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1000 Rio Brazos Rd., Aztec, NM 87410
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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. 30-025-06339
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 615
9. OGRID Number 873
10. Pool name or Wildcat Eunice; B-T-D, North (22900)
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3431' GL

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-100) 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 E : 1980 feet from the North line and 660 feet from the West line
Section 14 Township 21S Range 37E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3431' 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 isolate the Drinkard for injection, per the attached. We are still evaluating which scenario will be the most operational and cost effective.

Spud Date:

8/16/1949

Rig Release Date:

9/23/1949

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 11/16/2018

Type or print name Reesa Fisher E-mail address: Reesa.Fisher@apachecorp.com PHONE: (432) 818-1062

For State Use Only

APPROVED BY: [Signature] TITLE Petroleum Engineer DATE 11/21/18
Conditions of Approval (if any):

NEDU 615W: (API: 30-025-06339)

OBJECTIVE: ISOLATE DRINKARD FOR INJECTION

Scenario 1: Dual Packer Isolation

1. POOH w 2-3/8" injection tubing and 7" injection packer
2. PU workstring and RIH w bit and clean out well to PBTD at ~6693'.
3. Make casing scraper run to around 6589' (casing shoe). POOH
4. Run casing inspection log and cement bond log from top of Drinkard to surface. POOH.
5. RIH to perforate Drinkard formation f/ 6500-6650'. 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 7" 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/ 7" 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 5.5" LTC L-80 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 ~6693'. Deepen another 50-100'.
3. MIRU cement and casing crew and PU 1500' of 5.5" 17# LTC L-80 casing (including float shoe, float collar, landing collar and liner hanger) using 2-7/8" L-80 workstring.

****BOTTOM 300' MUST BE 5.5" FLUSH JOINT****

4. RIH and tag TD. PU and set TOL around 250-300' above top Blinebry perf. Pump spacer followed by 75-100 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 to 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'-6650'. POOH
10. PU 5.5" treating packer on 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 5.5" 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 615W								
API#/Surface Loc 3002506339		Surface Legal Location 1980' FNL, 660' FWL, Unit E, Sec 14, T-21S, R-37E		Field Name Eunice North				
Spud Date 8/16/1949		Original KB Elevation (ft) 3,443.0		Ground Elevation (ft) 3,430.0				
PSD (All) (ftKB)		Total Depth (ftKB) 6,643.0		KB-Ground Distance (ft) 13.0				
		Comment						
Injection, NE DRINKARD UNIT #615 - Original Hole, 10/19/2018 12:05:40 PM								
Vertical schematic (actual)		Casing Strings						
		Csg Des	OD (in)	W/Len (ft)	Grade	Set Depth (ftKB)		
		Surface	13 3/8	48.00	1-40	166.00		
		Inter 1	9 5/8	34.00	1-40	2,732.00		
		Prod 1	7	28.00	1-55	6,600.00		
		Cement						
		String	Description	Top Depth (ftKB)	Bottom Depth (ftKB)	Top Meas Meth		
		Surface	Surface - 125 3/8	13.00	166.00	Returns at Surface		
		Inter 1	Intermediate - 600 5/8	1,414.00	2,732.00	Temperature Survey		
		Prod 1	Production - 500 7	3,875.00	6,600.00	Temperature Survey		
		String	Description	Top Depth (ftKB)	Bottom Depth (ftKB)	Top Meas Meth		
		Prod 1	Sqz Drinkard Perfs - 100 7	5,515.00	6,555.00			
		String	Description	Top Depth (ftKB)	Bottom Depth (ftKB)	Top Meas Meth		
		Prod 1	Sqz Tubb Perfs - 200 7	6,100.00	6,310.00			
		String	Description	Top Depth (ftKB)	Bottom Depth (ftKB)	Top Meas Meth		
		Prod 1	Sqz Blinebry Perfs - 75 7	5,774.00	5,828.00			
		String	Description	Top Depth (ftKB)	Bottom Depth (ftKB)	Top Meas Meth		
		Prod 1	Sqz Tubb Perfs - 40 bbl Polymer	6,100.00	6,130.00			
		Perforations						
		Date	Type	Prop?	Top (ftKB)	Bot (ftKB)	Shot Dens (shots/ft)	Entered Shot Total
		7/29/1962	Blinebry sqz'd	No	5,773	5,776	2.0	8
		3/25/1988	Blinebry	No	5,777	5,779	1.0	3
		3/25/1988	Blinebry	No	5,783	5,786	1.0	4
		7/29/1962	Blinebry sqz'd	No	5,786	5,788	2.0	6
		7/29/1962	Blinebry sqz'd	No	5,791	5,796	2.0	12
		3/25/1988	Blinebry	No	5,792	5,795	1.0	4
		3/25/1988	Blinebry	No	5,797	5,797	1.0	1
		3/25/1988	Blinebry	No	5,798	5,798	1.0	1
		3/25/1988	Blinebry	No	5,801	5,803	1.0	3
		3/25/1988	Blinebry	No	5,805	5,809	1.0	5
		7/29/1962	Blinebry sqz'd	No	5,806	5,810	2.0	10
		3/25/1988	Blinebry	No	5,811	5,818	1.0	8
		3/25/1988	Blinebry	No	5,823	5,829	1.0	7
		7/29/1962	Blinebry sqz'd	No	5,824	5,828	2.0	10
		3/25/1988	Blinebry	No	5,832	5,834	1.0	3
		3/25/1988	Blinebry	No	5,845	5,849	1.0	5
		3/25/1988	Blinebry	No	5,856	5,856	1.0	1
		3/25/1988	Blinebry	No	5,863	5,863	1.0	1
		3/25/1988	Blinebry	No	5,866	5,866	1.0	1
		3/25/1988	Blinebry	No	5,868	5,868	1.0	1
		3/25/1988	Blinebry	No	5,877	5,885	1.0	9
		3/25/1988	Blinebry	No	5,889	5,897	1.0	9



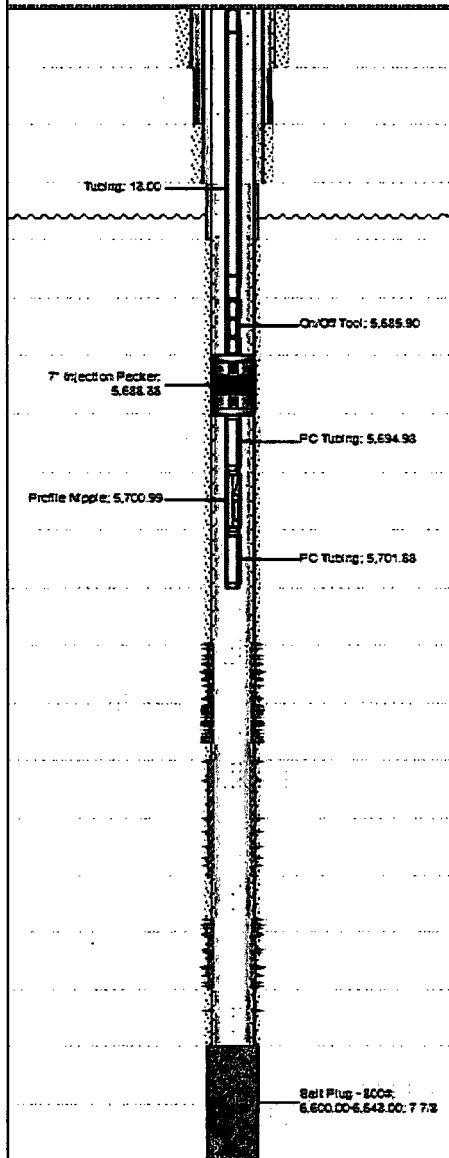
Downhole Well Profile w Cement

Well Name: NEDU 615W

Injection, NE DRINKARD UNIT #515 - Original Hole, 10/19/2018 12:06:29 PM

Vertical schematic (actual)

Incl (°)



Perforations

Date	Type	Prop?	Top (SSCB)	Bot (SSCB)	Shot Dens (shots/ft)	Entered Shot Total
3/25/1988	Blindbry	No	5,911	5,914	1.0	4
3/25/1988	Blindbry	No	5,919	5,919	1.0	1
3/25/1988	Blindbry	No	5,920	5,920	1.0	1
3/25/1988	Blindbry	No	5,926	5,926	1.0	1
3/25/1988	Blindbry	No	5,927	5,927	1.0	1
3/25/1988	Blindbry	No	5,930	5,932	1.0	3
3/25/1988	Blindbry	No	5,951	5,958	1.0	8
3/25/1988	Blindbry	No	5,970	5,976	1.0	7
3/25/1988	Blindbry	No	5,983	5,985	1.0	3
3/25/1988	Blindbry	No	5,987	5,993	1.0	7
3/25/1988	Blindbry	No	5,996	5,998	1.0	3
3/25/1988	Blindbry	No	6,003	6,005	1.0	3
3/25/1988	Blindbry	No	6,009	6,009	1.0	1
3/25/1988	Blindbry	No	6,010	6,010	1.0	1
10/1/1954	Tubb Sqz'd	No	6,100	6,110	4.0	44
10/1/1954	Tubb Sqz'd	No	6,130	6,150	4.0	84
10/1/1954	Tubb Sqz'd	No	6,165	6,175	4.0	44
10/1/1954	Tubb Sqz'd	No	6,220	6,245	4.0	104
10/1/1954	Tubb Sqz'd	No	6,255	6,265	4.0	44
10/1/1954	Tubb Sqz'd	No	6,280	6,310	4.0	124
3/25/1988	Drinkard	No	6,468	6,472	1.0	5
3/25/1988	Drinkard	No	6,482	6,484	1.0	3
3/25/1988	Drinkard	No	6,488	6,499	1.0	12
3/25/1988	Drinkard	No	6,502	6,515	1.0	14
7/29/1962	Drinkard Sqz'd	No	6,515	6,517	2.0	6
3/25/1988	Drinkard	No	6,518	6,523	1.0	6
7/29/1962	Drinkard Sqz'd	No	6,527	6,530	2.0	8
3/25/1988	Drinkard	No	6,529	6,531	1.0	3
7/29/1962	Drinkard Sqz'd	No	6,540	6,542	2.0	6
3/25/1988	Drinkard	No	6,540	6,540	1.0	1
3/25/1988	Drinkard	No	6,541	6,541	1.0	1
7/29/1962	Drinkard Sqz'd	No	6,546	6,548	2.0	6
7/29/1962	Drinkard Sqz'd	No	6,551	6,555	2.0	10
3/25/1988	Drinkard	No	6,553	6,555	1.0	3
3/25/1988	Drinkard	No	6,573	6,575	1.0	3

Proposed Perforations

Date	Type	Prop?	Top (SSCB)	Bot (SSCB)	Shot Dens (shots/ft)	Entered Shot Total

Tubing Strings

Tubing Description	Run Date	String Length (ft)	Set Depth (SSCB)				
Tubing - Injection	12/20/2017	5,693.12	5,708.1				
Item Desc	Qty	Make	Model	OD (in)	WT (lb/ft)	Grade	Len (ft)
Tubing	183		KOBE SS	2 3/8	3.02	J-55	5,672.90
On/Off Tool	1			2 3/8			2.48
7" Injection Packer	1			7			6.60
PC Tubing	1			2 3/8			6.01
Profile Nipple	1			2 3/8			0.89
PC Tubing	1			2 3/8			6.24

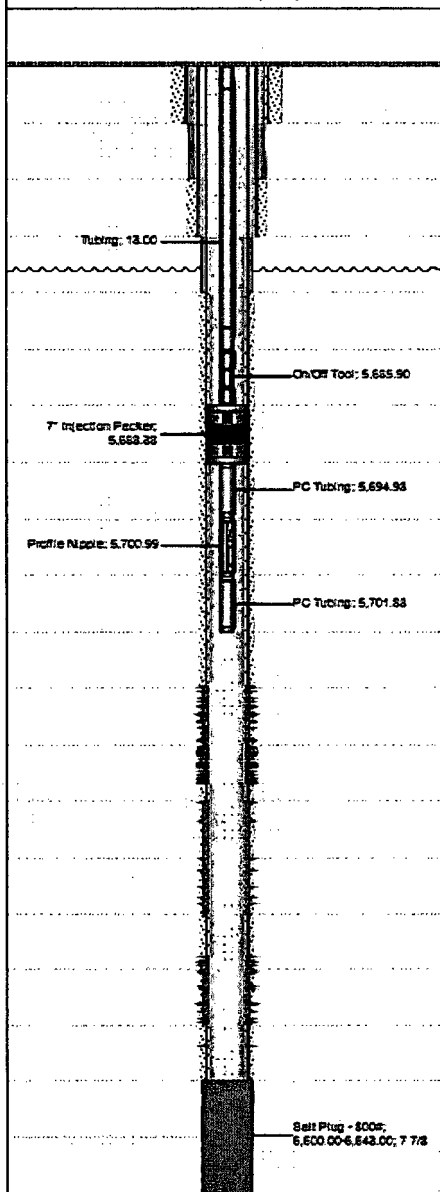
 Ball Plug - 2000
 6,600.00-6,643.00: 7 7/8

Apache**Downhole Well Profile w Cement****Well Name: NEDU 615W**

Injection, IFE DRINKARD UNIT #615 - Original Hole, 10/19/2018 12:06:59 PM

Vertical schematic (actual)

Incl (°)

**Rod Strings**

Rod Description	Run Date	String Length (ft)	Set Depth (ft)
Item Des	JIS	Make	Model

Other In Hole

Description	Run Date	Yds (ft)	Yds (ft)	Run Date
Salt Plug - 800#		7 7/8	6,600	7/27/1962

Plug Back Total Depths

Date	Type	Depth (ft)	Depth (ft)

Comments

Comment

Comment

9/29/1949: wash OH 6600-6643' w/ 500 gal 20% mud acid - az w/ 4000 gal 20% acid - perf Tubb 6100-6310' w/ 4 JSPF - treat 6100-6310' w/ 5000 gal acid

Comment

9/17/1954: perf Tubb 6100-6310' w/ 4 JSPF - az Drinkard w/ 1000 gal 15% Type J acid

Comment

8/29/1956: az Tubb w/ 3000 gal retarded acid + 7000 gal regular acid

Comment

7/27/1962: plug off OH 6600-6643' w/ 800# salt & oil - perf Drinkard 6515-6555' w/ 2 JSPF - perf Blinebry 5773-5828' w/ 2 JSPF - acid/frac Drinkard 6515-6555' w/ 1000 gal 15% acid + 20,000 gal refined oil + 20,000# sand - acid/frac Tubb w/ 500 gal acid + 20,000 gal refined oil + 30,000# sand - frac Blinebry 5773-5828' w/ 34,840 gal RO + 90,000# sand

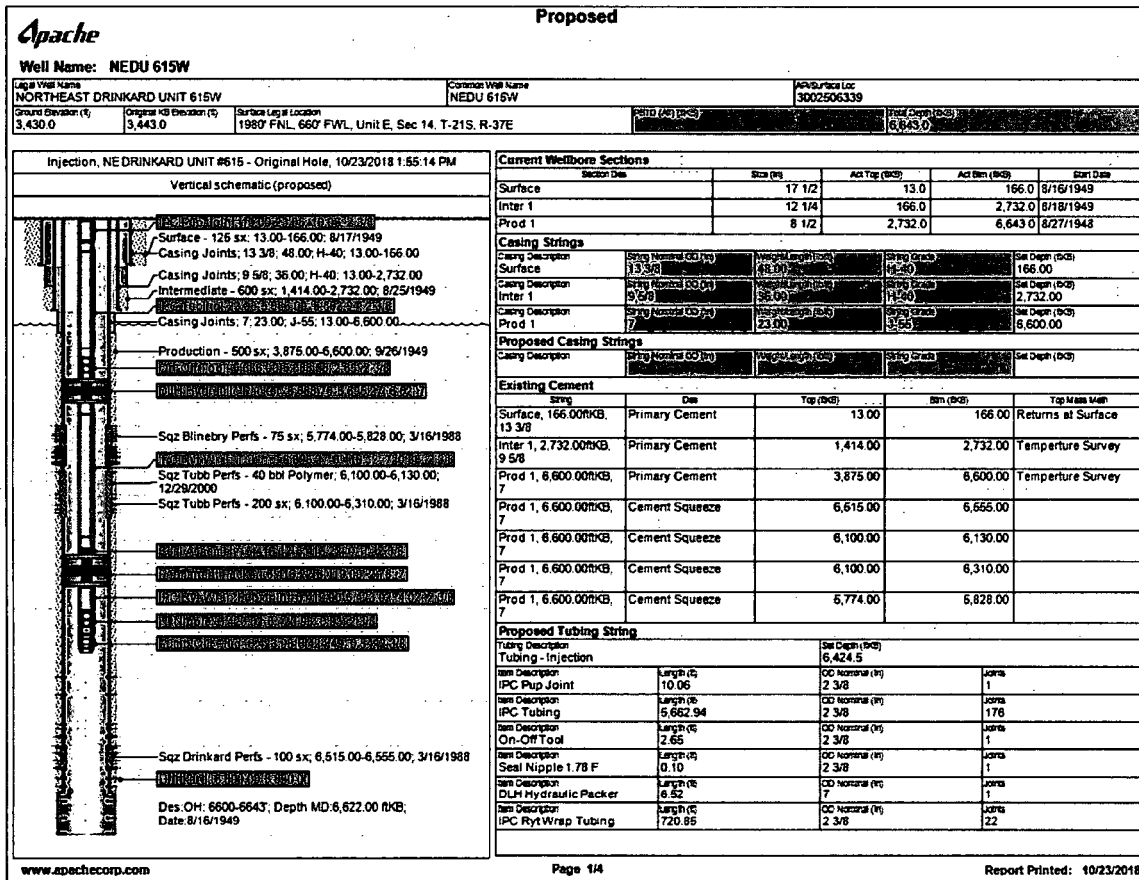
Comment

3/14/1988: sqz Drinkard perfs 6515-6555' w/ 100 sx cmt - sqz Blinebry perfs 5774-5828' w/ 75 sx cmt - perf Drinkard 6468-7375' - perf Blinebry 5777-6010' - az OH 6600-6643' & perfs 6468-6575' w/ 4200 gal 15% NEFE acid + 750# RS - az Blinebry perfs 5751-6010' w/ 1680 gal 15% NEFE acid

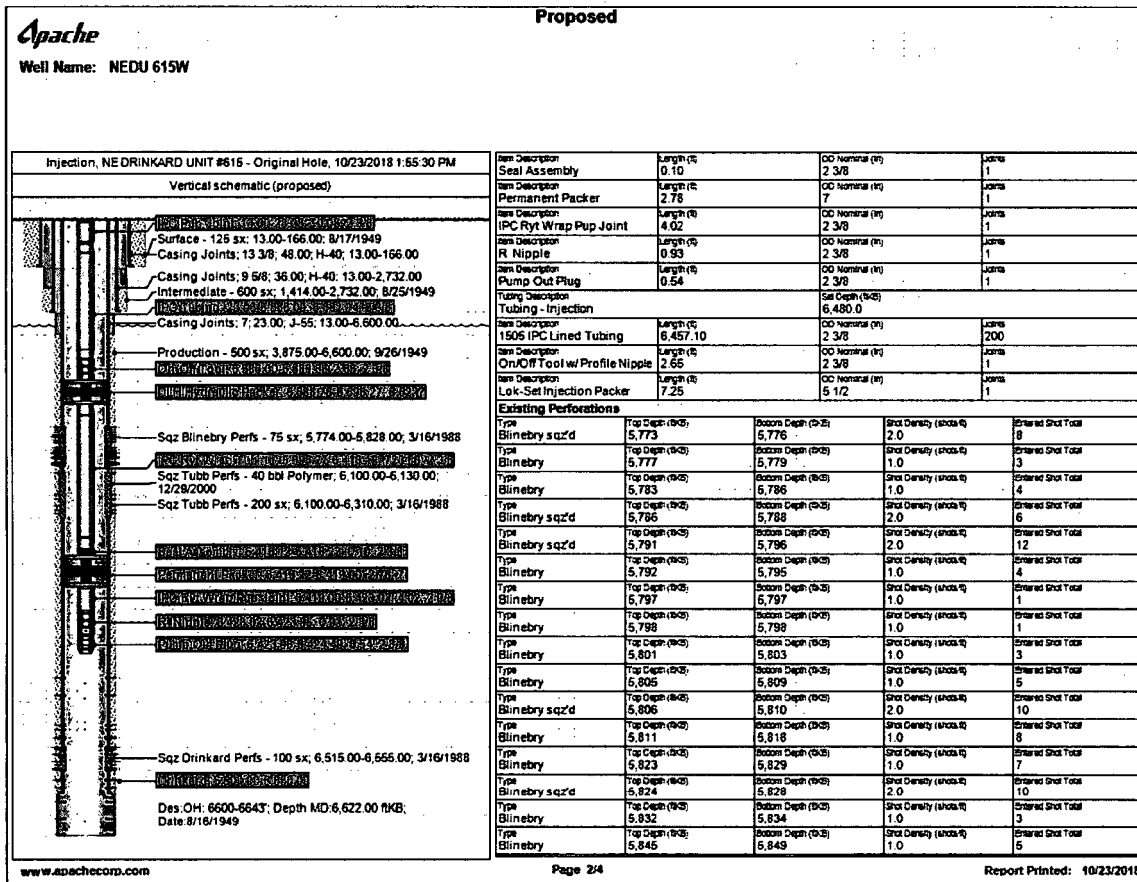
Comment

12/29/2000: polymer sqz Tubb interval 6100-6130' w/ 40 bbl Mazaseal gel

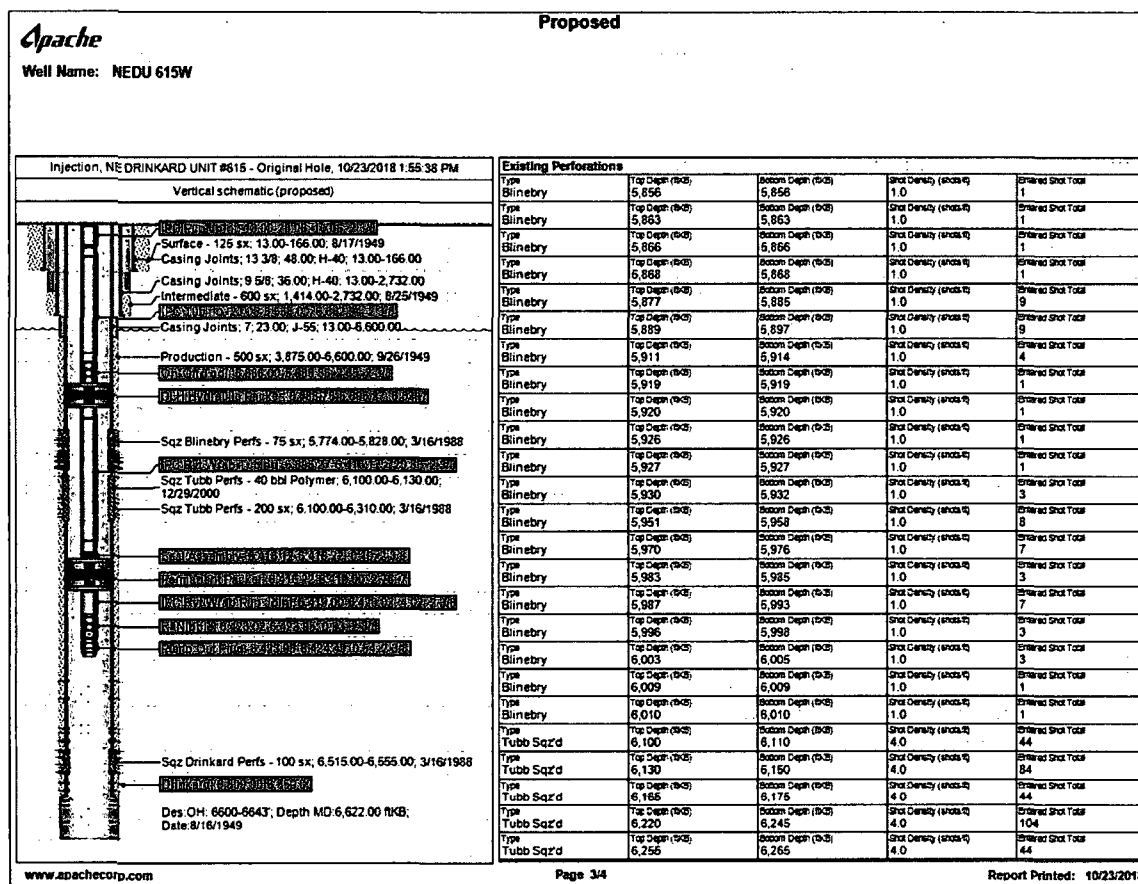
Scenario 1: Dual Packer Proposed WBD (Revised Changes in Yellow)



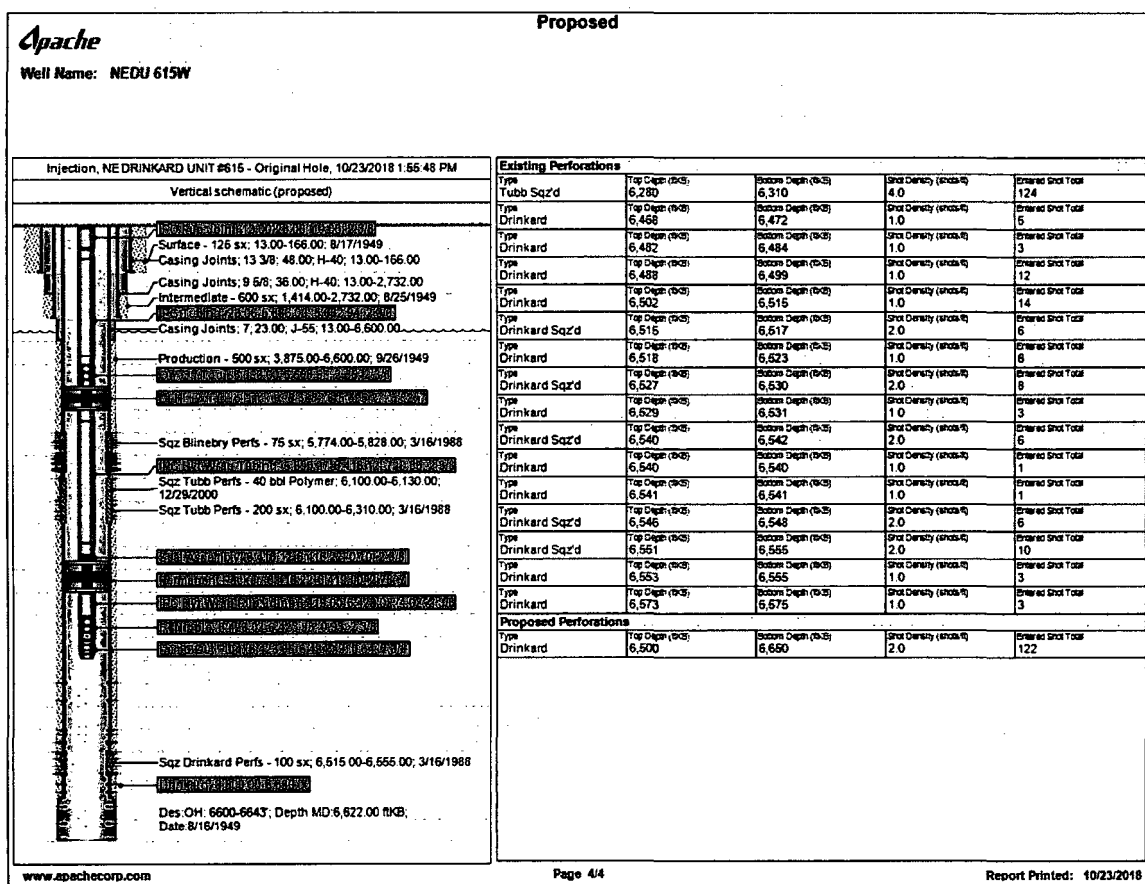
Scenario 1: Dual Packer Proposed WBD (Diamond Channel in Yellow)



Scenario 1: Dual Packer Proposed WBD (Proposed Drilling Unit Valley)



Scenario 1: Dual Packer Proposed WBD (Proposed Completion)



Scenario 2: Liner Proposed WBD (10/23/2018 1:51:44 PM)



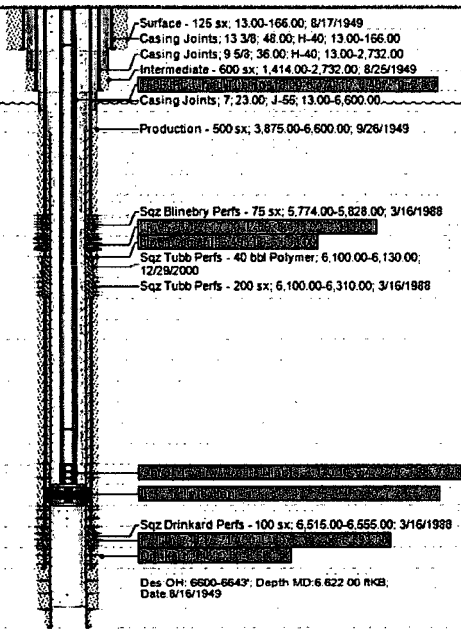
Proposed

Well Name: NEDU 615W

Legal Well Name NORTHEAST DRINKARD UNIT 615W	Cameron Well Name NEDU 615W	API Surface Loc 3002506339
Ground Elevation (ft) 3,430.0	Original KB Elevation (ft) 3,443.0	Surface Legal Location 1980' FNL, 660' FWL, Unit E, Sec 14, T-21S, R-37E

Injection, NE DRINKARD UNIT #615 - Original Hole, 10/23/2018 1:51:44 PM

Vertical schematic (proposed)



Surface - 125 sx; 13.00-166.00; 8/17/1949
 Casing Joints; 13 3/8; 48.00; H-40; 13.00-166.00
 Casing Joints; 9 5/8; 36.00; H-40; 13.00-2,732.00
 Intermediate - 600 sx; 1,414.00-2,732.00; 8/25/1949
 Casing Joints; 7, 23.00; J-55; 13.00-6,600.00
 Production - 500 sx; 3,875.00-6,600.00; 9/26/1949

Sqz Blinbery Perfs - 75 sx; 5,774.00-6,828.00; 3/16/1988
 Sqz Tubb Perfs - 40 bbl Polymer; 6,100.00-6,130.00; 12/29/2000
 Sqz Tubb Perfs - 200 sx; 6,100.00-6,310.00; 3/16/1988

Sqz Drinkard Perfs - 100 sx; 6,515.00-6,555.00; 3/16/1988

Des OH: 6600-6643'; Depth MD: 6,622.00 RKB,
 Date 8/16/1949

Current Wellbore Sections

Section Desc	Size (in)	Act Top (feet)	Act Btm (feet)	Start Date
Surface	17 1/2	13.0	166.0	8/16/1949
Inter 1	12 1/4	166.0	2,732.0	8/18/1949
Prod 1	8 1/2	2,732.0	6,643.0	8/27/1948

Casing Strings

Casing Description	Size Nominal OD (in)	Weight (lb/ft)	Joint Length (ft)	Joint Grade	Set Depth (feet)
Surface	13 3/8	45.00	48.00	H-40	166.00
Inter 1	9 5/8	36.00	36.00	H-40	2,732.00
Prod 1	7	23.00	23.00	J-55	6,600.00

Proposed Casing Strings

Casing Description	Size Nominal OD (in)	Weight (lb/ft)	Joint Length (ft)	Set Depth (feet)
Prod Linr 1	5 1/2	17.00	150	6,693.00

Existing Cement

String	Des	Top (feet)	Btm (feet)	Top Measurement
Surface, 166.00ftKB, 13 3/8	Primary Cement	13.00	166.00	Returns at Surface
Inter 1, 2,732.00ftKB, 9 5/8	Primary Cement	1,414.00	2,732.00	Temperature Survey
Prod 1, 6,600.00ftKB, 7	Primary Cement	3,875.00	6,600.00	Temperature Survey
Prod 1, 6,600.00ftKB, 7	Cement Squeeze	6,515.00	6,555.00	
Prod 1, 6,600.00ftKB, 7	Cement Squeeze	6,100.00	6,130.00	
Prod 1, 6,600.00ftKB, 7	Cement Squeeze	6,100.00	6,310.00	
Prod 1, 6,600.00ftKB, 7	Cement Squeeze	6,774.00	6,828.00	

Proposed Cement

String	Description	Top Depth (ft)	Bottom Depth (ft)	Top Measurement Method
Prod Linr 1, 6,693.00ftKB, 5 1/2	Primary Liner Cement	5,498.00	6,693.00	Returns at Surface

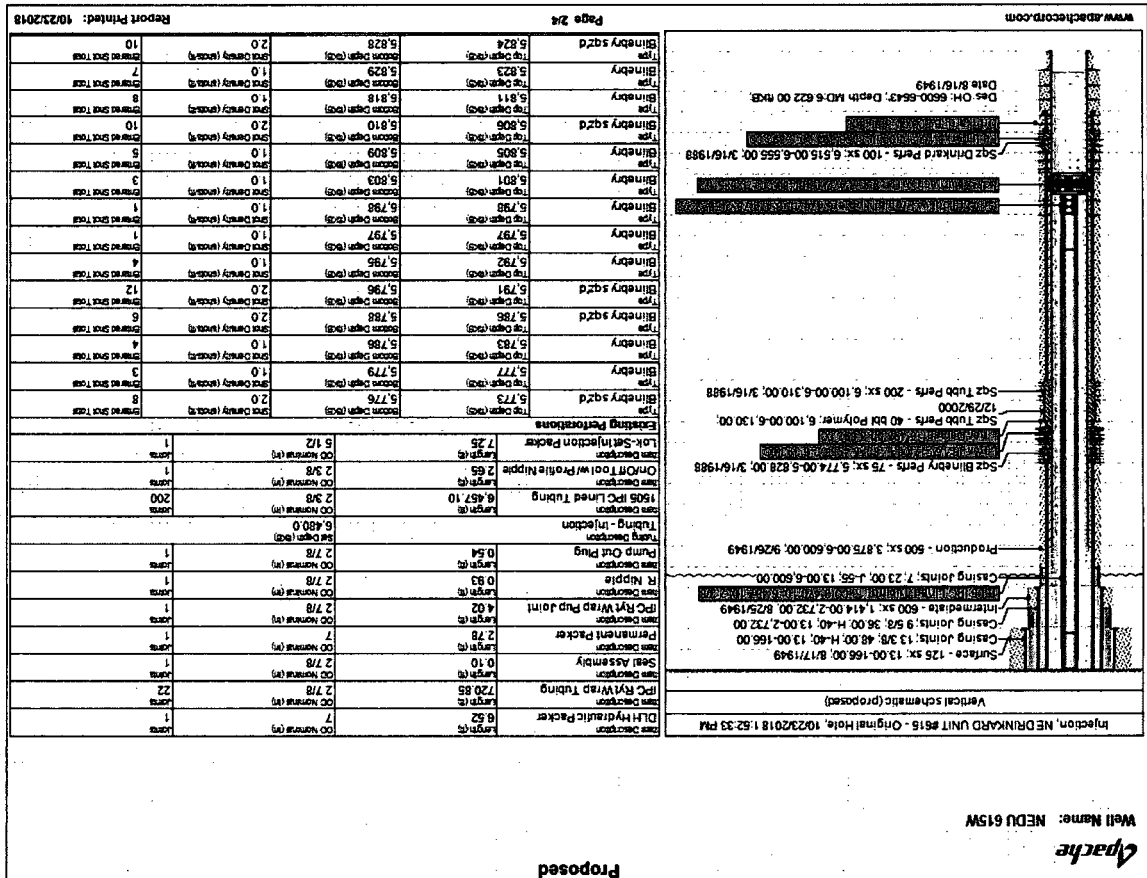
Proposed Tubing String

Tubing Description	Length (ft)	OD Nominal (in)	Joints	Set Depth (feet)
Tubing - Injection				6,424.5
IPC Pup Joint	10.06	2 7/8	1	
IPC Tubing	5,662.94	2 7/8	176	
On-Off Tool	2.65	2 7/8	1	
Seal Nipple 1.78 F	0.10	2 7/8	1	

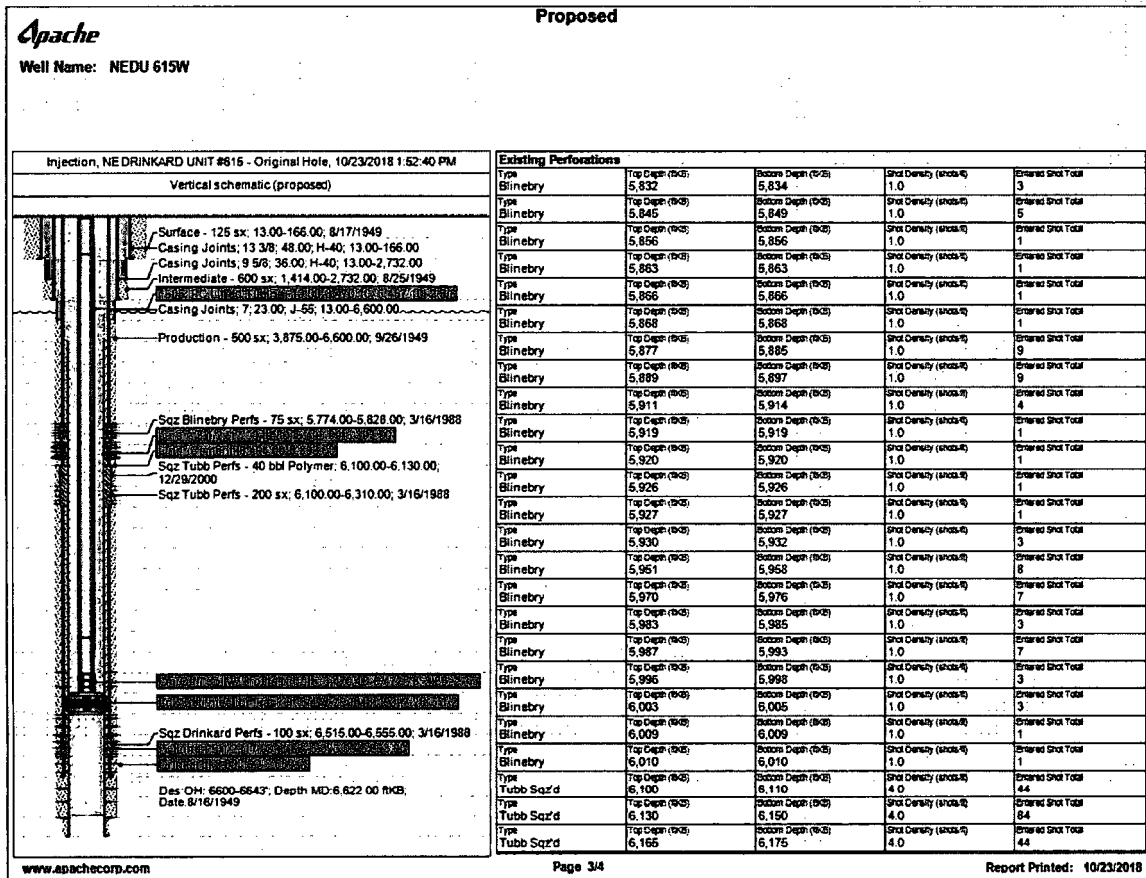
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Report Printed: 10/23/2018



Scenario 2: Liner Proposed WBD



Scenario 2: Liner Proposed WBD (Proposed Changes in Yellow)

