

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office
FORM APPROVED
OMB No. 1004-0137
Expires January 31, 2018

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.

OCD Hobbs
Lease Serial No.
NMNM2512

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well ☐ Oil Well ☐ Gas Well ☒ Other: INJECTION		6. If Indian, Allottee or Tribe Name
2. Name of Operator APACHE CORPORATION		7. If Unit or CA/Agreement, Name and/or No. 73888U3160
3a. Address 303 VETERANS AIRPARK LANE SUITE 3000 MIDLAND, TX 79705		8. Well Name and No. NEDU 403
3b. Phone No. (include area code) Ph: 432-818-1062		9. API Well No. 30-025-06449-00-S1
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 10 T21S R37E NENW 460FNL 1980FWL		10. Field and Pool or Exploratory Area EUNICE
		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			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Workover Operations
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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 recompleat 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 recompleat 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 isolate the Drinkard for injection, per the attached procedure and WBD's. (R-8541)

14. I hereby certify that the foregoing is true and correct. Electronic Submission #442680 verified by the BLM Well Information System For APACHE CORPORATION, sent to the Hobbs Committed to AFMSS for processing by PRISCILLA PEREZ on 11/06/2018 (19PP0303SE)	
Name (Printed/Typed) REESA FISHER	Title SR STAFF REGULATORY ANALYST
Signature (Electronic Submission)	Date 11/05/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JONATHON SHEPARD	Title PETROELUM ENGINEER	Date 11/19/2018
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.		
Office Hobbs		

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)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

MAB/OCD
11/29/2018

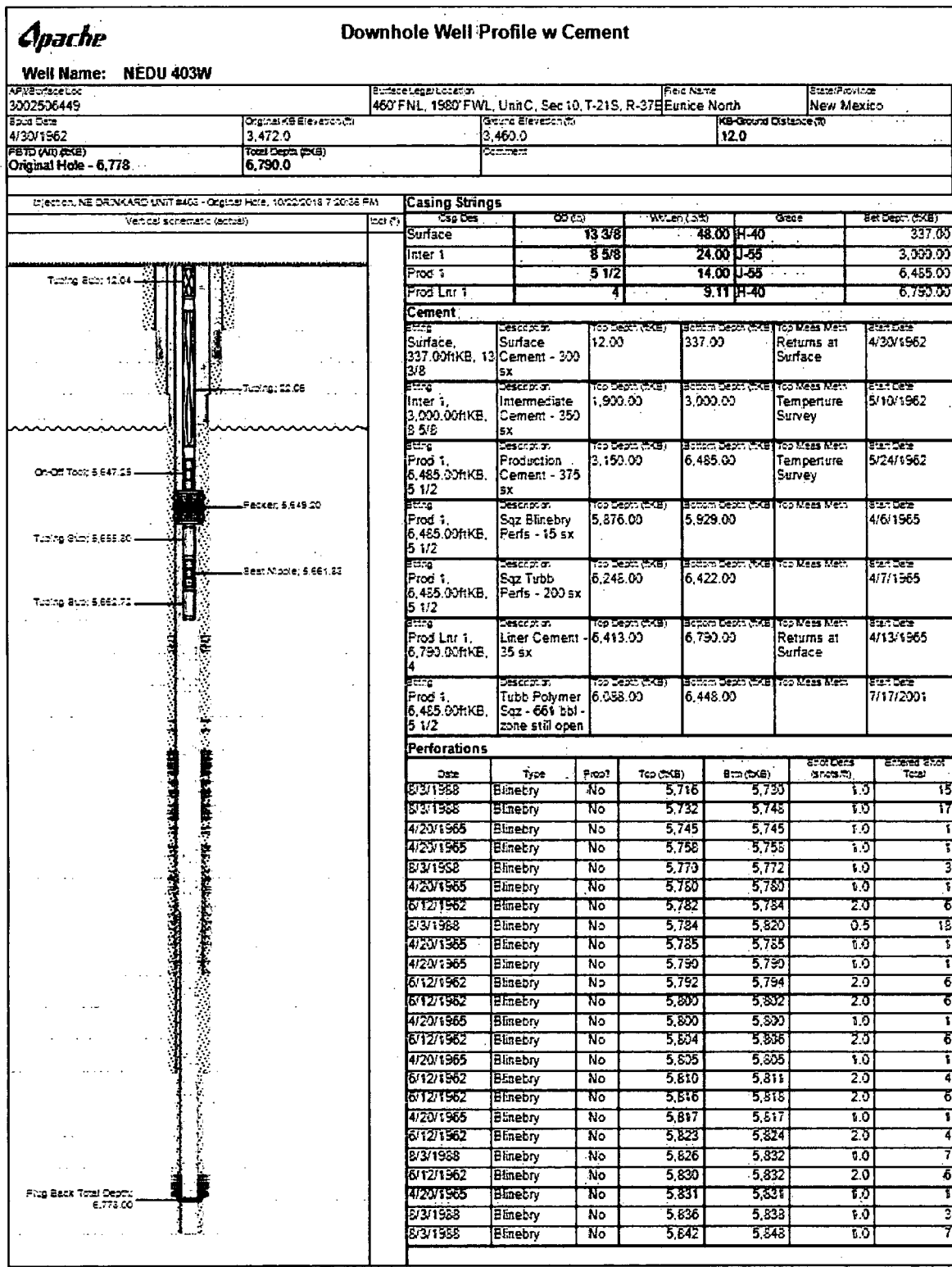
NEDU 403W: (API: 30-025-20567)

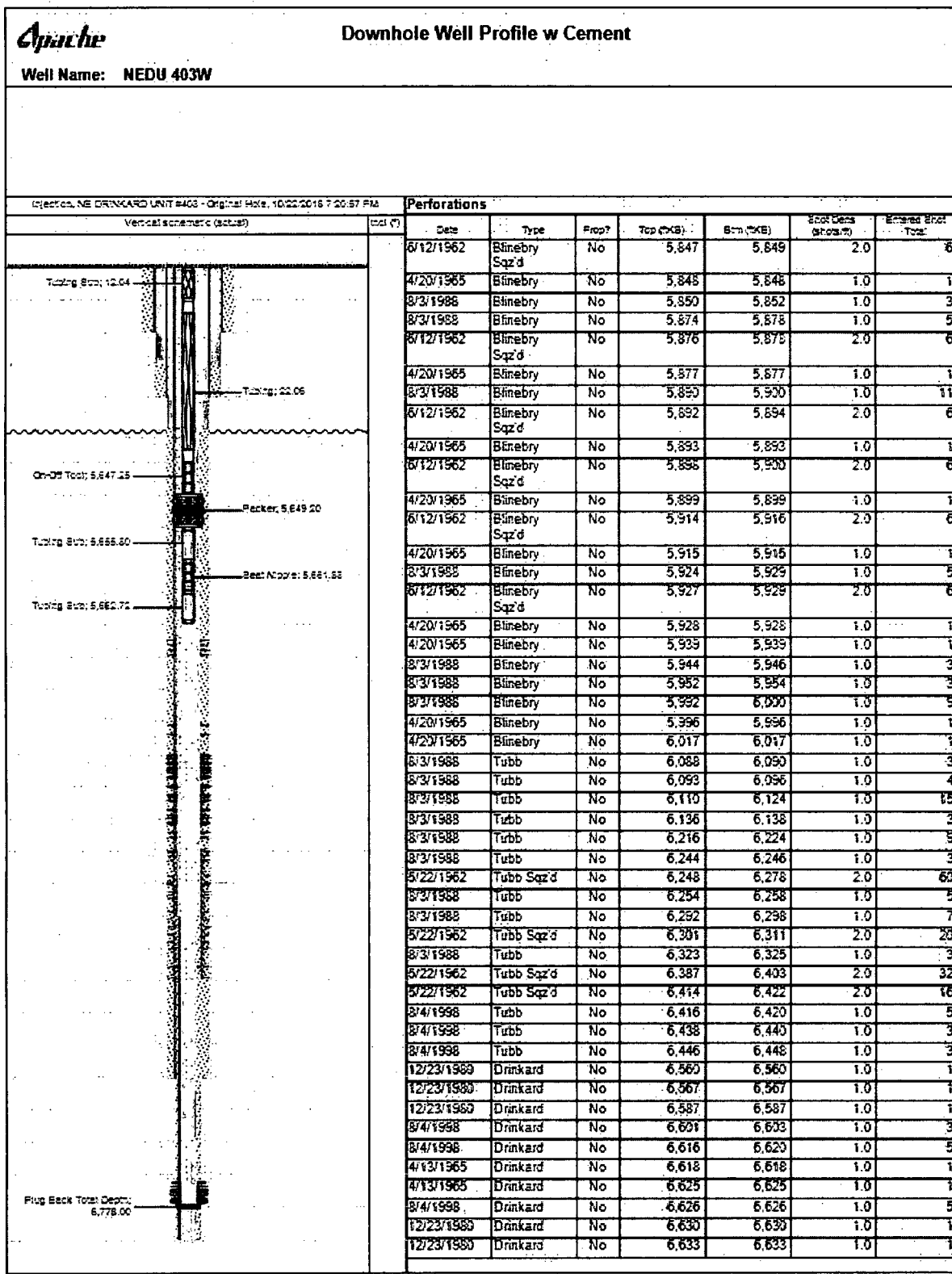
OBJECTIVE: ISOLATE DRINKARD FOR INJECTION

Dual Packer Isolation

1. POOH w 2-3/8" injection tubing and 5.5" injection packer (~5650')
2. PU workstring and RIH w bit and clean out well to PBTD at ~6693'.
3. Make casing scraper run to around 6700' (Below Bottom Perf). 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 w/ 5-1/2" permanent packer and set in good casing between Blinbry 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.

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



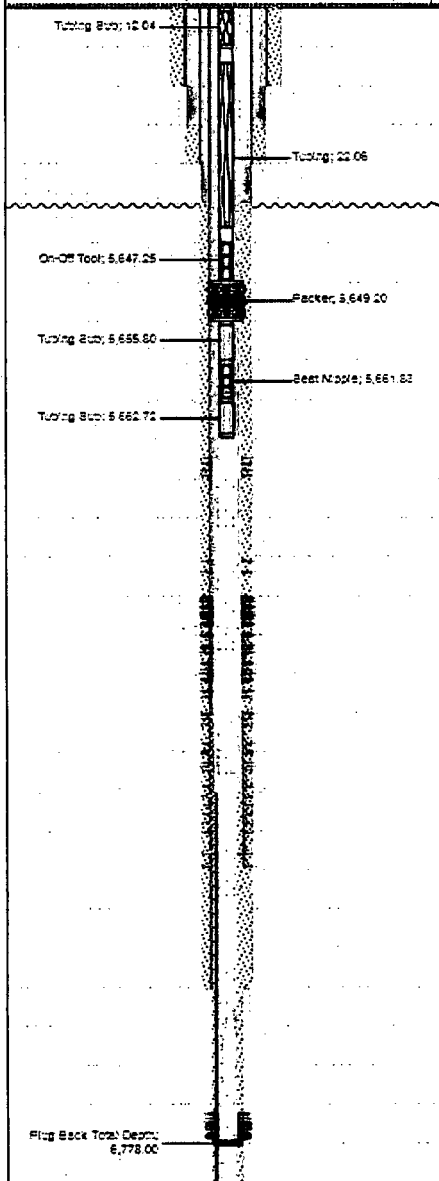


Apache**Downhole Well Profile w Cement**Well Name: **NEDU 403W**

Electrical, AB DRINKARD UNIT #403 - Original Hole, 10/22/2018 7:21:17 PM

Vertical schematic (actual)

CPI (C)

**Perforations**

Date	Type	Prop?	Top (FKS)	Bot (FKS)	Shot Dens (shots/ft)	Entered Shot Total
4/13/1965	Drinkard	No	6,644	6,644	1.0	1
8/4/1998	Drinkard	No	6,646	6,648	1.0	3
12/23/1980	Drinkard	No	6,648	6,648	1.0	1
12/23/1980	Drinkard	No	6,654	6,654	1.0	1
4/13/1965	Drinkard	No	6,669	6,669	1.0	1
8/4/1998	Drinkard	No	6,670	6,673	1.0	4
12/23/1980	Drinkard	No	6,672	6,672	1.0	1
4/13/1965	Drinkard	No	6,698	6,698	1.0	1
8/4/1998	Drinkard	No	6,700	6,704	1.0	5
12/23/1980	Drinkard	No	6,706	6,706	1.0	1
8/4/1998	Drinkard	No	6,714	6,718	1.0	5
4/13/1965	Drinkard	No	6,718	6,718	1.0	1
12/23/1980	Drinkard	No	6,720	6,720	1.0	1
8/4/1998	Drinkard	No	6,721	6,726	1.0	6
4/13/1965	Drinkard	No	6,725	6,725	1.0	1
4/13/1965	Drinkard	No	6,733	6,733	1.0	1
8/4/1998	Drinkard	No	6,734	6,764	0.5	15

Proposed Perforations

Date	Type	Prop?	Top (FKS)	Bot (FKS)	Shot Dens (shots/ft)	Entered Shot Total
	Drinkard - Cased Hole	Yes	6,525	6,542	2.0	36
	Drinkard - Cased Hole	Yes	6,615	6,621	2.0	14
	Drinkard - Cased Hole	Yes	6,625	6,637	2.0	26
	Drinkard - Cased Hole	Yes	6,639	6,642	2.0	8
	Drinkard - Cased Hole	Yes	6,646	6,657	2.0	24
	Drinkard - Cased Hole	Yes	6,666	6,683	2.0	36
	Drinkard - Cased Hole	Yes	6,690	6,707	2.0	36

Tubing Strings

String Description	Run Date	String Length (ft)	Set Depth (FKS)				
Tubing - Injection	6/29/2001	5,657.16	5,669.2				
Item Des	JS	Make	Model	OD (in)	WT (lb/ft)	Grade	Len (ft)
Tubing Sub	1		Duoline	2 3/8	4.70	J-55	10.02
Tubing	180		Duoline	2 3/8	4.70	J-55	5,625.19
On-Off Tool	1			2 3/8			1.95
Packer	1			5 1/2			6.60
Tubing Sub	1		Ext PC & IPC	2 3/8	4.70	J-55	6.03
Seat Nipple	1			2 3/8	5.10	SS	0.89
Tubing Sub	1		1505 IPC - NonUpset	2 3/8	4.70	J-55	6.48

Rod Strings

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

Other In Hole

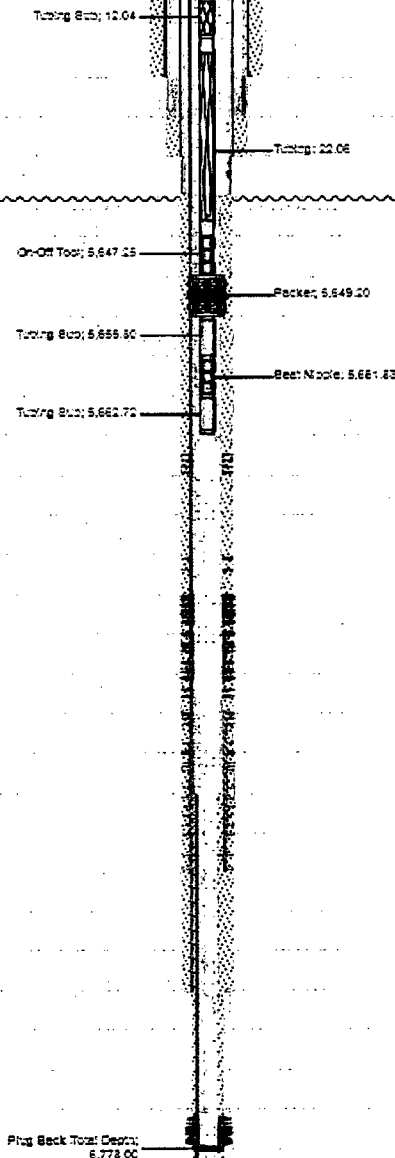
Description	OD (in)	Top (FKS)	Run Date

Apache**Downhole Well Profile w Cement****Well Name: NEDU 403W**

Injection, NE DRINKARD UNIT #403 - Original Hole, 10/22/2013 7:21:32 PM

Plug Back Total Depths

Vertical schematic (actual)	Depth (ft)	Date	Type	Depth (ft) (CMT)	Depth (ft) (TVD) (CMT)
			Cement Plug	6,778	
Comments					
5/18/1962: initial completion - perf Tubb 6248-6422' - az 6248-6422' w/ 500 gal 15% acid + 20,000 gal sand frac using 20,000# sand & 1000# adomite - perf Blinbry 5782-5929' - treat perfs 5876-5929' w/ 5000 gal lease crude + 5000# sand + 100# adomite - treat perfs 5782-5849' w/ 8000 gal lease crude + 8000# sand + 160# adomite					
6/22/1962: abandon Tubb					
4/5/1965: sqz perfs 5876-5929' w/ 15 sx CL C cmt - sqz perfs 5782-5849' (could not sqz into formation - still open) - sqz perfs 6248-6422' w/ 200 sx CL C cmt - install 4" liner @ 6750' w/ 35 sx CL C cmt - spot 100 gal acid - perf Drinkard 6618-6733' - az 6618-6733' w/ 2000 gal acid - frac 6618-6733' w/ 7500 gal crude + 1800# sand + 400# adomite - perf Blinbry 5745-6017' - az 5745-6017' w/ 2000 gal unisal + 40,000 gal crude + 24,000# sand + 2000# adomite in 2 stages					
12/11/1980: C/O fill to 6785' - reperf 6560-6720' - az perfs w/ 2268 gal 15% HCL NEFE acid - acid/frac Drinkard perfs w/ 18,144 gal 40# gel + 11,676 gal 25% HCL NEFE acid - az Blinbry perfs 5745-6017' w/ 3528 gal 15% HCL in 2 stages					
7/28/1988: perf Blinbry 5716-5820' & Tubb 6058-6325' - spot 15% NEA @ 5700-6770' - perf liner (Tubb) @ 6416-6764' - az Drinkard perfs & Tubb zone 6416-6448' w/ 3150 gal 15% NEFE acid w/ 750# GRS - az Blinbry perfs 5716-6000' & Tubb perfs 6083-6525' w/ 4200 gal 15% NEFE acid + 1500# GRS					
2/1/1989: C/O to 6300' - convert to W1W					



Dual Packer Proposed WBD (Proposed Chokepoint Migration)



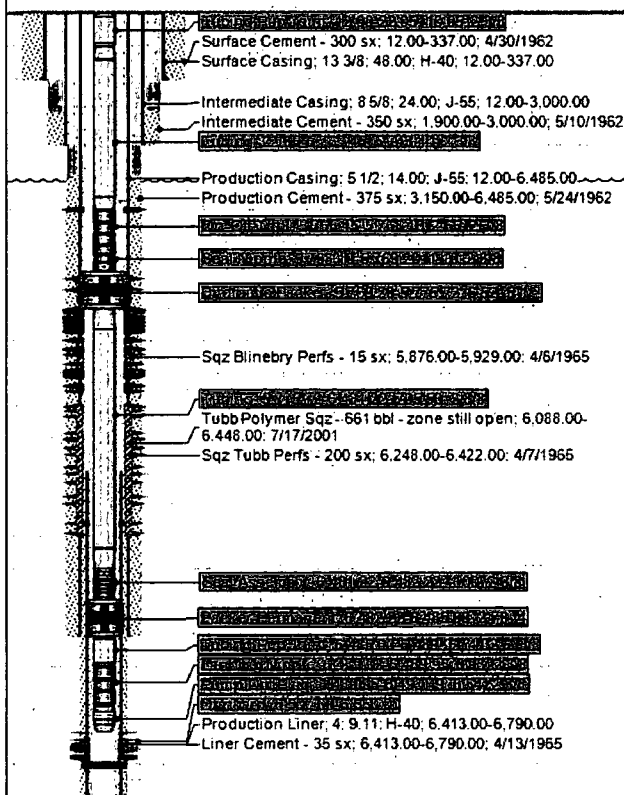
Proposed

Well Name: NEDU 403W

Legal Well Name NORTHEAST DRINKARD UNIT 403W	Common Well Name NEDU 403W	API Surface Loc 3002506449
Ground Elevation (ft) 3,460.0	Original KB Elevation (ft) 3,472.0	Surface Log Location 460' FNL, 1980' FWL, Unit C, Sec 10, T-21S, R-37E
PD10 (API) (ftCS) Original Hole - 6,778		Total Depth (ftCS) 6,790.0

Injection, NE DRINKARD UNIT #403 - Original Hole, 10/24/2018 9:07:45 AM

Vertical schematic (proposed)



Current Wellbore Sections

Section Des	Size (in)	Act Top (ftCS)	Act Btm (ftCS)	Start Date
Surface	17 1/2	12.0	337.0	4/30/1962
Inter 1	12 1/4	337.0	3,000.0	5/1/1962
Prod 1	7 7/8	3,000.0	6,485.0	5/11/1962
Prod 2	4 3/4	6,485.0	6,790.0	4/7/1965

Casing Strings

Casing Description	String Nominal OD (in)	Weight/Length (lb/ft)	String Grade	Set Depth (ftCS)
Surface	13 3/8	48.00	H-40	337.00
Inter 1	8 5/8	24.00	J-55	3,000.00
Prod 1	5 1/2	14.00	J-55	6,485.00
Prod Lnr 1	4	9.11	H-40	6,790.00

Proposed Casing Strings

Casing Description	String Nominal OD (in)	Weight/Length (lb/ft)	String Grade	Set Depth (ftCS)
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Existing Cement

String	Des	Top (ftCS)	Btm (ftCS)	Top Mass Meth
Surface, 337.00ftKB, 13 3/8	Primary Cement	12.00	337.00	Returns at Surface
Inter 1, 3,000.00ftKB, 8 5/8	Primary Cement	1,900.00	3,000.00	Temperature Survey
Prod 1, 6,485.00ftKB, 5 1/2	Primary Cement	3,150.00	6,485.00	Temperature Survey
Prod 1, 6,485.00ftKB, 5 1/2	Cement Squeeze	5,876.00	5,929.00	
Prod 1, 6,485.00ftKB, 5 1/2	Cement Squeeze	6,248.00	6,422.00	
Prod Lnr 1, 6,790.00ftKB, 4	Primary Liner Cement	6,413.00	6,790.00	Returns at Surface
Prod 1, 6,485.00ftKB, 5 1/2	Cement Squeeze	6,088.00	6,448.00	

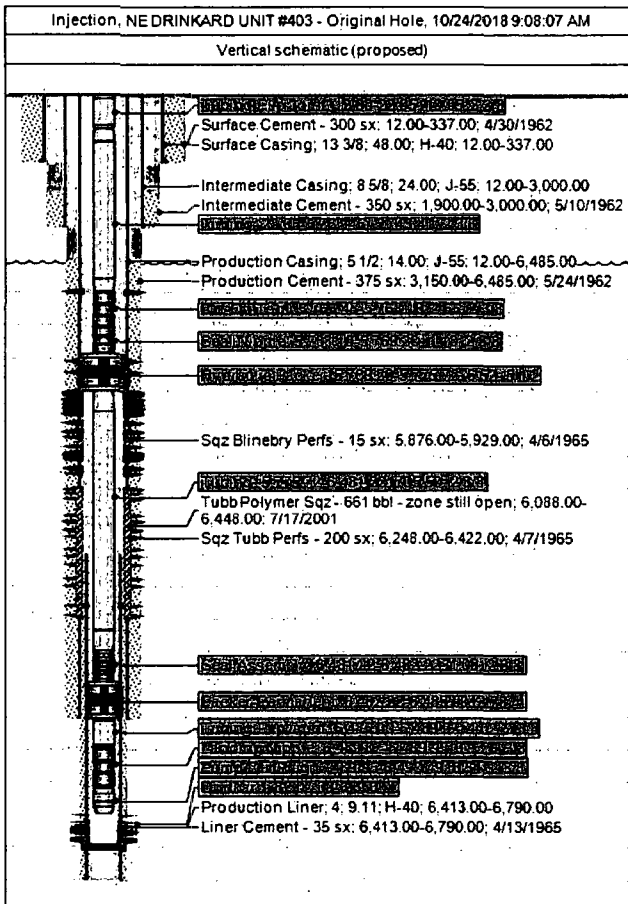
Proposed Tubing String

Tubing Description	Length (ft)	OD Nominal (in)	Joints
Tubing - Injection	6,490.5		
Tubing Pup Joint	10.05	2 3/8	1
Tubing	5,743.40	2 3/8	178
On-Off Tool	2.65	2 3/8	1
Seal Nipple	1.10	2 3/8	1
Hydraulic Packer	6.52	5 1/2	1



Well Name: NEDU 403W

Proposed

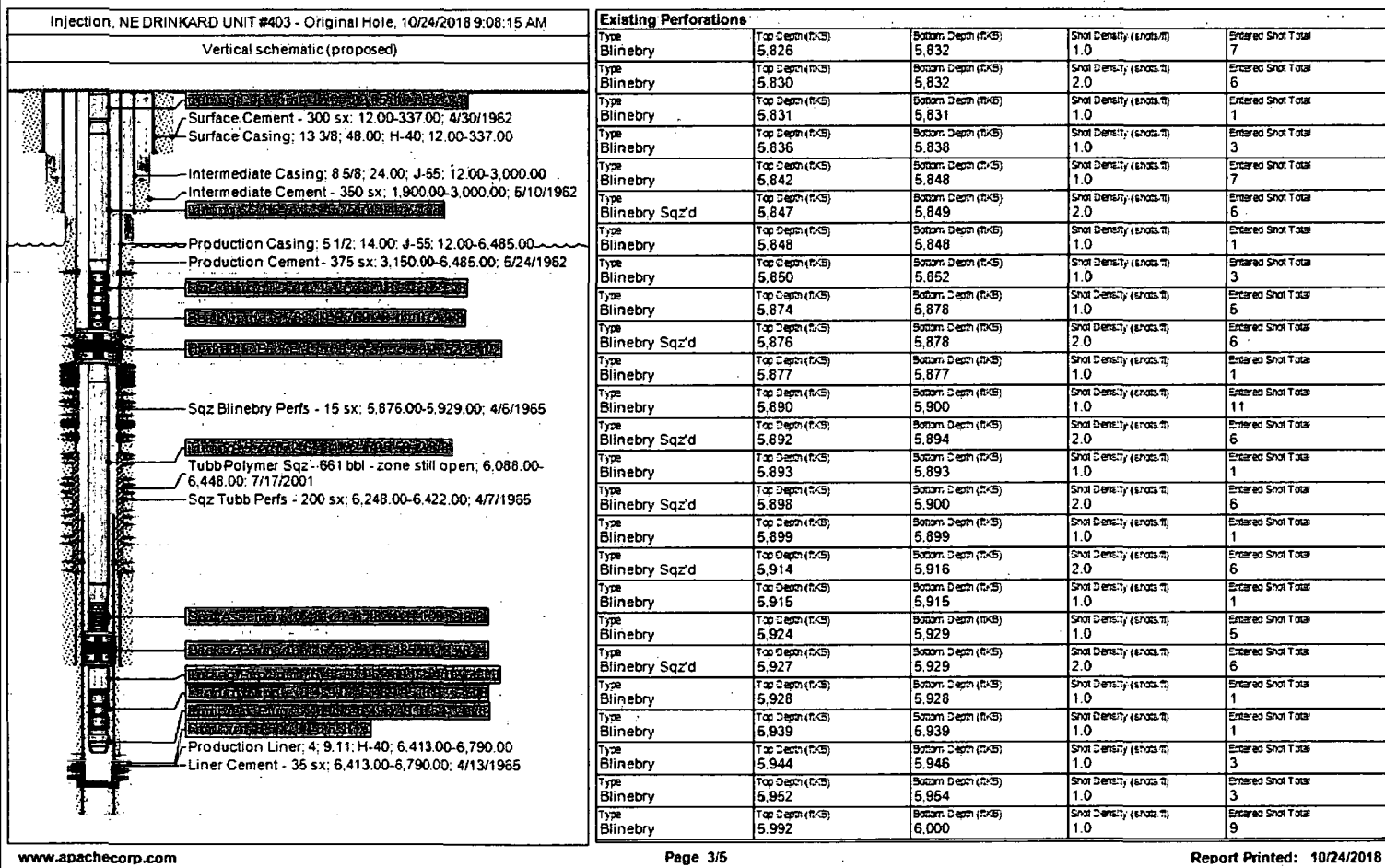


Item Description	Length (ft)	OD Nominal (in)	Joints
Tubing	705.50	2 3/8	22
Item Description	Length (ft)	OD Nominal (in)	Joints
Seal Assembly	1.00	2 3/8	1
Item Description	Length (ft)	OD Nominal (in)	Joints
Packer-Permanent	2.78	4	1
Item Description	Length (ft)	OD Nominal (in)	Joints
Tubing Pup Joint	4.02	2 3/8	1
Item Description	Length (ft)	OD Nominal (in)	Joints
Landing Nipple	0.93	2 3/8	1
Item Description	Length (ft)	OD Nominal (in)	Joints
Pump Out Plug	0.54	2 3/8	1

Existing Perforations				
Type	Top Depth (ftGS)	Bottom Depth (ftGS)	Shot Density (shots/ft)	Entered Shot Total
Blinebry	5,716	5,730	1.0	15
Blinebry	5,732	5,748	1.0	17
Blinebry	5,745	5,745	1.0	1
Blinebry	5,758	5,758	1.0	1
Blinebry	5,770	5,772	1.0	3
Blinebry	5,780	5,780	1.0	1
Blinebry	5,782	5,784	2.0	6
Blinebry	5,784	5,820	0.5	18
Blinebry	5,785	5,785	1.0	1
Blinebry	5,790	5,790	1.0	1
Blinebry	5,792	5,794	2.0	6
Blinebry	5,800	5,802	2.0	6
Blinebry	5,800	5,800	1.0	1
Blinebry	5,804	5,806	2.0	6
Blinebry	5,805	5,805	1.0	1
Blinebry	5,810	5,811	2.0	4
Blinebry	5,816	5,818	2.0	6
Blinebry	5,817	5,817	1.0	1
Blinebry	5,823	5,824	2.0	4

Apache

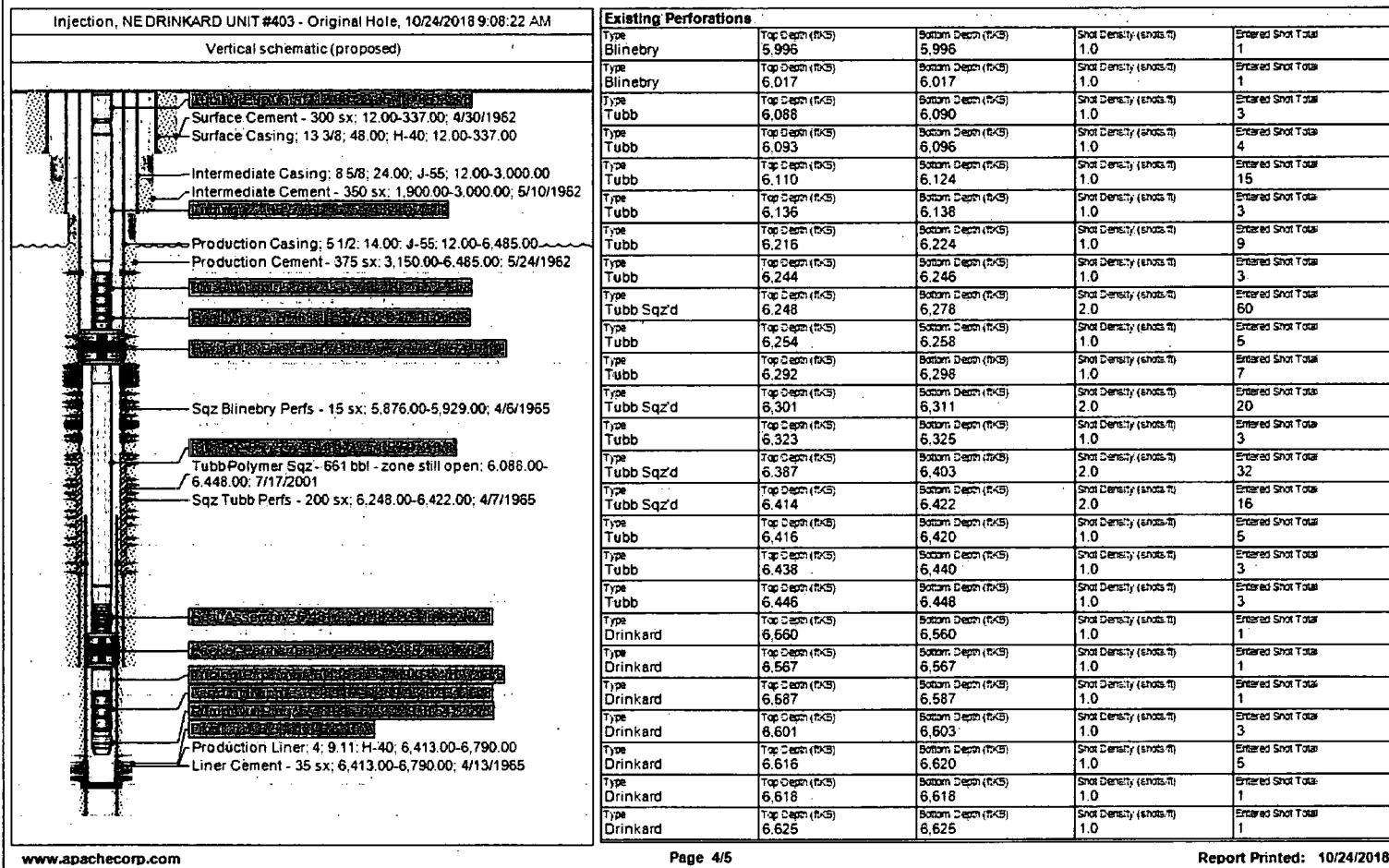
Well Name: NEDU 403W

Proposed

Apache

Well Name: NEDU 403W

Proposed



Dual Packer Proposed WBD (Proposed Changes in Yellow)

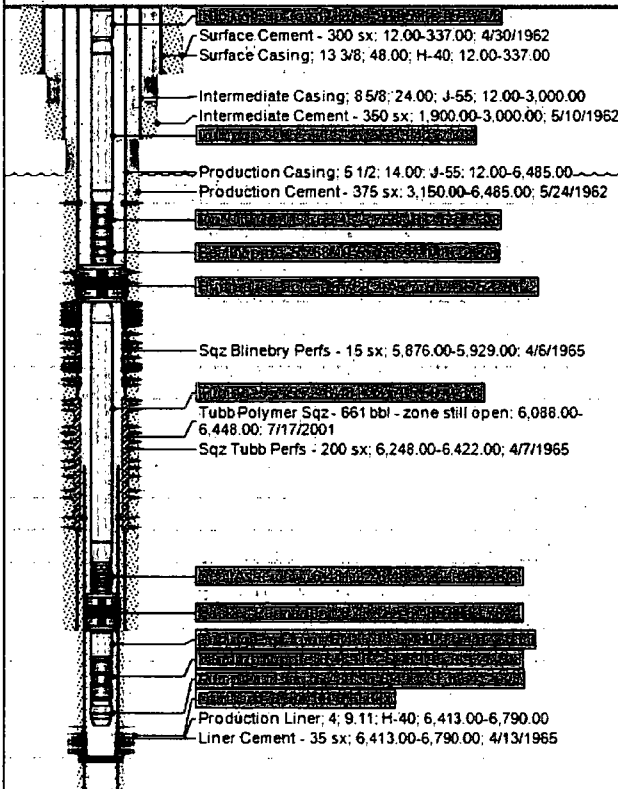
Apache

Well Name: NEDU 403W

Proposed

Injection, NE DRINKARD UNIT #403 - Original Hole, 10/24/2018 9:08:28 AM

Vertical schematic (proposed)



Existing Perforations

Type	Top Depth (ft)	Bottom Depth (ft)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,626	6,626	1.0	5
Drinkard	6,630	6,630	1.0	1
Drinkard	6,633	6,633	1.0	1
Drinkard	6,644	6,644	1.0	1
Drinkard	6,646	6,648	1.0	3
Drinkard	6,648	6,648	1.0	1
Drinkard	6,654	6,654	1.0	1
Drinkard	6,659	6,659	1.0	1
Drinkard	6,670	6,673	1.0	4
Drinkard	6,672	6,672	1.0	1
Drinkard	6,698	6,698	1.0	1
Drinkard	6,700	6,704	1.0	5
Drinkard	6,706	6,706	1.0	1
Drinkard	6,714	6,718	1.0	5
Drinkard	6,718	6,718	1.0	1
Drinkard	6,720	6,720	1.0	1
Drinkard	6,721	6,726	1.0	6
Drinkard	6,725	6,725	1.0	1
Drinkard	6,733	6,733	1.0	1
Drinkard	6,734	6,764	0.5	15

Proposed Perforations

Type	Top Depth (ft)	Bottom Depth (ft)	Shot Density (shots/ft)	Entered Shot Total
Drinkard	6,500	6,650	2.0	180