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		[B]	XC	Offset Operators,	Leasehold	lers or Surface (Owner		WN 12	THE NEW YORK
		[C]	XA	Application is Or	ne Which F	Requires Publisl	ned Legal Not	tice	2 A	CEIVED OCI
		[D]		Notification and/ .S. Bureau of Land Mana				0	ې 29 :	<u>I</u>
		[E]	X F	For all of the abo	ve, Proof c	of Notification of	or Publication	is Attached,		
		[F]	□ \	Waivers are Attac	ched .					
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[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	Allar	Consultant	1-11-16			
Print or Type Name	Signature	Title	Date			
		brian@permitswest.c	om			

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e-mail Address

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

	FOR		
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 92							
VII.	Attach data on the proposed operation, including: <u>30-025-37535</u>							
	 Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.). 							
*VIII.	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.							
IX.	Describe the proposed stimulation program, if any.							
*X.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).							
*XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.							
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.							
XIII,	Applicants must complete the "Proof of Notice" section on the reverse side of this form.							
XIV.	Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.							
	NAME: BRIAN WOOD TITLE: CONSULTANT							
	SIGNATURE: DATE: JANUARY 4, 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:							

Side 2

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III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
 - (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
 - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
 - (3) A description of the tubing to be used including its size, lining material, and setting depth.

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

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

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
 - (1) The name of the injection formation and, if applicable, the field or pool name.
 - (2) The injection interval and whether it is perforated or open-hole.
 - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
 - (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,

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

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

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

INJECTION WELL DATA SHEET

OPERATOR:APACH	E CORPORATION				· · · · · · · · · · · · · · · · · · ·
WELL NAME & NUMBI	ER: WEST BLINEBRY DRINKARD	UNIT 92			
WELL LOCATION:	10' FSL & 1330' FEL	0		21 S	
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE
<u>WELLBO</u>	<u>RE SCHEMATIC</u>		<u>WELL CO</u> Surface (NSTRUCTION DA Casing	<u>TA</u>
7 7	8.625" 24# in 12.25" hole @ 1197'	Hole Size: 12.25	ı 	Casing Size:	8.625"
,	12.25" hole @ 1197' Generation of the second	Cemented with: 57	5sx.	or	ft ³
		Top of Cement:SU	JRFACE	Method Determin	ed: CIRCULATED
-	18"		Intermediat	e Casing	
•	5.5" 17# in 5.5" 17# in 7.875" hole @ 7284' TOC (1150 sx) = 650'	Hole Size:	<u></u>	Casing Size:	
	2	Cemented with:	SX.	or	ft ³
		Top of Cement:		Method Determin	ed:
			Production	Casing	
	existing perfs Blinebry 5596' - 5747'	Hole Size: 7	.875"	Casing Size:	5.5"
will set packer @ ≈6350'	Tubb 6050' - 6198' will squeeze all	Cemented with:1	L,150sx.	or	ft ³
		Top of Cement:	650'	Method Determin	ed: CBL
will perforate Drinkard 6400' - 6640' (includes existing perfs <			,284'		
			Injection 1	nterval	
	PBTD 7267' TD 7284'	6,400'	feet	to	6,640'
(not to scale)	(D-	rforated or Onen H	ale: indicate which)	

(Perforated or Open Hole; indicate which)

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Side 1

INJECTION WELL DATA SHEET

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Tubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COAT	
Type of Packer: LOCK SET INJECTION	
Packer Setting Depth: _6,350 '	
Other Type of Tubing/Casing Seal (if applicable):	
Additional Data	
1. Is this a new well drilled for injection?YesXXX_No	
If no, for what purpose was the well originally drilled? BLINEBRY/TUBB/DRINKARD OIL WELL	
 Name of the Injection Formation: <u>DRINKARD</u> Name of Field or Pool (if applicable): <u>EUNICE; BLI-TU-DR, NORTH (POOL CODE 22900</u>))
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 (3,714'), SAN ANDRES (3,994'),PADDOCK (≈5,160)	
BLINEBRY (5,592'), & TUBB (6,069')	
UNDER: ABO (6,676'), MONTOYA (~7,295'), MCKEE (~7,558'), CONNELL (~8	8,8086'

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30-025-37535

I. Goal is to convert this existing Blinebry, Tubb, Drinkard oil well (fka, State Land 15 #9) to a water injection well to increase oil recovery. The well will inject (6,400' - 6,640') into the Drinkard, which is part of the Eunice; Blinebry-Tubb-Drinkard, North Pool (aka, Eunice; BLI-TU-DR, North and pool code = 22900).

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

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

- III. A. (1) Lease: NM State Land Office B0-8105-0004 Lease Size: 160 acres (see Exhibit A for maps and C-102) Closest Lease Line: 410' Lease Area: S2S2 Section 16, T. 21 S., R. 37 E. Unit Size: 2,480 acres Unit Numbers: 300341 & NMNM-120042X Closest Unit Line: 910' Unit Area: <u>T. 21 S., R. 37 E.</u> 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 (8-5/8", 24#) was set in 2005 at 1197' in a 12.25" hole with 575 sacks, of which 171 sacks circulated to surface.



PROVIDING PERMITS for LAND USERS

30-025-37535

Production casing (5.5", 24#) was set at 7,284' (TD) in a 7.875" hole and cemented to 650' (CBL) with 1,150 sacks.

- A. (3) Tubing will be internally plastic coated 2-3/8", J-55, 4.7#. Setting depth will be ≈6,375'. (Injection interval will be 6,400' to 6,640'.)
- A. (4) A lock set injection packer will be set at ≈6350' (≈50' above the highest perforation of 6400').
- 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 6,400' to 6,640'. The well is a cased hole. Well is currently perforated in the Blinebry, Tubb, and Drinkard.
- B. (3) Well was originally drilled as a Blinebry, Tubb, Drinkard oil well.
- B. (4) Well is currently perforated in three zones: Blinebry (5,596' 5,747'), Tubb (6,050' - 6,198'), and Drinkard (6,515' - 6,611'). Perforations outside the proposed injection interval (6,400' - 6,640') will be squeezed.
- B. (5) Next higher oil or gas zone in the area of review is the Tubb. It produced from 6,050' to 6,198' in this well. Injection will occur in the Drinkard from 6,400' to 6,640'. (Drinkard top = 6,372'.) Both zones are part of the Eunice; Blinebry-Tubb-Drinkard, North Pool (pool code 22900) and in the unit.

No lower oil or gas zone currently produces in the area of review. Next lower productive zone is the Abo. It was penetrated by this well, but was not tested. Abo top is at 6,676. Wantz; Abo (pool code 62700) has produced elsewhere in the area of review in the past.



PAGE 2

APACHE CORPORATION WEST BLINEBRY DRINKARD UNIT 92 910' FSL & 1330' FEL SEC. 16, T. 21 S., R. 37 E. LEA COUNTY, NM

30-025-37535

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 910' south. Four existing injection wells are within a half-mile radius. All are in the unit (see Exhibit B).

V. Exhibit B shows all 55 existing wells (47 oil or gas wells + 4 water injection wells + 3 + P&A wells + 1 water supply well) within a half-mile radius, regardless of depth. Exhibit C shows all 800 existing wells (618 oil or gas wells + 90 injection or disposal wells + 62 P & A wells + 38 water supply wells) 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 (T 21 S, R 37 E)	Lessor(s)	Lease	Lessee(s) of Record	Drinkard operator, if any
SWNW Sec. 15	NMSLO	B0-1481-0018	Oxy USA WTP	Apache
W2SW4 Sec. 15	fee	Argo (NEDU)	Apache	Apache
S2NE4 Sec. 16	NMSLO	B0-1732-0001	Chevron	Apache
SENW Sec. 16	NMSLO	B0-1557-0002	Apache	Apache
N2SE4 & NESW	NMSLO	B0-0085-0016	Apache	Apache
S2S2 Sec. 16	NMSLO	B0-8105-0004	Apache	Apache
E2NE4 Sec. 21	BLM	NMLC-032591A	Apache et al	Apache
W2NE4 & E2NW4 Sec. 21	fee	Weatherly	Stephens & Johnson	Stephens & Johnson
W2NW4 Sec. 22	fee	Argo A (NEDU)	Apache	Apache

VI. There are 55 existing wells within a half-mile radius. Thirty-eight of the wells penetrated the Drinkard (top = 6,372'). The penetrators include 31 oil or gas wells, 4 water injection wells, 2 P&A wells, and 1 water supply well. A table abstracting the well construction details and histories of the penetrators are in



APACHE CORPORATION WEST BLINEBRY DRINKARD UNIT 92 910' FSL & 1330' FEL SEC. 16, T. 21 S., R. 37 E. LEA COUNTY, NM

30-025-37535

Exhibit F. Diagrams of the 2 P&A penetrators are in Exhibit G. The 55 existing wells (+ 3 approved, but not yet drilled, wells) and their distances from the #92 are:

ΑΡΙ	OPERATOR	WELL	ТҮРЕ	UNIT- SECTION	TVD	CURRENT ZONE	FEET FROM WBDU 92
3002538378	Apache	State Land 15 016	0	O-16	4135	Penrose Skelly; Grayburg	332
3002539605	Apache	State Land 15 018	0	0-16	4404	Penrose Skelly; Grayburg	407
3002537496	Apache	State Land 15 012	G	P-16	4415	Penrose Skelly; Grayburg	657
3002520311	Apache	WBDU 091	ο	O-16	7300	Eunice; Bli-Tu- Dr, North	663
3002506632	Apache	WBDU 088	ο	0-16	6660	Eunice; Bli-Tu- Dr, North	699
3002506633	Apache	WBDU 089	0	P-16	6665	Eunice; Bli-Tu- Dr, North	719
3002537201	Apache	WBDU 079	0	J-16	7310	Eunice; Bli-Tu- Dr, North	808
3002539300	Apache	WBDU 115	ο	P-16	7225	Eunice; Bli-Tu- Dr, North	866
3002537916	Apache	State DA 013	ο	I-16	4398	Penrose Skelly; Grayburg	923
3002539449	Apache	State Land 15 017	0	P-16	4415	Penrose Skelly; Grayburg	1008
3002537482	Apache	State Land 15 013	G	0-16	4392	Penrose Skelly; Grayburg	1037
3002539963	Apache	WBDU 114	о	P-16	6970	Eunice; Bli-Tu- Dr, North	1045
3002506634	Apache	WBDU 090	0	P-16	8261	Eunice; Bli-Tu- Dr, North	1162



30-025-37535

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3002506618	Apache	WBDU 077	0	J-16	6720	Eunice; Bli-Tu- Dr, North	1255
3002506619	Apache	WBDU 078	I	1-16	6644	Eunice; Bli-Tu- Dr, North	1263
3002538415	Apache	WBDU 084	0	K-16	6835	Eunice; Bli-Tu- Dr, North	1366
3002535765	Apache	State DA 008	0	J-16	4200	Penrose Skelly; Grayburg	1384
3002537536	Apache	WBDU 093	0	0-16	7102	Eunice; Bli-Tu- Dr, North	1410
3002536786	Apache	State DA 010	0	J-16	4345	Penrose Skelly; Grayburg	1418
3002506617	Apache	State DA 005	0	I-16	8225	Penrose Skelly; Grayburg	1466
3002506722	Stephens & Johnson	Weatherly 004	0	B-21	6612	Eunice; Bli-Tu- Dr, North	1699
3002539381	Apache	WBDU 127	0	A-21	6878	Eunice; Bli-Tu- Dr, North	1701
3002506716	Apache	WBDU 095	ο	A-21	6630	Eunice; Bli-Tu- Dr, North	1710
3002537243	Apache	NEDU 721	0	M-15	6850	Eunice; Bli-Tu- Dr, North	1715
3002538231	Apache	WBDU 082	0	J-16	6875	Eunice; Bli-Tu- Dr, North	1721
3002539151	Apache	Elliott A 010	0	A-21	4410	Penrose Skelly; Grayburg	1866
3002536806	Apache	NEDU720	0	D-22	6850	Eunice; Bli-Tu- Dr, North	1937
3002506608	Apache	Argo 012	0	M-15	8035	Penrose Skelly; Grayburg	1958
3002506631	Apache	State Land 15 002	0	N-16	6700	Penrose Skelly; Grayburg	1967





30-025-37535

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3002509911	Apache	NEDU 702	ο	M-15	6646	Eunice; Bli-Tu- Dr, North	2016
3002535516	Apache	State DA 007	0	K-16	4200	Penrose Skelly; Grayburg	2016
3002542537	Apache	WBDU 164	0	H-16	7000 (plan)	Eunice; Bli-Tu- Dr, North	2040
3002535523	Apache	Weatherly 21 002	ο	B21	7152	Penrose Skelly; Grayburg	2045
3002539686	Apache	Argo A 014	ο	D-22	4400	Penrose Skelly; Grayburg	2081
3002537834	Chevron	Harry Leonard NCT E 008	P&A	H-16	4300	Penrose Skelly; Grayburg	2082
3002541549	Apache	WBDU 154	1	N-16	6952	Eunice; Bli-Tu- Dr, North	2123
3002506718	John H Hendrix	Elliott A 003	P&A	A-21	7859	Eunice; Bli-Tu- Dr, North	2143
3002538230	Apache	WBDU 081	0	K-16	6793	Eunice; Bli-Tu- Dr, North	2170
3002536646	Apache	Weatherly 21 005	0	C-21	4250	Penrose Skelly; Grayburg	2226
3002506616	Apache	WBDU 076	J	K-16	6654	Eunice; Bli-Tu- Dr, North	2229
3002538802	Stephens & Johnson	Weatherly 009	о	B-21	6696	Eunice; Bli-Tu- Dr, North	2247
3002509916	Apache	NEDU701	ο	L-15	6654	Eunice; Bli-Tu- Dr, North	2266
3002506624	Chevron	Harry Leonard NCT E 005	0	H-16	8220	Penrose Skelly; Grayburg	2290
3002506606	Apache	Argo 010	P&A	L-15	8015	Hare; San Andres (Gas)	2312
3002542232	Apache	NEDU 639	ο	L-15	7450 (plan)	Eunice; Bli-Tu- Dr, North	2329



30-025-37535

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3002537365	Apache	State Land 15 008	о	N-16	4435	Penrose Skelly; Grayburg	2355
3002537238	Apache	NEDU 629	0	L-15	6900	Eunice; Bli-Tu- Dr, North	2394
3002536787	Apache	State DA 011	0	K-1 6	4350	Penrose Skelly; Grayburg	2402
3002506605	Apache	NEDU 723	ο	M-15	8179	Eunice; Bli-Tu- Dr, North	2404
3002539557	Apache	Argo 013	0	M-15	4409	Penrose Skelly; Grayburg	2443
3002542233	Apache	NEDU 724	0	M-15	7450 (plan)	Eunice; Bli-Tu- Dr, North	2455
3002506620	Chevron	Harry Leonard NCT E 001	о	G-16	6670	Penrose Skelly; Grayburg	2480
3002506621	Apache	W8DU 056	I	H-16	6780	Eunice; Bli-Tu- Dr, North	2482
3002506721	Stephens & Johnson	Weatherly 003	0	C-21	6624	Eunice; Bli-Tu- Dr, North	2502
3002534888	Apache	NEDU 713	ο	L-15	6790	Eunice; Bli-Tu- Dr, North	2519
3002509928	Apache	NEDU 801	0	D-22	6636	Eunice; Bli-Tu- Dr, North	2545
3002506741	Apache	Argo A 009	W	D-22	8035	Hare; San Andres (Gas)	2640
3002539152	Apache	Elliott A 011	ο	H-21	5656	Penrose Skelly; Grayburg	2663

VII. 1. Average injection rate will be $\approx 2,500$ bwpd. Maximum injection rate will be $\approx 3,000$ bwpd.



PAGE 7

30-025-37535

- 2. System will be closed. The well will be tied into the existing unit pipeline system. The system consists of a branched injection system with centrifugal injection pumps.
- 3. Average injection pressure will be ≈1,200 psi. Maximum injection pressure will be 1,280 psi (=0.2 psi/ft x 6,400' (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 38,670,251 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
рН	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



APACHE CORPORATION WEST BLINEBRY DRINKARD UNIT 92 910' FSL & 1330' FEL SEC. 16, T. 21 S., R. 37 E. LEA COUNTY, NM

30-025-37535

5. Apache currently has 109 active oil 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 Drinkard is Leonardian in age, 304' 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:



APACHE CORPORATION WEST BLINEBRY DRINKARD UNIT 92 910' FSL & 1330' FEL SEC. 16, T. 21 S., R. 37 E. LEA COUNTY, NM

30-025-37535

There are 3 water wells within a 1-mile radius according to the State Engineer (Exhibit H). Deepest of the three is 120'. None were found during a November 11, 2015 field inspection.

Two wells within a mile, but that are not in the State Engineer's database, were found and sampled. One well is in the Finish Line Trailer Park, 3000' southeast in SENE Section 21. The other is 5000' southeast in NWNW Section 27. Their analyses are in Exhibit I. Depths are unknown, but are likely in the red beds. (Ogallala is >3 miles northeast.)

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

There will be >5,100' of vertical separation and 1,217' of salt and anhydrite between the bottom of the only likely underground fresh water source and the top of the injection interval. Produced water is currently being injected (194 wells) or disposed (9 wells) into the Blinebry-Tubb-Drinkard, San Andres, Grayburg, Queen, Seven Rivers, and Yates within T. 21 S., R. 37 E.

IX. The well will be stimulated with acid.

X. DSN/SDL and DLL/MSFL logs were run in 2006 and are on file with NMOCD.

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

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

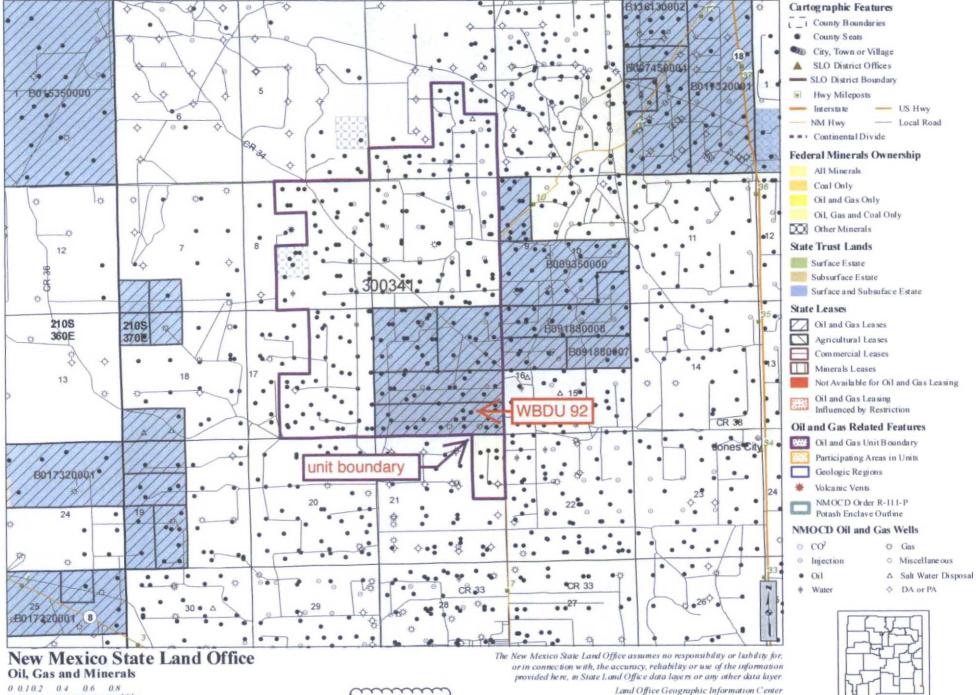


APACHE CORPORATION WEST BLINEBRY DRINKARD UNIT 92 910' FSL & 1330' FEL SEC. 16, T. 21 S., R. 37 E. LEA COUNTY, NM

30-025-37535

XIII. A legal ad (see Exhibit K) was published January 5, 2016. Notice (this application) has been sent (Exhibit L) to the surface owner (NM State Land Office), offset Drinkard operators (excluding Apache, only Stephens & Johnson), and other lessees or leasehold operating rights holders (BLM, Chevron USA, Elliott Hall Co. Utah LP, Elliott Industries Ltd. Partnership, NM State Land Office, and Oxy USA WTP LP).





No. of Concession, Name -____ Miles Universal Transverse Mercator Projection, Zone 13 1983 North American Datum

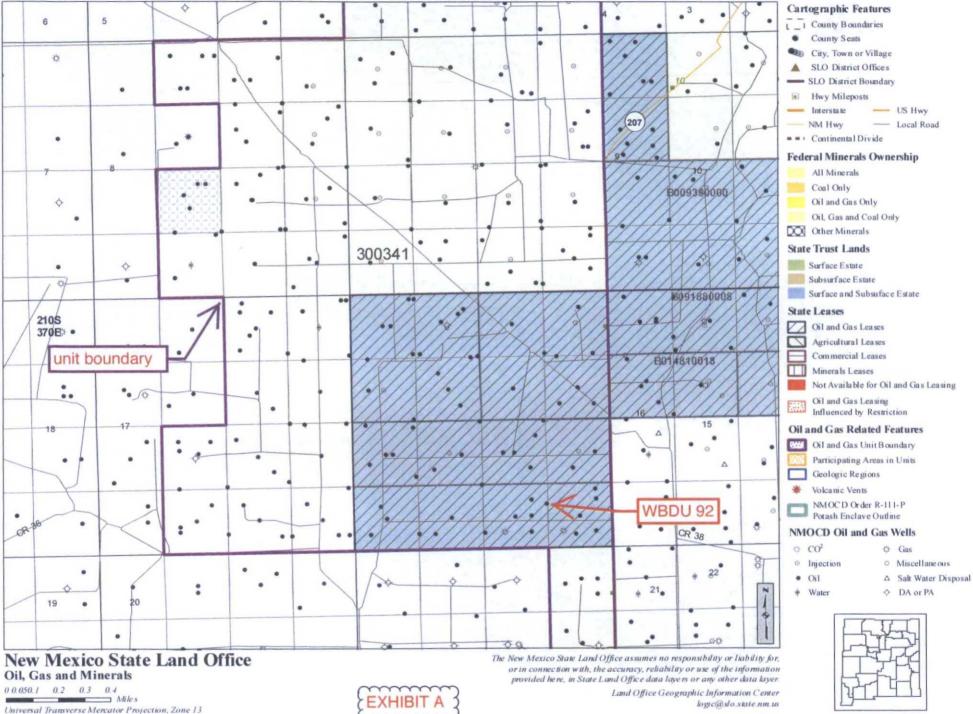


logic@slo_state.nm.us

Created On: 3/22/2014 2:51:13 PM



www.nmstatelands.org

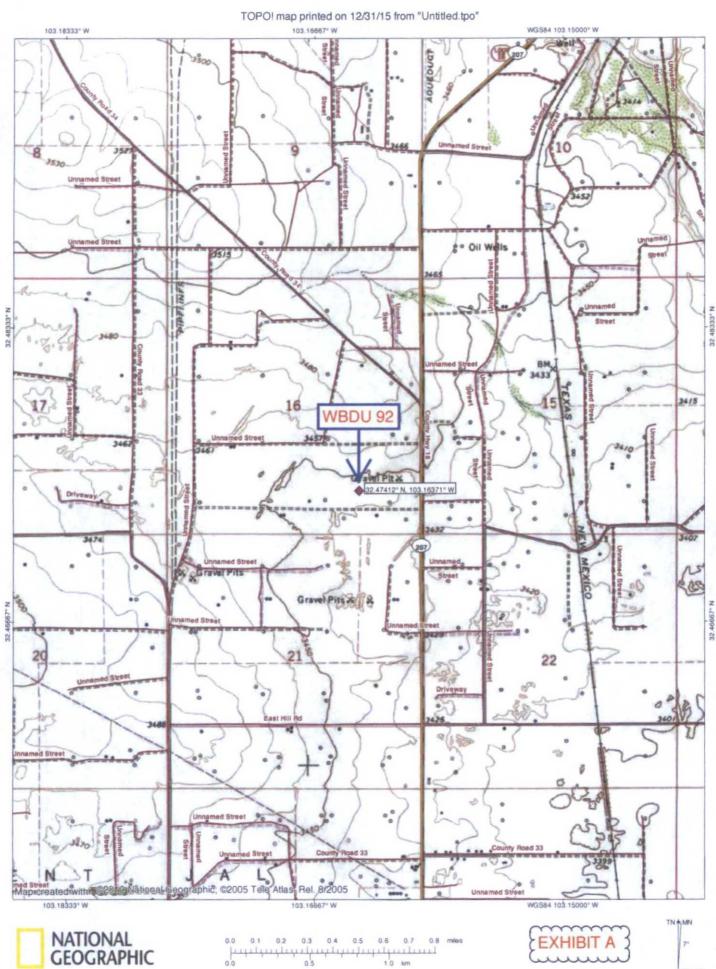


1983 North American Datum



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www.nmstatelands.org



12/31/15

DISTRICT I 1825 N. PRENCH DR., HOBBS, NM 88240

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

State of New Mexico

Energy, Minerals and Natural Resources Department



OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR.

Form C-102 Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

EXHIBIT A

05.11.0978

Certificate No. GARY BIDSON

5 telm 7/5/05

12641

DISTRICT III 1000 Rio Brazos	Rd., Aztec, N	M 87410		Santa	Fe, Ne	w Me	exico 87505		FUC MAD	c S copica
DISTRICT IV	DR., SANTA PE.	NN 87505	WELL LO	CATION	AND A	CREA	GE DEDICATI	ON PLAT	- AMEND	ED REPORT
арі 30-025 - 37	Number 7535		19190	Pool Code)		Dri	nkard	Pool Name		
Property 34938	Code					Well Num 9	ober			
OGRID N 00873	lo.			APA	^{Operat} CHE C		Elevatio 3444			
	· · · · · · · · · · · · · · · · · · ·	····		···	Surface					
UL or lot No.	Section	Township	Range	Lot Idn	Feet from	o the	North/South line	Feet from the	East/West line	County
0	16	21-S	37-E		91	0	SOUTH	1330	EAST	LEA
		<u></u> _	Bottom	·			rent From Sur			, -
UL or lot No.	Section	Township	Range	Lot Idn	Feet from	a the	North/South line	Feet from the	East/West line	County
Dedicated Acre	Joint o	r Infill Co	nsolidation	Code Or	der No.					Ļ,
40										/
NO ALLO	DWABLE W						NTIL ALL INTER Approved by 1		EEN CONSOLID	ATED
							1374757611 10 10 10 10 10 10 10 10 10 10 10 10 1	I hereb contained herei best of my know Signature Elaine L Printed Nam Engineer Tile 4/20/200 Detc	e Tech 6 OR CERTIFICAT Has been for the formation many or the formation in the formation of the many of the formation in the formation of the in the formation of the formation in the formation of the formation of the formation of the formation is the formation of the formation of the formation of the formation is the formation of the	formation ete to the ete to the TION ion shown d notes of under my frue and f
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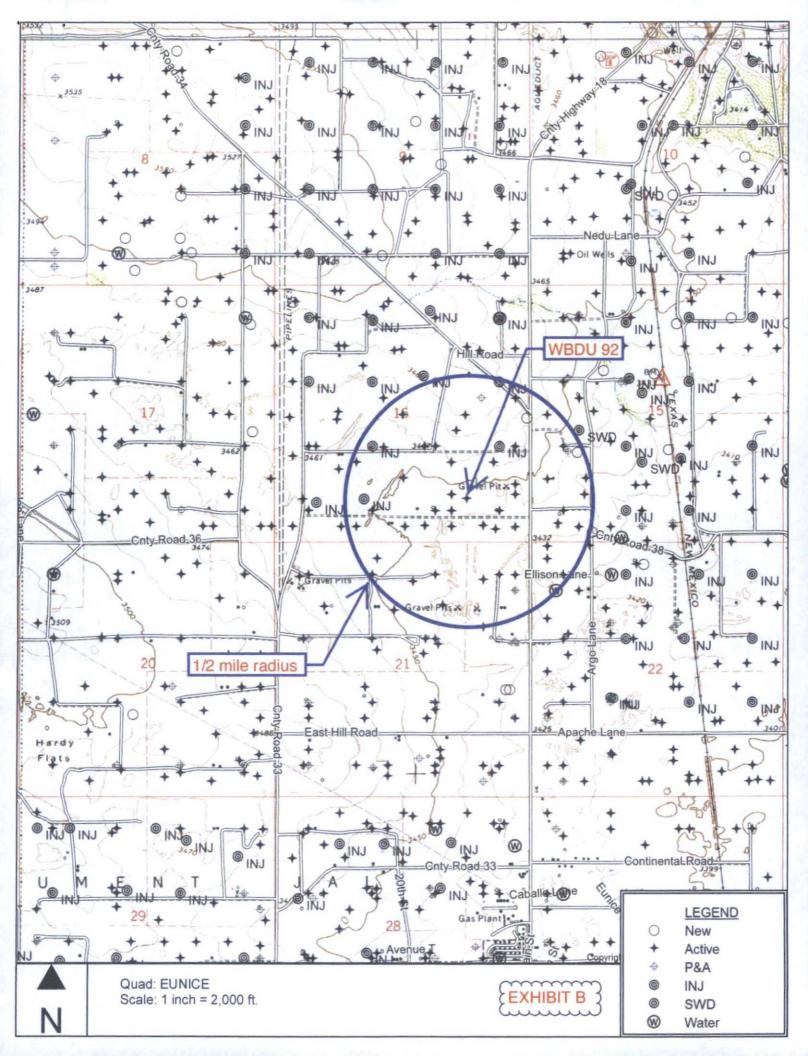
-1330'

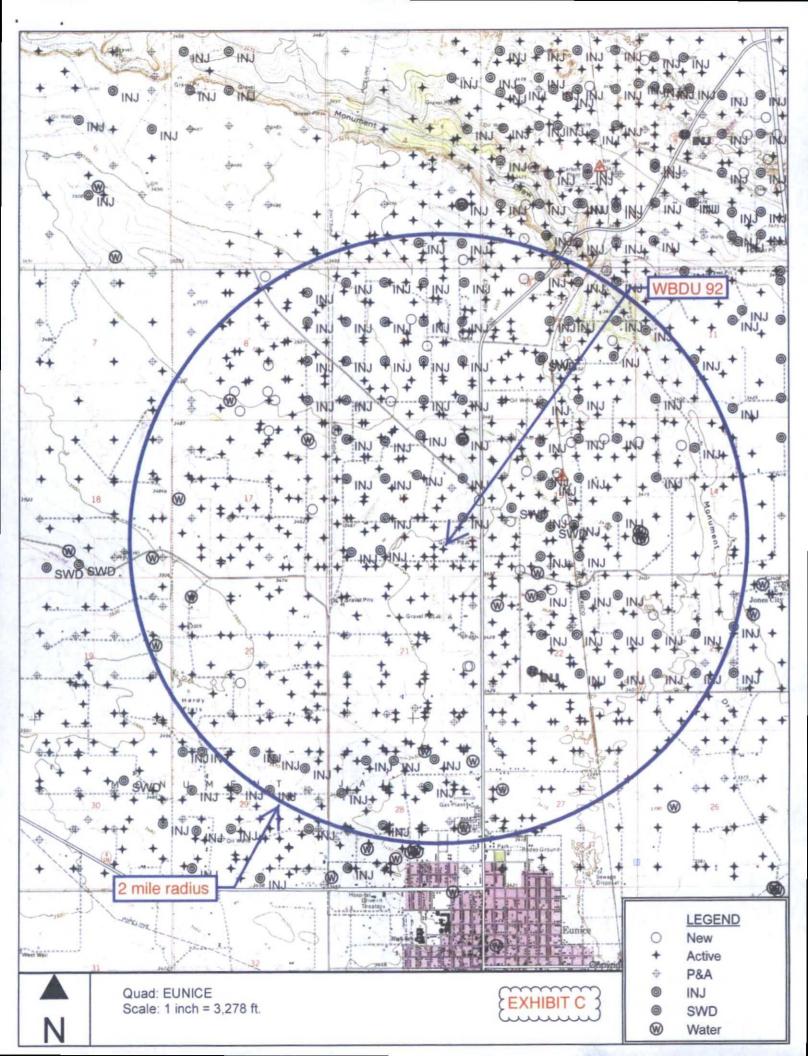
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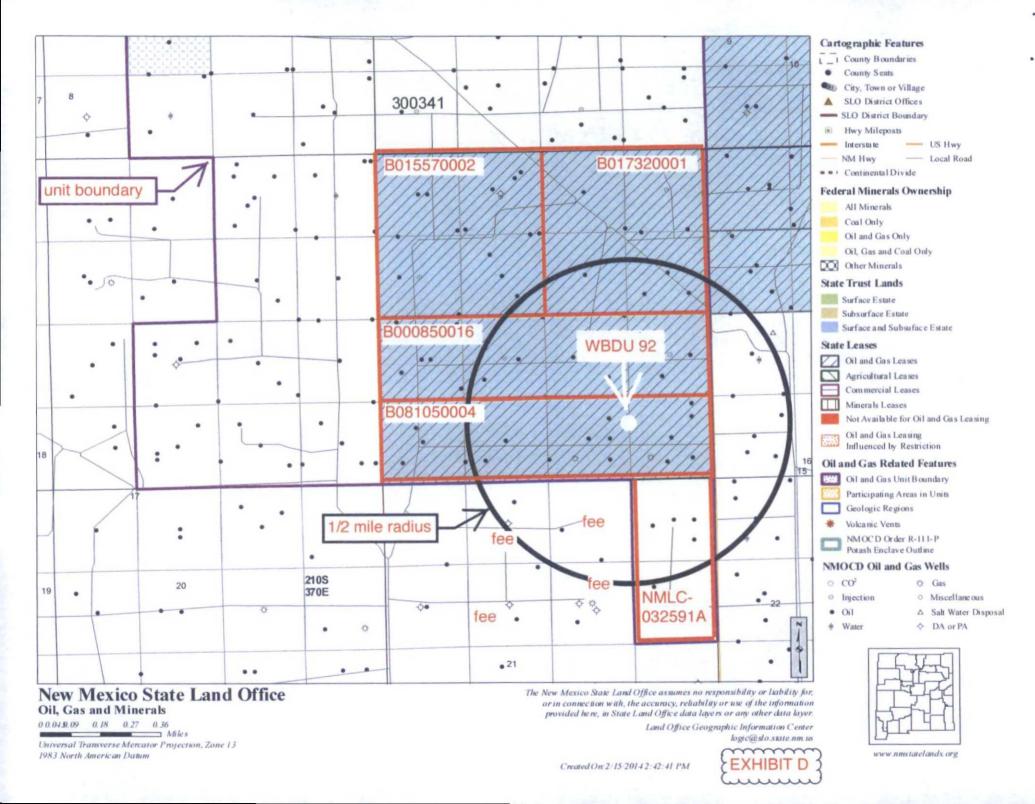
Y=538145.7 N X=860844.7 E

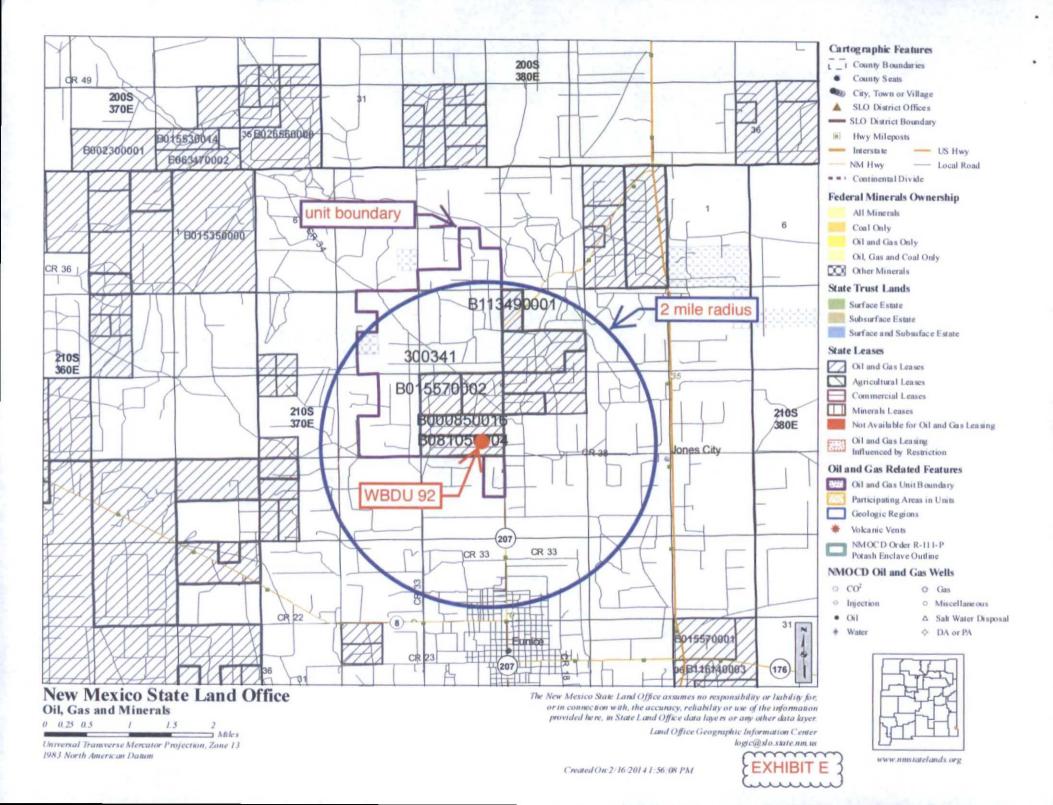
LAT.=32°28°26.53" N

LONG. = 103"09'47.78" W









WELL	SPUD	TD	POOL (most recent)	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	тос	HOW DETERMINED
WBDU 091	9/19/63	7300	Eunice; Bli-Tu-Dr, North	0	17.5	13.325	252	300 sx	surface	circulated 25 sx
30-025-20311					11	8.625	2990	665 sx	surface	circulated 100 sx
0-16-215-37£					7.875	5.5	7298	1005 sx	1120	temp survey
WBDU 088	6/16/47	6660	Eunice; Bli-Tu-Dr, North	0	17.5	13.325	223	250 sx	no report	no report
30-025-06632	····				11	8.625	2866	1600 sx	no report	no report
0-16-21\$-37£					7.75	5.5	6659	500 sx	no report	no report
WBDU 089	6/22/47	6665	Eunice; Bli-Tu-Dr, North	0	17.5	13.325	219	250 sx	no report	no report
30-025-06633					11	8.625	2864	1700 sx	no report	no report
P-16-21S-37E					7.875	5.5	6664	400 sx	no report	no report
WBDU 079	6/24/05	7310	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1289	600 sx	surface	circulated 92 sx
30-025-37201					7.875	5.5	7310	1600 sx	270	CBL
J-16-21S-37E										
				<u> </u>		 				

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W8DU 115	5/7/10	7225	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1273	650 sx	surface	circulated
30-025-39300					7.875	5.5	7225	1300 sx	surface	circulated
P-16-21S-37E										
WBDU 114	12/19/10	6970	Eunice; Blí-Tu-Dr, North	0	12.25	8.625	1297	664 sx	surface	circulated
30-025-39963					7.875	5.5	6952	1195	surface	no report
P-16-21S-37E										
WBDU 090	4/12/52	8261	Eunice; Bli-Tu-Dr, North	0	17	13.325	258	250 sx	surface	circulated
30-025-06634					11	8.625	2681	1500 sx	surface	circulated
P-16-21S-37E		-			7.75	5.5	8259	400 sx	3375	temp survey
WBDU 077	7/4/47	6720	Eunice; Bli-Tu-Dr, North	0	17.25	13.325	213	200 sx	surface	circulated
30-025-06618					11	8.625	2807	1550 sx	580	temp survey
J-16-21S-37E					7.375	5.5	6630	500 sx	2845	temp survey
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W8DU 078	8/12/47	6644	Eunice; Bli-Tu-Dr, North	1	17.25	13.325	215	200 sx	surface	circulated
30-025-06619					11	8.625	2807	1550 sx	1350	no report
I-16-21S-37E					7.375	5.5	6644	500 sx	3165	no report
	· · · · · · · · · · · · · · · · · · ·		· ····································							
WBDU 084	7/3/07	6835	Eunice; Bli-Tu-Dr, North	ο	12.25	8.625	1265	650 sx	surface	circulated
30-025-38415					7.875	5.5	6835	1400 sx	8 9 0	CBL
K-16-21S-37E										
WBDU 093	12/14/05	7102	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1225	550	surface	circulated 129
30-025-37536					7.875	5.5	7102	1250 sx	1940	CBL
O-16-21S-37E										
State DA 005	3/4/52	8225	Paddock	0	17.5	13.325	258	200 sx	surface	circulated
30-025-06617					11	8.625	2820	1500 sx	565	temp survey
I-16-21S-37E					6.75	5.5	8225	500 sx	3448	temp survey
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Weatherly 004	7/7/47	6612	Eunice; Bli-Tu-Dr, North	0	17.25	13.375	210	225 sx	surface	circulated
30-025-06722					11	8.625	2858	1200 sx	surface	circulated
B-21-21S-37E					7.75	5.5	6610	700 sx	2300	calculated
WBDU 127	9/6/09	6878	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1254	650 sx	surface	circulated
30-025-39381					7.875	5.5	6878	1250 sx	190	CBL
A-21-21S-37E										
WBDU 095	6/25/47	6630	Eunice; Bli-Tu-Dr, North	0	no report	13.325	318	300 sx	no report	no report
30-025-06716					no report	9.625	2848	1000 sx	no report	no report
A-21-21S-37E					no report	7	6625	500 sx	no report	no report
<u>_</u>					 					
NEDU 721	9/16/05	6850	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1275	575 sx	surface	circulated
30-025-37243					7.875	5.5	6850	1300 sx	408	CBL
M-15-215-37E									 	<u></u>
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WBDU 082	4/8/07	6875	Eunice; Bli-Tu-Dr, North	0	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 720	10/16/04	6850	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1195	600 sx	surface	circulated 130 sx
30-025-36806					7.875	5.5	6850	1150 sx	460	no report
D-22-21S-37E		ج .								
Argo 012	12/15/51	8035	Penrose Skeliy; Grayburg	0	17.5	13.325	227	250 sx	surface	circulated 60 sx
30-025-06608					11	8.625	2882	1900 sx	surface	circulated 300 sx
M-15-21S-37E					7.875	5.5	8033	983 sx	3480	CBL
State Land 15 002	3/17/47	6700	Penrose Skelly; Grayburg	0	17	13.325	320	300 sx	no report	no report
30-025-06631					11	8.625	2864	1600 sx	no report	no report
N-16-21S-37E					7.75	5.5	6699	500 sx	4670	calculation

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NEDU 702	8/8/47	6646	Eunice; Bli-Tu-Dr, North	ο	17.5	13.325	316	250 sx	surface	circulated
		0040			17.5	13.325	510	230.32	Suilace	
30-025-09911					11	8.625	2826	800 sx	surface	circulated
M-15-21S-37E					7.875	5.5	6529	500 sx	3650	estimated
Weatherly 21 002	4/27/02	7152	Penrose Skelly; Grayburg	0	14.75	11.75	395	305 sx	surface	circulated 25 sx
30-025-35523	-				11	8.625	3003	850 sx	surface	circulated 50 sx
B-21-21S-37E	<u> </u>				7.875	5.5	7152	750 sx	2690	temp survey
								······		
WBDU 154	11/6/14	6952	Eunice; Bli-Tu-Dr, North	I	11	8.625	1276	575 sx	surface	circulated 182 s
30-025-41549	_				7.875	5.5	6955	1060 sx	surface	circulated 250 s
N-16-21S-37E								· · · · · ·		
			·····		no					
Elliott A 003	1/26/52	7845	Blinebry Oil & Gas (Oil)	P&A	report	13.325	260	300 sx	surface	circulated
30-025-06718					no report	9.625	2942	1850 sx	no report	no report
A-21-21S-37E					no report	5.5	7841	395 sx	5840	temp survey

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WBDU 081	2/28/07	6793	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1255	600 sx	surface	circulated
30-025-38230					7.875	5.5	6793	1200 sx	surface	CBL & circulated
K-16-21\$-37E										
WBDU 076	5/14/47	6654	Eunice; Bli-Tu-Dr, North	1	17.5	13.375	214	200 sx	<0	did not circulate
30-025-06616					11	8.625	2 9 95	1250 sx	1325	temp survey
K-16-215-37E					7.375	5.5	6654	500 sx	2850	temp survey
Weatherly 009	7/18/08	6696	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1222	550 sx	surface	circulated 42 s
30-025-38802					7.875	5.5	6694	1200 sx	2000	no report
B-21-21S-37E			· · ·				· · · ·			
NEDU 701	10/10/47	6654	Eunice; Bli-Tu-Dr, North	0	no report	13.325	224	210 sx	surface	circulated 25 s
30-025-09916					no report	8.625	2875	800 sx	surface	no report
L-15-215-37E					no report	5.5	6652	600 sx	3250	estimated
· · · · · · · · · · · · · · · · · · ·		<u> </u>			 	[
										

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Harry Leonard NCT E 005	6/22/52	8220	Penrose Skelly; Grayburg	0	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
	<u> </u>			_						
Argo 010	7/19/51	8015	Hare; San Andres (Gas)	P&A	17.25	13.325	241	250 sx	surface	circulated 50 sx
30-025-06606	_				11	8.625	2907	1700 sx	surface	circulated 287 sx
L-15-21S-37E					7.875	5.5	8012	875 sx	2660	TOL
NEDU 629	6/25/05	6900	Eunice; Bli-Tu-Dr, North	0	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										
NEDU 723	5/29/51	8179	Eunice; Bli-Tu-Dr, North	0	17.25	13.325	225	250 sx	surface	circulated
30-025-06605	· · · · · · · · · · · · · · · · · · ·				11	8.625	2917	1700 sx	surface	circulated
M-15-21S-37E	· · · · ·				7.875	5.5	8000	850sx	2701	CBL

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Harry Leonard NCT E 001	9/13/47	6670	Penrose Skelly; Grayburg	0	17.25	13.325	294	300 sx	surface	circulated
30-025-06620					12.25	9.625	2950	1300 sx	1345	temp survey
G-16-215-37E					8.75	7	6610	700 sx	1360	temp survey
		ļ								
WBDU 056	11/24/47	6780	Blinebry Oil & Gas (Oil)	1	17.5	13.325	301	300 sx	surface	circulated
30-025-06621					12.25	9.625	2952	1300 sx	1370	temp survey
H-16-215-37E					8.75	7	6547	700 sx	2715	temp survey
					6.25	4.5	6765	670 sx	surface	CBL
Weatherly 003	9/4/47	6624	Blinebry Oil & Gas (Oil)	ο	17	12.75	250	200 sx	no report	no report
30-025-06721					12	8:625	2900	1200 sx	no report	no report
C-21-21S-37E]			8.75	5.5	6624	500 sx	no report	no report
		ļ								
NEDU 713	9/25/00	6790	Eunice; Bli-Tu-Dr, North	0	12.25	8.625	1245	460 sx	surface	circulated 121 sx
30-025-34888					7.875	5.5	6790	1525 sx	surface	circulated 156 sx
L-15-21S-37E										
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NEDU 801	8/19/47	6636	Eunice; Bli-Tu-Dr, North	0	17.25	13.325	210	250 sx	surface	circulated 50 sx
30-025-09928					11	8.625	1223	600 sx	surface	circulated
D-22-215-37E	-				7.875	5.5	6624	800 sx	2734	calculated
Argo A 009	9/9/51	8035	Hare; San Andres (Gas)	w	17.25	13.325	218	250 sx	surface	circulated
30-025-06741					11	8.625	2900	1775 sx	surface	circulated
D-22-21S-37E					7.875	5.5	8025	1125 sx	2712	no report

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PBD Surface

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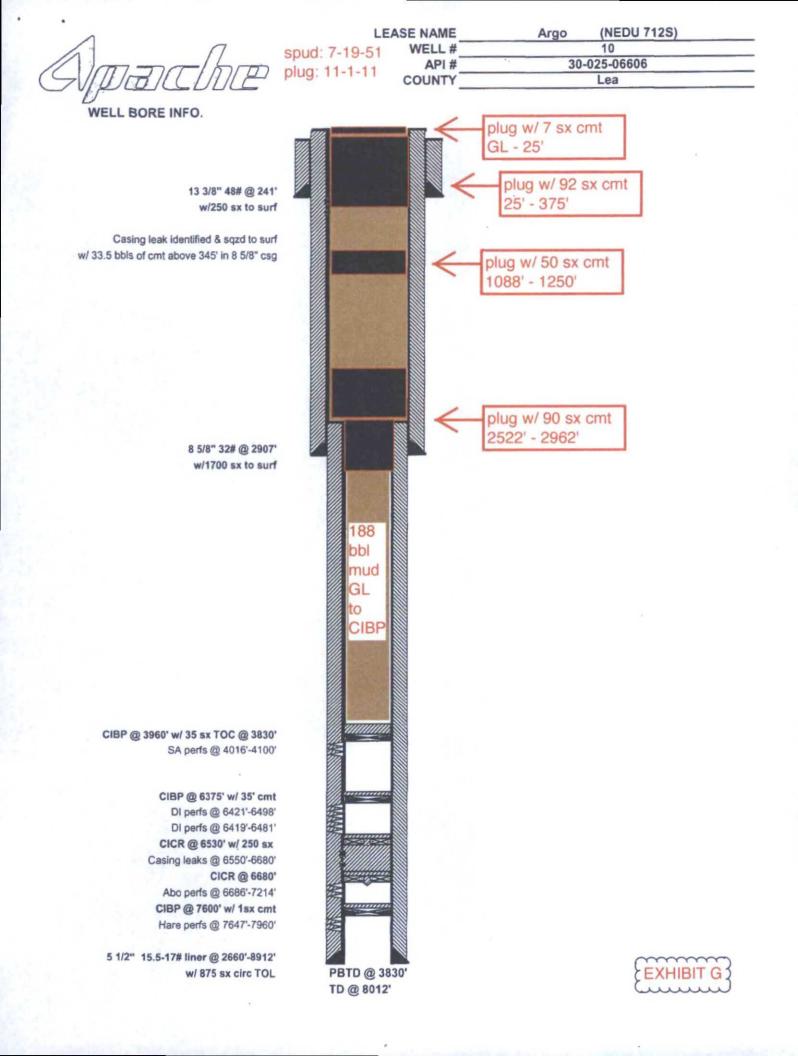
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spud: 1-26-52

· · · ·				
	WELL D	ATA SHEET	•	spud: 1-26-52
LEASE <u>Elliott A</u> Wel	L NO. <u>3</u>	FIELD	Blinebry	DATE <u>2-5-95</u>
LOCATION 980 FEET FROM	North LIN	e and <u>330</u>	FEET FROM <u>E</u>	ast LINE
SECTION 21 TOWNSHIP 2 API Well# 30-025-067180051	1-5 RANGE	e Designation	+ Serial # NML	C032591A
* WH CONNS NONE		Date Compl	eted	
KDB to KDB to CAT Juo sate Junt - H-Sgr. H-lase 732	<u>1434</u> GE <u>13</u> E <u>12</u>	Initial fo FROM:	eted rmation TO: oduction	BOPD BWPD MCFPD GOR
P+A mud		Completion Plug + Aba	Data:	5. End 2-5-95
Surf. P	ipe set 🕴	- + 10 - 5096 2-3-95 - Cu	<u>up to 4572: - /</u> + 5% "Cro@ 3000	+ Pull 5% "(so
1 1 240'W	/ 300 8X rc? <u>Ves</u>	2-4-95 - 50	+ 40bble PtAM	10 from 4571 to 2000! to Ca C/6 from 3 150
L'HAND	-y	To 2902 - 3	pot 100 sx. "Ci'cm Sa' CAIL Pluas Te	time/27 Co C/2 From
		Circ PtAM	RIS WINN NEW	to Surface w/ 208
1/1From 2654' cat 9 95/8 " 0	D <u>J2-36</u> 1bs. d Gr <u>H-404</u>	Test 95/2" (sg. to soopsi -	0k Beet 9%
Plog ⁺ Iz 100 st	g set at	2-5-95 -	x Holes @ 735'	They Sgz. Holer .
CA4. Plog "12 10051 From 2404 1 to 3150' Cmt. Ci	W/ 1850 EX IC? <u>No</u>	C Neat Cast.	940× 1344" ANNU - Leave 95/4 CS	1 51 5 W/ 3 60 5x. Class 3 + 13 3/6 49 5/4"
PM4-6 (13.23000' TOC at TS TS	<u>Nove</u> ' Dy	<u>Subsequent</u>	Workover or	Reconditioning :
1 100 4 Con 16 Vs" Lag. Parted @ 4860'			****	
1/ - (T) I / A		······	ner en la companya de	y
EZER PAANOS I. Holes I Frettligger Blinebry Parts 5804'to 586	_ 1			
1600' + F Blinesery Parts 5804 to 580 27502 (111) Sq2. Holese 5880 - 7552.	• .			
Hassid + Hug, 51/2 *	OD -	Present Pr		PD BWPD CPPD GOR
Cicke Tist 15.5+17 C	<u>+J55</u> , 80 set 8	•	······································	Date
CIBPOT320' 7841	•	Remarks or	Additional D	ata:
	E40 by TS	· ····································		······································
			· · · · · · · · · · · · · · · · · · ·	
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				EXHIBIT G
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New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates th	(R=POD has been replace													
POD has been replace & no longer serves a	d O=orphaned C=the file is	,	(qua	rtei	rs a	re 1	=NW	2=NE 3	=SW 4=SE) .				
water right file.)	closed)		(qua	rtei	rs a	re si	malles	st to lar	gest) (N.	AD83 UTM in me	eters)	(n feet)	
	POD Sub-		Q	Q	Q						• •	Depth	Depth	Water
POD Number	Code basin								X	·Y	Distance		Water	Column
<u>CP 00164</u>		LE					21S		671665	3594080* 🍚	979	120		
<u>CP 01141 POD2</u>		LE					21S		673541	3594250 🏵	1005	40		
CP 01141 POD3	within	LE	3	4			21S		673541	3594250 🏵	1005	40		
CP 01141 POD4	1 mile	LE	3	4	3	15	21S	37E	673541	3594250 😜	1005	45		
CP 00554	(1610 m)	LE		2	2	16	21S	37E	672744	3595610* 🚱	1149	80	70	10
CP 01185 POD3	beyond	LE		1	3	14	21S	37E	674592	3594620 😜	2036	70		
CP 01185 POD1	1 mile	LE		1	3	14	21S	37E	674598	3594689 🈜	2048	70		
CP 01185 POD2	(1610 m)	LE		1	3	14	21S	37E	674623	3594674 🏵	2072	70		
CP 01185 POD4		LE		1	3	14	21S	37E	674633	3594610 🌑	2076	70		
CP 00251		LE	2	3	4	22	21S	37E	674099	3592915* 😜	2190	103		
CP 00711		LE	4	2	2	28	21S	37E	672900	3592291* 😜	2210	100	65	35
CP 00252		LE	4	2	4	22	21S	37E	674493	3593125* 🚱	2356	106		
CP 00162		LE	1	4	2	09	21S	37E	672621	3596915* 😜	2440	120		
CP 00163		LE	1	4	2	09	21S	37E	672621	3596915* 🚱	2440	120		
CP 00346		LE	1	3	1	27	21S	37E	673110	3592096* 🚱	2441	90		
CP 00881		LE		4	4	22	21S	37E	674402	3592824* 🚱	2472	95	53	42
CP 00017		LE	2	1	2	27	21S	37E	674106	3592513* 🚱	2497	101		
CP 00736		LE		3	1	27	21S	37E	673211	3591997* 🈜	2561	120	76	44
CP 00242		LE	3	4	2	28	21S	37E	672708	3591889* 🚱	2590	112		
<u>CP 00293</u>		LE	2	4	1	27	21S	37E	673711	3592104* 😜	2635	80		
CP 00895		LE		1	1	20	21S	37E	669957	3593956* 😜	2655	163		
CP 00235		LE	2	2	1	23	21S	37E	675283	3594144* 🚱	2742	81		
CP 00240		LĘ	4	2	1	23	21S	37E	675283	3593944* 😜	2773	72		
CP 00241		LE	4	2	1	23	21S	37E	675283	3593944* 😜	2773	76		
CP 01026 POD1		LE	1	1	3	17	21S	37E	669809	3594958 😜	2794	167	95	72
CP 00249		LE	2	3	2	27	21S	37E	674113	3592111* 🏵	2827	102		

*UTM location was derived from PLSS - see Help



(A CLW##### in the POD suffix indicates the	(R=POD ha been replac	ed,													
POD has been replaced & no longer serves a water right file.)	O=orphaned C=the file is closed)		•••					2=NE 3 st to larg	3=SW 4= gest)	-	D83 UTM in r	neters)	(In feet)	
ROD Number	POD Sub-			Q		<u> </u>	Turo	Baa		x	Y	Distance	-	Depth	Water Column
POD Number CP 00250	<u>Code basir</u>	LE	-					37E	6741		3592111*			Walei	Column
CP 00735		LE		2	4	28	21S	37E	67281	16	3591588* 🚭	2898	105		
CP 00447		LE	2	4	4	18	21S	37E	66964	47	3594451* 😽	2914	95		
CP 00224		LΕ	4	3	3	23	21S	37E	67490)2	3592730* 🍯	2919	96		
CC 01999 POD1		CU	3	3	2	29	03N	36E	67038	35	3592502 🚭	2937	415	372	43
CP 00239		LE	1	1	2	23	215	37E	67548	35	3594152* 😜	2941	89		
CP 00236		LE	3	1	2	23	21S	37E	67548	35	3593952* 👸	2970	83		
CP 00212		LE	2	2	1	14	215	37E	67525	54	3595753* 😜	2980	46		
CP 00676		LE		4	4	18	21S	37E	66954	18	3594352* 😜	3015	140	106	34
CP 00014		LE	1	3	2	23	21S	37E	67549	92	3593749* 🚱	3019	84		
CP 00238		LE	З	3	2	23	21S	37E	67549	92	3593549* 😜	3073	81		
CP 00253		LE	3	4	2	27	21S	37E	67431	15	3591918* 😜	3100	101		
CP 00966 POD1		LE	1	3	4	28	21S	37E	67230)6	3591367 🚭	3117	154		
CP 00985 POD1		LE	4	4	2	19	21S	37E	66959	95	3593453 🚭	3136	160		
CP 00965 POD1	R	LE	1	3	4	28	21S	37E	67233	33	3591346 🏵	3136	123	60	63
CP 00965 POD2		LE	1	3	4	28	21S	37E	67227	73	3591336 🍯	3151	135		
CP 00322		LE			3	28	21S	37E	67181	8	3591366* 😜	3196	138	73	65
											Aver	age Depth to	Water:	107 1	ieet
												Minimum	-		
												Maximum	Depth:	372 1	ieet
Record Count: 43															
UTMNAD83 Radius	Search (in me	ters):													
Easting (X): 672	561		No	rth	ing	(Y)	: 359	4475			Radiu	IS: 3220			

*UTM location was derived from PLSS - see Help

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

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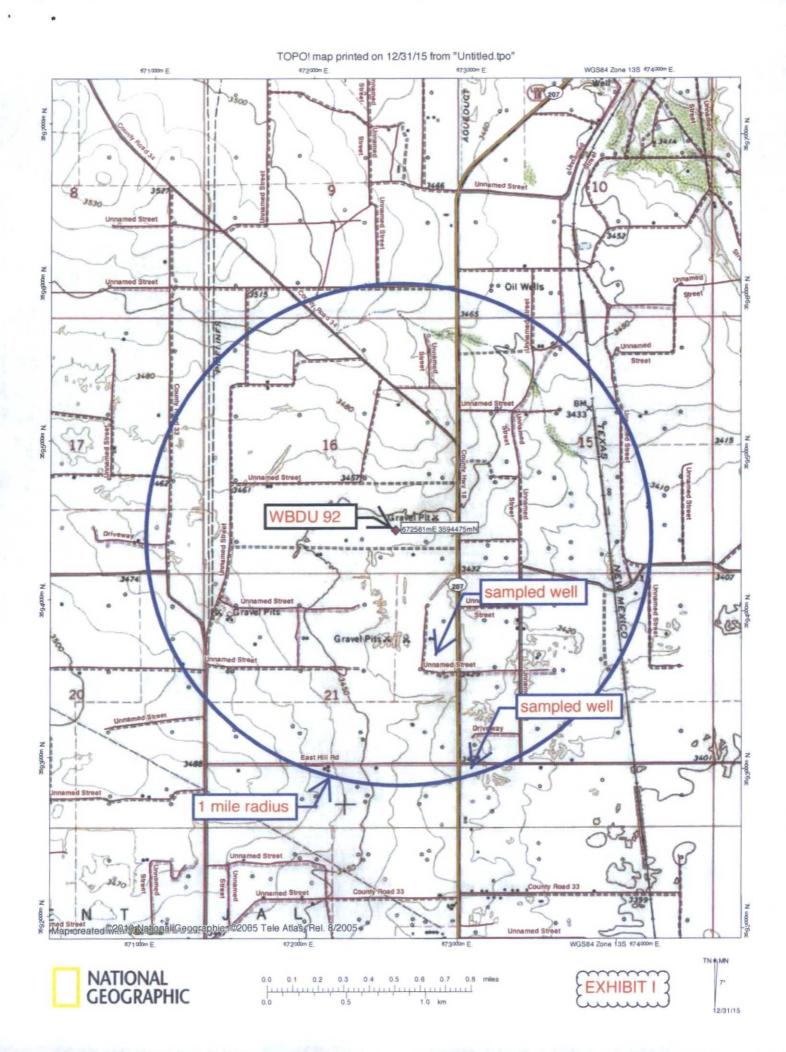
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Page 2 of 2

EXHIBIT H 3

WATER COLUMN/ AVERAGE DEPTH TO WATER



Analytical Report
Lab Order 1511713

11/20/2015 10:53:00 AM 22396

Date Reported: 12/2/2015

CLIENT: Permits West		Client Sample ID: AP WBDU #22								
Project: Apache WBDU 92		Collection Date: 11/11/2015 10:42:00 AM								
Lab ID: 1511713-001	Matrix:	Received Date: 11/17/2015 2:25:00 PM								
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 1664A					Analy	/st: MRA				
N-Hexane Extractable Material	ND	10	mg/L	1	11/23/2015	22464				
EPA METHOD 300.0: ANIONS					Analy	/st: LGT				
Chloride	44	10	mg/L	20	11/18/2015 6:09:02 F	PM R30336				
SM2540C MOD: TOTAL DISSOLVE	O SOLIDS				Analy	vst: KS				

20.0

mg/L

1

399

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers:	*	V
	D	Sa

Total Dissolved Solids

- 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 1 of 5
- P Sample pH Not In Range
- RL Reporting Detection Limit



Analytical Report Lab Order 1511713 Date Reported: 12/2/2015

CLIENT:	Permits West			Client Samp	le ID: AF	9 WBDU #21				
Project:	Apache WBDU 92			Collection	Date: 11/	/11/2015 11:58:00 A	M			
Lab ID:	1511713-002	Matrix:	Received Date: 11/17/2015 2:25:00 PM							
Analyses		Result	RL Qu	al Units	DF	Date Analyzed	Batch			
EPA MET	HOD 1664A					Anal	/st: MRA			
N-Hexan	e Extractable Material	ND	11	mg/L	1	11/23/2015	22464			
EPA MET	HOD 300.0: ANIONS					Analy	/st: LGT			
Chloride		49	10	mg/L	20	11/18/2015 6:33:51	PM R30336			
SM2540C	MOD: TOTAL DISSOLVE	O SOLIDS				Analy	/st: KS			
Total Dis	solved Solids	412	20.0	mg/L	1	11/20/2015 10:53:00	AM 22396			

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers: * D

- 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 5
- P Sample pH Not In Range
- RL Reporting Detection Limit



QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1511713 02-Dec-15

Client:Permits WestProject:Apache WBDU 92

Sample ID MB-22464	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	1664A			
Client ID: PBW	Batch	ID: 22	464	F	RunNo: 3	0546				
Prep Date: 11/23/2015	Analysis D	ate: 11	1/23/2015	5	SeqNo: 9	32601	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	10								
Silica Gel Treated N-Hexane Extrac	ND	10								
Sample ID LCS-22464	SampT	ype: LC	s	Tes	tCode: El	PA Method	1664A			•
Client ID: LCSW	Batch	ID: 22	464	F	RunNo: 3	0546				
Client ID: LCSW Prep Date: 11/23/2015	Batch Analysis D				RunNo: 30 SeqNo: 93		Units: mg/L			
			1/23/2015				Units: mg/L HighLimit	%RPD	RPDLimit	Qual
Prep Date: 11/23/2015	Analysis D	ate: 11	1/23/2015	S	eqNo: 9	32602	•	%RPD	RPDLimit	Qual

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

Page 3 of 5



QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1511713 02-Dec-15

Client:	Permits West
Project:	Apache WBDU 92

Sample ID MB	SampTyp	e: MBLK		Test	Code: EF	PA Method	300.0: Anions			
Client ID: PBW	Batch I	D: R30336		R	unNo: 30	0336				
Prep Date:	Analysis Dat	e: 11/18/2	015	Se	eqNo: 92	25732	Units: mg/L			
Analyte	Result		value SP	K Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sample ID LCS	SampTyp	e: LCS		Test	Code: EF	PA Method	300.0: Anions			
Client ID: LCSW	Batch I	D: R30336		RunNo: 30336						
Prep Date:	Analysis Dat	e: 11/18/2	015	Se	eqNo: 92	25733	Units: mg/L		•	
					%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte	Result	PQL SPH	value SP	K Rei vai	MREU	LOWEINHI	- ingriciinit			Quai

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

Page 4 of 5



QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1511713

02-Dec-15

Client:Permits WestProject:Apache WBDU 92

Sample ID MB-22396	SampType: MBLK	TestCode: SM2540C MOE	D: Total Diss	olved Sol	ids	
Client ID: PBW	Batch ID: 22396	RunNo: 30363				
Prep Date: 11/18/2015	Analysis Date: 11/20/2015	SeqNo: 926935	Units: mg/L			
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
otal Dissolved Solids	ND 20.0					
	ND 20.0 SampType: LCS	TestCode: SM2540C MOE	D: Total Diss	olved Sol	ids	
Sample ID LCS-22396		TestCode: SM2540C MOE RunNo: 30363	D: Total Disso	olved Sol	ids	
Sample ID LCS-22396 Client ID: LCSW	SampType: LCS	RunNo: 30363	D: Total Disso Units: mg/L	olved Sol	ids	<u>, </u>
	SampType: LCS Batch ID: 22396 Analysis Date: 11/20/2015	RunNo: 30363 SeqNo: 926936		olved Sol %RPD	ids RPDLimit	Qual

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



Page 5 of 5



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

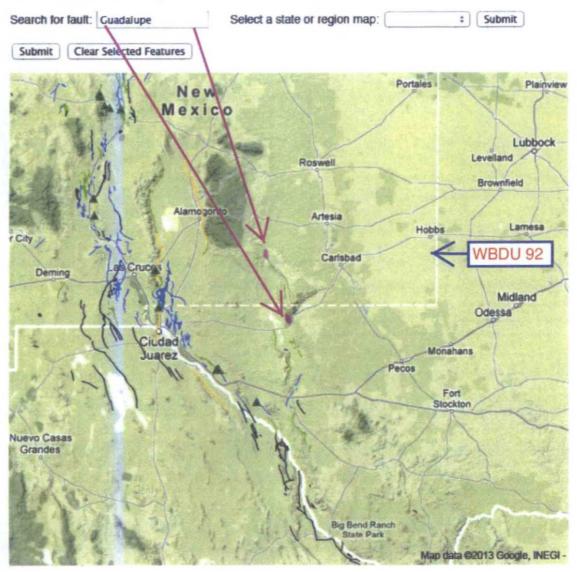
303 Vetorans Alepark Lane Midland, TX 79705, USA <u>ApacheCorp.com | LinkedIn | Facebook | Twitter | StockTwits | YouTube</u>





Geologic Hazards Science Center

EHP Quaternary Faults





Affidavit of Publication

STATE OF NEW MEXICO COUNTY OF LEA

I, Todd Bailey, Editor 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 05, 2016 and ending with the issue dated January 05, 2016.

Editor

Sworn and subscribed to before me this 5th day of January 2016.

issi

Business Manager

My commission expires January 29, 2019 (Seal) CONTRACTOR OUDGIE CLARK Notery Philos State of New Mostau of Expires 1-25-4

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

Apäche. Corporation 45 Blinebry Drinkard Unit. 92 Well 60 a water injection well. The well is at 910 (FSL 2 4330 FEL /Sec. 16 at 21 S. Apäches. And the second second the well is at 910 (FSL 2 4330 FEL /Sec. 16 at 21 S. The second second second second second second second second second the second second second second second second second the second second second second second second the second second second second second second the second second second second second second second second the second sec

00168595





NM State Land Office P. O. Box 1148 Santa Fe, NM 87504-1148

Apache Corporation is applying (see attached application) to converts its West Blinebry Drinkard Unit 92 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:West Blinebry Drinkard Unit 92 (state lease)TD = 7,284'Proposed Injection Zone:Drinkard from 6,400' to 6,640'Location:910' FSL & 1330' FEL Sec. 16, T. 21 S., R. 37 E., Lea County, NMApproximate Location:2 air miles north 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.

728	U.S. Postal Service: APArts n WBDQ GERTIFIED MAIL RECEIPT 92 Pomestic Mail Only
5	a For delivery information, visit our website at www.usps.com
-7	OFFICIAL USE
<u>9</u> 51,	
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	Rastricted Delivery Fee
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7014	Street & Apt. No.
2	or PO Box No.
	City. State, ZiP+4 S.F.
	PS Form 3800, duly 2014

Sincerely

Brian Wood



Chevron USA Inc. 1400 Smith Houston TX 77002

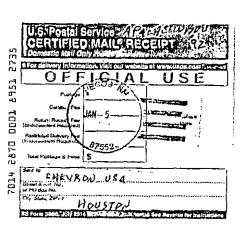
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Please call me if you have any questions.





Sincerely, THA

Brian Wood

BLM 620 E. Greene St. Carlsbad NM 88220

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PROVIDING PERMITS for LAND USERS

6051466-8120

17 Vorance Longs Surata For New Mexical 87508

Well Name:West Blinebry Drinkard Unit 92 (state lease)ID = 7,284'Proposed Injection Zone:Drinkard from 6,400' to 6,640'Location:910' FSL & 1330' FEL Sec. 16, T. 21 S., R. 37 E., Lea County, NMApproximate Location:2 air miles north of Eunice, NMApplicant Name:Apache CorporationApplicant's Address:303 Veterans Airpark Lane, #3000, Midland, TX 79705

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Please call me if you have any questions.

'n + - -CI USE 5 1001 1111 2.75 1024 Live I An It CARISHAG

Sincerely

Brian Wood

January 4, 2016



Elliott Industries LP P. O. Box 1328 Santa Fe NM 87504

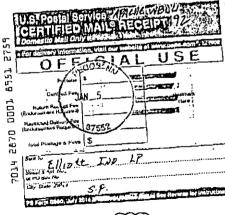
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Please call me if you have any questions.







Brian Wood

PERMITS WEST

17 Verano Linge, Sama Fa, New Mexico B75180 (Sector Ann 8120

January 4, 2016

Elliott Hall Co. UT LP P. O. Box 1231 Ogden UT 84402

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Well Name:West Blinebry Drinkard Unit 92 (state lease)ID = 7,284'Proposed Injection Zone:Drinkard from 6,400' to 6,640'Location: 910' FSL & 1330' FEL Sec. 16, T. 21 S., R. 37 E., Lea County, NMApproximate Location:2 air miles north 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





Sincerely.

Brian Wood

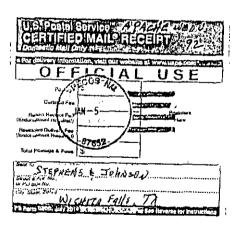
Stephens & Johnson Operating Co. P. O. Box 2249 Wichita Falls TX 76307

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Please call me if you have any questions.





PROVIDING PERMITS IN LAND USERS

17 Verans Coop, Santa Le, New Massar (1975) (St 5: 4 tar 8120

January 4, 2016

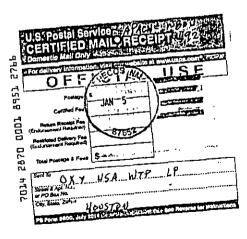
OXY USA WTP Limited Partnership P. O. Box 4294 Houston TX 77210

Apache Corporation is applying (see attached application) to converts its West Blinebry Drinkard Unit 92 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:
Proposed Injection Zone:
Drinkard from 6,400' to 6,640'ID = 7,284'Proposed Injection Zone:
Drinkard from 6,400' to 6,640'Location:
910' FSL & 1330' FEL Sec. 16, T. 21 S., R. 37 E., Lea County, NM
Approximate Location:
2 air miles north of Eunice, NM
Applicant Name:
Apache Corporation
(432) 818-1062
Applicant'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.

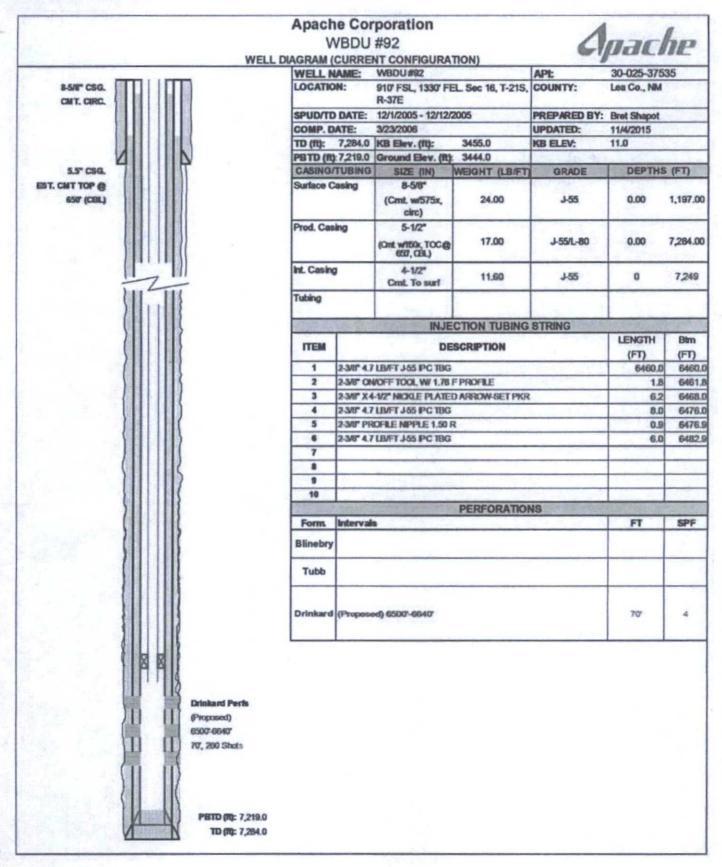
Please call me if you have any questions.



Sincerely,

Brian Wood

Proposed Configuration



C-108 Review Checklist: Received	016		,
1 hours in the second sec			
ORDER TYPE WFX/ PMX / SWD Number:	Order Date: Leg	acy Permits/Orders: <u>2-1</u>	2581
Well No. <u><u><u></u></u> <u><u></u><u></u> Well Name(s): <u><u></u><u></u> <u></u><u></u> <u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u>			
APL-30-0 25-37535 Soud Date 12+011		C Class II Primaoy 02/07/1	082)
$\frac{610E5L}{610E5L}$		Class II Primacy 03/07/15	<i>102</i>)
Footages 1330FEL Lot or Unit O S	ec 16 Tsp 215 Rg	375 County La	29
a si a Blasta a titura	E4hice's	21-	- 500
General Location: 3 -4 / ES Nu/ E 4 hi - Le	3001: 14 7501	Pool No.:	
API: 30-0 25-37535 Spud Date: 12foil. GIOFSL Footages 1330FEL Lot or Unit OS General Location: 341125 AG/EGANTE	OGRID: <u>87.</u>	3 Contact: 6-5 e	<u>~+</u>
COMPLIANCE RULE 5.9: Total Wells: <u>3ット</u> Inactive: 2/ Find A	ssur: Compl. Order?	<u>₩</u> 15 5.9 OK?_¥ Date	<u>, 1-28-</u> 7
WELL FILE REVIEWED () Current Status: Phoduces	/	· · · · · · · · · · · · · · · · · · ·	
NELL DIAGRAMS: NEW: Proposed () or RE-ENTER: Before Conv.	After Conv. 🕒 Logs in Imaç	jing:	
	-		
Planned Rehab Work to Well:			
Well Construction Details Sizes (in) Setting Borehole / Pipe Depths (ft)	Cerr Sx Ø	-	
Planned _or Existing _Surface // // // // // ///	9 Stage Tool 52		elVisa.
Planned_or Existing _ Interm/Prod		<u> </u>	<u>•///.54+/</u>
Planned_or Existing _Interm/Prod			
Planned_or Existing Prod/Liner		·	
Planned_or Existing _ Liner 7 78/53 728	~~	650 1	656
	Init enoth		
Planned_or Existing OH / PERF 6400-6640		completion/Operation De	
Injection Lithostratigraphic Units: Depths (ft) Units	- Tops United TU	7 <u>284</u> рвто <u>7</u>	
Adjacent Unit: Litho. Struc. for	63 NEW TD	NEW PBTD	
Confining Unit: Litho. Struc. Por.	670 NEW Ope	en Hole O or NEW Perfs	. @
Proposed Inj Interval TOP:	6402 Tubing Si	ze 231 in. Inter Coated	3
Proposed Inj Interval BOTTOM:	5640 Proposed	Packer Depth 635	ft *
Confining Unit: Litho. Struc. Por,		er Depth <u>6305</u> (100-	
Adjacent Unit: Litho. Struc. Por. Adjacent Unit: Litho. Struc. Por. Adjacent Unit: Litho. Struc. Por. Adjacent Unit: Litho.		Max. Surface Press. /24 Press. / 2000 (0.2	
POTASH: R-111-P Noticed? BLM Sec Ord () WIPP () No			
FRESH WATER: Aquifer 946+ Crnary Max Depth		2 2-	
NMOSE Basin: CAPITAN REEF: thru adj	A No. Wells within 1-Mile	• Radius? FW An	alysis
Disposal Fluid: Formation Source(s) Driwkend	nalysis? On Lease (Operator Only O or Com	mercial O
Disposal Int: Inject Rate (Avg/Max BWPD):	Waters? NA Source	System	or Open
HC Potential: Producing Interval? Formerly Producing? M	-	\sim	
	-		-
AOR Wells: 1/2-M Radius Map? Well List? Total No. \			
Penetrating Wells: No: Active Wells 36 Num Repairs?on which w	ell(s)?	Diagrams?	·
Penetrating Wells: No. P&A Wells 2 Num Repairs? on which well		Diagrams?	
NOTICE: Newspaper Date + 5-2016 Mineral Owner MMS+	Surface Owner	N. Date	e 1-5-20
RULE 26.7(A): Identified Tracts?	(e
Order Conditions: Issues:/			
add Order Cond: * ~ 1120 An 1-12 98	1 sets mA	On;	
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