

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

HOBBS OCD

MAY 06 2014

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2014

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

RECEIVED

5. Lease Serial No.  
NMLC 032096A

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well  
 Oil Well     Gas Well     Other

2. Name of Operator  
Apache Corporation (873)

3a. Address  
303 Veterans Airpark Lane, Suite 1000  
Midland, TX 79705

3b. Phone No. (include area code)  
432/818-1062

7. If Unit of CA/Agreement, Name and/or No.  
WBDU

8. Well Name and No.  
West Blinebry Drinkard Unit (WBDU) #066 / 37346

9. API Well No.  
30-025-06638

10. Field and Pool or Exploratory Area  
Eunice; B-T-D, North (22900)

11. County or Parish, State  
Lea County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input checked="" type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Apache intends to convert this well to injection, per the attached procedure. A copy of the NMOCD Injection Permit WFX-913 is also attached.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
Reesa Fisher

Title Sr. Staff Reg Analyst

Signature *Reesa Fisher*

Date 05/01/2014

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by \_\_\_\_\_ Title Petroleum Engineer

Date MAY 07 2014

Office \_\_\_\_\_

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

MAY 07 2014

## **WBDU 66 (API: 30-25-06638) Proposed Procedure**

### **Deepen Well, Run Liner, and Convert to Injection in the Drinkard Formation**

May 1, 2014

**Day 1:** MIRU SR. POOH and LD pump and rods. ND WH and NU BOPs. POOH and LD 2-7/8" production tubing.

**Day 2:** PU & RIH w/CIBP on 2-7/8" work string. Set CIBP at +/-3600', POOH

MIRU WL, log well with GR/CBL/CCL from +/-3600' to surface, POOH. RIH w/ casing punch and perforate casing above TOC, POOH. Establish circulation behind 7" casing to surface

**Day 3:** PU & RIH w/ cement retainer on 2-7/8" work string and set retainer

MIRU cementers, cement 7" casing to surface with +/-650 sx (estimated, confirm volumes) of Class C cement (weight 14.8 ppg, yield 1.33 cf/sack). POOH w/ 2-7/8" work string

**Day 4:** PU & RIH w/ bit on 2-7/8" work string, drill out cement and cement retainer

**Day 5:** Continue to drill out cement and cement retainer, circulate well clean. POOH

MIRU WL, log well with GR/CBL/CCL from +/-3600' to surface, POOH

**Day 6:** RIH w/ 2-7/8" work string & bit. Drill out CIBP. RIH to 6610' and drill out cement to TD @ 6645', circulate LCM as necessary

**Day 7:** Cont. to drill out cement to TD @ 6645', drill well out to new TD @ +/-6780', circulate LCM as necessary

**Day 8:** Cont. to drill well out to new TD @ +/-6780', circulate LCM as necessary. Circulate wellbore clean and POOH and LD 2-7/8" work string

**Day 9:** MIRU WL, run GR/CNL/CBL/CCL log from PBTD to surface, POOH. Send logs to Midland

**Day 10:** RU casing crew and equipment and RIH with 4-1/2" 11.6 lb/ft LTC 8 RD J-55 casing with DV tool (set at +/- 5500'), float collar, and float shoe to +/- 6780'. Perform two stage cement job to surface as follows:

- a. Pump first stage consisting of 10 bbl fresh water flush, 40 bbl seal bond LCM spacer, and 195 sacks of 50:50 Fly Ash (Pozzolan):Class C cement + additives (weight 14.2 ppg, yield 1.31 cf/sack, volume 45.5 bbls, 50% excess slurry)
- b. Drop plug, displace with 105 bbl fresh water (confirm volumes) and bump plug. Drop dart, open DV tool
- c. Circulate through stage tool with fresh water until setting time for first cement stage has elapsed
- d. Pump second cement stage consisting of 20 bbl fresh water flush, lead slurry of 330 sacks 35:65 Fly Ash (Pozzolan):Class C cement + additives (weight 12.5 ppg, yield 2.13 cf/sack, 125.5 bbl), tail slurry of 100 sacks of class C cement + additives (weight 14.8 ppg, yield 1.33 cf/sack, 23.7 bbl)
- e. Drop DV tool plug, displace with 85.4 bbl fresh water (confirm volumes)

**Day 11:** WOC

**Day 12:** RIH w/ 3-3/4" bit on 2-3/8" work string. Drill out DV tool, float collar and cement to +/- 6765'. Circulate clean. POOH

**Day 13:** MIRU WL and RIH w/ GR/CBL/CCL, log well from TD to surface, POOH

PU and RIH w/ 3-3/8" TAGs loaded with SDP charges and perforate the Drinkard @ 4 SPF, 90 deg phasing (estimated 70', 280 shots), POOH

PU and RIH w/ treating packer on 2-3/8" work string

**Day 14:** Cont. RIH w/ treating packer on 2-3/8" work string. Set packer @ +/-6500'

MIRU acidizers. Acidize the Drinkard w/10,000 gals 15% HCl and rock salt in 3 equal stages @ +/- 8 BPM. Release packer. Wash out salt. POOH

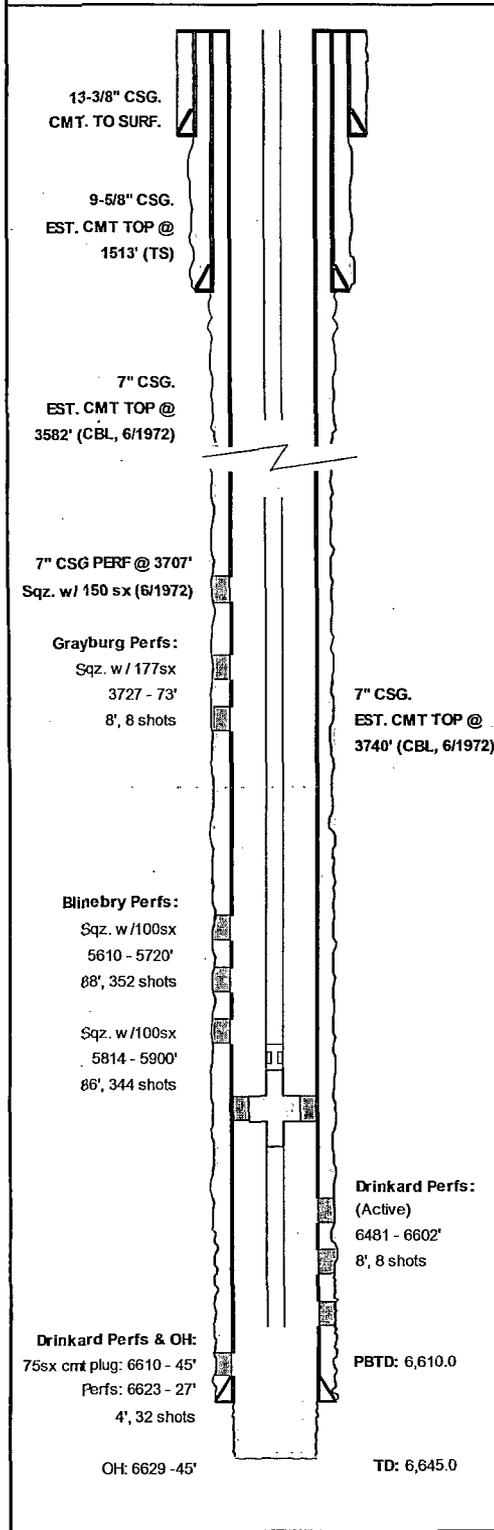
**Day 15:** PU and RIH with 4-1/2" injection packer with 2-3/8" IPC tubing subs, upper and lower profile nipples, and on/off tool on 2-3/8" work string. Set packer @ +/-6500'. Release on/off tool and pressure test casing to 500 psi. POOH and LD 2-3/8" work string

**Day 16:** PU & RIH w/2-3/8" IPC injection tubing and on/off tool. Circulate packer fluid and latch onto packer with on/off tool. ND BOPs and NU WH. Pressure test casing to 500 psi. RDMO SR

**Day 17:** Perform MIT test for NM OCD. Place well on injection

Current Wellbore Diagram

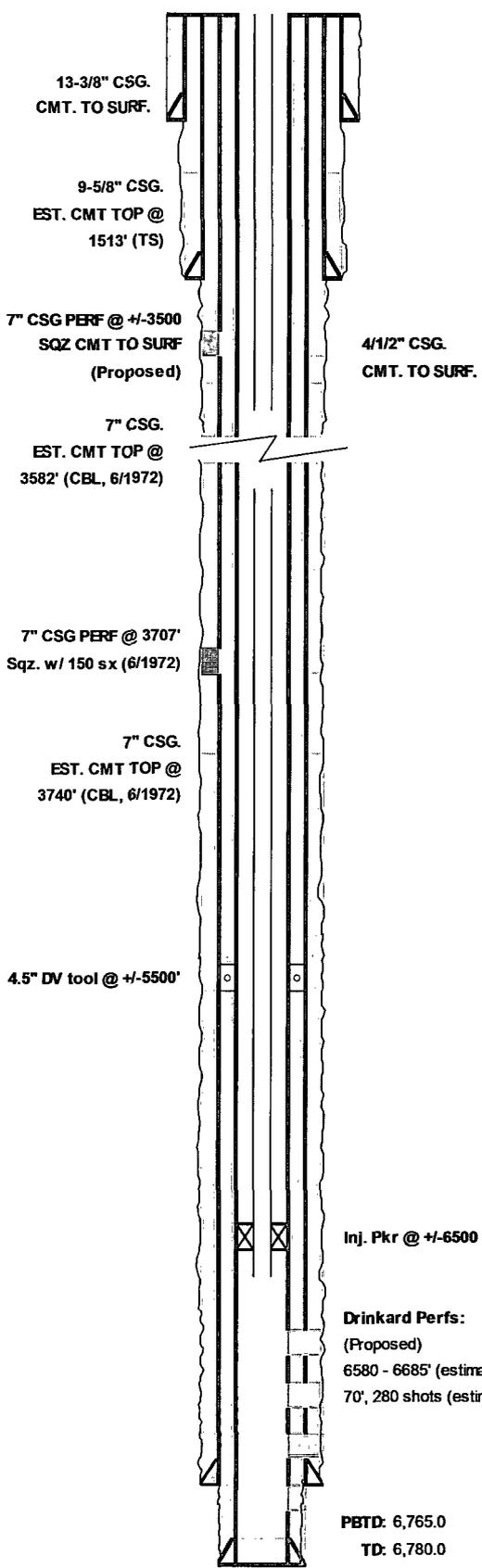
Apache Corporation  
 WBDU #66 (Lockhart A-17 #3)  
 WELL DIAGRAM (CURRENT CONFIGURATION)



<b>WELL NAME:</b> WBDU #66 (Lockhart A-17 #3)		<b>API:</b> 30-025-06638			
<b>LOCATION:</b> 1980' FNL & 660' FEL Unit H, Sec. 17, T-21S, R-37E		<b>COUNTY:</b> Lea Co., NM			
<b>SPUD/TD DATE:</b> 7/7/1947 - 9/10/1947		<b>COMP. DATE:</b> 9/19/1947			
<b>PREPARED BY:</b> Michael Hunter		<b>DATE:</b> 4/30/2014			
<b>TD (ft):</b> 6,645.0	<b>KB Elev. (ft):</b> 3483.0	<b>KB to Ground (ft)</b> 10.0			
<b>PBTD (ft):</b> 6,610.0		<b>Ground Elev. (ft):</b> 3473.0			
<b>CASING/TUBING</b>	<b>SIZE (IN)</b>	<b>WEIGHT (LB/FT)</b>	<b>GRADE</b>	<b>DEPTHS (FT)</b>	
Surface Casing	13-3/8" (Cmt. w/ 200sx, Circ.)	32.40	Naylor (?)	0.00	222.00
Int. Casing	9-5/8" (Cmt. w/ 500sx, TOC @ 1513')	36.00	J-55	0.00	2,529.00
Prod. Casing	7" (Cmt. w/ 500sx, TOC @ 3740')	23.00	J-55/N-80	0.00	6,629.00
	(Perf & sqz 50sx @ 3707', TOC @ 3582')				
Openhole	6-1/8"			6,629.00	6,645.00
Tubing	2-7/8"	6.50	J-55	0.00	6,542.00
<b>PRODUCTION TBG STRING</b>					
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>LENGTH (FT)</b>	<b>Depth (FT)</b>		
1	220 JTS 2-7/8" 6.5 LB/FT J-55 TBG				
2	TAC		6387.00		
3	SN		6542.00		
4					
5					
6					
7					
8					
9					
10					
<b>PRODUCTION ROD STRING</b>					
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>LENGTH (FT)</b>	<b>Btm (FT)</b>		
1	80 JTS 3/4" RODS	2,000.00			
2	179 JTS 5/8" RODS	4,475.00			
3	2 JTS 1-1/4" K BARS	50.00			
4	BHP: 2" X 1-1/4" X 16' RHBC	16.00			
5					
6					
7					
8					
9					
10					
<b>SURFACE EQUIPMENT</b>					
<b>PUMPING UNIT SIZE:</b> C228-246-86		<b>MOTOR HP:</b> 20 HP			
<b>PUMPING UNIT MAKE:</b>		<b>MOTOR MAKE:</b>			
<b>PERFORATIONS</b>					
<b>Form.</b>	<b>Intervals</b>	<b>FT</b>	<b>SPF</b>		
Grayburg	Sqz. w/ 177sx 3727', 33', 43', 52', 59', 64', 70', 73'	8	1		
Blinebry	Sqz. w/ 100sx 5610 - 48', 5670 - 5720' Sqz. w/ 100sx 5814 - 5900'	174	4		
Drinkard	Active: 6481', 6503', 25', 37', 57', 70', 79', 6602'	8	1		
	Sqz. w/ 75sx 6623 - 27'	4	8		

Proposed Wellbore Diagram

**Apache Corporation**  
**WBDU #66 (Lockhart A-17 #3)**  
**WELL DIAGRAM (PROPOSED CONFIGURATION)**



<b>WELL NAME:</b>	WBDU #66 (Lockhart A-17 #3)	<b>API:</b>	30-025-06638
<b>LOCATION:</b>	1980' FNL & 660' FEL Unit H, Sec. 17, T-21S, R-37E	<b>COUNTY:</b>	Lea Co., NM
<b>SPUD/TD DATE:</b>	7/7/1947 - 9/10/1947	<b>COMP. DATE:</b>	9/19/1947
<b>PREPARED BY:</b>	Michael Hunter	<b>DATE:</b>	4/30/2014
<b>TD (ft):</b>	6,780.0	<b>KB Elev. (ft):</b>	3483.0
<b>PBTD (ft):</b>	6,765.0	<b>Ground Elev. (ft):</b>	3473.0
<b>KB to Ground (ft)</b>	10.0		

CASING/TUBING	SIZE (IN)	WEIGHT (LB/FT)	GRADE	DEPTHS (FT)	
Surface Casing	13-3/8" (Cmt. w/ 200sx, Circ.)	32.40	Naylor (?)	0.00	222.00
Int. Casing	9-5/8" (Cmt. w/ 500sx, TOC @ 1513')	36.00	J-55	0.00	2,529.00
Prod. Casing	7" (Cmt. w/ 500sx, TOC @ 3740')  (Perf & sqz 50sx @ 3707', TOC @ 3582')  (Perf @ +/-3500, sqz cmt to surf)	23.00	J-55/N-80	0.00	6,629.00
Liner	4-1/2" (Cmt. to surf)	11.60	J-55	0.00	6,780.00
Injection Tubing	2-3/8"	4.70	J-55 IPC	0.00	6,514.90

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

PERFORATIONS			
Form.	Intervals	FT	SPF
Blinbry			
Tubb			
Drinkard	Proposed: 6550 - 6685' (estimated)	70	4

Inj. Pkr @ +/-6500

**Drinkard Perfs:**  
 (Proposed)  
 6580 - 6685' (estimated)  
 70', 280 shots (estimar)

**PBTD: 6,765.0**  
**TD: 6,780.0**

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Susana Martinez**  
Governor

**David Martin**  
Cabinet Secretary-Designate

**Brett F. Woods, Ph.D.**  
Deputy Cabinet Secretary

**Jami Bailey, Division Director**  
Oil Conservation Division



Administrative Order WFX-913  
June 28, 2013

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order R-12981, Apache Corporation has made application to the Division for permission to add eight (8) water injection wells to its West Blinebry-Drinkard Unit (WBDU) Waterflood Project in the North Eunice Blinebry-Tubb-Drinkard Pool (22900) in Lea County, New Mexico. The conversion of the existing wells into water injection wells is anticipated to normalize the injection pattern in the south end of the WBDU.

**THE DIVISION DIRECTOR FINDS THAT:**

The application has been duly filed under the provisions of Division Rule 19.15.26.8B. NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections remain outstanding. The proposed wells are eligible for conversion to injection under the terms of that rule. The applicant has presented satisfactory evidence that all requirements prescribed in Rule 19.15.26.8 NMAC have been met and the operator is in compliance with Rule 19.15.5.9 NMAC.

The proposed expansion of the above-referenced waterflood project, will prevent waste, is in the best interests of conservation, will not impair correlative rights, and should be approved.

**IT IS THEREFORE ORDERED THAT:**

Apache Corporation (OGRID 873), as operator, is hereby authorized to inject water into the Blinebry, Tubb, and Drinkard formations through plastic-lined tubing for purposes of secondary recovery. The eight wells with specific information proposed in the application are:

API No.	WBDU Well #	Unit	Section	Township	Range	Top Perf.	Bottom Perf.	Tubing	Max Surf Pressure
30-025-06439	37	P	9	21S	37E	5585	6710	2.375 in	1117psig
30-025-06433	40	P	8	21S	37E	5597	6758	2.375 in	1119 psig
30-025-06621	56	H	16	21S	37E	5543	6702	2.375 in	1108 psig
30-025-06626	59	F	16	21S	37E	5580	6694	2.375 in	1116 psig
30-025-06629	61	D	16	21S	37E	5599	6726	2.375 in	1120 psig
30-025-06638	66	H	17	21S	37E	5572	6712	2.375 in	1114 psig
30-025-06615	75	L	16	21S	37E	5590	6707	2.375 in	1118 psig
30-025-06618	77	J	16	21S	37E	5547	6674	2.375 in	1109 psig

The approved maximum surface tubing injection pressure shall be **1120 psig or 0.2 psig per foot of depth to the uppermost perforation in the injection well, whichever is less**, as approved in paragraph (13) of Order No. R-12981 dated August 11, 2008. The operator shall set the injection packer in individual wells no more than 100 feet above the shallowest perforation for the permitted injection interval.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the injected fluid enters only the approved injection interval and is not permitted to escape to other formations or onto the surface.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing injection and prior to resuming injection each time any injection packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on these wells shall be limited as listed above. In addition, the injection well or header system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressures to the maximum allowable pressures for these wells.

Subject to the limitations within the hearing order permitting this project, the Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluids from the approved injection interval. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test.

The operator shall notify the supervisor of the Division's District I Office of the date and time of the installation of injection equipment and of any MIT test so that the same may be

inspected and witnessed. The operator shall provide written notice of the date of commencement of injection to the District I Office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the District I Office of any failure of the tubing, casing or packer in the approved injection well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

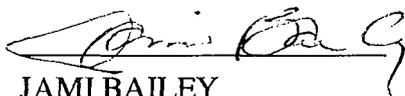
The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein. The subject wells shall be governed by all provisions of Division Order No. R-12981 and associated administrative orders.

The injection authority granted herein shall terminate two (2) years after the effective date of this order if the operator has not commenced injection operations into at least one of the subject wells, provided however, the Division, upon written request by the operator received prior to the two-year deadline, may grant an extension thereof for good cause shown.



JAMI BAILEY  
Director

JB/prg

cc: New Mexico Oil Conservation Division – Hobbs  
Case File 13503