1/31	SUSPENSE	ENGINEER TW	LOGGED IN 1/31/11	TYPE WFX	APP NO 1103233544

PTG-W

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

Apache Corp.
NEDU #165

ABOVE THIS LINE FOR DIVISION USE ONLY

ADMINISTRATIVE APPLICATION CHECKLIST

30-025-39915

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

Apache Corporation's
Northeast Drinkard Unit #165
30-025-39915

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

WFX-881

[D] Other: Specify _____

case 9231
R-8540

[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.

Print or Type Name	Signature	Title	Date
BRIAN WOOD (505) 466-8120 FAX 466-9682		CONSULTANT	1-31-11 e-mail Address brian@permitswest.com

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: YES Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? XXX Yes _____ No

II. OPERATOR: APACHE CORPORATION

ADDRESS: 303 VETERANS AIRPARK LANE, SUITE 3000, MIDLAND, TX 79705

CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: (505) 466-8120

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

IV. Is this an expansion of an existing project? _____ Yes XXX No (not a vertical or horizontal expansion, just infill)
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.

VII. Attach data on the proposed operation, including: **NORTHEAST DRINKARD UNIT #165**

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).

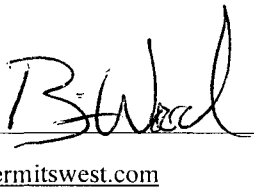
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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 31, 2011

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

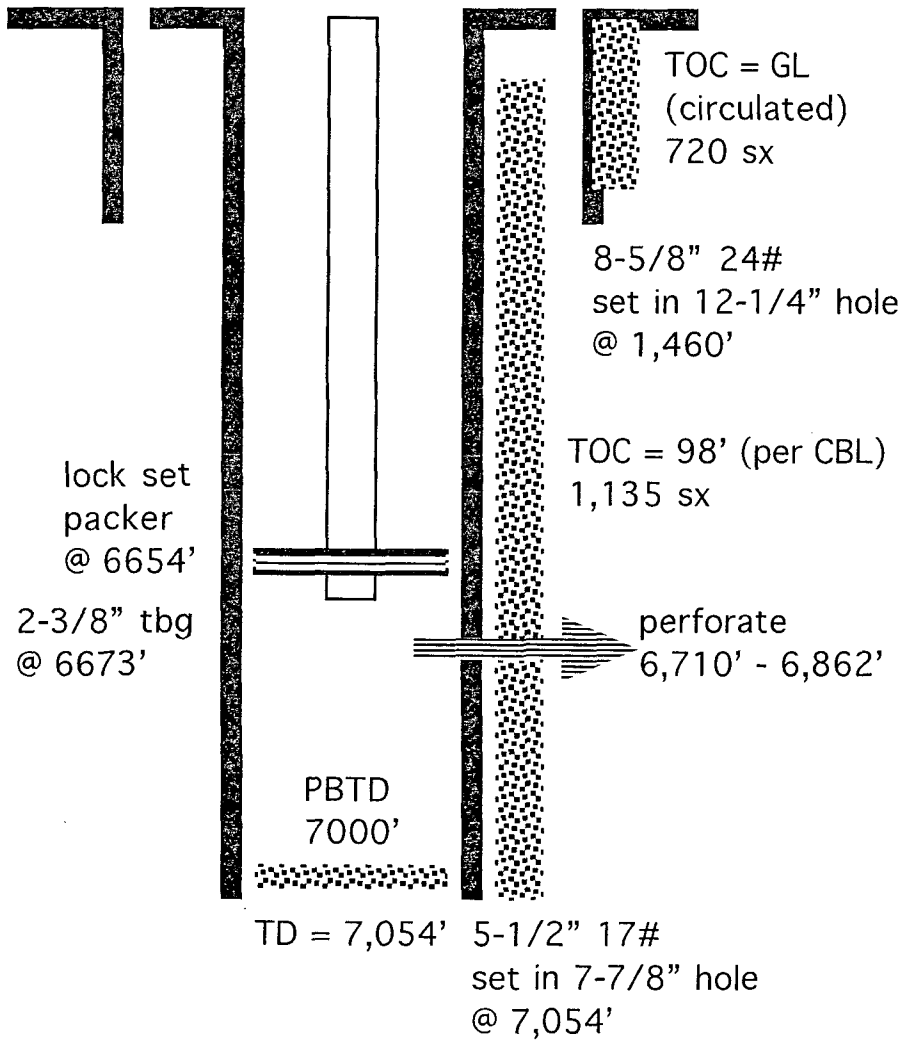
OPERATOR: APACHE CORPORATION

WELL NAME & NUMBER: NORTHEAST DRINKARD UNIT #165

WELL LOCATION:	1800' FNL & 125' FWL	D (LOT 5)	2	21 S	37 E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

(not to scale)



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12-1/4"

Casing Size: 8-5/8" & 24#

Cemented with: 720 sacks

or _____ ft^3

Top of Cement: SURFACE

Method Determine: Circulated

Proposed Liner

Hole Size: _____

Liner Size: _____

Cemented with: _____ sacks

or _____ ft^3

Top of Cement: _____

Method Determined: _____

Production Casing

Hole Size: 7-7/8"

Casing Size: 5-1/2" & 17#

Cemented with: 1,135 sacks

or _____ ft^3

Top of Cement: 98'

Method Determined: CBL

Total Depth: 7,054'

Injection Interval

From 6,710 feet To 6,862 feet

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2-3/8" Lining Material: Plastic

Type of Packer: LOCK SET OR ITS EQUIVALENT

Packer Setting Depth: 6,654' (WITHIN 56' OF THE HIGHEST PROPOSED PERFORATION @ 6,710')

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? (IT WAS PERMITTED & APPROVED AS AN OIL WELL, BUT IT WAS NEVER COMLETED AS AN 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)? NO List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.

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

   OVER: TUBB (6,270'), BLINEBRY (5,778'), GRAYBRUG (3,840')

   UNDER: ABO (6,868'), HARE; SIMPSON (8,000')

I. Purpose is to complete an already drilled, but not yet perforated, well as a water injection well to increase oil recovery. The well will inject into the Drinkard, which is part of the Eunice; Blinebry-Tubb-Drinkard, North Pool (aka, Eunice; BLI-TU-DR, North and pool code number = 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) which was established in 1987 by Shell. The unit was subsequently operated by Altura, and now, Apache. This is an active water flood.

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

III. A. (1) Lease: New Mexico State Land Office lease B1-1613-0002
Lease Size: 194.74 acres (see Exhibit A for C-102 and map)
Closest Lease Line: 125'
Lease Area: Lots 3 - 6 & 13, Section 2, T. 21 S., R. 37 E.
Unit Size: 4,938 acres
Closest Unit Line: 1,800'
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: all
Section 22: all
Section 23: all

A. (2) Surface casing (8-5/8" and 24#) was set at 1,460' in a 12-1/4" hole. Cement was circulated to the surface with ≈720 sacks. Lead was 520 sacks Class C mixed at 13.5 pounds per gallon and 1.75 cubic feet per sack. Tail was 200 sacks Class C mixed at 14.8 pounds per gallon and 1.34 cubic feet per sack. See attached well bore profile on Form C-108 for more hole, casing, and cement details.

Production casing (5-1/2" and 17#) is set at 7,054' (TD) in a 7-7/8" hole (PBTD = 7,000'). Cement top is 98' according to the CBL. Lead was 860 sacks 35:65 Poz mixed at 12.8 pounds per gallon and 1.9 cubic feet per sack. Tail was 275 sacks 50:50 poz mixed at 14.2 pounds per gallon and 1.3 cubic feet per sack. See attached well bore profile on Form C-108 and histories for more hole, casing, and cement details.

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

A. (3) Tubing has been installed. Specifications are 2-3/8", J-55, 4.7#, and internally plastic coated. Setting depth is 6,673'. (Disposal interval will be ≈6,710' to ≈6,862'.)

A. (4) A lock set injection packer is set at 6,654' (56' above the highest proposed perforation of ≈6,710').

B. (1) Injection zone will be the grainstone and packstone members of the Drinkard limestone. The zone is part of the Eunice; Blinebry-Tubb-Drinkard, North Pool (NMOCD pool code number = 22900). Estimated fracture gradient is ≈0.56 psi per foot.

B. (2) Injection interval will be ≈6,710' to ≈6,862'. The well is a cased hole. See attached well bore profile for more perforation information.

B. (3) The well was initially planned as an oil well (see Form C-101 (APD) dated 9-22-10). The well has been drilled, but not yet perforated. It will be completed as a water injection well after approval.

B. (4) The well has not yet been perforated. It will be perforated from ≈6,710' to ≈6,862' 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 6,584'. Injection will occur in the Drinkard. Drinkard top is at 6,585'. Injection interval in the Drinkard will be ≈6,710' to ≈6,862'. The Tubb is unitized with the Drinkard. There will be a ≈126' interval between the bottom of the Tubb and the highest perforation. The Blinebry above the Tubb in productive in Sections 2 and 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 6,868'. There are four Abo producers in Section 2 and six in Section 3. All ten Abo producing wells are operated by Apache. The Abo is not part of the Northeast Drinkard Unit. There will be a ≈134' interval between the lowest perforation and the top of the Abo pay zone (6,996') as measured in the closest (1,597') Abo well (Apache's State Section 2 #11; 30-025-06377). The State Section 2 #11 is now plugged and abandoned. The Hare; Simpson is deeper than the Abo and is productive in Sections 2 and 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 five waterflood expansions (WFX) since then (WFX-740,

WFX-752, WFX-759, WFX-774, and WFX-784). Closest unit boundary is 1,880' north. There are 13 active injection wells within a half mile radius and within the unit. The 13 injection wells are in all four directions (see Exhibit B).

V. Exhibit B shows all 43 existing wells (1 P & A + 14 water injection wells + 28 producing oil wells) within a half mile radius, regardless of depth. One of the 14 injection wells (#168) has been drilled, but has not yet perforated.

Exhibit C shows all 530 existing wells (400 oil or gas producing wells + 97 injection or disposal wells + 28 P & A wells + 5 water wells) within a two mile radius.

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

Area	Lessor	Lease Number	Operator
Lots 3 -6 & 13 Sec. 2	NMSLO	B1-1613-0002	Apache
Lots 2, 7, & 10 Sec. 2	NMSLO	B0-1732-0001	Apache
Lots 11, 12, & 14 Sec. 2	NMSLO	B0-9745-0004	Apache
Lots 1, 2, 7, 8, 15, & 16 Sec. 3	BLM	NMNM-2512	Apache
Lots 9 & 10 Sec. 3	fee	fee	Apache
SESE Sec. 33*	BLM	NMLC-031695B	ConocoPhillips
S2SW4 & SWSE Sec. 34*	BLM	NMLC-063458	ConocoPhillips

*only tracts within area of review, but outside the Northeast Drinkard Unit

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 40 existing wells (12 water injection wells + 26 producing oil wells + 2 plugged wells) which are within a half mile and which penetrated the Drinkard. A table abstracting the 40 wells' construction details and history is in Exhibit F. Schematics of the two plugged wells are also included in Appendix F.

By section, the 40 wells and their distances from the #165 are:

OPERATOR	WELL	API # 30-025-	2-T21S-R37E	ZONE(S)	STATUS	TD	DISTANCE
Apache	NEDU 132	34601	1339 FN & 130 FW	EBTDN*	OW	6970	459'
Apache	NEDU 115	06340	5940 FS & 660 FW	EBTDN	WIW	8620	544'
~~Apache~~	~~NEDU 116~~	~~06346~~	~~5790 FS & 660 FW~~	~~EBTDN~~	~~WIW~~	~~6010~~	~~594'~~
~~Apache~~	~~NEDU 166~~	~~39916~~	~~1350 FN & 600 FW~~	~~EBTDN~~	~~no spud~~	~~7150~~	~~654'~~
Apache	NEDU 126	34415	2500 FN & 130 FW	EBTDN	OW	6940	704'
~~Apache~~	~~NEDU 167~~	~~39917~~	~~2545 FN & 660 FW~~	~~EBTDN~~	~~no spud~~	~~7150~~	~~921'~~
Apache	NEDU 168	39918	1970 FN & 1125 FW	EBTDN	WIW**		1018'
Apache	NEDU 133	34600	1458 FN & 1098 FW	EBTDN	OW	6980	1032'
Apache	NEDU 127	34426	2600 FN & 1200 FW	EBTDN	OW	6850	1347'
Apache	NEDU 140	35468	330 FN & 160 FW	EBTDN	OW	7000	1474'
Apache	NEDU 213	06368	4620 FS & 660 FW	EBTDN	OW	6760	1525'
~~Apache~~	~~NEDU 118~~	~~06347~~	~~1973 FN & 1650 FW~~	~~EBTDN~~	~~OW~~	~~5780~~	~~1539'~~
Apache	NEDU 119	06343	5610 FS & 1650 FW	EBTDN	P & A	6850	1589'
Apache	State 2-11	06377	3376 FN & 330 FW	Wantz; Abo	P & A	8015	1597'
Apache	NEDU 145	35903	1980 FN & 1850 FW	EBTDN	WIW	7023	1738'
Apache	NEDU 117	06345	921 FN & 1650 FW	EBTDN	WIW	6996	1761'
Apache	NEDU 141	35469	330 FN & 1200 FW	EBTDN	OW	6990	1820'
Apache	State 2-8	06374	3546 FN & 660 FW	Hare; Simpson	OW	8156	1836'
~~Apache~~	~~NEDU 148~~	~~39039~~	~~2840 FN & 1720 FW~~	~~EBTDN~~	~~no spud~~	~~7025~~	~~1914'~~
Apache	NEDU 135	34796	1450 FN & 2280 FW	EBTDN	OW	6610	2187'
Apache	NEDU 216	06483	3546 FN & 1650 FW	EBTDN	WIW	8147	2331'
Apache	NEDU 218	06484	3546 FN & 1700 FW	EBTDN	WIW	8000	2361'
Apache	NEDU 230	34412	3677 FS & 135 FW	EBTDN	OW	6930	2371'
Apache	NEDU 114	06344	906 FN & 660 FW	EBTDN	WIW	6896	2405'
~~Apache~~	~~NEDU 217~~	~~06485~~	~~2886 FN & 2303 FW~~	~~EBTDN~~	~~OW~~	~~5952~~	~~2445'~~
Apache	NEDU 231	34411	3800 FS & 1200 FW	EBTDN	OW	6940	2494'
Apache	NEDU 142	35470	330 FN & 2200 FW	EBTDN	OW	6850	2544'

*Eunice; Blinebry-Tubb-Drinkard, North pool

**drilled as an oil well, application for conversion to WIW being prepared

OPERATOR	WELL	API # 30-025-	3-T21S-R37E	ZONE(S)	STATUS	TD	DISTANCE
Apache	NEDU 113	06496	1980 FN & 660 FE	EBTDN*	WIW	6830	807'
Apache	NEDU 158	39440	2562 FN & 590 FE	EBTDN	OW	7020	1044'
~~Apache~~	~~NEDU 112~~	~~06509~~	~~660 FN & 660 FE~~	~~EBTDN~~	~~WIW~~	~~6020~~	~~1388'~~
Apache	NEDU 131	34609	1253 FN & 1244 FE	EBTDN	OW	6990	1481'
Apache	NEDU 211	06381	4620 FS & 660 FE	EBTDN	WIW	6780	1627'
Apache	Taylor Glen 4	06383	3376 FN & 764 FE	Hare; Simpson	OW	8119	1804'
Apache	Taylor Glen 3	06382	3546 FN & 330 FE	Wantz; Abo	OW	8224	1808'
Apache	NEDU 125	34425	2727 FN & 1511 FE	EBTDN	OW	6910	1880'
Apache	NEDU 154	39439	1310 FN & 1825 FE	EBTDN	OW	7025	2017'
Apache	NEDU 139	35610	330 FN & 1300 FE	EBTDN	OW	6990	2056'
Apache	NEDU 110	06495	1980 FN & 1980 FE	EBTDN	WIW	5976	2117'
Apache	NEDU 163	39914	2650 FN & 2030 FE	EBTDN	OW	7306	2320'
Apache	NEDU 109	06510	660 FN & 1980 FE	EBTDN	WIW	6025	2403'
Apache	NEDU 111	26670	2232 FN & 2310 FE	EBTDN	WIW	6875	2477'
Apache	Taylor Glen 5	06384	3546 FN & 1650 FE	PSG & WA**	OW	8361	2490'
Apache	NEDU 208	06385	4620 FS & 1979 FE	EBTDN	OW	6707	2544'
Apache	NEDU 228	34427	3768 FN & 1493 FE	EBTDN	OW	6920	2549'
~~Apache~~	~~Hawk 3~~	~~39281~~	~~3630 FN & 890 FE~~	~~PSG & WA~~	~~no spud~~	~~4550~~	~~2621'~~

*Eunice; Blinebry-Tubb-Drinkard, North pool

**Penrose Skelly; Grayburg & Wantz; Abo

OPERATOR	WELL	API # 30-025-	34-T20S-R38E	ZONE(S)	STATUS	TD	DISTANCE
ConocoPhillips	Warren 321	37952	355 FS & 10 FW	WBT*	plan oil	7250	2348'
~~ConocoPhillips~~	~~Warren 14~~	~~07889~~	~~660 FS & 660 FW~~	~~WBT~~	~~WIW~~	~~6006~~	~~2479'~~
ConocoPhillips	Warren 12	07880	660 FS & 1980 FW	WBT	OW	6198	2683'

*Warren; Blinebry-Tubb Oil; Gas

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 ≈1,342 psi (= 0.2 psi/foot x ≈6,710' (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 an 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 NMOCD records, at least 1,784 approved wells have targeted or will 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 ≈300' 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 or have been 222 Drinkard injection wells and 1,562 Drinkard production wells in the state. Adjacent to the Northeast Drinkard Unit are three other Drinkard water floods (the Apache operated West Blinebry Drinkard Unit and East Blinebry Drinkard Unit and the Chevron operated Central Drinkard Unit). The Central Drinkard Unit has been under water flood since the 1960s.

Formation tops are:

Quaternary = 0'
Rustler = 1,400'
Yates = 2,718'
Queen = 3,508'
Grayburg = 3,840'
San Andres = 4,085'
Glorieta = 5,340'
Blinebry = 5,778'
Tubb = 6,270'
Drinkard = 6,585'
Abo: 6,868'
Total Depth: 7,055'

There are no water wells within a one mile radius. This conclusion is based on a field inspection by foot and road (Exhibit H) and a review of the State Engineer's records. The closest water well is 6,412' south in Section 10 (Exhibit H). No completion report has been filed. It is proposed as a water source for energy exploration. The deepest water well in T. 20 S., R. 38 E. or T. 21 S., R. 37 E. is 140' deep. The Ogallala Formation is not present. No existing underground drinking water sources are above or below the Drinkard within a one mile radius.

There will be >5,000' of vertical separation and the Rustler salt interval between the bottom of the only likely underground water source (Quaternary) 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. Cement bond gamma ray CCL, spectral gamma ray, compensated neutron, photo density, compensated sonic, dual laterolog, and micro laterolog logs have been provided to the NMOCD.

XI. Based on a field inspection and a review of the State Engineer's records, there are no water wells within a one mile radius.

XII. Apache is not aware of any geologic or engineering data which 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. Indeed, no underground sources have been developed within a one mile radius. Over 222 injection or salt water 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)

XIII. Notice (this application) has been sent (Exhibit I) to the surface owner (New Mexico State Land Office) and all leasehold operators (only Apache and ConocoPhillips) within a half mile.

A legal ad (see Exhibit J) was published on January 7, 2011.

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410

DISTRICT IV
11885 S. ST FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-025-39915	22900	Eunice; Bli-Tu-Dri, North

Property Code	Property Name	Well Number
22503	NORTHEAST DRINKARD UNIT	165

OGRID No.	Operator Name	Elevation
873	APACHE CORPORATION	3494'

Surface Location

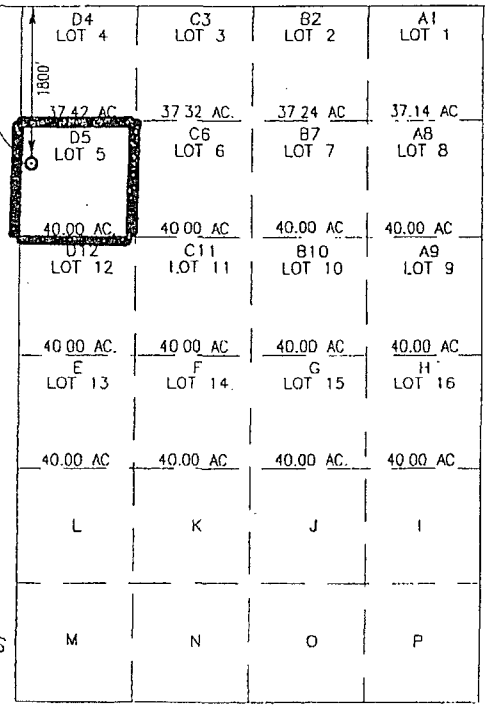
UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
5	2	21-S	37-E		1800	NORTH	125	WEST	LEA

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



SCALE: 1"=2000'

GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION

Y=553917.2 N
X=867385.6 E

LAT.=32.517181° N
LONG.=103.141496° W

LAT.=32°31'01.85" N
LONG.=103°08'29.39" W

EXHIBIT A

OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 9/22/10
Date

Sorina L. Flores
Printed Name

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

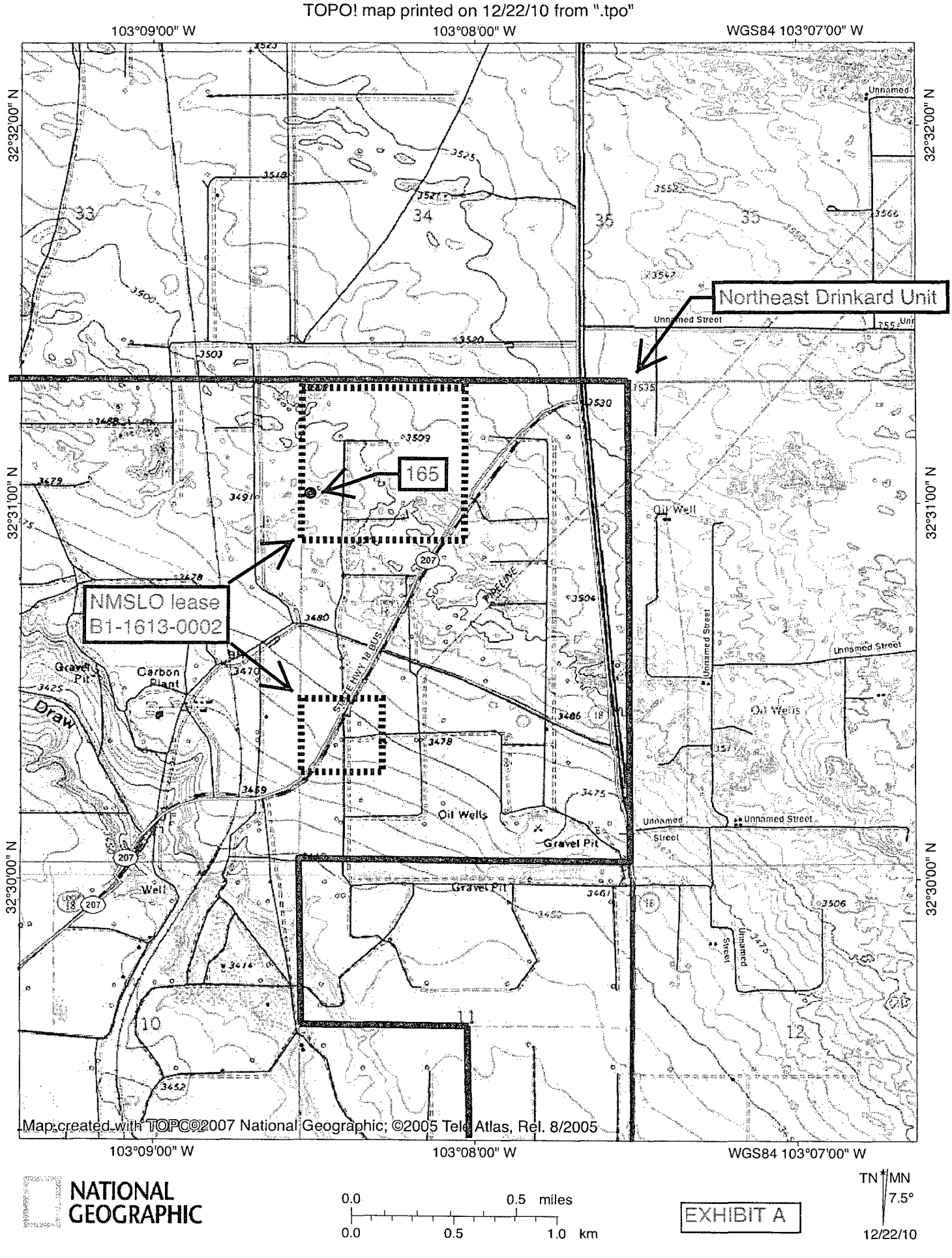
AUGUST 27, 2010

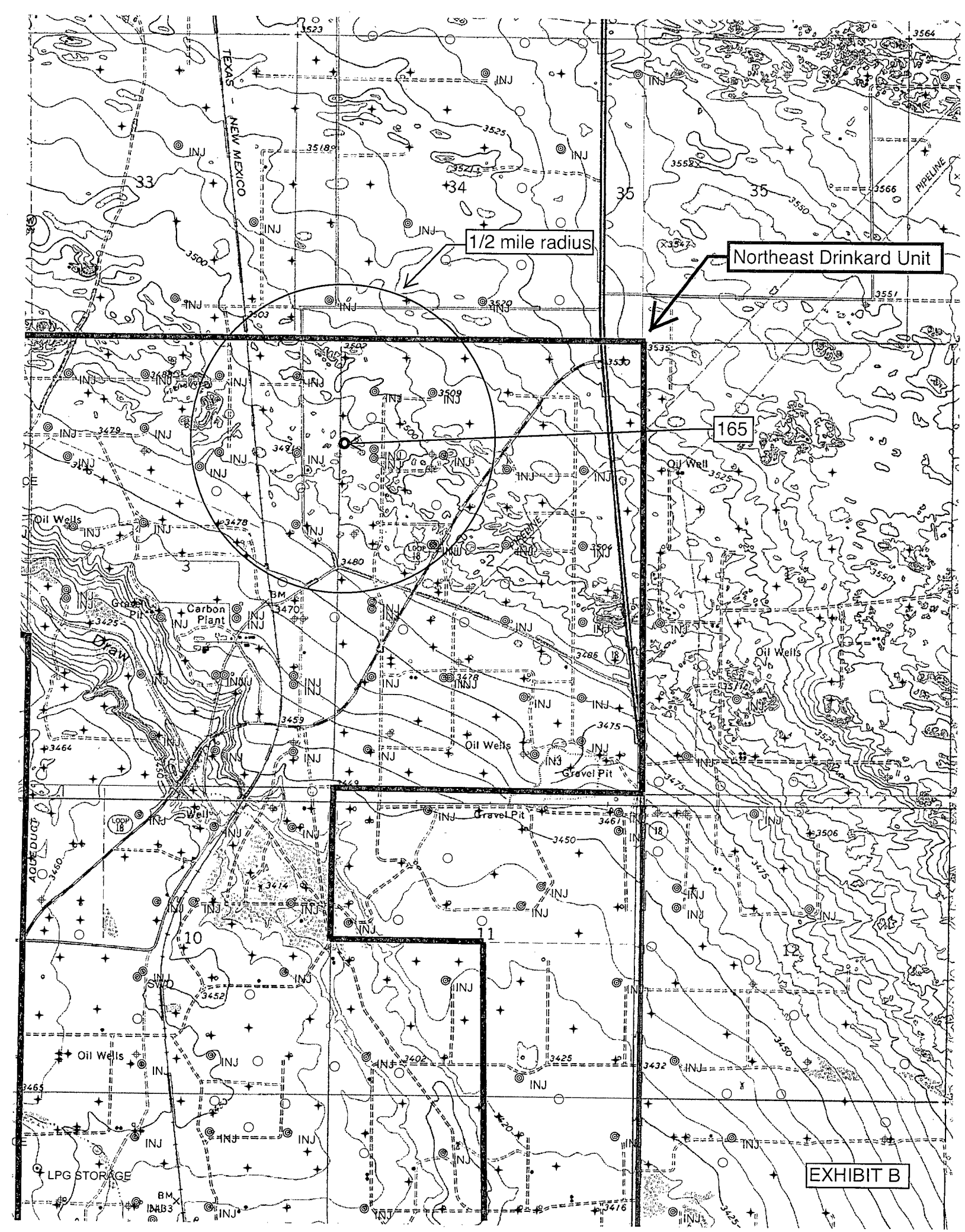
Date Surveyed DSS

Signature & Seal of Professional Surveyor

Ronald J. Eidson 9/28/2010

Certificate No. GARY G. EIDSON 12641
RONALD J. EIDSON 3239


TOPO! map printed on 12/22/10 from ".tpo"
103°09'00" W
103°08'00" W
WGS84 103°07'00" W
32°32'00" N
32°31'00" N
32°30'00" N
Northeast Drinkard Unit
165
NMSLO lease
B1-1613-0002
Unnamed Street
Oil Well
Oil Wells
Gravel Pit
Carbon Plant
Draw
Well
Pipeline
Map created with TOPO! ©2007 National Geographic; ©2005 Tele Atlas, Rel. 8/2005
NATIONAL GEOGRAPHIC
0.0 0.5 miles
0.0 0.5 1.0 km
EXHIBIT A
TN MN
7.5°
12/22/10


1/2 mile radius
Northeast Drinkard Unit
165
EXHIBIT B
TEXAS - NEW MEXICO
PIPELINE
Oil Well
Oil Wells
Gravel Pit
Carbon Plant
Draw
AQUEDUCT
LPG STORAGE
SWD
INJ

165

2 mile radius

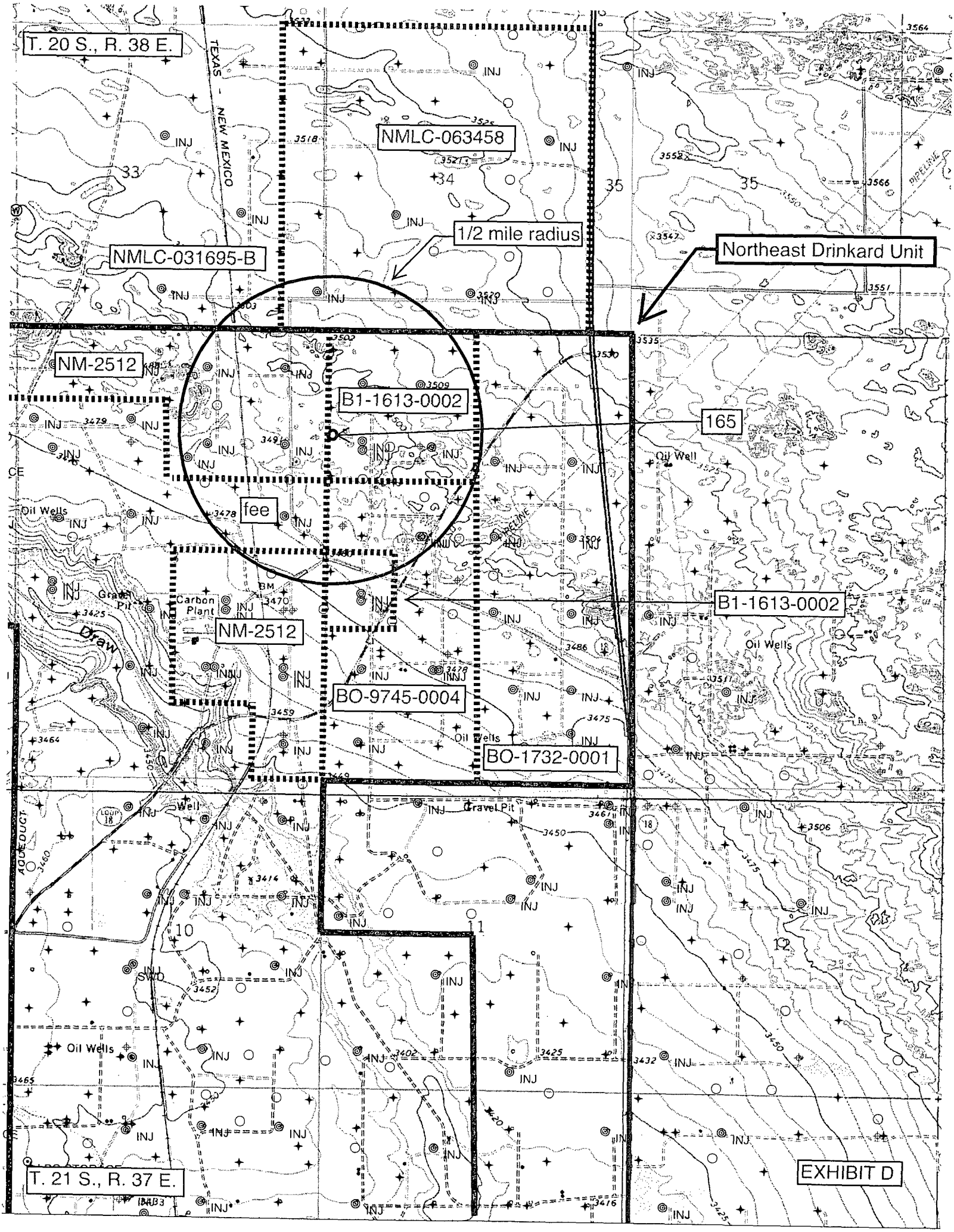
EXHIBIT C

SCALE 1:29268

0 1 MILES

0 1000 2000 YARDS

0 1 2 KILOMET


T. 20 S., R. 38 E.
TEXAS - NEW MEXICO
NMLC-063458
1/2 mile radius
Northeast Drinkard Unit
NMLC-031695-B
NM-2512
B1-1613-0002
165
fee
B1-1613-0002
NM-2512
BO-9745-0004
BO-1732-0001
T. 21 S., R. 37 E.
EXHIBIT D

#165

NMSLO

2 mile radius

BLM

fee

NMSLO

Northeast Drinkard Unit

EXHIBIT E

SCALE 1:29268

0 1 MILES

0 1000 2000 YARDS

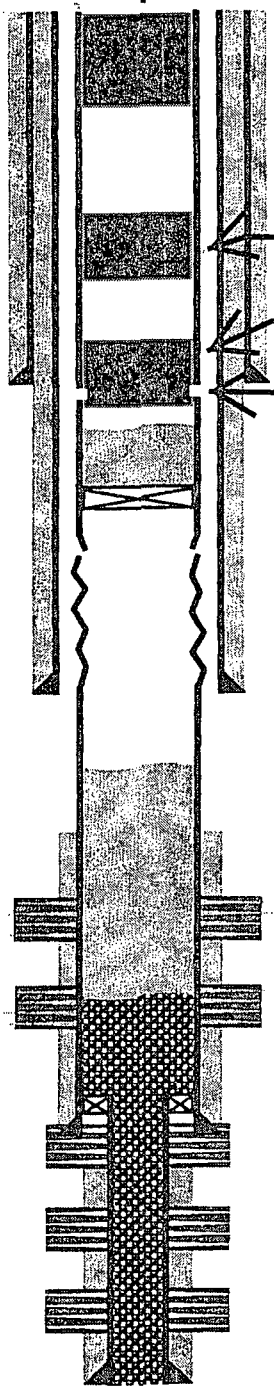
0 1 2 KILOMET

70 sx Class C plug GL - 249'

P & A 6-30-05

NEDU 119
API - 30-025-06343
5610' FSL & 1650' FWL
Sec. 2 T-21S R-37E
Lea County, New Mexico
Spud Date - 1/18/1953

Apache CORPORATION
CENTRAL REGION



Completions

Date	Zone	Perfs
?	Glorietta	5375 - 5537 Sqzd
?	Blinbry	5805 - 5945 Sqzd
Jul-90	Blinebry	5966 - 6190
Jul-90	Tubb	6206 - 6280
Jul-90	Drinkard	6746 - 6832

Surface Casing (17-1/4" Hole)
13.375"54# 0'-200' 225 sxs cmt. TOC-Surf Circ.

40 sx Class C plug 1341' - 1465'

40 sx Class C plug 2401' - 2557'

cut 5-1/2" casing @ 2,500' & POOH

Cement Cap @ 2590 12/93

CIBP @ 2625 12/93

Parted Casing @ 2653 9/91

Collapsed Casing @ 2653 - 2682 9/91

Swedged Through 9/91

Intermediate (11" Hole)
8.625" 32# 0'-3015' 1650 sxs cmt. TOC-Surf Circ.

Cement Cap @ 4293 Set 12/93

Backside Cmt @ 4715 Survey

Perfs @ 5375 - 5537 SQZD 1974

Perfs @ 5805 - 5945 SQZD 1974

Pea Grvl @ 5878 Set 12/93

Production Casing (7-7/8" Hole)
5.5" 15.5# 0'-5980' 225 sxs cmt. TOC-4715 Survey

Perfs @ 5966 - 6190

Backside Cmt @ 6000 Calc.

Perfs @ 6206 - 6280

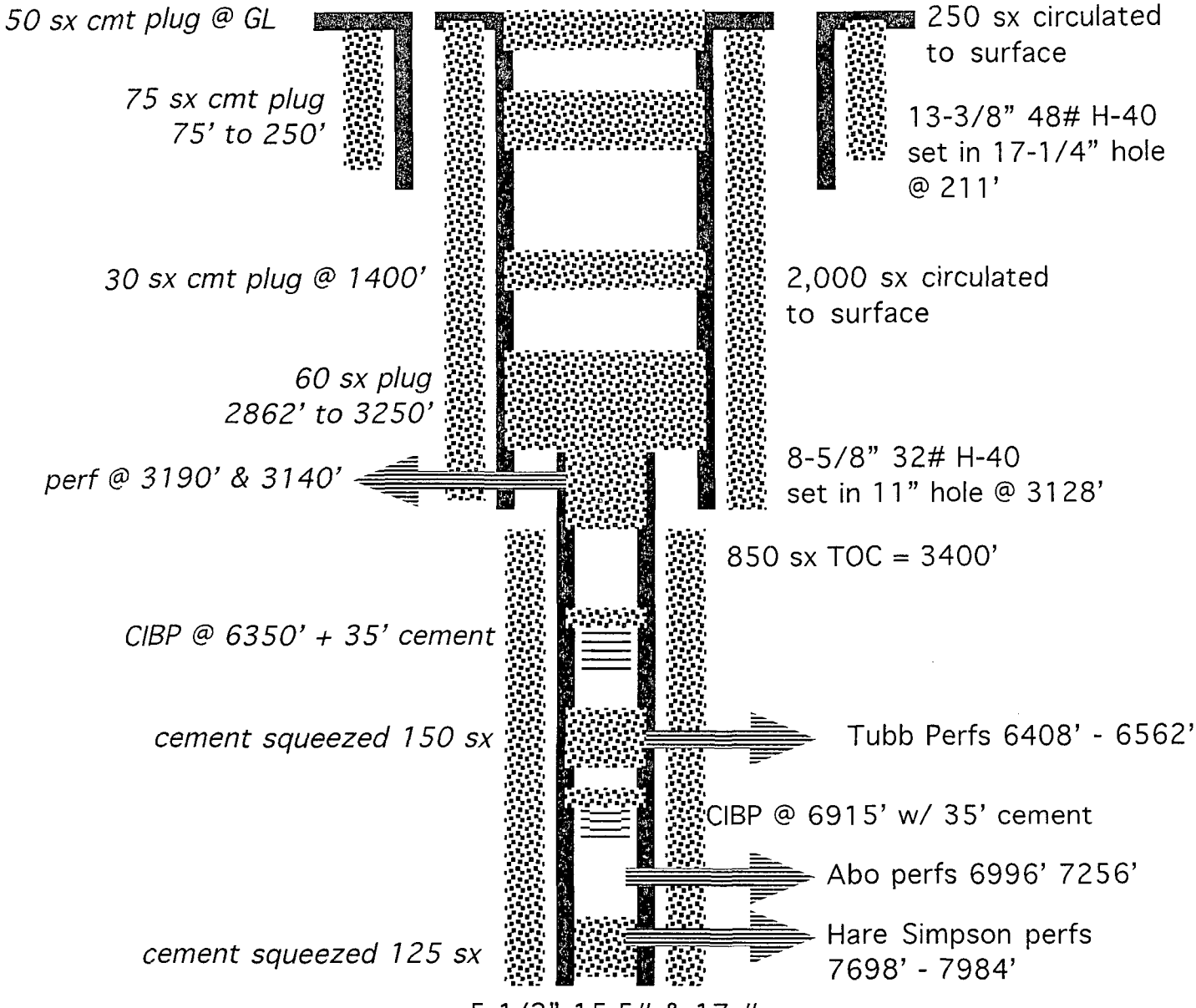
Perfs @ 6746 - 6832

Production Liner (4-3/4" Hole)
3.5" 9.3# 5955'-6850' 75 sxs cmt. TOC-6000 Calc.

EXHIBIT F

Created by
CM 1/25/2005

Apache's
State Section 2 #11
API 30-025-06377
3376 FSL & 330 FWL 2-21s-37e
Spud 1-12-52 (as oil well) and Plug 4-10-02 (as oil well)



5-1/2" 15.5# & 17 #
J-55 liner set in 7-7/8" hole
2930' - 8014'
TD = 8015'

EXHIBIT F

(not to scale)

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS

30-025-34427	228	Northeast Drinkard Unit	O	A	Surf	11"	8-5/8"	1365	410	PBCZ	Circ 98 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 10-18-98					Prod	7-7/8"	5-1/2"	6900	1200		Circ	TD 6920	

30-025-37952	321	Warren Unit	Plan	A	Surf							Warren Blinebry Tubb O&G	217817
no spud yet			Oil		Inter								
					Prod								

30-025-07880	012	Warren Unit	O	A	Surf		10-3/4"	252	250			Warren Blinebry Tubb O&G	005037
spud 9-11-54					Inter		7-5/8"	3049	1120			TD 6198	
					Prod		5-1/2"	6179	415				

EXHIBIT F

API	WELL ID	PROPERTY NAME	WELL TYPE	WELL STATUS	CSG TYPE	HOLE SIZE	CSG SIZE	SET AT	SX CMNT	CMNT TYPE	METH DET	POOLNAME	OGRID #
30-025-06510	109	Northeast Drinkard Unit	I	A	Surf		11-3/4"	270	375		Circ	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 10-9-55					Inter		7-5/8"	3061	1112		Temp Svy		
					Prod		5-1/2"	6024	375		Temp Svy	TD 6025	
30-025-26670	111	Northeast Drinkard Unit	I	A	Surf	12-1/4"	8-5/8"	1395	599		Circ	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 4-18-80					Prod	7-7/8"	5-1/2"	6875	2612		Circ	TD 6875	
30-025-06496	113	Northeast Drinkard Unit	I	A	Surf	17-1/2"	13-3/8"	211	250		CIRC	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 4-15-58					Inter	12-1/4"	9-5/8"	3029	1210		Temp Svy	TD 6830	
					Prod	8-3/4"	7"	6829	770		Temp Svy		
30-025-39440	158	Northeast Drinkard Unit	O	A	Surf	12-1/4"	8-5/8"	1419	720	Class C	Circ 170 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 11-7-10					Prod	7-7/8"	5-1/2"	7020	1250	Class C	Circ 124 sx	TD 7020	
30-025-34609	131	Northeast Drinkard Unit	O	A	Surf	12-1/4"	8-5/8"	1365	460	Class C	Circ 109 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 7-10-99					Prod	7-7/8"	5-1/2"	6990	1525	POZ-C & POZ-H	Circ 125 sx	TD 6990	
30-025-06381	211	Northeast Drinkard Unit	I	A	Surf	17-1/2"	13-3/8"	222	300	regular	Circ 260 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 1-4-50					Inter	11"	8-5/8"	2920	2200	4% Bent + neat	Circ	TD 6780	
					Prod	7-7/8"	5-1/2"	6665	600	regular			
30-025-06383	4	Taylor Glenn	O	A	Surf	17-1/4"	13-3/8"	200	250	Neat	Circ 50 sx	Hare Simpson	000873
spud 3-10-52					Inter	11"	8-5/8"	3147	2200		Circ 30 sx	TD 8119	
					Prod	7-7/8"	5-1/2"	8115	875		Circ 75 sx		
30-025-06382	3	Taylor Glenn	O	A	Surf	17-1/2"	13-3/8"	219	250	Neat		Wantz Abo	000873
spud 11-11-51					Inter	11"	8-5/8"	3150	2000	Neat	Circ	TD 8224	
					Prod	7-7/8"	5-1/2"	8102	870	Neat et al	Circ		
30-025-34425	125	Northeast Drinkard Unit	O	A	Surf	11"	8-5/8"	1300	410	PBCZ	Circ 120 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 11-14-98					Prod	7-7/8"	5-1/2"	6910	1375	Interfill C & POZ	Circ 86 sx	TD 6910	
30-025-39439	154	Northeast Drinkard Unit	O	A	Surf	12.25"	8.625"	1409	720	Class C	Circ 154 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 10-25-10					Prod	7.875"	5.5"	7025	1340	Class C	Circ 152 sx	TD 7025	
30-025-35610	139	Northeast Drinkard Unit	O	A	Surf	17-1/4"	8-5/8"	1400	460		Circ	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 8-2-01					Prod	7-7/8"	5-1/2"	6990	1375		Circ	TD 6990	
30-025-06495	110	Northeast Drinkard Unit	I	A	Surf		10-3/4"	265	250		Circ	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 4-8-57					Inter		7-5/8"	3119	1150		TOC 1350'	TD 5976	
					Prod		5-1/2"	5674	400		TOC 3000'		
30-025-39914	163	Northeast Drinkard Unit	O	A	Surf	12.25"	8.625"	1380	675	Class C	Circ 180 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 11-30-10					Prod	7.875"	5.5"	7125	850	Class C	Circ 106 sx	TD 7025	
30-025-06384	5	Taylor Glenn	O	A	Surf	17-1/4"	13-3/8"	225	250	Neat	Circ 90 sx	Penrose Skelly Grayburg	000873
spud 5-14-52					Inter	11"	8-5/8"	3147	2200	Neat + 4%	Circ 400 sx	TD 8361	
					Prod	7-7/8"	5-1/2"	8355	850	Neat + 4%			
30-025-06385	208	Northeast Drinkard Unit	O	A	Surf	17"	13-3/8"	225	250	Neat		Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 7-27-52					Inter	11"	8-5/8"	3147	1700	4% & Neat	Circ 280 sx	TD 6707	
					Prod	7-7/8"	5-1/2"	6660	300	4% & Neat	Circ 25 sx		

EXHIBIT F

30-025-34796	135	Northeast Drinkard Unit	O	A	Surf	12-1/4"	8-5/8"	1273	460	Class C	Circ 70 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 1-18-00					Prod	7-7/8"	5-1/2"	6610	1300	POZ-C & POZ-H	Circ 112 sx	TD 6610	
30-025-06483	216	Northeast Drinkard Unit	I	A	Surf	17-1/2"	13-3/8"	223	250	Reg	Circ 60 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 9-9-88					Inter	11"	8-5/8"	3148	1600	Neat + 4%	Circ 490 sx	TD 8147	
					Prod	7-7/8"	5-1/2"	8010	800				
30-025-06484	218	Northeast Drinkard Unit	I	A	Surf	17"	13-3/8"	222	250	Neat	Circ 40 sx	Eunice-Blinebry-Tubb-Drinkard-North	
spud 7-29-52					Inter	11"	8-5/8"	3150	1800	Neat + 4%	Circ 450 sx	TD 8000	
					Prod	7-7/8"	5-1/2"	7997	825	Neat + 4%	Circ 100 sx		
30-025-34412	230	Northeast Drinkard Unit	O	A	Surf	11"	8-5/8"	1363	400		Circ 120 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 6-16-98					Prod	7-7/8"	5-1/2"	6930	1305		Circ 110 sx	TD 6930	
30-025-34411	231	Northeast Drinkard Unit	O	A	Surf	11"	8-5/8"	1382	410		Circ 125 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 6-29-98					Prod	7-7/8"	5-1/2"	6940	1450		Circ 146 sx	TD 6940	
30-025-35470	142	Northeast Drinkard Unit	O	A	Surf	12-1/4"	8-5/8"	1448	460	Class C	Circ 72 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 5-23-01					Prod	7-7/8"	5-1/2"	6850	1175	POZ-C & POZ-H	Circ 44 sx	TD 6850	

EXHIBIT F

API	WELL ID	PROPERTY NAME	WELL TYPE	STATUS	CSG TYPE	HOLE SIZE	CSG SIZE	SET AT	SX CMNT	CMNT TYPE	METH DET	POOLNAME	OGRID #
P&A													
30-025-06377	11	State Section 2	O	P&A	Surf	17-1/4"	13-3/8"	211	250		Circ	Wantz Abo	000873
spud 1-12-52					Inter	11"	8-5/8"	3128	2000		Circ	TD 8015	
					Prod	7-7/8"	5-1/2"	804	850				
Active													
30-025-34601	132	Northeast Drinkard Unit	O	A	Surf	12-1/4"	8-5/8"	1323	380		Circ 92 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 5-29-99					Prod	7-7/8"	5-1/2"	6970	1250		Circ 25 sx	TD 6970	
30-025-06340	115	Northeast Drinkard Unit	I	A	Surf	17-1/2"	13-3/8"	152	165	Halliburton	TOC GL	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 1-17-50					Inter	12"	9-5/8"	3005	1600	Halliburton	TOC GL	TD 8620	
					Prod	7-7/8"	5-1/2"	8519	550	Halliburton	TOC 4255		
30-025-34415	126	Northeast Drinkard Unit	O	A	Surf	11"	8-5/8"	1396	410		Circ 106 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 8-15-98					Prod	7-7/8"	5-1/2"	6940	1350		Circ 50 sx	TD 6940	
30-025-39918	168	Northeast Drinkard Unit	I	A	Surf	12-1/4"	8-5/8"	1450	720	Class C	Circ	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 2010					Prod	7-7/8"	5-1/2"	7054	1135	Class C	98' per CBL	TD 7052	
30-025-34600	133	Northeast Drinkard Unit	O	A	Surf	12-1/4"	8-5/8"	1333	460	Class C	Circ 109 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 6-12-99					Prod	7-7/8"	5-1/2"	6980	1660	POZ-C & POZ-H	Circ 162 sx	TD 6980	
30-025-35903	145	Northeast Drinkard Unit	I	A	Surf	12-1/4"	8-5/8"	1344	550	Class C	Circ	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 7-12-02					Prod	7-7/8"	5-1/2"	7023	1500	POZ-C & POZ-H	Circ	TD 7023	
30-025-06344	114	Northeast Drinkard Unit	I	A	Surf	17-1/4"	13-3/8"	208	240		Circ	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 10-29-74					Inter Short	11"	8-5/8"	3008	1750		Circ	TD 6896	
					Inter Long	7-7/8"	5-1/2"	6030	225		Temp Svy		
					Prod	4-3/4"	3-1/2"	6898	100		Circ		
30-025-34426	127	Northeast Drinkard Unit	O	A	Surf	11"	8-5/8"	1390	410	PBCZ	Circ 78 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 8-29-98					Prod	7-7/8"	5-1/2"	6980	1200	Interfill C & POZ	Circ 90 sx	TD 6850	
30-025-35468	140	Northeast Drinkard Unit	O	A	Surf	12-1/4"	8-5/8"	1398	460	Class C	Circ 81 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 4-23-01					Prod	7-7/8"	5-1/2"	7000	1375	POZ-C & POZ-H	Circ 75 sx	TD 7000	
30-025-06368	213	Northeast Drinkard Unit	O	A	Surf	17-1/2"	13-3/8"	213	300	regular	Circ 30 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 10-27-49					Inter	11"	8-5/8"	2926	2200		Circ 200 sx	TD 6760	
					Prod	7-7/8"	5-1/2"	6651	600				
30-025-06343	119	Northeast Drinkard Unit	O	P & A	Surf	17-1/4"	13-3/8"	200	225		Circ	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 1-18-53					Inter	12-1/4"	8-5/8"	3005	1650		4715 surv	TD 6850	
					Prod	7-7/8"	5-1/2"	5960	225		6000 calc		
30-025-06345	117	Northeast Drinkard Unit	I	A	Surf	17-1/4"	13-3/8"	210	245		Circ	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 11-25-74					Inter	11"	8-5/8"	3022	2100		Circ	TD 6945	
					Prod	7-7/8"	5-1/2"	6060	200	Neat			
30-025-35469	141	Northeast Drinkard Unit	O	A	Surf	12-1/4"	8-5/8"	1429	460	Class C	Circ 71 sx	Eunice-Blinebry-Tubb-Drinkard-North	000873
spud 5-8-01					Prod	7-7/8"	5-1/2"	6990	1375	POZ-C & POZ-H	Circ 66 sx	TD 6990	
30-025-06374	8	State Section #2	O	A	Surf	17-1/4"	13-3/8"	219	250	Regular	Circ	Hare Simpson	000873
spud 9-16-51					Inter	11"	8-5/8"	3149	2000	Reg + 4%	Circ	TD 8156	
					Prod	7-7/8"	5-1/2"	8018	875				

EXHIBIT F

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	252.26
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	-0.08	0.00	-0.09	0.00	0.07	3.09	0.60	0.00	0.3
120	0	1.33	95.11	-0.10	0.00	-0.02	0.00	0.09	3.78	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

EXHIBIT G

New Mexico Office of the State Engineer

Point of Diversion by Location

(with Owner Information)

(acre ft per annum) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y	Distance
CP 01037		EXP	0	MCNEILL RANCH	LE	CP 01037 POD1			2 2 2	10	21S	37E	674322	3597345	1955

Record Count: 1

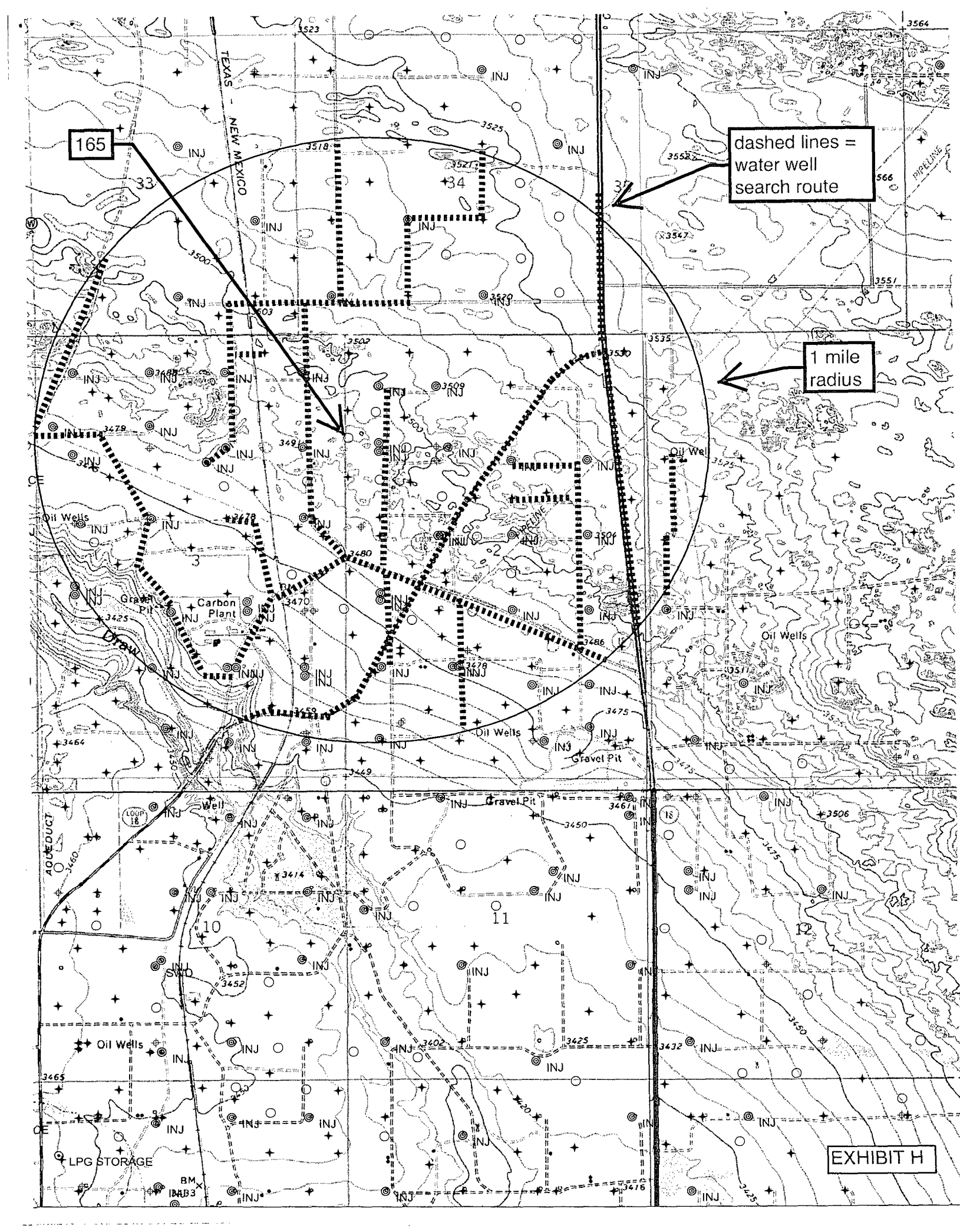
UTMNAD83 Radius Search (in meters):

Easting (X): 674566 Northing (Y): 3599285.85 Radius: 2000

1,955 meters
x 3.28 meter/feet
6,412 feet

Sorted by: Distance

EXHIBIT H


165
dashed lines = water well search route
1 mile radius
EXHIBIT H
TEXAS - NEW MEXICO
Draw
Carbon Plant
Gravel Pit
Oil Wells
LPG STORAGE
AQUEDUCT
PIPELINE
33
34
3
2
10
11
12

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

January 31, 2011

Tom Scarborough
ConocoPhillips Company
P. O. Box 2197
Houston, TX 77252

Dear Mr. Scarborough:

Apache Corporation is applying (see attached application) to complete its existing Northeast Drinkard Unit #165 well as a water injection well. As required by NM Oil Conservation Division 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 #165 (state lease) TD = 7,054'
Proposed Injection Zone: Drinkard (from 6,710' to 6,862')
Location: 1800' FNL & 125' FWL Sec. 2, T. 21 S., R. 37 E., Lea County, NM
Approximate Location: ≈5 air miles north-northeast 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 salt water injection well will be filed with the NM Oil Conservation Division (NMOCD). If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Brian Wood

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$6.66

QUICKSEND CPU SANTA FE, NM 87505 Postmark Here JAN 31 2011 USPS

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

EXHIBIT I

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

January 31, 2011

Ray Powell
New Mexico State Land Office
P. O. Box 1148
Santa Fe, NM 87504-1148

Dear Mr. Powell:

Apache Corporation is applying (see attached application) to complete its existing Northeast Drinkard Unit #165 well as a water injection well. As required by NM Oil Conservation Division 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 #165 (state lease) TD = 7,054'
Proposed Injection Zone: Drinkard (from 6,710' to 6,862')
Location: 1800' FNL & 125' FWL Sec. 2, T. 21 S., R. 37 E., Lea County, NM
Approximate Location: ≈5 air miles north-northeast 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 salt water injection well will be filed with the NM Oil Conservation Division (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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Return Receipt Fee (Endorsement Required)	2.30
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 6.66

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

EXHIBIT I

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
January 07, 2011
and ending with the issue dated
January 07, 2011

PUBLISHER
Sworn and subscribed to before me
this 7th day of
January, 2011

Notary Public

My commission expires
February 09, 2013
(Seal)

OFFICIAL SEAL
DORA YANEZ
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires: _____

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 NOTICE
JANUARY 7, 2011

Apache Corporation is applying to use the Northeast Drinkard Unit #165 and #168 wells as water injection wells in Sec. 2, T.21 S., R. 37 E., Lea County, NM. The #165 is located at 1800' FNL & 125' FWL and will inject water into the Blinebry (maximum injection pressure = 1,140 psi) from 5,701' to 6,100' and into the Drinkard (maximum injection pressure = 1,342 psi) from 6,710' to 6,862'. The #168 is located at 1970' FNL & 1125' FWL and will inject water into the Blinebry (maximum injection pressure = 1,155 psi) from 5,773 to 5,978 and into the Drinkard (maximum injection pressure = 1,322 psi) from 6,610' to 6,900'. Injection will be at a maximum rate of 1,000 bwpd per well. 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.
#26305

EXHIBIT J