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د. . م.	DATE IN 3317	SUSPENSE			7 TYPE WFX	APP NOPKSCI706	240732
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· ·		. *	EXICO OIL CON - Engineerin South St. Francis Dr	SERVATION	DIVISION		
		ADMIN	IISTRATIVE	APPLICAT	ION CHEC	KLIST	
	THIS CHECK		FOR ALL ADMINISTRATIV			SION RULES AND REGL	
	Application Ac	ronyms:					•
	HO]	IC-Downhole Con [PC-Pool Commi [WFX-Wat [SW]		ease Commingli -Lease Storage] [PMX-Pressure al] [IPI-Injectio	ng] [PLC-Pool/L [OLM-Off-Lease Maintenance Ex n Pressure Increa	ease Commingling Measurement] pansion] ise]	
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E	Blinebry only	• •	n - Disposal - Pressu X	re Increase - Enha SWD 🗌 IPI		PPR	ŐČ
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		[B] X Off	fset Operators, Lease	holders or Surface	Owner		
		[C] X Ap	plication is One Whi	ch Requires Publi	shed Legal Notice		
		[D] X No	tification and/or Con Bureau of Land Management -	Current Approval	by BLM or SLO		
		[E] X For	all of the above, Pro	oof of Notification	or Publication is	Attached, and/or,	
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	approval is acc	urate and complein the required info	nereby certify that the ete to the best of my prmation and notifica	knowledge. I also affons are submitte	o understand that <b>n</b> ed to the Division.	o action will be tak	
	Brian Wood		must be completed by a	in individual with ma		visory capacity.	0 01 17
•	Print or Type Na	<u> </u>	Signature	UK	Consultant		2-21-17 Date

(505) 466-8120

Title				-
brian@	permi	tswe	est.com	

e-mail Address

ENE	TE OF NEW MEXICOOil Conservation DivisionFORM C-108RGY, MINERALS AND NATURAL1220 South St. Francis Dr.Revised June 10, 2003OURCES DEPARTMENTSanta Fe, New Mexico 87505Revised June 10, 2003
	APPLICATION FOR AUTHORIZATION TO INJECT
I.	PURPOSE:       XXX       Secondary Recovery       Pressure Maintenance       Disposal       Storag         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: 505 466-812
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
<b>v</b> .	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. EAST BLINEBRY DRINKARD UNIT 54
VII.	Attach data on the proposed operation, including: <u>30-025-06567</u>
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>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.).</li> </ol>
*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 wit 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 71 / TITLE: CONSULTANT
	SIGNATURE:DATE: FEB. 20, 2017
	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:
	RIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

#### III. WELL DATA

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.

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,

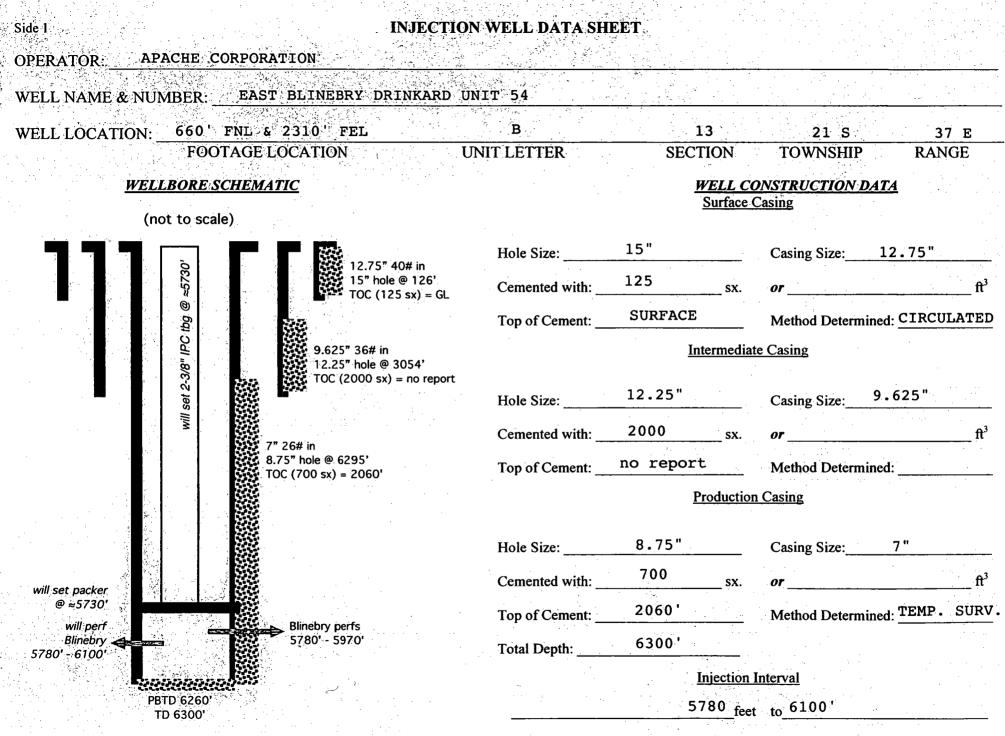
(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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.

Α.

**B**.



(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: ≈5730 '

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? BLINEBRY OIL WELL

2. Name of the Injection Formation: BLINEBRY

- 3. Name of Field or Pool (if applicable): <u>EUNICE; BLI-TU-DR</u>, 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: YATES (2730'), 7 RIVERS (3000'), QUEEN (3640'), GRAYBURG (3943'), SAN ANDRES (4207')

UNDER: TUBB (≈6250'), DRINKARD (≈6615), ABO (≈6895')

APACHE CORPORATION EAST BLINEBRY DRINKARD UNIT 54 660' FNL & 2310' FEL SEC. 13, T. 21 S., R. 37 E., LEA COUNTY, NM

30-025-06567

I. Purpose is to convert a 6300' deep oil well to a water injection well to increase oil recovery. The well will inject (5780' - 6100') into the Blinebry, which is 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 East Blinebry Drinkard Unit (Case Numbers 13503 and 13504, Order Numbers R-12394 & -12395) that was established in 2005 by Apache. There have been 4 subsequent WFX approvals (WFX-819, -842, -904, -909). This is an active water flood. Twenty-three water injectors are active in the Unit. An injection increase to 2100 psi was authorized (IPI-292) in 2008.

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

III. A. (1) Lease: fee ("Gulf Bunin")

A. (2)

Lease Size: 120 acres (see Exhibit A for maps and C-102) Closest Lease Line: 660' Lease Area: N2NW4 & NWNE of Section 13, T. 21 S., R. 37 E. Unit Size: 2,080 acres BLM Unit #: NMNM-112723X Closest Unit Line: 990' Unit Area: T. 21 S., R. 37 E.

Section 1: Lots 11-15, W2SE4, & SW4 Section 11: E2 & NW4 Sections 12: W2 & W2E2 Section 13: W2, W2NW4, & NWSE Section 14: NE4 & E2SE4

Surface casing (12.75", 40#) is set at 126' in a 15" hole. Cement (125 sx) circulated to the surface.



## APACHE CORPORATION EAST BLINEBRY DRINKARD UNIT 54 660' FNL & 2310' FEL SEC. 13, T. 21 S., R. 37 E., LEA COUNTY, NM

30-025-06567

Intermediate casing (9.625", 36#) was set at 3054' in a 12.25" hole and cemented with 2000 sacks to an unknown top.

Production casing (7", 26#) was set at 6295' in an 8.75" hole and cemented to 2060' (temperature survey) with 700 sacks.

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

- A. (3) Tubing will be 2-3/8" J-55 (4.7# IPC or 5.3# fiber lined). Setting depth will be  $\approx$ 5730'. (Disposal interval will be 5780' 6100'.)
- A. (4) A lock set injection packer will be set at ≈5730' (≈50' above the highest proposed perforation of 5780').
- B. (1) Injection zone will be the Blinebry carbonate. It is part of the Eunice; Blinebry-Tubb-Drinkard, North Pool. Fracture gradient is ≈0.56 psi/ft.
- B. (2) Injection interval will be from 5780' to 6100' in a cased hole. Well is currently perforated from 5780' to 5970'.
- B. (3) Well was originally drilled in 1955 as a Blinebry oil well.
- B. (4) The well will be perforated from 5780' to 6100' with 2 shots per foot. Shot diameter = 0.40".
- B. (5) Next likely higher oil or gas zone is the San Andres. Its bottom is at 5354'. Injection will occur in the Blinebry. Blinebry top is at 5747'. Injection interval will be 5780' to 6100'.

The next lower oil or gas zone in the area of review is the Tubb, part of the same Eunice; Blinebry-Tubb-Drinkard, North Pool. Tubb top is at  $\approx 6250'$ . Deepest perforation will be 6100'.



APACHE CORPORATION EAST BLINEBRY DRINKARD UNIT 54 660' FNL & 2310' FEL SEC. 13, T. 21 S., R. 37 E., LEA COUNTY, NM

30-025-06567

IV. This is not a horizontal or vertical expansion of an existing injection project. Case files 13503 and 13504) describe the water flood. There have been four WFX approvals: (WFX-819, -842, -904, -909). Closest unit boundary is 990' east. Two existing injection wells are within a half-mile radius and two more are just 7' and 9' beyond the radius. All four injectors are in the unit (see Exhibit B).

V. Exhibit B shows all 26 existing wells (19 oil wells + 4 P & A wells + 2 water injection wells + 1 windmill) within a half-mile radius, regardless of depth. Exhibit C shows all 307 existing wells (200 oil or gas producing wells + 43 injection or disposal wells + 37 P & A wells + 27 water supply wells) within a two-mile radius.

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

Aliquot Parts in Area of Review	Lessor	Lease	Lessee(s) of Record	Blinebry operator
E2SE4 12-21s-37e	fee	M W Coll	Apache	Apache
NWSE & NWSW 12-21s-37e	fee	Coll	Apache	Apache
NESW & SWSW 12-21s-37e	fee	Chesher	Apache	Apache
SESW 12-21s-37e	fee	Plumlee	Apache	Apache
SWSE 12-21s-37e	fee	Fields	Apache	Apache
NENE 13-21s-37e	fee	Bunin	Apache	Apache
NWNE & N2NW4 13-21s-37e	fee	Gulf Bunin	Apache	Apache
SENE 13-21s-37e	BLM	NMLC-032096B	Apache, Chevron, & ConocoPhillips	Apache
NESE 13-21s-37e	BLM	NMLC-032096B	Apache, Chevron, & ConocoPhillips	none
SWNE, S2NE4, NWSE, & N2SW4 13-21s-37e	BLM	NMNM-125057	Apache, BP, & Chevron	Apache
SWSW 7-21s-38e	BLM	NMLC-056011B	Elliott Hall Co. & Elliott Industries	Apache
NWNW 18-21s-38e	fee	Bunin	Apache	Apache
SWNW 18-21s-38e	fee	Bunin	Apache	none



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## APACHE CORPORATION EAST BLINEBRY DRINKARD UNIT 54 660' FNL & 2310' FEL SEC. 13, T. 21 S., R. 37 E., LEA COUNTY, NM

#### 30-025-06567

VI. Twenty-six existing wells are within a half-mile radius. Twenty-five of the wells penetrated the Blinebry. The penetrators include 19 oil wells, 4 P&A wells, and 2 water injection wells. A table abstracting the well construction details and histories of the penetrators is in Exhibit F. Diagrams of the P&A wells are also in Exhibit G, sorted by API number. The penetrators are:

ΑΡΙ	OPERATOR	WELL	TYPE WELL	UNIT- SECTION	TVD	ZONE	FEET FROM EBDU 54
3002539707	3002539707 Apache		0	B-13	7200	Eunice; Bli-Tu-Dr, N	905
3002539035	Apache	EBDU 094	ο	C-13	7045	Eunice; Bli-Tu-Dr, N	908
3002538537	Apache	EBDU 072	0	B-13	7200	Eunice; Bli-Tu-Dr, N	931
3002539274	Apache	EBDU 078	0	N-12	7045	Eunice; Bli-Tu-Dr, N	981
3002506566	Apache	EBDU 053	I	C-13	6010	Eunice; Bli-Tu-Dr, N	1301
3002506553	Apache	Fields 001	P&A	0-12	5938	Eunice; Bli-Tu-Dr, N	1320
3002506564	Solar	Bunin Estate 003	P&A	A-13	6013	Eunice; Bli-Tu-Dr, N	1326
3002539547	Apache	Bunin 006	Ö	A-13	7900	Wantz; Abo	1359
3002506560	Apache	EBDU 039	O	G-13	5999	Eunice; Bli-Tu-Dr, N	1361
3002506565	Apache	Bunin 003Y	P&A	A-13	7400	Wantz; Abo	1427
3002539568	Apache	EBDU 082	0	C-13	7534	Eunice; Bli-Tu-Dr, N	1600
3002506557	Apache	EBDU 038	0	F-13	6050	Eunice; Bli-Tu-Dr, N	1637
3002506554	Apache	Plumlee 001	0	N-12	7674	Wantz; Abo	1639
3002539378	Apache	EBDU 079	Ο	N-12	6997	Eunice; Bli-Tu-Dr, N	1706

PROVIDING PERMITS for LAND USERS

INC.

## APACHE CORPORATION EAST BLINEBRY DRINKARD UNIT 54 660' FNL & 2310' FEL SEC. 13, T. 21 S., R. 37 E., LEA COUNTY, NM

30-025-06567

فالمراجع المغرية	<u>,</u>					<u> </u>	
3002539844	Apache	EBDU 104	0	J-13	7209	Eunice; Bli-Tu-Dr, N	1998
3002540144	Apache	Bunin 009	о	A-13	7509	Eunice; Bli-Tu-Dr, N	2001
3002539679	Apache	EBDU 111	0	G-13	7208	Eunice; Bli-Tu-Dr, N	2057
3002506568	Apache	EBDU 055		D-13	6504	Eunice; Bli-Tu-Dr, N	2095
3002539036	Apache	EBDU 092	0	0-12	7185	Eunice; Bli-Tu-Dr, N	2096
3002540345	Apache	Lockhart B-13 A 014	ο	H-13	7495	Wantz; Abo	2104
3002539823	Apache	M W Coll 001	0	P-12	7302	Eunice; Bli-Tu-Dr, N	2117
3002539273	Apache	EBDU 077	ο	J-12	7068	Eunice; Bli-Tu-Dr, N	2174
3002506563	Apache	Gulf Bunin 001	P&A	D-13	7144	Wantz; Abo	2296
3002538500	Apache	EBDU 068	0	N-12	7000	Eunice; Bli-Tu-Dr, N	2375
3002539459	Apache	EBDU 083	0	L-13	7000	Eunice; Bli-Tu-Dr, N	2612
3002506556	Apache	EBDU 037	1	E-13	6750	Eunice; Bli-Tu-Dr, N	2647

VII. 1. Average injection rate will be  $\approx$ 400 bwpd. Maximum injection rate will be 500 bwpd.

3.

2. System is closed. Well will be tied into the existing unit pipeline system.

Average injection pressure will be ≈2000 psi. Maximum injection pressure will be 2100 psi (IPI-292).

4. Water source will be water pumped from an existing San Andres water supply well. A comparison of nearby analyses and San Andres follows.



PROVIDING PERMITS for LAND USERS

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## APACHE CORPORATION EAST BLINEBRY DRINKARD UNIT 54 660' FNL & 2310' FEL SEC. 13, T. 21 S., R. 37 E., LEA COUNTY, NM

#### 30-025-06567

No compatibility problems have reported from the 15,491,353 barrels that have been injected in the Unit to date.

	NEDU Injection Pump Discharge	San Andres 919-S
Anion/Cation Ratio	1.0	N/A
Barium	0.1 mg/l	0.38 mg/l
Bicarbonate	671.0 mg/l	562.0 mg/l
Calcium	1,099.0 mg/l	608.0 mg/l
Carbon Dioxide	80.0 ppm	80.0 ppm
Chloride	10,086.0 mg/l	6,200.0 mg/l
Hydrogen Sulfide	90.0 ppm	408.0 ppm
Iron	0.3 mg/l	0.0 mg/l
Magnesium	439.0 mg/l	244.0 mg/l
Manganese	N/A	0.01 mg/l
pH	7.5	6.49
Potassium	115.0 mg/l	N/A
Sodium	5,799.5 mg/l	3,909.0 mg/l
Strontium	28.0 mg/	19.0 mg/l
Sulfate	2,465.0 mg/l	1,750.0 mg/l
<b>Total Dissolved Solids</b>	20,702.9 mg/l	13,273.0 mg/l
		+

5. Ninety-three oil wells are in the Unit. It is the goal of the project to increase production.

VIII. The Unit is on the north end of a north-northwest to south-southeast trending anticline. It is part of the Penrose Skelly trend and parallels the west edge of the Central Basin Platform. Dips are 1° to 2°. The injection interval is Leonardian in age, 253' 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 108 Blinebry injection wells in the state. The East Blinebry Drinkard Unit shares its west border with Apache's Northeast Drinkard



## APACHE CORPORATION EAST BLINEBRY DRINKARD UNIT 54 660' FNL & 2310' FEL SEC. 13, T. 21 S., R. 37 E., LEA COUNTY, NM

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Unit. Three other similar water floods (West Blinebry Drinkard Unit, Northeast Drinkard Unit, and Warren Blinebry Unit) are within a mile of the East Blinebry Drinkard Unit. The slightly more distant (2 miles) Central Drinkard Unit has been under water flood since the 1960s.

Estimated formation depths are:

Ogallala = 0' Rustler = 1475' Top salt = 1530' Bottom salt = 2600' Yates = 2730' Seven Rivers = 3000' Queen = 3640' Grayburg = 3943' San Andres = 4207' Glorieta = 5355' Blinebry = 5747' *injection interval = 5780' - 6100'* Blinebry marker = 5822' Tubb =  $\approx$ 6250' TD = 6300'

According to Office of the State Engineer records (Exhibit H), one fresh water well is within a mile radius. It was not found during a January 8 and 9, 2017 inspection. Deepest water well within 2 miles is 160'.

Three samples (Exhibit H) were collected during that inspection. One sample was collected from a windmill  $\frac{1}{2}$  mile southwest of EBDU 54. The windmill does not match State Engineer records. A second sample (Fabersham) was collected from a well  $\approx 6200'$  southwest of EBDU 54. The Fabersham well may be CP 00562. A third sample (Sec. 23 tank) was collected from a tank  $\approx 8000'$  southwest of EBDU 54. The Section 23 tank may be CP 00235 POD 109 No existing underground drinking water sources are below the injection interval within a mile radius.

There will be >4,000' of vertical separation and hundreds of feet of salt and anhydrite between the bottom of the only likely underground fresh water source (Ogallala) and the top of the injection interval.



## APACHE CORPORATION EAST BLINEBRY DRINKARD UNIT 54 660' FNL & 2310' FEL SEC. 13, T. 21 S., R. 37 E., LEA COUNTY, NM

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Produced water is currently being injected (199 wells) or disposed (8 wells) into the Blinebry-Tubb-Drinkard, San Andres, Grayburg, Queen, Seven Rivers, and Yates within T. 21 S., R. 37 E.

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

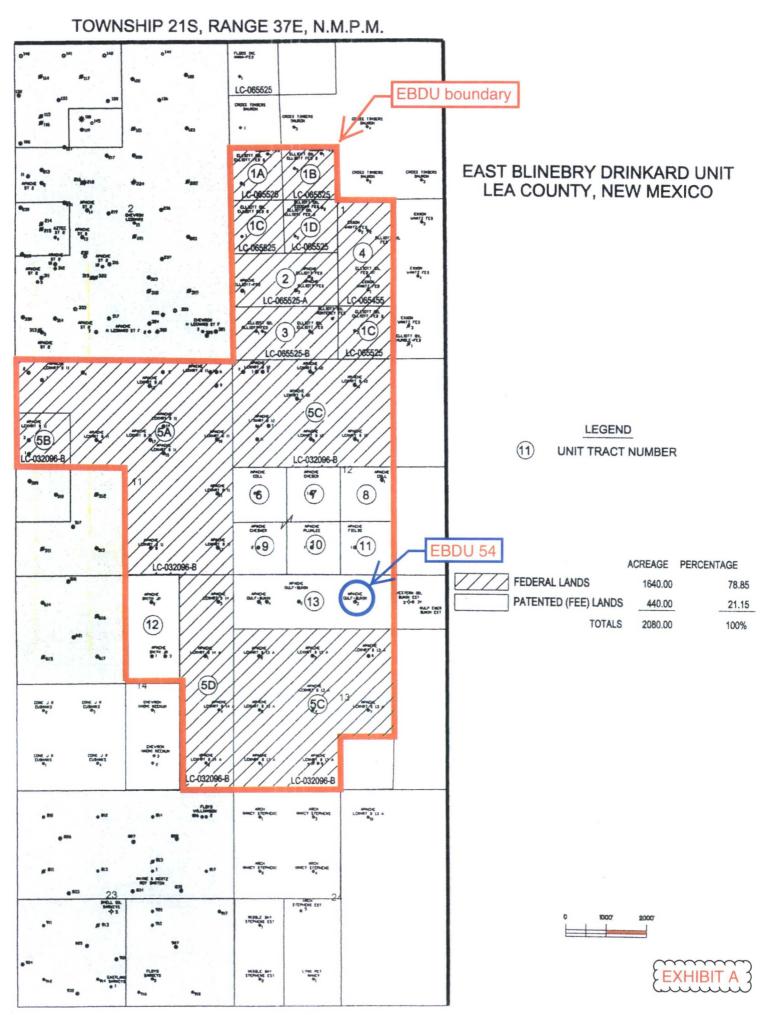
X. Microlaterolog and gamma ray logs are on file with NMOCD.

XI. One fresh water well is within a mile. Analyses from three fresh water wells within  $\approx 8000^{\circ}$  are attached (Exhibit H).

XII. Apache is not aware of any geologic or engineering data that may indicate the injection interval is in hydrologic connection with any underground sources of water. Closest Quaternary faults are  $\approx 112$  miles southwest (Exhibit I). There are 108 Blinebry injection wells in New Mexico. Previously approved water flood expansions in the Unit include WFX-819, -842, -904, and -909.

XIII. A legal ad (see Exhibit J) was published on December 25, 2016. Notice (this application) has been sent (Exhibit K) to the surface owner (N B Bunin Properties LP), offset Blinebry operators (only Apache), lessees (Apache, BP, Chevron, ConocoPhillips. Elliott Hall Co., & Elliott Industries), and operating rights holders (ConocoPhillips). Apache operates the only Blinebry wells in the area of review.





State o	of New Mexico
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OIL CONSER	RVATIONDIVISION
1220 Sou	th St. Francis Dr.
Santa	Fe, NM 87505
L LOCATION AND	ACREAGEDEDICATIO
' Pool Code	
	Energy, Minerals & 1 OIL CONSEF 1220 Sou Santa LL LOCATION AND

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

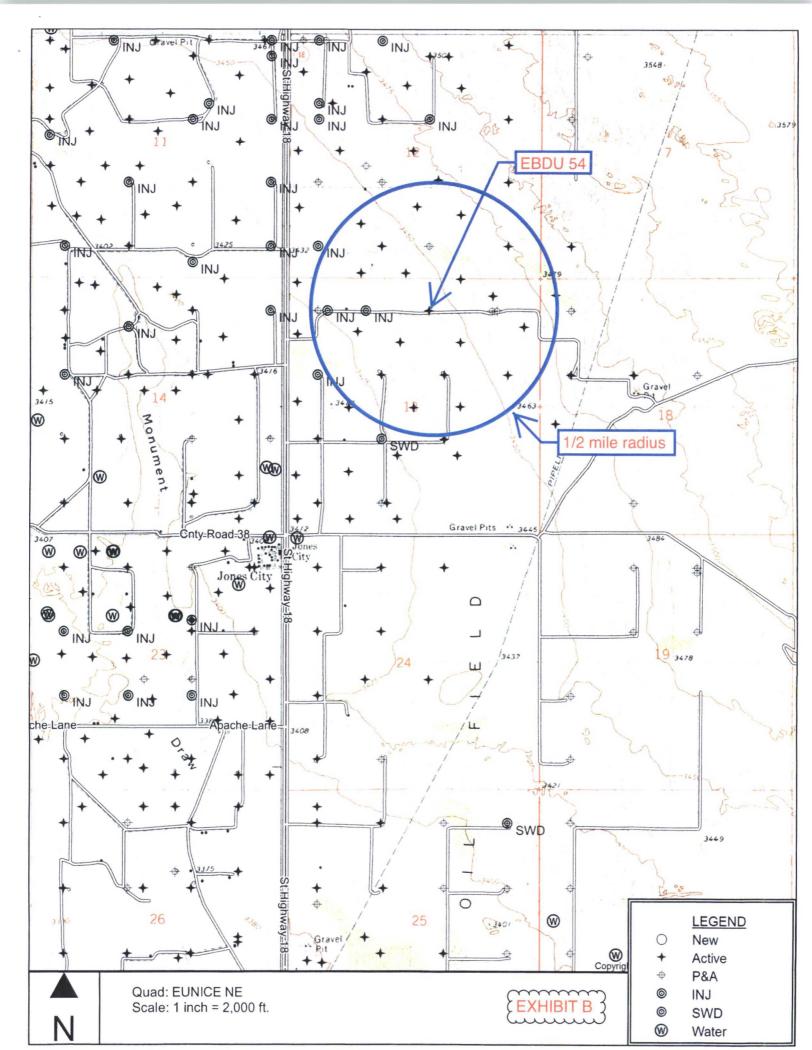
#### AMENDED REPORT

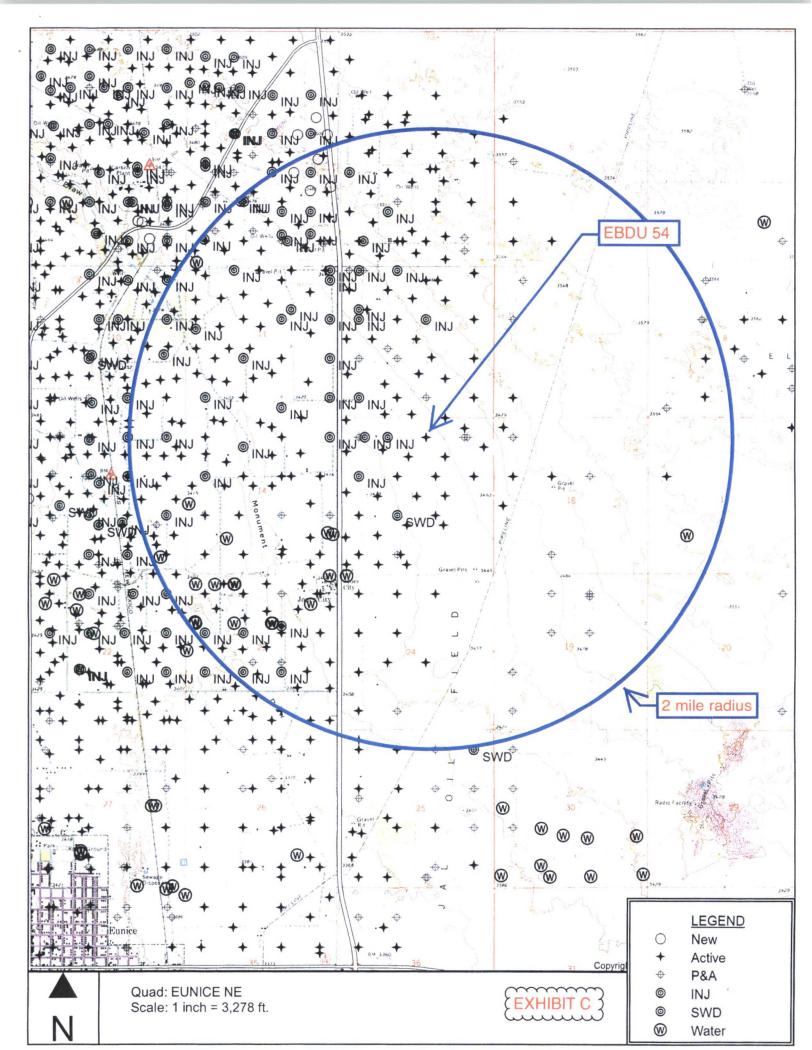
#### **EDICATION PLAT**

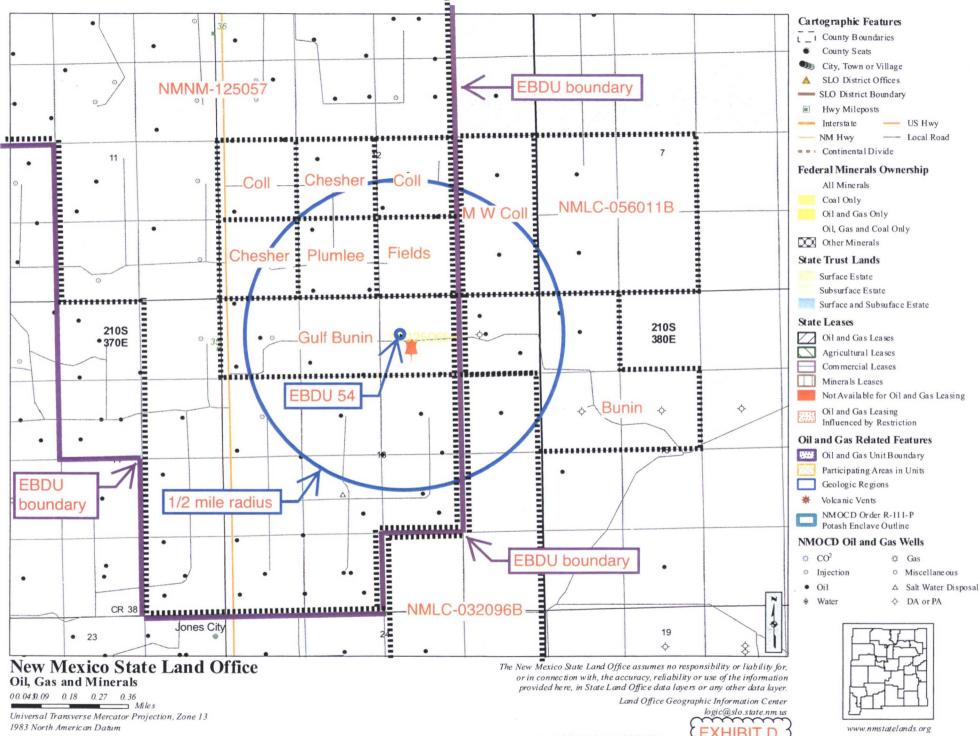
30-025-065	API Numbe 57	r il	229	' Pool Code 900		unice; Blinebry-T	' Pool Na ubb-Drinkard,		
Property ( 35023	Code	EAST BL	INEBRY	DRINKA	<sup>•</sup> Property P RD UNIT	Name	· ·	54	Well Number
'OGRID I 00873	No.	Apache Co	orporatio	n	Operator ?	Name		3450'	'Elevation GR
				, ,	<sup>10</sup> Surface	Location			
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
В	13	215	37E	В	660	North	2310	East	Lea
,			<sup>11</sup> Bo	ottom Ho	le Location I	f Different From	n Surface		
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
" Dedicated Acres	" Joint of	r Infill * Co	nsolidation	Code "Or	der No.	<u> </u>			
40					-	· .			· · · · · · · · · · · · · · · · · · ·

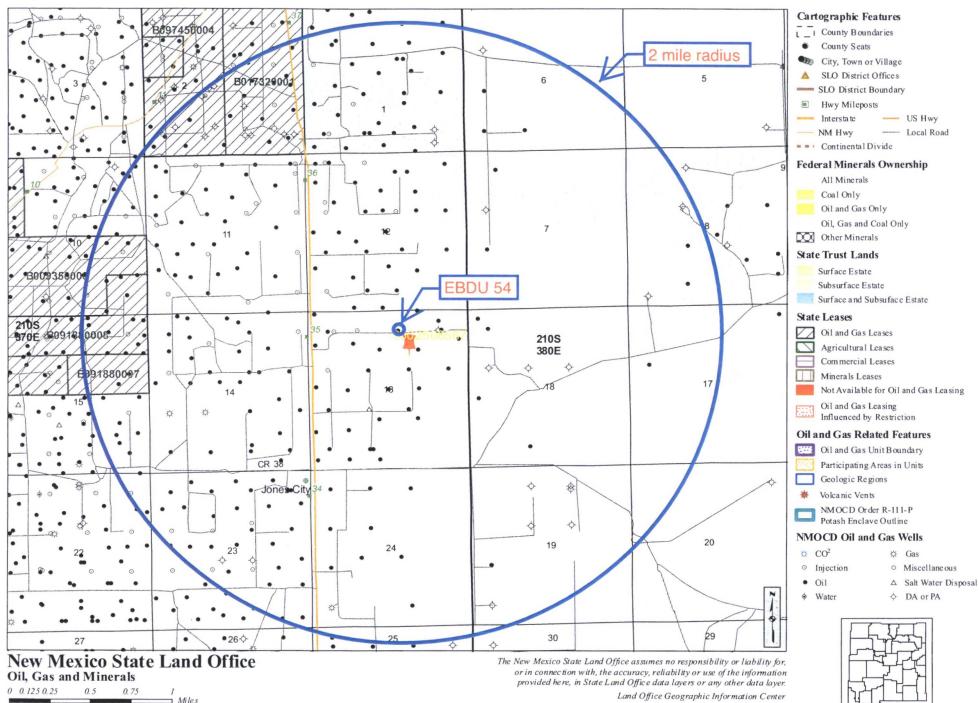
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

<sup>16</sup> <sup>16</sup> <sup>17</sup> OPERATOR CERTIFICATIO <i>I hereby certify that the biformation contained herein is true and con</i>	
	N uplete to
the best of my knowledge and belief, and that this organization eithe	ownsa
working interest or unleased mineral interest in the land including d	e
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 it	uerest,
or to a voluntary pooling agreement or a compulsory pooling order	
heretofore ordered by the division	
Signature Mackay 03/28/20 Daite	07
Sophie Mackay Printed Name	
18SURVEYOR CERTIFICATION I hereby certify that the well location shown on	DN this plat
was plotted from field notes of actual surveys m me or under my supervision, and that the same	ľ
and correct to the best of my belief.	
Date of Survey	
Signature and Seal of Professional Surveyor.	
	1
Certificate Number	ᠬ᠇᠇
EXHIB	IT A









Universal Transverse Mercator Projection, Zone 13 1983 North American Datum

EXHIBIT E

www.nmstatelands.org

logic@slo.state.nm.us

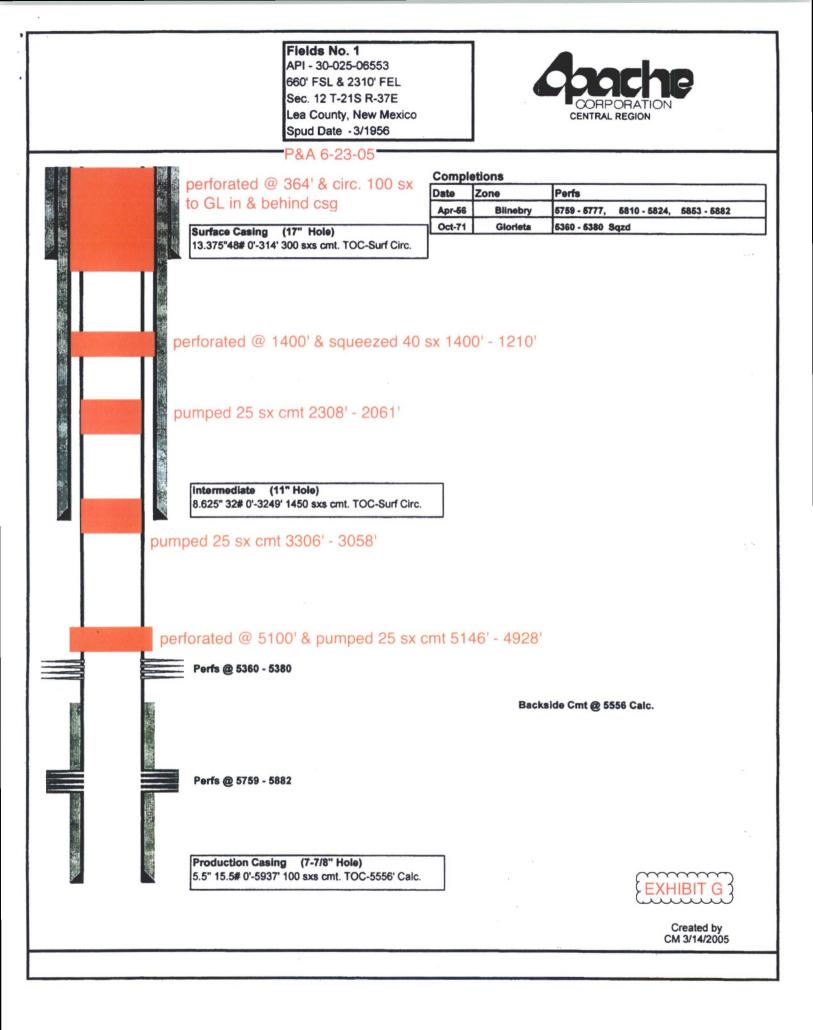
				WELL	HOLE	CASING				HOW
WELL	SPUD	TVD	POOL	TYPE	0.D.	<b>O.</b> D.	SET @	CEMENT	TOC	DETERMINED
EBDU 093	6/10/10	7200	Eunice; Bli-Tu-Dr, North	0	12.25	8:625	1521	700 sx	GL	Circ
3002539707		447 1			7.875	5.5	7200	1125 sx	GL	Circ
B-13-21S-37E										
				1940 - A.						
EBDU 094	10/7/08	7045	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1470	750 sx	GL	Circ
3002539035					7.875	5.5	7045	1600 sx	70	CBL
C-13-21S-37E		• •								
									<u> </u>	
EBDU 072	2/8/08	7200	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1500	700 sx	GL	Circ
3002538537		· ·			7.875	5.5	7200	1150 sx	130	CBL
B-13-21S-37E										
			·							
EBDU 078	10/21/09	7045	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1495	700 sx	GL	Circ
3002539274			· · · · · · · · · · · · · · · · · · ·	:	7.875	5.5	7045	1200 sx	GL	Circ
N-12-21S-37E										
							1. A.			
EBDU 053	8/18/54	6010	Eunice; Bli-Tu-Dr, North	t I	17.5	13.325	190	300 sx	GL	calc
3002506566					12.25	9.625	3001	1225 sx	1925	no report
C-13-21S-37E					8.75	7	6010	500 sx	4000	no report
	1				,					
Fields 001	3/25/56	5938	Eunice; Bli-Tu-Dr, North	P&A	17	13.325	314	300 sx	GL	Circ
3002506553					11	8.625	3249	1450 sx	GL	Circ
0-12-21S-37E					7.875	5.5	5937	100 sx	5556	Calc
· · · ·		-		· ·.			:			
Bunin Estate 003	12/23/57	6190	Eunice; Bli-Tu-Dr, North	P&A	17.25	13.375	125	150 sx	GL	Circ
3002506564					12	8.625	3000	no report	no report	N/A
A-13-21S-37E					7.875	open hole	N/A	N/A	N/A	N/A
				1			1.61			
Bunin 006	11/8/09	7900	Wantz; Abo	0	12.25	8.625	1399	700 sx	GL	Circ
3002539547					7.875	5.5	7900	1300 sx	80	no report
A-13-215-37E										
-		a sa taon a taon Ang ang ang ang ang ang ang ang ang ang a			· · ·					

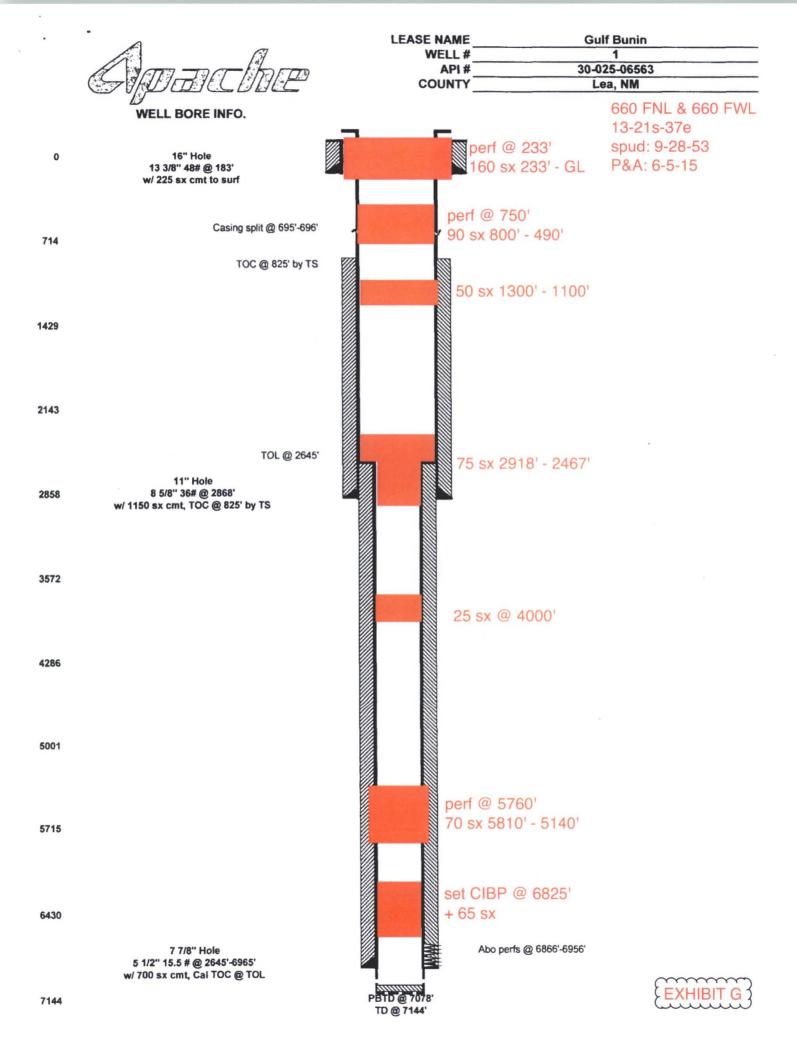
	4 v			WELL	HOLE	CASING				HOW
WELL	SPUD	TVD	POOL	TYPE	0.D.	O.D.	SET @	CEMENT	тос	DETERMINED
EBDU 039	7/11/55	5999	Eunice; Bli-Tu-Dr, North	0.	13.5	10.75	249	250 sx	no report	no report
3002506560				а <u>.</u>	9.625	7.625	2950	1045 sx	no report	no report
G-13-21S-37E					6.75	5.5	5999	520 sx	no report	no report
Bunin 003Y	5/13/59	7400	Wantz; Abo	P&A	17	13.375	142	150 sx	GL	Circ
3002506565	· · ·				11	8.625	3070	400 sx	2010	Temp Survey
A-13-215-37E					7.875	5.5	7390	350 sx	5450	Temp Survey
EBDU 082	12/6/09	7534	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1392	650 sx	GL	Circ
3002539568					7.875	5.5	7550	1200 sx	85	no report
C-13-21S-37E										
EBDU 038	1/27/55	6050	Eunice; Bli-Tu-Dr, North	0		10.75	253	250 sx	no report	no report
3002506557					×.	7.625	3149	1155 sx	no report	no report
F-13-21S-37E						5.5	6048	646 sx	3066	no report
Plumlee 001	3/1/52	7674	Wantz; Abo	0	17.25	13.375	210	250 sx	GL	Circ 85 sx
3002506554					_11	8.625	3182	2200 sx	GL	Circ 500 sx
N-12-21S-37E			:		7.875	5.5	6950	250 sx	5300	Temp Survey
			· · · · ·				2		· · · · · ·	
EBDU 079	9/23/09	6997	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1460	650 sx	GL	Circ
3002539378					7.875	5.5	6997	1000 sx	GL	Circ
N-12-21S-37E		·		· · · · ·						N
EBDU 104	10/31/10	7209	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1437	700 sx	GL	Circ 160 sx
3002539844					7.875	5.5	7209	1300 sx	50	log
J-13-21S-37E										
				et i s San sense				× .		
Bunin 009	6/7/11	7509	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1553	780 sx	GL	Circ 15 sx
3002540144					7.875	5.5	·· 7509	2220 sx	GL	Circ 208 sx
A-13-21S-37E										
· · · · · · · · · · · · · · · · · · ·										

				WELL	HOLE	CASING				HOW
WELL	SPUD	TVD	POOL	ТҮРЕ	0.D.	O.D.	SET @	CEMENT	TOC	DETERMINED
EBDU 111	7/7/10	7208	Eunice; Bli-Tu-Dr, North	Ο	12.25	8.625	1469	750 sx	GL	Circ 160 sx
3002539679					7.875	5.5	7208	1200 sx	90	CBL
G-13-21S-37E					1		· · · ·	· · · · · · · · · · · ·		
EBDU 055	2/17/56	6504	Eunice; Bli-Tu-Dr, North	l I	17.5	13.375	139	200 sx	GL	visual
3002506568				•	11.75	8.625	3024	2000 sx	GL	Circ
D-13-21S-37E	~	· · ·			7.875	5.5	6499	600 sx	2700	Temp Survey
EBDU 092	9/15/08	7185	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1513	800 sx	GL	Circ
3002539036					7.625	5.5	7185	1600 sx	80	CBL
O-12-21S-37E								· · ·		
						·				
· · · ·					,				1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	
Lockhart B13 A 14	1/26/12	7495	Wantz; Abo	0	12.25	8.625	1574	675 sx	GL	Circ 150 sx
3002540345					7.875	5.5	7495	1170	100	log
H-13-21S-37E										
										- 
MW Coll 001	8/4/10	7302	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1560	700 sx	GL	Circ 67 sx
3002539823					7.875	5.5	7302	1175 sx	GL	Circ 112 sx
P-12-21S-37E		· · ·							· · · ·	
EBDU 077	10/13/09	7068	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1525	700 sx	GL	Circ
3002539273	· · · · · · · · · · · · · · · · · · ·				7.875	5.5	7068	1100 sx	GL	Circ
J-12-21S-37E										
Gulf Bunin 001	9/18/53	7145	Wantz; Abo	- P&A	16	13.375	183	225 sx	GL	Circ
3002506563				1	11	8.625	2868	1150 sx	825	Temp Survey
D-13-21S-37E					7.875	5.5	6965	700 sx	2667	calc
					4.75	ОН	7145	N/A	N/A	N/A

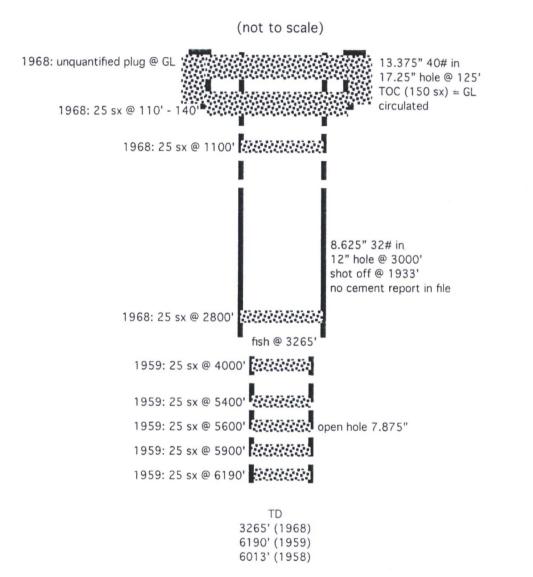
				WELL	HOLE	CASING	· · · · · · · · · · · · · · · · · · ·			ноw
WELL	SPUD	TVD	POOL	TYPE	O.D.	0.D.	SET @	CEMENT	тос	DETERMINED
EBDU 068	2/18/08	7000	Eunice; Bli-Tu-Dr, North	. O	12.25	8.625	1450	650 sx	GL	Circ
3002538500					7.875	5.5	7000	1150 sx	230	CBL
N-12-21S-37E							,			
EBDU 083	9/3/09	7000	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1420	650 sx	GL	Circ
3002539459	· · · · · · · · · · · · · · · · · · ·				7.875	5.5	7000	2350 sx	GL	Circ
L-13-21S-37E									· · · · · · · · · · · · · · · · · · ·	<b>_</b>
WBDU 037	8/17/53	6750	Eunice; Bli-Tu-Dr, North	l 	17.5	13.325	262	250 sx	GL	calc
3002506556		1			12.25	9.625	3149	1675 sx	GL	calc
E-13-21S-37E			and the second		8.75	7	6748	651 sx	3286	calc
EBDU 048	3/1/56	5920	Eunice; Bli-Tu-Dr, North	I	17.5	13.325	314	300 sx	GL	Circ 20 sx
3002506550					12.25	8.625	3248	1500 sx	GL	Circ 230 sx
M-12-21S-37E		. 1			7.875	5.5	5919	100 sx	5457	calc

EXHIBIT F



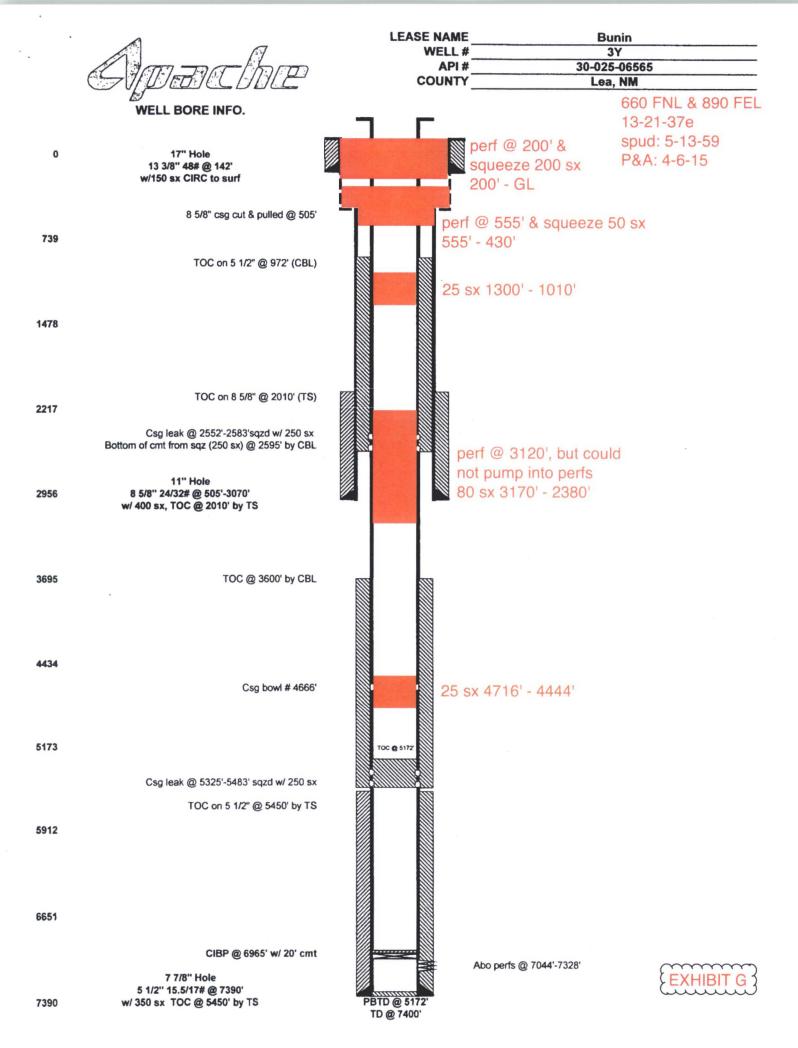


## Solar's Bunin Estate 3 30-025-06564 660 FNL & 990 FEL 13-21s-37e Lea County NM spud: 12-23-57 & 12-1-68 P&A: 12-7-68, 5-11-59, & 10-22-58











CP.00562

CP 00700

CP 00678

CP 00197

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is (NAD83 UTM in meters) closed) (quarters are smallest to largest) (In feet) POD Sub-000 Water basin County 64 16 4 Sec Tws Rng **POD Number** DistanceDepthWellDepthWater Column Code Х Y - 3595783\* 🚱 CP 00137 POD1 LE 2 2 1 13 215 . 37E 676862 224 65 1 mile =............ .... 1610 meters LE CP 00134 POD1 1 1 1 24 21S 37E 676289 3594166\* 🚱 1706 85 LE 1 2 2 23 21S 37E 1927 136 71 675887 3594159\* 🚱 65 CP 1 1 2 23 37E CP 00239 POD1 LE 21S 675485 3594152\* 🚱 2201 89 61 28 LE 2 23 21S 37E 675794 3593851\* 🕰 2231 75 65 10 CP 00235 POD8 CP LE 3 1 2 23 21S 37E 675485 3593952\* 🚱 2345 94 58 36 CP LE 37E CP 00236 POD1 3 1 2 23 21S 675485 3593952\* 🚯 83 2345 CP 00235 POD1 CP LE 2 2 1 23 21S 37E 675283 3594144\* 🚱 2355 81 LE 37E CP 00240 POD1 CP 4 2 1 23 21S 675283 3593944\* 🚱 2491 CP LE 2 1 23 37E 2491 79 CP 00241 POD1 4 215 675283 3593944\* 🚱 CP LE 1 3 2 23 215 37E 675492 3593749\* 🚱 60 32 CP 00235 POD10 2494 92 CP 00235 POD11 CP LE 1 3 2 23 21S 37E 675492 3593749\* 🚳 2494 60 37 97 CP 00237 POD1 CP LE 1 3 2 23 21S 37E 675492 3593749\* 🚱 2494 84 CP 00235 POD2 CP LE 1 2 1 23 21S 37E 675083 3594144\* 🍋 2510 96 65 31 CP 01185 POD2 LE 1 3 14 21S 37E 67,4623 3594674 2641 70 3594594 🚱 CP 01574 POD2 СР LE 1 3 3 14 21S 37E 674654 2645 68 57 11 CP LE 37E 3593549\* 🚱 CP 00238 POD1 3 3 2 23 215 675492 2652 81 LE CP 01185 POD4 1 3 215 37E 674633 3594610 🚱 70 14 2658 CP 01185 POD1 LE 1 3 14 21S 37E 674598 3594689 🚱 2659 70 CP 00235 POD6 CP LE 21S 37E 674881 3594137\* 🚱 20 2 1 1 23 2676 85 65 CP 01185 POD3 LE 1 3 14 21S 37E 674592 3594620 🚱 2691 70 CP LE 2 4 4 15 215 37E 3594599 🚱 68 57 CP 01574 POD1 674563 2726 -11 CP 00235 POD5 CP LE 4 1 23 21S 37E 675090 3593742\* 🚱 2770 90 70 20 1 CP 00235 POD3 CP LE 1 1 1 23 21S 37E 674681 3594137\* 🚳 2842 90 61 29 ED 17 21S 38E 679802 3594732\* 🚱 2899 125 37 3 88 CP 00235 POD9 CP LE 21S 37E 675090 3593542\* 🚱 2914 94 58 3 4 1 23 36 CP LE 2 19 38E 679312 CP 00139 POD1 2 4 215 3593818\* 🚱 2922 75

http://nmwrrs.ose.state.nm.us/nmwrrs/ReportProxy?queryData=%...%0A%22R%22%3A%223220%22%2C%0A%22PLSSDiv%22%3A%22false%22%

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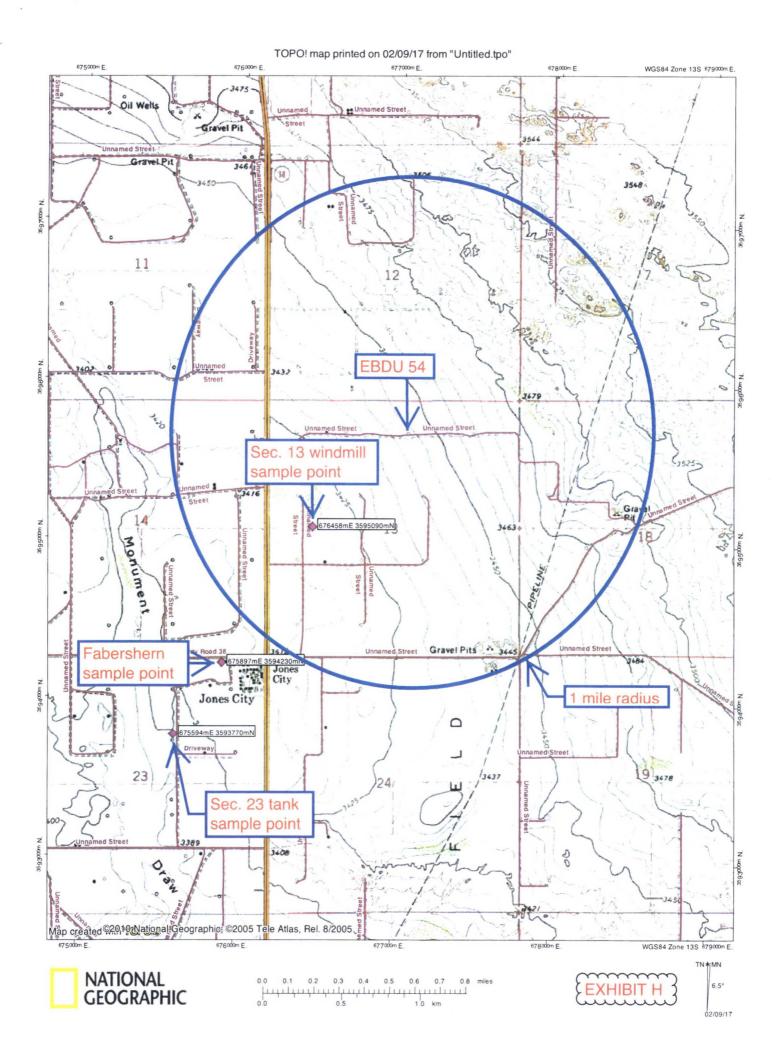
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· .				•											£1-1117, ·	
	<b>CD</b>															
	СР	LE					37E	1. T	359859		2948		85			
<u>CP 00235 POD7</u>	СР	LE	3	1 1	. 23	215	37E	674681	359393	-	2955	5	85		65	20
<u>CP 00705 POD1</u>	СР	ED	1	43	17	215	38E	679903	359463	7* 🚱	3026	5	160			
<u>CP 00235 POD4</u>	СР	LE	· 1	31	23	21S	37E	674688	359373	5* 🏵	3074	Ļ	100		80	20
										Avera	ge Depth to	Water:			61 feet	
											Minimur	n Depth	:		37 feet	
											Maximun	n Depth	:		80 feet	
Record Count: 32																<b>·</b>
UTMNAD83 Radius Search (in me	ters):															
Easting (X): 677064		Nort	hing (	( <b>Y</b> ):	3595	686			Radius:	3220						
	- 11-1-		-													
*UTM location was derived from PLSS - see The data is furnished by the NMOSE/ISC and	is accept	ed by t	he reci	nient	with t	he ev n	ecced un	derstanding	that the OS	F/ISC m	ake no wan	onties o	<b>V D P</b> OCCO	d or impl	ind concer	
the accuracy, completeness, reliability, usability	ty, or suita	ability f	or any	partic	ular p	urpose	of the da	ita.								
2/4/17 4:27 PM											WATER WATER	COLUN	/IN/ AV	/ERAGE	E DEPTH '	то
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EXHIBIT H

2/4/17, 4:28 PM



Analytical Report

Lab Order 1701429

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/18/2017

CLIENT: Permits West		C	lient Samp	le ID: Section	23 Tank
Project: Apache EBDU			Collection	Date: 1/8/201	7 3:17:00 PM
Lab ID: 1701429-001	Matrix:	AQUEOUS	Received	Date: 1/11/20	17 2:02:00 PM
Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: LGT
Chloride	330	25 *	mg/L	50	1/17/2017 9:20:25 PM
EPA METHOD 1664A					Analyst: tnc
N-Hexane Extractable Material	ND	11.4	mg/L	1 '	1/11/2017 3:30:00 PM
SM2540C MOD: TOTAL DISSOLVED	SOLIDS	• 			Analyst: KS
Total Dissolved Solids	1200	20.0 *	mg/L	1	1/13/2017 6:52:00 PM

EXHIBIT H

Page 1 of 6

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

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 BlankE 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

# Analytical Report

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 1701429 Date Reported: 1/18/2017

CLIENT: Permits West		Client Sample ID: Fabershern Domestic								
<b>Project:</b> Apache EBDU	<b>Collection Date:</b> 1/9/2017 9:35:00 AM									
Lab ID: 1701429-002	Matrix:	AQUEOUS	Received	ved Date: 1/11/2017 2:02:00 PM						
Analyses	Result	PQL Qual	Units	DF	Date Analyzed					
EPA METHOD 300.0: ANIONS					Ånalyst: LGT					
Chloride	1200	50 *	mg/L	100	1/17/2017 9:32:50 PM					
EPA METHOD 1664A					Analyst: tnc					
N-Hexane Extractable Material	ND	12.0	mg/L	1	1/11/2017 3:30:00 PM					
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analyst: KS					
Total Dissolved Solids	2840	20.0 *	mg/L	1	1/13/2017 6:52:00 PM					

# EXHIBIT H

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

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 Page 2 of 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

**Analytical Report** 

Lab Order 1701429

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/18/2017

CLIENT: Permits West		C	lient Sampl	e ID: Section	n 13 WM
Project: Apache EBDU			<b>Collection</b>	Date: 1/9/20	17 11:36:00 AM
Lab ID: 1701429-003	Matrix:	AQUEOUS	Received 1	Date: 1/11/2	017 2:02:00 PM
Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS			· · ·	••	Analyst: LGT
Chloride	380	10 *	mg/L	20	1/11/2017 11:26:06 PM
EPA METHOD 1664A			. ·		Analyst: tnc
N-Hexane Extractable Material	ND	9.72	mg/L	· 1	1/11/2017 3:30:00 PM
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS	*:			Analyst: KS
Total Dissolved Solids	1060	20.0 *	mg/L	· 1	1/13/2017 6:52:00 PM



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

Qualifiers:	· •	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
s Kra	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

- Analyte detected in the associated Method Blank В Ε Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 6 J
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- Sample container temperature is out of limit as specified W

QC SUMMARY Hall Environment				ory, Inc.					WO#:	1701429 18-Jan-17
Client: Permits Project: Apache			· .							
Sample ID MB-29634	Samp1	ype: ME	BLK	Tes	stCode: E	EPA Method	1664A		·····	
Client ID: PBW	Batcl	h ID: 29	634	·	RunNo:	39981				
Prep Date: 1/11/2017	Analysis E	Date: 1/	11/2017	:	SeqNo: ·	1252885	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	10.0				Think and				
Silica Gel Treated N-Hexane Extrac	ND	10.0			- 		• •		<u></u>	
Sample ID LCS-29634	SampT	ype: LC	:S	Tes	stCode: E	EPA Method	1664A			
Client ID: LCSW	Batch	n ID: 29	634	Ē	RunNo: :	39981				
Prep Date: 1/11/2017	Analysis D	)ate: 1/	11/2017		SeqNo: '	1252886	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	35.4	10.0	40.00	. 0	88.5	78	114			
Silica Gel Treated N-Hexane Extrac	18.0	10.0	20.00	0	90.0	64	132			

#### 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

#### Page 4 of 6



		MARY REPORT onmental Analysis Laboratory, Inc.	WO#:	1701429 18-Jan-12
Client: Project:		Permits West Apache EBDU	· · · · · · · · · · · · · · · · · · ·	
Sample ID Client ID:	MB PBW	SampType:     MBLK     TestCode:     EPA Method 300.0:     Anions       Batch ID:     R39975     RunNo:     39975		
Prep Date:		Analysis Date: 1/11/2017 SeqNo: 1252702 Units: mg/L		
Analyte Chloride	<u> </u>	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD ND 0.50	RPDLimit	Qual
Sample ID	LCS	SampType: LCS TestCode: EPA Method 300.0: Anions		
Client ID:	LCSW		· .	
Prep Date:		Analysis Date: 1/11/2017 SeqNo: 1252703 Units: mg/L		
Analyte		Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD	RPDLimit	Qual
Chloride	 	4.6 0.50 5.000 0 91.3 90 110		
Sample ID	мв	SampType: mblk TestCode: EPÀ Method 300.0: Anions		
Client ID:	PBW	Batch ID: R40074 RunNo: 40074		
Prep Date:	-	Analysis Date: 1/17/2017 SeqNo: 1256674 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: Ics TestCode: EPA Method 300.0: Anions	· ·	
Client ID:	LCSW	Batch ID: R40074 RunNo: 40074		
Prep Date:		Analysis Date: 1/17/2017 SeqNo: 1256675 Units: mg/L		
Analyte		Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD	RPDLimit	Qual
Chloride		4 9 0 50 5 000 0 97.2 90 110		

#### 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





## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1701429

#### Client: Permits West Project: Apache EBDU

Ξ

Sample ID MB-29665	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: PBW	Batch ID: 29665	RunNo: 40008							
Prep Date: 1/12/2017	Analysis Date: 1/13/2017	SeqNo: 1253638 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-29665	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids							
	SampType: LCS Batch ID: 29665	TestCode: SM2540C MOD: Total Dissolved Solids RunNo: 40008							
Client ID: LCSW	• •								
Sample ID LCS-29665 Client ID: LCSW Prep Date: 1/12/2017 Analyte	Batch ID: 29665 Analysis Date: 1/13/2017	RunNo: 40008							

#### 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

Page 6 of 6





Form C-108 Affirmative Statement Apache Corporation East Blinebry Drinkard Unit Section 13, T-21-S, R-37-E Lea County, New Mexico

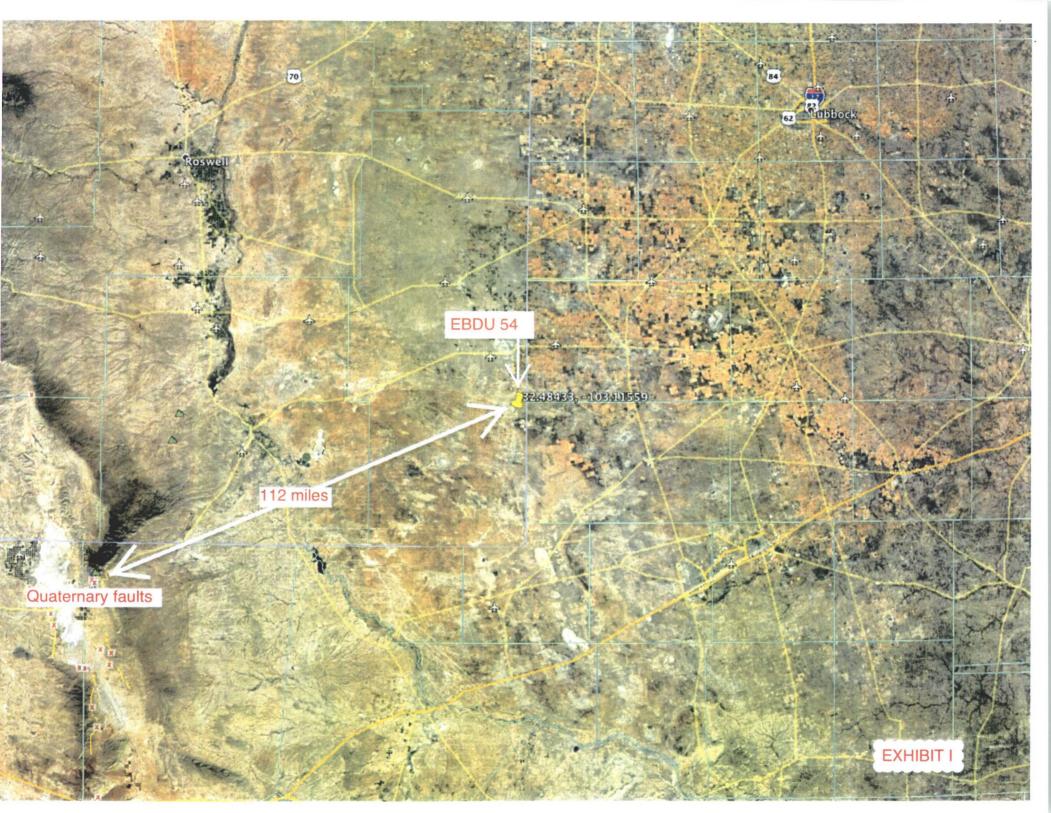
The extractions from the seismic data show no evidence of faulting at (or above) the Glorieta in this area and surface mapping from the USGS confirms that no faults are known at the surface. In addition, we have no empirical evidence that our injection operations at EBDU are affected by faulting at the Glorieta level, the evaporites, or the surface. Available geologic and engineering data has been examined and no evidence of open faults or hydrological connection between the injection zone and any underground sources of drinking water has been found.

DE.D

Dr. Mark Pasley Geological Advisor

20 February 2017 Date





# **Affidavit of Publication**

STATE OF NEW MEXICO COUNTY OF LEA

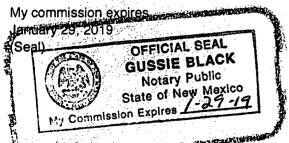
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

> Beginning with the issue dated December 25, 2016 and ending with the issue dated December 25, 2016.

Publisher

Sworn and subscribed to before me this 25th day of December 2016.

**Business Manager** 



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

**BRIAN WOOD** PERMITS WEST 37 VERANO LOOP **SANTA FE, NM 87508**  00186366



LEGAL NOTICE December 25, 2016 Apacher Corporation Is applying to convert the East Blinebry Drinkard Unit 64 oil well to a water injection well. The well is at 660 FNL & 2310 FEL, Sec. 13, T. 21 SS, R. 37 E. Lea County, NM, This is 4 miles northeast of R: 37-E: Lea County, NM This is 4 miles northeast of Eurice, NM. It will inject water-into the Blinebry (maximum injection pressure = 2 (100 psi) from 5,600' to 6 100: Injection will be a a maximum rate of 500 bwpd. htterested parties must file objections or requests for hearing with the NM OII Conservation Division, 1220 South Saint Francis. Dr: Santa Fe. NM 87505 within 15) days. Addition al information can be obtained by contacting: Brian Wood Internation can be obtained by contacting: Brian Wood Permits (West: Inc., 374 Verano Loop, Santa Fe, NM 87508 Phone number 15 (505)7466:8120.

31445



February 20, 2017

N. B. Bunin Properties LP 1496 Guadalupe Bend Boerne TX 78006

Apache Corporation is applying (see attached application) to convert its East Blinebry Drinkard Unit 54 oil well to a water injection well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed water injection well. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: East Blinebry Drinkard Unit 54 (fee lease) $\underline{TD} = 6,300' \text{ MD}$ Proposed Injection Zone: Blinebry from 5,780' to 6,100'Where: 660' FNL & 2310' FEL Sec. 13, T. 21 S., R. 37 E., Lea County, NMApproximate Location: 4 air miles NE of Eunice, NMApplicant Name:Apache Corporation(432) 818-1062Applicant's Address:303 Veterans Airpark Lane, #3000, Midland, TX 79705

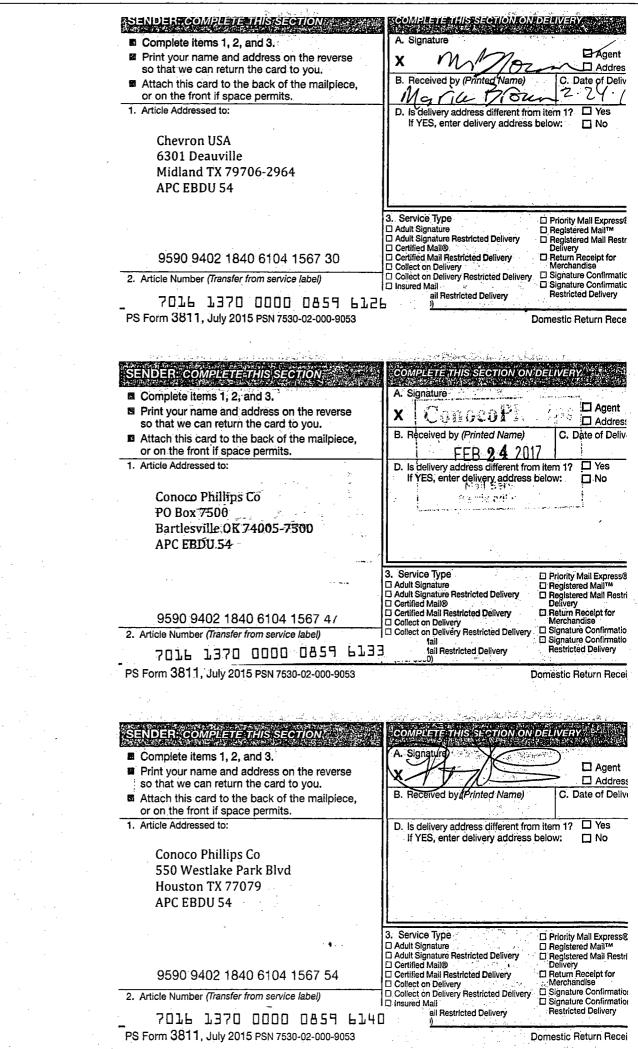
<u>Submittal Information:</u> Application for a water injection well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The New Mexico Oil Conservation Division address is 1220 South St.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

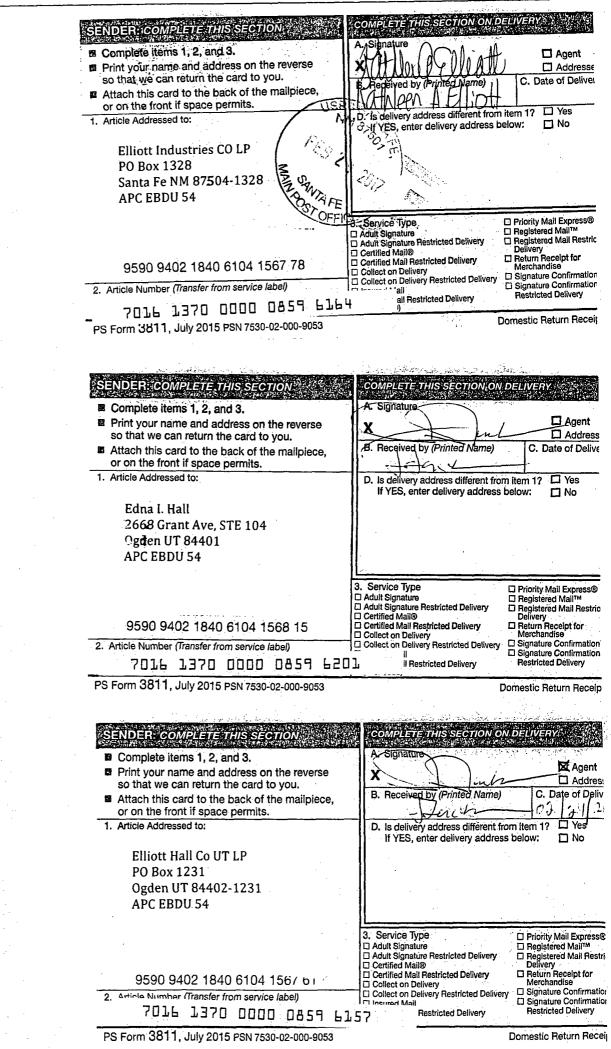
Please call me if you have any questions.

Sincerely,

**Brian Wood** 

SENDER A. Signature Complete items 1, 2, and 3. Acent Print your name and address on the reverse Х Address so that we can return the card to you. B. Received by (Printed Name) C. Date of Delive Attach this card to the back of the mailpiece, 20 1 or on the front If space permits. D Yes 1. Article Addressed to: D. Is delivery address different from Item 1? If YES, enter delivery address below: D No APC-EBAL SY Y27 BLM 620 E. GLOTHE SJ. CARLS \$ 10 (A \$ \$220 Service Type C Priority Mail Express@ Adult Signature Adult Signature Restricted Delivery □ Registered Mali™
 □ Registered Mali Restri Delivery
 Return Receipt for Merchandise Certifled Mall® 9590 9402 2392 6249 8243 84 Certified Mail Restricted Delivery Collect on Delivery Signature Confirmation 2. Article Number (Transfer from service label) Signature Confirmation 6645 7016 1370 0000 0859 **Restricted Delivery** Restricted Delivery PS Form 3811, July 2015 PSN 7530-02-000-9053 **Domestic Return Recel** COMPLETE THIS SECTION ON DELIVERY SENDER: COMPLETE THIS SECTION matu Complete items 1, 2, and 3. CI Agent Print your name and address on the reverse Addres: so that we can return the card to you. Date of Deliv B. Received by (Printed Name Attach this card to the back of the mailpiece, or on the front if space permits. D. Is delivery address different from item ? If YES, enter delivery address below □ Yes 1. Article Addressed to: **BP** American Prodctuion Co TOT PO Box 3092 Houston TX 77253-3092 APC EBDU 54 Service Type 3 Priority Mail Express Adult Signature □ Registered Mail™ □ Registered Mail Restr. Adult Signature Restricted Delivery ☐ Return Receipt for Merchandise ☐ Signature Confirmatio Certified Mall® **Certified Mail Restricted Delivery** 9590 9402 1840 6104 1567 23 Collect on Delivery Collect on Delivery Restricted Delivery 2. Article Number (Transfer from service label) Signature Confirmatio Insured Mail Restricted Delivery **il Restricted Delivery** 7016 1370 0000 0859 6119 PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Rece SENDER: COMPLETE THIS SECTION SECTION ON DELIVER A. Signature Complete items 1, 2, and 3. Agen 8 Print your name and address on the reverse X so that we can return the card to you. B. Received by (Printed Name) Attach this card to the back of the mailpiece, DEBNE Micharly or on the front if space permits. 1. Article Addressed to: D. Is delivery address different from item 1? If YES, enter delivery address below: N B Bunin Properties LP 25 2017 1496 Guadalupe Bend Boerne TX 78006 APC EBDU 54 06-9999 Priority Mail Express® Begistered Mail™ Service Type D Adult Signature Registered Mail Restri Delivery Adult Signature Restricted Delivery Certified Mail® E Return Receipt for Certified Mail Restricted Delivery 9590 9402 1840 6104 1568 35 Merchandise Collect on Delivery Signature Confirmation Collect on Delivery Restricted Delivery 2. Article Number (Transfer from service label) Signature Confirmation Insured Mail Restricted Delivery 7016 1370 0000 0859 6218 I Restricted Delivery PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Recei





		eceived 3/3/2 Add. Requ	•			
C-108 Review	w Checklist: R	eceived 333 Add. Requ	uest:	Reply Date:	Suspended:	[Ver 15]
	PMX/SWD NU	mber: Order	r Date:	Legacy Permit	s/Orders: P-7	2394 7
Well No. 5 4 Well Name(	s): EBD4			·····	<b>/</b>	12395
Well No. <u>5 4</u> Well Name( API: 30-0 <u>2 5-06 65</u> 660 F ~ L	Spud Dat	MARch 1, ie: 1955 1	New or Old:	UIC Class II	Primacy 03/07/198	2)
660FNL Footages 2310FEL	- Lot	or Unit 🔏 Sec 13	Tsp 21	S Rae 374	F County Le	<del>L</del>
General Location: 2555	1- 5 5/2	Elalate Pool:	SLINE G (AC	hny Oil	Bool No. 60	-60
BLM 100K Map: 34-				673	Brien	
COMPLIANCE RULE 5.9: Total Wel	•			. Order?	i.9 OK? <u>Date:</u> Date:	354-201/
WELL FILE REVIEWED  Current	Status:	44600-		/		
WELL DIAGRAMS: NEW: Proposed	O or <b>RE-ENTER</b> :	Before Conv. O After C	Conv. 🕑 l	_ogs in Imaging:	Υ	
Planned Rehab Work to Well:	. <u> </u>			• 		·
Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)		Cement Sx br Cf	Cement Top and I	Determination Method
Plannedor ExistingSurface	<u> </u>	126	Stage Tool	125	SGIFAL	۷.
Planned_or ExistingInterm/Prod		3054		2000		lestimate.
Plannedor ExistingInterm/Prod	814/7"	6295		9403ec	20451	75
Planned_or Existing _ Prod/Liner						
Planned_or Existing Liner						
Planned_or Existing _ OH	5760/100		Inj Length	Comp	letion/Operation	Details:
Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining	Tops			-95
Adjacent Unit: Litho. Struc. Por.		Units BLihthn.	5820	NEW TD	_	•
Confining Unit: Litho. Struc. Por.		[~]	5354	NEW Open Hole	or NEW Perfs (	y × 7 pz
Proposed Inj Interval TOP:				Tubing Size 🕂	in. Inter Coated?	Y 260
Proposed Inj Interval BOTTOM:				Proposed Packer D		
Confining Unit: Litho. Struc. Por.	MARK THE TRACK SHOW			Min. Packer Depth	•	
Adjacent Unit: Litho. Struc. Por. AOR: Hydrologic a		formation	Ļ	Proposed Max. Surf Admin. Inj. Press. <b>2</b>		
POTASH: R-111-P_MINoticed?			Calt/Ca			
		1 - A				
FRESH WATER: Aquifer						
NMOSE Basin: Apithy	· · · ·			vithin 1-Mile Radius?	1=	
Disposal Fluid: Formation Source(s						
Disposal Int: Inject Rate (Avg/Max	BWPD): YOU	Protectable Water	s?_/_S	ource: S	System: Closed or	Open ·
HC Potential: Producing Interval	?Formerly Pro	oducing?Method: I	Logs/DST/P	&A/Other	2-Mile Radius Poo	I Мар 🔿
AOR Wells: 1/2-M Radius Map?	Well List?_	Total No. Wells P	enetrating Ir	nterval: 25 H		A
Penetrating Wells: No. Active Wel	Is_//Num Repairs	?on which well(s)?			Diagrams?_	
Penetrating Wells: No. P&A Wells		• • •			Diagrams?_	
NOTICE: Newspaper Date	Sy Mineral	Owner MBBANIN	Surface C	Dwner 5	N. Date_	ptry/nl #
RULE 26.7(A): Identified Tracts?	Affected Pers	sons: Gunocofh	ilips, E	SL Liot + Hulla	O FILOT Str	·· 42(724)
Order Conditions: Issues:						
Add Order Cond:					<b>`</b>	