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District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
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District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87401
District IV - (505) 476-3448
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

WELL API NO. 30-025-06595
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Northeast Drinkard Unit (NEDU) [22503]
8. Well Number 709
9. OGRID Number 873
10. Pool name or Wildcat Eunice; B-T-D, North [22900]

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.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other Injection ☐
2. Name of Operator Apache Corporation
3. Address of Operator 303 Veterans Airpark Lane, Suite 1000 Midland, TX 79705
4. Well Location Unit Letter I, 1980 feet from the South line and 660 feet from the East line Section 15 Township 21S Range 37E NMPM County Lea
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3413' GL

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.

Apache intends to perform conformance work on this well, per the attached procedure and supporting WBD information.

**Condition of Approval: notify
OCD Hobbs office 24 hours
prior of running MIT Test & Chart**

Spud Date:

11/16/1948

Rig Release Date:

12/29/1948

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

SIGNATURE Reesa Fisher TITLE Sr. Staff Reg Analyst DATE 10/24/2018
Type or print name Reesa Fisher E-mail address: Reesa.Fisher@apachecorp.com PHONE: (432) 818-1062
For State Use Only
APPROVED BY: Mary Brown TITLE AO/I DATE 10/30/2018
Conditions of Approval (if any):

NEDU 709W: (API: 30-025-06595)

OBJECTIVE: ISOLATE DRINKARD FOR INJECTION

Scenario 1: Dual Packer Isolation

1. POOH w 2-3/8" injection tubing and 5-1/2" injection packer
2. PU workstring and RIH w bit and clean out well to PBTD at 6622'.
3. Make casing scraper run to around 6596' (casing shoe). POOH
4. Run casing inspection log and cement bond log from top of Drinkard to surface. POOH.
5. RIH w/ wireline and perforate Drinkard formation f/ 6500'-6620' (actual depths TBD). POOH.
6. RIH w/ workstring and treating packer to acid stimulate Drinkard formation w/ 5000 gals 15% HCl using rock salt for diversion. POOH.
7. MIRU wireline. RIH w/ 5-1/2" permanent packer and set in good casing between Blinebry and Drinkard (Depth dependent on casing inspection log)
8. PU 700-800' of 2-3/8" IPC externally coated tubing w/ 5-1/2" hydraulic packer on top and tie into permanent packer. Ensure hydraulic packer is at or within 100' of top perf. Pressure up tubing to set hydraulic packer. Test casing to 500 psi.
9. Perform MIT for NMOCD and return well on injection.

Scenario 2: Cement 4" FJ liner from Blinebry to TD

1. POOH w 2-3/8" injection tubing and 5-1/2" injection packer
2. PU workstring and RIH w/ bit and clean out well to PBTD at 6622'. Deepen another +/- 50'. POOH
3. MIRU cement and casing crew and PU 1500' of 4" casing (including float shoe, float collar, landing collar and liner hanger) using 2-7/8" L-80 workstring.
4. RIH and tag TD. PU and set TOL around 250-300' above top Blinebry perf. Pump spacer followed by 50-100 SX of cement. Flush with fresh water.
5. Release workstring from liner. Reverse circulate to clean hole. POOH
6. If no cement circulated to surface, PU packer and attempt squeeze liner top or RIH w/ liner packer and sting into tie back tool. Set liner packer and test casing.
7. PU bit and drill out cement to float collar. Pressure test casing. Continue drilling out cement if needed to perforate. POOH.
8. MIRU wireline. Run CBL from PBTD to surface
9. PU wireline guns and perforate Drinkard formation f/6500'—6620' (Depths TBD). POOH
10. PU 4" treating packer w/ ~40 jts of 2-3/8" followed by remaining 2-7/8" workstring to surface. Set packer ~100' above top perf and load backside.
11. Acid stimulate Drinkard formation w/ 5000 gals 15% HCl using 1.1 SG ball sealers for diversion. Release packer and knock off balls. POOH.
12. RIH w 4" injection packer and ~6500' of 2-3/8" IPC tubing. Set packer within 20' of top perf. Circulate packer fluid and test backside to 500 psi
13. Perform MIT for NMOCD

Apache		Downhole Well Profile w Cement																									
Well Name: NEDU 709W																											
API Surface Loc 3002506595		Surface Legal Location 1980' FSL, 660' FEL, Unit 1, Sec 15, T-21S, R-37E		Field Name Eunice North																							
State/Province New Mexico																											
Spud Date 11/16/1948		Original KB Elevation (ft) 3,424.0		Ground Elevation (ft) 3,412.0																							
Pore (API) (ft) 6,622.0		Total Depth (ft) 6,622.0		Cement 12.0																							
Injection, NE DRINKARD UNIT #709 - Original Hole, 10/18/2018 5:12:17 PM																											
Vertical schematic (actual)		Casing Strings																									
		<table border="1"> <thead> <tr> <th>Csg Des</th> <th>OD (in)</th> <th>Wt Len (lb/ft)</th> <th>Grade</th> <th>Set Depth (ft)</th> </tr> </thead> <tbody> <tr> <td>Surface</td> <td>13 3/8</td> <td>48.00</td> <td>H-40</td> <td>310.00</td> </tr> <tr> <td>Inter 1</td> <td>8 5/8</td> <td>32.00</td> <td>H-40</td> <td>2,802.00</td> </tr> <tr> <td>Prod 1</td> <td>5 1/2</td> <td>17.00</td> <td>J-55</td> <td>6,596.00</td> </tr> </tbody> </table>				Csg Des	OD (in)	Wt Len (lb/ft)	Grade	Set Depth (ft)	Surface	13 3/8	48.00	H-40	310.00	Inter 1	8 5/8	32.00	H-40	2,802.00	Prod 1	5 1/2	17.00	J-55	6,596.00		
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Prod 1	Sqz Drinkard	6,574.00	6,622.00		12/7/1965																						
Perforations																											
Date	Type	Prop?	Top (ft)	Bot (ft)	Shot Desc (shots/ft)	Entered Shot Total																					
8/16/1990	Blindbry	No	5,672	5,672	2.0	2																					
8/16/1990	Blindbry	No	5,676	5,676	2.0	2																					
8/16/1990	Blindbry	No	5,732	5,732	2.0	2																					
5/26/1988	Blindbry	No	5,738	5,739	1.0	2																					
5/26/1988	Blindbry	No	5,748	5,771	2.0	48																					
5/26/1988	Blindbry	No	5,784	5,787	1.0	4																					
5/26/1988	Blindbry	No	5,790	5,792	1.0	3																					
5/26/1988	Blindbry	No	5,800	5,802	1.0	3																					
5/26/1988	Blindbry	No	5,823	5,824	1.0	2																					
5/26/1988	Blindbry	No	5,850	5,859	1.0	10																					
5/26/1988	Blindbry	No	5,886	5,889	1.0	4																					
5/26/1988	Blindbry	No	5,891	5,893	1.0	3																					
5/26/1988	Blindbry	No	5,895	5,897	1.0	3																					
5/26/1988	Blindbry	No	5,944	5,946	1.0	3																					
5/26/1988	Blindbry	No	5,950	5,955	1.0	6																					
5/26/1988	Blindbry	No	5,963	5,966	1.0	4																					
8/16/1990	Blindbry	No	5,998	5,998	2.0	2																					
8/16/1990	Blindbry	No	6,012	6,012	2.0	2																					
8/16/1990	Blindbry	No	6,025	6,025	2.0	2																					
8/16/1990	Blindbry	No	6,034	6,034	2.0	2																					
8/16/1990	Blindbry	No	6,038	6,038	2.0	2																					
8/16/1990	Blindbry	No	6,045	6,045	2.0	2																					
8/16/1990	Blindbry	No	6,056	6,056	2.0	2																					
8/16/1990	Blindbry	No	6,063	6,063	2.0	2																					
8/16/1990	Blindbry	No	6,066	6,066	2.0	2																					
8/16/1990	Blindbry	No	6,070	6,070	2.0	2																					
8/16/1990	Blindbry	No	6,074	6,074	2.0	2																					
8/16/1990	Blindbry	No	6,077	6,077	2.0	2																					
8/8/1975	Drinkard	No	6,433	6,433	1.0	1																					
8/8/1975	Drinkard	No	6,435	6,435	1.0	1																					
8/8/1975	Drinkard	No	6,438	6,438	1.0	1																					
8/8/1975	Drinkard	No	6,441	6,441	1.0	1																					
8/8/1975	Drinkard	No	6,450	6,450	1.0	1																					
8/8/1975	Drinkard	No	6,454	6,454	1.0	1																					
8/8/1975	Drinkard	No	6,457	6,457	1.0	1																					



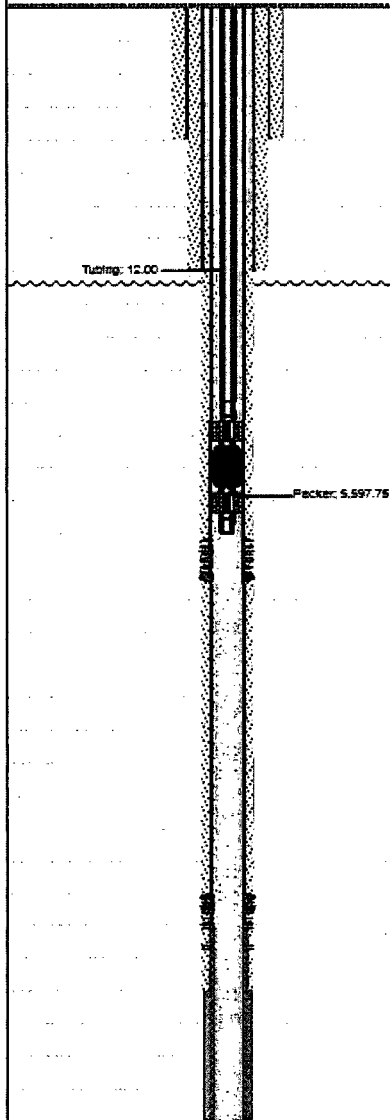
Downhole Well Profile w Cement

Well Name: NEDU 709W

Injection, NE DRINKARD UNIT #709 - Original Hole, 10/18/2018 5:41:32 PM

Vertical schematic (actual)

(mci ('))



Perforations

Date	Type	Prop?	Top (ftKB)	Botm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total
8/8/1975	Drinkard	No	6,466	6,466	1.0	1
8/8/1975	Drinkard	No	6,468	6,468	1.0	1
8/8/1975	Drinkard	No	6,478	6,478	1.0	1
8/8/1975	Drinkard	No	6,482	6,482	1.0	1
8/8/1975	Drinkard	No	6,484	6,484	1.0	1
8/8/1975	Drinkard	No	6,495	6,495	1.0	1
8/8/1975	Drinkard	No	6,497	6,497	1.0	1
8/8/1975	Drinkard	No	6,502	6,502	1.0	1
8/8/1975	Drinkard	No	6,504	6,504	1.0	1
8/8/1975	Drinkard	No	6,509	6,509	1.0	1
8/8/1975	Drinkard	No	6,511	6,511	1.0	1
12/28/1948	Drinkard - Sqz'd	No	6,538	6,554	6.0	102
5/26/1988	Drinkard	No	6,561	6,564	1.0	4
12/28/1948	Drinkard - Sqz'd	No	6,574	6,582	6.0	54
5/26/1988	Drinkard	No	6,575	6,581	1.0	7

Proposed Perforations

Date	Type	Prop?	Top (ftKB)	Botm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total
	Drinkard - Cased Hole	Yes	6,535	6,556	2.0	44
	Drinkard - Cased Hole	Yes	6,560	6,565	2.0	12
	Drinkard - Cased Hole	Yes	6,568	6,572	2.0	10
	Drinkard - Cased Hole	Yes	6,574	6,582	2.0	18
	Drinkard - Cased Hole	Yes	6,588	6,593	2.0	12
	Drinkard - Open Hole	Yes	6,600	6,618	2.0	38

Tubing Strings

Tubing Description	Run Date	String Length (ft)	Set Depth (ftKB)				
Tubing - Injection	11/16/1948	5,693.00	5,605.0				
Item Des	J/S	Make	Model	OD (in)	WT (lb/ft)	Grade	Len (ft)
Tubing	17			2 3/8			5,585.
	3						75
Packer	1			2 3/8			7.25

Rod Strings

Rod Description	Run Date	String Length (ft)	Set Depth (ftKB)				
Item Des	J/S	Make	Model	OD (in)	WT (lb/ft)	Grade	Len (ft)

Other In Hole

Description	OD (in)	Top (ftKB)	Run Date

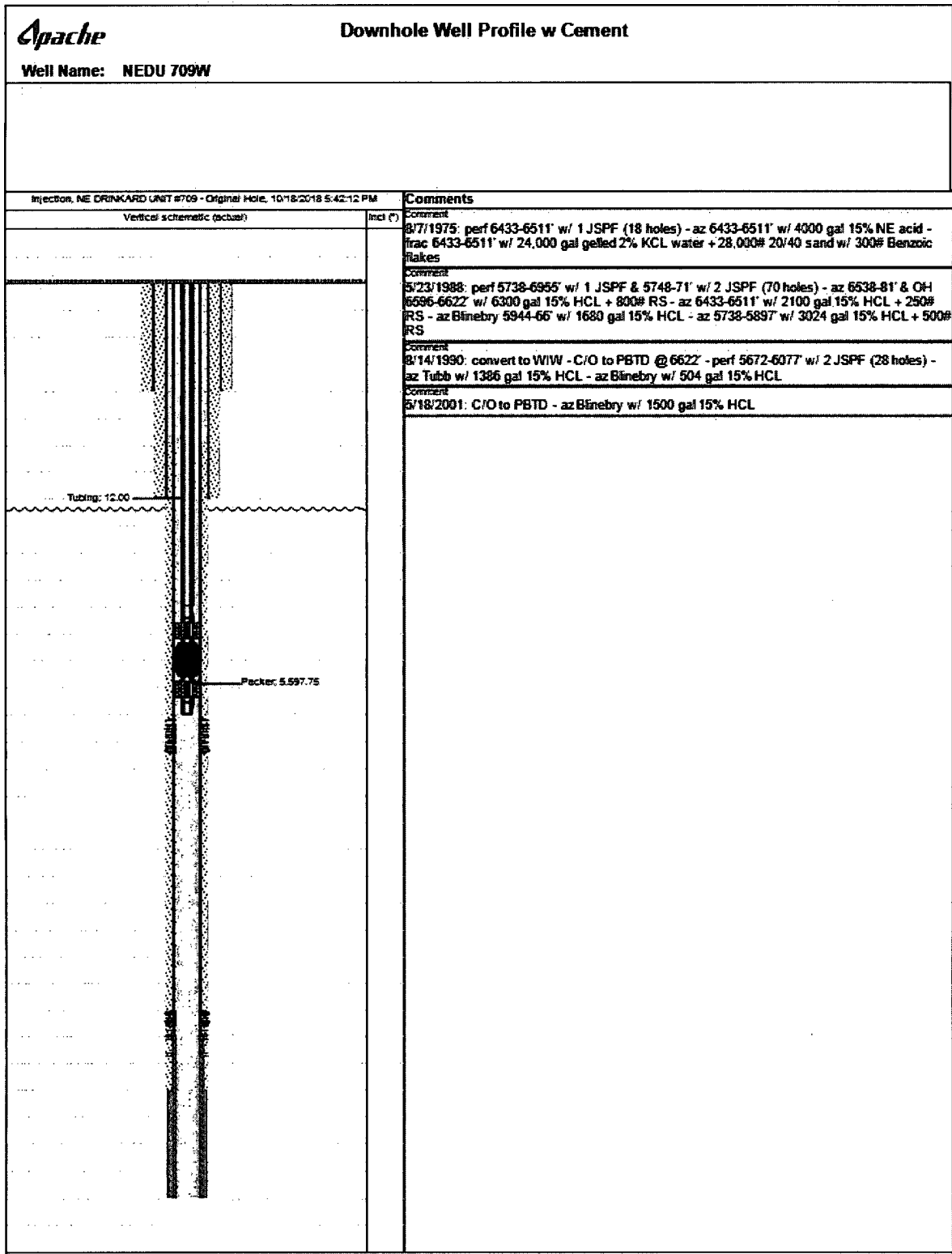
Plug Back Total Depths

Date	Type	Depth (ftKB)	Depth (ftKB) (ftKB)

Comments

Comment
12/21/1948: az 6596-6622' w/ 500 gal mud + 1000 gal 15% acid - perf 6574-6582' - az w/ 1000 gal 15% acid - perf 6538-6554' - az w/ 1000 gal

Comment
12/7/1965: sqz Drinkard perfs & open hole 6574-82' & 6596-32' w/ 48 sx incor cmt - frac 6538-6554' w/ 10,000 gal refined oil + 1/20# gal adomite + 7000# sand



Scenario 1: Dual Packer Proposed WBD ()



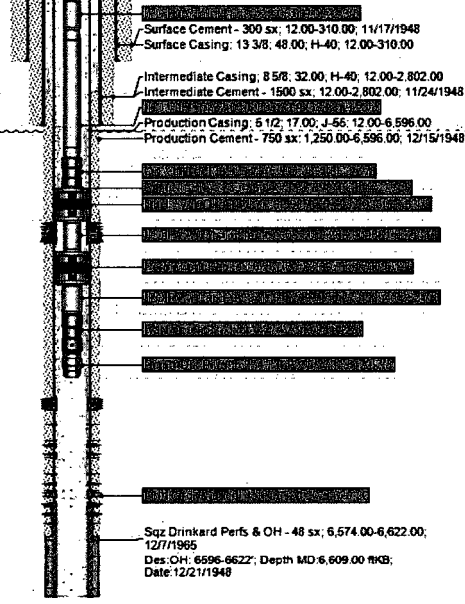
Proposed

Well Name: NEDU 709W

Legal Well Name NORTHEAST DRINKARD UNIT 709W		Common Well Name NEDU 709W		API Surface Loc 3002506595	
Ground Elevation (ft) 3,412.0	Original K/S Elevation (ft) 3,424.0	Surface Legal Location 1980' FSL, 660' FEL, Unit I, Sec 15, T-21S, R-37E		SPUD (M) Date	First Depth (ft) 6,522.0

Injection, NEDRINKARD UNIT #709 - Original Hole, 10/23/2018 8:19:47 AM

Vertical schematic (proposed)



Section	Size (in)	Act Top (ft)	Act Bot (ft)	Start Date
Surface	17 1/2	12.0	310.0	11/16/1948
Inter 1	12 1/4	310.0	2,802.0	11/18/1948
Prod 1	7 7/8	2,802.0	6,622.0	11/26/1948

Casing String	Set Depth (ft)
Surface	310.00
Inter 1	2,802.00
Prod 1	6,596.00

Casing Description	Set Depth (ft)
Surface	310.00
Inter 1	2,802.00
Prod 1	6,596.00

Existing Cement	Top (ft)	Bot (ft)	Top Well Mark
Surface, 310.00ftKB, 13 3/8	12.00	310.00	Returns at Surface
Inter 1, 2,802.00ftKB, 8 5/8	12.00	2,802.00	Returns at Surface
Prod 1, 6,596.00ftKB, 5 1/2	1,250.00	6,596.00	Estimated
Prod 1, 6,596.00ftKB, 5 1/2	6,574.00	6,622.00	

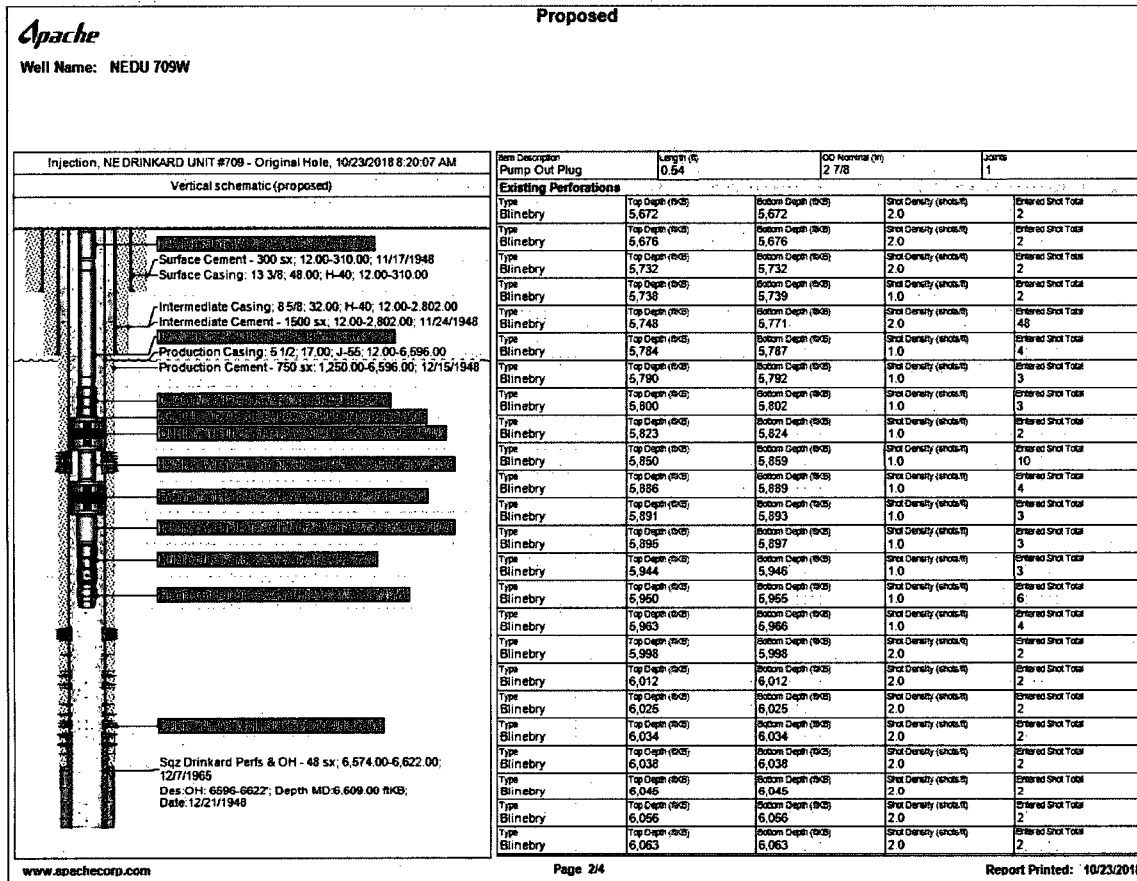
Proposed Tubing String	Set Depth (ft)
Tubing - Injection	6,275.3
IPC Pup Joint	2 3/8
IPC Tubing	2 3/8
On-Off Tool	2 7/8
Seal Nipple 1.78 F	2 7/8
DLH Hydraulic Packer	5 1/2
IPC RytWrap Tubing	2 3/8
Seal Assembly	2 3/8
Permanent Packer	5 1/2
IPC Ryt Wrap Pup Joint	2 7/8
R Nipple	2 7/8

www.apachecorp.com

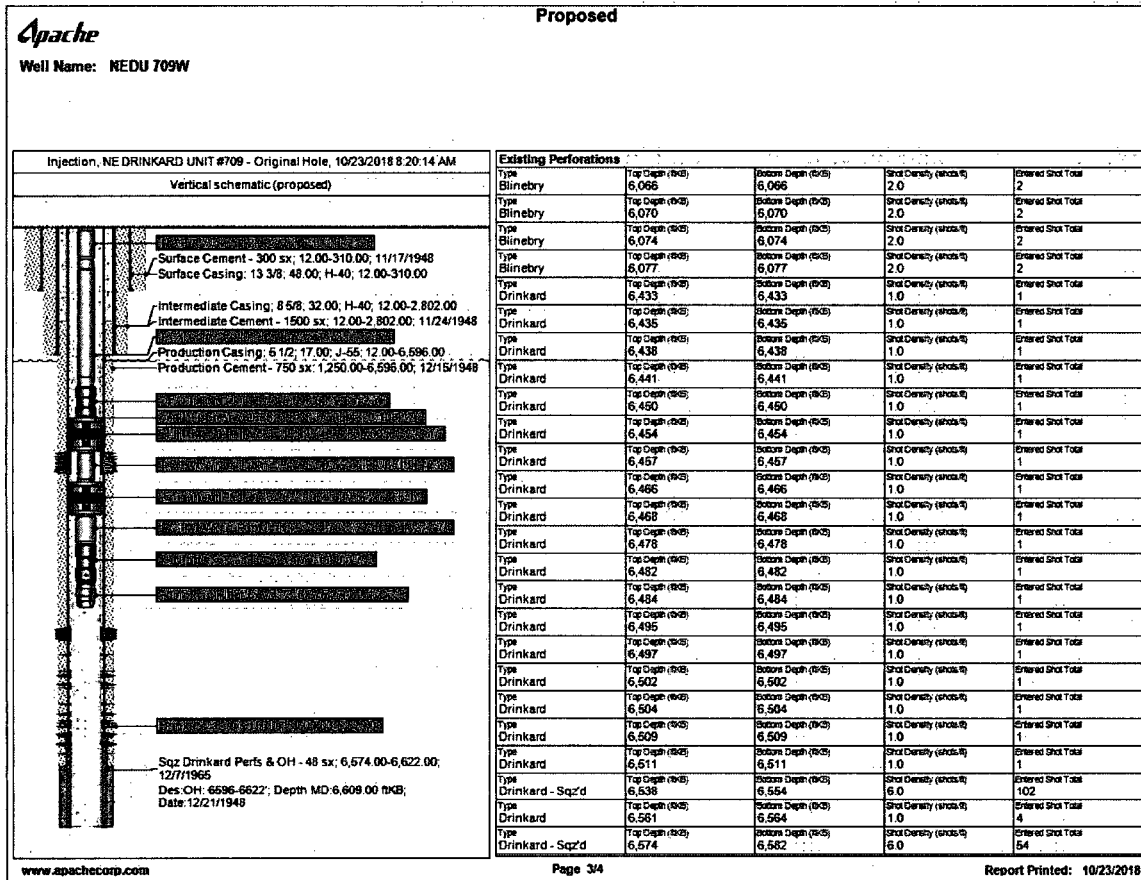
Page 1/4

Report Printed: 10/23/2018

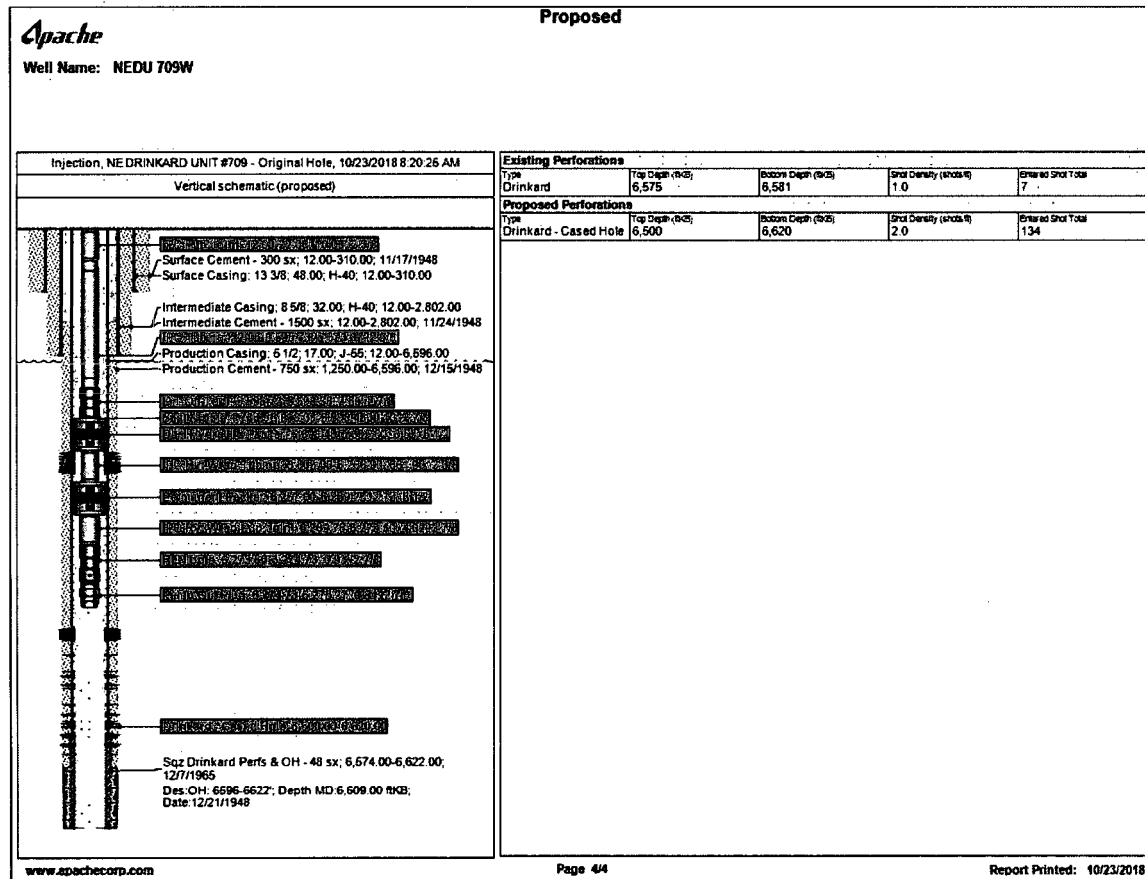
Scenario 1: Dual Packer Proposed WBD



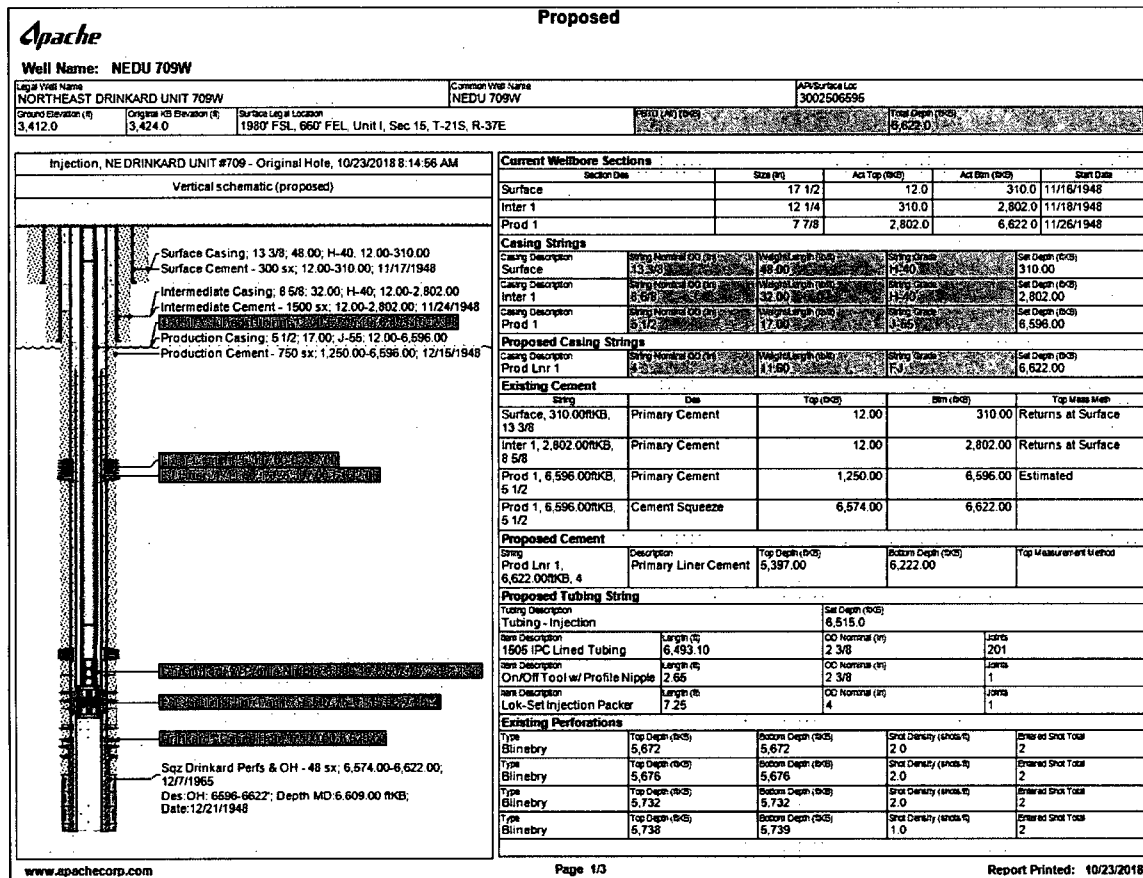
Scenario 1: Dual Packer Proposed WBD



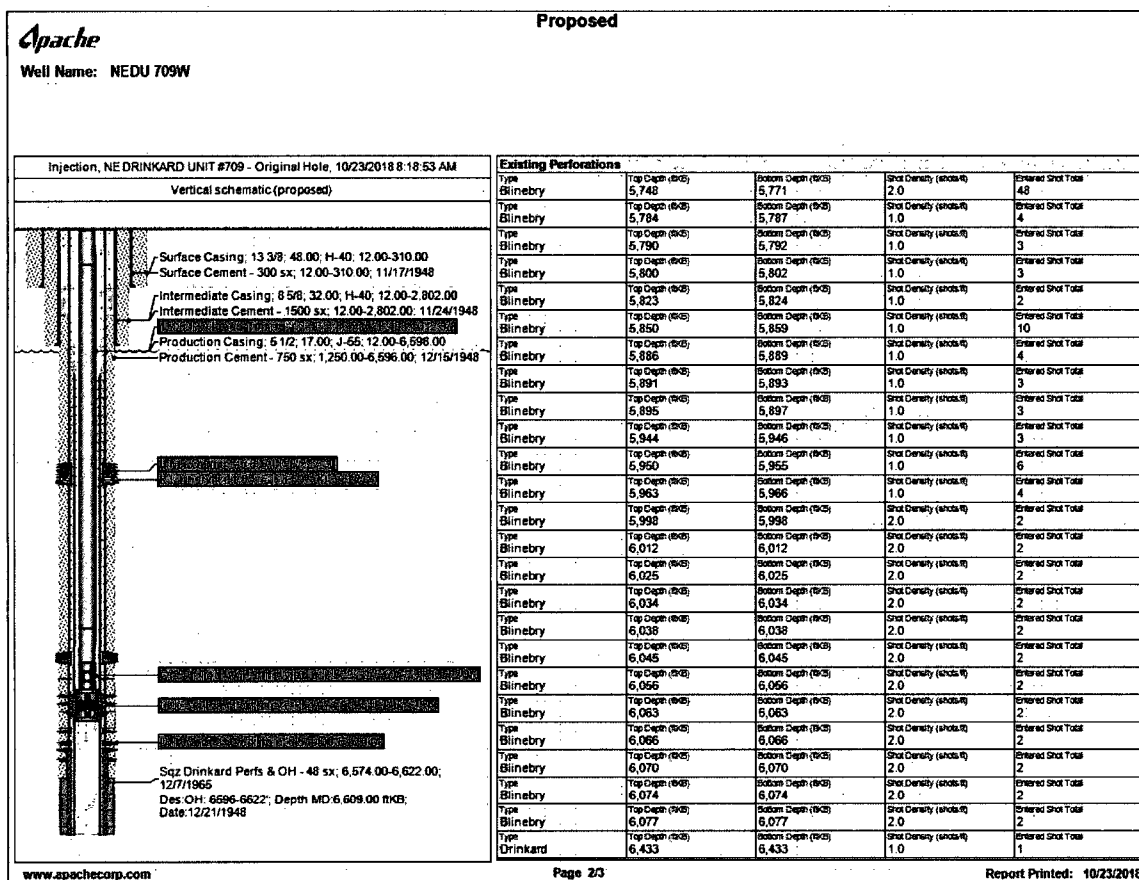
Scenario 1: Dual Packer Proposed WBD (Proposed Changes in Yellow)



Scenario 2: FJ Liner Proposed WBD (Removal of Cement in Yellow)



Scenario 2: FJ Liner Proposed WBD ()



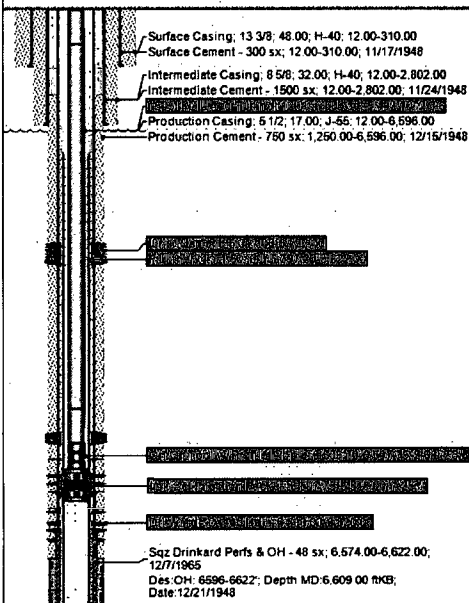
Scenario 2: FJ Liner Proposed WBD (Increased Shot Density in Well)

Apache

Well Name: NEDU 709W

Proposed

Injection, NEDRINKARD UNIT #709 - Original Hole, 10/23/2018 8:19:00 AM
Vertical schematic (proposed)



Existing Perforations

Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,435	6,435	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,438	6,438	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,441	6,441	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,450	6,450	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,454	6,454	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,457	6,457	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,466	6,466	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,468	6,468	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,478	6,478	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,482	6,482	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,484	6,484	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,496	6,496	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,497	6,497	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,502	6,502	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,504	6,504	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,509	6,509	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,511	6,511	1.0	1
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard - Sqz'd	6,538	6,554	6.0	102
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,561	6,564	1.0	4
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard - Sqz'd	6,574	6,582	6.0	54
Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,575	6,581	1.0	7

Proposed Perforations

Type	Top Depth (ftD)	Bottom Depth (ftD)	Shot Density (shots/ft)	Entered Shot Total
Drinkard - Cased Hole	6,500	6,620	2.0	134