

Submit a Copy To Appropriate District
Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO.
1. Type of Well: Oil Well ☐ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☐ FEE ☐
2. Name of Operator		6. State Oil & Gas Lease No.
3. Address of Operator		7. Lease Name or Unit Agreement Name
4. Well Location Unit Letter _____: _____ feet from the _____ line and _____ feet from the _____ line Section _____ Township _____ Range _____ NMPM _____ County _____		8. Well Number
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		9. OGRID Number
		10. Pool name or Wildcat

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Spud Date:

Rig Release Date:

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

SIGNATURE alicia fulton TITLE _____ DATE _____

Type or print name _____ E-mail address: _____ PHONE: _____

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

WBDU Step Rate Test Program

ALICIA FULTON – REGULATORY
AARON MURRAY – PRODUCTION ENGINEER
ERIC STAIB – RESERVOIR ENGINEER
ALEXANDRA WEBSTER – GEOLOGY
BO LANGLEY – ASSISTANT FOREMAN



29 June 2022

Apache Contacts

- **POC:** Alicia Fulton, Regulatory – alicia.fulton@apachecorp.com
- Aaron Murray, Production Engineering – aaron.murray@apachecorp.com
- Bo Langley, Assistant Foreman – Bo.Langley@apachecorp.com
- Eric Staib, Reservoir Engineering – eric.staib@apachecorp.com
- Alexandra Webster, Geology – alexandra.webster@apachecorp.com

Purpose of Step Rate Program

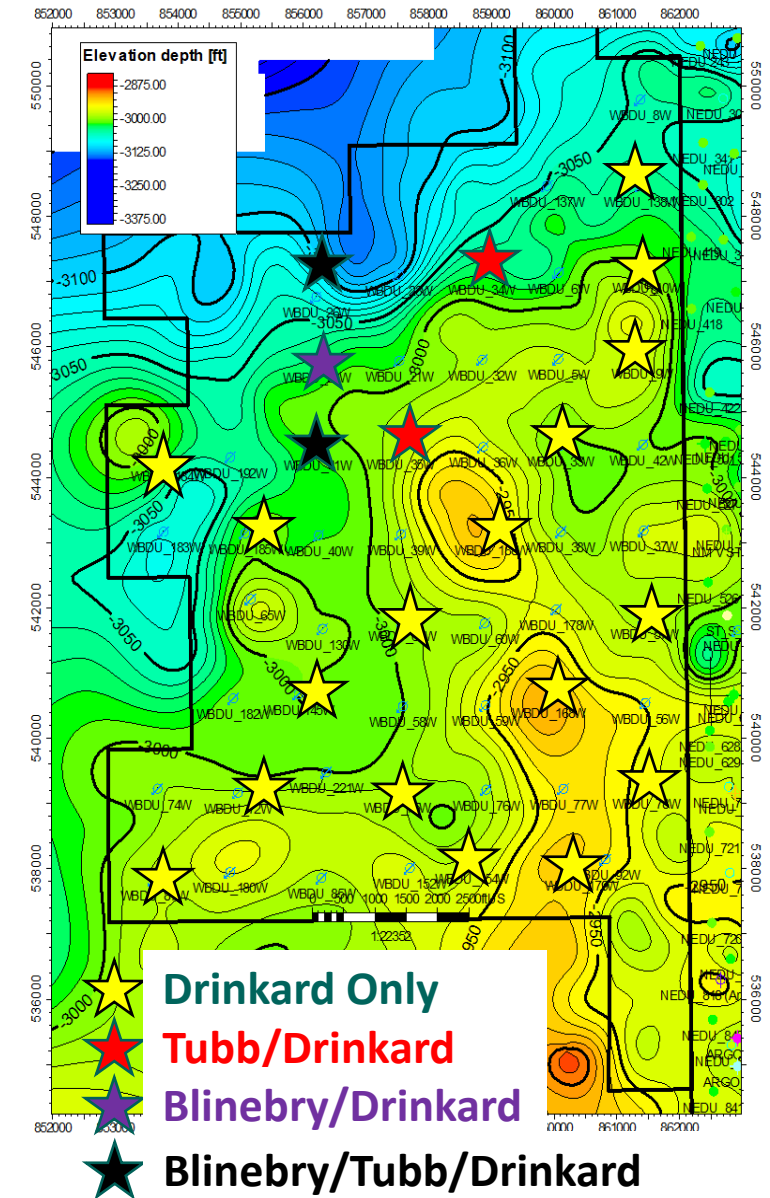
- The purpose of the WBDU step rate tests is to seek a fieldwide Injection Pressure Increase approved.
- We would like to increase the injection pressure for reserve acceleration and increased EUR for the entirety of the WBDU lease.
- The NEDU (IPI-185) has permitted injection pressure of 1,375 psi and the EBDU (IPI-292) has permitted injection pressure of 2,100 psi. Both were increased based on submitted injection pressure tests.

WBDU Step Rate Targets

- 22 targets selected for:
 - Total coverage of depth on structure
 - Total areal coverage
 - Including wells with Blinebry & Tubb perms

Well	API	Injecting Zones
WBDU 179W	3002543528	Drinkard
WBDU 168W	3002541548	Drinkard
WBDU 78W	3002506619	Drinkard
WBDU 188W	3002542569	Drinkard
WBDU 9W	3002506444	Drinkard
WBDU 75W	3002506615	Drinkard
WBDU 57W	3002506623	Drinkard
WBDU 154W	3002541549	Drinkard
WBDU 72W	3002506645	Drinkard
WBDU 87W	3002506643	Drinkard
WBDU 10W	3002506445	Drinkard
WBDU 145W	3002543229	Drinkard
WBDU 61W	3002506629	Drinkard
WBDU 33W	3002506438	Drinkard
WBDU 35W	3002509910	Tubb/Drinkard
WBDU 138W	3002506396	Drinkard
WBDU 34W	3002509909	Tubb/Drinkard
WBDU 185W	3002542493	Drinkard
WBDU 184W	3002543804	Drinkard
WBDU 20W	3002506432	Blinebry/Drinkard
WBDU 26W	3002526967	Blinebry/Tubb/Drinkard
WBDU 41W	3002506434	Blinebry/Tubb/Drinkard

Step Rate Targets on Drinkard Structure



WBDU Step Rate Targets-More Information

Well	API	Injecting Zones	Legal Location	Current/Stable Inj Rate, Bbl/d	Current/Stable Inj Pressure, PSI	Cume Injection, MBbl	Drinkard Top, MD	Latest IP
WBDU 179W	3002543528	Drinkard	T21S R37E Sec 16	150	0	674	6388	2/12/2020
WBDU 168W	3002541548	Drinkard	T21S R37E Sec 16	480	1090	1497	6407	2/7/2020
WBDU 78W	3002506619	Drinkard	T21S R37E Sec 16	540	830	3	6431	4/30/2019
WBDU 188W	3002542569	Drinkard	T21S R37E Sec 9	300	0	517	6440	6/16/2022
WBDU 9W	3002506444	Drinkard	T21S R37E Sec 9	540	1150	3859	6451	5/20/2021
WBDU 75W	3002506615	Drinkard	T21S R37E Sec 16	150	1150	477	6459	1/30/2020
WBDU 57W	3002506623	Drinkard	T21S R37E Sec 16	370	1115	2694	6460	4/23/2019
WBDU 154W	3002541549	Drinkard	T21S R37E Sec 16	110	1150	401	6464	6/29/2022
WBDU 72W	3002506645	Drinkard	T21S R37E Sec 17	470	1030	912	6474	8/14/2019
WBDU 87W	3002506643	Drinkard	T21S R37E Sec 17	380	1060	3098	6480	6/28/2022
WBDU 10W	3002506445	Drinkard	T21S R37E Sec 9	340	1115	2788	6481	6/17/2022
WBDU 145W	3002543229	Drinkard	T21S R37E Sec 17	135	1150	254	6491	2/20/2020
WBDU 61W	3002506629	Drinkard	T21S R37E Sec 16	290	1135	925	6495	5/8/2019
WBDU 33W	3002506438	Drinkard	T21S R37E Sec 9	870	1060	3684	6497	6/24/2022
WBDU 35W	3002509910	Tubb/Drinkard	T21S R37E Sec 9	1100	0	3346	6506	6/22/2022
WBDU 138W	3002506396	Drinkard	T21S R37E Sec 4	240	420	2029	6512	11/29/2021
WBDU 34W	3002509909	Tubb/Drinkard	T21S R37E Sec 9	130	1085	783	6521	7/5/2022
WBDU 185W	3002542493	Drinkard	T21S R37E Sec 8	235	1050	957	6526	4/22/2019
WBDU 184W	3002543804	Drinkard	T21S R37E Sec 8	250	993	92	6555	6/3/2021
WBDU 20W	3002506432	Blaineby/Drinkard	T21S R37E Sec 8	125	1140	782	6561	6/30/2022
WBDU 26W	3002526967	Blaineby/Tubb/Drinkard	T21S R37E Sec 8	375	1140	1893	6588	6/20/2022
WBDU 41W	3002506434	Blaineby/Tubb/Drinkard	T21S R37E Sec 8	225	450	1962	6545	7/14/2022

Prep Planned Before Step Rate Tests

- Each injector's injection profile and workover history was reviewed, and the following wells will need IPLs
- As of 5/1/2022, 11 of the 22 step rate targets had had IPLs in the past 3 years confirming no out-of-zone losses, leaks, or integrity issues
- 11 of the 22 step rate targets had not had an IPL in the past three years confirming zonal isolation, so an IPL program was undertaken with Renegade Wireline
 - IPL program was completed on 7/14/2022
 - Wellbore integrity and injection zones have now been verified
 - Apache is happy to provide IPLs to NMOCD

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Santa Fe, NM 87505

CONDITIONS

Action 130071

CONDITIONS

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 130071
	Action Type: [C-103] NOI General Sundry (C-103X)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	None	1/24/2023