



## Technical Report

# MECHANICAL INTEGRITY TESTING

## CLASS I NON-HAZARDOUS DEEPWELL CHUKKA WDW-2

(OCD UIC Permit: UICI-008-2)  
(API Number: 30-015-20894)

HF Sinclair Navajo Refining, LLC  
Artesia, New Mexico

Section 12, Township 18S, Range 27E  
1980 FNL, 660 FWL

July 2025

Petrotek Corporation  
5935 South Zang Street, Suite 200  
Littleton, Colorado 80127  
Phone: (303) 290-9414  
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2025 MECHANICAL INTEGRITY TESTING  
CLASS I NON-HAZARDOUS DEEPWELL  
OCD UIC Permit: UICI-008-2  
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HF Sinclair Navajo Refining, LLC  
Artesia, New Mexico

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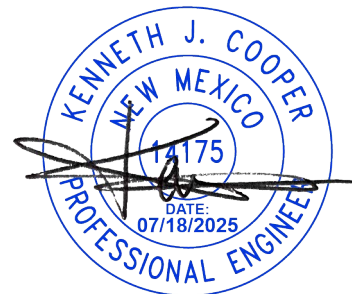


**2025 MECHANICAL INTEGRITY TESTING  
CLASS I NON-HAZARDOUS DEEPWELL  
OCD UIC Permit: UICI-008-2  
API Number: 30-015-20894**

**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



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***Petrotek***

Mechanical Integrity Testing Report  
HF Sinclair Navajo Refining, LLC - Artesia, New Mexico – July 2025

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## EXECUTIVE SUMMARY

This report summarizes the successful mechanical integrity testing (MIT) activities performed on the Chukka WDW-2 (WDW-2) 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. Approvals were received from regulatory agency staff prior to commencement of activities. Ronald Heuer of OCD was present to witness MIT testing. MIT activities were supervised by Jeremiah Demuth (Petrotek) on June 25, 2025.

Mechanical Integrity Testing Report  
HF Sinclair Navajo Refining, LLC - Artesia, New Mexico – July 2025

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## 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-008-2
- b. **Well classification** - Class I Non-hazardous
- c. **Well name and number** - Chukka WDW-2
- d. **API Number** - 30-015-20894
- e. **Legal Location** - Section 12, Township 18S, Range 27E, 1980 FNL, 660 FWL

## 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 25, 2025, the annulus pressurized to approximately 638 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 1000, 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 decreased by 3 psi (0.5%). Since a change of 10% (64 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.

**TABLE 1**  
**WDW-2 ANNULUS PRESSURE TEST MEASUREMENTS**

Time, minutes	0	5	10	15	20	25	30
Annulus Pressure, psi	638	638	637	637	636	636	635

# FIGURES

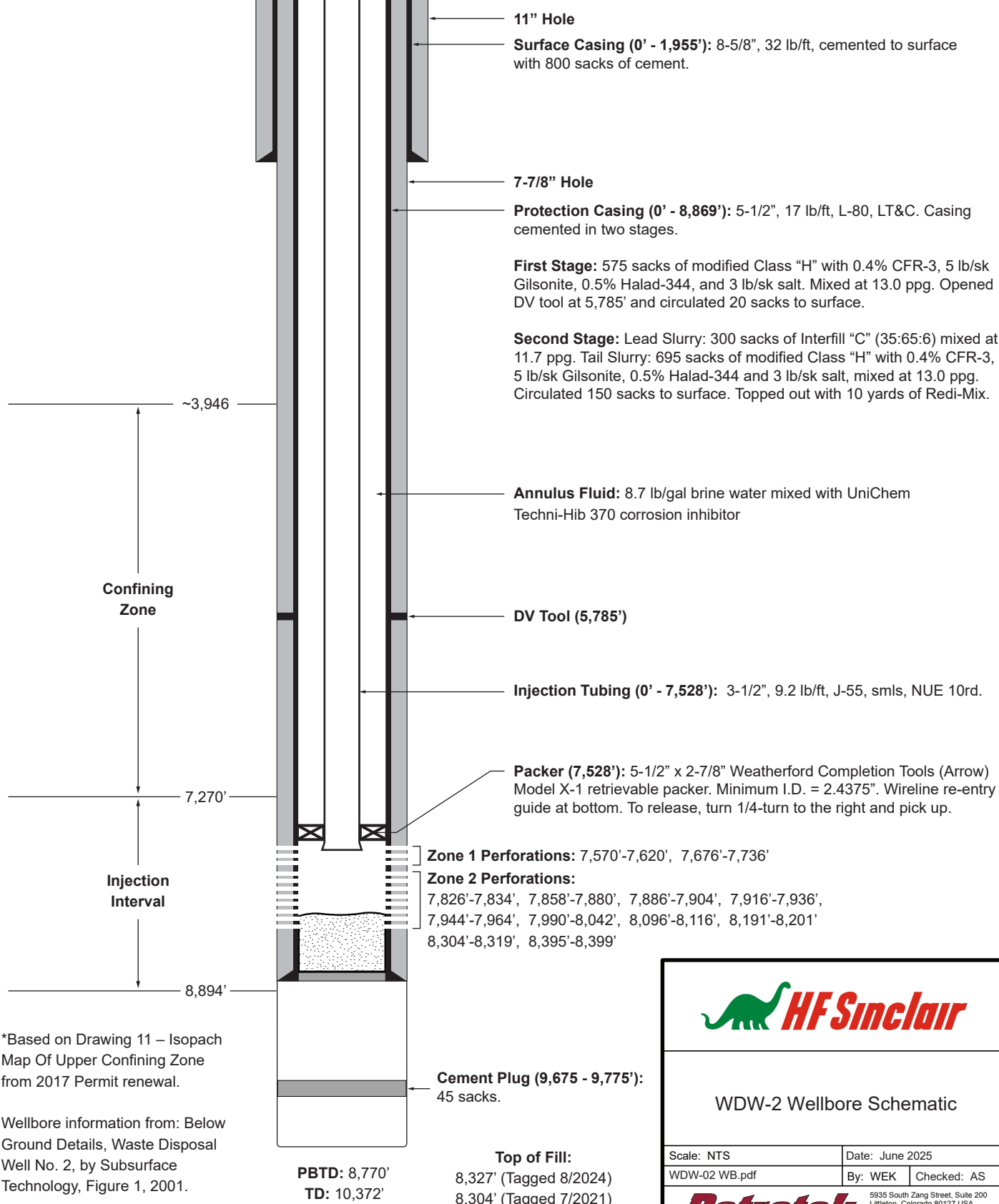
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***Petrotek***


OCD UIC Permit: UICI-008-2  
 Well API Number: 30-015-20894  
 Eddy County, New Mexico  
 Sec. 12, T18S-R27E  
 Lat. 32.763705° / Long. -104.238488° (NAD 83)

All depths referenced to Kelly Bushing (KB)  
 elevation 13' above ground level.  
 Ground Level Elevation: +3,533' MSL

Base of USDW - 473'




NOT TO SCALE



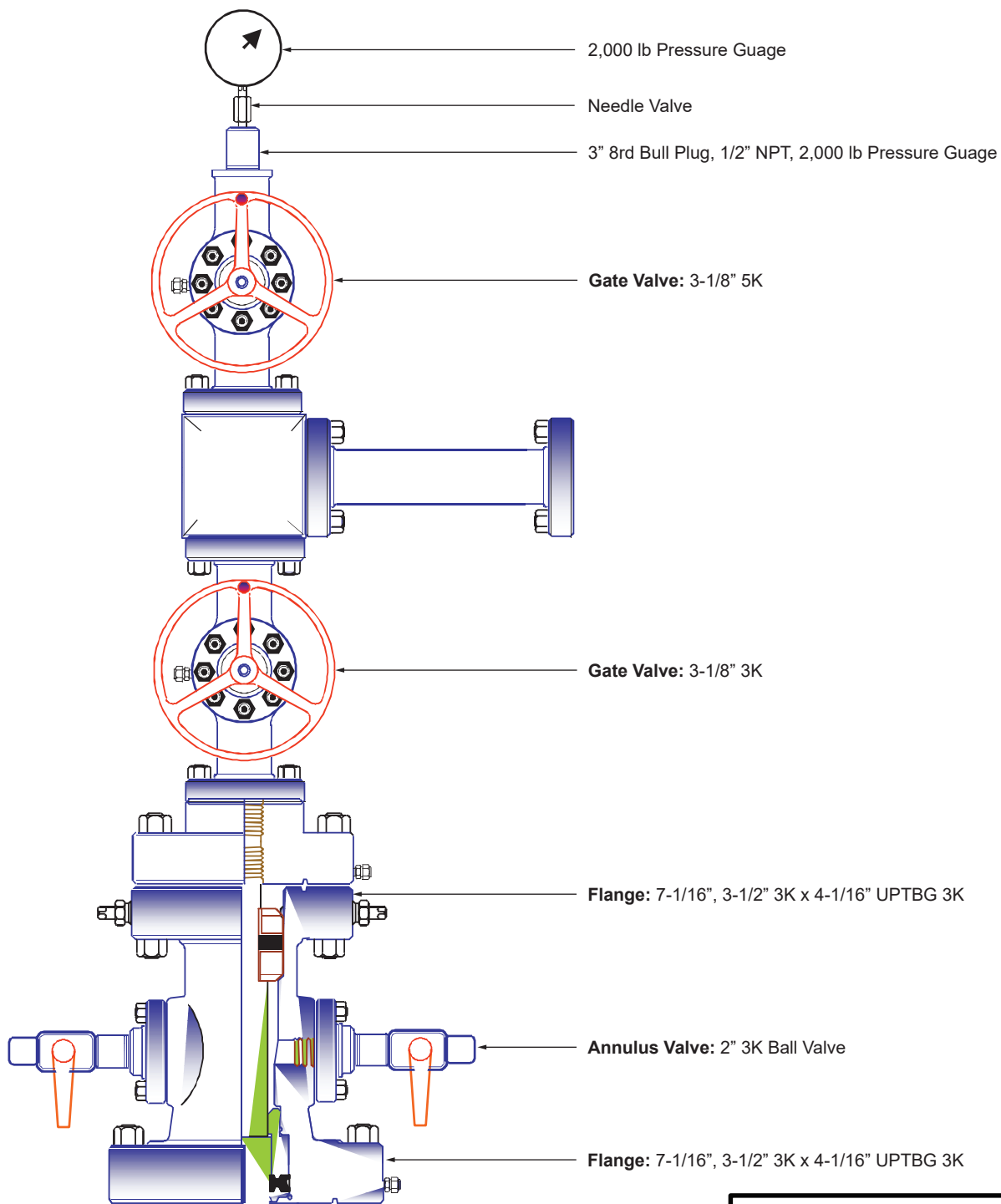
### WDW-2 Wellbore Schematic

Scale: NTS	Date: June 2025
WDW-02 WB.pdf	By: WEK    Checked: AS



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 303-290-9414  
[www.petrotek.com](http://www.petrotek.com)

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 Well API Number: 30-015-20894  
 Eddy County, New Mexico  
 Sec. 12, T18S-R27E  
 Lat. 32.763705° / Long. -104.238488° (NAD 83)



Well Head information partially  
 from: Well: Navajo Refining  
 WDW #2, by Subsurface Technology

NOT TO SCALE



### WDW-2 Wellhead Schematic

Scale: NTS	Date: June 2025
WDW-02 WH.pdf	By: WEK Checked: AS

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# ATTACHMENTS

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***Petrotek***

# Attachment 1 OCD Test Notification

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***Petrotek***

**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](mailto:Ronald.Heuer@emnrd.nm.gov))  
<[Ronald.Heuer@emnrd.nm.gov](mailto:Ronald.Heuer@emnrd.nm.gov)>

**Cc:** Wes Janes <[wjanes@petrotek.com](mailto:wjanes@petrotek.com)>; Cameron Kerr <[ckerr@petrotek.com](mailto:ckerr@petrotek.com)>; Tilton, Kord <[Timothy.Tilton@HFSinclair.com](mailto:Timothy.Tilton@HFSinclair.com)>; Alba, Teresa <[Teresa.Alba@HFSinclair.com](mailto:Teresa.Alba@HFSinclair.com)>; Duncan, Timothy <[Timothy.Duncan@HFSinclair.com](mailto:Timothy.Duncan@HFSinclair.com)>; Holder, Mike <[Michael.Holder@HFSinclair.com](mailto:Michael.Holder@HFSinclair.com)>; Paudel, Shreejaya <[Shreejaya.Paudel@HFSinclair.com](mailto:Shreejaya.Paudel@HFSinclair.com)>; Ken Schlieper <[kschlieper@petrotek.com](mailto:kschlieper@petrotek.com)>; Lewis Wandke <[lwandke@petrotek.com](mailto: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
  - o 0700 JHA and work permit at WDW 1 (30-015-27592), rig up test equipment for MIT
  - o 0800 Conduct witnessed MIT on WDW 1
    - Bradenhead cemented in
  - o 0900 Rig down and return WDW 1 to injection
- 6/25
  - o 0800 JHA and work permit at WDW 2 (30-015-20894), rig up test equipment for MIT
  - o 0900 Conduct witnessed MIT on WDW 2
    - Bradenhead cemented in
  - o 1000 Rig down and return WDW 2 to injection
- 6/26
  - o 0800 JHA and work permit at WDW 3 (30-015-26575), rig up test equipment for MIT
  - o 0900 Conduct unwitnessed Bradenhead test
  - o 1000 Conduct unwitnessed MIT on WDW 3
  - o 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  
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## Attachment 2

# APT Pressure Gauge Certification

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***Petrotek***

# PSS-COMPANIES



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*

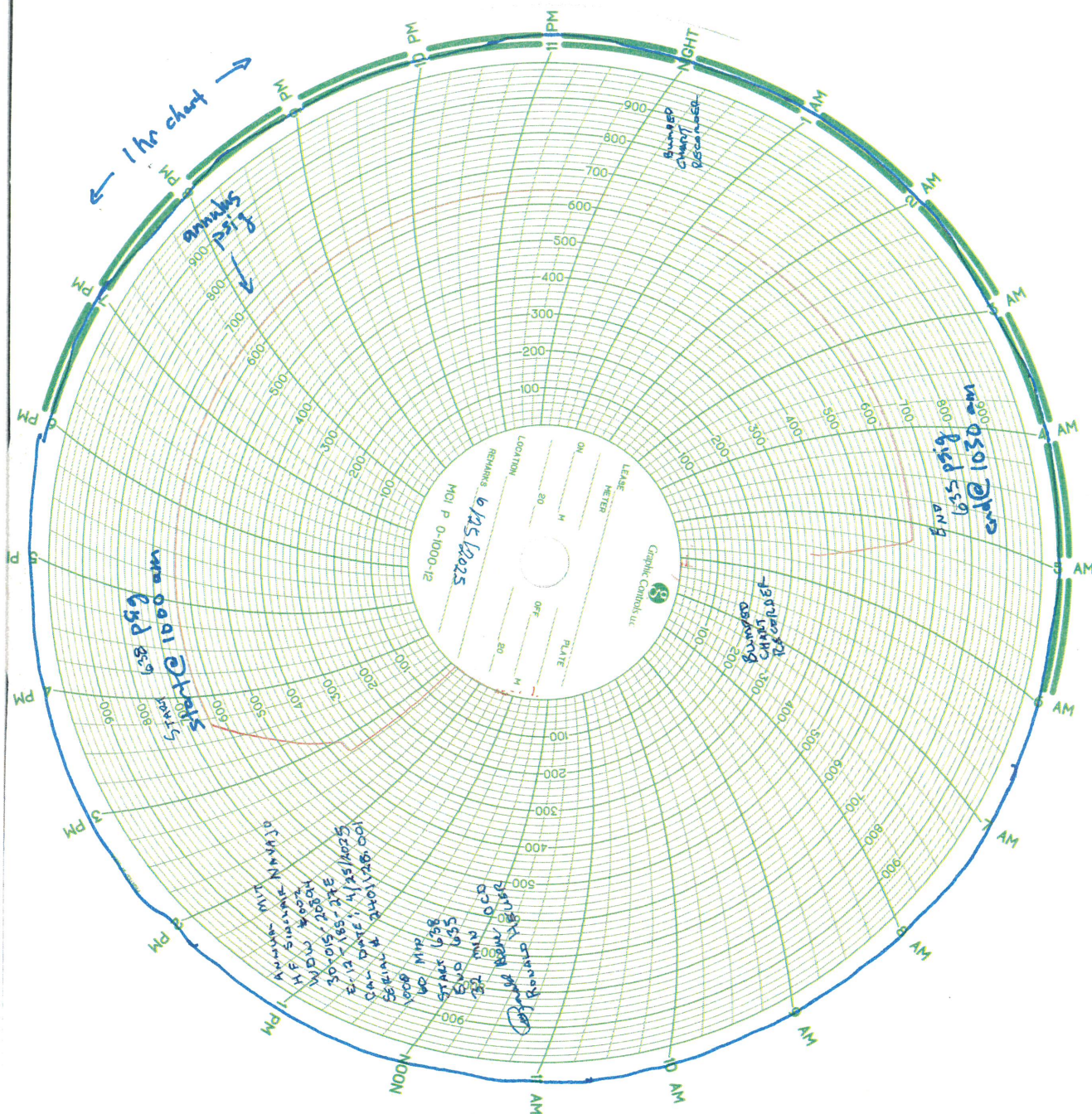
## Attachment 3 APT Chart Record

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***Petrotek***



WDW-2



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

Action 488284

COMMENTS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 488284
	Action Type: [C-103] Sub. General Sundry (C-103Z)

COMMENTS

Created By	Comment	Comment Date
cchavez	MIT on 6/25/2025 at 10 am. Passed. Verified by CJC on 7/25/2025.	7/25/2025



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

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Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
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CONDITIONS

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