

# UICI-8-1

## EPA FALL-OFF TEST REPORT (WDW-1)

# 2023

and a resolution of 0.01% of full scale, and operate within a range of 14.7 to 15,000 psi.

- c. **Provide the manufacturer's recommended frequency of calibration and a calibration certificate showing the date the gauge was last calibrated -** These gauges are recommended to be calibrated once per year. The most recent calibration certificate is provided as Attachment 3.

## 10. ONE-MILE AREA OF REVIEW (AOR)

A standard one-mile Area of Review (AOR) was evaluated for WDW-1 as part of the annual testing and reporting requirements. The wells located within this one-mile AOR are listed in Attachment 6. A figure displaying the wells located in the AOR and the wells in the surrounding sections has been provided as Figure 13.

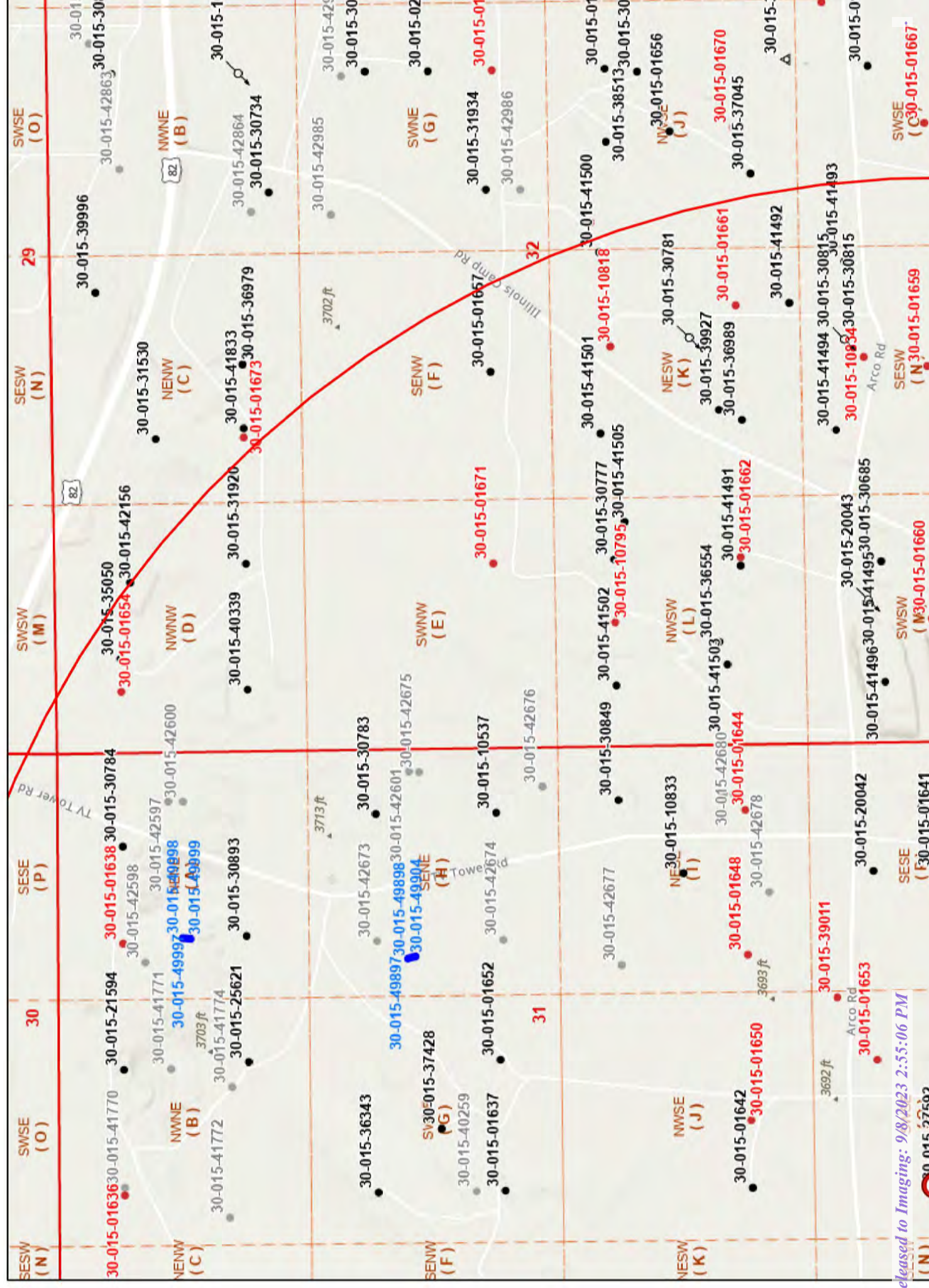
Based on the data review, there have been six wells spud within the AOR in the last year with proposed depths that extend below the WDW #1 injection interval. As of the time of this report, no casing, cement, or completion records are available for these recently spudded wells. In addition, one well was P&A'd within the AOR during the past year but does not penetrate into the injection interval. Tables 3 and 4 summarize the wells drilled and P&A'd within the AOR over the past year, respectively.

**TABLE 3  
WELLS DRILLED WITHIN AOR DURING THE PAST YEAR**

Operator	Well Name	API	Well Type	PLSS Location (ULSTR)	Proposed TVD (ft)	Spud Date
Spur Energy Partners LLC	BLALOCK 32 STATE COM #090H	30-015-49897	Oil	H-31-17S-28E	<del>10,325</del>	<del>11/2/2022</del>
Spur Energy Partners LLC	BLALOCK 32 STATE COM #011H	30-015-49898	Oil	H-31-17S-28E	9,341	11/1/2022
Spur Energy Partners LLC	BLALOCK 32 STATE COM #050H	30-015-49904	Oil	H-31-17S-28E	9,747	10/31/2022
Spur Energy Partners LLC	BLALOCK 32 STATE COM #001H	30-015-49997	Oil	A-31-17S-28E	8,736	11/6/2022
Spur Energy Partners LLC	BLALOCK 32 STATE COM #010H	30-015-49998	Oil	A-31-17S-28E	9,242	11/10/2022
Spur Energy Partners LLC	BLALOCK 32 STATE COM #070H	30-015-49999	Oil	A-31-17S-28E	9,826	11/7/2022

**TABLE 4**

# ArcGIS Web Map







Technical  
Report

MECHANICAL INTEGRITY AND  
RESERVOIR TESTING

CLASS I NON-HAZARDOUS DEEPWELL  
MEWBOURNE WELL NO. 1  
(OCD UIC Permit: UICI-008-1)  
(API Number: 30-015-27592)

HollyFrontier Navajo Refining Company  
Artesia, New Mexico

Section 31, Township 17S, Range 28E  
660 FSL, 2310 FEL

June 2023

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



2023 MECHANICAL INTEGRITY AND RESERVOIR TESTING  
CLASS I NON-HAZARDOUS DEEPWELL  
OCD UIC Permit: UICI-008-1  
API Number: 30-015-27592

HollyFrontier Navajo Refining Company  
Artesia, New Mexico

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***Petrotek***

**2023 MECHANICAL INTEGRITY AND RESERVOIR TESTING  
CLASS I NON-HAZARDOUS DEEPWELL  
OCD UIC Permit: UICI-008-1  
API Number: 30-015-27592**

**HollyFrontier Navajo Refining Company  
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 and Reservoir Testing  
HollyFrontier Navajo Refining-Artesia, New Mexico - June 2023

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## EXECUTIVE SUMMARY

This report summarizes the successful mechanical integrity testing (MIT) and falloff testing (FOT) activities performed on the Mewbourne WDW-1 at the HollyFrontier Navajo Refining Company (HFNR) 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 MIT procedures, provided field supervision, completed pressure transient test analysis, and prepared the final report documenting the fieldwork on the Class I non-hazardous injection well.

The test procedures were submitted to the OCD headquarters and OCD District II on April 26, 2023 before field activities commenced. Attachment 1 presents the test notification and procedures. Approvals were received from regulatory agency staff prior to commencement of activities. No OCD personnel were present to witness testing. MIT and reservoir testing activities were supervised by Wes Janes (Petrotek).

The field activities consisted of an annulus pressure test (APT) and an injection falloff test. The well satisfactorily demonstrated mechanical integrity pursuant to the applicable UIC permit, guidelines and regulations. All MIT requirements were satisfied as a result of the work performed. Wellbore and reservoir properties were confirmed as similar to those determined from analysis of the previous testing conducted in the well.

**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** - UICI-008-1
- b. **Well classification** - Class I Non-hazardous
- c. **Well name and number** - Mewbourne WDW-1
- d. **API Number** - 30-015-27592
- e. **Legal Location** - 660 FSL, 2210 FEL, Section 31, Township 17S, Range 28E

**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. COPY OF AN ELECTRIC LOG ENCOMPASSING THE COMPLETED INTERVAL**

A copy of the dual induction log run in 1993 during the initial completion of the well was submitted with the original permit and can be found online on the OCD website as part of the OCD well files for this well.

**5. COPY OF RELEVANT PORTIONS OF ANY POROSITY LOG USED TO ESTIMATE FORMATION POROSITY**

A copy of the neutron density log, encompassing the completed interval between 7,924 and 8,476 feet Below Ground Level (BGL), can be found online on the OCD website as part of the well files for this well. From these logs, it was determined that the injection reservoir thickness is approximately 175 feet with an average porosity of 10 percent. These values are consistent with historical test analyses. Petrotek utilized these values for the analysis performed for and presented in this report.



## 6. PVT DATA OF THE FORMATION AND INJECTION FLUID

Fluid samples of connate brine from the injection interval were collected from WDW-1 (33,000 mg/L) and WDW-2 (20,000 mg/L) during recompletion as Class I UIC wells. Both of these wells are completed in the same injection formation. The average density and total dissolved solids (TDS) of the fluids recovered from the two wells were 1.03 g/cc and 26,500 mg/l, respectively. The results of formation fluid analysis were provided in documents previously submitted to and approved by OCD. Available analyte values for WDWs 1, 2, and 3 are provided in Table 1.

**TABLE 1**  
**HFNR FORMATION FLUID SAMPLE ANALYSIS RESULTS**

Chemical	Mewbourne Well (WDW-1)	Chukka Well (WDW-2)	Gaines Well (WDW-3)	Average
Date	7/31/1998	6/14/1999	9/8/2006	
Fluoride (mg/L)	2.6	9.7	ND	6.15
Chloride (mg/L)	19,000	15,000	10,447	14,816
NO <sub>3</sub> -N (mg/L)	<10	<10	--	<10
SO <sub>4</sub> (mg/L)	2,200	2,000	1,908	2,036
CaCO <sub>3</sub> (mg/L)	1,000	1,210	--	1,105
Specific Gravity (unitless)	1.0340	1.0249	--	1.0295
TDS (mg/L)	33,000	20,000	--	26,500
Specific Conductance (uMHOs/cm)	52,000	43,000	--	47,500
Potassium (mg/L)	213	235	85.5	177.8
Magnesium (mg/L)	143	128	155	142
Calcium (mg/L)	390	609	393	464
Sodium (mg/L)	12,770	8,074	6,080	8,975
pH	8.10	7.20	--	7.65

Note: ND: Non-detect; -- indicates no analysis.

The formation viscosity, fluid compressibility, and total compressibility were estimated using the average brine salinity along with the bottom hole temperature and pressure recorded in the well at the depth of the injection zone in conjunction with industry standard correlations. The correlations used are presented in the SPE textbook on Pressure Transient Testing which was published as part of the SPE Textbook Series as Volume 9. For the sake of brevity, only page, equation, and figure numbers from this volume are listed subsequently in this report as a reference for all correlations presented regarding the PVT data.



The percent solids for the fluid was approximated as 2.65% based on the average 26,500 mg/l TDS brine concentration for the formation samples presented in Table 1. A bottom hole temperature of 126.4 °F has been used as representative of the formation for these correlations. This value was derived from the original temperature log, run in 1998 when the well was recompleted. This log can be found on the OCD website as part of the WDW-1 well files.

Fluid viscosity was estimated using multiple equations developed by McCain that first are used to estimate fluid viscosity at atmospheric conditions (equations B-72, 73, and 74), which is then converted to viscosity at bottom hole conditions (equation B-75) by using a correction factor. These equations can be found on page 527. As a primary input for the correlation, pressure is required. The formation pressure has been estimated at a datum depth of 7,924 feet below ground level (BGL) using the average formation fluid specific gravity based on the TDS values provided in Table 1. Using this method, a value of 3,522 psi has been estimated as the initial reservoir pressure (7,924 feet BGL). At this pressure and a temperature of 126.4 °F, the following equations have been used to derive viscosity:

$$\mu_{w1} = AT^B \quad (B-72)$$

$$A = 109.574 - 8.40564 * S + 0.313314 * S^2 + 8.72213 * 10^{-3} * S^3 \quad (B-73)$$

$$B = -1.12166 + 2.63951 * 10^{-2} * S - 6.79461 * 10^{-4} * S^2 - 5.47119 * 10^{-5} * S^3 + 1.55586 * 10^{-6} * S^4 \quad (B-74)$$

$$\frac{\mu_w}{\mu_{w1}} = 0.9994 + 4.0295 * 10^{-5} * P + 3.1062 * 10^{-9} * P^2 \quad (B-75)$$

Where,

$\mu_{w1}$  is the viscosity of the formation fluid at atmospheric conditions

$T_F$  is the bottom hole temperature in °F

$S$  is the percent of solids

$P$  is the bottom hole pressure in psi

$\mu_w$  is the viscosity of the brine at bottom hole conditions

Using these equations, a value of 0.57 centipoise is calculated for the formation fluid viscosity.

Formation Compressibility was estimated using equation L-89 provided on page 337. This equation was developed for limestone formations, consistent with the primary composition of the effective injection interval (see discussion in Section 11).

$$c_f = \frac{a}{(1+bc\phi)^{\frac{1}{b}}} \quad (L-89)$$

Where,

$$\begin{aligned} a &= 0.8535 \\ b &= 1.075 \\ c &= 2.303 \times 10^6 \\ \Phi &= 0.10 \end{aligned}$$

Based on this equation, a value of  $8.20\text{E-}6 \text{ psi}^{-1}$  is derived for formation compressibility.

Fluid compressibility was estimated using figures L-30 and L-31 on page 338 with a bottom hole temperature of  $126.4^\circ\text{F}$ , a bottom hole pressure (BHP) of 3,522 psi, and a dissolved solids weight of 2.65%. Using Figure L-31 to first estimate freshwater compressibility, a value of  $2.86\text{E-}06 \text{ psi}^{-1}$  is derived. Using Figure L-30, the coefficient of isothermal compressibility (ratio of brine compressibility over freshwater compressibility) was determined to be approximately 0.95. This results in a value of  $2.70\text{E-}06 \text{ psi}^{-1}$  for the formation fluid compressibility ( $c_w$ ).

By combining the formation and formation fluid compressibility, the total system compressibility is determined. The total system compressibility ( $c_t$ ) is approximately  $1.09 \text{E-}05 \text{ psi}^{-1}$ .

The values presented in this section have been used for analysis unless stated otherwise.

## 7. DAILY RATE HISTORY FOR A MINIMUM OF ONE MONTH PRECEDING THE FALLOFF TEST

Table 2 summarizes data acquired with HFNR well monitoring equipment for the month prior to and during the month that testing was conducted.

**TABLE 2**  
**APRIL AND MAY INJECTION DATA**

Date	Injection Pressure (psi)	Injection Rate (gpm)	Annulus Pressure (psi)
4/1/2023	982.0	99.7	555.7
4/2/2023	0.0	5.9	667.5
4/3/2023	0.0	0.0	N/A
4/4/2023	0.0	0.0	N/A
4/5/2023	0.0	0.9	179.0
4/6/2023	509.9	72.4	67.8
4/7/2023	950.2	99.9	109.8
4/8/2023	1023.2	102.1	387.0
4/9/2023	1026.4	101.9	478.3
4/10/2023	1052.6	104.5	548.6



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Date	Injection Pressure (psi)	Injection Rate (gpm)	Annulus Pressure (psi)
4/11/2023	1050.2	103.6	552.9
4/12/2023	1050.7	104.8	566.3
4/13/2023	1000.0	64.6	567.5
4/14/2023	1036.9	38.1	416.0
4/15/2023	1042.0	39.1	414.8
4/16/2023	1038.4	39.6	384.0
4/17/2023	1039.7	40.3	400.8
4/18/2023	1065.9	45.8	368.5
4/19/2023	1087.7	49.9	395.4
4/20/2023	1100.5	52.4	453.6
4/21/2023	1008.6	39.2	603.2
4/22/2023	1107.6	55.9	523.9
4/23/2023	1070.1	48.2	525.7
4/24/2023	1070.1	47.2	531.6
4/25/2023	1102.0	53.5	559.0
4/26/2023	1095.1	52.6	573.8
4/27/2023	990.7	33.1	619.5
4/28/2023	1063.2	47.5	530.0
4/29/2023	1001.1	29.5	548.0
4/30/2023	991.8	22.2	526.8
5/1/2023	986.9	25.2	502.5
5/2/2023	953.0	17.6	583.4
5/3/2023	970.1	22.1	459.3
5/4/2023	970.1	19.5	481.3
5/5/2023	970.1	18.9	488.8
5/6/2023	1076.5	47.9	498.7
5/7/2023	801.1	12.7	802.7
5/8/2023	1004.5	28.7	494.6

## 8. CUMULATIVE INJECTION INTO THE FORMATION FROM TEST WELL

At the time of shut-in during testing, the cumulative volume of waste injected into this well since operations began, based on OCD and HFNR records, is 50,401,025 barrels (2,116,843,041 gallons).

## 9. PRESSURE GAUGES

- a. **Describe the type of downhole surface pressure readout gauge used included manufacturer and type** - Two downhole pressure and temperature memory gauges were utilized for the falloff testing. The gauges were 1.25-inch Quartz pressure and temperature memory gauges manufactured by DataCan (Part No. 101696).
- b. **List the full range, accuracy and resolution of the gauge(s)** - The memory gauges are designed to measure pressure to an accuracy of 0.03% of full scale



and a resolution of 0.01% of full scale, and operate within a range of 14.7 to 15,000 psi.

- c. **Provide the manufacturer's recommended frequency of calibration and a calibration certificate showing the date the gauge was last calibrated -** These gauges are recommended to be calibrated once per year. The most recent calibration certificate is provided as Attachment 3.

## 10. ONE-MILE AREA OF REVIEW (AOR)

A standard one-mile Area of Review (AOR) was evaluated for WDW-1 as part of the annual testing and reporting requirements. The wells located within this one-mile AOR are listed in Attachment 6. A figure displaying the wells located in the AOR and the wells in the surrounding sections has been provided as Figure 13.

Based on the data review, there have been six wells spud within the AOR in the last year with proposed depths that extend below the WDW #1 injection interval. As of the time of this report, no casing, cement, or completion records are available for these recently spudded wells. In addition, one well was P&A'd within the AOR during the past year but does not penetrate into the injection interval. Tables 3 and 4 summarize the wells drilled and P&A'd within the AOR over the past year, respectively.

**TABLE 3  
WELLS DRILLED WITHIN AOR DURING THE PAST YEAR**

Operator	Well Name	API	Well Type	PLSS Location (ULSTR)	Proposed TVD (ft)	Spud Date
Spur Energy Partners LLC	BLALOCK 32 STATE COM #090H	30-015-49897	Oil	H-31-17S-28E	10,325	11/3/2022
Spur Energy Partners LLC	BLALOCK 32 STATE COM #011H	30-015-49898	Oil	H-31-17S-28E	9,341	11/1/2022
Spur Energy Partners LLC	BLALOCK 32 STATE COM #050H	30-015-49904	Oil	H-31-17S-28E	9,747	10/31/2022
Spur Energy Partners LLC	BLALOCK 32 STATE COM #001H	30-015-49997	Oil	A-31-17S-28E	8,736	11/6/2022
Spur Energy Partners LLC	BLALOCK 32 STATE COM #010H	30-015-49998	Oil	A-31-17S-28E	9,242	11/10/2022
Spur Energy Partners LLC	BLALOCK 32 STATE COM #070H	30-015-49999	Oil	A-31-17S-28E	9,826	11/7/2022

**TABLE 4**

Mechanical Integrity and Reservoir Testing  
HollyFrontier Navajo Refining-Artesia, New Mexico - June 2023

### WELLS P&A'd WITHIN AOR DURING THE PAST YEAR

Operator	Well Name	API	Well Type	PLSS Location (ULSTR)	TVD (ft)	Plug Date
ROVER OPERATING, LLC	HUDSON SAIKIN STATE #001	30-015-02666	Oil	E-31-17S-28E	1,860	11/29/2022

- a. **Wells Located Within the One-mile AOR** - The wells located within the one-mile AOR are provided as Attachment 6. This table contains the operator, well name, API number, well type, well status, location, and date of abandonment or completion.
- b. **Status of Wells Within AOR** - In Attachment 6, the abbreviation SWD indicates Salt Water Disposal, P&A indicates Plugged and Abandoned, TA indicates Temporarily Abandoned, and AL indicates Abandoned Location.
- c. **Provide details on any offset producers and injectors completed in the same injection interval** - HFNR operates three other Class I Injection wells, two of which are completed in the same interval, WDW-2 and WDW-3. Neither of these wells are located within the one-mile WDW-1 AOR. Based on public data, there is one additional injection well, not operated by HFNR that is located within the AOR and injects into the same interval. This well is the Walter Solt State #001 operated by Walter Solt, LLC. No offset producers exist that are completed in the injection interval within the AOR based on public data. Additional information is presented in Section 12 of this report.



## 11. GEOLOGY

- a. Describe the geologic environment of the injection interval
- b. Discuss the presence of geologic features, i.e., pinchouts, channels and faults, if applicable
- c. Provide a portion of a relevant structure map, if necessary

The following discussion provides responses to the requirements listed above. This discussion is primarily based on information presented in previous permit applications for this well.

The WDW-1, 2, and 3 wells are located in the northern part of the Delaware Basin. The injection interval for these three wells is composed of carbonates from the Permian-age Lower Wolfcamp Formation, Pennsylvanian-age Cisco Formation, and Pennsylvanian-age Canyon Formation. The Wolfcamp unconformably overlies the Cisco and Canyon Formations. Table 5, sourced from the 2019 MIT report, presents a summary of the logged formation depths for these formations in each of the wells. The geologic interpretations have been confirmed but not revised as part of this report.

**TABLE 5**  
**HFNR INJECTION FORMATION TOPS – WDW-1, 2, and 3**

Formation	WDW-1 (KB = 3,693 ft AMSL)		WDW-2 (KB = 3,623 ft AMSL)		WDW-3 (KB = 3,625 ft AMSL)	
	MD, KB (ft)	AMSL, KB (ft)	MD, KB (ft)	AMSL, KB (ft)	MD, KB (ft)	AMSL, KB (ft)
Lower Wolfcamp	7,450	-3,757	7,270	-3,647	7,303	-3,678
Cisco	7,816	-4,123	7,645	-4,022	7,650	-4,025
Canyon	8,475	-4,782	8,390	-4,767	8,390	-4,765
Base of Injection Zone (Base of Canyon)	9,016	-5,323	8,894	-5,271	8,894	-5,269

The lower portion of the Wolfcamp Formation, referred to as the Lower Wolfcamp, is the uppermost unit in the injection interval. The top of the zone ranges from a depth of 7,303 – 7,450 feet KB in the referenced wells. A structure map of the top of the Wolfcamp is provided in Figure 3. The Wolfcamp ranges from fine to medium-grained, limestones with interbedded shales (Meyer, 1966). The picks for the top of the Wolfcamp were made from log correlations. The Wolfcamp is overlain by the dense, dolomitic Abo Formation. The gross thickness of the Lower Wolfcamp is approximately 363 feet thick. According to porosity log data from the area, the Wolfcamp porosity is generally greater than 5%.

The Cisco Formation is described as consisting of limestone/dolomite with some interbedded shales and fine-grained sandstones (Lindsay et al., 2006). The top of the Cisco occurs at approximately 7,645 – 7,816 feet KB. A structure map of the



top of the Cisco can be found in Figure 4. Coarse-grained dolomites have been noted to have interstitial to cavernous porosity (Lindsay et al., 2006). At the three HFNR wells, the Cisco Formation is a porous dolomite that ranges from a gross thickness of 659 feet to 745 feet. The net thickness using a porosity cutoff of greater than 10% is approximately 100 feet in WDW-1, 32 feet in WDW-2, and 65 feet in WDW-3.

The Canyon Formation typically consists mostly of brown limestone with interbedded grey shales (Lindsay et al., 2006). The top of the Canyon occurs at approximately 8,400 KB. Some white sandstone and conglomerates have been noted at the base of the Canyon (Lindsay et al., 2006). Some dolomites have been noted to be present in the Canyon as well. Gross thickness of the Canyon Formation is approximately 504-541 feet in the three wells. The net thickness using a porosity cutoff greater than 5% is approximately 34 feet in WDW-1, 30 feet in WDW-2, and 10 feet in WDW-3. No intervals appear to have a porosity more than 10%, based on logs. A structure map is provided in Figure 5 which displays the top of the Strawn Formation, indicating the bottom of the Canyon Formation.

## 12. OFFSET WELLS

HFNR operates three other Class I Injection wells locally, two of which are completed in the same interval, WDW-2 and WDW-3. These wells are not within the 1-mile AOR surrounding WDW-1. WDW-2 is approximately 10,900 feet to the southwest of WDW-1, while WDW-3 is approximately 7,800 feet to the southwest of WDW-1. These wells were used for injection at a constant rate during the duration of testing this year, are at a significant distance from the test well in a relatively high-permeability system, and are not considered to have had a significant impact on the testing performed on WDW-1.

There is one additional well, not operated by HFNR, that is within the AOR and injects into the same interval (Walter Solt State #001; API: 30-015-25522).

- a. **Identify the distance between the test well and any offset wells completed in the same injection interval** – The Walter Solt State #001 is approximately 4,600 feet to the southeast. Distance to the other HFNR injectors is discussed in the preceding paragraph.
- b. **Report the status of the offset wells during both the injection and shut-in portions of the test** - The offset HFNR wells were operated at a constant rate during testing.
- c. **Describe the impact, if any, of the offset wells during both the injection and shut-in portions of the test** – Although some offset interference may exist at the end of the test from these offset injectors, a useful test appears to have been achieved. No injection is reported on the state website for the Walter Solt State #001 well since October 2021.



### 13. CHRONOLOGICAL LISTING OF THE DAILY TESTING ACTIVITIES

- a. **Date of the test** - Testing was performed from May 9 through 11, 2023.
- b. **Time of the injection period** - Continuous injection occurred for approximately 48 hours before the falloff test began. This injection period exceeded the duration of the falloff.
- c. **Type of injection fluid** - Filtered waste was utilized as test injection fluid.
- d. **Final injection pressure and temperature prior to shutting in the well** - Prior to shutting in the well, the bottom hole injection pressure was 4,442.2 psia (at 7,887 feet KB) and the injection rate was 23.0 gpm (788.6 bwpd) with a measured bottom hole temperature of 93.9 °F.
- e. **Total shut-in time** - The well was shut-in for approximately 43.8 hours for testing.
- f. **Final static pressure and temperature at the end of the falloff portion of the test** - At the conclusion of the test, the final bottom hole pressure was 4,363.1 psia and the final bottom hole temperature was 102.7 °F.

### 14. DESCRIBE THE LOCATION OF THE SHUT-IN VALVE USED TO CEASE FLOW TO THE WELL FOR THE SHUT-IN PORTION OF THE TEST

The well was shut-in using a wing valve located on the inlet side of the wellhead.

### 15. PRESSURE FALLOFF ANALYSIS

This section addresses requirements 15-20 of Section IX, Report Components, of the OCD falloff test guidelines. The equations, parameters and calculations utilized to derive these values are detailed further in the following discussion. Table 6 contains input values used to perform the specified calculations.

The raw digital data collected during the test is provided in Attachment 7. The contracted service company that supplied the gauges used for testing generated an injection falloff test summary report based on the data that was collected. This report is provided in Attachment 4.

- a. **Radius of test investigation** - The radius of investigation for this test was determined to be approximately 7,686 feet based on the average permeability derived from test analysis.
- b. **Time to beginning of the infinite acting portion of the test** - The time at which the test began to display attributes that may be consistent with transition to radial flow was approximately 10-15 hours after shut-in. This value was derived from a model fit of the log-log data and overall derivative behavior that is consistent with testing data from 2021 and 2022.

Mechanical Integrity and Reservoir Testing  
HollyFrontier Navajo Refining-Artesia, New Mexico - June 2023

- c. **Slope(s) determined from the semi-log plot** - The slope for the middle-time radial period, as determined from the semi-log plot, was 0.43 psi/cycle.
- d. **Transmissibility ( $kh/\mu$ )** - The transmissibility was determined to be 297,778 md-ft/cp.
- e. **Permeability (k)** - The permeability was determined to be 970 md.
- f. **Skin Factor (s)** - The skin factor was determined to be 201 units.
- g. **Pressure drop due to skin ( $\Delta P_{\text{skin}}$ )** - The pressure drop due to skin was determined to be 75.3 psi
- h. **Flow efficiency** - The flow efficiency was determined to be 0.05.
- i. **Flow capacity (kh)** - The flow capacity (permeability-thickness) was determined to be 169,733 md-ft.
- j.  **$P_{1\text{hr}}$**  - The extrapolated 1-hr pressure was determined to be 4,364.0 psi.

**TABLE 6**  
**FALLOFF TEST ANALYSIS INPUT VALUES**

Parameter	Value	Unit
Formation Thickness, h	175	feet
Porosity, $\Phi$	10	percent
Viscosity, $\mu$	0.57	centipoise
Formation Compressibility, $c_f$	8.20E-06	1/psi
Total Compressibility, $c_t$	10.90E-06	1/psi
Formation Volume Factor, B	1.00	bbl/stb
Wellbore Radius, $r_w$	0.3646	feet
Final Well Flowing Pressure, $p_{wf}$	4,341.8	psia
Final Injection Rate, $q_{\text{final}}$	788.6 23.0	bwpd (gpm)
Horner Straight Line Slope, m	0.430599	psi/cycle

The average historical injection period used to account for total injected volume in the analysis was calculated by dividing the cumulative historical injection through August 17, 2020 (43,995,961 barrels) by the final injection rate (163 gpm). This resulted in a value of 188,939 hours. This value of 188,939 hours of injection at 163 gpm was used in conjunction with the injection data collected from August 17, 2020 through May 9, 2023. The total waste volume injected up to the time of shut-in utilized for calculations was 50,401,025 barrels (2,116,843,041 gallons).

To determine the mobility-thickness (transmissibility), the following equation was utilized. The resulting transmissibility was 297,778 md-ft/cp.

$$\frac{kh}{\mu} = 162.6 \frac{q_{\text{final}} B}{m}$$

Where,



$k$  is the permeability, in md  
 $h$  is the formation thickness, in feet  
 $\mu$  is the viscosity of the formation fluid, in cp  
 $q$  is the final flow rate, in bpd  
 $B$  is the formation volume factor in RB/STB  
 $m$  is the slope of the line assigned to the radial flow period on the semi-log plot, in psi/cycle  
 and 162.6 is a units conversion constant

$$\frac{kh}{\mu} = \text{Transmissibility} = 162.6 \frac{788.58 * 1.0}{0.4306} = 297,778 \frac{\text{md} - \text{ft}}{\text{cp}}$$

The transmissibility derived from the slope of the semi-log straight line was then used to determine the permeability thickness. The resulting permeability-thickness was 169,733 md-ft.

$$kh = \left( \frac{kh}{\mu} \right) \mu = 297,778 \left( \frac{\text{md} - \text{ft}}{\text{cp}} \right) 0.57 \text{ cp} = 169,733 \text{ md} - \text{ft}$$

This permeability thickness was then used to determine the permeability of the reservoir. The resulting permeability was 970 md.

$$k = \frac{kh}{h} = \frac{169,733 \text{ md} - \text{ft}}{175 \text{ ft}} = 970 \text{ md}$$

In order to determine if the appropriate viscosity was utilized in the previous calculations, it must be determined if the pressure transient was traveling through reservoir fluids. This is done by determining the time it is expected to take the pressure transient to travel through the injected fluid. The first step of this is to determine the approximate radius of waste emplaced by injection. The idealized piston-like displacement radius was estimated to be 2,269 feet.

$$r_{\text{waste}} = \sqrt{\frac{0.13368 * V}{\pi h \Phi}}$$

Where,

$r_{\text{waste}}$  is the distance to the waste front, in feet  
 $V$  is the total volume of fluid injected into the well, in gallons  
 $h$  is the formation thickness, in feet  
 $\Phi$  is the porosity, as a fraction  
 0.13368 is a conversion constant

$$r_{waste} = \sqrt{\frac{0.13368 * (2,116,843,041)}{\pi * 175 * 0.10}} = 2,269 \text{ feet}$$

Based on this radius, the time for a pressure transient to travel through this fluid can be calculated. The resulting time was approximately 3.13 hours.

$$t_{waste} = 948 \frac{\Phi \mu_{waste} c_t r_{waste}^2}{k}$$

Where,

$t_{waste}$  is the time for a pressure transient to reach the waste front, in hours

$\Phi$  is the porosity, as a fraction

$\mu_{waste}$  is the viscosity of the waste, in cp

$r_{waste}$  is the radius of the waste front, in feet

$c_t$  is the total compressibility, in  $\text{psi}^{-1}$

$k$  is the permeability, in md

948 is a conversion constant

$$t_{waste} = 948 \frac{0.10 * 0.57 * 10.90E-06 * (2,269)^2}{970} = 3.13 \text{ hours}$$

Based on this result, and the time it took for evidence of any transition to radial flow (approximately 10 hours), it is likely that the pressure transient was dominated by reservoir fluid properties during the middle-time radial flow period, indicating that the appropriate viscosity was used for analysis.

The near wellbore damage, referred to as skin, can be calculated based on the results of the straight line, semi-log analysis as well. This is done by utilizing the following equation. The result of this calculation was a skin of 201.5 units.

$$s = 1.151 \left( \frac{P_{wf} - P_{1hr}}{m} - \log \left( \frac{k}{\Phi \mu c_t r_w^2} \right) + 3.23 \right)$$

Where,

$s$  is skin damage, in units

$P_{wf}$  is the shut-in well pressure, in psi

$P_{1hr}$  is the extrapolated pressure at a time of 1 hour, using the slope of the straight line from the semi-log analysis, in psi

$m$  is the slope of the radial line, in  $\text{psi/cycle}$

$k$  is the permeability, in md

$\Phi$  is the porosity, as a fraction

$\mu$  is the viscosity, in cp

$r_w$  is radius of the wellbore in feet

1.151 and 3.23 are constants

$$s = 1.151 \left( \frac{4,442.2 - 4,364.0}{0.4306} - \log \left( \frac{970}{0.10 * 0.57 * 10.90E - 06 * 0.3646^2} \right) + 3.23 \right)$$

$$= 201.5$$

The pressure contribution of the skin term to wellbore pressure can be calculated using the following equation. The result of this calculation was 75.3 psi of pressure due to skin.

$$\Delta P_{skin} = 0.869 * m * s$$

Where,

$\Delta P_{skin}$  is the change in pressure due to skin damage, in psi

$m$  is slope of the radial line, in psi/cycle

$s$  is skin, in units

0.869 is a conversion constant

$$\Delta P_{skin} = 0.869 * 0.4306 * 201.5 = 75.3 \text{ psi}$$

The flow efficiency (FE) can be determined using the following equation, provided within the OCD Guidelines (Section IX, 15, h). The result of this calculation was 0.05.

$$FE = \frac{P_{wf} - \Delta P_{skin} - P_{end \text{ of test}}}{P_{wf} - P_{end \text{ of test}}}$$

Where,

$P_{wf}$  is the shut-in well pressure, in psi

$\Delta P_{skin}$  is the change in pressure due to skin damage, in psi

$P_{end \text{ of test}}$  is the pressure at the end of the falloff test, in psi

$$FE = \frac{4,442.2 - 75.3 - 4,363.1}{4,442.2 - 4,363.1} = 0.05$$

The test radius of investigation ( $r_{inv}$ ) can be estimated using the following equation. The result of this calculation was 7,686 feet.

$$r_{inv} = 0.029 \sqrt{\frac{kt}{\Phi \mu c_t}}$$



Where,

k is permeability, in md  
 t is time, in hours  
 $\Phi$  is porosity, as a fraction  
 $\mu$  is viscosity, in cp  
 $c_t$  is total compressibility, in  $\text{psi}^{-1}$   
 0.029 is a constant

$$r_{inv} = 0.029 \sqrt{\frac{970 * 43.8}{0.1 * 0.57 * 10.90E - 06}} = 7,686 \text{ feet}$$

Based on examination of the log-log diagnostic plot provided as Figure 9, the early-time data is dominated by changing wellbore storage. The change in storage behavior approximately 1-2 minutes results from the transition to vacuum in the wellbore. It is likely that the test was transitioning to radial flow approximately 10-15 hours after shut-in, with derivative data between 15-20 hours resembling radial-flow behavior. However, late-time test data is potentially impacted by offset heterogeneity, interference, and/or dual porosity effects which prevent the development of a fully-stabilized radial flow period. Figure 10 presents the semi-log plot of the falloff data with a straight line representing the most-likely radial flow period consistent with the diagnostic log-log plot.

The following figures are provided to illustrate the test analysis and results:

- Figure 6 - Cartesian Plot of Pressure, Temperature, and Rate vs. Time
- Figure 7 - Full Rate History Plot
- Figure 8 - Cartesian Plot of Pressure Falloff with Model Match
- Figure 9 - Log-log Derivative Plot with Model Match
- Figure 10 - Semi-log Horner Plot with Model Match
- Figure 11 - Daily Injection Rate History for Month Prior to Test Plot
- Figure 12 - Hall Plot

As specified by OCD requirements, a Hall Plot (Figure 12) generated from data during the month prior to the falloff test is included. It is noted that this plot of a limited elapsed time of the Hall function is a simplistic presentation based on correcting average daily wellhead pressures to bottomhole conditions based on hydrostatic head and tubing friction loss. The plot has been made with these BHP values rather than a pressure change (or  $dp$ ) that would be generated by subtracting original reservoir pressure from the injection pressure value. Because this BHP value is used, the Hall plot slope is not proportional to other indicators, but qualitatively can yield insight to well conditions based on changing slopes. Further, consistent with the Hall method, it is assumed that the reservoir is homogenous and isotropic, that none of the average daily pressures are impacted by transient flow (relatively continuous, constant rate injection took place), and that

no offset wells are impacting pressure at this well during the time that the Hall function has been plotted. The slope of the data is fairly linear, and this linearity is consistent with no significant changes in well condition taking place during this time period. Based on this observed linear trend, there are no significant concerns noted with regard to well or reservoir performance.

Table 7 summarizes historical well test analysis results, including the results from the test this year. Attachment 6 presents a summary of the falloff test analysis.

**TABLE 7**  
**HISTORICAL AMBIENT RESERVOIR TEST MEASUREMENTS**

Year	Fill Depth (feet)	Permeability (md)	Mobility-thickness (md-ft/cp)	Skin (units)	P* (psia)
2023	8,380	970	297,779	201.5	4,355.3
2022	8,436	1,614	495,672	73.0	4,120.2
2021	8,375	1,501	460,906	264.0	4,111.4
2020	NA	1,155	320,873	117.9	4,153.3
2019	8,512	1,129	346,733	129.0	4,290.9
2018	8,470	1,025	314,769	87.0	4,361.6
2017	9,001	412	126,471	57.0	4,359.6
2016	8,890	520	159,662	67.0	4,433.2
2015	8,995	423	130,002	44.0	4,542.8
2014	8,990	546	167,698	44.0	4,404.7
2012	9,018	661	202,929	36.0	4,008.0
2011	9,001	685	210,441	69.0	3,846.2
2010	9,001	521	159,979	93.0	3,716.9
2009	9,001	883	271,155	77.0	3,591.6
2008	NA	1,592	488,655	262.0	3,527.4
Permit	NA	250	40,094	NA	NA

All raw data generated by the test will be kept on file by HFNR for a period not less than five years. The raw data has been provided as a part of this report, with additional files available upon OCD request.

## 16. PART I INTERNAL MECHANICAL INTEGRITY

On May 11, the well annulus was pressured to 590.2 psi. The well had been shut in for approximately 45 hours prior to the test, ensuring sufficient thermal equilibrium. A calibrated digital pressure gauge (Crystal XP2i, 5,000 psi, SN -



Mechanical Integrity and Reservoir Testing  
HollyFrontier Navajo Refining-Artesia, New Mexico - June 2023

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901241) 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 annulus pressure was then monitored for a period of thirty minutes at 5-minute intervals. During the test the pressure increased by 0.2 psi (0.03%). Since a change of 10% (59.0 psi) of the test pressure is allowable, this test is within acceptable specifications.

Attachment 2 presents a copy of the gauge certification. Attachment 7 contains the digital data collected during the APT. Pressures were observed during testing are shown in Table 8 below.

**TABLE 8**  
**ANNULUS PRESSURE TEST MEASUREMENTS**

Time, Minutes	0	5	10	15	20	25	30
Annulus Pressure, Psi	590.2	590.5	590.4	590.4	590.4	590.2	590.4



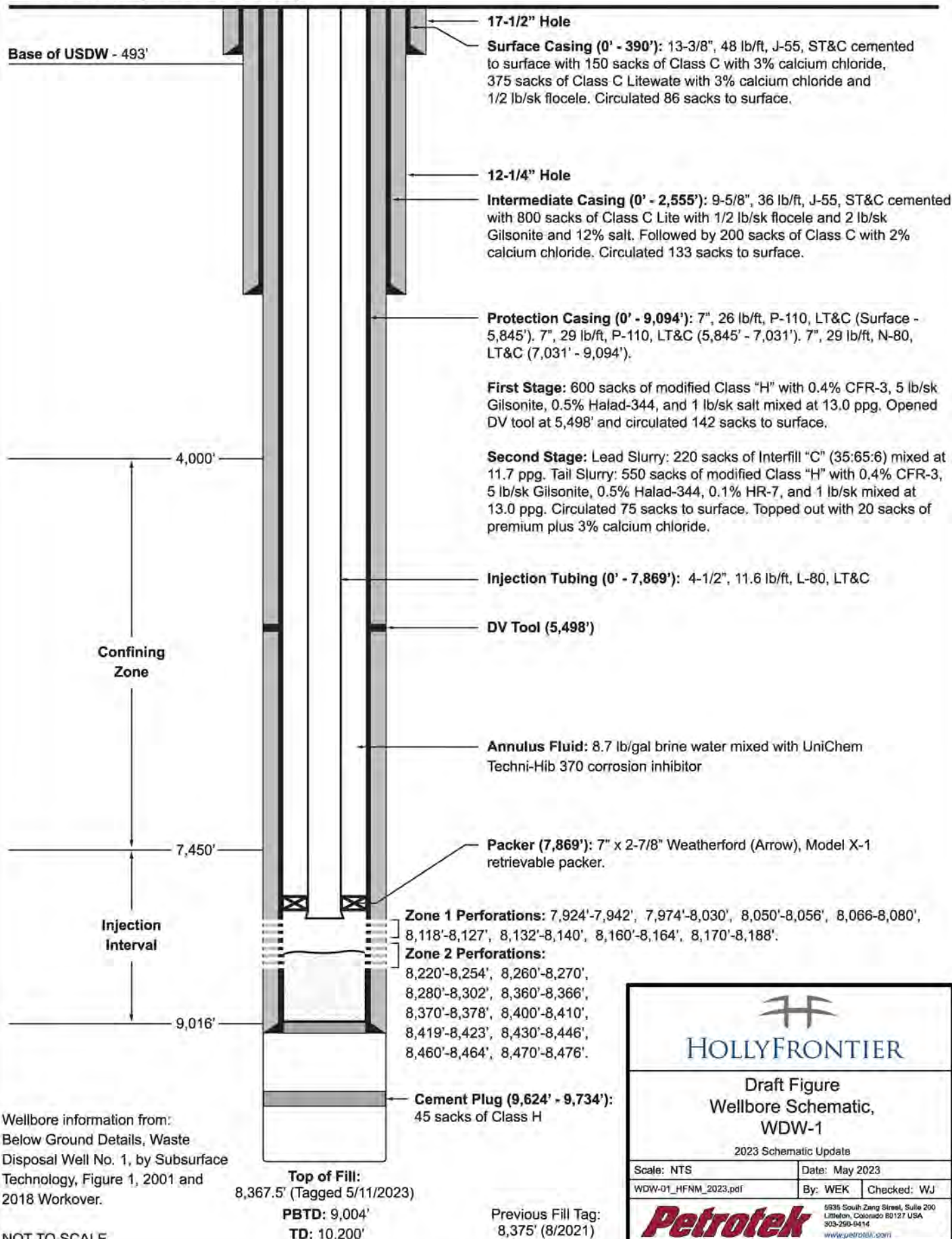
# FIGURES

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***Petrotek***

OCD UIC Permit: UICI-008-1  
 Well API Number: 30-015-27592  
 Eddy County, New Mexico  
 Sec. 31, T17S-R28E  
 Lat. 32.78517° / Long. -104.21376° (NAD 83)

All depths referenced to Kelly Bushing (KB)  
 elevation 12.5' above ground level.  
 Ground Level Elevation: +3,678' MSL



**HOLLYFRONTIER**

**Draft Figure**  
**Wellbore Schematic,**  
**WDW-1**

2023 Schematic Update

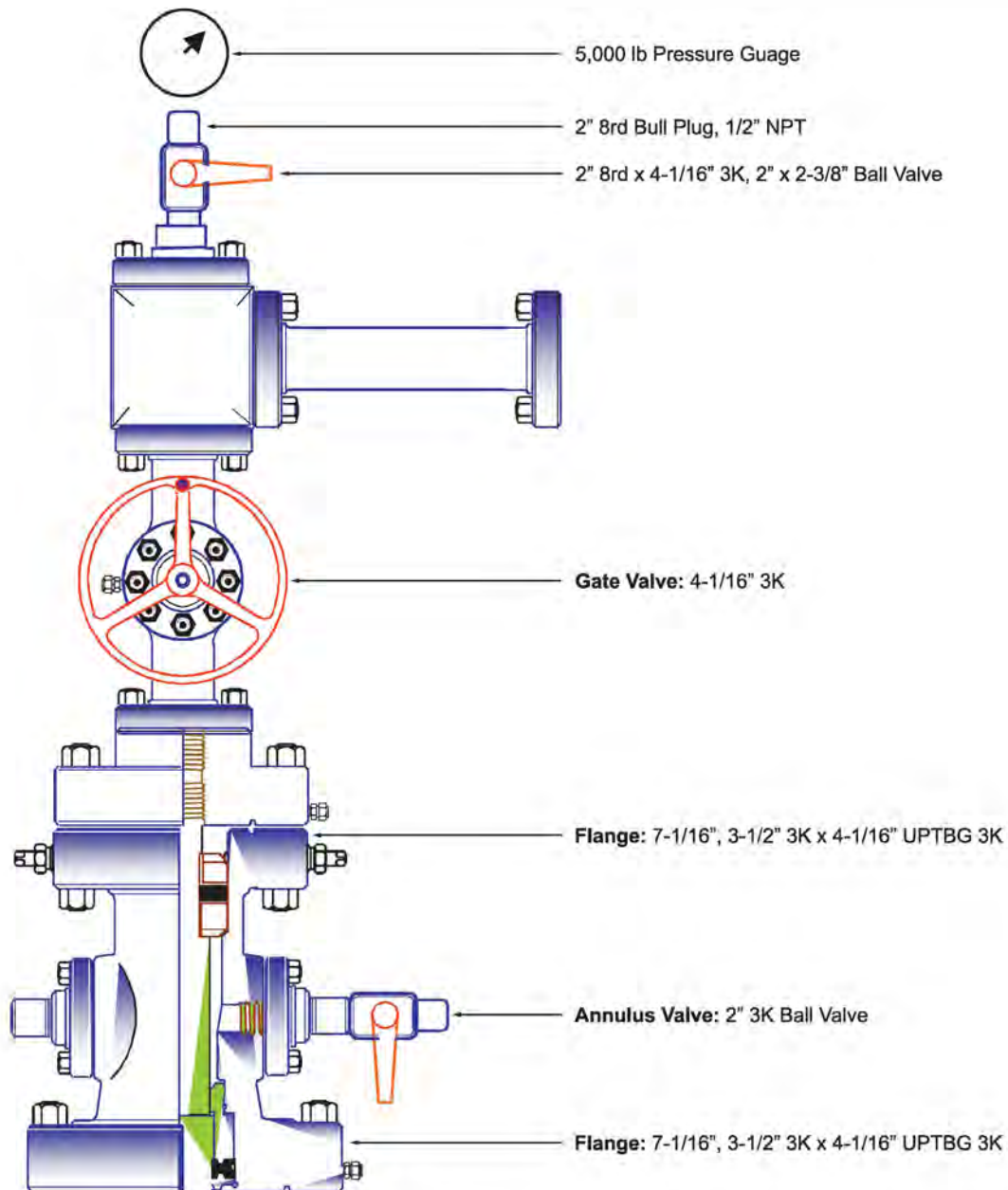
Scale: NTS	Date: May 2023
WDW-01_HFNM_2023.pdf	By: WEK Checked: WJ

**Petrotek**

5935 South Zang Street, Suite 200  
 Littleton, Colorado 80127 USA  
 303-290-0414  
 www.petrotek.com





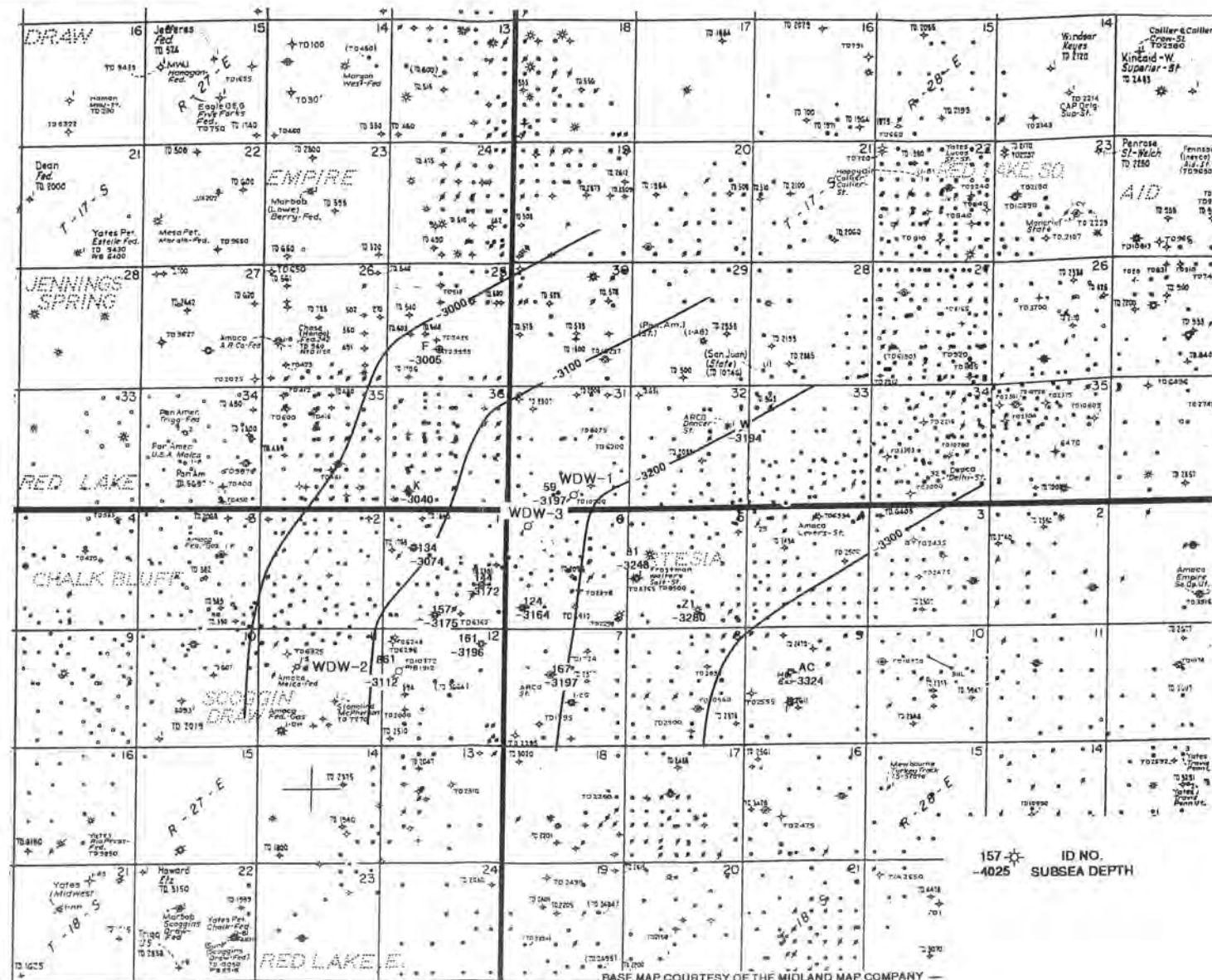
OCD UIC Permit: UICI-008-1  
 Well API Number: 30-015-27592  
 Eddy County, New Mexico  
 Sec. 31, T17S-R28E  
 Lat. 32.78517° / Long. -104.21376° (NAD 83)



Well Head information partially  
 from: Figure 5, Mewbourne Well  
 No. 1 Wellhead Schematic by  
 Superior Wellhead.

NOT TO SCALE

 <b>HOLLYFRONTIER</b>		
<b>Figure 2</b> <b>WDW No. 1,</b> <b>Wellhead Schematic</b>		
2023 FOT/MIT Report		
Scale: NTS	Date: June 2023	
Fig_02_HF_Antesia_2023_WDW_01.pdf	By: WEK	Checked: LW
		
<small>5935 South Zang Street, Suite 200        Littleton, Colorado 80127 USA        303-290-9414  <a href="http://www.petrotek.com">www.petrotek.com</a></small>		



Adapted from Navajo Refining Co., Attachment VIII-12,  
Structure - Top of Wolfcamp Formation, Envirocorp, 1998.

**HOLLYFRONTIER**

**Figure 3**  
Wolfcamp Formation Structure Map

2023 FOT/MIT Report

Contour Interval = 100'	Date: June 2023
Fig. 03_HF_Aresis_2023_FOT.pdf	By: WEK   Checked: LW

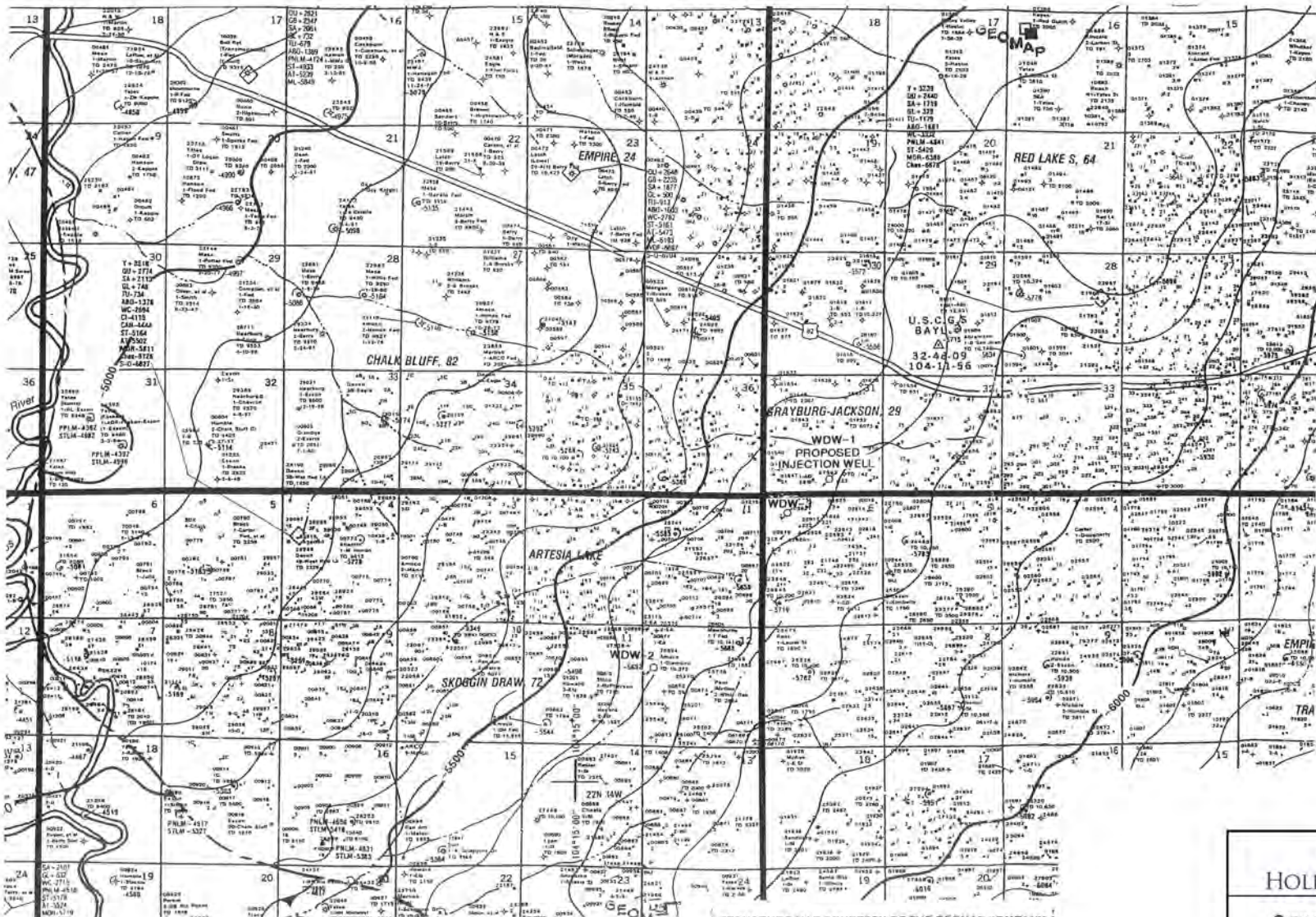
**Petrotek**

8835 North Zuni Street, Suite 300  
Lubbock, Colorado 80427 USA  
303.266.0414  
www.petrotek.com









Adapted from Navajo Refining Co., Attachment VIII-11,  
Structure Map of the Strawn Formation, Envrincorp, 1999.

**HOLLYFRONTIER**

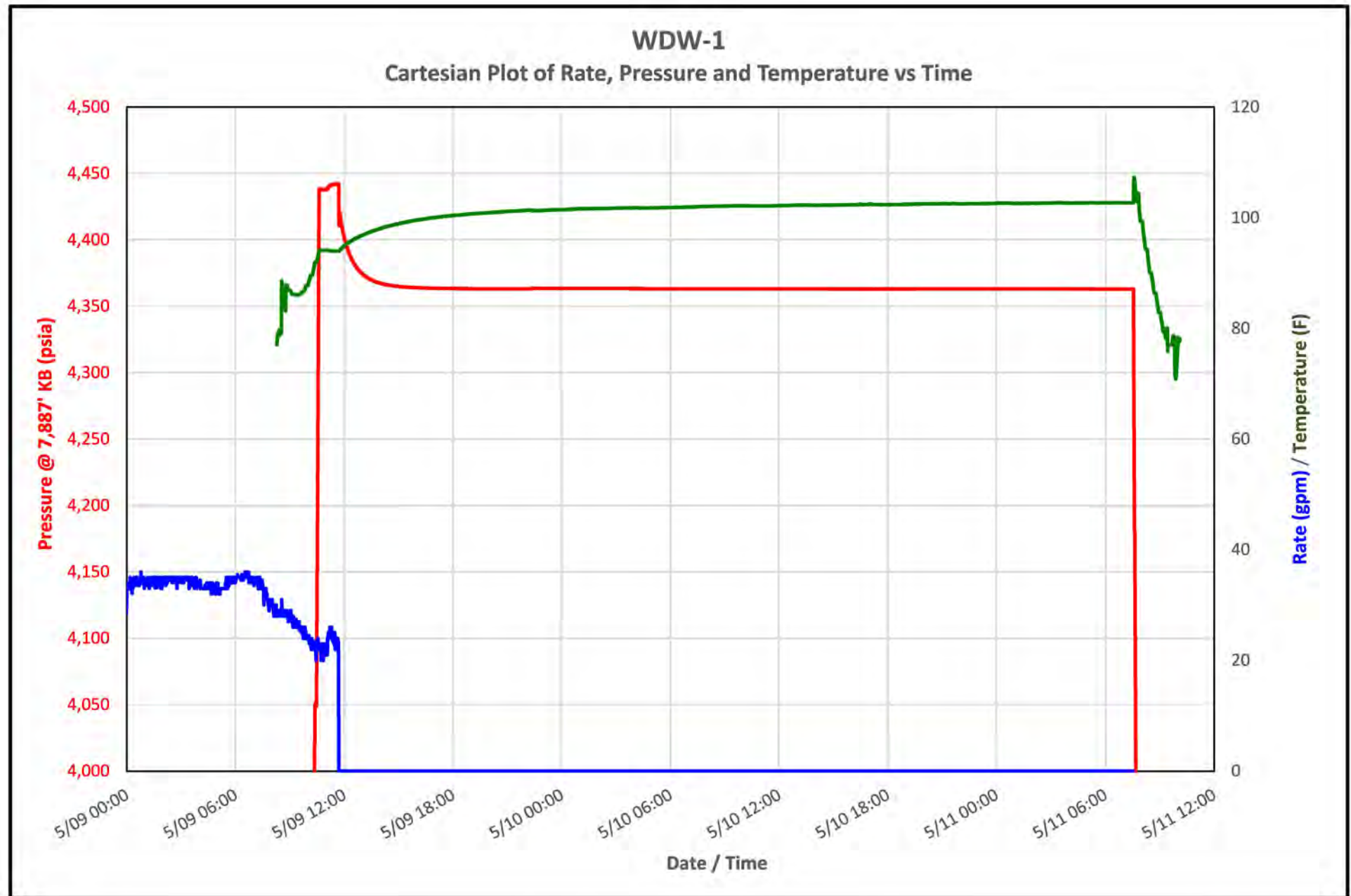
Figure 5  
Canyon/Strawn Formation  
Structure Map  
2023 FOT/MIT Report

Contour Interval = 100'	Date: June 2023
Fig. 05_HF_Artesia_2023_FOT.pdf	By: WEK Checked: LW

**Petrotek**

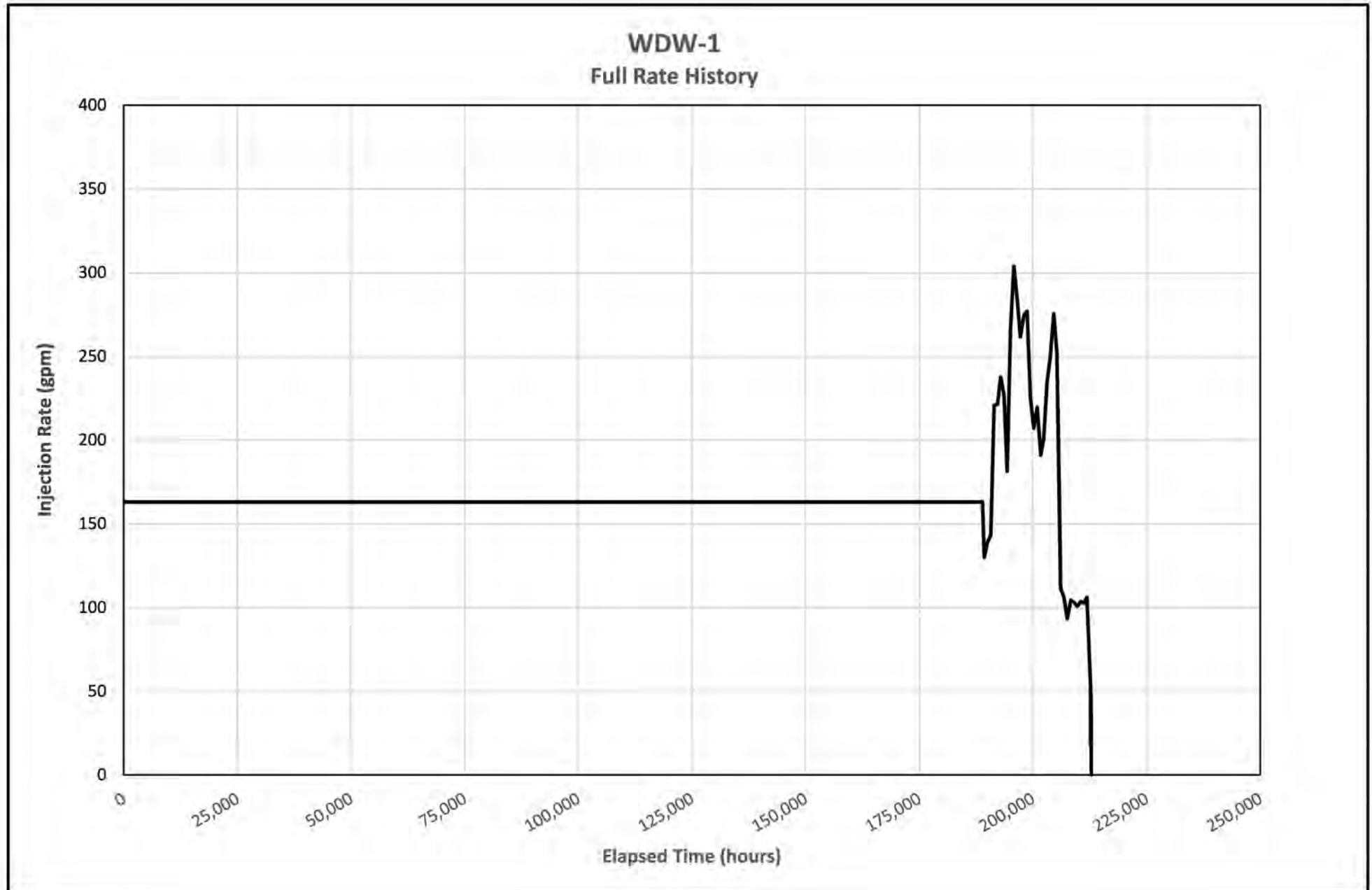
9142 South Zuni Street, Suite 300  
Littleton, Colorado 80127 USA  
303-225-0114  
www.petrotek.com



**Figure 6**

Cartesian Plot of Rate, Pressure and Temperature vs Time  
2023 Well Testing

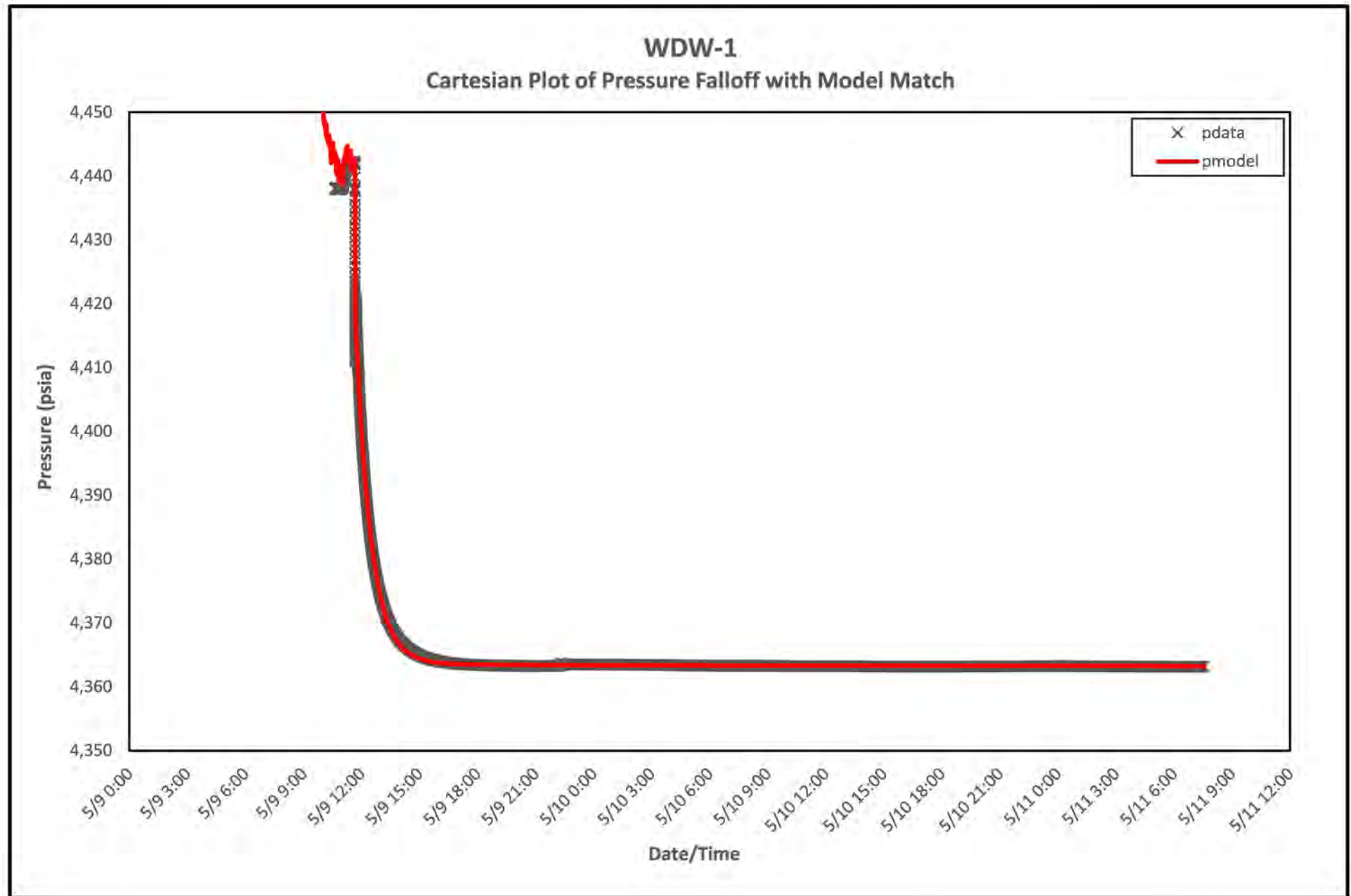




**Figure 7**  
Full Rate History  
2023 Well Testing

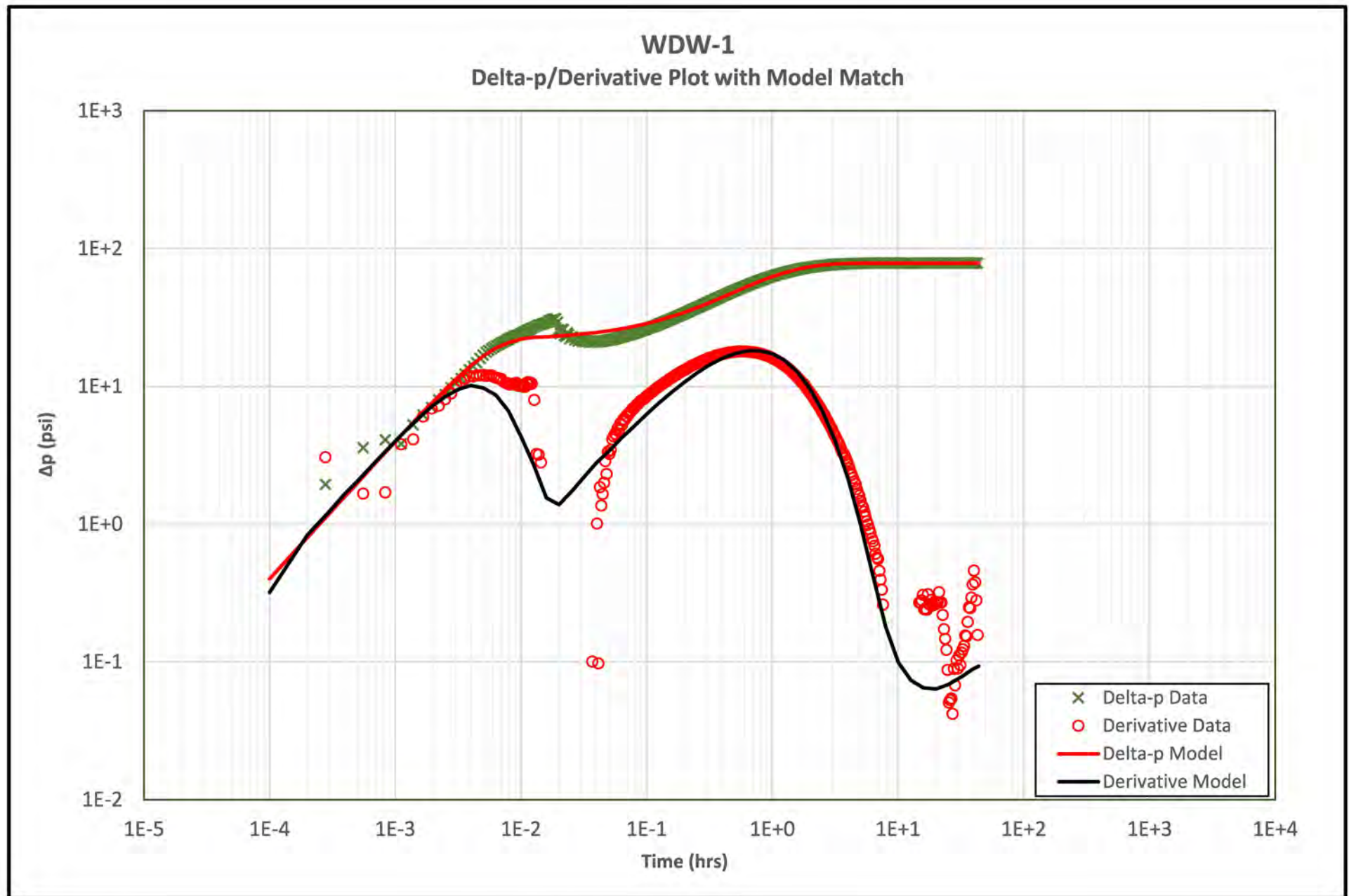




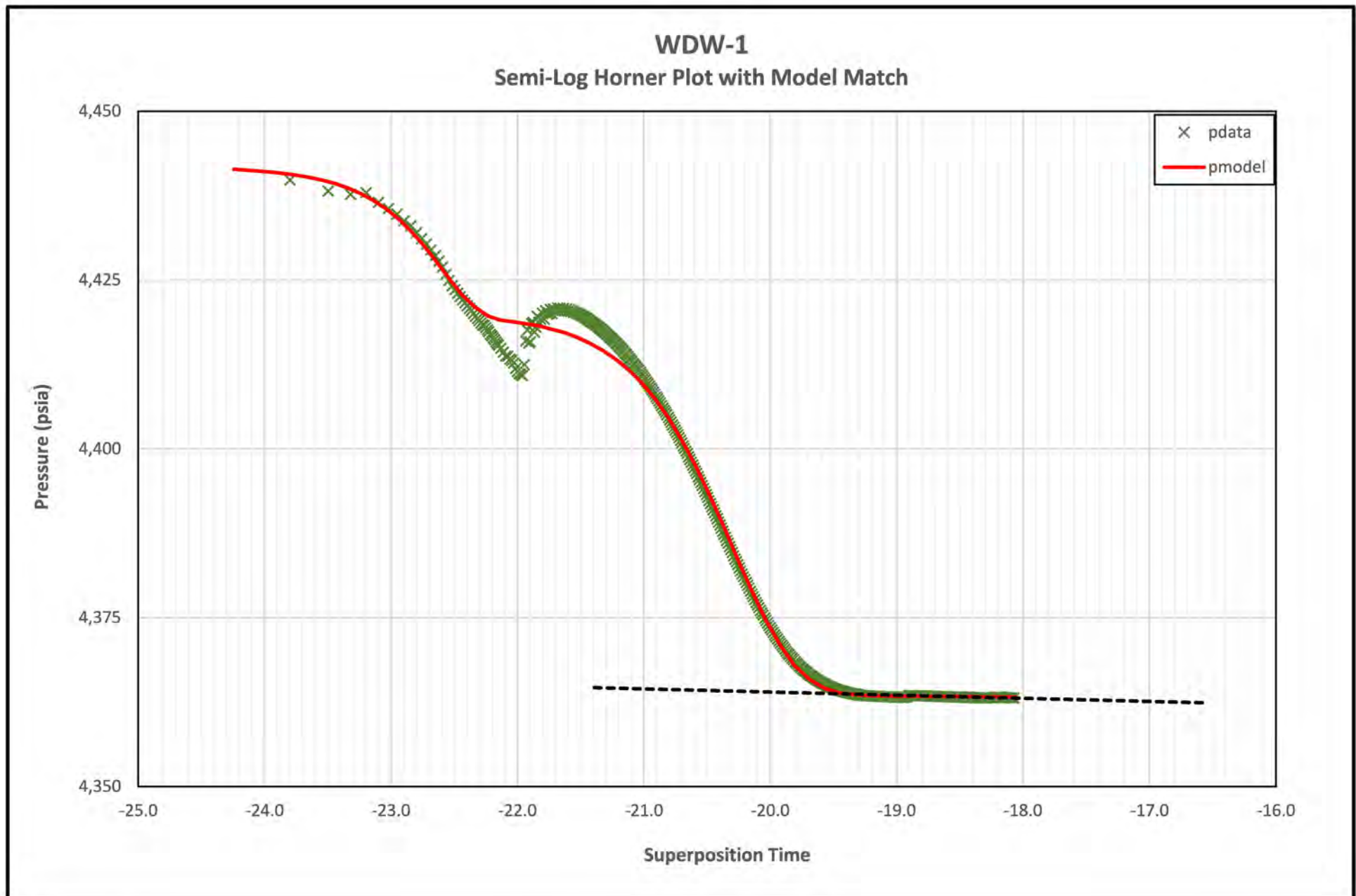
**Figure 8**

Cartesian Plot of Pressure Falloff with Model Match  
2023 Well Testing



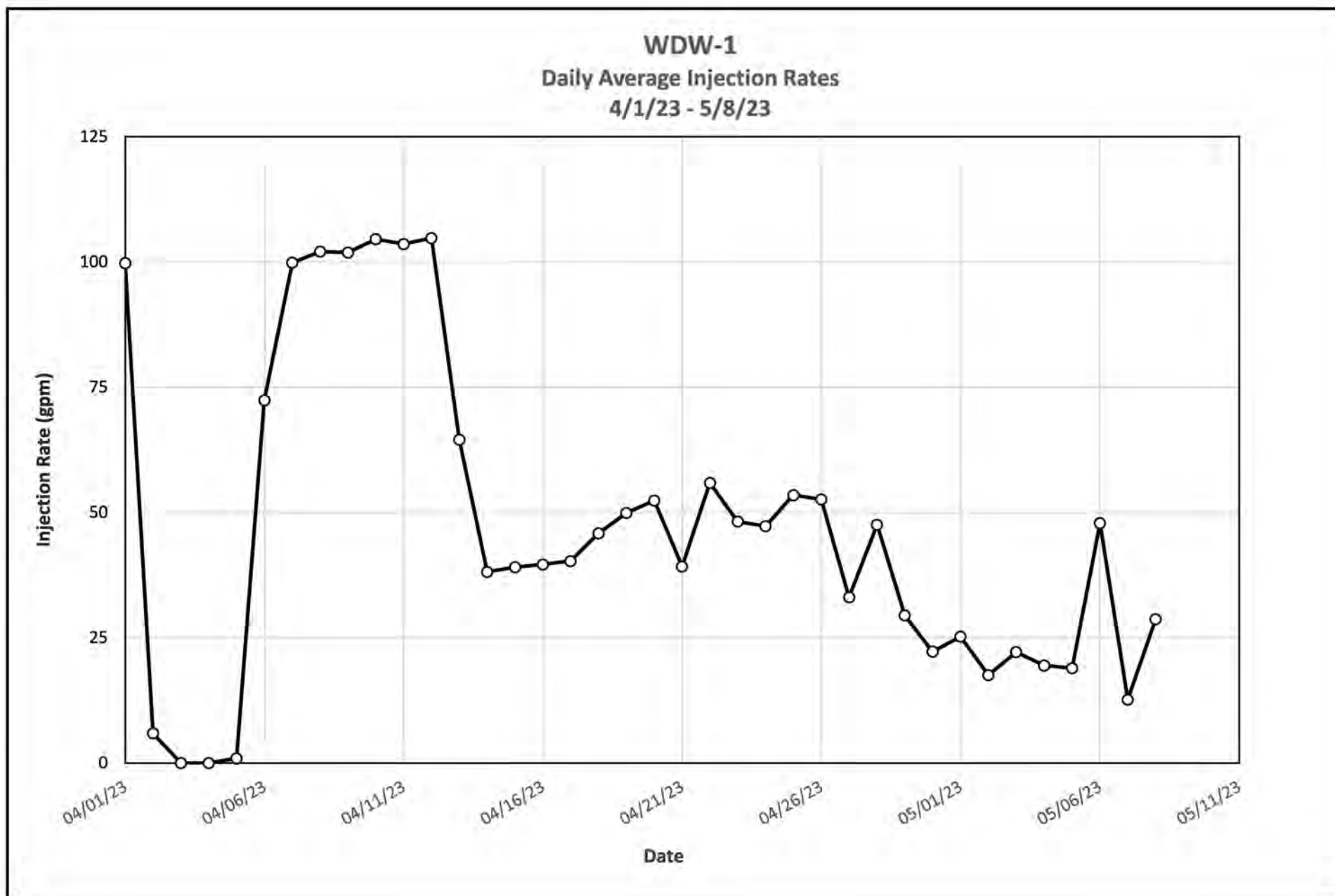






**Figure 10**  
Semi-Log Horner Plot with Model Match  
2022 Well Testing

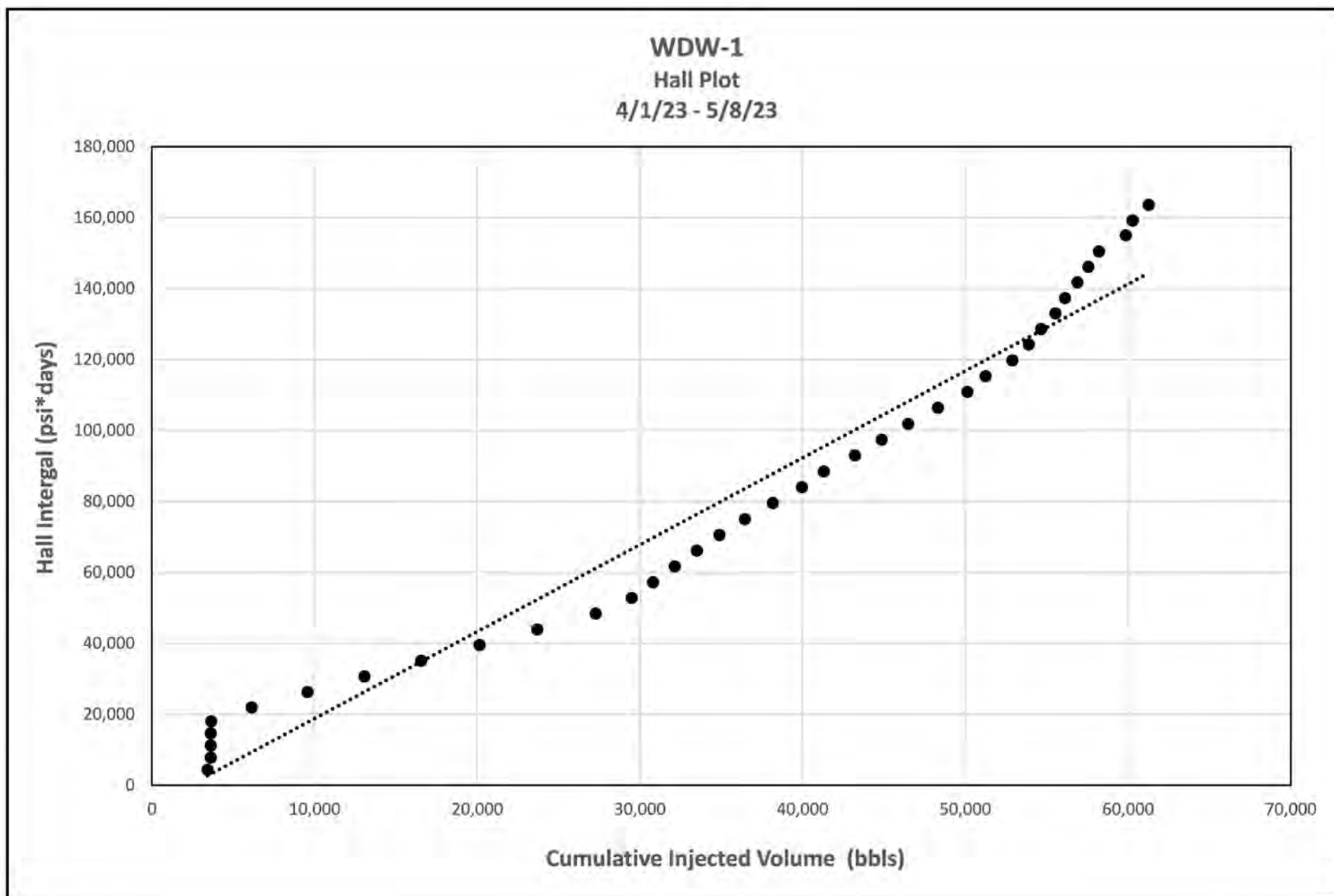




**Figure 11**  
Daily Average Injection Rates  
2023 Well Testing







# ATTACHMENTS

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***Petrotek***



# Attachment 1 OCD Test Notification

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***Petrotek***

Office  
 District I - (575) 393-6161  
 1625 N. French Dr., Hobbs, NM 88240  
 District II - (575) 748-1283  
 811 S. First St., Artesia, NM 88210  
 District III - (505) 334-6178  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV - (505) 476-3460  
 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. 30-015-27592
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. B-2071-28
7. Lease Name or Unit Agreement Name Mewbourne WDW-1
8. Well Number: WDW-1
9. OGRID Number: 15694
10. Pool name or Wildcat PENN 96918

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (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 <input type="checkbox"/> Gas Well <input type="checkbox"/> Other - UIC Injection Well	
2. Name of Operator HF SINCLAIR NAVAJO REFINERY LLC	
3. Address of Operator P.O. Box 159, Artesia, NM 88210	
4. Well Location Unit Letter <u>O</u> <u>660</u> feet from the <u>South</u> line and <u>2,310</u> feet from the <u>EAST</u> line Section <u>31</u> Township <u>17S</u> Range <u>28E</u> NMPM County: <u>EDDY</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3,678' GL	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

<b>NOTICE OF INTENTION TO:</b> PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/> DOWNHOLE COMMINGLE <input type="checkbox"/> CLOSED-LOOP SYSTEM <input type="checkbox"/> OTHER: PRESSURE FALLOFF TEST / MIT <input checked="" type="checkbox"/>	<b>SUBSEQUENT REPORT OF:</b> REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/> CASING/CEMENT JOB <input type="checkbox"/> OTHER: <input type="checkbox"/>
---	---

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.

**May 7, 2023; Day 1:** Begin constant-rate injection (+/- 10%) into Mewbourne WDW-1 as well as the three (3) offset wells for at least 30 hours prior to shut-in of WDW-1 for falloff testing. Target rate for WDW-1 is approximately 160 gpm. Wellhead pressure will not exceed 1,400 psig. Plant personnel will record rate, volume and pressure during the constant-rate injection period to ensure steady flow for analysis. Samples of the injectate will be collected approximately every 10 hours and analyzed for pH and specific gravity.

**May 8, 2023; Day 2:** Continue constant-rate injection into all four (4) wells.

**May 9, 2023; Day 3:** While injection continues, run dual downhole memory gauges to test depth making flowing gradient stops every 1,000 feet. Collect pressure data at test depth for at least 1 hour while injecting at constant rate. Shut in WDW-1 and collect falloff data for a minimum of 30 hours. WDW-2, WDW-3 and WDW-4 will continue injection at constant rate until downhole memory gauges are pulled from WDW-1.

**May 10, 2023; Day 4:** WDW-1 will remain shut-in while collecting falloff pressure data using downhole memory gauges.

**May 11, 2023; Day 5:** After a minimum of 30 hours of falloff data collection, remove gauges from the well making 5-minute gradient stops every 1,000 feet. Note the top of fill will be tagged either with gauges prior to pulling from the well, or on a second run with sinker bars after gauges are removed (TBD). Conduct MIT for a minimum of 30 minutes recording data electronically. Rig down wireline and return well to service.

Spud Date:

Rig Release Date:

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

SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Type or print name \_\_\_\_\_ E-mail address: \_\_\_\_\_ PHONE: \_\_\_\_\_

**For State Use Only**

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_



## Attachment 2 Annulus Pressure Test Gauge Certification

***Petrotek***



7200 E. Dry Creek Rd, STE C-102, Centennial, CO 80112

Ph. 303-804-0667 Cal.Lab@Apex-Instruments.com

# Calibration Certificate

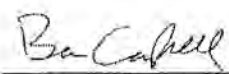
**Certificate Number: 223866****Customer:**Petrotek  
Littleton, CO**Manufacturer:** Crystal Engineering**Model Number:** XP2i 5000 psi**Serial Number:** 901241**Description:** Digital Test Gauge**Procedure:** CI-001**Calibrated To:** Manufacturer's Specifications**Technician:** Ben Campbell**Calibration Date:** 9/1/2022**Due Date:** 9/1/2023**As Found:** In Tolerance**As Left:** As Found**Temperature:** 71.5 F**Humidity:** 42.0 %**Issue Date:** 9/1/2022**Tolerance Specs:**

0 - 20%: +/- (0.02% of FS)

20% - 100%: +/- (0.1% of Rdg)

**Technician Notes:**

As Left Userspan: 1.00000

Approved Signatory: 

Apex Instruments certifies that the instrument listed above meets the specifications of the manufacturer at the completion of its calibration. The calibrations within the certificate are traceable through NIST or another National Metrology Institute to the International System of Units (SI).

Methods used are in accordance with the procedure listed above. This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

Unless otherwise contractually specified, a binary decision rule, utilizing simple acceptance, and simple rejection criteria will be used for the determination of compliance. When compliance statements are present, they are reported without factoring in the effects of uncertainty and the limits are defined by the manufacturer's stated accuracy.

This certificate does not guarantee the continued performance of the instrument listed above. Any modifications or services performed hereafter may void this certificate.

This certificate applies only to the item listed above and is not to be reproduced other than in full, except with prior written approval from Apex Instruments Inc.

Certificate Number: 220000

09/11/2022

Standards Used					
Description	Model Number	Serial Number	Calibration Date	Due Date	ID
Pressure Measurement Module - 1000 PSIA	PM600-A7M	3350002	9/28/2021	9/28/2022	APX00021
Pressure Measurement Module - 3000 PSIA	PM600-A20M	3260003	9/3/2021	9/3/2022	APX00022
Temp / RH Datalogger	UX100-011	21284718	1/31/2022	9/3/2022	APX09582
Digital Test Gauge	XP2i-S2 5000 psi	216492	8/5/2022	8/5/2023	APX10184

Crystal 22i 5000 PSI					
Manual Template	Found / Left				
Test Description	Nominal	Test Results	Tolerance (+/-)	UUT Error	Status
0 psi	0.00 psi	0.00 psi	1.00 psi	0.00 psi	Pass
1000 psi	1000.00 psi	1000.00 psi	1.00 psi	0.00 psi	Pass
2000 psi	2000.00 psi	2000.00 psi	2.00 psi	0.00 psi	Pass
3000 psi	3000.00 psi	3000.00 psi	3.00 psi	0.00 psi	Pass
4000 psi	4000.00 psi	4000.10 psi	4.00 psi	0.10 psi	Pass
5000 psi	5000.00 psi	5000.20 psi	5.00 psi	0.20 psi	Pass
4000 psi	4000.00 psi	4000.30 psi	4.00 psi	0.30 psi	Pass
3000 psi	3000.00 psi	3000.10 psi	3.00 psi	0.10 psi	Pass
2000 psi	2000.00 psi	2000.00 psi	2.00 psi	0.00 psi	Pass
1000 psi	1000.00 psi	1000.00 psi	1.00 psi	0.00 psi	Pass
0 psi	0.00 psi	0.00 psi	1.00 psi	0.00 psi	Pass

— End of measurement results—







## Attachment 3 Downhole Pressure Gauge Certification

***Petrotek***

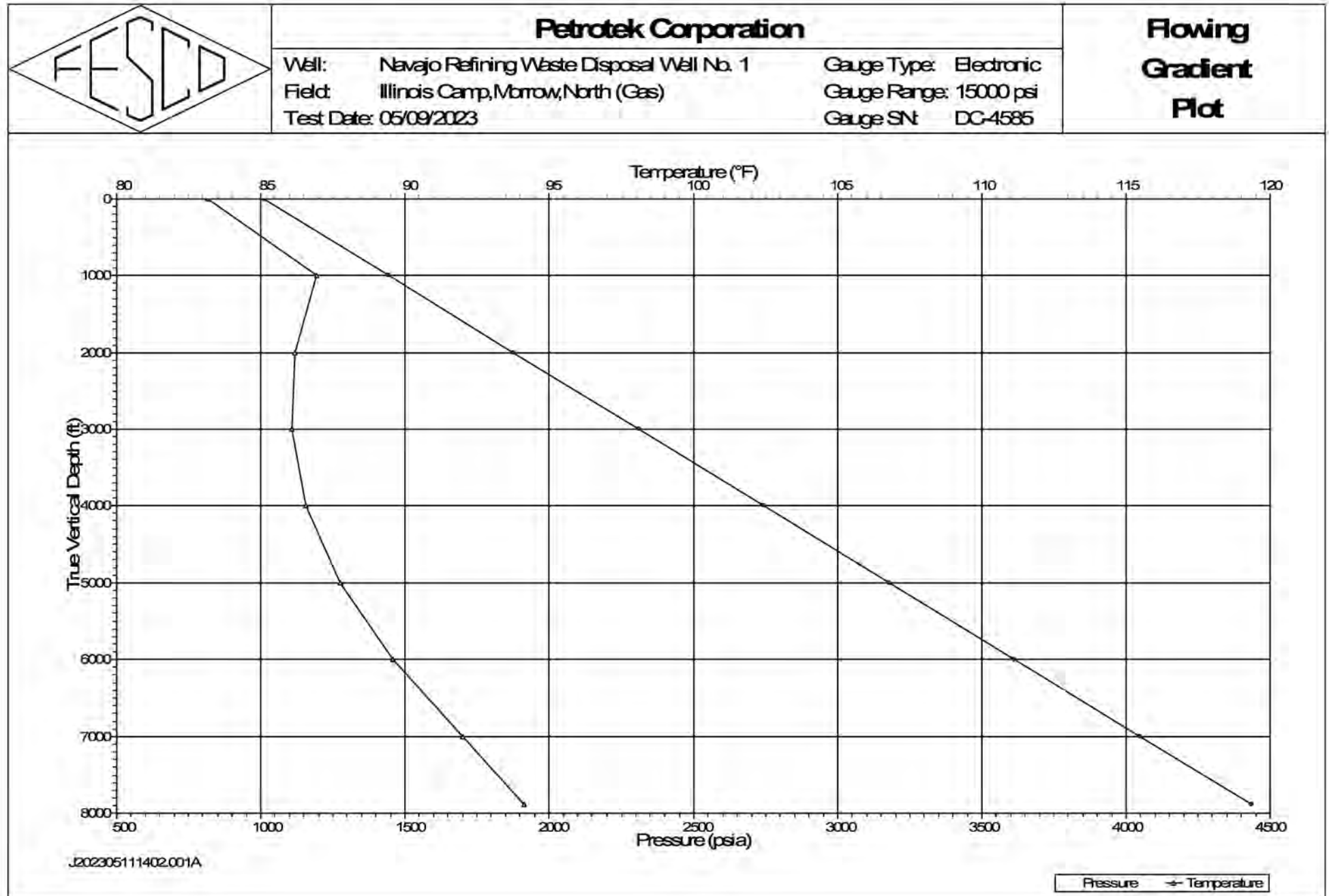
## Attachment 4 FESCO Injection Falloff Test Report



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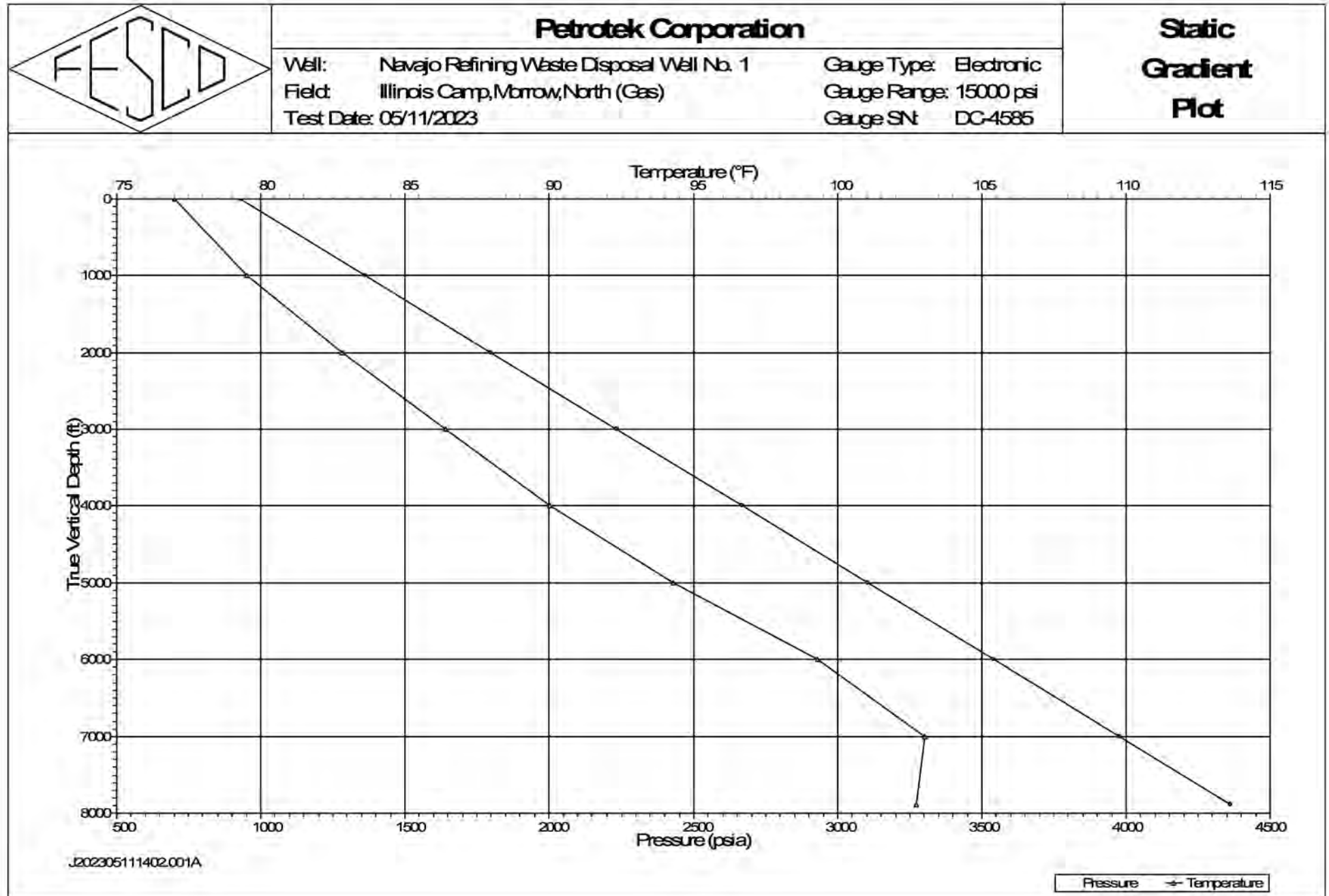
***Petrotek***

	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332							
FLOWING GRADIENT SURVEY								
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Formation: Unavailable		Test Date: 05/09/2023 Location: Eddy County, NM Status: Injecting water						
Well Data: Wellhead Connection: 4-1/16" 3k Flange Elevation: 13 ft above GL Tubing: 4.5" Set at 7879 ft (EOT) Casing: 7" Set at 9094 ft Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Datum: 8200 ft (MD)		Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"						
Depth	Pressure							Comments
MD ft	TVD ft	Delta Depth ft	WHP psia	BHT °F	Gauge Pressure psia	Delta Pressure psi	Pressure Gradient psi / ft	
0	0	0	1013	83.17	1010.25	0.00	0.0000	
1000	1000	1000		86.93	1442.31	432.06	0.4321	
2000	2000	1000		86.18	1874.36	432.05	0.4320	
3000	3000	1000		86.06	2310.08	435.72	0.4357	
4000	4000	1000		86.57	2744.01	433.93	0.4339	
5000	5000	1000		87.77	3178.67	434.66	0.4347	
6000	6000	1000		89.59	3614.07	435.40	0.4354	
7000	7000	1000		92.00	4049.82	435.75	0.4358	
7887	7887	887		94.11	4438.07	388.25	0.4377	
BHT at Test Depth: 94.11 °F Extrapolated BHP at Datum: 4575.07 psia BHP Gradient at Datum : 0.4377 psi/ft				Oil Level: Injecting Water Level: Injecting Csg Press: 430 psig		Previous BHP: U/A BHP Change: U/A		
Remarks: RIH with electronic gauge making injecting gradient stops to 7887 ft. Flow well for 1 hrs. SI well for 43.85-hr falloff test. POOH making static gradient stops to surface. RDMO.								
Certified: FESCO, Ltd. - Midland, TX  By: <u>Michael Carnes</u> District Manager - (432) 332-3211								
Job No.: J202305111402.001A								

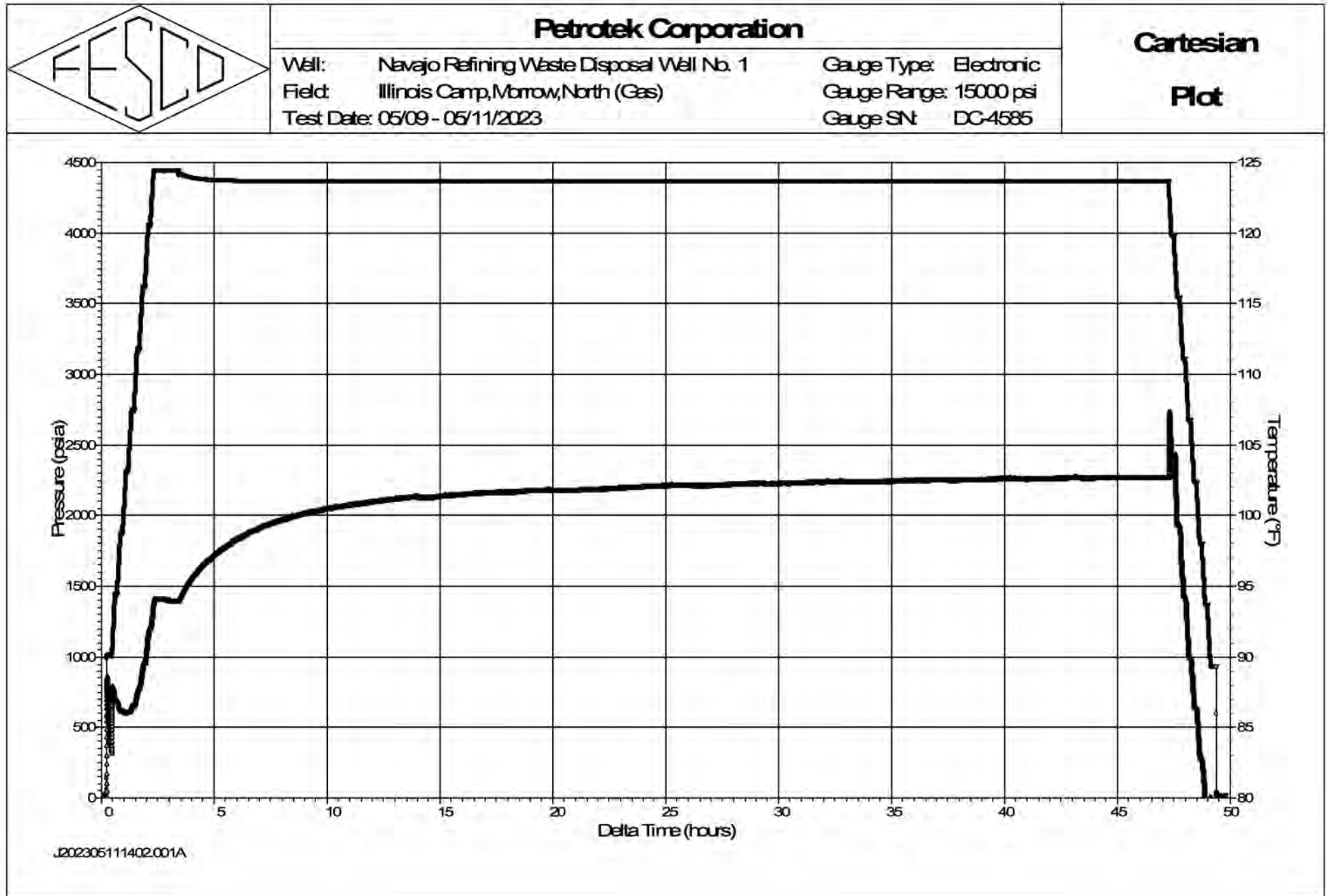


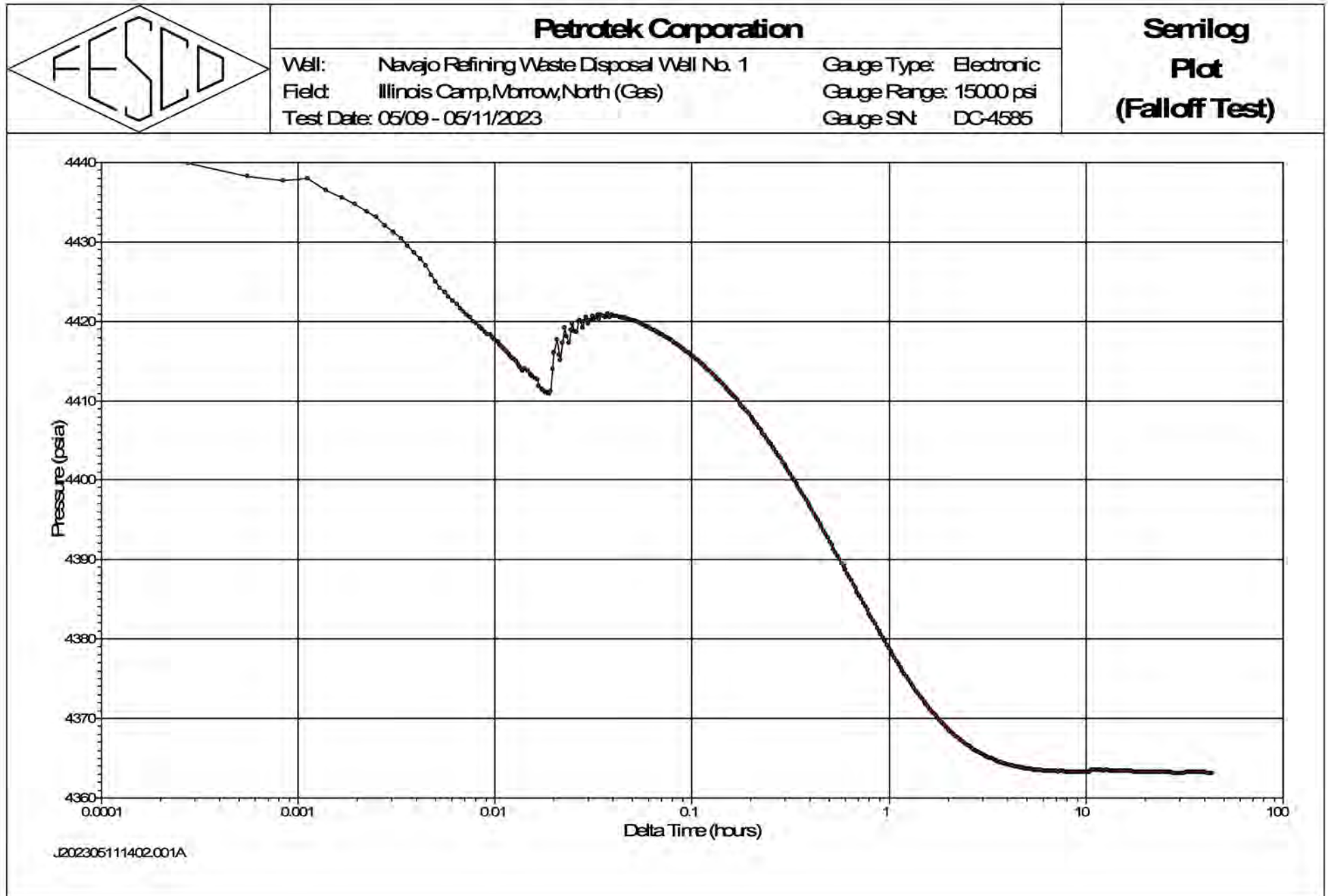


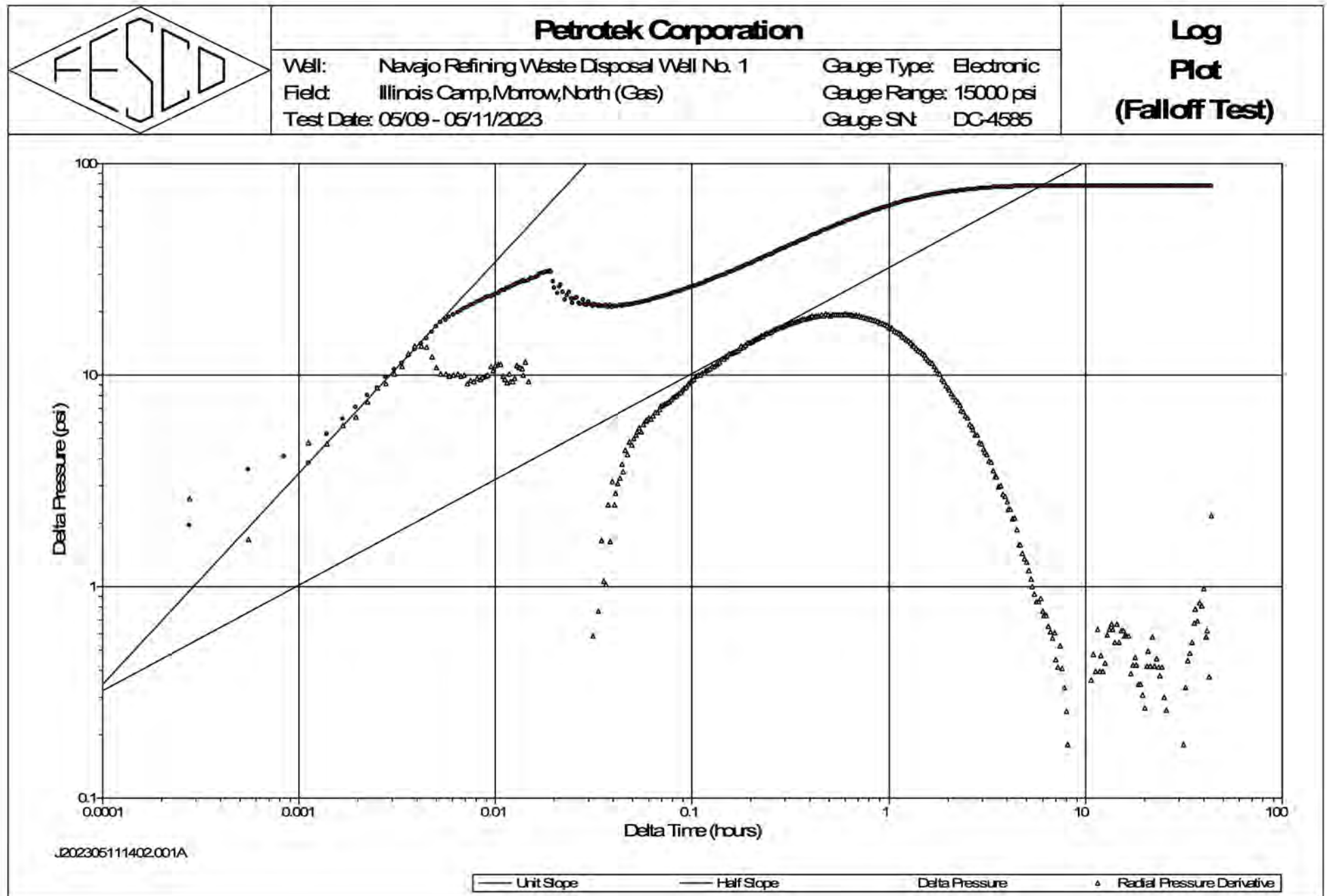
	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332							
STATIC GRADIENT SURVEY								
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Formation: Unavailable		Test Date: 05/11/2023 Location: Eddy County, NM Status: SI 43.9 hrs						
Well Data: Wellhead Connection: 4-1/16" 3k Flange Elevation: 13 ft above GL Tubing: 4.5" Set at 7879 ft (EOT) Casing: 7" Set at 9094 ft Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Datum: 8200 ft (MD)		Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"						
<b>Depth</b>	<b>Pressure</b>		<b>Comments</b>					
<b>MD ft</b>	<b>TVD ft</b>	<b>Delta Depth ft</b>		<b>WHP psia</b>	<b>BHT °F</b>	<b>Gauge Pressure psia</b>	<b>Delta Pressure psi</b>	<b>Pressure Gradient psi / ft</b>
0	0	0		77.00	927.86	0.00	0.0000	Water level at surface.
1000	1000	1000		79.52	1362.35	434.49	0.4345	
2000	2000	1000		82.84	1797.97	435.62	0.4356	
3000	3000	1000		86.39	2233.55	435.58	0.4356	
4000	4000	1000		90.01	2669.31	435.76	0.4358	
5000	5000	1000		94.32	3105.31	436.00	0.4360	
6000	6000	1000		99.31	3540.87	435.56	0.4356	
7000	7000	1000		103.03	3977.73	436.86	0.4369	
7887	7887	887		102.72	4363.12	385.39	0.4345	
BHT at Test Depth: 102.72 °F Extrapolated BHP at Datum: 4499.12 psia BHP Gradient at Datum : 0.4345 psi/ft				Oil Level: None Water Level: Surface Csg Press: 600 psig		Previous BHP: U/A BHP Change: U/A		
Remarks: POOH after 43.85-hr falloff test making static gradient stops to surface. RDMO.								
<div style="text-align: right;">           Certified: FESCO, Ltd. - Midland, TX             By: <u>Michael Carnes</u>            District Manager - (432) 332-3211         </div>								
Job No.: J202305111402.001A								























		<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
		<b>RESERVOIR PRESSURE FALLOFF TEST</b>						
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable							Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments	
05/09/23	09:17:00	-3.41833		18.77		77.09	Powered up gauge.	
05/09/23	09:20:00	-3.36833		19.11		78.71		
05/09/23	09:25:00	-3.28500		21.11		79.63		
05/09/23	09:30:00	-3.20167		20.31		79.18		
05/09/23	09:31:00	-3.18500		20.20		79.24		
05/09/23	09:32:00	-3.16833		20.17		79.30		
05/09/23	09:32:23	-3.16194		992.46		84.91	Pressured up lubricator.	
05/09/23	09:33:00	-3.15167		1007.41		88.56		
05/09/23	09:34:00	-3.13500		1008.83		87.60		
05/09/23	09:35:00	-3.11833		1009.01		87.12		
05/09/23	09:36:00	-3.10167		1008.58		86.59		
05/09/23	09:37:00	-3.08500		1008.83		86.02		
05/09/23	09:38:00	-3.06833		1009.22		85.42		
05/09/23	09:39:00	-3.05167		1008.38		84.91		
05/09/23	09:40:00	-3.03500		1008.24		84.48		
05/09/23	09:41:00	-3.01833		1008.38		84.14		
05/09/23	09:42:00	-3.00167		1008.53		83.90		
05/09/23	09:43:00	-2.98500		1007.02		83.68		
05/09/23	09:44:00	-2.96833		1008.95		83.43		
05/09/23	09:45:00	-2.95167		1007.79		83.26		
05/09/23	09:45:58	-2.93556		1010.81		83.18	Casing Pressure = 430 psig.	
05/09/23	09:45:59	-2.93528	1013	1010.25		83.17	RIH making injecting gradient stops.	
05/09/23	09:46:00	-2.93500		1009.13		83.16		
05/09/23	09:47:00	-2.91833		1050.70		87.92		
05/09/23	09:47:17	-2.91361		1062.41		87.95	BHT began decreasing while RIH.	
05/09/23	09:48:00	-2.90167		1096.39		87.92		
05/09/23	09:49:00	-2.88500		1151.11		87.78		
05/09/23	09:50:00	-2.86833		1206.45		87.67		
05/09/23	09:51:00	-2.85167		1265.26		87.49		
05/09/23	09:52:00	-2.83500		1325.43		87.30		
05/09/23	09:53:00	-2.81833		1383.89		87.12		
05/09/23	09:54:00	-2.80167		1436.19		86.97		
05/09/23	09:54:10	-2.79889		1441.13		86.95	Arrived at 1000 ft stop.	
05/09/23	09:55:00	-2.78500		1442.55		86.93		
05/09/23	09:56:00	-2.76833		1440.59		86.93		
05/09/23	09:57:00	-2.75167		1441.06		86.93		
05/09/23	09:58:00	-2.73500		1442.90		86.93		
05/09/23	09:59:00	-2.71833		1442.17		86.93		

		<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
		<b>RESERVOIR PRESSURE FALLOFF TEST</b>						
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp,Morrow,North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable							Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments	
05/09/23	09:59:20	-2.71278		1442.31		86.93	Left 1000 ft stop.	
05/09/23	10:00:00	-2.70167		1471.38		86.88		
05/09/23	10:01:00	-2.68500		1515.40		86.78		
05/09/23	10:02:00	-2.66833		1559.72		86.68		
05/09/23	10:03:00	-2.65167		1604.27		86.58		
05/09/23	10:04:00	-2.63500		1648.92		86.51		
05/09/23	10:05:00	-2.61833		1693.44		86.43		
05/09/23	10:06:00	-2.60167		1737.98		86.36		
05/09/23	10:07:00	-2.58500		1782.13		86.30		
05/09/23	10:08:00	-2.56833		1827.50		86.24		
05/09/23	10:09:00	-2.55167		1869.99		86.20		
05/09/23	10:09:08	-2.54944		1874.85		86.19	Arrived at 2000 ft stop.	
05/09/23	10:10:00	-2.53500		1875.73		86.18		
05/09/23	10:11:00	-2.51833		1874.46		86.18		
05/09/23	10:12:00	-2.50167		1876.71		86.18		
05/09/23	10:13:00	-2.48500		1877.54		86.18		
05/09/23	10:14:00	-2.46833		1875.42		86.18		
05/09/23	10:14:22	-2.46222		1874.36		86.18	Left 2000 ft stop.	
05/09/23	10:15:00	-2.45167		1901.53		86.16		
05/09/23	10:16:00	-2.43500		1947.90		86.13		
05/09/23	10:17:00	-2.41833		1991.08		86.09		
05/09/23	10:18:00	-2.40167		2036.43		86.07		
05/09/23	10:19:00	-2.38500		2082.25		86.05		
05/09/23	10:20:00	-2.36833		2126.19		86.04		
05/09/23	10:21:00	-2.35167		2173.22		86.03		
05/09/23	10:22:00	-2.33500		2219.47		86.03		
05/09/23	10:23:00	-2.31833		2262.47		86.04		
05/09/23	10:24:00	-2.30167		2306.29		86.05		
05/09/23	10:24:04	-2.30056		2309.88		86.05	Arrived at 3000 ft stop.	
05/09/23	10:25:00	-2.28500		2309.69		86.06		
05/09/23	10:26:00	-2.26833		2308.64		86.06		
05/09/23	10:27:00	-2.25167		2310.11		86.06		
05/09/23	10:28:00	-2.23500		2310.67		86.06		
05/09/23	10:29:00	-2.21833		2310.43		86.06		
05/09/23	10:29:13	-2.21472		2310.08		86.06	Left 3000 ft stop.	
05/09/23	10:29:34	-2.20889		2323.35		86.06	BHT resumed increasing while RIH.	
05/09/23	10:30:00	-2.20167		2340.93		86.07		
05/09/23	10:31:00	-2.18500		2386.85		86.10		

		<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
		<b>RESERVOIR PRESSURE FALLOFF TEST</b>						
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp,Morrow,North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable							Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments	
05/09/23	10:32:00	-2.16833		2432.88		86.13		
05/09/23	10:33:00	-2.15167		2481.64		86.17		
05/09/23	10:34:00	-2.13500		2527.15		86.22		
05/09/23	10:35:00	-2.11833		2572.35		86.28		
05/09/23	10:36:00	-2.10167		2619.45		86.34		
05/09/23	10:37:00	-2.08500		2668.30		86.41		
05/09/23	10:38:00	-2.06833		2712.75		86.49		
05/09/23	10:38:50	-2.05444		2744.23		86.55	Arrived at 4000 ft stop.	
05/09/23	10:39:00	-2.05167		2743.77		86.56		
05/09/23	10:40:00	-2.03500		2743.86		86.57		
05/09/23	10:41:00	-2.01833		2745.03		86.57		
05/09/23	10:42:00	-2.00167		2744.13		86.57		
05/09/23	10:43:00	-1.98500		2745.53		86.57		
05/09/23	10:44:00	-1.96833		2743.34		86.57		
05/09/23	10:44:20	-1.96278		2744.01		86.57	Left 4000 ft stop.	
05/09/23	10:45:00	-1.95167		2771.68		86.60		
05/09/23	10:46:00	-1.93500		2818.04		86.69		
05/09/23	10:47:00	-1.91833		2865.06		86.80		
05/09/23	10:48:00	-1.90167		2912.90		86.92		
05/09/23	10:49:00	-1.88500		2960.55		87.04		
05/09/23	10:50:00	-1.86833		3008.12		87.17		
05/09/23	10:51:00	-1.85167		3055.50		87.31		
05/09/23	10:52:00	-1.83500		3102.60		87.45		
05/09/23	10:53:00	-1.81833		3151.59		87.62		
05/09/23	10:53:36	-1.80833		3177.18		87.72	Arrived at 5000 ft stop.	
05/09/23	10:54:00	-1.80167		3178.40		87.75		
05/09/23	10:55:00	-1.78500		3178.79		87.76		
05/09/23	10:56:00	-1.76833		3179.31		87.77		
05/09/23	10:57:00	-1.75167		3178.59		87.77		
05/09/23	10:58:00	-1.73500		3178.94		87.77		
05/09/23	10:58:53	-1.72028		3178.67		87.77	Left 5000 ft stop.	
05/09/23	10:59:00	-1.71833		3181.76		87.77		
05/09/23	11:00:00	-1.70167		3224.85		87.90		
05/09/23	11:01:00	-1.68500		3272.48		88.08		
05/09/23	11:02:00	-1.66833		3319.17		88.26		
05/09/23	11:03:00	-1.65167		3365.55		88.45		
05/09/23	11:04:00	-1.63500		3414.48		88.64		
05/09/23	11:05:00	-1.61833		3462.43		88.83		





 PETROLEUM ENGINEERS		FESCO, Ltd. 1000 Fesco Ave. - Alice, Texas 78332					 PETROLEUM ENGINEERS	
		RESERVOIR PRESSURE FALLOFF TEST						
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp,Morrow,North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable							Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments	
05/09/23	11:06:00	-1.60167		3510.10		89.03		
05/09/23	11:07:00	-1.58500		3558.11		89.24		
05/09/23	11:08:00	-1.56833		3604.99		89.47		
05/09/23	11:08:14	-1.56444		3613.62		89.53	Arrived at 6000 ft stop.	
05/09/23	11:09:00	-1.55167		3614.12		89.58		
05/09/23	11:10:00	-1.53500		3613.81		89.59		
05/09/23	11:11:00	-1.51833		3614.64		89.59		
05/09/23	11:12:00	-1.50167		3613.40		89.59		
05/09/23	11:13:00	-1.48500		3612.88		89.59		
05/09/23	11:13:23	-1.47861		3614.07		89.59	Left 6000 ft stop.	
05/09/23	11:14:00	-1.46833		3630.18		89.62		
05/09/23	11:15:00	-1.45167		3676.65		89.83		
05/09/23	11:16:00	-1.43500		3724.27		90.05		
05/09/23	11:17:00	-1.41833		3770.82		90.28		
05/09/23	11:18:00	-1.40167		3817.51		90.53		
05/09/23	11:19:00	-1.38500		3864.31		90.80		
05/09/23	11:20:00	-1.36833		3910.38		91.08		
05/09/23	11:21:00	-1.35167		3957.32		91.39		
05/09/23	11:22:00	-1.33500		4004.08		91.69		
05/09/23	11:23:00	-1.31833		4046.89		91.92		
05/09/23	11:23:07	-1.31639		4049.65		91.94	Arrived at 7000 ft stop.	
05/09/23	11:24:00	-1.30167		4049.80		91.98		
05/09/23	11:25:00	-1.28500		4049.78		91.99		
05/09/23	11:26:00	-1.26833		4049.88		91.99		
05/09/23	11:27:00	-1.25167		4050.09		92.00		
05/09/23	11:28:00	-1.23500		4049.80		92.00		
05/09/23	11:28:16	-1.23056		4049.82		92.00	Left 7000 ft stop.	
05/09/23	11:29:00	-1.21833		4077.52		92.07		
05/09/23	11:30:00	-1.20167		4123.96		92.30		
05/09/23	11:31:00	-1.18500		4170.31		92.55		
05/09/23	11:32:00	-1.16833		4216.23		92.81		
05/09/23	11:33:00	-1.15167		4263.24		93.06		
05/09/23	11:34:00	-1.13500		4309.57		93.33		
05/09/23	11:35:00	-1.11833		4355.56		93.60		
05/09/23	11:36:00	-1.10167		4400.14		93.86		
05/09/23	11:37:00	-1.08500		4423.90		94.00		
05/09/23	11:37:50	-1.07111		4437.94		94.09	Softset gauge at 7887 ft.	
05/09/23	11:38:00	-1.06833		4437.94		94.10		



	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332	
RESERVOIR PRESSURE FALLOFF TEST		
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"



  



Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	11:39:00	-1.05167		4438.03		94.11	
05/09/23	11:40:00	-1.03500		4438.06		94.11	
05/09/23	11:41:00	-1.01833		4438.04		94.11	
05/09/23	11:42:00	-1.00167		4438.10		94.11	
05/09/23	11:43:00	-0.98500		4438.05		94.11	
05/09/23	11:44:00	-0.96833		4438.07		94.11	
05/09/23	11:45:00	-0.95167		4438.09		94.11	
05/09/23	11:46:00	-0.93500		4437.96		94.11	
05/09/23	11:47:00	-0.91833		4437.90		94.11	
05/09/23	11:48:00	-0.90167		4437.91		94.11	
05/09/23	11:49:00	-0.88500		4437.96		94.11	
05/09/23	11:50:00	-0.86833		4437.93		94.11	
05/09/23	11:51:00	-0.85167		4437.95		94.11	
05/09/23	11:52:00	-0.83500		4437.97		94.11	
05/09/23	11:53:00	-0.81833		4438.01		94.11	
05/09/23	11:54:00	-0.80167		4438.00		94.11	
05/09/23	11:55:00	-0.78500		4437.98		94.11	
05/09/23	11:56:00	-0.76833		4438.04		94.11	
05/09/23	11:57:00	-0.75167		4438.04		94.11	
05/09/23	11:58:00	-0.73500		4438.11		94.11	
05/09/23	11:59:00	-0.71833		4438.09		94.11	
05/09/23	12:00:00	-0.70167		4438.09		94.11	
05/09/23	12:01:00	-0.68500		4438.10		94.11	
05/09/23	12:02:00	-0.66833		4438.16		94.11	
05/09/23	12:03:00	-0.65167		4438.19		94.11	
05/09/23	12:03:52	-0.63722		4438.07		94.11	7887 ft stop.
05/09/23	12:04:00	-0.63500		4438.08		94.11	
05/09/23	12:05:00	-0.61833		4438.53		94.11	
05/09/23	12:06:00	-0.60167		4439.08		94.10	
05/09/23	12:07:00	-0.58500		4439.46		94.08	
05/09/23	12:08:00	-0.56833		4439.85		94.07	
05/09/23	12:09:00	-0.55167		4440.16		94.06	
05/09/23	12:10:00	-0.53500		4440.40		94.04	
05/09/23	12:11:00	-0.51833		4440.59		94.03	
05/09/23	12:12:00	-0.50167		4440.78		94.02	
05/09/23	12:13:00	-0.48500		4440.90		94.01	
05/09/23	12:14:00	-0.46833		4441.06		94.01	
05/09/23	12:15:00	-0.45167		4441.16		94.00	

	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
RESERVOIR PRESSURE FALLOFF TEST							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"					
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	12:16:00	-0.43500		4441.26		93.99	
05/09/23	12:17:00	-0.41833		4441.35		93.99	
05/09/23	12:18:00	-0.40167		4441.41		93.98	
05/09/23	12:19:00	-0.38500		4441.53		93.98	
05/09/23	12:20:00	-0.36833		4441.61		93.97	
05/09/23	12:21:00	-0.35167		4441.63		93.97	
05/09/23	12:22:00	-0.33500		4441.68		93.97	
05/09/23	12:23:00	-0.31833		4441.72		93.96	
05/09/23	12:24:00	-0.30167		4441.72		93.96	
05/09/23	12:25:00	-0.28500		4441.79		93.95	
05/09/23	12:26:00	-0.26833		4441.78		93.95	
05/09/23	12:27:00	-0.25167		4441.86		93.95	
05/09/23	12:28:00	-0.23500		4441.93		93.94	
05/09/23	12:29:00	-0.21833		4441.93		93.94	
05/09/23	12:30:00	-0.20167		4441.84		93.94	
05/09/23	12:31:00	-0.18500		4441.98		93.94	
05/09/23	12:32:00	-0.16833		4441.97		93.93	
05/09/23	12:33:00	-0.15167		4442.02		93.93	
05/09/23	12:34:00	-0.13500		4441.98		93.93	
05/09/23	12:35:00	-0.11833		4442.06		93.93	
05/09/23	12:36:00	-0.10167		4442.11		93.92	
05/09/23	12:37:00	-0.08500		4442.12		93.92	
05/09/23	12:38:00	-0.06833		4442.15		93.92	
05/09/23	12:39:00	-0.05167		4442.17		93.92	
05/09/23	12:40:00	-0.03500		4442.18		93.92	
05/09/23	12:41:00	-0.01833		4442.22		93.92	
05/09/23	12:42:00	-0.00167		4441.83		93.92	
05/09/23	12:42:04	-0.00056		4441.81		93.92	Casing Pressure = 430 psig.
05/09/23	12:42:05	-0.00028		4441.78		93.92	Fluid Rates = Unavailable
05/09/23	12:42:06	0.00000		4441.77	0.00	93.92	Shut in well for ? hr falloff test.
05/09/23	12:42:07	0.00028		4439.83	-1.94	93.92	
05/09/23	12:42:08	0.00056		4438.19	-3.58	93.92	
05/09/23	12:42:09	0.00083		4437.68	-4.09	93.92	
05/09/23	12:42:10	0.00111		4437.94	-3.83	93.92	
05/09/23	12:42:11	0.00139		4436.52	-5.25	93.92	
05/09/23	12:42:12	0.00167		4435.58	-6.19	93.92	
05/09/23	12:42:13	0.00194		4434.75	-7.02	93.92	
05/09/23	12:42:14	0.00222		4433.77	-8.00	93.92	







 <b>FESCO</b> PETROLEUM ENGINEERS	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332	 <b>FESCO</b> PETROLEUM ENGINEERS					
RESERVOIR PRESSURE FALLOFF TEST							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"					
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	12:42:15	0.00250		4433.04	-8.73	93.92	
05/09/23	12:42:16	0.00278		4432.03	-9.74	93.92	
05/09/23	12:42:17	0.00306		4431.17	-10.60	93.92	
05/09/23	12:42:18	0.00333		4430.34	-11.43	93.92	
05/09/23	12:42:19	0.00361		4429.47	-12.30	93.93	
05/09/23	12:42:20	0.00389		4428.59	-13.18	93.93	
05/09/23	12:42:21	0.00417		4427.78	-13.99	93.93	
05/09/23	12:42:22	0.00444		4426.94	-14.83	93.93	
05/09/23	12:42:23	0.00472		4425.84	-15.93	93.94	
05/09/23	12:42:24	0.00500		4424.93	-16.84	93.94	
05/09/23	12:42:25	0.00528		4424.11	-17.66	93.94	
05/09/23	12:42:26	0.00556		4423.56	-18.21	93.95	
05/09/23	12:42:27	0.00583		4423.03	-18.74	93.95	
05/09/23	12:42:28	0.00611		4422.53	-19.24	93.95	
05/09/23	12:42:29	0.00639		4422.08	-19.69	93.96	
05/09/23	12:42:30	0.00667		4421.63	-20.14	93.96	
05/09/23	12:42:31	0.00694		4421.22	-20.55	93.97	
05/09/23	12:42:32	0.00722		4420.81	-20.96	93.97	
05/09/23	12:42:33	0.00750		4420.47	-21.30	93.97	
05/09/23	12:42:34	0.00778		4420.03	-21.74	93.98	
05/09/23	12:42:35	0.00806		4419.67	-22.10	93.98	
05/09/23	12:42:36	0.00833		4419.30	-22.47	93.99	
05/09/23	12:42:37	0.00861		4419.01	-22.76	93.99	
05/09/23	12:42:38	0.00889		4418.65	-23.12	93.99	
05/09/23	12:42:39	0.00917		4418.35	-23.42	94.00	
05/09/23	12:42:40	0.00944		4418.30	-23.47	94.00	
05/09/23	12:42:41	0.00972		4417.95	-23.82	94.00	
05/09/23	12:42:42	0.01000		4417.63	-24.14	94.00	
05/09/23	12:42:43	0.01028		4417.35	-24.42	94.01	
05/09/23	12:42:44	0.01056		4416.97	-24.80	94.01	
05/09/23	12:42:45	0.01083		4416.73	-25.04	94.01	
05/09/23	12:42:46	0.01111		4416.45	-25.32	94.02	
05/09/23	12:42:47	0.01139		4416.14	-25.63	94.02	
05/09/23	12:42:48	0.01167		4415.88	-25.89	94.02	
05/09/23	12:42:49	0.01194		4415.62	-26.15	94.02	
05/09/23	12:42:50	0.01222		4415.36	-26.41	94.02	
05/09/23	12:42:51	0.01250		4415.23	-26.54	94.03	
05/09/23	12:42:52	0.01278		4414.92	-26.85	94.03	

	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
RESERVOIR PRESSURE FALLOFF TEST							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"					
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	12:42:53	0.01306		4414.57	-27.20	94.03	
05/09/23	12:42:54	0.01333		4414.32	-27.45	94.03	
05/09/23	12:42:55	0.01361		4414.04	-27.73	94.03	
05/09/23	12:42:56	0.01389		4413.74	-28.03	94.03	
05/09/23	12:42:57	0.01417		4414.02	-27.75	94.04	
05/09/23	12:42:59	0.01472		4413.71	-28.06	94.04	
05/09/23	12:43:00	0.01500		4413.29	-28.48	94.04	
05/09/23	12:43:01	0.01528		4413.21	-28.56	94.04	
05/09/23	12:43:02	0.01556		4413.10	-28.67	94.05	
05/09/23	12:43:04	0.01611		4412.74	-29.03	94.05	
05/09/23	12:43:05	0.01639		4412.61	-29.16	94.05	
05/09/23	12:43:06	0.01667		4411.89	-29.88	94.05	
05/09/23	12:43:08	0.01722		4411.47	-30.30	94.05	
05/09/23	12:43:09	0.01750		4411.27	-30.50	94.06	
05/09/23	12:43:11	0.01806		4411.06	-30.71	94.06	
05/09/23	12:43:12	0.01833		4410.97	-30.80	94.06	
05/09/23	12:43:13	0.01861		4410.88	-30.89	94.06	SIBHP began increasing.
05/09/23	12:43:14	0.01889		4410.87	-30.90	94.06	
05/09/23	12:43:15	0.01917		4411.21	-30.56	94.06	
05/09/23	12:43:17	0.01972		4413.98	-27.79	94.06	
05/09/23	12:43:18	0.02000		4416.02	-25.75	94.07	
05/09/23	12:43:20	0.02056		4417.60	-24.17	94.07	
05/09/23	12:43:22	0.02111		4415.73	-26.04	94.07	
05/09/23	12:43:23	0.02139		4415.06	-26.71	94.07	
05/09/23	12:43:25	0.02194		4417.20	-24.57	94.08	
05/09/23	12:43:27	0.02250		4419.09	-22.68	94.08	
05/09/23	12:43:29	0.02306		4418.06	-23.71	94.08	
05/09/23	12:43:31	0.02361		4417.29	-24.48	94.08	
05/09/23	12:43:33	0.02417		4418.95	-22.82	94.09	
05/09/23	12:43:35	0.02472		4419.76	-22.01	94.09	
05/09/23	12:43:37	0.02528		4418.76	-23.01	94.09	
05/09/23	12:43:39	0.02583		4418.66	-23.11	94.09	
05/09/23	12:43:41	0.02639		4419.93	-21.84	94.10	
05/09/23	12:43:43	0.02694		4420.09	-21.68	94.10	
05/09/23	12:43:46	0.02778		4419.20	-22.57	94.10	
05/09/23	12:43:48	0.02833		4420.02	-21.75	94.10	
05/09/23	12:43:50	0.02889		4420.50	-21.27	94.10	
05/09/23	12:43:53	0.02972		4419.69	-22.08	94.11	

	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
<b>RESERVOIR PRESSURE FALLOFF TEST</b>							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"					
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	12:43:55	0.03028		4420.09	-21.68	94.11	
05/09/23	12:43:58	0.03111		4420.68	-21.09	94.11	
05/09/23	12:44:00	0.03167		4420.13	-21.64	94.11	
05/09/23	12:44:03	0.03250		4420.50	-21.27	94.11	
05/09/23	12:44:06	0.03333		4420.72	-21.05	94.11	
05/09/23	12:44:08	0.03389		4420.30	-21.47	94.12	
05/09/23	12:44:11	0.03472		4420.73	-21.04	94.12	
05/09/23	12:44:14	0.03556		4420.70	-21.07	94.12	
05/09/23	12:44:17	0.03639		4420.46	-21.31	94.12	
05/09/23	12:44:20	0.03722		4420.89	-20.88	94.12	
05/09/23	12:44:23	0.03806		4420.51	-21.26	94.12	
05/09/23	12:44:27	0.03917		4420.83	-20.94	94.13	
05/09/23	12:44:30	0.04000		4420.58	-21.19	94.13	
05/09/23	12:44:33	0.04083		4420.59	-21.18	94.13	
05/09/23	12:44:37	0.04194		4420.60	-21.17	94.13	
05/09/23	12:44:40	0.04278		4420.47	-21.30	94.13	
05/09/23	12:44:44	0.04389		4420.56	-21.21	94.14	
05/09/23	12:44:47	0.04472		4420.34	-21.43	94.14	
05/09/23	12:44:51	0.04583		4420.47	-21.30	94.14	
05/09/23	12:44:55	0.04694		4420.24	-21.53	94.14	
05/09/23	12:44:59	0.04806		4420.29	-21.48	94.15	
05/09/23	12:45:03	0.04917		4420.12	-21.65	94.15	
05/09/23	12:45:07	0.05028		4420.11	-21.66	94.15	
05/09/23	12:45:11	0.05139		4419.99	-21.78	94.16	
05/09/23	12:45:15	0.05250		4419.91	-21.86	94.16	
05/09/23	12:45:20	0.05389		4419.84	-21.93	94.16	
05/09/23	12:45:24	0.05500		4419.66	-22.11	94.16	
05/09/23	12:45:29	0.05639		4419.61	-22.16	94.16	
05/09/23	12:45:34	0.05778		4419.45	-22.32	94.16	
05/09/23	12:45:38	0.05889		4419.35	-22.42	94.16	
05/09/23	12:45:43	0.06028		4419.25	-22.52	94.17	
05/09/23	12:45:48	0.06167		4419.08	-22.69	94.17	
05/09/23	12:45:54	0.06333		4418.93	-22.84	94.17	
05/09/23	12:45:59	0.06472		4418.83	-22.94	94.17	
05/09/23	12:46:04	0.06611		4418.66	-23.11	94.18	
05/09/23	12:46:10	0.06778		4418.52	-23.25	94.18	
05/09/23	12:46:16	0.06944		4418.39	-23.38	94.19	
05/09/23	12:46:21	0.07083		4418.28	-23.49	94.19	





	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
RESERVOIR PRESSURE FALLOFF TEST							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"					
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	12:46:27	0.07250		4418.11	-23.66	94.20	
05/09/23	12:46:33	0.07417		4417.94	-23.83	94.20	
05/09/23	12:46:40	0.07611		4417.75	-24.02	94.21	
05/09/23	12:46:46	0.07778		4417.62	-24.15	94.22	
05/09/23	12:46:52	0.07944		4417.48	-24.29	94.22	
05/09/23	12:46:59	0.08139		4417.30	-24.47	94.23	
05/09/23	12:47:06	0.08333		4417.12	-24.65	94.23	
05/09/23	12:47:13	0.08528		4416.93	-24.84	94.23	
05/09/23	12:47:20	0.08722		4416.76	-25.01	94.24	
05/09/23	12:47:27	0.08917		4416.59	-25.18	94.25	
05/09/23	12:47:35	0.09139		4416.40	-25.37	94.25	
05/09/23	12:47:42	0.09333		4416.23	-25.54	94.26	
05/09/23	12:47:50	0.09556		4416.03	-25.74	94.27	
05/09/23	12:47:58	0.09778		4415.84	-25.93	94.28	
05/09/23	12:48:06	0.10000		4415.65	-26.12	94.28	
05/09/23	12:48:15	0.10250		4415.44	-26.33	94.29	
05/09/23	12:48:23	0.10472		4415.25	-26.52	94.30	
05/09/23	12:48:32	0.10722		4415.05	-26.72	94.31	
05/09/23	12:48:41	0.10972		4414.82	-26.95	94.32	
05/09/23	12:48:50	0.11222		4414.61	-27.16	94.32	
05/09/23	12:49:00	0.11500		4414.37	-27.40	94.33	
05/09/23	12:49:09	0.11750		4414.17	-27.60	94.34	
05/09/23	12:49:19	0.12028		4413.94	-27.83	94.35	
05/09/23	12:49:29	0.12306		4413.68	-28.09	94.35	
05/09/23	12:49:40	0.12611		4413.42	-28.35	94.36	
05/09/23	12:49:50	0.12889		4413.20	-28.57	94.38	
05/09/23	12:50:01	0.13194		4412.96	-28.81	94.39	
05/09/23	12:50:12	0.13500		4412.68	-29.09	94.40	
05/09/23	12:50:23	0.13806		4412.46	-29.31	94.42	
05/09/23	12:50:35	0.14139		4412.22	-29.55	94.44	
05/09/23	12:50:47	0.14472		4411.95	-29.82	94.45	
05/09/23	12:50:59	0.14806		4411.71	-30.06	94.46	
05/09/23	12:51:11	0.15139		4411.46	-30.31	94.47	
05/09/23	12:51:24	0.15500		4411.18	-30.59	94.48	
05/09/23	12:51:37	0.15861		4410.88	-30.89	94.49	
05/09/23	12:51:50	0.16222		4410.60	-31.17	94.50	
05/09/23	12:52:04	0.16611		4410.33	-31.44	94.52	
05/09/23	12:52:18	0.17000		4410.04	-31.73	94.53	



	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332	
<b>RESERVOIR PRESSURE FALLOFF TEST</b>		
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"



  



Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	12:52:32	0.17389		4409.74	-32.03	94.54	
05/09/23	12:52:47	0.17806		4409.45	-32.32	94.56	
05/09/23	12:53:02	0.18222		4409.12	-32.65	94.58	
05/09/23	12:53:17	0.18639		4408.85	-32.92	94.60	
05/09/23	12:53:32	0.19056		4408.56	-33.21	94.61	
05/09/23	12:53:48	0.19500		4408.26	-33.51	94.62	
05/09/23	12:54:05	0.19972		4407.91	-33.86	94.63	
05/09/23	12:54:22	0.20444		4407.59	-34.18	94.64	
05/09/23	12:54:39	0.20917		4407.25	-34.52	94.66	
05/09/23	12:54:56	0.21389		4406.96	-34.81	94.67	
05/09/23	12:55:14	0.21889		4406.63	-35.14	94.68	
05/09/23	12:55:32	0.22389		4406.27	-35.50	94.69	
05/09/23	12:55:51	0.22917		4405.90	-35.87	94.73	
05/09/23	12:56:10	0.23444		4405.61	-36.16	94.75	
05/09/23	12:56:30	0.24000		4405.27	-36.50	94.76	
05/09/23	12:56:50	0.24556		4404.86	-36.91	94.77	
05/09/23	12:57:11	0.25139		4404.54	-37.23	94.81	
05/09/23	12:57:32	0.25722		4404.18	-37.59	94.82	
05/09/23	12:57:53	0.26306		4403.84	-37.93	94.83	
05/09/23	12:58:15	0.26917		4403.44	-38.33	94.84	
05/09/23	12:58:38	0.27556		4403.09	-38.68	94.87	
05/09/23	12:59:01	0.28194		4402.71	-39.06	94.89	
05/09/23	12:59:25	0.28861		4402.28	-39.49	94.91	
05/09/23	12:59:49	0.29528		4401.96	-39.81	94.93	
05/09/23	13:00:14	0.30222		4401.55	-40.22	94.94	
05/09/23	13:00:39	0.30917		4401.16	-40.61	94.96	
05/09/23	13:01:05	0.31639		4400.77	-41.00	94.98	
05/09/23	13:01:31	0.32361		4400.39	-41.38	95.00	
05/09/23	13:01:59	0.33139		4399.96	-41.81	95.01	
05/09/23	13:02:26	0.33889		4399.59	-42.18	95.04	
05/09/23	13:02:55	0.34694		4399.13	-42.64	95.05	
05/09/23	13:03:24	0.35500		4398.77	-43.00	95.08	
05/09/23	13:03:54	0.36333		4398.34	-43.43	95.10	
05/09/23	13:04:24	0.37167		4397.92	-43.85	95.12	
05/09/23	13:04:55	0.38028		4397.51	-44.26	95.15	
05/09/23	13:05:27	0.38917		4397.08	-44.69	95.18	
05/09/23	13:06:00	0.39833		4396.65	-45.12	95.20	
05/09/23	13:06:33	0.40750		4396.24	-45.53	95.22	

		<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
		<b>RESERVOIR PRESSURE FALLOFF TEST</b>						
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable							Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments	
05/09/23	13:07:07	0.41694		4395.76	-46.01	95.25		
05/09/23	13:07:42	0.42667		4395.37	-46.40	95.28		
05/09/23	13:08:18	0.43667		4394.94	-46.83	95.30		
05/09/23	13:08:55	0.44694		4394.47	-47.30	95.31		
05/09/23	13:09:32	0.45722		4394.06	-47.71	95.33		
05/09/23	13:10:10	0.46778		4393.58	-48.19	95.35		
05/09/23	13:10:50	0.47889		4393.17	-48.60	95.38		
05/09/23	13:11:30	0.49000		4392.72	-49.05	95.39		
05/09/23	13:12:11	0.50139		4392.24	-49.53	95.41		
05/09/23	13:12:53	0.51306		4391.77	-50.00	95.44		
05/09/23	13:13:36	0.52500		4391.33	-50.44	95.47		
05/09/23	13:14:20	0.53722		4390.91	-50.86	95.51		
05/09/23	13:15:05	0.54972		4390.43	-51.34	95.54		
05/09/23	13:15:51	0.56250		4389.99	-51.78	95.56		
05/09/23	13:16:38	0.57556		4389.55	-52.22	95.59		
05/09/23	13:17:26	0.58889		4389.10	-52.67	95.62		
05/09/23	13:18:16	0.60278		4388.66	-53.11	95.66		
05/09/23	13:19:06	0.61667		4388.16	-53.61	95.68		
05/09/23	13:19:58	0.63111		4387.73	-54.04	95.74		
05/09/23	13:20:51	0.64583		4387.29	-54.48	95.74		
05/09/23	13:21:45	0.66083		4386.81	-54.96	95.77		
05/09/23	13:22:40	0.67611		4386.38	-55.39	95.80		
05/09/23	13:23:37	0.69194		4385.92	-55.85	95.83		
05/09/23	13:24:35	0.70806		4385.48	-56.29	95.88		
05/09/23	13:25:34	0.72444		4385.00	-56.77	95.89		
05/09/23	13:26:35	0.74139		4384.56	-57.21	95.92		
05/09/23	13:27:37	0.75861		4384.10	-57.67	95.95		
05/09/23	13:28:41	0.77639		4383.63	-58.14	95.99		
05/09/23	13:29:46	0.79444		4383.20	-58.57	96.02		
05/09/23	13:30:53	0.81306		4382.76	-59.01	96.05		
05/09/23	13:32:01	0.83194		4382.29	-59.48	96.10		
05/09/23	13:33:11	0.85139		4381.88	-59.89	96.16		
05/09/23	13:34:22	0.87111		4381.43	-60.34	96.17		
05/09/23	13:35:35	0.89139		4381.01	-60.76	96.22		
05/09/23	13:36:50	0.91222		4380.54	-61.23	96.25		
05/09/23	13:38:06	0.93333		4380.12	-61.65	96.27		
05/09/23	13:39:24	0.95500		4379.71	-62.06	96.32		
05/09/23	13:40:45	0.97750		4379.27	-62.50	96.33		







 <b>FESCO</b> PETROLEUM ENGINEERS	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332	 <b>FESCO</b> PETROLEUM ENGINEERS					
<b>RESERVOIR PRESSURE FALLOFF TEST</b>							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable						Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	13:42:06	1.00000		4378.84	-62.93	96.38	
05/09/23	13:43:30	1.02333		4378.44	-63.33	96.41	
05/09/23	13:44:56	1.04722		4378.01	-63.76	96.43	
05/09/23	13:46:24	1.07167		4377.59	-64.18	96.47	
05/09/23	13:47:54	1.09667		4377.18	-64.59	96.56	
05/09/23	13:49:26	1.12222		4376.79	-64.98	96.58	
05/09/23	13:51:00	1.14833		4376.42	-65.35	96.62	
05/09/23	13:52:36	1.17500		4376.01	-65.76	96.66	
05/09/23	13:54:15	1.20250		4375.61	-66.16	96.70	
05/09/23	13:55:55	1.23028		4375.24	-66.53	96.72	
05/09/23	13:57:39	1.25917		4374.85	-66.92	96.79	
05/09/23	13:59:24	1.28833		4374.51	-67.26	96.81	
05/09/23	14:01:12	1.31833		4374.13	-67.64	96.86	
05/09/23	14:03:03	1.34917		4373.77	-68.00	96.90	
05/09/23	14:04:56	1.38056		4373.41	-68.36	96.94	
05/09/23	14:06:52	1.41278		4373.07	-68.70	97.00	
05/09/23	14:08:50	1.44556		4372.73	-69.04	97.03	
05/09/23	14:10:51	1.47917		4372.39	-69.38	97.10	
05/09/23	14:12:55	1.51361		4372.10	-69.67	97.14	
05/09/23	14:15:02	1.54889		4371.73	-70.04	97.19	
05/09/23	14:17:12	1.58500		4371.44	-70.33	97.25	
05/09/23	14:19:25	1.62194		4371.13	-70.64	97.29	
05/09/23	14:21:41	1.65972		4370.85	-70.92	97.36	
05/09/23	14:24:00	1.69833		4370.55	-71.22	97.38	
05/09/23	14:26:23	1.73806		4370.24	-71.53	97.43	
05/09/23	14:28:48	1.77833		4369.96	-71.81	97.50	
05/09/23	14:31:17	1.81972		4369.70	-72.07	97.55	
05/09/23	14:33:50	1.86222		4369.43	-72.34	97.58	
05/09/23	14:36:26	1.90556		4369.16	-72.61	97.63	
05/09/23	14:39:06	1.95000		4368.90	-72.87	97.67	
05/09/23	14:41:49	1.99528		4368.66	-73.11	97.74	
05/09/23	14:44:37	2.04194		4368.43	-73.34	97.78	
05/09/23	14:47:28	2.08944		4368.20	-73.57	97.84	
05/09/23	14:50:23	2.13806		4367.96	-73.81	97.90	
05/09/23	14:53:22	2.18778		4367.75	-74.02	97.91	
05/09/23	14:56:26	2.23889		4367.55	-74.22	97.96	
05/09/23	14:59:34	2.29111		4367.36	-74.41	98.00	
05/09/23	15:02:46	2.34444		4367.13	-74.64	98.08	



 <b>FESCO</b> PETROLEUM ENGINEERS	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332	 <b>FESCO</b> PETROLEUM ENGINEERS					
<b>RESERVOIR PRESSURE FALLOFF TEST</b>							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable						Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	15:06:02	2.39889		4366.99	-74.78	98.20	
05/09/23	15:09:23	2.45472		4366.80	-74.97	98.25	
05/09/23	15:12:49	2.51194		4366.64	-75.13	98.27	
05/09/23	15:16:20	2.57056		4366.44	-75.33	98.34	
05/09/23	15:19:55	2.63028		4366.28	-75.49	98.39	
05/09/23	15:23:36	2.69167		4366.11	-75.66	98.44	
05/09/23	15:27:22	2.75444		4365.96	-75.81	98.47	
05/09/23	15:31:13	2.81861		4365.82	-75.95	98.56	
05/09/23	15:35:09	2.88417		4365.67	-76.10	98.59	
05/09/23	15:39:11	2.95139		4365.55	-76.22	98.67	
05/09/23	15:43:18	3.02000		4365.42	-76.35	98.70	
05/09/23	15:47:32	3.09056		4365.30	-76.47	98.79	
05/09/23	15:51:51	3.16250		4365.19	-76.58	98.85	
05/09/23	15:56:16	3.23611		4365.07	-76.70	98.87	
05/09/23	16:00:47	3.31139		4364.97	-76.80	98.95	
05/09/23	16:05:25	3.38861		4364.85	-76.92	98.99	
05/09/23	16:10:09	3.46750		4364.73	-77.04	99.05	
05/09/23	16:15:00	3.54833		4364.66	-77.11	99.11	
05/09/23	16:19:57	3.63083		4364.53	-77.24	99.15	
05/09/23	16:25:02	3.71556		4364.48	-77.29	99.25	
05/09/23	16:30:13	3.80194		4364.37	-77.40	99.27	
05/09/23	16:35:32	3.89056		4364.31	-77.46	99.31	
05/09/23	16:40:58	3.98111		4364.24	-77.53	99.40	
05/09/23	16:46:32	4.07389		4364.15	-77.62	99.44	
05/09/23	16:52:14	4.16889		4364.10	-77.67	99.51	
05/09/23	16:58:03	4.26583		4364.02	-77.75	99.54	
05/09/23	17:04:01	4.36528		4363.98	-77.79	99.61	
05/09/23	17:10:07	4.46694		4363.92	-77.85	99.67	
05/09/23	17:16:22	4.57111		4363.86	-77.91	99.71	
05/09/23	17:22:45	4.67750		4363.81	-77.96	99.75	
05/09/23	17:29:17	4.78639		4363.75	-78.02	99.78	
05/09/23	17:35:59	4.89806		4363.71	-78.06	99.85	
05/09/23	17:42:49	5.01194		4363.67	-78.10	99.96	
05/09/23	17:49:50	5.12889		4363.64	-78.13	99.96	
05/09/23	17:57:00	5.24833		4363.60	-78.17	99.99	
05/09/23	18:04:20	5.37056		4363.55	-78.22	100.09	
05/09/23	18:11:50	5.49556		4363.53	-78.24	100.12	
05/09/23	18:19:31	5.62361		4363.48	-78.29	100.16	

	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
<b>RESERVOIR PRESSURE FALLOFF TEST</b>							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"					
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/09/23	18:27:22	5.75444		4363.49	-78.28	100.23	
05/09/23	18:35:25	5.88861		4363.50	-78.27	100.29	
05/09/23	18:43:39	6.02583		4363.45	-78.32	100.28	
05/09/23	18:52:04	6.16611		4363.43	-78.34	100.34	
05/09/23	19:00:41	6.30972		4363.41	-78.36	100.39	
05/09/23	19:09:30	6.45667		4363.38	-78.39	100.48	
05/09/23	19:18:31	6.60694		4363.38	-78.39	100.49	
05/09/23	19:27:45	6.76083		4363.37	-78.40	100.53	
05/09/23	19:37:12	6.91833		4363.34	-78.43	100.61	
05/09/23	19:46:53	7.07972		4363.34	-78.43	100.66	
05/09/23	19:56:46	7.24444		4363.31	-78.46	100.68	
05/09/23	20:06:54	7.41333		4363.32	-78.45	100.70	
05/09/23	20:17:15	7.58583		4363.32	-78.45	100.74	
05/09/23	20:27:51	7.76250		4363.30	-78.47	100.84	
05/09/23	20:38:42	7.94333		4363.29	-78.48	100.84	
05/09/23	20:49:48	8.12833		4363.27	-78.50	100.89	
05/09/23	21:01:10	8.31778		4363.26	-78.51	100.92	
05/09/23	21:12:47	8.51139		4363.27	-78.50	100.99	
05/09/23	21:24:41	8.70972		4363.27	-78.50	101.00	
05/09/23	21:36:52	8.91278		4363.23	-78.54	101.06	
05/09/23	21:49:19	9.12028		4363.27	-78.50	101.11	
05/09/23	22:02:04	9.33278		4363.25	-78.52	101.14	
05/09/23	22:15:06	9.55000		4363.23	-78.54	101.19	
05/09/23	22:28:27	9.77250		4363.26	-78.51	101.22	
05/09/23	22:42:06	10.00000		4363.26	-78.51	101.24	
05/09/23	22:56:05	10.23306		4363.27	-78.50	101.31	
05/09/23	23:10:23	10.47139		4363.27	-78.50	101.36	
05/09/23	23:25:01	10.71528		4363.48	-78.29	101.30	
05/09/23	23:40:00	10.96500		4363.48	-78.29	101.28	
05/09/23	23:55:19	11.22028		4363.47	-78.30	101.29	
05/10/23	00:11:00	11.48167		4363.51	-78.26	101.34	
05/10/23	00:27:03	11.74917		4363.46	-78.31	101.43	
05/10/23	00:43:28	12.02278		4363.47	-78.30	101.47	
05/10/23	01:00:16	12.30278		4363.44	-78.33	101.49	
05/10/23	01:17:28	12.58944		4363.46	-78.31	101.47	
05/10/23	01:35:03	12.88250		4363.47	-78.30	101.53	
05/10/23	01:53:04	13.18278		4363.45	-78.32	101.62	
05/10/23	02:11:29	13.48972		4363.44	-78.33	101.60	







		<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
		<b>RESERVOIR PRESSURE FALLOFF TEST</b>						
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable							Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments	
05/10/23	02:30:20	13.80389		4363.43	-78.34	101.60		
05/10/23	02:49:38	14.12556		4363.40	-78.37	101.64		
05/10/23	03:09:22	14.45444		4363.41	-78.36	101.67		
05/10/23	03:29:34	14.79111		4363.39	-78.38	101.66		
05/10/23	03:50:15	15.13583		4363.40	-78.37	101.71		
05/10/23	04:11:24	15.48833		4363.39	-78.38	101.77		
05/10/23	04:33:03	15.84917		4363.38	-78.39	101.78		
05/10/23	04:55:12	16.21833		4363.39	-78.38	101.81		
05/10/23	05:17:52	16.59611		4363.36	-78.41	101.77		
05/10/23	05:41:03	16.98250		4363.33	-78.44	101.78		
05/10/23	06:04:47	17.37806		4363.31	-78.46	101.77		
05/10/23	06:29:05	17.78306		4363.31	-78.46	101.83		
05/10/23	06:53:56	18.19722		4363.30	-78.47	101.85		
05/10/23	07:19:22	18.62111		4363.28	-78.49	101.88		
05/10/23	07:45:23	19.05472		4363.29	-78.48	101.92		
05/10/23	08:12:01	19.49861		4363.28	-78.49	101.97		
05/10/23	08:39:16	19.95278		4363.27	-78.50	101.99		
05/10/23	09:07:09	20.41750		4363.27	-78.50	102.04		
05/10/23	09:35:41	20.89306		4363.28	-78.49	102.09		
05/10/23	10:04:53	21.37972		4363.25	-78.52	102.10		
05/10/23	10:34:46	21.87778		4363.27	-78.50	102.14		
05/10/23	11:05:20	22.38722		4363.24	-78.53	102.17		
05/10/23	11:36:38	22.90889		4363.23	-78.54	102.13		
05/10/23	12:08:39	23.44250		4363.23	-78.54	102.12		
05/10/23	12:41:24	23.98833		4363.23	-78.54	102.15		
05/10/23	13:14:56	24.54722		4363.24	-78.53	102.22		
05/10/23	13:49:14	25.11889		4363.24	-78.53	102.25		
05/10/23	14:24:21	25.70417		4363.24	-78.53	102.29		
05/10/23	15:00:16	26.30278		4363.20	-78.57	102.27		
05/10/23	15:37:02	26.91556		4363.19	-78.58	102.30		
05/10/23	16:14:39	27.54250		4363.18	-78.59	102.33		
05/10/23	16:53:08	28.18389		4363.16	-78.61	102.37		
05/10/23	17:32:32	28.84056		4363.17	-78.60	102.39		
05/10/23	18:12:50	29.51222		4363.15	-78.62	102.39		
05/10/23	18:54:05	30.19972		4363.16	-78.61	102.39		
05/10/23	19:36:17	30.90306		4363.17	-78.60	102.40		
05/10/23	20:19:28	31.62278		4363.17	-78.60	102.44		
05/10/23	21:03:40	32.35944		4363.20	-78.57	102.48		



		<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
		<b>RESERVOIR PRESSURE FALLOFF TEST</b>						
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable							Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments	
05/10/23	21:48:54	33.11333		4363.21	-78.56	102.52		
05/10/23	22:35:10	33.88444		4363.22	-78.55	102.55		
05/10/23	23:22:32	34.67389		4363.22	-78.55	102.52		
05/11/23	00:10:59	35.48139		4363.24	-78.53	102.55		
05/11/23	01:00:35	36.30806		4363.25	-78.52	102.63		
05/11/23	01:51:19	37.15361		4363.22	-78.55	102.61		
05/11/23	02:43:15	38.01917		4363.23	-78.54	102.62		
05/11/23	03:36:23	38.90472		4363.21	-78.56	102.67		
05/11/23	04:30:45	39.81083		4363.21	-78.56	102.70		
05/11/23	05:26:23	40.73806		4363.16	-78.61	102.67		
05/11/23	06:23:19	41.68694		4363.15	-78.62	102.71		
05/11/23	07:21:35	42.65806		4363.13	-78.64	102.70		
05/11/23	08:21:12	43.65167		4363.13	-78.64	102.72		
05/11/23	08:33:16	43.85278		4363.12	-78.65	102.72	Casing Pressure = 600 psig	
05/11/23	08:33:17	43.85306		4363.12	-78.65	102.72	POOH from 7887 ft making static gradient stops.	
05/11/23	08:33:18	43.85333		4362.84		102.72		
05/11/23	08:33:19	43.85361		4361.28		102.72		
05/11/23	08:33:20	43.85389		4359.31		102.72		
05/11/23	08:33:21	43.85417		4357.54		102.73	BHT increased while POOH.	
05/11/23	08:34:00	43.86500		4325.68		105.31		
05/11/23	08:35:00	43.88167		4279.06		107.05		
05/11/23	08:35:28	43.88944		4257.78		107.34	BHT resumed decreasing while POOH.	
05/11/23	08:36:00	43.89833		4232.75		107.16		
05/11/23	08:37:00	43.91500		4185.20		106.66		
05/11/23	08:38:00	43.93167		4137.40		106.02		
05/11/23	08:39:00	43.94833		4089.11		105.23		
05/11/23	08:40:00	43.96500		4042.25		104.33		
05/11/23	08:41:00	43.98167		3998.10		103.43		
05/11/23	08:41:35	43.99139		3977.26		103.20	Arrived at 7000 ft stop.	
05/11/23	08:42:00	43.99833		3977.82		103.06		
05/11/23	08:43:00	44.01500		3977.73		103.04		
05/11/23	08:44:00	44.03167		3977.73		103.04		
05/11/23	08:45:00	44.04833		3977.73		103.04		
05/11/23	08:46:00	44.06500		3977.73		103.03		
05/11/23	08:47:00	44.08167		3977.73		103.03		
05/11/23	08:47:04	44.08278		3977.73		103.03	Left 7000 ft stop.	
05/11/23	08:47:56	44.09722		3938.43		102.78	BHT began increasing while POOH.	
05/11/23	08:48:00	44.09833		3935.15		102.79		

		<div>FESCO, Ltd. 1000 Fesco Ave. - Alice, Texas 78332</div>						
		RESERVOIR PRESSURE FALLOFF TEST						
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp,Morrow,North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable							Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"	
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments	
05/11/23	08:49:00	44.11500		3889.41		103.81		
05/11/23	08:50:00	44.13167		3842.36		104.31		
05/11/23	08:50:09	44.13417		3836.93		104.40	BHT resumed decreasing while POOH.	
05/11/23	08:51:00	44.14833		3799.07		102.97		
05/11/23	08:52:00	44.16500		3751.28		102.02		
05/11/23	08:53:00	44.18167		3704.96		101.25		
05/11/23	08:54:00	44.19833		3658.95		100.40		
05/11/23	08:55:00	44.21500		3612.55		99.82		
05/11/23	08:56:00	44.23167		3565.61		99.42		
05/11/23	08:57:00	44.24833		3541.01		99.35		
05/11/23	08:57:10	44.25111		3540.93		99.34	Arrived at 6000 ft stop.	
05/11/23	08:58:00	44.26500		3540.88		99.33		
05/11/23	08:59:00	44.28167		3540.86		99.32		
05/11/23	09:00:00	44.29833		3540.86		99.32		
05/11/23	09:01:00	44.31500		3540.86		99.32		
05/11/23	09:02:00	44.33167		3540.87		99.31		
05/11/23	09:02:51	44.34583		3540.87		99.31	Left 6000 ft stop.	
05/11/23	09:03:00	44.34833		3534.76		99.30		
05/11/23	09:04:00	44.36500		3487.58		98.88		
05/11/23	09:05:00	44.38167		3440.82		97.84		
05/11/23	09:06:00	44.39833		3391.41		97.42		
05/11/23	09:07:00	44.41500		3343.65		96.89		
05/11/23	09:08:00	44.43167		3294.38		96.63		
05/11/23	09:09:00	44.44833		3245.78		96.31		
05/11/23	09:10:00	44.46500		3196.48		95.64		
05/11/23	09:11:00	44.48167		3147.93		94.95		
05/11/23	09:12:00	44.49833		3115.88		94.49		
05/11/23	09:12:49	44.51194		3105.30		94.34	Arrived at 5000 ft stop.	
05/11/23	09:13:00	44.51500		3105.35		94.34		
05/11/23	09:14:00	44.53167		3105.31		94.33		
05/11/23	09:15:00	44.54833		3105.30		94.33		
05/11/23	09:16:00	44.56500		3105.30		94.33		
05/11/23	09:17:00	44.58167		3105.31		94.33		
05/11/23	09:17:51	44.59583		3105.31		94.32	Left 5000 ft stop.	
05/11/23	09:18:00	44.59833		3098.45		94.31		
05/11/23	09:19:00	44.61500		3050.80		93.80		
05/11/23	09:20:00	44.63167		3003.93		93.48		
05/11/23	09:21:00	44.64833		2956.74		92.81		



 PETROLEUM ENGINEERS		<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332					 PETROLEUM ENGINEERS
		<b>RESERVOIR PRESSURE FALLOFF TEST</b>					
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp,Morrow,North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable							Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/11/23	09:22:00	44.66500		2909.60		92.39	
05/11/23	09:23:00	44.68167		2861.39		91.93	
05/11/23	09:24:00	44.69833		2812.14		91.47	
05/11/23	09:25:00	44.71500		2763.19		91.06	
05/11/23	09:26:00	44.73167		2714.22		90.53	
05/11/23	09:27:00	44.74833		2670.61		90.09	
05/11/23	09:27:19	44.75361		2669.34		90.02	Arrived at 4000 ft stop.
05/11/23	09:28:00	44.76500		2669.28		90.01	
05/11/23	09:29:00	44.78167		2669.29		90.01	
05/11/23	09:30:00	44.79833		2669.30		90.01	
05/11/23	09:31:00	44.81500		2669.30		90.01	
05/11/23	09:32:00	44.83167		2669.31		90.01	
05/11/23	09:32:17	44.83639		2669.31		90.01	Left 4000 ft stop.
05/11/23	09:33:00	44.84833		2636.81		89.85	
05/11/23	09:34:00	44.86500		2589.68		89.45	
05/11/23	09:35:00	44.88167		2542.00		89.04	
05/11/23	09:36:00	44.89833		2494.61		88.60	
05/11/23	09:37:00	44.91500		2447.18		88.15	
05/11/23	09:38:00	44.93167		2400.44		87.77	
05/11/23	09:39:00	44.94833		2353.25		87.40	
05/11/23	09:40:00	44.96500		2305.80		87.03	
05/11/23	09:41:00	44.98167		2259.15		86.64	
05/11/23	09:42:00	44.99833		2233.64		86.41	
05/11/23	09:42:15	45.00250		2233.53		86.40	Arrived at 3000 ft stop.
05/11/23	09:43:00	45.01500		2233.53		86.39	
05/11/23	09:44:00	45.03167		2233.53		86.39	
05/11/23	09:45:00	45.04833		2233.54		86.39	
05/11/23	09:46:00	45.06500		2233.54		86.39	
05/11/23	09:47:00	45.08167		2233.55		86.39	
05/11/23	09:47:11	45.08472		2233.55		86.39	Left 3000 ft stop.
05/11/23	09:48:00	45.09833		2196.22		86.16	
05/11/23	09:49:00	45.11500		2150.20		85.80	
05/11/23	09:50:00	45.13167		2103.91		85.43	
05/11/23	09:51:00	45.14833		2057.81		85.09	
05/11/23	09:52:00	45.16500		2011.24		84.66	
05/11/23	09:53:00	45.18167		1964.56		84.23	
05/11/23	09:54:00	45.19833		1917.99		83.83	
05/11/23	09:55:00	45.21500		1871.19		83.40	

	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
<b>RESERVOIR PRESSURE FALLOFF TEST</b>							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"					
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/11/23	09:56:00	45.23167		1825.48		83.09	
05/11/23	09:56:55	45.24694		1798.02		82.86	Arrived at 2000 ft stop.
05/11/23	09:57:00	45.24833		1797.97		82.86	
05/11/23	09:58:00	45.26500		1797.95		82.84	
05/11/23	09:59:00	45.28167		1797.95		82.84	
05/11/23	10:00:00	45.29833		1797.96		82.84	
05/11/23	10:01:00	45.31500		1797.97		82.84	
05/11/23	10:01:47	45.32806		1797.97		82.84	Left 2000 ft stop.
05/11/23	10:02:00	45.33167		1788.89		82.82	
05/11/23	10:03:00	45.34833		1742.92		82.62	
05/11/23	10:04:00	45.36500		1696.49		82.22	
05/11/23	10:05:00	45.38167		1650.05		81.80	
05/11/23	10:06:00	45.39833		1603.27		81.42	
05/11/23	10:07:00	45.41500		1555.49		81.22	
05/11/23	10:08:00	45.43167		1507.99		80.70	
05/11/23	10:09:00	45.44833		1459.67		80.39	
05/11/23	10:10:00	45.46500		1411.58		79.91	
05/11/23	10:11:00	45.48167		1364.98		79.44	
05/11/23	10:11:07	45.48361		1362.27		79.45	Arrived at 1000 ft stop.
05/11/23	10:12:00	45.49833		1362.33		79.49	
05/11/23	10:13:00	45.51500		1362.31		79.50	
05/11/23	10:14:00	45.53167		1362.33		79.51	
05/11/23	10:15:00	45.54833		1362.34		79.52	
05/11/23	10:16:00	45.56500		1362.34		79.52	
05/11/23	10:16:24	45.57167		1362.35		79.52	Left 1000 ft stop.
05/11/23	10:17:00	45.58167		1335.13		79.77	
05/11/23	10:18:00	45.59833		1287.31		78.93	
05/11/23	10:19:00	45.61500		1238.81		78.57	
05/11/23	10:20:00	45.63167		1190.56		78.26	
05/11/23	10:21:00	45.64833		1141.46		78.25	
05/11/23	10:22:00	45.66500		1091.38		79.65	
05/11/23	10:23:00	45.68167		1047.38		79.07	
05/11/23	10:24:00	45.69833		1002.30		79.66	
05/11/23	10:25:00	45.71500		969.48		79.97	
05/11/23	10:26:00	45.73167		940.25		77.80	
05/11/23	10:26:39	45.74250		925.71		76.31	Gauge at surface.
05/11/23	10:27:00	45.74833		926.93		76.84	
05/11/23	10:28:00	45.76500		927.80		76.99	

	<b>FESCO, Ltd.</b> 1000 Fesco Ave. - Alice, Texas 78332						
<b>RESERVOIR PRESSURE FALLOFF TEST</b>							
Company: Petrotek Corporation Well: Navajo Refining Waste Disposal Well No. 1 Field: Illinois Camp, Morrow, North (Gas) Location: Eddy County, NM Perfs: 7924 - 8188; 8220 - 8476 ft (MD) Formation: Unavailable		Test Date: 05/09 - 05/11/2023 Gauge Depth: 7887 ft Gauge Type: Electronic Gauge SN: DC-4585 Gauge Range: 15000 psi Gauge OD: 1.2500"					
Test Date mm/dd/yy	Real Time hh:mm:ss	Delta Time hours	WHP psia	BHP psia	Delta BHP psi	Temp. °F	Comments
05/11/23	10:29:00	45.78167		927.85		76.94	
05/11/23	10:30:00	45.79833		927.83		76.96	
05/11/23	10:31:00	45.81500		927.82		76.97	
05/11/23	10:32:00	45.83167		927.86		76.99	
05/11/23	10:33:00	45.84833		927.86		76.99	
05/11/23	10:33:15	45.85250		927.86		77.00	Closed crown valve.
05/11/23	10:34:00	45.86500		927.86		77.00	
05/11/23	10:35:00	45.88167		927.95		76.99	
05/11/23	10:36:00	45.89833		927.88		77.00	
05/11/23	10:37:00	45.91500		927.91		77.00	
05/11/23	10:38:00	45.93167		927.82		77.03	
05/11/23	10:39:00	45.94833		928.01		77.07	
05/11/23	10:40:00	45.96500		927.90		77.09	
05/11/23	10:40:36	45.97500		927.96		77.09	Pressured down lubricator.
05/11/23	10:41:00	45.98167		34.58		76.96	
05/11/23	10:42:00	45.99833		6.62		77.34	
05/11/23	10:42:05	45.99972		6.32		77.46	Test complete.
05/11/23	10:50:00	46.13167		12.56		72.99	
05/11/23	11:00:00	46.29833		9.18		77.02	
05/11/23	11:06:14	46.40222		11.53		78.15	Powered down gauge.
<b>Remarks:</b> RIH with electronic gauge making injecting gradient stops to 7887 ft. Flow well for 1 hrs. SI well for 43.85-hr falloff test. POOH making static gradient stops to surface. RDMO.							
Job No.: J202305111402.001A				Certified: FESCO, Ltd. - Midland, TX  By: <u>Michael Carnes</u> District Manager - (432) 332-3211			



## Attachment 5 Falloff Test Summary

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***Petrotek***

## DW No. 1 2023 Falloff Test Summary

### Reservoir Properties

Net Pay (h)	175 ft
Porosity ( $\Phi$ )	10.0 %
Formation Compressibility ( $c_f$ )	8.20E-06 psi <sup>-1</sup>
Total Compressibility ( $c_t$ )	1.09E-05 psi <sup>-1</sup>
Wellbore Radius ( $r_w$ )	0.365 ft

### Fluid Properties

Viscosity ( $\mu$ )	0.57 cp
Fluid Compressibility ( $c_f$ )	2.70E-06 psi <sup>-1</sup>
Formation Volume Factor (B)	1.00 bbl/stb

### Model Parameters

Wellbore Storage	Changing hegeman
Well Model	Vertical
Reservoir Model	Dual-porosity PSS
Boundary Model	Infinite

### Analysis Results

#### Well & Wellbore

Initial Wellbore Storage	8.20E-03 bbl/psi
Final Wellbore Storage	3.34E-01 bbl/psi
$D_t$ [changing storage]	2.09E-02 hr
Skin	200.0
$\Delta p_{skin}$	74.8 psi

#### Reservoir & Boundary

Permeability (k)	970 md
Transmissibility	297,778 md-ft/cp
Radius of Investigation ( $r_i$ )	7,686 ft
Omega	7.14E-02
Lambda	3.41E-09

## Attachment 6 AOR Well List

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***Petrotek***



Operator	Well Name	API	Well Type	PLSS Location	Latitude	Longitude	Well Status	Spud Date	Plug Date
Spur Energy Partners LLC	BIG BOY STATE #006	30-015-39324	Oil	O-36-175-27E	32.78460	-104.23080	Active	12/18/2011	-
Spur Energy Partners LLC	BIG BOY STATE #007	30-015-39325	Oil	O-36-175-27E	32.78600	-104.23080	Active	1/6/2012	-
Spur Energy Partners LLC	BIG BOY STATE #008	30-015-39326	Oil	O-36-175-27E	32.78400	-104.22860	Active	5/6/2013	-
APACHE CORPORATION	AAO FEDERAL #003	30-015-33473	Oil	G-01-185-27E	32.77840	-104.22890	Active	10/22/2004	-
APACHE CORPORATION	AAO FEDERAL #007	30-015-32309	Oil	B-01-185-27E	32.78240	-104.22910	Active	3/12/2003	-
REMNANT OIL OPERATING, LLC	SOUTH RED LAKE II UNIT #057	30-015-36116	Oil	G-36-175-27E	32.79140	-104.22900	Active	4/14/2008	-
Spur Energy Partners LLC	BIG BOY STATE #005	30-015-39323	Oil	O-36-175-27E	32.78570	-104.22860	Active	4/21/2012	-
APACHE CORPORATION	AAO FEDERAL #004	30-015-32310	Oil	O1-185-27E	32.78050	-104.22860	Active	7/14/2003	-
APACHE CORPORATION	AAO FEDERAL #017	30-015-42027	Oil	H-01-185-27E	32.77870	-104.22640	Active	3/27/2014	-
APACHE CORPORATION	EMPIRE ABO UNIT #203	30-015-22656	Oil	H-01-185-27E	32.77660	-104.22580	Active	9/13/1978	-
APACHE CORPORATION	RED LAKE 36 A STATE #002	30-015-33994	Oil	A-36-175-27E	32.79520	-104.22500	Active	3/23/2005	-
APACHE CORPORATION	AAO FEDERAL #023	30-015-42336	Oil	H-01-185-27E	32.77700	-104.22460	Active	8/4/2014	-
APACHE CORPORATION	AAO FEDERAL #014	30-015-42024	Oil	A-01-185-27E	32.78290	-104.22400	Active	3/7/2014	-
APACHE CORPORATION	AAO FEDERAL #024	30-015-42337	Oil	A-01-185-27E	32.78050	-104.22440	Active	6/3/2014	-
APACHE CORPORATION	AAO FEDERAL #008	30-015-33784	Oil	O1-185-27E	32.77870	-104.22460	Active	2/28/2005	-
Contango Resources, LLC	ENRON STATE #015	30-015-36978	Oil	D-31-175-28E	32.79500	-104.22250	Active	6/25/2009	-
ROVER OPERATING, LLC	RAMPO #001	30-015-01639	Oil	M-31-175-28E	32.78590	-104.22250	Active	3/17/1948	-
ROVER OPERATING, LLC	RAMPO #002	30-015-01640	Oil	L-31-175-28E	32.78860	-104.22250	Active	6/15/1955	-
Contango Resources, LLC	ENRON STATE #020	30-015-42372	Oil	D-31-175-28E	32.79680	-104.22220	Active	7/6/2014	-
APACHE CORPORATION	EMPIRE ABO UNIT #021C	30-015-02619	Oil	E-06-185-28E	32.77780	-104.22140	Active	10/7/1959	-
APACHE CORPORATION	EMPIRE ABO UNIT #021B	30-015-02613	Oil	D-06-185-28E	32.78050	-104.22140	Active	12/8/1959	-
Contango Resources, LLC	ENRON STATE #016	30-015-38512	Oil	D-31-175-28E	32.79500	-104.22060	Active	8/11/2011	-
ROVER OPERATING, LLC	HUDSON SAIKIN STATE #002	30-015-24887	Oil	E-31-175-28E	32.79140	-104.22040	Active	6/5/1984	-
Contango Resources, LLC	ENRON STATE #004	30-015-32162	Oil	D-31-175-28E	32.79650	-104.22040	Active	3/25/2003	-
APACHE CORPORATION	EMPIRE ABO UNIT #211	30-015-21195	Oil	E-06-185-28E	32.77600	-104.21930	Active	12/12/1974	-
APACHE CORPORATION	EMPIRE ABO UNIT #222	30-015-22012	Oil	F-06-185-28E	32.77960	-104.21840	Active	2/17/1977	-
APACHE CORPORATION	EMPIRE ABO UNIT #022C	30-015-02610	Oil	N-06-185-28E	32.77160	-104.21790	Active	7/19/1960	-
ROVER OPERATING, LLC	STATE FX #001	30-015-10107	Oil	F-06-185-28E	32.77820	-104.21750	Active	7/9/1963	-
Contango Resources, LLC	STALEY STATE #012	30-015-37673	Oil	N-30-175-28E	32.79870	-104.21830	Active	5/24/2010	-
APACHE CORPORATION	EMPIRE ABO UNIT #022D	30-015-02620	Oil	F-06-185-28E	32.77780	-104.21680	Active	11/3/1959	-
APACHE CORPORATION	EMPIRE ABO UNIT #022E	30-015-02621	Oil	C-06-185-28E	32.78150	-104.21710	Active	11/29/1959	-
APACHE CORPORATION	EMPIRE ABO UNIT #022F	30-015-02623	Oil	K-06-185-28E	32.77510	-104.21680	Active	1/28/1960	-
ROVER OPERATING, LLC	STATE FV #001	30-015-10118	Oil	N-31-175-28E	32.78540	-104.21640	Active	2/8/1963	-
G and C Operating, LLC	ASTON & FAIR #001Y	30-015-01635	Oil	F-31-175-28E	32.79140	-104.21610	Active	6/7/1947	-
Contango Resources, LLC	STALEY STATE #017	30-015-40026	Oil	N-30-175-28E	32.79870	-104.21580	Active	3/15/2012	-
APACHE CORPORATION	EMPIRE ABO UNIT #221	30-015-21746	Oil	F-06-185-28E	32.77620	-104.21470	Active	3/28/1976	-
HF Sinclair Navajo Refining LLC	WDW #001	30-015-27592	SWD	O-31-175-28E	32.78520	-104.21380	Active	8/4/1993	-
ROVER OPERATING, LLC	STATE FW #001	30-015-01642	Oil	J-31-175-28E	32.78790	-104.21380	Active	11/29/1962	-
G and C Operating, LLC	MALCO STATE #002	30-015-36343	Oil	G-31-175-28E	32.79330	-104.21390	Active	6/30/2008	-
G and C Operating, LLC	MALCO STATE #001	30-015-01637	Oil	G-31-175-28E	32.79140	-104.21390	Active	1/14/1953	-
Contango Resources, LLC	STALEY STATE #029	30-015-42726	Oil	O-30-175-28E	32.79920	-104.21340	Active	11/22/2014	-
Contango Resources, LLC	STALEY STATE #009	30-015-36564	Oil	O-30-175-28E	32.79870	-104.21360	Active	12/15/2008	-
G and C Operating, LLC	MALCO STATE #003	30-015-37428	Oil	G-31-175-28E	32.79240	-104.21280	Active	12/20/2009	-
APACHE CORPORATION	EMPIRE ABO UNIT #023B	30-015-02614	Oil	G-06-185-28E	32.77790	-104.21270	Active	12/28/1959	-
SBKF, LLC	POWCO STATE #001	30-015-21594	Oil	B-31-175-28E	32.79690	-104.21180	Active	8/28/1975	-
Contango Resources, LLC	STALEY STATE #020	30-015-40983	Oil	O-30-175-28E	32.79870	-104.21180	Active	3/3/2013	-
R & M Oil, LLC	BOLING #001	30-015-01652	Oil	G-31-175-28E	32.79150	-104.21160	Active	12/14/1989	-
SBKF, LLC	POWCO STATE #002	30-015-25621	Oil	B-31-175-28E	32.79510	-104.21170	Active	5/12/1986	-
Contango Resources, LLC	NW STATE #028	30-015-30893	Oil	A-31-175-28E	32.79510	-104.20950	Active	9/14/2000	-
Contango Resources, LLC	ANTHONEY #002	30-015-38234	Oil	P-30-175-28E	32.79900	-104.20900	Active	2/1/2011	-
Contango Resources, LLC	ANTHONEY STATE #003	30-015-39638	Oil	P-30-175-28E	32.79900	-104.20860	Active	2/21/2012	-
Contango Resources, LLC	NORTHWEST ARTESIA UNIT #010	30-015-10833	Oil	L-31-175-28E	32.78890	-104.20850	Active	6/4/1966	-
Contango Resources, LLC	NORTHWEST ARTESIA UNIT #011	30-015-20042	Oil	P-31-175-28E	32.78620	-104.20840	Active	4/26/1967	-
Contango Resources, LLC	NW STATE #012	30-015-30784	Oil	A-31-175-28E	32.79690	-104.20800	Active	11/11/1999	-
APACHE CORPORATION	EMPIRE ABO UNIT #024B	30-015-02615	Oil	A-06-185-28E	32.78160	-104.20840	Active	1/28/1960	-
Contango Resources, LLC	NW STATE #009	30-015-30849	Oil	L-31-175-28E	32.78980	-104.20720	Active	12/14/1999	-
Contango Resources, LLC	NW STATE #011	30-015-30783	Oil	H-31-175-28E	32.79330	-104.20740	Active	11/3/1999	-
Contango Resources, LLC	NORTHWEST ARTESIA UNIT #004	30-015-10537	Oil	H-31-175-28E	32.79160	-104.20740	Active	3/3/1966	-
Contango Resources, LLC	NW STATE #015	30-015-30785	Oil	A-06-185-28E	32.78230	-104.20730	Active	12/20/1999	-
Contango Resources, LLC	NW STATE #010	30-015-30760	Oil	P-31-175-28E	32.78550	-104.20730	Active	10/12/1999	-
Contango Resources, LLC	NORTHWEST ARTESIA UNIT #016	30-015-20019	Oil	A-06-185-28E	32.78260	-104.20730	Active	2/15/1967	-
APACHE CORPORATION	EMPIRE ABO UNIT #024	30-015-01641	Oil	P-31-175-28E	32.78530	-104.20840	Active	2/26/1960	-
Contango Resources, LLC	ENRON STATE #018	30-015-40339	Oil	D-32-175-28E	32.79510	-104.20530	Active	1/11/2014	-
APACHE CORPORATION	AB STATE 647 #004	30-015-41505	Oil	L-32-175-28E	32.78970	-104.20250	Active	10/2/2013	-
Contango Resources, LLC	NW STATE #006	30-015-30777	Oil	L-32-175-28E	32.78990	-104.20310	Active	10/19/1999	-
APACHE CORPORATION	AB STATE 647 #011	30-015-41495	Oil	M-32-175-28E	32.78610	-104.20310	Active	9/13/2013	-
APACHE CORPORATION	AB STATE 647 #014	30-015-41498	Oil	M-32-175-28E	32.78440	-104.20270	Active	11/4/2013	-
APACHE CORPORATION	AB STATE 647 #001	30-015-41491	Oil	L-32-175-28E	32.78810	-104.20320	Active	10/29/2013	-
Contango Resources, LLC	ENRON STATE #002	30-015-31920	Oil	D-32-175-28E	32.79520	-104.20320	Active	9/4/2001	-
Maverick Permian LLC	ILLINOIS CAMP A COM #001	30-015-24485	Gas	E-05-185-28E	32.77810	-104.20300	Active	5/28/1983	-
Contango Resources, LLC	NORTHWEST ARTESIA UNIT #012	30-015-20043	Injection	M-32-175-28E	32.78620	-104.20380	Active	4/29/1967	-
Contango Resources, LLC	NW STATE #007	30-015-30685	Oil	M-32-175-28E	32.78630	-104.20300	Active	8/30/1999	-
Contango Resources, LLC	NW STATE #029	30-015-36554	Oil	L-32-175-28E	32.78840	-104.20450	Active	1/21/2009	-
Contango Resources, LLC	NW STATE #032	30-015-37058	Oil	M-32-175-28E	32.78440	-104.20520	Active	8/12/2009	-
Contango Resources, LLC	ENRON STATE #012	30-015-35050	Oil	D-32-175-28E	32.79690	-104.20480	Active	11/20/2006	-
WALTER SOLT, LLC	WALTER SOLT STATE #001	30-015-25522	SWD	L-05-185-28E	32.77510	-104.20490	Active	1/9/1986	-
APACHE CORPORATION	AB STATE 647 #013	30-015-41497	Oil	M-32-175-28E	32.78410	-104.20510	Active	10/10/2013	-
APACHE CORPORATION	AB STATE 647 #006	30-015-41503	Oil	L-32-175-28E	32.78830	-104.20490	Active	8/30/2013	-
APACHE CORPORATION	AB STATE 647 #005	30-015-41502	Oil	L-32-175-28E	32.78980	-104.20520	Active	8/23/2013	-
APACHE CORPORATION	AB STATE 647 #012	30-015-41496	Oil	M-32-175-28E	32.78600	-104.20520	Active	9/19/2013	-
APACHE CORPORATION	AB STATE 647 #003	30-015-41501	Oil	K-32-175-28E	32.79010	-104.20100	Active	10/23/2013	-
APACHE CORPORATION	AB STATE 647 #010	30-015-41494	Oil	N-32-175-28E	32.78670	-104.20090	Active	10/16/2013	-
APACHE CORPORATION	AB STATE 647 #015	30-015-41504	Oil	N-32-175-28E	32.78450	-104.20090	Active	9/26/2013	-
APACHE CORPORATION	AB STATE 647 #001	30-015-39927	Oil	K-32-175-28E	32.78840	-104.20050	Active	8/11/2013	-
Contango Resources, LLC	NW STATE #031	30-015-37057	Oil	N-32-175-28E	32.78450	-104.20050	Active	7/21/2009	-
Contango Resources, LLC	NW STATE #030	30-015-36989	Oil	K-32-175-28E	32.78810	-104.20070	Active	7/7/2009	-
APACHE CORPORATION	AA STATE #001	30-015-01657	Oil	F-32-175-28E	32.79170	-104.19990	Active	7/29/1960	-
Contango Resources, LLC	NW STATE #005	30-015-30781	Injection	K-32-175-28E	32.78880	-104.19930	Active	10/28/1999	-
Contango Resources, LLC	NW STATE #008	30-015-30815	Injection	N-32-175-28E	32.78660	-104.19930	Active	11/18/1999	-
APACHE CORPORATION	AB STATE 647 #008	30-015-41492	Oil	K-32-175-28E	32.78740	-104.19870	Active	11/15/2013	-
APACHE CORPORATION	AB STATE 647 #016	30-015-41511	Oil	N-32-175-28E	32.78450	-104.19850	Active	11/9/2013	-
APACHE CORPORATION	AB STATE 647 #009	30-015-41493	Oil	N-32-175-28E	32.78660	-104.19800	Active	9/5/2013	-
APACHE CORPORATION	AB STATE 647 #002	30-015-41500	Oil	K-32-175-28E	32.79010	-104.19790	Active	8/17/2013	-
Spur Energy Partners LLC	WAUKEE 36 STATE COM #051H	30-015-49019	Oil	L-31-175-28E	32.78940	-104.22120	New	11/19/2021	-
Spur Energy Partners LLC	WAUKEE 36 STATE COM #011H	30-015-49018	Oil	L-31-175-28E	32.78960	-104.22390	New	11/22/2021	-
Spur Energy Partners LLC	WAUKEE 36 STATE COM #010H	30-015-49026	Oil	M-31-175-28E	32.78540	-104.22110	New	11/11/2021	-
Spur Energy Partners LLC	WAUKEE 36 STATE COM #002H	30-015-49020	Oil	M-31-175-28E	32.78700	-104.22390	New	11/15/2021	-
Spur Energy Partners LLC	BLALOCK 32 STATE COM #090H	30-015-49897	Oil	H-31-175-28E	32.79280	-104.20990	New	11/3/2022	-
Spur Energy Partners LLC	BLALOCK 32 STATE COM #011H	30-015-49898	Oil	H-31-175-28E	32.79280	-104.20990	New	11/1/2022	-
Spur Energy Partners LLC	BLALOCK 32 STATE COM #050H	30-015-49904	Oil	H-31-175-28E	32.79270	-104.20990	New	10/31/2022	-
Spur Energy Partners LLC	BLALOCK 32 STATE COM #001H	30-015-49997	Oil	A-31-175-28E	32.79590	-104.20960	New	11/6/2022	-
Spur Energy Partners LLC	BLALOCK 32 STATE COM #010H	30-015-49998	Oil	A-31-175-28E	32.79610	-104.20960	New	11/10/2022	-
Spur Energy Partners LLC	BLALOCK 32 STATE COM #070H	30-015-499							

APACHE CORPORATION	EMPIRE ABO UNIT #023C	30-015-02625	Oil	B-06-185-28E	32.78210	-104.21330	Plugged (not released)	10/11/1959	3/26/2021
APACHE CORPORATION	EMPIRE ABO UNIT #419	30-015-38011	Oil	O-31-175-28E	32.78670	-104.21060	Plugged (not released)	10/11/2011	2/13/2018
APACHE CORPORATION	EMPIRE ABO UNIT #261	30-015-21539	Oil	N-32-175-28E	32.78400	-104.20170	Plugged (not released)	6/24/1975	5/31/2017
APACHE CORPORATION	EMPIRE ABO UNIT #026E	30-015-02606	Oil	C-05-185-28E	32.78270	-104.19990	Plugged (not released)	7/5/1960	1/15/2021
APACHE CORPORATION	EMPIRE ABO UNIT #026A	30-015-01659	Oil	N-32-175-28E	32.78540	-104.19980	Plugged (not released)	1/26/1960	3/8/2021
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #019	30-015-01251	Oil	O-36-175-27E	32.78510	-104.23000	Plugged (site released)	-	9/9/2009
APACHE CORPORATION	EMPIRE ABO UNIT #019B	30-015-00708	Oil	B-01-185-27E	32.78150	-104.23000	Plugged (site released)	-	5/22/2013
KERSEY & COMPANY	RAMAPO #002	30-015-00687	Gas	I-36-175-27E	32.78960	-104.22680	Plugged (site released)	-	6/14/1996
ASPEN OIL INC	GATES STATE #002	30-015-00647	Oil	H-36-175-27E	32.79320	-104.22680	Plugged (site released)	-	10/31/2004
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #020	30-015-00677	Oil	P-36-175-27E	32.78410	-104.22680	Plugged (site released)	-	9/9/2009
Contango Resources, LLC	NO BLUFF 36 STATE COM #002	30-015-31123	Gas	H-36-175-27E	32.79230	-104.22610	Plugged (site released)	3/18/2001	11/19/2020
APACHE CORPORATION	EMPIRE ABO UNIT #020D	30-015-01215	Oil	A-01-185-27E	32.78140	-104.22570	Plugged (site released)	11/7/1959	5/19/2017
APACHE CORPORATION	EMPIRE ABO UNIT #020C	30-015-00711	Oil	H-01-185-27E	32.77780	-104.22570	Plugged (site released)	-	7/8/2013
KERSEY & COMPANY	RAMAPO #001	30-015-00688	Oil	I-36-175-27E	32.78960	-104.22470	Plugged (site released)	10/2/1941	6/18/1996
KERSEY & COMPANY	RAMAPO #003	30-015-00670	Oil	I-36-175-27E	32.78960	-104.22470	Plugged (site released)	-	6/17/1996
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #020	30-015-00685	Oil	I-36-175-27E	32.78780	-104.22470	Plugged (site released)	N/A	N/A
APACHE CORPORATION	EMPIRE ABO UNIT #411	30-015-39021	Oil	D-06-185-28E	32.78310	-104.22310	Plugged (site released)	10/31/2011	3/18/2015
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-01634	Oil	D-31-175-28E	32.79680	-104.22250	Plugged (site released)	N/A	1/1/1901
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #021	30-015-01647	Oil	M-31-175-28E	32.78510	-104.22140	Plugged (site released)	-	7/23/2005
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-01645	Oil	F-31-175-28E	32.79500	-104.22040	Plugged (site released)	N/A	N/A
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-02626	Oil	F-06-185-28E	32.77880	-104.21820	Plugged (site released)	N/A	N/A
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #022A	30-015-01646	Oil	N-31-175-28E	32.78510	-104.21680	Plugged (site released)	-	8/20/2009
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #022	30-015-01643	Oil	F-31-175-28E	32.79140	-104.21620	Plugged (site released)	-	7/10/2009
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #022B	30-015-01651	Oil	K-31-175-28E	32.78790	-104.21580	Plugged (site released)	-	2/10/2010
APACHE CORPORATION	EMPIRE ABO UNIT #408	30-015-39020	Oil	O-31-175-28E	32.78370	-104.21460	Plugged (site released)	10/18/2011	1/18/2017
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #234	30-015-22593	Oil	G-06-185-28E	32.77810	-104.21420	Plugged (site released)	-	11/25/2008
APACHE CORPORATION	EMPIRE ABO UNIT #231A	30-015-01626	Oil	G-06-185-28E	32.77960	-104.21450	Plugged (site released)	-	7/1/2013
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #023D	30-015-02628	Oil	J-06-185-28E	32.77520	-104.21360	Plugged (site released)	4/2/1960	12/5/2008
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-02624	Oil	O-06-185-28E	32.77160	-104.21360	Plugged (site released)	N/A	N/A
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-02611	Oil	J-06-185-28E	32.77530	-104.21380	Plugged (site released)	N/A	N/A
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00264	Oil	J-06-185-28E	32.77530	-104.21380	Plugged (site released)	N/A	N/A
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #231B	30-015-22491	Oil	J-06-185-28E	32.77360	-104.21390	Plugged (site released)	-	8/24/2009
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-01636	Oil	C-31-175-28E	32.79690	-104.21390	Plugged (site released)	N/A	N/A
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #233	30-015-22490	Oil	G-06-185-28E	32.77640	-104.21290	Plugged (site released)	-	10/9/2009
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-02618	Gas	J-06-185-28E	32.77350	-104.21300	Plugged (site released)	N/A	N/A
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #023A	30-015-01650	Oil	J-31-175-28E	32.78790	-104.21270	Plugged (site released)	-	9/17/2003
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #023	30-015-01649	Oil	O-31-175-28E	32.78520	-104.21260	Plugged (site released)	-	1/14/2010
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-01653	Oil	O-31-175-28E	32.78610	-104.21160	Plugged (site released)	N/A	N/A
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #232A	30-015-22528	Oil	J-06-185-28E	32.77530	-104.21130	Plugged (site released)	6/27/1978	10/9/2009
BP AMERICA PRODUCTION COMPANY	SLIDER 6 STATE #001	30-015-34028	Oil	G-06-185-28E	32.77710	-104.21070	Plugged (site released)	6/19/2005	12/23/2008
APACHE CORPORATION	EMPIRE ABO UNIT #231	30-015-21542	Oil	B-06-185-28E	32.77990	-104.21140	Plugged (site released)	-	6/13/2013
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #232	30-015-21737	Oil	G-06-185-28E	32.77720	-104.21140	Plugged (site released)	-	10/9/2009
APACHE CORPORATION	EMPIRE ABO UNIT #235	30-015-22913	Oil	G-06-185-28E	32.77860	-104.21140	Plugged (site released)	-	4/21/2010
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-01638	Oil	A-31-175-28E	32.79690	-104.20960	Plugged (site released)	N/A	N/A
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #021A	30-015-01648	Oil	L-31-175-28E	32.78800	-104.20980	Plugged (site released)	4/14/1960	8/24/2002
APACHE CORPORATION	EMPIRE ABO UNIT #024C	30-015-02616	Oil	H-06-185-28E	32.77890	-104.20940	Plugged (site released)	-	6/7/2013
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #024K	30-015-02617	Oil	I-06-185-28E	32.77530	-104.20950	Plugged (site released)	-	12/12/2002
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #241	30-015-23547	Oil	H-06-185-28E	32.77810	-104.20840	Plugged (site released)	-	12/23/2008
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #024A	30-015-01644	Oil	I-31-175-28E	32.78800	-104.20740	Plugged (site released)	-	6/15/2009
APACHE CORPORATION	EMPIRE ABO UNIT #251	30-015-22750	Oil	D-05-185-28E	32.78170	-104.20570	Plugged (site released)	-	6/19/2013
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-01654	Oil	D-32-175-28E	32.79690	-104.20540	Plugged (site released)	N/A	N/A
APACHE CORPORATION	EMPIRE ABO UNIT #025A	30-015-01662	Oil	L-32-175-28E	32.78810	-104.20310	Plugged (site released)	-	5/16/2013
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #025B	30-015-01671	Oil	E-32-175-28E	32.79160	-104.20320	Plugged (site released)	-	7/21/2008
LIME ROCK RESOURCES A, L.P.	NORTHWEST ARTESIA UNIT #009	30-015-10795	Oil	L-32-175-28E	32.78990	-104.20420	Plugged (site released)	-	5/28/2008
MARBOB ENERGY CORP	LP STATE #001	30-015-31086	Oil	E-05-185-28E	32.77900	-104.20300	Plugged (site released)	7/3/2000	3/11/2008
APACHE CORPORATION	EMPIRE ABO UNIT #025C	30-015-02607	Oil	D-05-185-28E	32.78170	-104.20410	Plugged (site released)	-	6/25/2013
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #025	30-015-01660	Oil	M-32-175-28E	32.78530	-104.20410	Plugged (site released)	-	6/30/2009
CONOCOPHILLIPS COMPANY	STATE E AI #001	30-015-02608	Oil	E-05-185-28E	32.77890	-104.20520	Plugged (site released)	-	1/13/2006
MACK ENERGY CORP	STATE AG #001	30-015-10244	Oil	L-05-185-28E	32.77530	-104.20520	Plugged (site released)	-	3/26/2001
BP AMERICA PRODUCTION COMPANY	EMPIRE ABO UNIT #261A	30-015-22697	Oil	C-05-185-28E	32.78060	-104.20000	Plugged (site released)	-	6/15/2009
SDX RESOURCES INC	NORTHWEST ARTESIA UNIT #013	30-015-10834	Oil	N-32-175-28E	32.78630	-104.19970	Plugged (site released)	-	11/1/2006
APACHE CORPORATION	EMPIRE ABO UNIT #026B	30-015-01661	Oil	K-32-175-28E	32.78810	-104.19880	Plugged (site released)	3/13/1960	3/12/2021
SDX RESOURCES INC	NORTHWEST ARTESIA UNIT #008	30-015-10818	Oil	K-32-175-28E	32.78990	-104.19950	Plugged (site released)	-	11/6/2006
APACHE CORPORATION	EMPIRE ABO UNIT #272	30-015-22009	Oil	O-32-175-28E	32.78450	-104.19740	Plugged (site released)	2/8/1977	5/4/2021
LU VENTURES, LLC DBA MARKER OIL & GAS	GATES STATE #003	30-015-31036	Oil	H-36-175-27E	32.79140	-104.22680	Reclamation Fund Approved	3/25/2000	-
LU VENTURES, LLC DBA MARKER OIL & GAS	HOMAN #001	30-015-00669	Oil	H-36-175-27E	32.79140	-104.22470	Reclamation Fund Approved	5/22/1949	-
TARCO ENERGY, LC	DELHI #007	30-015-00646	Oil	A-36-175-27E	32.79500	-104.22470	Reclamation Fund Approved	3/26/1950	-
LU VENTURES, LLC DBA MARKER OIL & GAS	GATES STATE #001	30-015-00689	Oil	H-36-175-27E	32.79320	-104.22470	Reclamation Fund Approved	7/21/1951	-
LU VENTURES, LLC DBA MARKER OIL & GAS	ASTON & FAIR A #001	30-015-01633	Oil	D-31-175-28E	32.79680	-104.22260	Reclamation Fund Approved	12/28/1945	-
CFM OIL, LLC	BLAKE STATE #001	30-015-01616	Oil	P-30-175-28E	32.79870	-104.20970	Reclamation Fund Approved	11/21/1952	-
APACHE CORPORATION	EMPIRE ABO UNIT #417	30-015-39401	Oil	P-36-175-27E	32.78630	-104.22560	Temporary Abandonment	1/9/2012	-
APACHE CORPORATION	EMPIRE ABO UNIT #213	30-015-23116	Oil	E-06-185-28E	32.77760	-104.22320	Temporary Abandonment	3/9/1980	-
APACHE CORPORATION	EMPIRE ABO UNIT #201	30-015-21553	Oil	H-01-185-27E	32.77630	-104.22360	Temporary Abandonment	6/28/1975	-
APACHE CORPORATION	EMPIRE ABO UNIT #212	30-015-22637	Oil	E-06-185-28E	32.77650	-104.22230	Temporary Abandonment	12/4/1978	-
APACHE CORPORATION	EMPIRE ABO UNIT #021D	30-015-02622	Oil	L-06-185-28E	32.77500	-104.22140	Temporary Abandonment	12/27/1959	-
APACHE CORPORATION	EMPIRE ABO UNIT #211A	30-015-23548	Oil	L-06-185-28E	32.77430	-104.22030	Temporary Abandonment	2/11/1981	-
APACHE CORPORATION	EMPIRE ABO UNIT #026D	30-015-02602	Oil	F-05-185-28E	32.77900	-104.20090	Temporary Abandonment	11/28/1959	-

## Attachment 7

## Digital Data

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***Petrotek***



**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

COMMENTS

Action 249236

**COMMENTS**

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 249236
	Action Type: [C-103] Sub. General Sundry (C-103Z)

**COMMENTS**

Created By	Comment	Comment Date
cchavez	Fall-Off Test (FOT) 2023 Submittal OCD Review Comments on the FOT Report are as follows: 1) A FOT is not considered to be an MIT, but is an indicator of the remaining storage potential of injection zone. 2) The Pressure differential from the point before FOT monitoring and end of monitoring was less than 100 psi. 3) The Hall Plot indicates the wellbore is plugged and needs to be cleaned out. 4) The elevated positive "skin" values, i.e., 201.5 also indicate the wellbore is plugged. OCD had commented on the 2022 FOT that the well needed to be cleaned out before running another FOT. 5) The Fig. 10 Horner Plot X or Y scale units are not semi-logarithmic. 6) The Fig 9. Log-Log Plot did not achieve Radial Flow and the resulting plot could not be matched with any known reservoir condition; thus, was inconclusive. 7) Fig. 13 Area of Review 1-Mile was missing from the FOT Rpt. 8) Table 3 AOR Id'd Horiz Wells breached zone were confirmed to be within 1 mile of the inj well installed 2022.	9/8/2023

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CONDITIONS  
  
Action 249236

CONDITIONS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 249236
	Action Type: [C-103] Sub. General Sundry (C-103Z)

CONDITIONS

Created By	Condition	Condition Date
cchavez	OCD is conditionally approving this FOT Report with some deficiencies on the conditions: 1) The wellbore must be cleaned out before the end of 2023. 2) The permittee, during the next FOT shall stop the test and clean-out the well before running the final FOT to ensure the aquifer characteristics will be accurately determined by the FOT.	9/8/2023