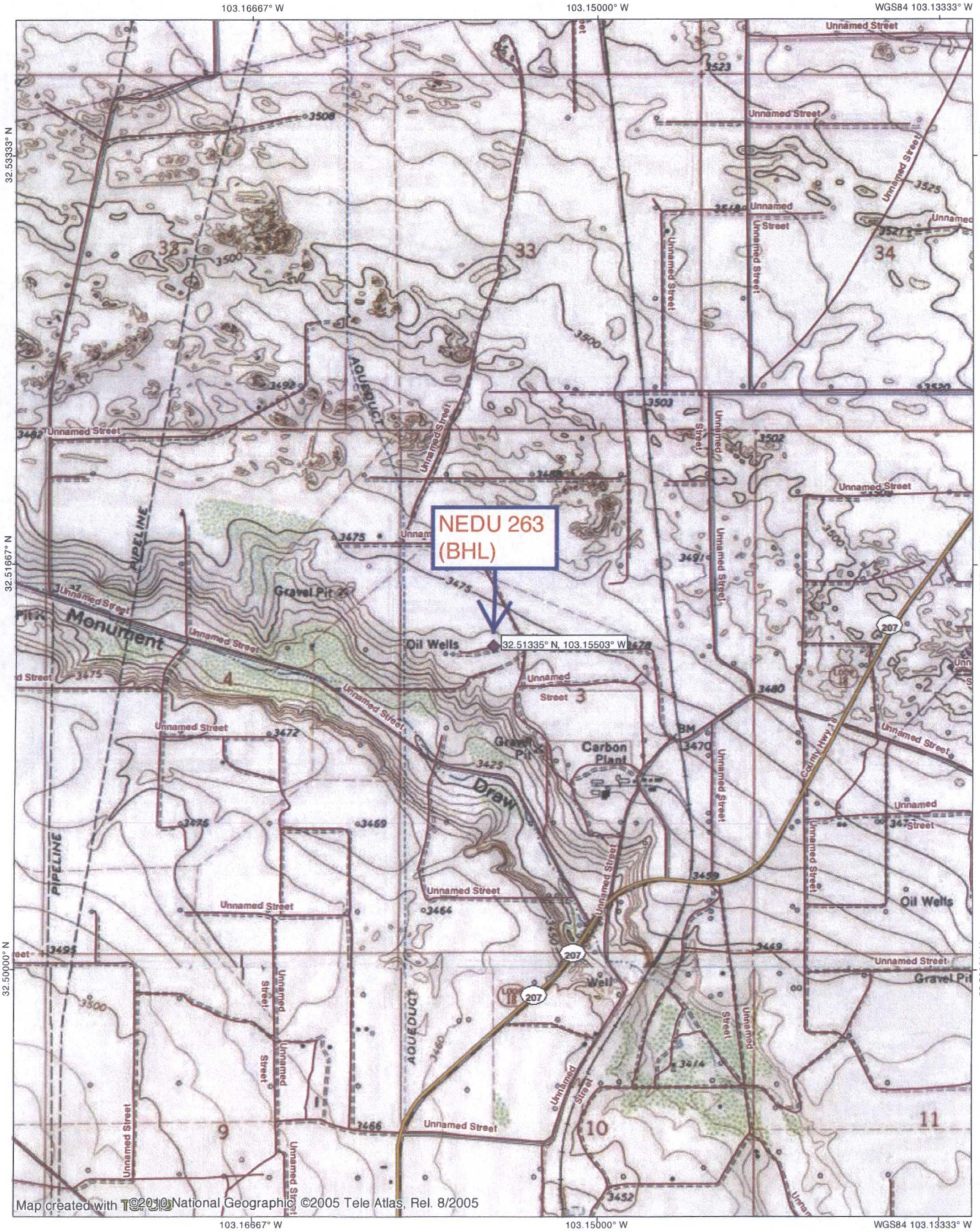
www.nmstatelands.org

TOPO! map printed on 04/21/13 from "Untitled.tpo"



NATIONAL GEOGRAPHIC

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 miles
0.0 0.5 1.0 km

EXHIBIT A

TN MN
7°
04/21/13

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 Rd., 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 and 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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name

Property Code	Property Name	Well Number
	NORTHEAST DRINKARD UNIT	263W

OGRID No.	Operator Name	Elevation
	APACHE CORPORATION	3473'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 11	3	21 S	37 E		3345	NORTH	1620	WEST	LEA

Bottom Hole Location If Different From Surface

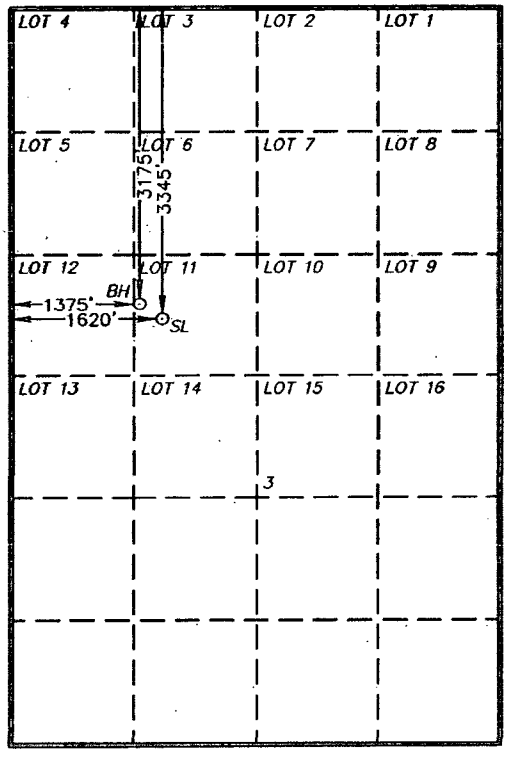
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 11	3	21 S	37 E		3175	NORTH	1375	WEST	LEA

Dedicated Acres	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

SURFACE LOCATION
Lat - N 32°30'47.09"
Long - W 103°09'15.24"
NMSPCE- N 552399.850
E 904805.323
(NAD-83)
Lat - N 32°30'46.66"
Long - W 103°09'13.54"
NMSPCE- N 552339.865
E 863621.582
(NAD-27)

PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°30'48.77"
Long - W 103°09'18.09"
NMSPCE- N 552566.965
E 904559.021
(NAD-83)
Lat - N 32°30'48.34"
Long - W 103°09'16.39"
NMSPCE- N 552506.966
E 863375.287
(NAD-27)



1" = 2000'

EXHIBIT A

OPERATOR CERTIFICATION

I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

Email Address

SURVEYOR CERTIFICATION

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 supervison, and that the same is true and correct to the best of my belief.

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

SEPTEMBER 14, 2012
Date Surveyed

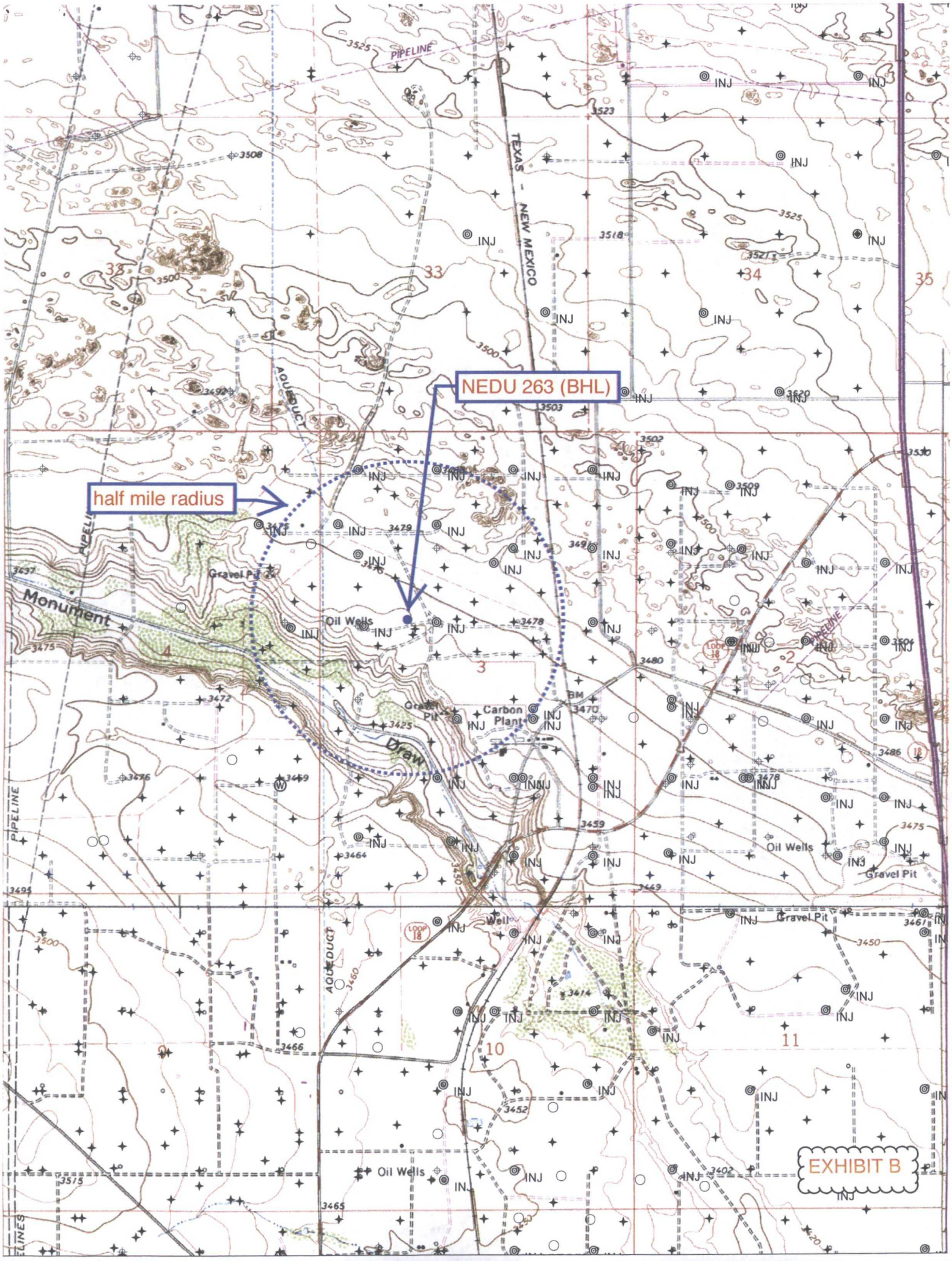
Signature & Seal of Professional Surveyor

W.O. NO. 27324

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 27324

B


NEDU 263 (BHL)
half mile radius
EXHIBIT B
TEXAS - NEW MEXICO
PIPELINE
AQUEDUCT
Monument
Draw
Gravel Pit
Oil Wells
Carbon Plant
Well
INJ
33
34
35
3
4
10
11

C

Northeast Drinkard Unit 263

two mile radius

EXHIBIT C

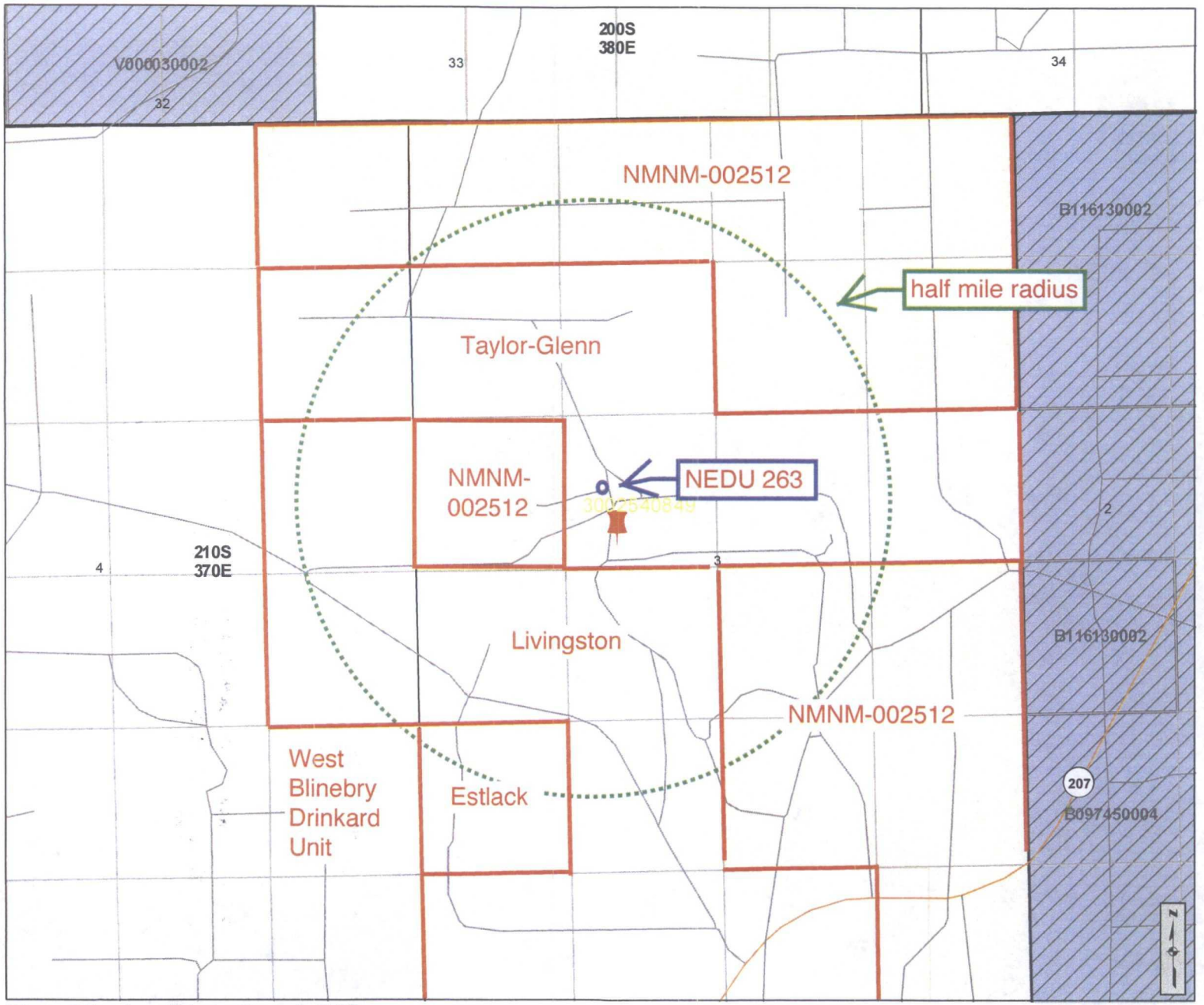
SCALE 1:29629

0 1 MILES

0 1000 2000 YARDS

0 1 2 KILOMETI


D



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 Subsuface 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^2
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

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

EXHIBIT D

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

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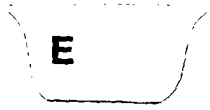
www.nmstatelands.org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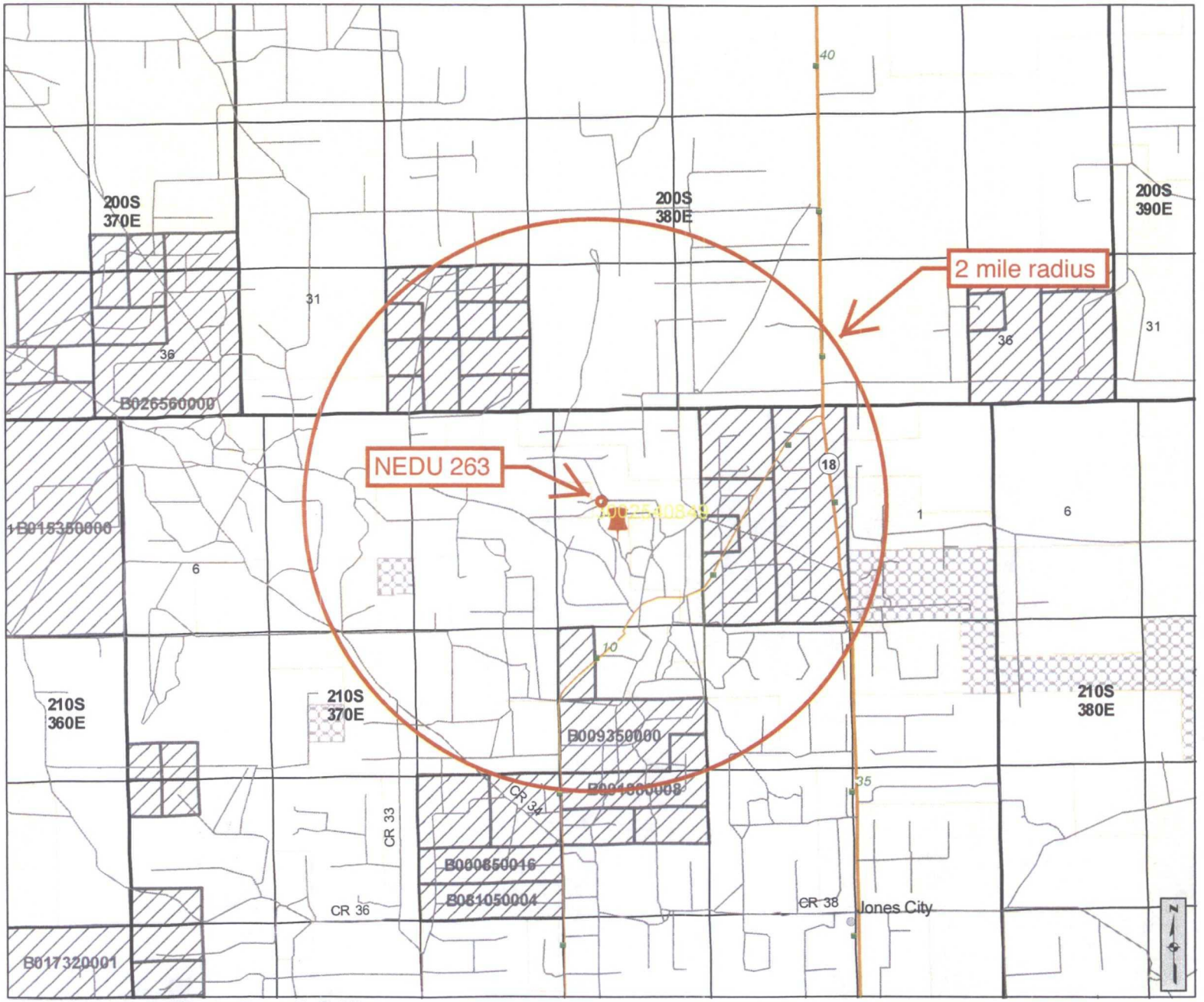

Cartographic Features

- County Boundaries
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- City, Town or Village
- SLO District Offices
- SLO District Boundary
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- Surface and Subsuface Estate

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- Volcanic Vents
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NMOCD Oil and Gas Wells

- CO^2
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

www.nmstatelands.org

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 E

Land Office Geographic Information Center
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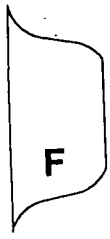

F

Sorted by distance from NEDU 263

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
NEDU 206	9/29/47	8590	Blinebry-Drinkard-Tubb	WIW	17	13.375	301	250 sx	GL	circulated
30-025-06522					11	8.625	3879	4300 sx	GL	circulated
K-3-21s-37e					7.875	5.5	8060	675 sx	2915	temperature survey
NEDU 175	8/24/12	7050	BLI-TU-DR	Oil	12.25	8.625	1371	700sx	GL	circulated 180 sx to GL
30-025-40516					7.875	5.5	7050	1150 sx	GL	circulated 106 sx to GL
C-3-21s-37e										
NEDU 204	8/11/62	6800	BLI-TU-DR	WIW	10.75	9.625	1310	625 sx	GL	circulated
30-025-06506					8.75	7	6800	650 sx	2200	temperature survey
L-3-21s-37e										
NEDU 128	7/25/99	6930	BLI-TU-DR	Oil	12.25	8.625	1336	460 sx	GL	circulated 100 sx to pit
30-025-34651					7.875	5.5	6930	1000 sx	GL	circulated 129 sx to pit
E-3-21s-37e										
NEDU 232	10/6/98	6890	BLI-TU-DR	Oil	11	8.625	1302	410 sx	GL	circulated 110 sx to pit
30-025-34430					7.875	5.5	6890	1225 sx	GL	circulated 129 sx to pit
Lot 14-3-21s-37e										
NEDU 159	6/23/12	7024	BLI-TU-DR	Oil	12.25	8.625	1327	675 sx	GL	circulated 109 sx to GL
30-025-40497					7.875	5.5	7024	1290 sx	GL	circulated 100 sx to GL
C-3-21s-37e										
NEDU 160	7/1/12	7100	BLI-TU-DR	Oil	12.25	8.625	1395	685 sx	GL	circulated 51 sx to GL
30-025-40498					7.875	5.5	7100	1300 sx	GL	circulated 14 bbl to GL
D-3-21s-37e										
NEDU 124	10/31/98	6910	BLI-TU-DR	Oil	11	8.625	1309	410 sx	GL	circulated 76 sx to pit
30-025-34424					7.875	5.5	6910	1425 sx	GL	circulated 86 sx to pit
K-3-21s-37e										
NEDU 282	9/1/12	7050	BLI-TU-DR	Oil	12.25	8.625	1356	670 sx	GL	circulated 141 sx to GL
30-025-40499					7.875	5.5	7050	1515 sx	GL	circulated 62 sx to GL
E-3-21s-37e										

Sorted by distance from NEDU 263

NEDU 229	11/1/98	6910	BLI-TU-DR	Oil	11	8.625	1309	410 sx	GL	circulated 126 sx to pit
30-025-34429					7.875	5.5	6910	1325 sx	GL	circulated 170 sx to pit
J-3-21s-37e										
NEDU 105	7/1/75	6870	BLI-TU-DR	WIW	11	8.625	1380	400 sx	GL	circulated
30-025-25008					7.875	5.5	6870	985 sx	410	temperature survey
E-3-21s-37e										
NEDU 108	10/19/74	6805	BLI-TU-DR	P&A	12.25	8.625	1361	600 sx	GL	circulated
30-025-24831					7.875	5.5	6805	1025 sx	2328	calculated
C-3-21s-37e										
NEDU 240	7/26/02	6850	BLI-TU-DR	WIW	12.25	8.625	1268	550 sx	GL	circulated 41 sx
30-025-35904					7.875	5.5	6850	1500 sx	GL	circulated 30 sx
M-3-21s-37e										
NEDU 205	11/26/61	6730	BLI-TU-DR	WIW	12.25	9.625	259	250 sx	GL	circulated 35 sx to GL
30-025-06521					8.75	2.875	6715	635 sx	2400	temperature survey
M-3-21s-37e										
LIVINGSTON 014	4/10/84	7745	Wantz Abo	Oil	17.25	13.375	481	475 sx	GL	circulated unknown to GL
30-025-28671					12.25	8.625	2470	1425 sx	GL	circulated 250 sx
E-3-21s-37e					7.875	5.5	7745	1530 sx	364	calculated
NEDU 134	12/22/03	6900	BLI-TU-DR	Oil	12.25	8.625	1315	460 sx	GL	circulated 50 sx
30-025-34737					7.875	5.5	6900	1170 sx	330	cement bond log
H-4-21s-37e										
NEDU 208	7/27/52	6707	BLI-TU-DR	Oil	17	13.375	225	250 sx	no report	no report
30-025-06385					11	8.625	3147	2000 sx	GL	circulated out 280 sx
J-3-21s-37e					7.875	5.5	6600	600 sx	GL	circulated out 25 sx
NEDU 207	7/31/52	6885	BLI-TU-DR	WIW	17	13.375	215	250 sx	GL	circulated 65 sx to GL
30-025-06519					11	8.625	3153	1600 sx	GL	circulated 380 sx to GL
N-3-21s-37e					7.875	5.5	7000	810 sx	GL	reversed out 75 sx

EXHIBIT F

Sorted by distance from NEDU 263

NEDU 111	4/18/80	6875	BLI-TU-DR	WIW	12.25	8.625	1395	674 sx	GL	circulated 75 sx to GL
30-025-26670					7.875	5.5	6875	2782 sx	GL	circulated 170 sx to GL
G-3-21s-37e										
NEDU 173	8/16/12	7050	BLI-TU-DR	Oil	12.25	8.625	1352	700 sx	GL	circulated 173 sx to GL
30-025-40554					7.875	5.5	7050	1220 sx	GL	circulated 72 bbls to GL
B-3-21s-37e										
NEDU 163	11/30/10	7025	BLI-TU-DR	Oil	12.25	8.625	1422	720 sx	GL	circulated 180 sx to GL
30-025-39914					7.875	5.5	7025	1275 sx	GL	circulated 106 sx to GL
B-3-21s-37e										
NEDU 234	1/3/00	6900	BLI-TU-DR	Oil	12.25	8.625	1275	460 sx	GL	circulated 82 sx to pit
30-025-34738					7.875	5.5	6900	1740 sx	GL	circulated 150 sx
P-4-21s-37e										
NEDU 242	6/10/06	6950	BLI-TU-DR	Oil	12.25	8.625	1325	575 sx	GL	circulated to GL
30-025-37875					7.875	5.5	6950	1000 sx	GL	circulated to GL
G-3-21s-37e										
NEDU 202	10/10/84	8156	BLI-TU-DR	WIW	17.5	13.375	1190	935 sx	GL	circulated to GL
30-025-26990					12.25	9.625	3500	1200 sx	806	calculated
I-4-21s-37e					8.75	7	8153	1720 sx	GL	circulated to GL
NEDU 201	12/23/65	6750	BLI-TU-DR	Oil	12.25	9.625	308	250 sx	GL	cemented to GL
30-025-06399					8.75	2.875	6745	635 sx	2200	temperature survey
I-4-21s-37e										
NEDU 268	11/1/16	7000	BLI-TU-DR	Oil	11	8.625	1293	500 sx	GL	circulated 190 sx to GL
3002540779					7.875	5.5	7000	1210 sx	GL	circulated 140 sx to GL
K-3-21s-37e										
NEDU 152H	no spud	Plan 7000	BLI-TU-DR	Oil	12.25	8.625	1375	675 sx	GL	planned circulate to GL
30-025-39288					7.875	5.5	7000	1000 sx	GL	planned circulate to GL
H-4-21s-37e										
NEDU 233	9/24/98	6870	BLI-TU-DR	Oil	11	8.625	1285	410 sx	GL	circulated 63 sx to pit
30-025-34431					7.875	5.5	6870	1300 sx	GL	circulated 146 sx to pit
K-3-21s-37e										

EXHIBIT F

Sorted by distance from NEDU 263

Taylor Glenn 5	5/14/52	8361	Wantz Abo	Oil	17.25	13.375	225	250 sx	GL	circulated out 90 sx
30-025-06384					11	8.625	3147	2200 sx	GL	circulated out 400 sx
J-3-21s-37e					7.875	5.5	8355	850 sx	2943	calculated
NEDU 129	7/28/00	6980	BLI-TU-DR	Oil	12.25	8.625	1321	460 sx	GL	circulated 87 sx to pit
30-025-34938					7.875	5.5	6980	1275 sx	GL	circulated 110 sx to pit
D-3-21s-37e										
NEDU 243	5/23/11	6955	BLI-TU-DR	Oil	12.25	8.625	1290	575 sx	GL	circulated to GL
30-025-38152					7.825	5.5	6955	1250 sx	212	cement bond log
E-3-21s-37e										
NEDU 228	10/18/98	6920	BLI-TU-DR	Oil	11	8.625	1311	410 sx	GL	circulate 98 sx to pit
30-025-34427					7.875	5.5	6920	1200 sx	180	cement bond log
J-3-21s-37e										
NEDU 125	11/14/98	6910	BLI-TU-DR	Oil	11	8.625	1300	410 sx	GL	circulated 120 sx to pit
30-025-34425					7.875	5.5	6910	1375 sx	GL	circulated 86 sx to pit
J-3-21s-37e										
NEDU 130	6/26/99	6950	BLI-TU-DR	Oil	12.25	8.625	1365	460 sx	GL	circulated 27 sx to pit
30-025-34617					7.875	5.5	6950	1400 sx	GL	circulated 220 sx to pit
F-3-21s-37e										
NEDU 241	5/20/11	7000	BLI-TU-DR	Oil	12.25	8.625	1290	645 sx	GL	circulated to GL
30-025-38526					7.825	5.5	7000	1150 sx	50	cement bond log
A-4-21s-37e										
NEDU 209	3/4/53	8114	BLI-TU-DR	WIW	no report	13.375	250	250 sx	no report	no report
30-025-06508						9.625	3133	1370 sx	no report	no report
O-3-21s-37e						7	8113	940 sx	3140	cement bond log
NEDU 146	1/16/10	6924	BLI-TU-DR	Oil	12.25	8.625	1207	550 sx	GL	circulated 148 sx to GL
30-025-37618					7.825	5.5	6924	1150 sx	340	cement bond log
H-4-21s-37e										

EXHIBIT F

Sorted by distance from NEDU 263

NEDU 203	1/26/57	7436	BLI-TU-DR	Oil	17.25	13.375	283	250 sx	GL	circulated out 40 sx
30-025-06398					11	8.625	3151	2300 sx	GL	circulated 400 sx to GL
P-4-21s-37e					7.875	5.5	7435	550 sx	4255	temperature survey
NEDU 210	8/2/52	8302	BLI-TU-DR	WIW	17.25	13.375	269	260 sx	GL	circulated to GL
30-025-06502					12.25	9.625	3149	1360 sx	600	temperature survey
G-3-21s-37e					8.75	7	8301	940 sx	3125	temperature survey
NEDU 157	8/8/16	7036	BLI-TU-DR	Oil	12.25	8.625	1445.5	730 sx	GL	circulated 157 sx to GL
30-025-40696					7.875	5.5	7036	1260 sx	GL	circulated 140 sx to GL
B-3-21s-37e										
NEDU 227	10/17/98	6890	BLI-TU-DR	Oil	11	8.625	1310	410 sx	GL	circulated 81 sx to pit
30-025-34428					7.875	5.5	6890	1315 sx	GL	circulated 64 sx to pit
J-3-21s-37e										

EXHIBIT F

Well: Northeast Drinkard Unit # 205

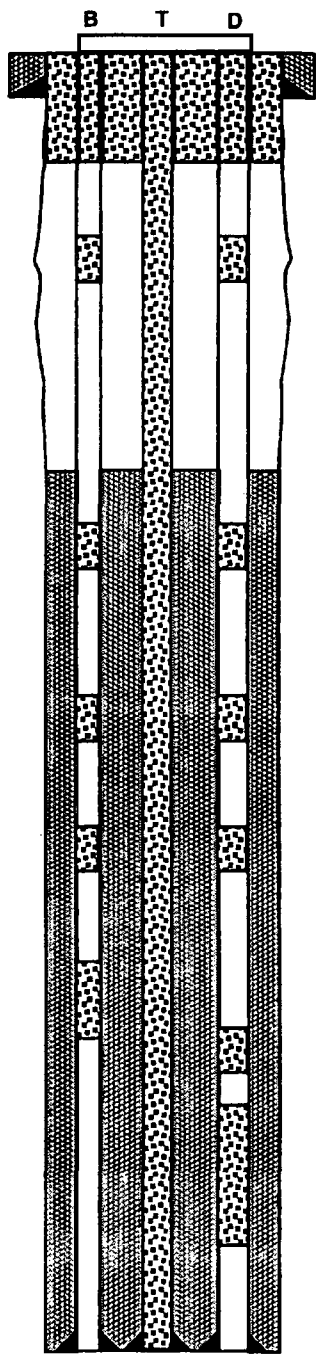
Field: Eunice N., Blinebry-Tubb-Drinkard

Location: 3300' FSL & 660' FWL
Unit M, Sec. 3, T21S, R37E
Lea County, New Mexico

API #: 30-025-06521

Current Status:
P&A **B** & **D** (3 / 83)
T(2 / 96)

Elevation: 3434' (GR)



12-1/4" Hole
9-5/8" 36# CSA 271'
Cement w / 250 sx
Circulated to Surface

B - Hole in Casing @ 650' & 700'
Pumped 185 sx thru holes and circulated to surface inside & outside casing

D - Hole in Casing @ 690'
Pumped 115 sx thru hole and circulated to surface inside & outside casing

B - 950 - 1050 - 5 sx

D - 950 - 1050 - 5 sx

T - 0 - 6730 - Fill 2-7/8" Casing String w / cement
Install P&A Marker

B - 2500 - 2600 - 5 sx

D - 2500 - 2600 - 5 sx

B - 3330 - 3430 - 5 sx

D - 3330 - 3430 - 5 sx

B - 3887 - 3987 - 5 sx

D - 3887 - 3987 - 5 sx

B- 5620 - 5450 - 25 sx

D - 5605 - 5705 - 5 sx

Blinebry Perfs:
5618-5839 (39 Holes) **P&A - 3/83**
5714-6029 (67 Holes)

D - 5836 - 6520 - 25 sx

Tubb Perfs:
6133-6363 (12 Holes)
6099-6145 (15 Holes)

Drinkard Perfs:
6519-6635 (12 Holes) **P&A - 3/83**
6508-6687 (63 Holes)

TD @ 6730'

8-3/4" Hole
2-7/8" 6.5# J-55 3-String CSA 6726'
Cement w / 635 sx
TOC @ 2400' (Temp Survey)

EXHIBIT F


G

Baker Petrolite

from WFX-784

South Permian Basin Region
10520 West I-20 East
Odessa, TX 79765
(915) 498-9191
Lab Team Leader - Sheila Hernandez
(915) 495-7240

Water Analysis Report by Baker Petrolite

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

Summary	
Sampling Date:	10/3/02
Analysis Date:	10/4/02
Analyst:	SHEILA HERNANDE
TDS (mg/l or g/m3):	20702.9
Density (g/cm3, tonne/m3):	1.015
Anion/Cation Ratio:	1.000000
Carbon Dioxide:	60 PPM
Oxygen:	
Comments:	

Analysis of Sample 223099 @ 75 °F

Anions	mg/l	meq/l	Cations	mg/l	meq/l
Chloride:	10086.0	284.49	Sodium:	5799.5	252.25
Bicarbonate:	671.0	11.	Magnesium:	439.0	36.11
Carbonate:	0.0	0.	Calcium:	1099.0	54.84
Sulfate	2465.0	51.32	Strontium:	28.0	0.64
Phosphate:			Barium:	0.1	0.
Borate:			Iron:	0.3	0.01
Silicate:			Potassium:	115.0	2.94
			Aluminum:		
Hydrogen Sulfide:		90 PPM	Chromium:		
pH at time of sampling:		7.5	Copper:		
pH at time of analysis:			Lead:		
pH used in Calculation:		7.5	Manganese:		
			Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite $CaCO_3$		Gypsum $CaSO_4 \cdot 2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$		CO_2 Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	1.18	75.54	-0.08	0.00	-0.14	0.00	0.07	2.75	0.75	0.00	0.21
100	0	1.25	85.15	-0.09	0.00	-0.09	0.00	0.07	3.09	0.60	0.00	0.3
120	0	1.33	95.11	-0.10	0.00	-0.02	0.00	0.09	3.78	0.47	0.00	0.42
140	0	1.41	105.41	-0.10	0.00	0.08	128.07	0.11	4.46	0.36	0.00	0.56

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

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

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

EXHIBIT G

UNICHEM

A Division of BJ Services Company

Lab Test No. 23748

Apache

Sample Date: 3/10/99

Water Analysis

Listed below please find water analysis report from: NEDU #919-S

WFX-774 application indicates this is San Andres source water

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

Cations:		mg/l
Calcium	(Ca++):	608
Magnesium	(Mg++):	244
Sodium	(Na+):	3909
Iron	(Fe++):	0.00
Dissolved Iron	(Fe++):	
Barium	(Ba++):	0.38
Strontium	(Sr):	19
Manganese	(Mn++):	0.01
Resistivity:		
Anions:		
Bicarbonate	(HCO3-):	562
Carbonate	(CO3--):	
Hydroxide	(OH-):	0
Sulfate	(SO4--):	1750
Chloride	(Cl-):	6200

Gases:		ppm		
Carbon Dioxide	(CO2):	80.00	Oxygen	(O2):
Hydrogen Sulfide	(H2S):	408.00		

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

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

Comments:

cc: Jerry White
Jay Brown

P.O. Box 61427 • Midland, TX 79711 • 4312 S. County Rd. 1298, Midland, TX 79765
Office: (915) 563-0241 • Fax: (915) 563 0243


H


fresh water well
approximate base of Ogallala aquifer
NEDU 263
outside of Ogallala
207
207
500 m
2000 ft
EXHIBIT H

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

3,348' from SHL

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q 64	q 16	q 4	Sec	Tws	Rng	X	Y	Distance
00552		STK	3	MILLARD DECK	LE	CP 00552			Shallow	2	4		04	21S	37E	672700	3598022*	1021
00553		STK	3	MILLARD DECK	LE	CP 00553			Shallow	2	4		04	21S	37E	672700	3598022*	1021
01037		EXP	0	MCNEILL RANCH	LE	CP 01037 POD1				2	2	2	10	21S	37E	674322	3597345	1771

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 673339 **Northing (Y):** 3598819 **Radius:** 2000

Sorted by: Distance

M location was derived from PLSS - see Help

EXHIBIT H

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

3,384' from BHL

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

File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 64 16 4	Sec	Twn	Rng	X	Y	Distance
)0552		STK	3	MILLARD DECK	LE	CP 00552			Shallow	2 4	04	21S	37E	672700	3598022*	1032
)0553		STK	3	MILLARD DECK	LE	CP 00553			Shallow	2 4	04	21S	37E	672700	3598022*	1032
)1037		EXP	0	MCNEILL RANCH	LE	CP 01037 POD1				2 2 2	10	21S	37E	674322	3597345	1827

:ord Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 673302 **Northing (Y):** 3598861 **Radius:** 2000

Sorted by: Distance

EXHIBIT H

ıl location was derived from PLSS - see Help

Analytical Report
Lab Order **1211780**
Date Reported: **11/28/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Apache-NEDU SWD
Lab ID: 1211780-001
Matrix: AQUEOUS
Client Sample ID: A NEDU SWD Wind#1
Collection Date: 11/15/2012 6:02:00 PM
Received Date: 11/19/2012 1:36:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 1664A						Analyst: **JAL**
N-Hexane Extractable Material	6.9	5.0		mg/L	1	11/26/2012

EXHIBIT H

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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Apache-NEDU SWD
Lab ID: 1211780-002 **Matrix:** AQUEOUS

Client Sample ID: A NEDU SWD Wind #2
Collection Date: 11/15/2012 6:02:00 PM
Received Date: 11/19/2012 1:36:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **JML**
Total Dissolved Solids	1520	20.0		mg/L	1	11/21/2012 1:57:00 PM

EXHIBIT H

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
P	Sample pH greater than 2	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#: **1211780**

28-Nov-12

Client: Permits West

Project: Apache-NEDU SWD

Sample ID	MB-4953	SampType:	MBLK		TestCode:	EPA Method 1664A				
Client ID:	PBW	Batch ID:	4953		RunNo:	7100				
Prep Date:	11/26/2012	Analysis Date:	11/26/2012		SeqNo:	205931	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-4953	SampType:	LCS		TestCode:	EPA Method 1664A				
Client ID:	LCSW	Batch ID:	4953		RunNo:	7100				
Prep Date:	11/26/2012	Analysis Date:	11/26/2012		SeqNo:	205932	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	34	5.0	40.00	0	84.8	78	114			

Sample ID	MB-4953	SampType:	MBLK		TestCode:	EPA Method 1664A				
Client ID:	PBW	Batch ID:	4953		RunNo:	7101				
Prep Date:	11/26/2012	Analysis Date:	11/27/2012		SeqNo:	205949	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silica Gel Treated N-Hexane Extrac	ND	5.0								

Sample ID	LCS-4953	SampType:	LCS		TestCode:	EPA Method 1664A				
Client ID:	LCSW	Batch ID:	4953		RunNo:	7101				
Prep Date:	11/26/2012	Analysis Date:	11/27/2012		SeqNo:	205950	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silica Gel Treated N-Hexane Extrac	13	5.0	20.00	0	66.5	64	132			

EXHIBIT H

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1211780**

28-Nov-12

Client: Permits West

Project: Apache-NEDU SWD

Sample ID	MB-4917	SampType:	MBLK		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	PBW	Batch ID:	4917		RunNo:	7074				
Prep Date:	11/20/2012	Analysis Date:	11/21/2012		SeqNo:	204919	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-4917	SampType:	LCS		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	LCSW	Batch ID:	4917		RunNo:	7074				
Prep Date:	11/20/2012	Analysis Date:	11/21/2012		SeqNo:	204920	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	996	20.0	1000	0	99.6	80	120			

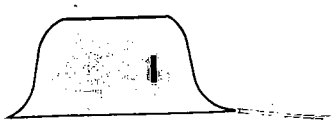
Sample ID	1211677-002AMS	SampType:	MS		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	BatchQC	Batch ID:	4917		RunNo:	7074				
Prep Date:	11/20/2012	Analysis Date:	11/21/2012		SeqNo:	204932	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1050	20.0	1000	36.00	101	80	120			

Sample ID	1211677-002AMSD	SampType:	MSD		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	BatchQC	Batch ID:	4917		RunNo:	7074				
Prep Date:	11/20/2012	Analysis Date:	11/21/2012		SeqNo:	204933	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1060	20.0	1000	36.00	103	80	120	1.42	5	

EXHIBIT H

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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits



USGS
science for a changing world

Geologic Hazards Science Center

EHP Quaternary Faults

Search for fault: Guadalupe Select a state or region map: Submit

Submit Clear Selected Features

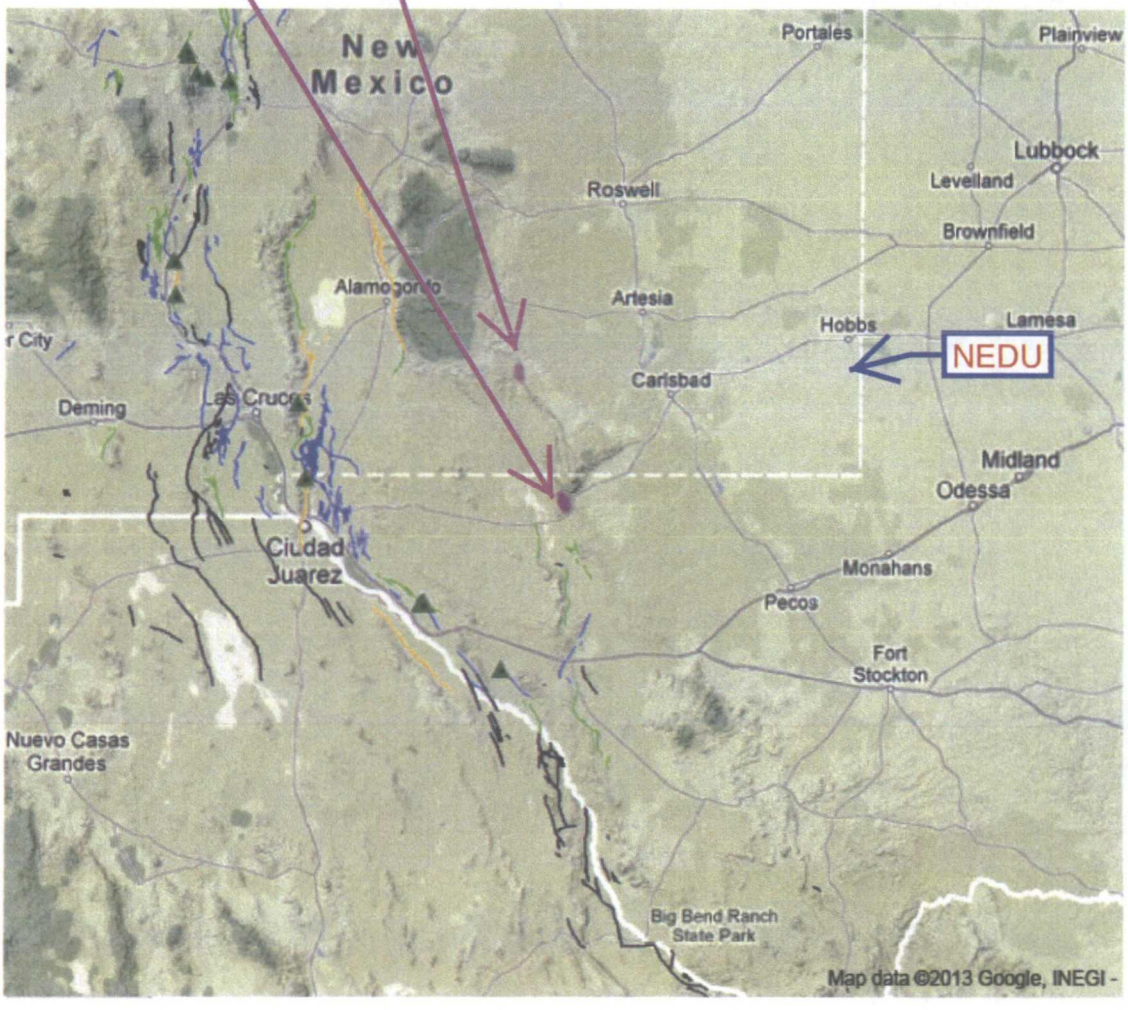


EXHIBIT I


J

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

April 27, 2013

Elizabeth Gervis Taylor, et al
614 W. Parkside Dr.
Palatine, IL 60067

Dear Ms. Taylor:

Apache Corporation is applying (see attached application) to drill its Northeast Drinkard Unit 263 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 263 (private lease) TD = 7,000'
Proposed Injection Zone: Drinkard from 6,551' to 6,803'
SHL: 3345' FNL & 1620' FWL Sec. 3, T. 21 S., R. 37 E., Lea County, NM
BHL: 3175' FNL & 1375' FWL Sec. 3, T. 21 S., R. 37 E., Lea County, NM
Approximate Location: ≈5 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

EXHIBIT J

7012 0470 0001 5973 5562

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

Postage	$ 1.52
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 7.17

Postmark Here
APR 27 2013
SANTA FE, NM 87501

Sent To Gervis
Street, Apt. No.; or PO Box No.
City, State, ZIP+4

Affidavit of Publication

State of New Mexico,
County of Lea.

I, JUDY HANNA
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
April 17, 2013
and ending with the issue dated
April 17, 2013

PUBLISHER
Sworn and subscribed to before me
this 17th day of
April, 2013

Notary Public

My commission expires
January 29, 2015
(Seal)

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

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

LEGAL LEGAL

Legal Notice
April 17, 2013

Apache Corporation is applying to directionally drill the Northeast Drinkard Unit 263 well as a water injection well. The SHL will be at 3345 FNL & 1620 FWL. The BHL will be at 3175 FNL & 1375 FWL. Both will be in Sec. 3, T. 21 S., R. 37 E., Lea County, NM. This is 5 miles north of Eunice, NM. It will inject water into the Drinkard (maximum injection pressure = 1,310 psi), from 6,551' to 6,803'. Injection will be at a maximum rate of 1,000 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.
#28082

02108485 00112811

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

EXHIBIT K

Injection Permit Checklist: Received 05/01/13 First Email Date: — Final Reply Date: — Suspended?: —

Issued Permit: Type: WFX / PMX / SWD Number: 911 Permit Date: 05/31/13 Legacy Permits or Orders: R-8541 + 16 WFX / 1 IPI

Well No. 263 Well Name(s): Northeast Drinkard Unit (NEDU)

API : 30-0 25-40849 Spud Date: TBD New/Old: New (UIC Cl II Primacy March 7, 1982)

Footages SHL 3345 FNL/1620 FWL Lot H Unit J Sec 3 Tsp 21S Rge 37E County Lea
BHL 3175 FNL/1375 FWL

General Location: One mile north of Eunice Pool: Eunice, BL-Tu-Dr, N Pool No.: 22900

Operator: Apache Corp OGRID: 873 Contact: Brian Wood / Agent

COMPLIANCE RULE 5.9: Inactive Wells: 3 TotalWells: 2766 Fincl Assur: OK Compl. Order? No **IS 5.9 OK?** Yes

Well File Reviewed: ✓ Current Status: Proposed; APD approved

Planned Rehab Work to Well: NA

Well Diagrams: Proposed X Before Conversion ___ After Conversion ___ Are Elogs in Imaging?: NA

Well Construction Details:	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Stage Tool	Cement (Sx) or Cf	Cement Top and Determination Method
Planned __ or Existing __ Cond	—	—	—	—	—
Planned ✓ or Existing __ Surface	11 / 8 5/8	0-1330	NA	490	Cir. to surf.
Planned __ or Existing __ Interm	—	—	—	—	—
Planned ✓ or Existing __ LongSt	7 7/8 / 5 1/2	0-7050	NA	1660	Cir. to surf.
Planned __ or Existing __ Liner	—	—	—	—	—
Planned ✓ or Existing __ OH / PERF	5 1/2	6551 to 6803	Top of Drinkard		

Injection Formation(s):	Depths (ft)	Formation	Tops?
Above Top of Inject Formation	+1331 / BL	Glorieta	5220
Above Top of Inject Formation	916 ~~+1660~~ / BL	Paddock	5285
Proposed Interval TOP:	6551	Blinebry	5635
Proposed Interval BOTTOM:	6803	Drinkard	6551
Below Bottom of Inject Formation	±1	Abo	6804
Below Bottom of Inject Formation	—	—	—

Blinebry / Tubb / Drinkard

Completion/Ops Details:

Drilled TD 7050 PBTD —
Open Hole ___ or Perfs ✓
Tubing Size 2 3/8 Inter Coated? ✓
Proposed Packer Depth 6510
Max Packer Depth 6451 (100-ft limit)
Proposed Max. Surface Press 1060
Calc. Injt Press 1310 (0.2 psi per ft)
Calc. FPP — (0.65 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P No *Noticed?* No **BLM Sec Ord** No **WIPP** No *Noticed?* No **SALADO** T: NA B: NA **CLIFF HOUSE** NA

Fresh Water: Max Depth: ±125 FW Formation Ogallala Wells? 1 Analysis? N HydrologicAffirmStatement Yes

Disposal Fluid: Formation Source(s) Base of Og San Andres (well Caprock) + ~~Production Water~~ On Lease X Only from Operator ___ or Commercial ___

Injection Rate: 750 - 1000 BWPD **Disposal Interval:** Protectable Waters? No **CAPITAN REEF:** in No thru No outside of Yes

H/C Potential: Producing Interval? Water Flooding Project Formerly Producing? ___ Method: E Log /Mudlog/DST/Depleted/Other —

AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: 40

Penetrating Wells: No. Active Wells 38 Num Repairs? 0 on which well(s)? [29 producers + 9 inj] Diagrams? N

Penetrating Wells: No. P&A Wells 2 Num Repairs? 0 on which well(s)? ___ Diagrams? Y

NOTICE: Newspaper Date 04/17/2013 Mineral Owner All Leases Apache Surface Owner Taylor etal N. Date 04/27/13

RULE 26.7(A): Identified Tracts? ✓ Affected Persons: ~~Conoco Phillips~~ & Apache (owner) N. Date ~~04~~ NA

Permit Conditions: None required

Issues: