DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO
2/08/2016		MAM	2/08/2016	WFX	pMAM1603547324

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]

WFX 953

Apache Corporation (OGRID 873)
West Blinebry Drinkard Unit 57
30-025-06623
Eunice; BLI-TU-DR, North (22900)

[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 _____

[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] X 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
2016 FEB -8 A 9:13

[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	2-8-16
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? _____ Yes XXX No
If yes, give the Division order number authorizing the project: R-12981 et al

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

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

WEST BLINEBRY DRINKARD UNIT 57
30-025-06623

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).

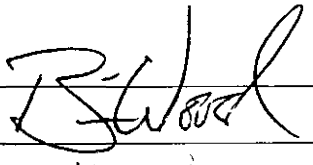
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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: FEBRUARY 5, 2016

E-MAIL ADDRESS: brian@permitswest.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

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

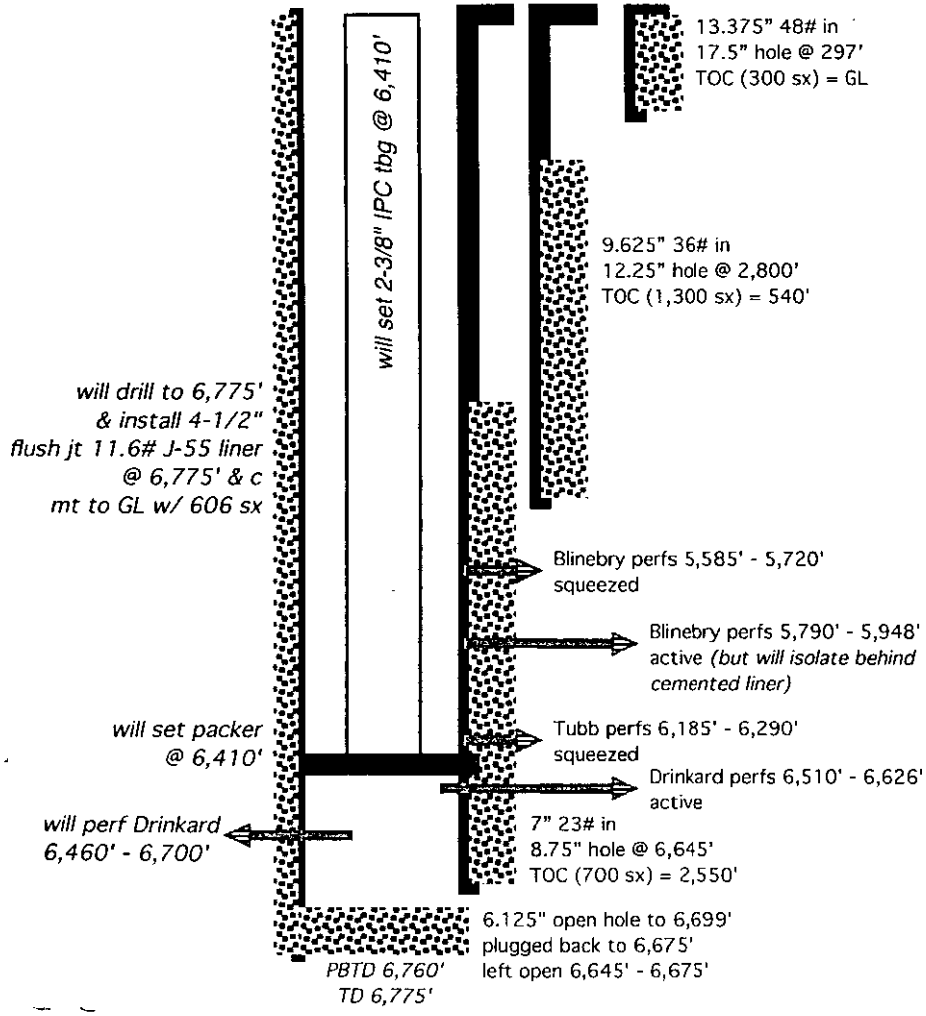
OPERATOR: APACHE CORPORATION

WELL NAME & NUMBER: WEST BLINEBRY DRINKARD UNIT 57

WELL LOCATION:	660' FNL & 660' FEL	A	16	21 S	37 E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

Planned (not to scale) "As Is"



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17.5" Casing Size: 13.375"

Cemented with: 300 sx. *or* _____ ft³

Top of Cement: GL Method Determined: CIRCULATED

Intermediate Casing

Hole Size: 12.25" Casing Size: 9.625"

Cemented with: 1,330 sx. *or* _____ ft³

Top of Cement: 540' Method Determined: TEMP. SURVEY

Production Casing

Hole Size: 8.75" Casing Size: 7"

Cemented with: 700 sx. *or* _____ ft³

Top of Cement: 2,550' Method Determined: TEMP. SURVEY

Total Depth: 6,699' now and 6,775' proposed

Injection Interval

6,460' feet to 6,700'

(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: ≈6,410'

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

Additional Data

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

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

2. Name of the Injection Formation: DRINKARD

3. Name of Field or Pool (if applicable): EUNICE; BLI-TU-DR, NORTH (POOL CODE 22900)

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.

   NO

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

   OVER: GRAYBURG (3,690'), SAN ANDRES (3,950'),
   BLINEBRY (5,585'), & TUBB (6,185')

   UNDER: ABO (6,705'), SIMPSON (7,350'), McKEE (7,575'), ELLENBURGER (7,950')

APACHE CORPORATION
WEST BLINEBRY DRINKARD UNIT 57
660' FNL & 660' FEL
SEC. 16, T. 21 S., R. 37 E.
LEA COUNTY, NM

30-025-06623

I. Goal is to change the injection interval of this existing water injection well (fka, Harry Leonard NCT-E 4) from its current 5,790' - 6,626' interval (Blinebry and Drinkard) to a 6,460' - 6,700' interval (only Drinkard). Both intervals are part of the Eunice; Blinebry-Tubb-Drinkard, North Pool (aka, Eunice; BLI-TU-DR, North and pool code = 22900).

The well and zone are part of the West Blinebry Drinkard Unit (Cases 14125 and 14126, both Order Number R-12981) that was established in 2008 by Apache. There have been nine subsequent WFX approvals: WFX-854, WFX-857, WFX-913, WFX-921, WFX-922, WFX-923, WFX-924, WFX-948, and WFX-952. Thirty-four water injectors are now active in the unit.

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

III. A. (1) Lease: NM State Land Office B0-1732-0001
Lease Size: 8,837.66 acres (see Exhibit A for maps and C-102)
Closest Lease Line: 660'
Lease Area: NE4 Section 16, T. 21 S., R. 37 E. et al
Unit Size: 2,480 acres Unit Numbers: 300341 & NMNM-120042X
Closest Unit Line: 660'
Unit Area:

T. 21 S., R. 37 E.
Section 4: Lot 15, S2SW4, & SE4
Section 8: E2, NENW, & E2SW
Sections 9 & 16: all
Section 17: E2 & E2SW4
Section 21: E2NE4

A. (2) Surface casing (13-3/8", 48#, H-40) was set in 1948 in a 17-1/2" hole at 297' and cemented with 300 sacks. Cement circulated to surface.

Intermediate casing (9-5/8", 36#, H-40) was set in a 12-1/4" hole at 2,800' and cemented to 540' (temperature survey) with 1,300 sacks.

Production casing (7", 23#, J-55) was set in an 8-3/4" hole at 6,645' and cemented to 2,550' (temperature survey) with 700 sacks.

A 6-1/8" hole was drilled to 6,699', plugged back to 6,675', and left open from 6,645' to 6,675'.

A 6-1/8" hole will be drilled to 6,775'. A 4-1/2" flush joint liner (11.6#, J-55) will be set at 6,775, a DV tool will be set at ≈5,500', and the liner cemented to surface with 606 sacks.

A. (3) Tubing will be internally plastic coated 2-3/8", J-55, 4.7#. Setting depth will be ≈6,410'. (Injection interval will be 6,460' to 6,700'.)

A. (4) A 2-3/8" x 4-1/2" nickel plated Arrow-set packer will be set at ≈6,410' (≈50' above the highest perforation of 6,460').

B. (1) Injection zone will be the Drinkard carbonates. 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 6,460' to 6,700'. The well is a cased hole. Well is currently perforated in the Blinebry and Drinkard. Tubb perforations were squeezed in 2008.

B. (3) Well was originally drilled as a Drinkard oil well. It was converted to a water injection well in 2008 under R-12981.

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

DEPTH	NAME	STATUS	WHEN
5585' – 5720'	Blinebry	squeezed w/ 100 sx	1963
5790' – 5948'	Blinebry	will run & cement liner	2016
6185' – 6290'	Tubb	squeezed w/ 250 sx	2008
6510' – 6626'	Drinkard	active	
6460' – 6705'	Drinkard	will run & cement liner	2016
6775'	TD	will deepen 76' to 6775'	2016

B. (5) Next higher oil or gas zone in the area of review is the Tubb. It produced in this well and its top is at 6,185'. Injection will occur in the Drinkard from 6,460' to 6,700'.

Next lower oil or gas zone in the area of review is the Abo. Abo top is estimated at 6,800'. Abo is producing elsewhere in the area of review (e. g., 30-025-37202).

IV. This is not a horizontal or vertical expansion of an existing injection project. The case file for the unit approval (R-12981) describes the water flood. There have been eight water flood expansions since then. Closest unit boundary is 600' east. Seven existing injection wells are within a half-mile radius. All are in the unit.

V. Exhibit B shows all 54 existing wells (42 oil or gas wells + 7 water injection wells + 4 P&A wells + 1 brine well) within a half-mile radius, regardless of depth. Exhibit C shows all 775 existing wells (605 oil or gas wells + 93 injection or disposal wells + 55 P & A wells + 21 water supply wells + 1 brine well) within a two-mile radius.

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

Aliquot Parts in Area of Review (all T21S, R37E)	Lessor	Lease	Lessee(s) of Record	Blinebry, Tubb, &/or Drinkard operator, if any
SESW & SE4 Sec. 9	BLM	NMNM-090161	Apache & Chevron	Apache
W2SW & SESW Sec. 10	NMSLO	B0-0935-0000	ExxonMobil	Apache
N2NW4 Sec. 15	NMSLO	B0-9188-0008	Chevron	Apache
S2NW4 Sec. 15	NMSLO	B0-1481-0018	Oxy USA WTP	Apache
NWSW Sec. 15	fee	Argo	Apache	Apache
NE4 Sec. 16	NMSLO	B0-1732-0001	Chevron	Apache
E2NW4 Sec. 16	NMSLO	B0-1557-0002	Apache	Apache
N2SE4 Sec. 16	NMSLO	B0-0085-0016	Apache	Apache

VI. Fifty-four existing wells are within a half-mile radius. Thirty-eight of the wells penetrated the Drinkard (top = 6,440'). The penetrators include 29 oil or gas wells, 7 water injection wells, and 2 P&A wells. A table abstracting the well construction details and histories of the penetrators is in Exhibit F. Diagrams of the P&A penetrators are in Exhibit G. The 54 existing wells (+ 2 approved, but not yet drilled, wells) and their distances from the #57 are:

API	OPERATOR	WELL NAME	TYPE WELL	UNIT-SECTION T21S, R37E	TVD	CURRENT ZONE	FEET FROM WBDU 57
3002525198	Chevron	Harry Leonard NCT E 006	O	A-16	6720	Penrose Skelly; Grayburg	335
3002539277	Apache	WBDU 113	O	A-16	6912	Eunice; Bli-Tu-Dr, N	713
3002536741	Chevron	Harry Leonard NCT E 007	O	H-16	4345	Penrose Skelly; Grayburg	786
3002541262	Apache	WBDU 142	O	P-9	6849	Eunice; Bli-Tu-Dr, N	874
3002539119	Apache	WBDU 098	O	B-16	6880	Eunice; Bli-Tu-Dr, N	900

3002536662	Apache	Hawk Fed B 1 035	O	P-9	4350	Penrose Skelly; Grayburg	1050
3002536809	Apache	NEDU 526	O	D-15	6900	Eunice; Bli-Tu-Dr, N	1126
3002538959	Apache	Hawk Fed B 1 068	O	P-9	4455	Penrose Skelly; Grayburg	1158
3002538198	Apache	WBDU 052	O	O-9	6870	Eunice; Bli-Tu-Dr, N	1173
3002533547	Key	State 001	M	E-15	2200	BSW; Salado	1206
3002537223	Apache	NEDU 628	O	E-15	7106	Eunice; Bli-Tu-Dr, N	1288
3002506621	Apache	WBDU 056	I	H-16	6780	Eunice; Bli-Tu-Dr, N	1320
3002506439	Apache	WBDU 037	I	P-9	6750	Eunice; Bli-Tu-Dr, N	1320
3002506586	Chevron	State S 001	O	D-15	6660	Penrose Skelly; Grayburg	1326
3002506622	Chevron	Harry Leonard NCT E 003	O	B-16	6710	Penrose Skelly; Grayburg	1326
3002541547	Apache	WBDU 178	I	B-16	6948	Eunice; Bli-Tu-Dr, N	1449
3002535806	Apache	Hawk Fed B 1 027	O	P-9	4200	Penrose Skelly; Grayburg	1510
3002506612	Chevron	State S 005	O	D-15	8148	Penrose Skelly; Grayburg	1658
3002506614	Apache	NEDU 601	P&A	D-15	8145	Eunice; Bli-Tu-Dr, N	1659
3002506624	Chevron	Harry Leonard NCT E 005	O	H-16	8220	Penrose Skelly; Grayburg	1684
3002537834	Chevron	Harry Leonard NCT E 008	P&A	H-16	4300	Penrose Skelly; Grayburg	1690
3002535880	Apache	Hawk Fed B 1 028	O	O-9	4200	Penrose Skelly; Grayburg	1714

3002506472	XTO	NM V State 10	G	M-10	7939	Hare; San Andres	1801
3002537998	Apache	Hawk Fed B 1 052	O	P-9	4358	Penrose Skelly; Grayburg	1839
3002509913	Shell	NEDU 603	P&A	E-15	8182	Eunice; Bli-Tu-Dr, N	1860
3002506620	Chevron	Harry Leonard NCT E 001	O	G-16	6670	Penrose Skelly; Grayburg	1869
3002506463	Apache	NEDU 502	O	M-10	6660	Eunice; Bli-Tu-Dr, N	1870
3002509914	Apache	NEDU 602	O	E-15	6669	Eunice; Bli-Tu-Dr, N	1873
3002509906	Apache	WBDU 038	I	O-9	6770	Eunice; Bli-Tu-Dr, N	1875
3002541548	Apache	WBDU 168	I	G-16	6982	Eunice; Bli-Tu-Dr, N	1979
3002506467	XTO	NM V State 005	O	M-10	8403	Penrose Skelly; Grayburg	1979
3002539442	Apache	WBDU 112	O	P-9	6965	Eunice; Bli-Tu-Dr, N	1982
3002542537	Apache	WBDU 164	O	H-16	plan 7000	Eunice; Bli-Tu-Dr, N	1985
3002541600	Apache	NEDU 544	O	E-15	6948	Eunice; Bli-Tu-Dr, N	1986
3002538197	Apache	WBDU 051	O	O-9	6837	Eunice; Bli-Tu-Dr, N	1999
3002541485	Chevron	State S 012	O	C-15	4110	Penrose Skelly; Grayburg	2027
3002536530	Apache	Hawk Fed B 1 036	O	P-9	4743	Penrose Skelly; Grayburg	2078
3002534886	Apache	NEDU 524	O	C-15	6860	Eunice; Bli-Tu-Dr, N	2080
3002538231	Apache	WBDU 082	O	J-16	6875	Eunice; Bli-Tu-Dr, N	2109

3002536613	Apache	State C Tract 12 017	O	C-16	4386	Penrose Skelly; Grayburg	2112
3002534887	Apache	NEDU 624	O	C-15	6860	Eunice; Bli-Tu-Dr, N	2122
3002542237	Apache	NEDU 648	O	E-15	plan 7450	Eunice; Bli-Tu-Dr, N	2201
3002537242	Apache	NEDU 527	O	M-10	6862	Eunice; Bli-Tu-Dr, N	2205
3002537744	Apache	WBDU 050	O	J-9	6875	Eunice; Bli-Tu-Dr, N	2208
3002537238	Apache	NEDU 629	O	L-15	6900	Eunice; Bli-Tu-Dr, N	2227
3002538268	Apache	WBDU 064	O	F-16	6892	Eunice; Bli-Tu-Dr, N	2262
3002536095	Apache	State C Tract 12 013	O	C-16	4150	Penrose Skelly; Grayburg	2318
3002506591	Apache	NEDU 604	O	E-15	8193	Eunice; Bli-Tu-Dr, N	2341
3002537202	Apache	State C Tract 12 021	O	C-16	7300	Wantz; Abo	2405
3002536786	Apache	State DA 010	O	J-16	4345	Penrose Skelly; Grayburg	2475
3002535881	Apache	Hawk Fed B 1 030	O	I-9	4200	Penrose Skelly; Grayburg	2491
3002541161	Apache	NEDU 562	O	L-10	6978	Eunice; Bli-Tu-Dr, N	2516
3002536531	Apache	Hawk Fed B 1 038	O	O-9	4350	Penrose Skelly; Grayburg	2581
3002506627	Stanolind	State C TR 12 006	P&A	C-16	5762	Blinebry (fish)	2625
3002506628	Apache	WBDU 060	I	C-16	6699	Eunice; Bli-Tu-Dr, N	2625
3002520178	Apache	WBDU 042	I	I-9	6780	Eunice; Bli-Tu-Dr, N	2640

VII. 1. Average injection rate will be ≈2,500 bwpd.
Maximum injection rate will be ≈3,000 bwpd.

2. System will be closed. The well is 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 ≈1,100 psi. Maximum injection pressure will be 1,292 psi (=0.2 psi/ft x 6,460' (highest perforation)).

4. Water source will be water pumped from two 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 tank before being piped to the injection wells. A comparison of nearby analyses and San Andres follows. No compatibility problems have reported from the 39,054,030 barrels that have been injected to date in the unit since 2009.

	WBDU Injection Pump Discharge	San Andres 919-S
Anion/Cation Ratio	1.0	N/A
Barium	0.1 mg/l	0.38 mg/l
Bicarbonate	671.0 mg/l	562.0 mg/l
Calcium	1,099.0 mg/l	608.0 mg/l
Carbon Dioxide	80.0 ppm	80.0 ppm
Chloride	10,086.0 mg/l	6,200.0 mg/l
Hydrogen Sulfide	90.0 ppm	408.0 ppm
Iron	0.3 mg/l	0.0 mg/l
Magnesium	439.0 mg/l	244.0 mg/l
Manganese	N/A	0.01 mg/l
pH	7.5	6.49
Potassium	115.0 mg/l	N/A
Sodium	5,799.5 mg/l	3,909.0 mg/l
Strontium	28.0 mg/	19.0 mg/l

Sulfate	2,465.0 mg/l	1,750.0 mg/l
Total Dissolved Solids	20,702.9 mg/l	13,273.0 mg/l

5. Apache currently has 109 active oil wells, 34 active injection wells, and 11 approved, but not yet drilled, oil wells in the unit. It is the goal of the project to increase production.

VIII. The Unit is on the north end of a north-northwest to south-southeast trending anticline. It is part of the Penrose Skelly trend and parallels the west edge of the Central Basin Platform. Dips are 1° to 2°. The Blinebry/Tubb/Drinkard interval is Leonardian in age, 1163' thick, and consists of tan to dark gray shallow marine carbonates, many of which have been dolomitized. Core filling and replacement anhydrite are common in the limestone. Nodular anhydrite is common in the dolomite. Five per cent porosity cut off is used to determine pay zones. Impermeable shale and carbonates vertically confine the interval.

There are currently 155 Drinkard injection wells in New Mexico. The West Blinebry Drinkard Unit shares its east border with Apache's Northeast Drinkard Unit. Three other similar water floods (East Blinebry Drinkard Units, Central Drinkard Unit, and Warren Blinebry Unit) are within a mile of the West Blinebry Drinkard Unit. The Central Drinkard Unit has been under water flood since the 1960s. Formation depths are:

Quaternary = 0'
Anhydrite = 1,200'
Top salt = 1,420'
Bottom salt = 2,500'
Yates 2,660'
Seven Rivers = 2,910'
Queen = 3,370'
Grayburg = 3,690'
San Andres =3,950'
Glorieta = 5,180'
Blinebry = 5,585'
Tubb = 6,185'

Drinkard = 6,440'
Injection interval = 6,460' - 6,700'
Abo = 6,705'
PBTD = 6,760'
TD = 6,775'

There are 2 water wells (+ 6 monitoring wells) within a 1-mile radius according to the State Engineer (Exhibit H). Deepest of the water wells is 120'. One (CP 00554) of the two water wells could not be found during a January 20-21, 2016 field inspection. The other water well (CP 00162 & 00163 and 7/8 mile north) was sampled. A second water well, ¾ mile southeast and not in the State Engineer's database, was also sampled. Their analyses are in Exhibit I. Ogallala is >6 miles northeast.

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

There will be 5,240' of vertical separation and 1,300' of salt and anhydrite between the bottom of the only likely underground fresh water source (red beds) and the top of the injection zone. Produced water is currently being injected (194 wells) or disposed (9 wells) into the Blinebry-Tubb-Drinkard, San Andres, Grayburg, Queen, Seven Rivers, and Yates within T. 21 S., R. 37 E.

IX. The well will be stimulated with acid.

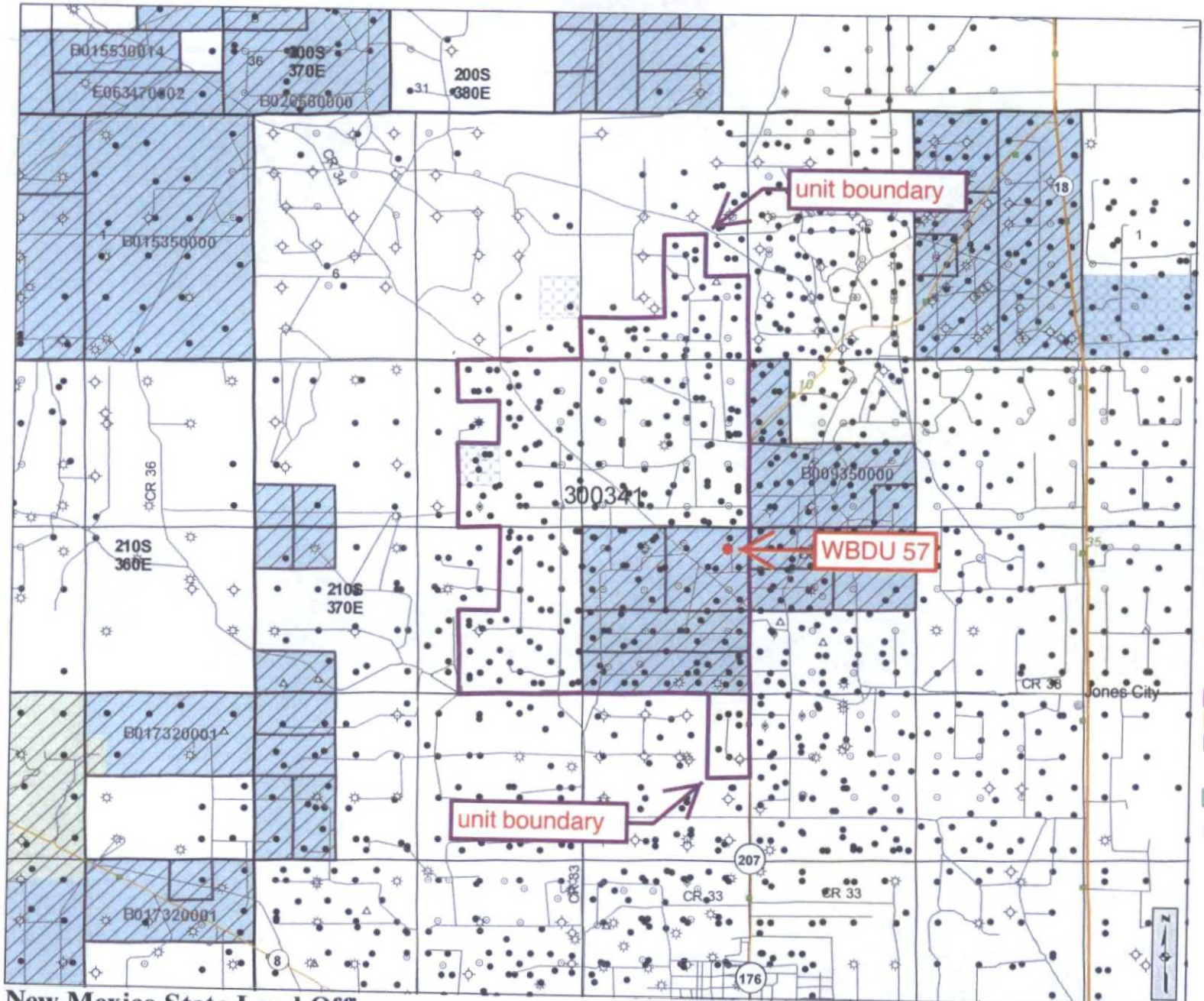
X. A gamma ray neutron log was run and is on file with NMOCD.

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

XII. Apache (Exhibit J) is not aware of any geologic or engineering data that may indicate the injection interval is in hydrologic connection with any underground

sources of water. Closest Quaternary faults are >100 miles west and southwest. There are 155 active Drinkard injection wells in New Mexico. Previously approved water flood expansions (WFX-) in the unit include 854, 857, 913, 921, 922, 923, 924, 948, and 952.

XIII. A legal ad (see Exhibit K) was published January 23, 2016. Notice (this application) has been sent (Exhibit L) to the surface owner (NM State Land Office), other lessees or leasehold operating rights holders (BLM, Chevron USA, ConocoPhillips, ExxonMobil, John H. Hendrix Corp., NM State Land Office, Oxy USA WTP LP, Penroc Oil Corp.) and non-Drinkard operators (Chevron, Key, & XTO) in the area of review. Apache is the only offset Drinkard operator



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 0.2 0.4 0.8 1.2 1.6 Miles

Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

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

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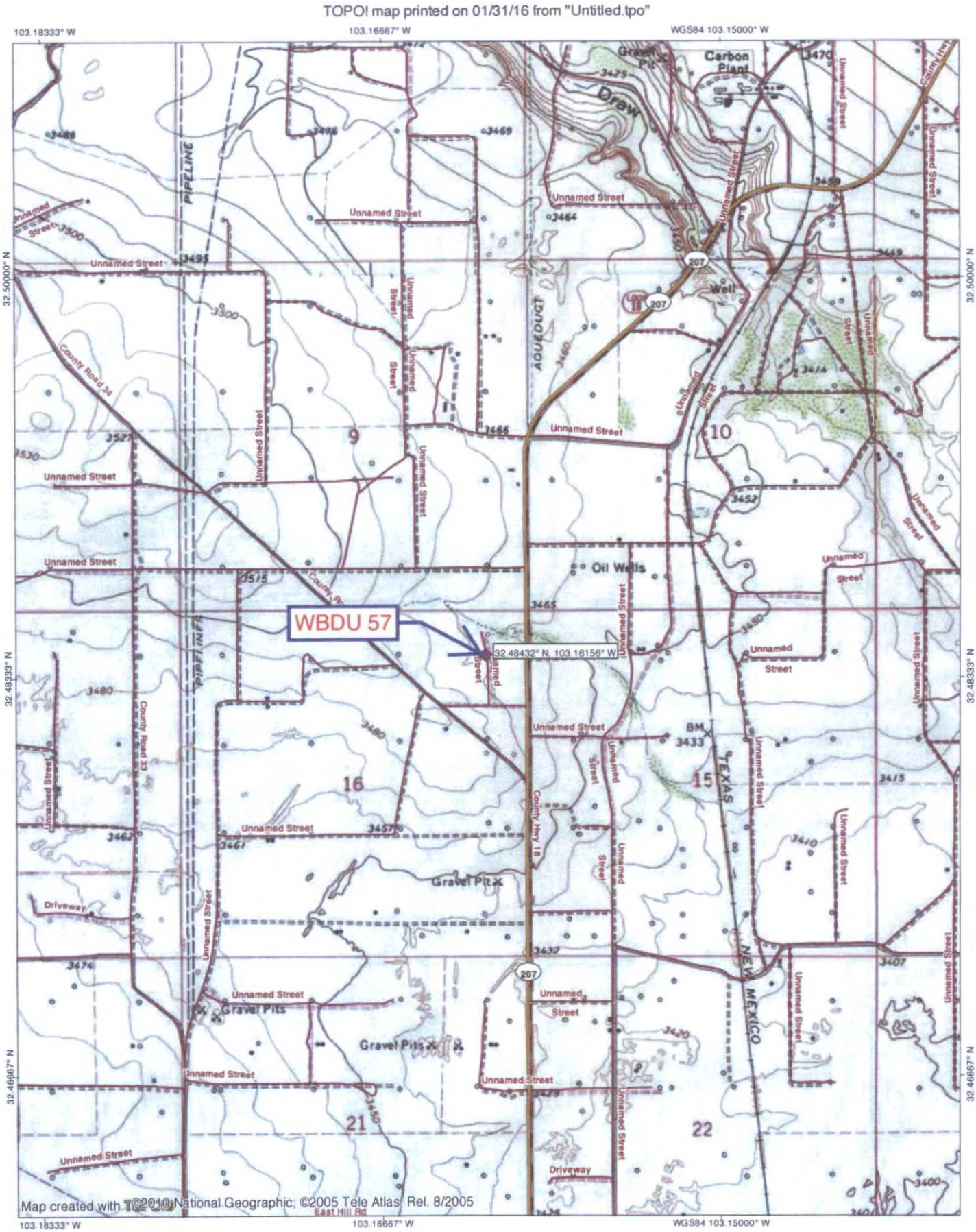
EXHIBIT A

www.nmstatelands.org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103.16667° W
WGS84 103.15000° W
32.50000° N
32.48333° N
32.46667° N
WBDU 57
32.48432° N, 103.16156° W
Carbon Plant
Gravel Pit
Draw
PIPELINE
AQUEDUCT
Well
Oil Wells
Gravel Pit
Gravel Pits
Driveway
BM 3433
TEXAS
NEW MEXICO
County Road 34
County Road 33
County Hwy 18
East Hill Rd
Unnamed Street
9
10
15
16
21
22
Map created with TOPO!
©2010 National Geographic; ©2005 Tele Atlas Rel. 8/2005
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°
01/31/16

NEW MEXICO OIL CONSERVATION COMMISSION

Gas Well Plat

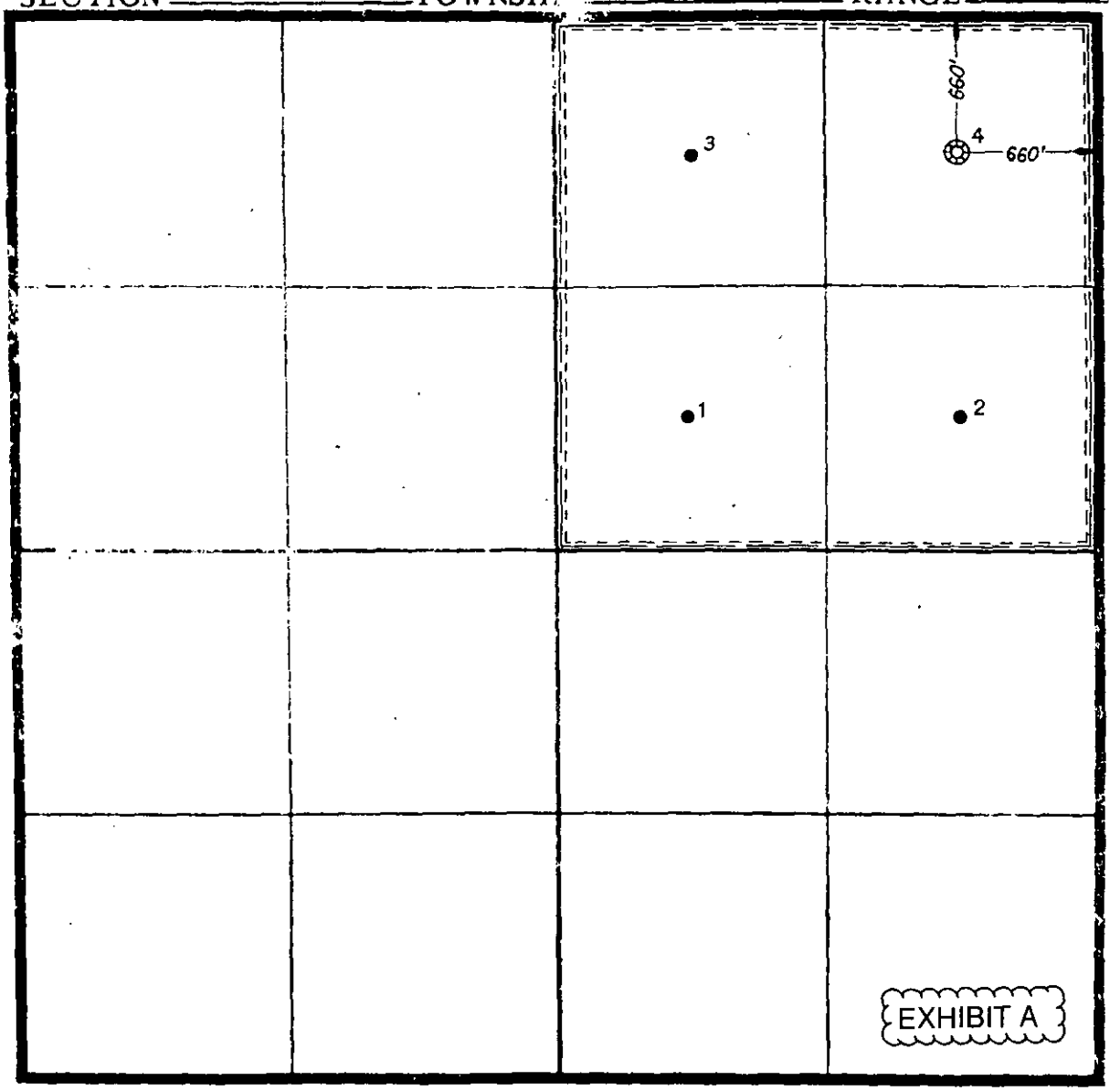
Date 4-22-54

Gulf Oil Corporation	Harry Leonard "E"	4-BL-T
Operator	Lease	Well No.

Name of Producing Formation Blinebry Pool Blinebry Gas

No. Acres Dedicated to the Well 160

SECTION 16 TOWNSHIP 21-S RANGE 37-E



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

Name T. W. Rhoads
Position Div. Gas-Gasoline Supervisor
Representing Gulf Oil Corporation
Address P. O. Box 1290, Fort Worth, Texas

● - Oil Well
⊛ - Dual (Gas-Gas)
———— - Lease Line
- - - - - - - - - - Acreage Dedicated

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
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025-06623	22900	Eunice; Bli-Tu-Dr, North

4 Property Code	5 Property Name	6 Well Number
306046	Harry Leonard NCT E	004

7 OGRID No.	8 Operator Name	9 Elevation
00873	Apache Corporation (873)	

10 Surface Location

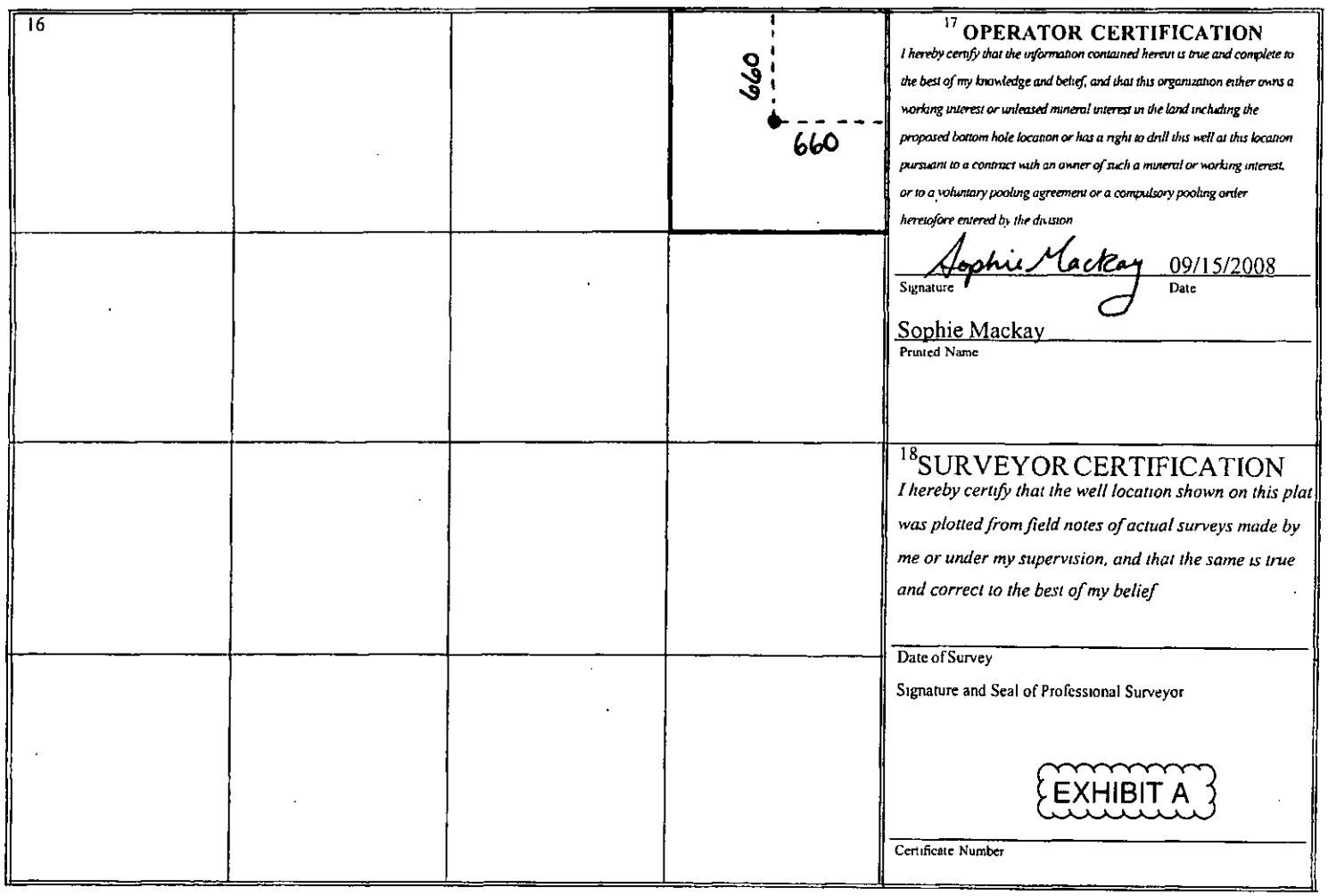
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	16	21S	37E		660	North	660	East	Lea

11 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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 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.



17 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

Sophie Mackay — Signature — 09/15/2008 — Date

Sophie Mackay
Printed Name

18 SURVEYOR CERTIFICATION

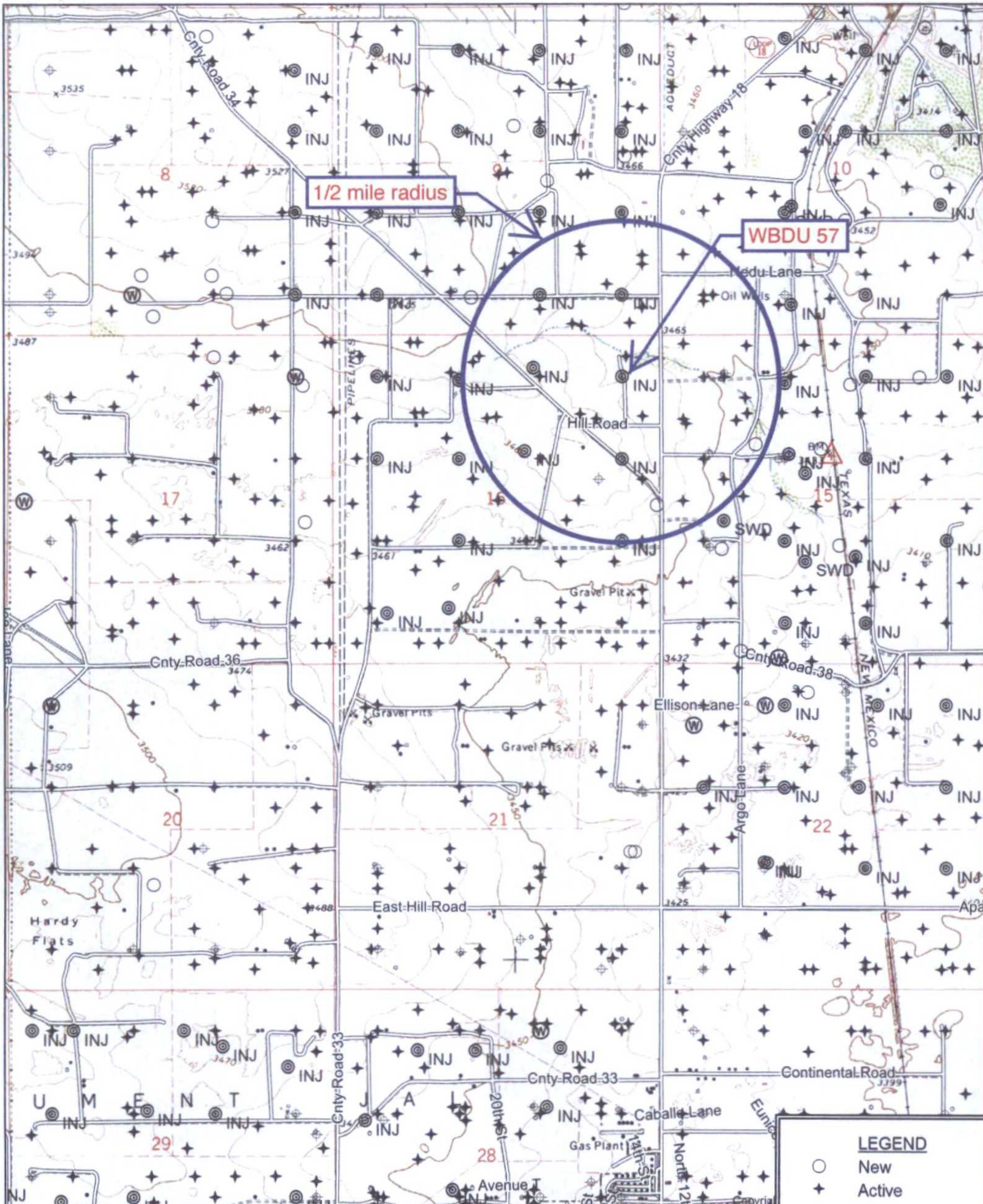
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief

Date of Survey

Signature and Seal of Professional Surveyor

EXHIBIT A

Certificate Number



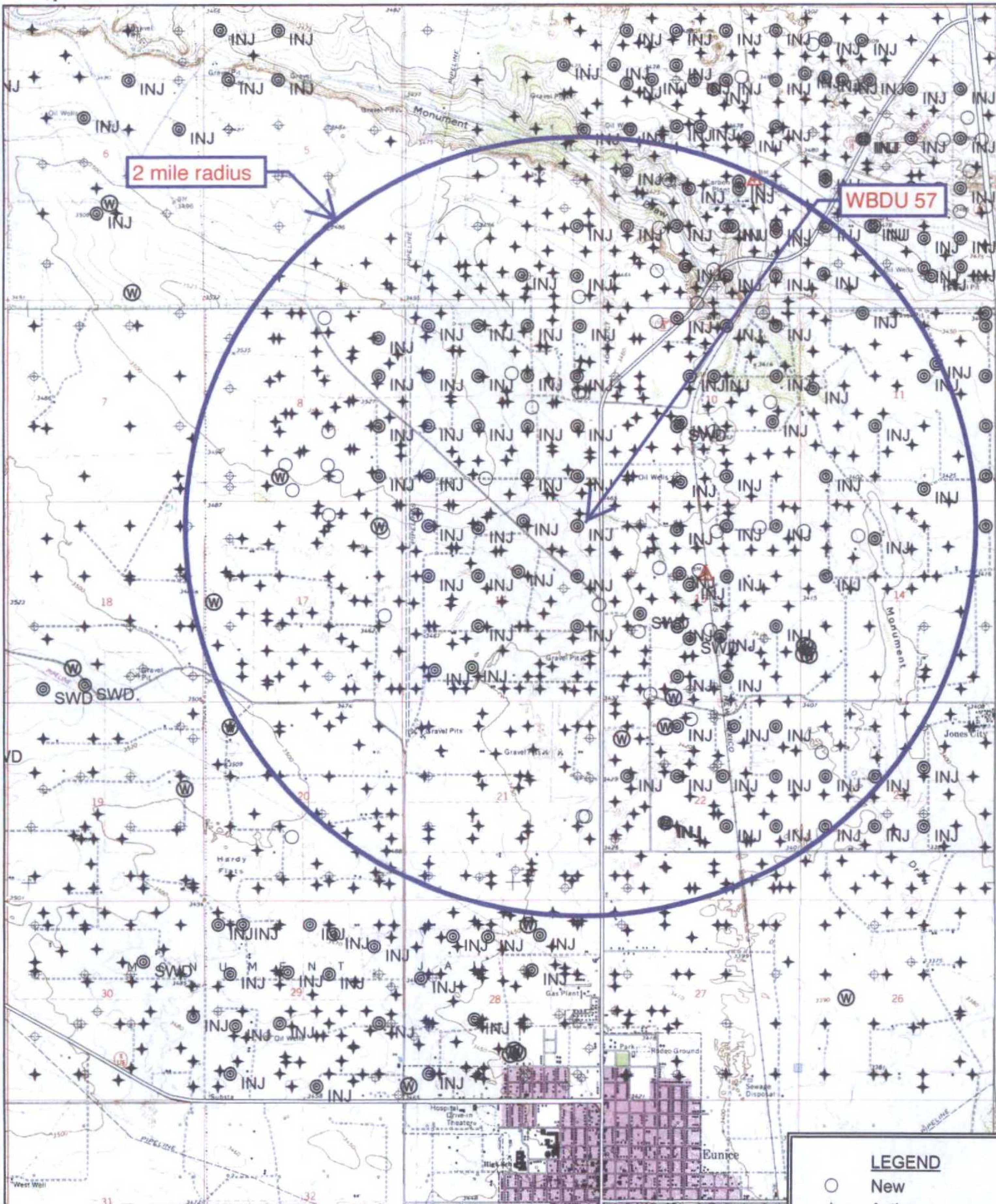
Quad: EUNICE
Scale: 1 inch = 2,000 ft.

N

EXHIBIT B

LEGEND

- ○ New
- ✦ Active
- P&A
- INJ
- SWD
- Ⓦ Water



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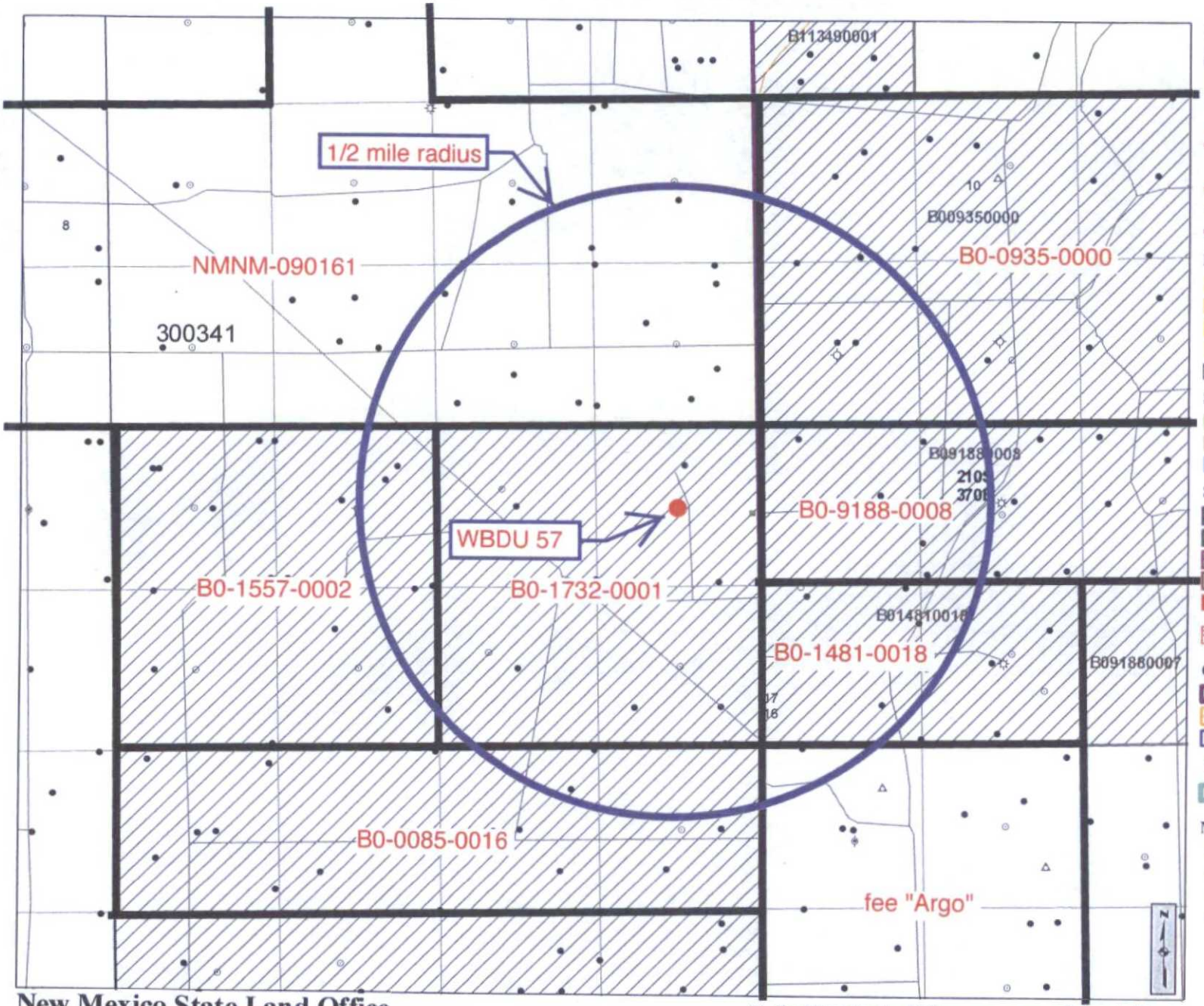
Quad: EUNICE
Scale: 1 inch = 3,333 ft.

EXHIBIT C



Cartographic Features
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- County Seats
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- SLO District Boundary
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- 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

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

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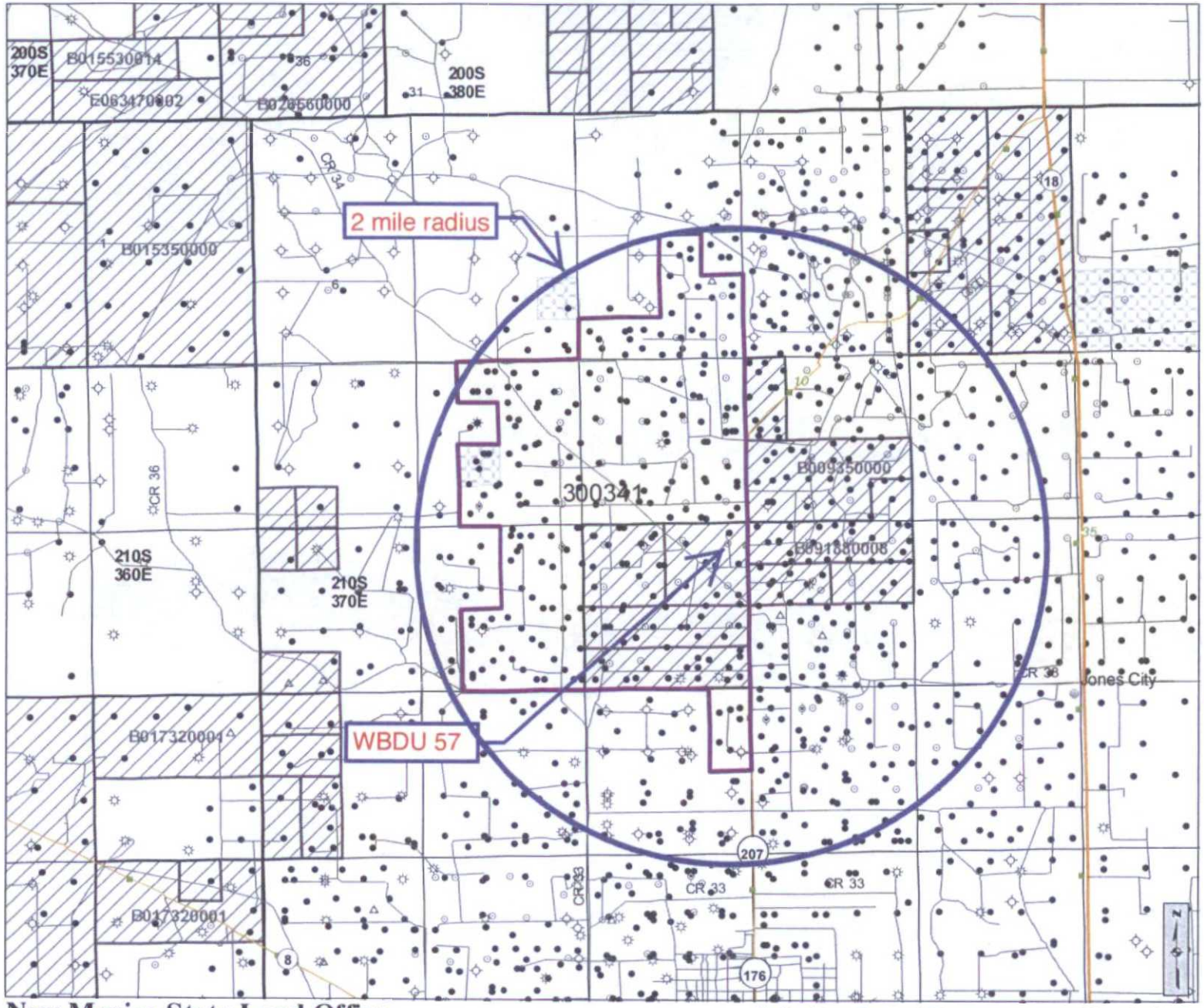
EXHIBIT D

www.nmstatelands.org



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

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

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EXHIBIT E

www.nmstatelands.org

SORTED BY DISTANCE FROM WBDU 57

WELL	SPUD	TD	POOL	TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
Harry Leonard NCT E 006	1/1/76	6720	Penrose Skelly; Grayburg	O	11	8.625	1305	550 sx	surface	circulated
30-025-25198					7.875	5.5	6720	1050 sx	47	tagged
A-16-21S-37E										
WBDU 113	9/15/09	6912	Penrose Skelly; Grayburg	O	12.25	8.625	1342	650 sx	surface	circulated
30-025-39277					7.875	5.5	6912	1000 sx	surface	circulated
A-16-21S-37E										
WBDU 142	10/9/13	6849	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1329	505 sx	surface	circulated 118 sx
30-025-41262					7.875	5.5	6856	1320 sx	surface	circulated 191 sx
P-9-21S-37E										
WBDU 098	6/15/09	6880	Penrose Skelly; Grayburg	O	12.25	8.625	1313	450 sx	surface	circulated
30-025-39119					7.875	5.5	6880	1050 sx	surface	circulated
B-16-21S-37E										
NEDU 526	11/27/04	6900	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1278	575 sx	surface	circulated 113 sx
30-025-36809					7.875	5.5	6900	1100 sx	220	no report
D-15-21S-37E										
WBDU 052	2/2/07	6870	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1296	600 sx	surface	circulated
30-025-38198					7.875	5.5	6870	1500 sx	300	CBL
O-9-21S-37E										
NEDU 628	12/30/05	7106	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1198	575 sx	surface	circulated 160 sx
30-025-37223					7.875	5.5	6889	1800 sx	1202	CBL
E-15-21S-37E										
WBDU 056	11/24/47	6780	Eunice; Bli-Tu-Dr, N	I	17.5	13.375	301	300 sx	surface	circulated
30-025-06621					12.25	9.625	2952	1300 sx	1370	temperature survey
H-16-21S-37E					8.75	7	6547	700 sx	2715	temperature survey

EXHIBIT F

SORTED BY DISTANCE FROM WBDU 57

WELL	SPUD	TD	POOL	TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 037	8/25/48	6750	Eunice; Bli-Tu-Dr, N	I	17	13.375	232	200 sx	surface	circulated
30-025-06439					12.25	9.625	2779	500 sx	1720	temperature survey
P-9-21S-37E					8.75	7	6723	800 sx	2750	temperature survey
State S 001	6/24/48	6660	Penrose Skelly; Grayburg	O	17.25	13.375	293	300 sx	surface	circulated 10 sx
30-025-06586					11	8.625	2797	1200 sx	surface	calculated
D-15-21S-37E					7.875	5.5	6625	400 sx	3100	CBL
Harry Leonard NCT E 003	9/10/48	6710	Penrose Skelly; Grayburg	O	17.25	13.375	304	300 sx	surface	circulated
30-025-06622					12.25	9.625	2800	1200 sx	surface	circulated
B-16-21S-37E					8.75	7	6649	700 sx	3200	temp survey
WBDU 178	11/22/14	6948	Penrose Skelly; Grayburg	I	11	8.625	1297	575 sx	surface	circulated 178 sx
30-025-41547					7.875	5.5	6955	1575 sx	surface	circulated 339 sx
B-16-21S-37E										
State S 005	02/13/51	8148	Penrose Skelly; Grayburg	O	17.25	13.375	280	300 sx	surface	circulated
30-025-06612					11	8.625	2974	2000 sx	surface	circulated
D-15-21S-37E					6.75	5.5	8147	500 sx	no report	no report
NEDU 601	04/19/52	8145	Eunice; Bli-Tu-Dr, N	P & A	17.25	13.375	293	300 sx	surface	circulated
30-025-06614					11	8.625	2990	2000 sx	160	no report
D-15-21S-37E					6.75	5.5	8142	350 sx	5380	temp survey
Harry Leonard NCT E 005	6/22/52	8220	Penrose Skelly; Grayburg	O	17.25	12.75	268	325 sx	surface	circulated
30-025-06624					11	8.625	2799	1100 sx	2290	temp survey
H-16-21S-37E					7.875	5.5	7999	131 sx	7540	temp survey

EXHIBIT F

SORTED BY DISTANCE FROM WBDU 57

WELL	SPUD	TD	POOL	TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
NM V State 010	3/21/52	7939	Hare; San Andres (Gas)	G	17.25	10.75	342	375 sx	surface	circulated 30 sx
30-025-06472					11	7.625	3104	1000 sx	surface	circulated 200 sx
M-10-21S-37E					6.75	5.5	7939	450 sx	1800	no report
NEDU 603	2/18/51	8182	Penrose Skelly; Grayburg	P & A	17.25	13.375	312	325 sx	surface	circulated
30-025-09913					11.25	8.625	2818	500 sx	surface	circulated
E-15-21S-37E					7.875	5.5	8030	400 sx	5700	CBL
Harry Leonard NCT E 001	10/4/05	6670	Penrose Skelly; Grayburg	O	17.25	13.375	294	300 sx	surface	circulated
30-025-06620					12.25	9.625	2950	1300 sx	1345	temp survey
G-16-21S-37E					8.75	7	6610	700 sx	1360	temp survey
NEDU 502	9/24/48	6660	Eunice; Bli-Tu-Dr, N	O	13.75	10.75	316	250 sx	surface	circulated 25 sx
30-025-06463					9.875	7.625	2796	1050 sx	surface	circulated 134 sx
M-10-21S-37E					6.75	5.5	6659	450 sx	2032	temp survey
NEDU 602	4/11/48	6669	Eunice; Bli-Tu-Dr, N	O	17.25	13.375	297	300 sx	surface	circulated
30-025-09914					11.25	8.625	2799	800 sx	700	calculated
E-15-21S-37E					7.875	5.5	6625	350 sx	4250	temp survey
WBDU 038	11/4/48	6770	Blinebury Oil & Gas (Oil)	I	17	13.375	212	200 sx	surface	circulated
30-025-09906					12.25	9.625	2794	500 sx	1950	temp survey
O-9-21S-37E					8.75	7	6767	900 sx	2700	temp survey
WBDU 168	11/14/14	6982	Eunice; Bli-Tu-Dr, N	I	11	8.625	1293	575 sx	surface	circulated
30-025-41548					7.875	5.5	6945	1921	surface	circulated
G-16-21S-37E										
NM V State 005	5/26/51	8403	Penrose Skelly; Grayburg	O	17.5	12.75	329	400 sx	surface	circulated 75 sx
30-025-06467					11	8.625	3100	1000 sx	surface	circulated 150 sx
M-10-21S-37E					6.75	5.5	8403	450 sx	2107	no report

EXHIBIT F

SORTED BY DISTANCE FROM WBDU 57

WELL	SPUD	TD	POOL	TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 112	1/28/11	6965	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1340	665 sx	surface	circulated 29 sx
30-025-39442					7.875	5.5	6965	1285 sx	surface	circulated 117 sx
P-9-21S-37E										
WBDU 164	N/A	plan 7000	Eunice; Bli-Tu-Dr, N	O	11	8.625	1300	715	surface	N/A
30-025-42537					7.875	5.5	7000	950	surface	N/A
H-16-21S-37E										
NEDU 544	2/9/14	6948	Eunice; Bli-Tu-Dr, N	O	11	8.625	1269	430 sx	surface	circulated 45 sx
30-025-41600					7.875	5.5	6954	1250 sx	surface	circulated 176 sx
E-15-21S-37E										
WBDU 051	3/6/07	6837	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1307	575 sx	surface	circulated
30-025-38197					7.875	5.5	6895	1150 sx	227	CBL
O-9-21S-37E										
NEDU 524	4/1/00	6860	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1207	460 sx	surface	circulated 120 sx
30-025-34886					7.875	5.5	6860	1500 sx	surface	circulated 148 sx
C-15-21S-37E										
WBDU 082	4/8/07	6875	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1285	650 sx	surface	circulated
30-025-38231					7.875	5.5	6875	1250 sx	320	CBL
J-16-21S-37E										
NEDU 624	4/17/00	6860	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1213	460 sx	surface	circulated 82 sx
30-025-34887					7.875	5.5	6860	1400 sx	170	CBL
C-15-21S-37E										
NEDU 648	N/A	plan 7450	Eunice; Bli-Tu-Dr, N	O	11	8.625	1287	475	surface	N/A
30-025-42237					7.875	5.5	7450	1250	surface	N/A
E-15-21S-37E										

EXHIBIT F

SORTED BY DISTANCE FROM WBDU 57

WELL	SPUD	TD	POOL	TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
NEDU 527	9/2/05	6862	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1283	575 sx	surface	circulated 116 sx
30-025-37242					7.875	5.5	6862	1150 sx	208	CBL
M-10-21S-37E										
WBDU 050	9/8/06	6875	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1288	600 sx	surface	circulated
30-025-37744					7.875	5.5	6875	1625 sx	590	CBL
J-9-21S-37E										
NEDU 629	6/25/05	6900	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1200	575 sx	surface	circulated
30-025-37238					7.875	5.5	6900	1300 sx	130	CBL
L-15-21S-37E										
WBDU 064	4/27/07	6892	Eunice; Bli-Tu-Dr, N	O	12.25	8.625	1322	575 sx	surface	circulated
30-025-38268					7.875	5.5	6892	1300 sx	280	CBL
F-16-21S-37E										
NEDU 604	8/28/51	8193	Eunice; Bli-Tu-Dr, N	O	17.25	13.375	336	350 sx	surface	circulated
30-025-06591					11.25	8.625	2835	500 sx	no report	no report
E-15-21S-37E					7.875	5.5	8042	400 sx	4550	CBL
State C Tract 12 021	7/26/05	7300	Wantz; Abo	O	12.25	8.625	1287	600 sx	surface	circulated 116 sx
30-025-37202					7.875	5.5	7300	1400 sx	390	CBL
C-16-21S-37E										
NEDU 562	7/17/13	6978	Eunice; Bli-Tu-Dr, N	O	11	8.625	1310	471 sx	surface	circulated 145 sx
30-025-41161					7.875	5.5	6978	1721 sx	242	estimated
L-10-21S-37E										
WBDU 060	2/22/54	6699	Eunice; Bli-Tu-Dr, N	I	17.5	13.375	297	300 sx	surface	circulated
30-025-06628					12.25	9.625	2953	1500 sx	surface	circulated
C-16-21S-37E					8.75	7	6694	1000 sx	surface	circulated

EXHIBIT F

SORTED BY DISTANCE FROM WBDU 57

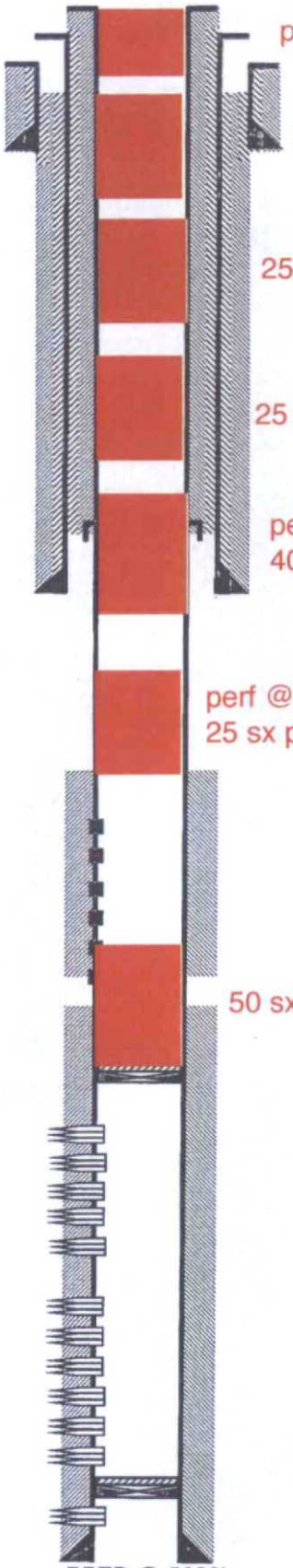
WELL	SPUD	TD	POOL	TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
WBDU 042	4/13/63	6780	Eunice; Bli-Tu-Dr, N	I	no report	9.325	1294	450 sx	surface	circulated
30-025-20178					no report	5.5	6750	500 sx	2300	temp survey
I-9-21S-37E										

EXHIBIT F

Apache

LEASE NAME	Northeast Drinkard Unit
WELL #	601
API #	30-025-06614
COUNTY	Lea

D-15-21s-37e
spud 4-19-52
P&A 10-13-11



perf @ 100' circ 50 sx to GL

TOC behind 8 5/8" @ 160'
13 3/8" @ 293' w/ 300 sx circ to surf

25 sx plug 200' - 400'

25 sx plug ?? (no tag) - 1306'

25 sx plug ?? (no tag) - 2246'

5 1/2" csg patch @ 2847 w/ 127 bbls cmt to surf

perf @ 3040' - unable to sqz tbg @ 3090'
40 sx plug 3040' - 2740'

8 5/8" 24/32# @ 2990' w/2000 sx TOC 160'

perf @ 4032' - unable to sqz tbg @ 4082'
25 sx plug 3885' - 4032'

Csg leaks @ 4320'-4350' sqzd w/ 250 sx

Cgs leaks @ 4943'-4974' sqzd w/ 350 sx

Csg leaks @ 5360' sqzd w/ 325 sx

50 sx plug 5113' - 5620'

TOC @ 5380' by TS

CIBP @ 5640' w/ 20' cmt
Blinbry Perfs
B-II @ 5679'-5716'
B-III @ 5746'-5821'
B-IV @ 5860'-5930'
B-V @ 5955'-5984'
Tubbs T-I perfs @ 6008'-6087'
Drinkard Perfs
D-I @ 6454'-6498'
D-II @ 6553'-6576'
D-III @ 6581'-6625'
D-IV @ 6640'-6645'
D-IV-V @ 6658'-6686'
D-V 6700'-6704'
CIBP @ 7900' w/2 sx cmt
Ellen perfs @ 7988'-8956'

5 1/2" 15.5/17# @ 8142' w/ 350 sx TOC @ 5380' TS

PBTD @ 5620'
TD @ 8145'

EXHIBIT G

Well: Northeast Drinkard Unit # 603

Field: Eunice N. Blinebry-Tubb-Drinkard

Location: 3390' FNL & 760' FWL
Unit E, Sec. 15, T21S, R37E
Lea County, New Mexico

API #: 30-025-09913

Current Status: P&A (11/93)
spud 2-18-51

Elevation: 3451' (GR)

Install P&A Marker

CICR @ 750'
Perf 5-1/2" casing @ 800'
Cmt to Surface inside & outside casing

17-1/2" Hole
13-3/8" 36# H-40 CSA 312'
Cement w / 325 sx
Circulated to Surface

CICR @ 2802' (63 sx)
Perf 5-1/2" casing @ 2875'
Cmt sqz 5-1/2" x 8-5/8" annulus (400 sx)
TOC @ 850' (TS)

11" Hole
8-5/8" 24# J-55 CSA 2818'
Cement w / 500 sx
Circulated to Surface

Blinebry Perfs:
5715-5974 (59 Holes)

Tubb Perfs:
5993-6080 (23 Holes)

Drinkard Perfs:
6466-6682 (58 Holes)

Abo Perfs:
6723-7231 (26 Holes)
Cmt sqz w/ 350 sx

CIBP @ 7281' (2 sx)

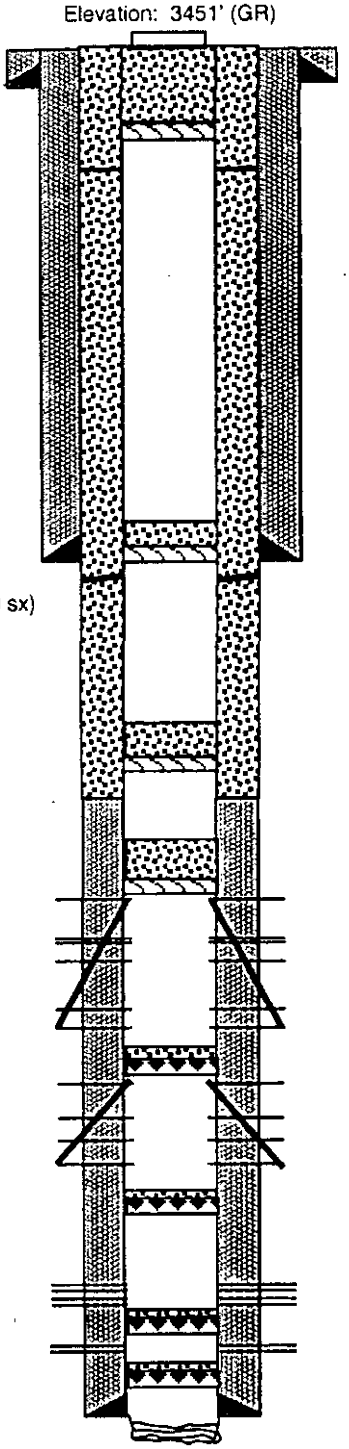
Hare Perfs:
7742-7938 (596 Holes)

CIBP @ 7950' (2 sx)

Hare Perfs:
7974-90 (108 Holes)

CIBP @ 8010' (1 sx)

Ellenburger Open Hole:
8030-8067



TD @ 8182'

CICR @ 4841' w/ 126' cmt
Cmt sqz leak 4934-65 w / 200 sx

CICR @ 5651' w/ 185' cmt
Cmt sqz perfs 5715-6682 w / 250 sx

CIBP @ 6696' w/ 35' cmt

7-7/8" Hole
5-1/2" 15.5/17# J-55 CSA 8030'
Cement w / 500 sx
TOC @ 5115' (Temp Survey)

EXHIBIT G

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin	Code	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00554			LE		2	2	16	21S	37E	672744	3595610*	0	80	70	10
CP 00162			LE	1	4	2	09	21S	37E	672621	3596915*	1310	120		
CP 00163			LE	1	4	2	09	21S	37E	672621	3596915*	1310	120		
CP 01141 POD2			LE	3	4	3	15	21S	37E	673541	3594250	1575	40		
CP 01141 POD3			LE	3	4	3	15	21S	37E	673541	3594250	1575	40		
CP 01141 POD4			LE	3	4	3	15	21S	37E	673541	3594250	1575	45		
CP 01575 POD1			LE	1	2	1	22	21S	37E	673543	3594200	1619	40	35	5
CP 01575 POD2		CP	LE	2	2	1	22	21S	37E	673610	3594192	1661	35	35	0
CP 00164			LE	2	1	1	21	21S	37E	671665	3594080*	1872	120		
CP 01185 POD1			LE		1	3	14	21S	37E	674598	3594689	2070	70		
CP 01574 POD1		CP	LE	2	4	4	15	21S	37E	674563	3594599	2080	68	57	11
CP 01185 POD3			LE		1	3	14	21S	37E	674592	3594620	2096	70		
CP 01185 POD2			LE		1	3	14	21S	37E	674623	3594674	2099	70		
CP 01185 POD4			LE		1	3	14	21S	37E	674633	3594610	2136	70		
CP 01574 POD2		CP	LE	1	3	3	14	21S	37E	674654	3594594	2163	68	57	11
CP 00552			LE		2	4	04	21S	37E	672700	3598022*	2412	90	75	15
CP 00553			LE		2	4	04	21S	37E	672700	3598022*	2412	90	75	15
CP 00212			LE	2	2	1	14	21S	37E	675254	3595753*	2514	46		
CP 00235			LE	2	2	1	23	21S	37E	675283	3594144*	2931	81		
CP 01026 POD1			LE	1	1	3	17	21S	37E	669809	3594958	3006	167	95	72
CP 00251			LE	2	3	4	22	21S	37E	674099	3592915*	3016	103		
CP 00240			LE	4	2	1	23	21S	37E	675283	3593944*	3036	72		
CP 00241			LE	4	2	1	23	21S	37E	675283	3593944*	3036	76		
CP 00252								S	37E	674493	3593125*	3038	106		
CP 00239			LE	1	1	2	23	21S	37E	675485	3594152*	3104	89		
CP 00236			LE	3	1	2	23	21S	37E	675485	3593952*	3203	83		

1610 meters = 5,280'

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

EXHIBIT H

WATER COLUMN/ AVERAGE DEPTH TO WATER

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
														Average Depth to Water:	**62 feet**
														Minimum Depth:	**35 feet**
														Maximum Depth:	**95 feet**

Record Count: 26

UTMNAD83 Radius Search (in meters):

Easting (X): 672744 **Northing (Y):** 3595610 **Radius:** 3220

EXHIBIT H

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

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

(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	Code	Grant	Source	q q q 6416 4	Sec	Twn	Rng	X	Y	Distance
CP 00554		STK	3	MILLARD DECK	LE	CP 00554			Shallow	2 2	16	21S	37E	672744	3595610*	0
CP 00162		PLS	3	SAM W GRAVES	LE	CP 00162				1 4 2	09	21S	37E	672621	3596915*	1310
CP 00163		PLS	3	SAM W GRAVES	LE	CP 00163				1 4 2	09	21S	37E	672621	3596915*	1310
CP 01141		MON	0	STRAUB CORPORATION	LE	CP 01141 POD1				3 4 3	15	21S	37E	673530	3594263	1559
					LE	CP 01141 POD5				3 4 3	15	21S	37E	673514	3594253	1560
					LE	CP 01141 POD2			Shallow	3 4 3	15	21S	37E	673541	3594250	1575
					LE	CP 01141 POD3			Shallow	3 4 3	15	21S	37E	673541	3594250	1575
					LE	CP 01141 POD4			Shallow	3 4 3	15	21S	37E	673541	3594250	1575
CP 01436		MON	0	REGENCY FIELD SERVICES LLC	LE	CP 01436 POD1				3 4 3	15	21S	37E	673562	3594229	1604
CP 01575		MON	0	ENERGY TRANSFER COMPANY REGENCY FIELD SERVICES INC	LE	CP 01575 POD1			Shallow	1 2 1	22	21S	37E	673542	3594200	1619
					LE	CP 01575 POD2		NON	Shallow	2 2 1	22	21S	37E	673609	3594192	1661
CP 00164		PLS	3	SAM W GRAVES	LE	CP 00164				2 1 1	21	21S	37E	671665	3594080*	1872
CP 01185		MON	0	SOUTHERN UNION GAS SERVICES	LE	CP 01185 POD1			Shallow	1 3	14	21S	37E	674598	3594689	2070
CP 01110		MON	0	SOUTHERN UNION GAS SERVICES	LE	CP 01110 POD1				1 3	14	21S	37E	674585	3594648	2077
					LE	CP 01110 POD2				1 3	14	21S	37E	674585	3594648	2077
					LE	CP 01110 POD3				1 3	14	21S	37E	674585	3594648	2077
					LE	CP 01110 POD4				1 3	14	21S	37E	674585	3594648	2077
					LE	CP 01110 POD5				1 3	14	21S	37E	674585	3594648	2077

1610 meters = 5,280'

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

(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)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Twn	Rng	X	Y	Distance
CP 01574		MON	0	GHD SERVICES INC	LE	CP 01574 POD1		NON	Shallow	2 4 4	15	21S	37E	674562	3594599	2080
CP 01185		MON	0	SOUTHERN UNION GAS SERVICES	LE	CP 01185 POD3			Shallow	1 3	14	21S	37E	674592	3594620	2096
CP 01121		EXP	0	SOUTHERN UNION GAS SERVICES	LE	CP 01121 POD1				3 1 3	14	21S	37E	674605	3594639	2099
L 12639	L	CLS	0	SOUTHERN UNION GAS SERVICES	LE	L 12639 POD1	C			3 1 3	14	21S	37E	674605	3594639	2099
CP 01185		MON	0	STRAUB CORPORATION	LE	CP 01185 POD2			Shallow	1 3	14	21S	37E	674623	3594674	2099
CP 01437		MON	0	REGENCY FIELD SERVICES LLC	LE	CP 01437 POD1				1 3 3	14	21S	37E	674611	3594596	2124
CP 01185		MON	0	STRAUB CORPORATION	LE	CP 01185 POD4			Shallow	1 3	14	21S	37E	674632	3594610	2136
CP 01437		MON	0	REGENCY FIELD SERVICES LLC	LE	CP 01437 POD2				1 3 3	14	21S	37E	674636	3594615	2138
CP 01574		MON	0	GHD SERVICES INC	LE	CP 01574 POD2		NON	Shallow	1 3 3	14	21S	37E	674654	3594594	2163
CP 01037		EXP	0	MCNEILL RANCH	LE	CP 01037 POD1				2 2 2	10	21S	37E	674322	3597345	2346
CP 00552		STK	3	MILLARD DECK	LE	CP 00552			Shallow	2 4	04	21S	37E	672700	3598022*	2412
CP 00553		STK	3	MILLARD DECK	LE	CP 00553			Shallow	2 4	04	21S	37E	672700	3598022*	2412
CP 00212		PDL	3	J.M. OWENS	LE	CP 00212				2 2 1	14	21S	37E	675254	3595753*	2514
CP 00235		IND	61	VERSADO GAS PROCESSORS LLC	LE	CP 00235				2 2 1	23	21S	37E	675283	3594144*	2931
CP 01026		DOM	1	DAVID KERBO	LE	CP 01026 POD1			Shallow	1 1 3	17	21S	37E	669809	3594958	3006
CP 00251		IND	48	VERSADO GAS PROCESSORS LLC	LE	CP 00251				2 3 4	22	21S	37E	674099	3592915*	3016
CP 00240		IND	34	VERSADO GAS PROCESSORS LLC	LE	CP 00240			Shallow	4 2 1	23	21S	37E	675283	3593944*	3036
CP 00241		IND	11	VERSADO GAS PROCESSORS LLC	LE	CP 00241			Shallow	4 2 1	23	21S	37E	675283	3593944*	3036
CP 00252		IND	40	VERSADO GAS PROCESSORS, LLC	LE	CP 00252				4 2 4	22	21S	37E	674493	3593125*	3038
CP 00239		IND	25	VERSADO GAS PROCESSORS LLC	LE	CP 00239			Shallow	1 1 2	23	21S	37E	675485	3594152*	3104
CP 00236		IND	40	VERSADO GAS PROCESSORS LLC	LE	CP 00236				3 1 2	23	21S	37E	675485	3593952*	3203

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

Record Count: 39

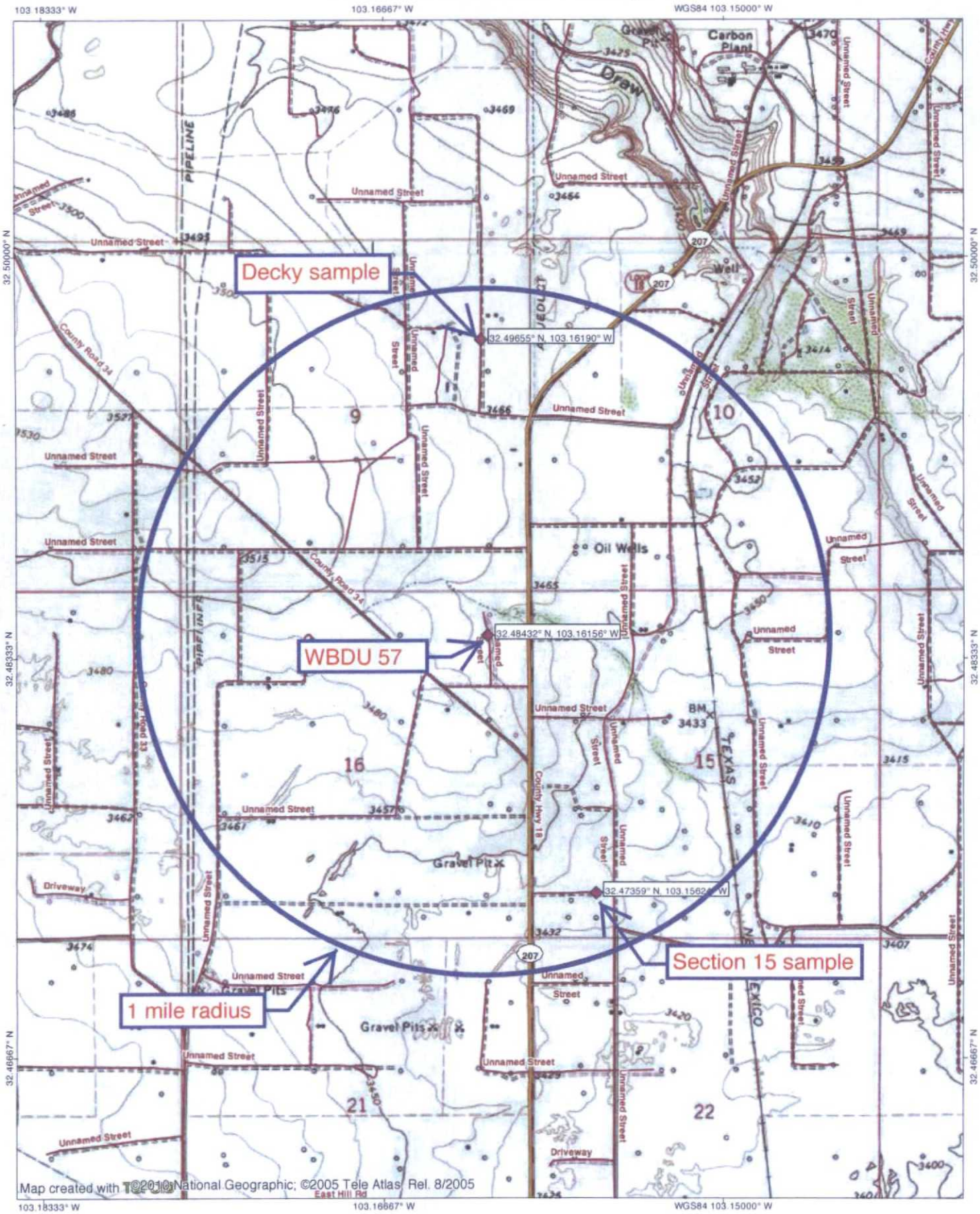
UTMNAD83 Radius Search (in meters):

Easting (X): 672744 **Northing (Y):** 3595610 **Radius:** 3220

Sorted by: Distance

EXHIBIT H

TOPO! map printed on 02/03/16 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 I

TN + MN
7°
02/03/16

Analytical Report
Lab Order **1601901**
Date Reported: **2/2/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Apache WBDUSWD
Lab ID: 1601901-001 **Matrix:** AQUEOUS

Client Sample ID: Apache Decky Pond
Collection Date: 1/20/2016 4:48:00 PM
Received Date: 1/25/2016 11:19:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664A						Analyst: **tnc**	
N-Hexane Extractable Material	ND	13		mg/L	1	1/25/2016 1:30:00 PM	23379
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	260	10	*	mg/L	20	1/25/2016 5:03:44 PM	R31665
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	751	20.0	*	mg/L	1	1/28/2016 6:43:00 PM	23428

EXHIBIT I

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Apache WBDUSWD
Lab ID: 1601901-002 **Matrix:** AQUEOUS

Client Sample ID: Apache MD Windmill
Collection Date: 1/21/2016 9:01:00 AM
Received Date: 1/25/2016 11:19:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664A						Analyst: **tnc**	
N-Hexane Extractable Material	ND	9.8		mg/L	1	1/25/2016 1:30:00 PM	23379
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	170	10		mg/L	20	1/25/2016 3:49:15 PM	R31665
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	774	20.0	*	mg/L	1	1/28/2016 6:43:00 PM	23428

EXHIBIT I

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Apache WBDUSWD
Lab ID: 1601901-003 **Matrix:** AQUEOUS

Client Sample ID: Apache McCasland Tr
Collection Date: 1/21/2016 1:21:00 PM
Received Date: 1/25/2016 11:19:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664A						Analyst: **tnc**	
N-Hexane Extractable Material	ND	9.9		mg/L	1	1/25/2016 1:30:00 PM	23379
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	48	10		mg/L	20	1/25/2016 7:07:50 PM	R31665
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	434	20.0		mg/L	1	1/28/2016 6:43:00 PM	23428

EXHIBIT I

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Apache WBDUSWD
Lab ID: 1601901-004 **Matrix:** AQUEOUS

Client Sample ID: Apache Section 15
Collection Date: 1/21/2016 11:33:00 AM
Received Date: 1/25/2016 11:19:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664A						Analyst: **tnc**	
N-Hexane Extractable Material	ND	9.9		mg/L	1	1/25/2016 1:30:00 PM	23379
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	620	25	*	mg/L	50	1/26/2016 7:36:31 PM	R31714
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	1570	20.0	*	mg/L	1	1/28/2016 6:43:00 PM	23428

EXHIBIT I

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1601901**

02-Feb-16

Client: Permits West
Project: Apache WBDUSWD

Sample ID	MB-23379	SampType:	MBLK		TestCode:	EPA Method 1664A				
Client ID:	PBW	Batch ID:	23379		RunNo:	31670				
Prep Date:	1/25/2016	Analysis Date:	1/25/2016		SeqNo:	969206	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	10								

Sample ID	LCS-23379	SampType:	LCS		TestCode:	EPA Method 1664A				
Client ID:	LCSW	Batch ID:	23379		RunNo:	31670				
Prep Date:	1/25/2016	Analysis Date:	1/25/2016		SeqNo:	969207	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	39	10	40.00	0	96.5	78	114			

Qualifiers:

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

EXHIBIT I

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1601901**

02-Feb-16

Client: Permits West

Project: Apache WBDUSWD

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R31665	RunNo:	31665					
Prep Date:		Analysis Date:	1/25/2016	SeqNo:	969035	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R31665	RunNo:	31665					
Prep Date:		Analysis Date:	1/25/2016	SeqNo:	969036	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.1	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R31714	RunNo:	31714					
Prep Date:		Analysis Date:	1/26/2016	SeqNo:	970466	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R31714	RunNo:	31714					
Prep Date:		Analysis Date:	1/26/2016	SeqNo:	970467	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.5	90	110			

Qualifiers:

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

EXHIBIT I

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1601901**

02-Feb-16

Client: Permits West

Project: Apache WBDUSWD

Sample ID	MB-23428	SampType:	MBLK		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	PBW	Batch ID:	23428		RunNo:	31755				
Prep Date:	1/27/2016	Analysis Date:	1/28/2016		SeqNo:	971754	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-23428	SampType:	LCS		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	LCSW	Batch ID:	23428		RunNo:	31755				
Prep Date:	1/27/2016	Analysis Date:	1/28/2016		SeqNo:	971755	Units:	mg/L		

Analyte	*Result*	*PQL*	*SPK value*	*SPK Ref Val*	*%REC*	*LowLimit*	*HighLimit*	*%RPD*	*RPDLimit*	*Qual*
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

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

EXHIBIT I

Ogallala boundary

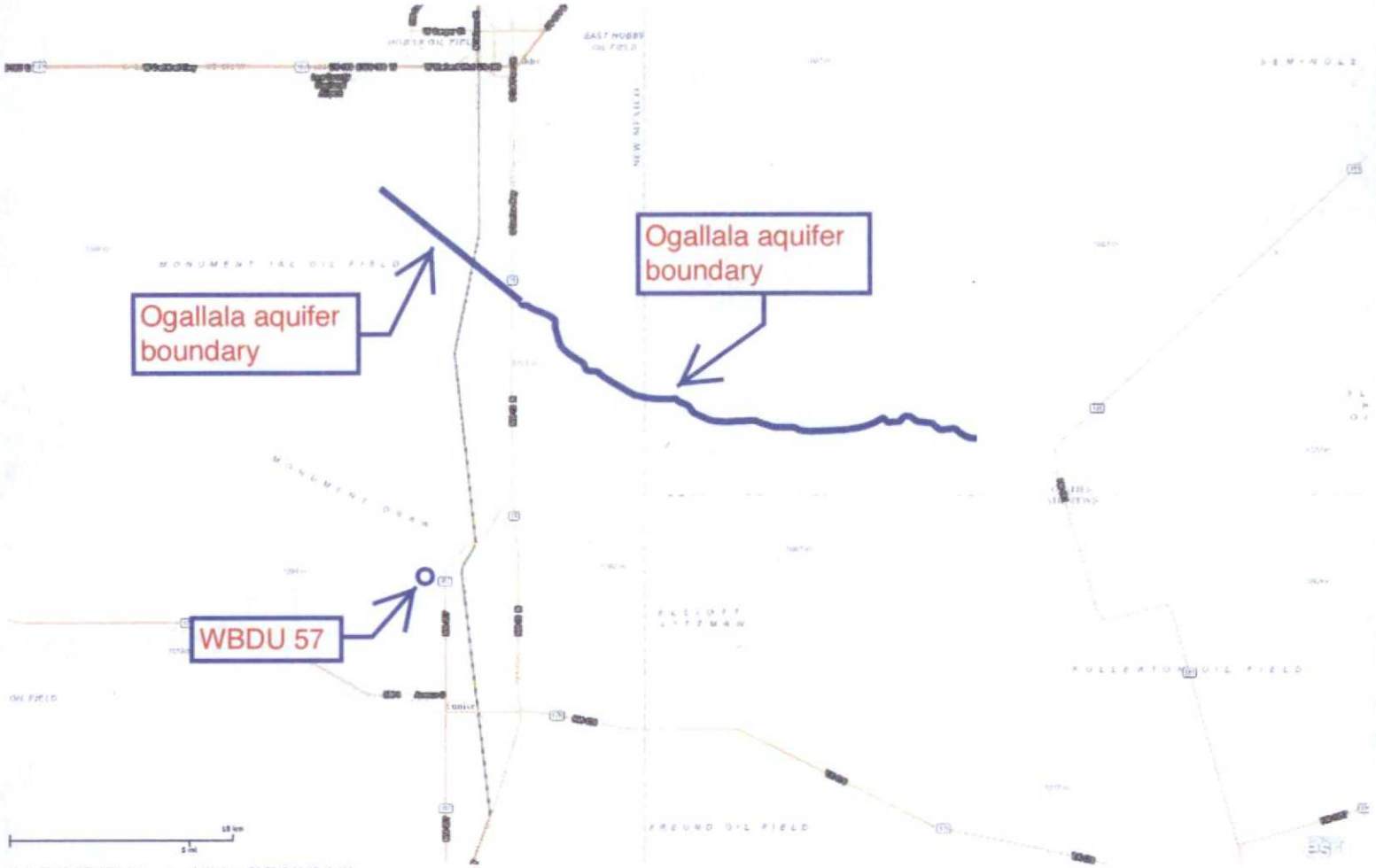


EXHIBIT I

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

Brian,

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

Regards,

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

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

Martin:

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

Please contact me or Justin if you have further questions.

Sincerely,

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

EXHIBIT J

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

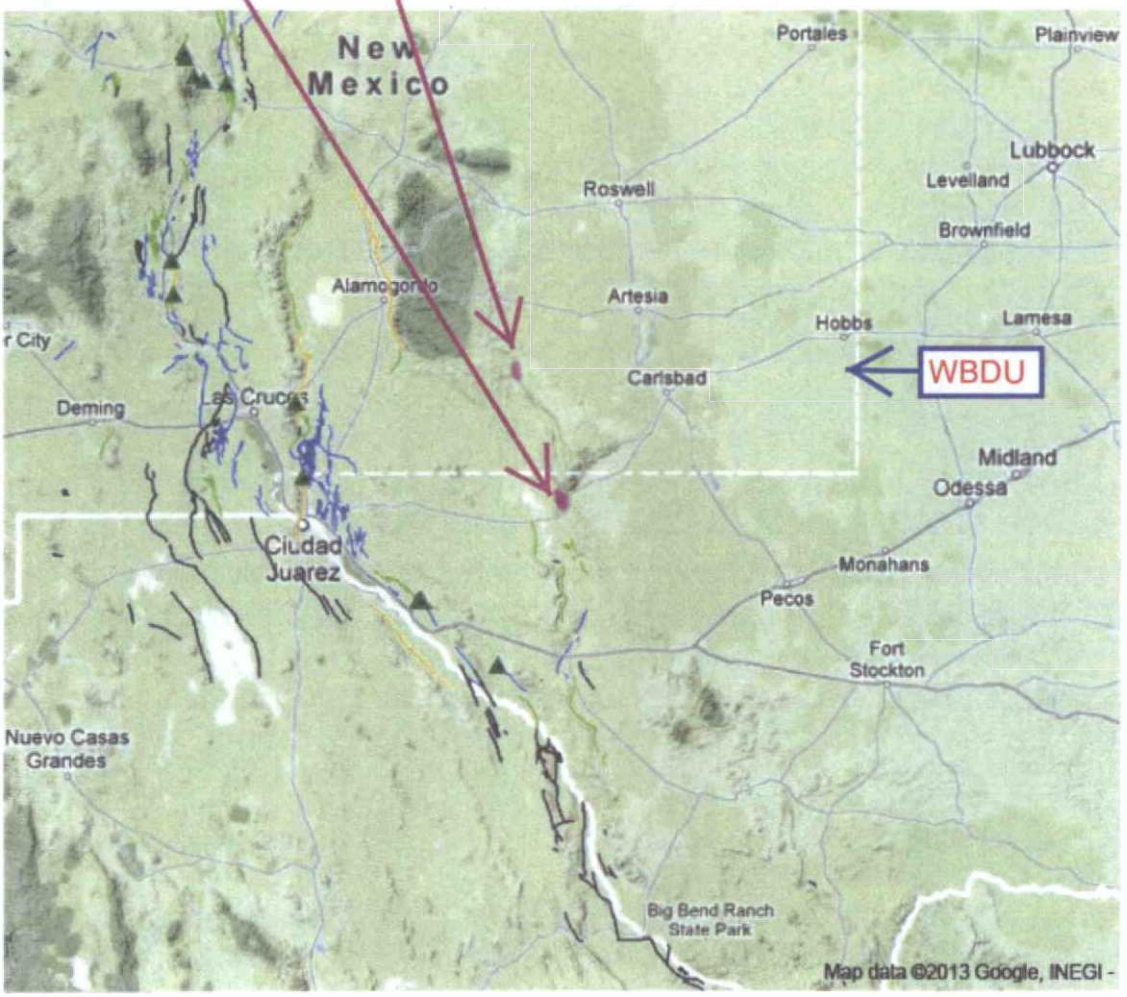


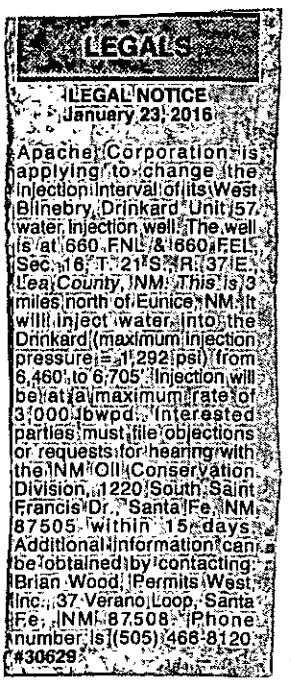
EXHIBIT J

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

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

Beginning with the issue dated
January 23, 2016
and ending with the issue dated
January 23, 2016.



LEGALS

LEGAL NOTICE
January 23, 2016

Apache Corporation is applying to change the injection interval of its West Blinebry Drinkard Unit 57 water injection well. The well is at 660 FNL & 660 FEL, Sec. 16, T. 21 S., R. 37 E., Lea County, NM. This is 3 miles north of Eunice, NM. It will inject water into the Drinkard (maximum injection pressure = 1,292 psi) from 6,460 to 6,705'. Injection will be at a maximum rate of 3,000 bwpd. Interested parties must file objections or requests for hearing with the NM Oil Conservation Division, 1220 South Saint Francis Dr., Santa Fe, NM 87505 within 15 days. Additional information can be obtained by contacting Brian Wood, Permits West Inc., 37 Verano Loop, Santa Fe, NM 87508. Phone number is (505) 466-8120. #30629

Publisher

Sworn and subscribed to before me this
23rd day of January 2016.

Business Manager

My commission expires
January 29, 2019
(Seal)

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-19

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

02108485

00169433

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

EXHIBIT K

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87506 (505) 466-8120

February 5, 2016

NM State Land Office
PO Box 1148
Santa Fe NM 87504

Apache Corporation is applying (see attached application) to change the injection interval of its West Blinebry Drinkard Unit 57 water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection change. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: West Blinebry Drinkard Unit 57 (state lease) TD = 6,775'
Proposed Injection Zone: Drinkard from 6,460' to 6,700'
Location: 660' FNL & 660' FEL Sec. 16, T. 21 S., R. 37 E., Lea County, NM
Approximate Location: 3 air miles north of Eunice, NM
Applicant Name: Apache Corporation (432) 818-1062
Applicant's Address: 303 Veterans Airpark Lane, #3000, Midland, TX 79705

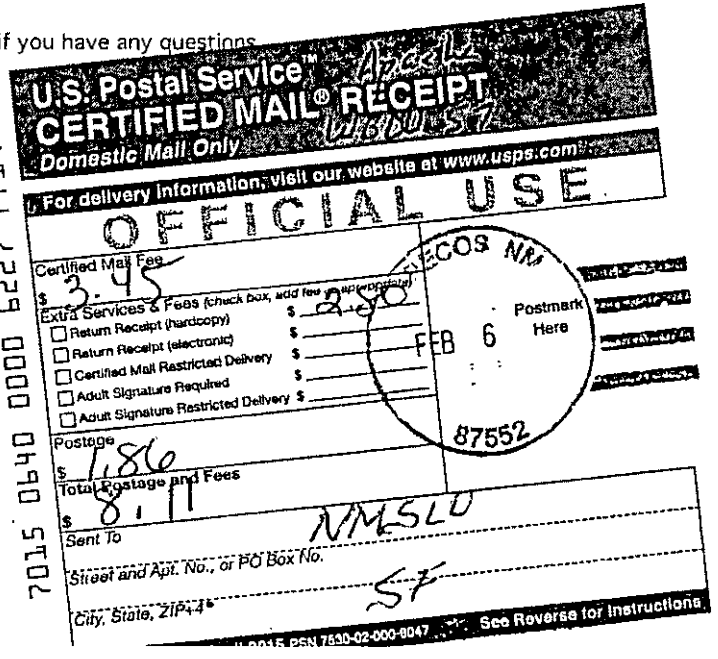
Submittal Information: Application for a water injection well change will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The NMOCD address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Brian Wood

EXHIBIT L



PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87506 (505) 466-8120

February 5, 2016

BLM
620 E. Greene
Carlsbad NM 88220

Apache Corporation is applying (see attached application) to change the injection interval of its West Blinebry Drinkard Unit 57 water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection change. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: West Blinebry Drinkard Unit 57 (state lease) TD = 6,775'
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Location: 660' FNL & 660' FEL Sec. 16, T. 21 S., R. 37 E., Lea County, NM
Approximate Location: 3 air miles north of Eunice, NM
Applicant Name: Apache Corporation (432) 818-1062
Applicant's Address: 303 Veterans Airpark Lane, #3000, Midland, TX 79705

Submittal Information: Application for a water injection well change 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 [illegible]
NMOCD address [illegible]
number is (505

Please call me if

Sincerely,

Brian Wood

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

February 5, 2016

Chevron USA
PO Box 1635
Houston TX 77251

Apache Corporation is applying (see attached application) to change the injection interval of its West Blinebry Drinkard Unit 57 water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection change. This letter is a notice only. No action is needed unless you have questions or objections.

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Please call me if you have questions.

Sincerely,

Brian Wood

EXHIBIT L

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Apache WBDU 57
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City, State, ZIP+4® Houston TX TX 87552
Apache WBDU 57
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7015 0640 0000 6227 7610

DECOS NM FEB 6

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

February 5, 2016

Conoco Phillips Co
PO Box 7500
Bartlesville OK 74005-7500

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Please call me if you have questions.

Sincerely,

Brian Wood

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

7015 0640 0000 6227 7627

DECOS NM FEB 6

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

February 5, 2016

ExxonMobil Corp.
PO Box 4358
Houston TX 77210-4358

Apache Corporation is applying (see attached application) to change the injection interval of its West Blinebry Drinkard Unit 57 water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection change. This letter is a notice only. No action is needed unless you have questions or objections.

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Please call me if you ha

Sincerely,

EXHIBIT 1

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

February 5, 2016

John H. Hendrix Corp
110 N. Marienfeld Street #400
Midland TX 79701

Apache Corporation is applying (see attached application) to change the injection interval of its West Blinebry Drinkard Unit 57 water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection change. This letter is a notice only. No action is needed unless you have questions or objections.

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Midland TX TX
Apache WBDU 57
Street and Apt. No., or PO Box No.
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PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

February 5, 2016

Key Energy Services
1301 McKinney Street, Suite 1800
Houston TX 77010

Apache Corporation is applying (see attached application) to change the injection interval of its West Blinebry Drinkard Unit 57 water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection change. This letter is a notice only. No action is needed unless you have questions or objections.

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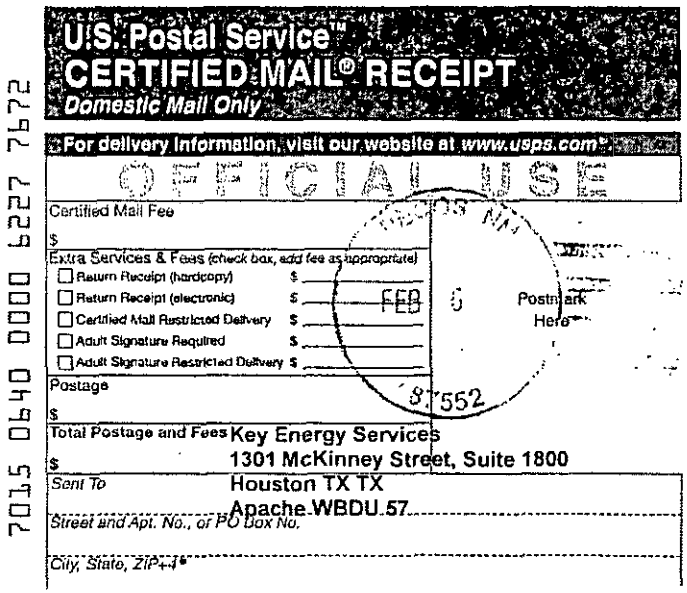
Please call me if you have any questions.

Sincerely,

Brian Wood

EXHIBIT 1



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

February 5, 2016

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

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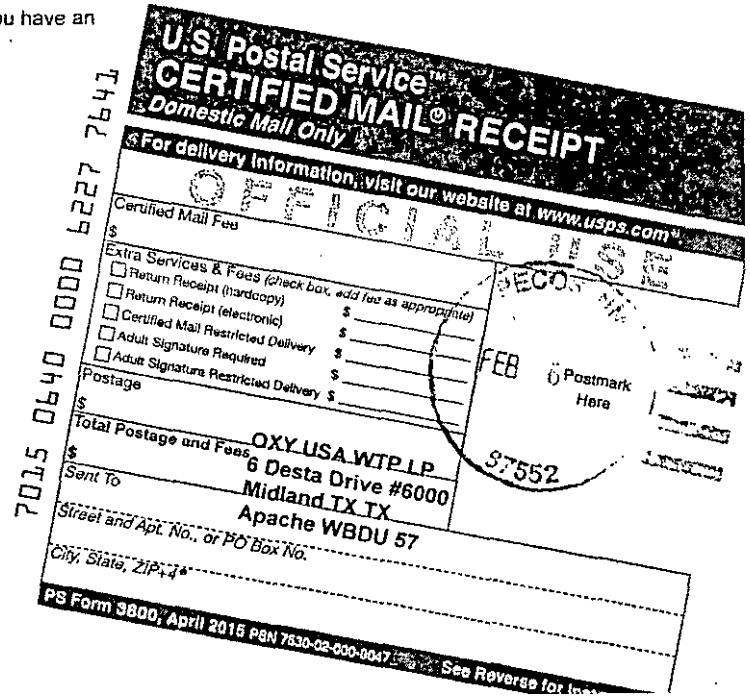
Please call me if you have an

Sincerely,

Brian Wood



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

February 5, 2016

Penroc Oil Corp
PO Box 2769
Hobbs NM 88241

Apache Corporation is applying (see attached application) to change the injection interval of its West Blinebry Drinkard Unit 57 water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection change. This letter is a notice only. No action is needed unless you have questions or objections.

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Applicant Name: Apache Corporation (432) 818-1062
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Please call me if you have any questions.

Sincerely,

Brian Wood

EXHIBIT L

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Penroc Oil Corp
PO Box 2769
Hobbs NM NM
Apache WBDU 57

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

February 5, 2016

XTO Energy Inc
PO Box 6501
Englewood CO 80155

Apache Corporation is applying (see attached application) to change the injection interval of its West Blinebry Drinkard Unit 57 water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection change. This letter is a notice only. No action is needed unless you have questions or objections.

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Location: 660' FNL & 660' FEL Sec. 16, T. 21 S., R. 37 E., Lea County, NM
Approximate Location: 3 air miles north of Eunice, NM
Applicant Name: Apache Corporation (432) 818-1062
Applicant's Address: 303 Veterans Airpark Lane, #3000, Midland, TX 79705

Submittal Information: Application for a water injection well change 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 NMOCD 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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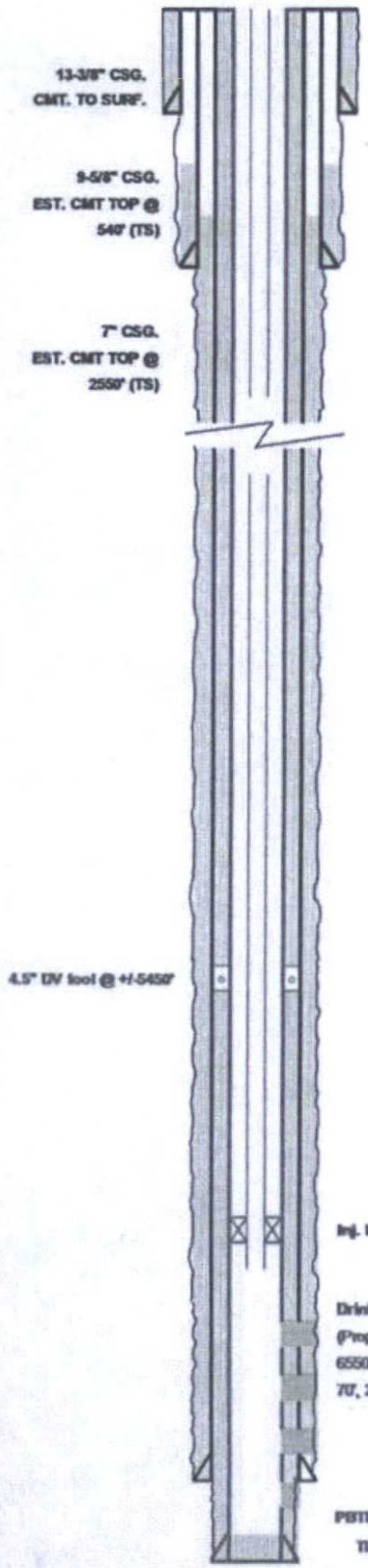
Apache WBDU 57

Proposed Wellbore Diagram

Apache Corporation
WBDU #57W (Harry Leonard NCT-E #4)
WELL DIAGRAM (PROPOSED CONFIGURATION)



WELL NAME:	WBDU #57W (Harry Leonard NCT-E #4)	**API:**	30-025-06623
LOCATION:	660' FNL / 660' FEL, Sec 16, T-21S, R-37E	**COUNTY:**	Lea Co., NM
SPUD/TD DATE:	9/25/1948 - 11/4/1948	**COMP. DATE:**	11/22/1948
PREPARED BY:	Bret Shapot	**DATE:**	11/10/2015
TD (ft): 6,775.0	**KB Elev. (ft):** 3486.0	**KB to Ground (ft)**	11.0
PBTD (ft): 6,760.0	**Ground Elev. (ft):** 3475.0		

CASING/TUBING	SIZE (IN)	WEIGHT (LB/FT)	GRADE	DEPTHS (FT)	
Surface Casing	13-3/8" (Cmt. w/ 300sx., Circ.)	48.00	H-40	0.00	297.00
Int. Casing	9-5/8" (Cmt. w/ 1300sx, TOC @ 540')	36.00	H-40	0.00	2,800.00
Prod. Casing	7" (Cmt. w/ 700sx, TOC @ 2550')	23.00	J-55	0.00	6,645.00
Liner	4-1/2" Cmt. To surf	11.60	J-55	0.00	6,775.00
Tubing	2-7/8"	6.50	J-55	0.00	6,515.00

INJECTION TBG STRING

ITEM	DESCRIPTION	LENGTH (FT)	Btm (FT)
1	2-3/8" 4.7 LB/FT J-55 IPC TBG	6,492.00	6492.00
2	2-3/8" ON/OFF TOOL W/ 1.78 F PROFILE	1.80	6493.80
3	2-3/8" X 4-1/2" NICKLE PLATED ARROW-SET PKR	6.20	6500.00
4	2-3/8" 4.7 LB/FT J-55 IPC TBG	8.00	6508.00
5	2-3/8" PROFILE NIPPLE 1.50 R	0.90	6508.90
6	2-3/8" 4.7 LB/FT J-55 IPC TBG	6.00	6,514.90
7			
8			
9			
10			

PERFORATIONS

Form.	Intervals	FT	SPF
Drinkard	(Estimated) 6550' - 6685'	70	4

C-108 Review Checklist: Received 2-05-2016 Add. Request: ______ Reply Date: ______ Suspended: ______ [Ver 15]

ORDER TYPE: (WFX) / PMX / SWD Number: ______ Order Date: ______ Legacy Permits/Orders: R-12531

Well No. 57 Well Name(s): WBDU

API : 30-0 25-06623 Spud Date: 9-25-48 New or Old: O (*UIC Class II Primacy 03/07/1982*)

Footages 660FNL 660FEL Lot ___ or Unit A Sec 16 Tsp 21S Rge 37E County Lea

General Location: ~3 miles N/Eunice Pool: Eunice; Bli-Tu-Dr Pool No.: 22900

BLM 100K Map: JAL Operator: Apache Corp OGRID: 873 Contact: Brian Wood, agent

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

WELL FILE REVIEWED ✓ Current Status: ~~Producer~~ Injection → Blinebry & Drinkard

WELL DIAGRAMS: NEW: Proposed ○ or **RE-ENTER:** Before Conv. ✓ After Conv. ✓ Logs in Imaging: Y

Planned Rehab Work to Well: new 4½ Liner 6775 -- TD

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)		Cement (Sx) or Cf	Cement Top and Determination Method
Planned __or Existing __Surface	17½/13⅜	300	Stage Tool	300	Surface/Visual
Planned__or Existing __ Interm/Prod	12¼/9⅝	2800		~~590~~ 1310	540/T.S.
Planned__or Existing __Interm/Prod	8¾/7	6645		~~[illegible]~~ 700	2550/T.S
Planned__or Existing __ Prod/Liner					
Planned__or Existing __(Liner)	4½	6775		606	Surface/Visual
Planned__or Existing __ OH / PERF	6460/~~6580~~/4700/~~6695~~		Inj Length 145		

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		Drinkard	6460 ~~6580~~
Confining Unit: Litho. Struc. Por.		Abo	6705
Proposed Inj Interval TOP:	6460		
Proposed Inj Interval BOTTOM:	6700		
Confining Unit: (Litho). Struc. Por.		Drinkard	6460
Adjacent Unit: (Litho) Struc. Por.		Abo	6705

Completion/Operation Details:

Drilled TD 6775 PBTD 6760

NEW TD ______ NEW PBTD ______

NEW Open Hole ○ or NEW Perfs ✓

Tubing Size 2⅜ in. Inter Coated? ______

Proposed Packer Depth ~~[illegible]~~ 6440 ft

Min. Packer Depth 6560 (100-ft limit)

Proposed Max. Surface Press. 1120 psi

Admin. Inj. Press. 1120 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P N/A Noticed? ___ **BLM Sec Ord** ○ **WIPP** ○ Noticed? ___ **Salt/Salado T:** 1200 **B:** 2500 **NW: Cliff House fm** ___

FRESH WATER: Aquifer Quaternary Max Depth 167 **HYDRO AFFIRM STATEMENT By Qualified Person** ✓

NMOSE Basin: Capitan **CAPITAN REEF:** thru adj (NA) **No. Wells within 1-Mile Radius?** 2 **FW Analysis** ___

Disposal Fluid: Formation Source(s) Produced H_2O Analysis? ______ On Lease ○ Operator Only ○ or Commercial ✓

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

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

AOR Wells: 1/2-M Radius Map? Y Well List? ______ Total No. Wells Penetrating Interval: 40 Horizontals? Ø

Penetrating Wells: No. Active Wells 38 Num Repairs? ___ on which well(s)? ______ Diagrams? ______

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

NOTICE: Newspaper Date 1-23-2016 Mineral Owner NMSLO, BLM Surface Owner NMSLO N. Date 2-6

RULE 26.7(A): Identified Tracts? Y Affected Persons: ConocoPhillips, EXXonMobil, Key N. Date 2-6

Order Conditions: Issues: ______

Add Order Cond: ______