Petrotek

Technical Report

MECHANICAL INTEGRITY TESTING

CLASS I NON-HAZARDOUS DEEPWELL
GAINES WDW-3
(OCD UIC Permit: UICI-008-3)
(API Number: 30-015-26575)

HF Sinclair Navajo Refining, LLC
Artesia, New Mexico

Section 1, Township 18S, Range 27E
2253 FWL, 790 FSL

July 2025

Petrotek Corporation
5935 South Zang Street, Suite 200
Littleton, Colorado 80127
Phone: (303) 290-9414
Fax: (303) 290-9580

2025 MECHANICAL INTEGRITY TESTING
CLASS I NON-HAZARDOUS DEEPWELL
OCD UIC Permit: UICI-008-3
API Number: 30-015-26575

HF Sinclair Navajo Refining, LLC
Artesia, New Mexico

TABLE OF CONTENTS

Tables

Figures

Attachments

2025 MECHANICAL INTEGRITY TESTING
CLASS I NON-HAZARDOUS DEEPWELL
OCD UIC Permit: UICI-008-3
API Number: 30-015-26575

HF Sinclair Navajo Refining, LLC
Artesia, New Mexico

Report prepared by:

Petrotek Corporation
Kenneth J. Cooper, P.E., New Mexico Reg. No. 14175
5935 South Zang Street, Suite 200
Littleton, Colorado 80127

EXECUTIVE SUMMARY

This report summarizes the successful mechanical integrity testing (MIT) activities performed on the Gaines WDW-3 (WDW-3) at the HF Sinclair Navajo Refining, LLC (HFSNR) facility at Artesia, New Mexico. The work was performed as a condition of the applicable UIC permit issued by the New Mexico Oil Conservation Division (OCD). Under contract, Petrotek Corporation (Petrotek) developed the test procedures, provided field supervision and prepared the final report documenting the mechanical integrity testing conducted on the Class I non-hazardous injection well.

The test procedures were submitted to the OCD headquarters and OCD District II on June 19, 2025, before field activities commenced. Attachment 1 presents the test notification and procedures submitted to OCD. MIT activities were supervised by Jeremiah Demuth (Petrotek) on June 26, 2025.

1. FACILITY INFORMATION

a. **Name** - HollyFrontier Navajo Refining Company
b. **Location** - Highway 82 East, Artesia, New Mexico, 88211
c. **Operator's OIL AND Gas Remittance Identifier (GRD) Number** - 15694

2. WELL INFORMATION

a. **OCD UIC Permit number** - OCD UIC Permit: UICI-008-3
b. **Well classification** - Class I Non-hazardous
c. **Well name and number** - Gaines WDW-3
d. **API Number** - 30-015-26575
e. **Legal Location** - Section 1, Township 18S, Range 27E, 2253 FWL, 790 FSL

3. CURRENT WELLBORE SCHEMATIC

A wellbore schematic displaying the well configuration during testing is provided as Figure 1. A wellhead schematic is provided as Figure 2.

4. INTERNAL MECHANICAL INTEGRITY

On June 26, 2025, the annulus pressurized to approximately 625 psi to begin the test, as instructed by OCD staff. The well had been shut in for approximately 24 hours prior to the annulus test, allowing time for sufficient thermal equilibrium to be reached. A calibrated mechanical pressure gauge (Palmer-Wahl, 1,000 psi, SN – 2401128.001) supplied by Petrotek was installed on the annulus at the wellhead. The well and test gauge were then isolated from the rest of the system and starting at approximately 1200, annulus pressure, injection pressure, and injection rate were then monitored for a period of thirty minutes at 5-minute intervals. During the Part I internal mechanical integrity test the pressure remained constant at 625 psi. Since a change of 10% (63 psi) of the starting test pressure is allowable, this test is within acceptable specifications.

Attachment 2 presents a copy of the test gauge certification. Pressures observed during the test are shown in Table 1 and the pressure gauge chart record of the APT is presented as Attachment 3. Attachment 4 presents a copy of the bradenhead test report, indicating full isolation of the surface casing.

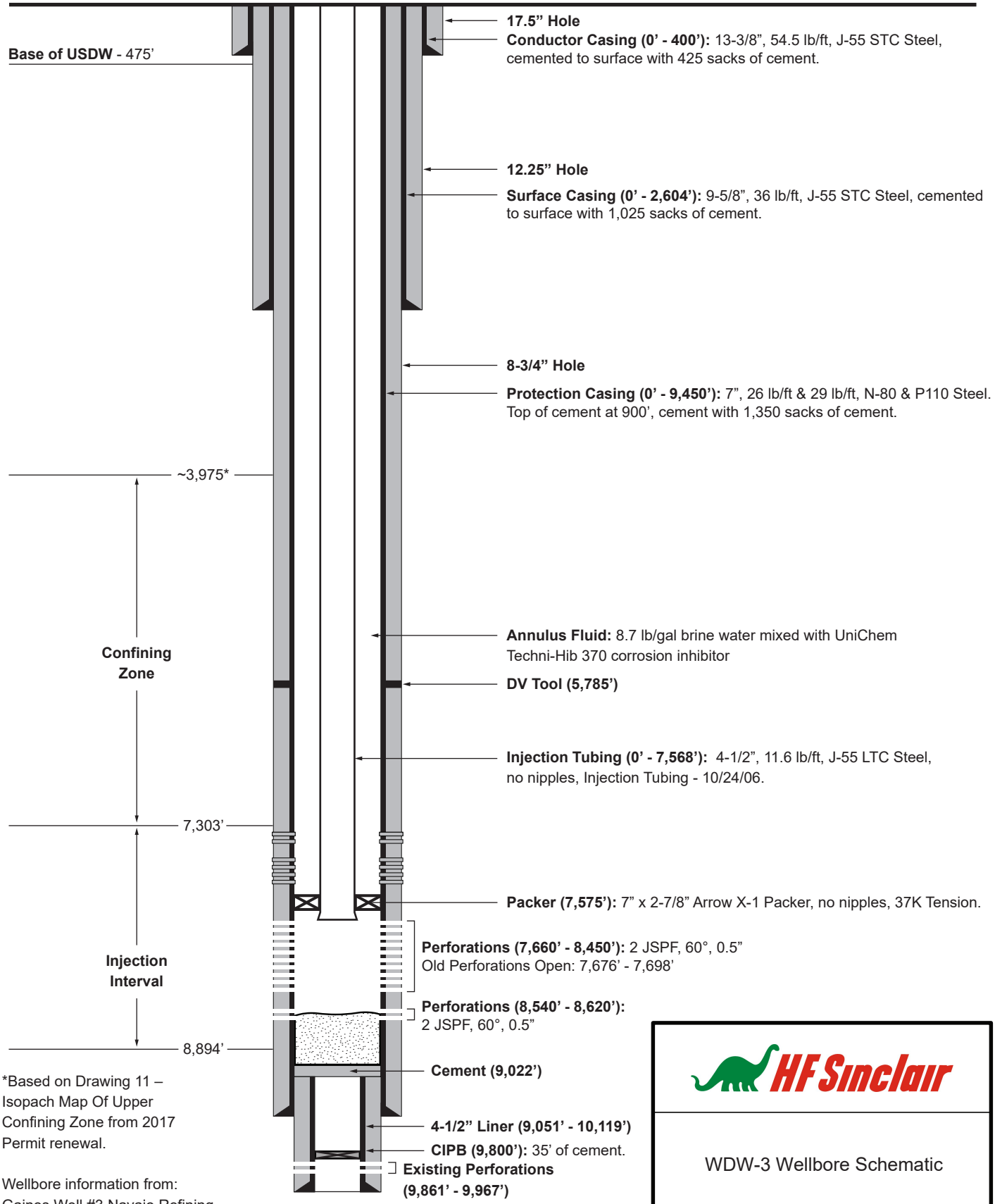
TABLE 1
WDW-3 ANNULUS PRESSURE TEST MEASUREMENTS

Time, minutes	0	5	10	15	20	25	30
Annulus Pressure, psi	625	625	625	625	625	625	625

FIGURES

OCD UIC Permit: UICI-008-3
Well API Number: 30-015-26575
Eddy County, New Mexico
Sec. 01, T18S-R27E
Lat. 32.771257° / Long. -104.233270° (NAD 83)

All depths referenced to Kelly Bushing (KB)
elevation 16' above ground level.
Ground Level Elevation: +3,531.4' MSL



*Based on Drawing 11 – Isopach Map Of Upper Confining Zone from 2017 Permit renewal.

Wellbore information from: Gaines Well #3 Navajo Refining schematic by Subsurface Technology, 2009.

NOT TO SCALE

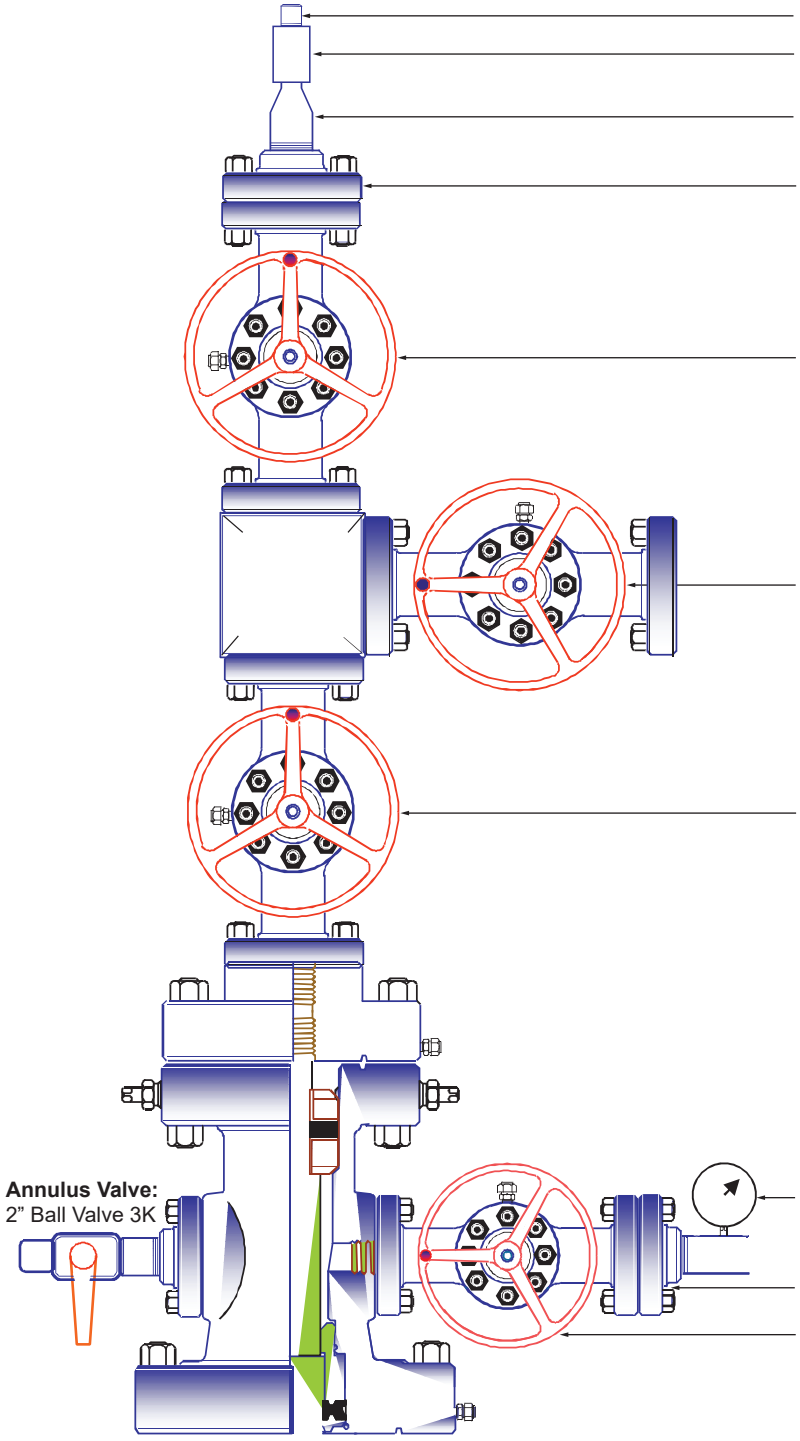
HF Sinclair

WDW-3 Wellbore Schematic

Scale: NTS	Date: June 2025	
WDW-03 WB.pdf	By: WEK	Checked: JD

Petrotek
5935 South Zang Street, Suite 200
Littleton, Colorado 80127 USA
303-290-9414
www.petrotek.com

OCD UIC Permit: UICI-008-3
Well API Number: 30-015-26575
Eddy County, New Mexico
Sec. 01, T18S-R27E
Lat. 32.771257° / Long. -104.233270° (NAD 83)



Well Head information partially
from: Well: Navajo Refining
WDW #3, by Subsurface Technology.

NOT TO SCALE

HF Sinclair

WDW-3 Wellhead Schematic

Scale: NTS	Date: June 2025	
WDW-03 WH.pdf	By: WEK	Checked: NB

Petrotek
5935 South Zang Street, Suite 200
Littleton, Colorado 80127 USA
303-290-9414
www.petrotek.com

ATTACHMENTS

Attachment 1
OCD Test Notification

From: Jeremiah Demuth
Sent: Thursday, June 19, 2025 11:13 AM
To: Ron Heuer - New Mexico Ocd Artesia New Contact (Ronald.Heuer@emnrd.nm.gov) <Ronald.Heuer@emnrd.nm.gov>
Cc: Wes Janes <wjanes@petrotek.com>; Cameron Kerr <ckerr@petrotek.com>; Tilton, Kord <Timothy.Tilton@HFSinclair.com>; Alba, Teresa <Teresa.Alba@HFSinclair.com>; Duncan, Timothy <Timothy.Duncan@HFSinclair.com>; Holder, Mike <Michael.Holder@HFSinclair.com>; Paudel, Shreejaya <Shreejaya.Paudel@HFSinclair.com>; Ken Schlieper <kschlieper@petrotek.com>; Lewis Wandke <lwandke@petrotek.com>
Subject: HFSNR Well Test schedule

Ron,

Per our phone discussion yesterday, we are planning to run MITs on the HFSNR wells as follows:

- 6/24
  - 0700 JHA and work permit at WDW 1 (30-015-27592), rig up test equipment for MIT
  - 0800 Conduct witnessed MIT on WDW 1
    - Bradenhead cemented in
  - 0900 Rig down and return WDW 1 to injection
- 6/25
  - 0800 JHA and work permit at WDW 2 (30-015-20894), rig up test equipment for MIT
  - 0900 Conduct witnessed MIT on WDW 2
    - Bradenhead cemented in
  - 1000 Rig down and return WDW 2 to injection
- 6/26
  - 0800 JHA and work permit at WDW 3 (30-015-26575), rig up test equipment for MIT
  - 0900 Conduct unwitnessed Bradenhead test
  - 1000 Conduct unwitnessed MIT on WDW 3
  - 1100 Rig down and return WDW 3 to injection

Please let me know if you have any questions,

Jeremiah Demuth, STS
HSE Manager / Permitting Specialist / Wellsite Supervisor
Petrotek Corporation
5935 South Zang Street, Suite 200
Littleton, Colorado 80127 USA
jdemuth@petrotek.com
P: 303-290-9414 x 425
C: 720-940-1742
www.petrotek.com

Attachment 2
APT Pressure Gauge Certification

Petrotek

P-SS-SS-COMPANIES

WASATCH SUPPLY

PSS PIPELINE SUPPLY & SERVICE

NORTH STATE SUPPLY NS

18460 CR 394 LA SALLE CO 80645 - Phone (303)-857-7986

CALIBRATION CERTIFICATE

CERTIFICATE NUMBER: CO

Details +/-: 1.0% ACCURACY

DATE CALIBRATED: 04/25/2025
DUE DATE: 04/25/2026
INDICATED PRESSURE RANGE: #0 – 1000 PSI
SERIAL NO: 2401128.001
MANUFACTURER: PALMER INSTRUMENTS/ 12" RECORDER
TYPE OF INSTRUMENT CALIBRATED: PRESSURE RECORDER
INSTRUMENT FINDINGS/STATUS: UNIT IS IN TOLERANCE/ INSTRUMENT MEETS OR EXCEEDS SPECIFICATIONS.
BASED ON INTERNATIONAL STANDARDS OF GRAVITY: (980.665 cm./sq.).
TYPE OF STANDARD USED TO CALIBRATE: REFINERY DEADWEIGHT TEST UNIT SPT. (35225-3) SERIAL No. 5268: KESSLER CALIBRATION
ALL STANDARD DIRECTLY TRACEABLE TO NATIONAL INSTITUTE OF STANDARDS & TECHNOLOGIES TEST NO: (N.I.S.T.) 2.6/172490 & 6.6/139577.
CALCULATED USING MASS VALUES, AREA, AO, AND STATED GRAVITY.
ROOM TEMPERATURE/HUMIDITY (AT TIME OF TEST): 66°F / 25%.

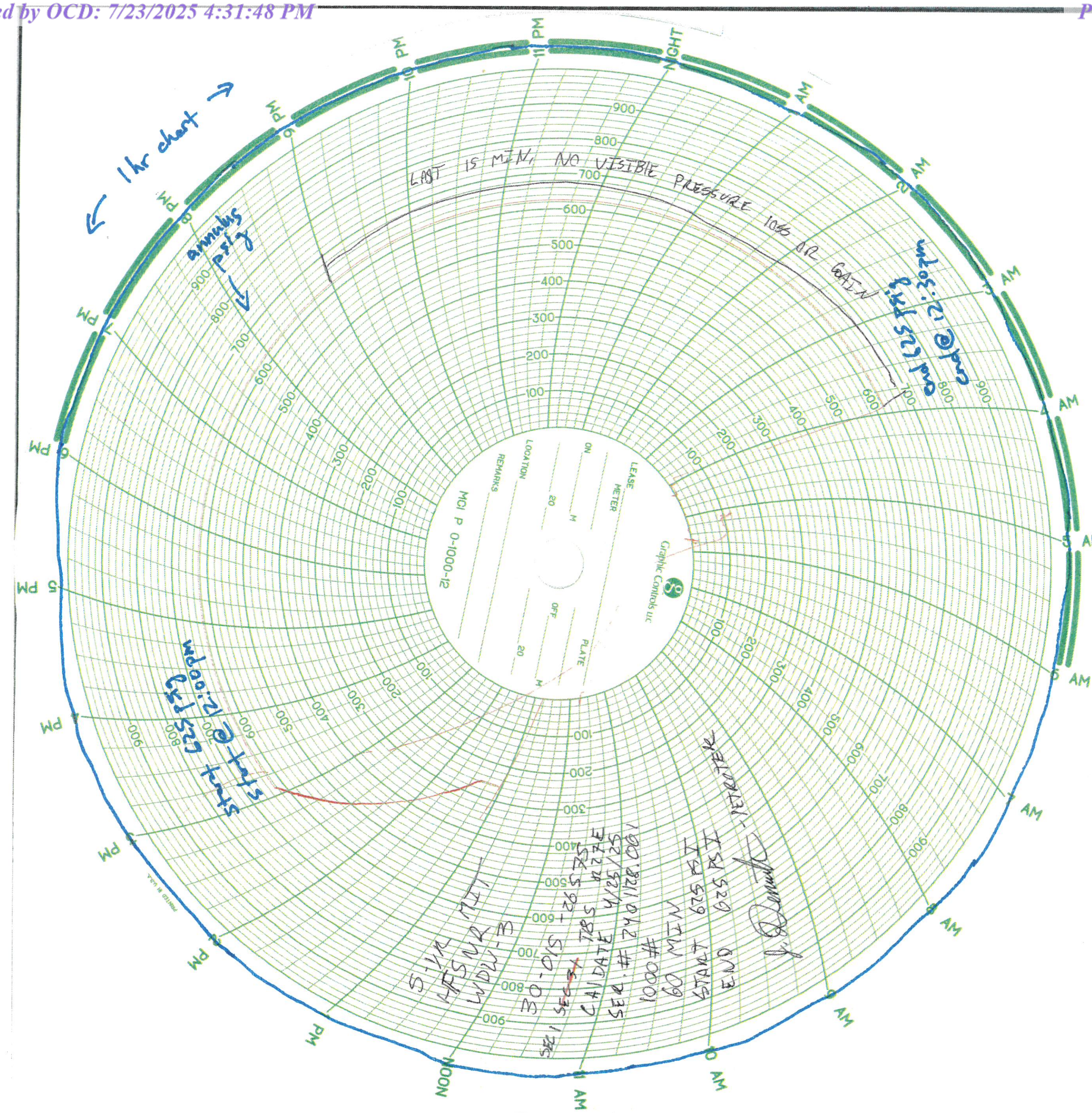
CALIBRATED BY: NICK BEDFORD

nick bedford

Attachment 3
APT Chart Record

Petrotek

WDW-3


1 hr chart
annulus psig
LAST 15 MIN, NO VISIBLE PRESSURE LOSS OR GAIN
end 625 psig
end @ 12:30pm
start 625 psig
start @ 12:00pm
Graphic Controls LLC
MCI P 0-1000-12
LEASE
METER
LOCATION
REMARKS
PLATE

Attachment 4
Bradenhead Test Report

Southern District
1625 N French Dr, Hobbs, NM 88240
Phone: (575) 241-7063

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division Hobbs District Office

BRADENHEAD TEST REPORT

Operator Name	API Number
HF SINCLAIR	30-015-26575
Property Name	**Well No.**
	3

Surface Location

UL - Lot	Section	Township	Range		Feet from	N/S Line	Feet From	E/W Line	County
	31 1	18S	27E		790	FSL	725	FWL	EDDY

Well Status

TA'D WELL	SHUT-IN	INJECTOR	PRODUCER	DATE
YES (NO)	(YES) NO	(INJ) SWD	OIL GAS	6/26/25

OBSERVED DATA

	(A)Surface	(B)Interm(1)	(C)Interm(2)	(D)Prod Csng	(E)Tubing
Pressure	0	6	N/A	225	1100
Flow Characteristics	NO FLOW	GAS		N/A - WAMS SYSTEM	CO2 ___ WTR X GAS ___ Type of Fluid Injected for Waterflood if applies.
Puff	Y / (N)	Y / (N)	Y / N	Y / N	
Steady Flow	Y / (N)	(Y) / N	Y / N	Y / N	
Surges	Y / (N)	Y / (N)	Y / N	Y / N	
Down to nothing	Y / (N)	(Y) / N	Y / N	Y / N	
Gas or Oil	Y / (N)	(Y) / N	Y / N	Y / N	
Water	Y / (N)	Y / (N)	Y / N	Y / N	

Remarks – Please state for each string (A,B,C,D,E) pertinent information regarding bleed down or continuous build up if applies.

INTERMEDIATE DOWN TO NOTHING IN 10 MINS. FLOWED THROUGH 1/2" OD HOSE.

Signature:	OIL CONSERVATION DIVISION
Printed name: CAMERON KERR	Entered into RBDMS
Title: PROJECT ENGINEER	Re-test
E-mail Address: CKERR@PETROTEK.COM	
Date: 6/26/25 Phone: 303-913-6963	
Witness:	

INSTRUCTIONS ON BACK OF THIS FORM

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 488286
	Action Type: [C-103] Sub. General Sundry (C-103Z)

COMMENTS

Created By	Comment	Comment Date
cchavez	MIT/Bradenhead Tests Performed on 6/26/2025 Passed. Verified by CJC on 7/25/2025.	7/25/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 488286

CONDITIONS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 488286
	Action Type: [C-103] Sub. General Sundry (C-103Z)

CONDITIONS

Created By	Condition	Condition Date
cchavez	None	7/25/2025