UICI-8-4

EPA FALL-OFF TEST REPORT

2022

Petrotek

Technical Report

MECHANICAL INTEGRITY AND RESERVOIR TESTING

CLASS I NON-HAZARDOUS DEEPWELL
WELL NO. 4
(OCD UIC Permit: UICI-008-4)
(API Number: 30-015-44677)

HollyFrontier Navajo Refining Company
Artesia, New Mexico

Section 23, Township 17S, Range 27E
1217 FSL, 2443 FWL

August 12, 2022

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EXECUTIVE SUMMARY

This report summarizes the successful mechanical integrity testing (MIT) and falloff testing activities performed on WDW-4 at the HollyFrontier Navajo Refining Company (HFNR) facility in 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 May 17, 2022, before field activities commenced. Attachment 1 presents the test notification and procedures submitted to OCD. Approvals were received from regulatory agency staff prior to commencement of activities. No OCD personnel were present to witness testing. MIT activities were supervised by Jeremiah Demuth (Petrotek).

The field activities consisted of an annulus pressure test (APT) and an injection falloff test on WDW-4. 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 number authorizing injection** - OCD UIC Permit: UICI-008-4

b. **Well classification** - Class I Non-hazardous

c. **Well name and number** - WDW-4

d. **API Number** - 30-015-44677

e. **Legal Location** - Section 23, Township 17S, Range 27E, 1217 FSL, 2443 FWL

3. CURRENT WELLBORE SCHEMATIC

A wellbore schematic displaying the well configuration during testing is provided as Figure 1. A current 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 2018 during the 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 10,307 and 10,680 feet 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 330 feet with an average porosity of 25 percent. Consistent with the most recent test analysis previously submitted, these values were used for the analysis performed on data collected this year and presented in this report.

6. PVT DATA OF THE FORMATION AND INJECTION FLUID

Formation fluid samples of connate brine from the injection interval were not collected from the WDW-4 during drilling and completion. Therefore, the average total dissolved solids (TDS) of the formation fluid is estimated to be 25,000 mg/l per the previously submitted and approved UIC permit application based on data acquired from offset wells, and consistent with the initial falloff test analysis from 2018.

The formation viscosity, fluid compressibility, and total compressibility were estimated using this 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. These correlations 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 for the PVT data.

The percent solids for the fluid was approximated as 2.5%, based on the average 25,000 mg/l TDS brine concentration discussed above. A bottom hole temperature of 159 °F has been used as representative of the formation for these correlations. This value was derived from the original temperature log, run in 2018 when the well was completed. This log is can be found online on the OCD site as part of the WDW-4 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 depth of 10,307 feet BGL using the average formation fluid specific gravity based on the TDS value discussed above. Using this method, a value of 4,574.5 psi has been estimated as the pressure at the depth the gauges were set at for testing (10,307 feet BGL). At this pressure and a temperature of 159 °F, the following equations have been used to derive viscosity:

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

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

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

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

Where,

μ_{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
μ_w is the viscosity of the brine at bottom hole conditions

Using these equations, a value of 0.47 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, which is consistent with the primary composition of the effective injection interval (see discussion in Section 11).

$$cf = \frac{a}{(1+bc\Phi)^{\frac{1}{b}}} \quad \text{(L-89)}$$

Where,

a = 0.8535
b = 1.075
c = 2.303 E06
Φ = 0.25

Based on this equation, a value of 3.50E-6 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 159 °F, a bottom hole pressure of 4,574.5 psi, and a dissolved solids weight of 2.5%. Using Figure L-31 to first estimate freshwater compressibility, a value of 2.86E-06 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 2.70E-06 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 6.20E-06 psi^{-1}.

The specific gravity of the test fluid, based on the static gradient survey performed at the end of the test, was 1.003 (gradient of 0.434 psi/ft) with a measured temperature during injection of 103.2 °F. Using Equations L-84 through L-87, the viscosity of the injected fluid at bottom hole conditions at the wellbore during injection is 0.76 cp. The compressibility of the injected fluid (based on Figures L-30 and 31) is 2.78E-06 psi^{-1}.

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

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

The following table summarizes recent data acquired with HFNR well monitoring equipment for the month prior to and the month that testing was conducted.

TABLE 1
JUNE AND JULY INJECTION DATA

Date	Injection Pressure (psi)	Injection Rate (gpm)	Annulus Pressure (psi)
6/1/2022	218.19	248.25	210.40
6/2/2022	214.74	246.27	141.15
6/3/2022	230.19	269.62	179.10
6/4/2022	240.92	283.54	203.98
6/5/2022	233.12	273.78	207.96
6/6/2022	248.18	295.69	216.05
6/7/2022	286.78	353.61	228.98
6/8/2022	242.04	279.84	207.76
6/9/2022	252.88	304.32	248.58
6/10/2022	240.94	287.03	229.99
6/11/2022	235.99	275.74	152.29
6/12/2022	220.35	246.05	161.65
6/13/2022	235.75	271.32	206.61
6/14/2022	282.18	341.28	217.30
6/15/2022	304.24	371.26	222.42
6/16/2022	277.73	337.75	237.66
6/17/2022	225.78	265.50	188.69
6/18/2022	229.35	264.67	194.30
6/19/2022	229.05	265.82	190.36
6/20/2022	233.57	265.22	181.95
6/21/2022	239.61	282.21	183.36
6/22/2022	249.09	292.79	208.81
6/23/2022	262.57	315.89	229.84
6/24/2022	252.95	293.10	181.63
6/25/2022	257.11	304.71	181.48
6/26/2022	263.16	317.74	189.23
6/27/2022	268.27	324.47	143.83
6/28/2022	277.46	339.54	136.91
6/29/2022	280.10	342.45	200.64
6/30/2022	288.76	352.46	226.02
7/1/2022	262.37	309.13	165.27
7/2/2022	263.57	317.60	185.55
7/3/2022	251.79	298.85	156.32
7/4/2022	247.91	292.20	119.43
7/5/2022	255.37	302.12	113.41
7/6/2022	262.67	308.63	145.45
7/7/2022	243.82	278.08	136.82
7/8/2022	250.25	292.40	180.40

Date	Injection Pressure (psi)	Injection Rate (gpm)	Annulus Pressure (psi)
7/9/2022	252.15	292.86	170.66
7/10/2022	260.42	301.25	170.65
7/11/2022	252.56	295.78	137.85
7/12/2022	256.66	300.48	179.75
7/13/2022	265.54	312.07	211.32
7/14/2022	266.78	312.24	257.72
7/15/2022	272.67	313.17	258.01
7/16/2022	260.42	294.37	234.53
7/17/2022	257.23	299.95	210.17
7/18/2022	259.61	302.21	205.01

8. CUMULATIVE INJECTION INTO THE FORMATION FROM TEST WELL

At the time of shut-in for testing the cumulative volume of waste injected into this well since operations began, based on OCD records and HFNR data, is 408,116,972 gallons (9,717,071 bbls).

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 10,000 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. These gauges were last calibrated on 5/28/2021. The most recent calibration certificates are provided in Attachment 3. The bottom gauge (Serial Number - 224831) was utilized for analysis and hung at a test depth of 10,327 feet KB.

10. ONE-MILE AREA OF REVIEW (AOR)

A standard one-mile Area of Review (AOR) was evaluated for WDW-4 as part of the annual testing and reporting requirements. This evaluation was performed by Federal Abstract Company. The wells located within this one-mile AOR are listed in Attachment 6. This table includes a listing of the operator, well name, API number, well type, well status, location, and date of abandonment or completion. 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, no new wells have been drilled within the AOR in the last year. Two wells, listed in Table 2, have been newly plugged and abandoned within the AOR in the last year. Neither well penetrates the WDW-4 confining interval.

TABLE 2
WELLS P&A'd WITHIN AOR DURING THE PAST YEAR

Operator	Well Name	API	Well Type	TVD (ft)	Lat Long	P&A Date
ALAMO PERMIAN RESOURCES, LLC	BERRY A #011	30-015-00498	Gas	2,150	32.816841 -104.233299	11/29/2021
Redwood Operating LLC	EAGLE 27 FEDERAL #001	30-015-29936	Oil	2,700	32.811573 -104.260719	12/23/2021

a. **Wells Located Within the One-mile AOR -** The wells located within the one-mile AOR are provided as Attachment 6. This table shows 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. The "new" well status represents permitted wells that have not been drilled or completed.

c. **Provide details on any offset producers and injectors completed in the same injection interval -** Based on public data, there is one well that has been completed in the same formation as WDW-4 within the one-mile AOR. This well is the Alamo Permian Resources, LLC Berry Federal #029, which was plugged and abandoned in 2013. No active offset producers or injectors exist in the injection interval within the AOR based on public data.

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 the previous permit application for this well.

The WDW-4 well is located in Eddy County, New Mexico on the Northwest Shelf of the Permian Basin. The injection interval is undifferentiated Silurian-Devonian age strata composed of shallow water carbonates, dolostone and limestones. The confining zone is comprised of the upper Devonian Woodford Formation and the

overlying undifferentiated Mississippian strata.

Based on the WDW-4 drilling report, the top of the Silurian-Devonian injection zone is at a depth of approximately 10,220 feet KB. A structure map of the top of the Silurian-Devonian is provided in Figure 3. The gross thickness of the Silurian-Devonian is approximately 665 feet thick. The top of the injection zone is over 1,000 feet below the base of the injection zone in which the three other Class I wells (WDW-1, WDW-2, and WDW-3) operated by HFNR are completed. These three wells are completed in the lower portion of the Permian age Wolfcamp Formation and the underlying Pennsylvanian age Cisco and Canyon Formations. The geologic interpretations have been confirmed but not revised as part of this report.

12. OFFSET WELLS

There is one well that was completed in the same formation as WDW-4 within the AOR. As noted in 10.c, this well is the Alamo Permian Resources, LLC Berry Federal #029. This well was plugged and abandoned in 2013.

a. **Identify the distance between the test well and any offset wells completed in the same injection interval –** The Berry Federal #029 well was located approximately 2,000 feet to the north of WDW-4.

b. **Report the status of the offset wells during both the injection and shut-in portions of the test -** The offset Berry Federal #029 well was plugged and abandoned in 2013.

c. **Describe the impact, if any, of the offset wells during both the injection and shut-in portions of the test -** There was no impact on the character of the falloff test or the development of a useful test from wells identified in the AOR. A discussion of possible late-time effects is included in Section 15 of this report.

13. CHRONOLOGICAL LISTING OF THE DAILY TESTING ACTIVITIES

a. **Date of the test -** Testing was performed from July 19 through 21, 2022.

b. **Time of the injection period -** Constant-rate injection occurred for approximately 48 hours before the falloff test began. This injection period exceeded the duration of the falloff. Figure 6 presents the test history.

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 4,631.2 psia (at 10,307 feet BGL) and the injection rate was 136.3 gpm (4,672.8 bwpd) with a measured bottom hole temperature of 106.9 °F.

e. **Total shut-in time -** The well was shut-in for approximately 44 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 4,609.8 psia and the final bottom hole temperature was 132.0 °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 3 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 whose gauges were utilized for testing generated an injection falloff test summary report based on this collected data. This report is provided in Attachment 4.

a. **Radius of test investigation -** The radius of investigation for this test was determined to be 12,521 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 transition into radial flow was approximately 0.06 hours after shut-in. This value was derived from the log-log plot.

c. **Slope(s) determined from the semi-log plot -** The slope for the likely middle-time radial period, as determined from the semi-log plot, was 0.3586 psi/cycle.

d. **Transmissibility (kh/μ) -** The transmissibility was determined to be 2,118,788 md-ft/cp.

e. **Permeability (k) -** The permeability was determined to be 3,018 md.

f. **Skin Factor (s) -** The skin factor was determined to be 38.5 units.

g. **Pressure drop due to skin (ΔP_{skin}) -** The pressure drop due to skin was determined to be 12.0 psi

h. **Flow efficiency -** The flow efficiency was determined to be 0.44.

i. **Flow capacity (kh) -** The flow capacity (permeability-thickness) was determined to be 995,830 md-ft.

j. **P_{1hr} -** The extrapolated 1-hr pressure was determined to be 4,616.6 psi.

TABLE 3
FALLOFF TEST ANALYSIS INPUT VALUES

Parameter	Value	Unit
Formation Thickness, h	330	feet
Porosity, Φ	25	percent
Viscosity, μ	0.47	centipoise
Formation Compressibility, c_f	3.50E-06	1/psi
Total Compressibility, c_t	6.20E-06	1/psi
Formation Volume Factor, B	1.00	bbl/stb
Wellbore Radius, r_w	0.3532	feet
Final Well Flowing Pressure, p_{wf}	4,631.2	psia
Final Injection Rate, q_{final}	4,672.8 136.3	bwpd (gpm)
Horner Straight Line Slope, m	0.3586	psi/cycle

The average historical injection period used to account for total volume in the analysis was calculated by dividing the cumulative historical injection through 8/1/2020 (4,573,230 barrels) by the final injection rate (142.4 gpm). This resulted in a value of 22,475.7 hours. This value of 22,475.7 hours of injection at 142.4 gpm was used in conjunction with the injection data collected from 8/1/2020 through 7/19/22. The total waste volume injected up to the time of shut-in utilized for calculations was 408,116,972 gallons (9,717,071 bbls).

To determine the mobility-thickness (transmissibility), the following equation was utilized. The resulting transmissibility was 2,118,788 md-ft/cp.

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

Where,

k is the permeability, in md
h is the formation thickness, in feet
μ 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 unit conversion constant

$$\frac{kh}{\mu} = Transmissibility = 162.6\frac{4{,}672.8 * 1.0}{0.3586} = 2{,}118{,}788\frac{md-ft}{cp}$$

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 995,830 md-ft.

$$kh = \left(\frac{kh}{\mu}\right)\mu = 2{,}118{,}788\left(\frac{md-ft}{cp}\right)0.47\ cp = 995{,}830\ md-ft$$

This permeability-thickness was then used to determine the permeability of the reservoir. The resulting permeability was 3,018 md.

$$k = \frac{kh}{h} = \frac{995{,}830\ \ md-ft}{330\ ft} = 3{,}018\ md$$

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 radius of waste emplaced by injection. The piston-like displacement radius was estimated to be 459 feet.

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

Where,

r_{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
Φ is the porosity, as a fraction
0.13368 is a conversion constant

$$r_{waste} = \sqrt{\frac{0.13368 * (408{,}116{,}972)}{\pi * 330 * 0.25}} = 459\ feet$$

Based on this radius, the time for a pressure transient to travel through this fluid can be calculated. The resulting time was approximately 0.05 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
Φ is the porosity, as a fraction
μ_{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 psi^{-1}

k is the permeability, in md
948 is a conversion constant

$$t_{waste} = 948\frac{0.25 * 0.47 * 6.2E-06 * (459)^2}{3{,}018} = 0.05\ hours$$

Based on this result, and the time it took for the transition to radial flow to begin (~0.06 hours), it is likely that the pressure transient was dominated by reservoir fluid properties during the subsequent middle-time radial flow period, indicating that the appropriate viscosity was used for the evaluation.

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 38.5 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 psi/cycle
k is the permeability, in md
Φ is the porosity, as a fraction
μ is the viscosity, in cp
r_w is radius of the wellbore in feet
1.151 and 3.23 are constants

$$s = 1.151\left(\frac{4{,}631.2 - 4{,}616.6}{0.3586} - log\left(\frac{3{,}018}{0.25 * 0.47 * 6.2E-06 * 0.3532^2}\right) + 3.23\right) = 38.5$$

The pressure contribution of the skin term to wellbore pressure can be calculated using the following equation. The result of this calculation was 12.0 psi of pressure due to skin.

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

Where,

ΔP_{skin} is the change in pressure due to skin, in psi
m is slope of the radial line, in psi/cycle

s is skin, in units
0.869 is a conversion constant

$$\Delta P_{skin} = 0.869 * 0.3586 * 38.5 = 12.0\ psi$$

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 0.44.

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

Where,

P_{wf} is the shut-in well pressure, in psi
ΔP_{skin} is the change in pressure due to skin damage, in psi
$P_{end\ of\ test}$ is the pressure at the end of the falloff test, in psi

$$FE = \frac{4{,}631.2 - 12.0 - 4{,}609.8}{4{,}631.2 - 4{,}609.8} = 0.44$$

The test radius of investigation (r_{inv}) can be determined using the following equation. The result of this calculation was 12,521 feet.

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

Where,

k is permeability, in md
t is time, in hours
Φ is porosity, as a fraction
μ is viscosity, in cp
c_t is total compressibility, in psi^{-1}
0.029 is a constant

$$r_{inv} = 0.029\sqrt{\frac{3{,}018 * 30}{0.25 * 0.47 * 6.2E-06}} = 12{,}521\ feet$$

Based on examination of the log-log diagnostic plot provided as Figure 7, is it evident that early-time data is dominated by wellbore storage. It is likely that the test was transitioning into radial flow approximately 0.06 hours after well shut-in. Middle-time data suitable for semi-log analysis lasts from approximately 0.08 to 0.12 hours after shut-in. The test has been analyzed using the analytical Horner semi-log method based on the reasonable assumption that a period of radial flow

exists in the data). Figure 8 presents the semi-log plot of the falloff with a line consistent with the likely radial flow period denoted in Figure 7. Subsequent to the end of the radial-flow period, a boundary-influenced late-time period develops. A simulation analysis was conducted to generate a best-fit model of the data. This analysis implies the possible presence of two intersecting limited-flow heterogeneities, both located at a distance of approximately 630 feet from the injector.This is not a unique analysis. The simulation analysis generally supports the more simplistic graphical analysis that relies upon the semi-log slope to derive a permeability-thickness during the middle-time period of the data more likely to be dominated by radial flow.

The character of the fall-off data and the derivative are similar to the patterns evident in previous testing of this well and are consistent with a large permeability-thickness and a small skin factor.

The following figures are provided illustrating the test analysis and results:

- Figure 4 - Cartesian Plot of Pressure, Temperature and Rate vs. Time
- Figure 5 - Full Rate History Plot
- Figure 6 - Cartesian Plot of Pressure Falloff with Model Match
- Figure 7 - Log-log Derivative Plot with Model Match
- Figure 8 - Semi-log Horner Plot with Model Match
- Figure 9 - Daily Injection Rate History for Month Prior to Test Plot
- Figure 10 - Hall Plot

As specified by OCD requirements, a Hall Plot (Figure 10) generated from the data presented in Table 1 over the month leading up to the falloff test this year 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 current concerns noted with regard to well or reservoir performance. Attachment 5 presents a summary of the falloff test.

Table 4 summarizes historical well test analysis results, including the results from

the test this year.

TABLE 4
HISTORICAL AMBIENT RESERVOIR TESTING

Year	Fill Depth (feet)	Permeability (md)	Mobility-thickness (md-ft/cp)	Skin (units)	P* (psia)
2022	10,662	3,018	2,118,788	38.5	4,613.5
2021	10,310	4,134	2,902,490	6.6	4,600.9
2020	10,448	2,474	1,569,774	-1.9	4,579.0
2018	N/A	6,642	3,845,360	-3.47	4,520.4

The 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. INTERNAL MECHANICAL INTEGRITY

On July 21, the annulus was pressured to 652.0 psi to begin the mechanical integrity test. A calibrated digital pressure gauge (Crystal XP2i, 5,000 psi, SN - 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, injection pressure and injection rate were then monitored for a period of thirty minutes at 5-minute intervals. During the Part I internal mechanical integrity test the pressure decreased by 23.2 psi. Since a change of 10% (65.2 psi) of the starting test pressure is allowable, this test is within acceptable specifications. Attachment 2 presents a copy of the gauge certification. Pressures were observed as follows during testing.

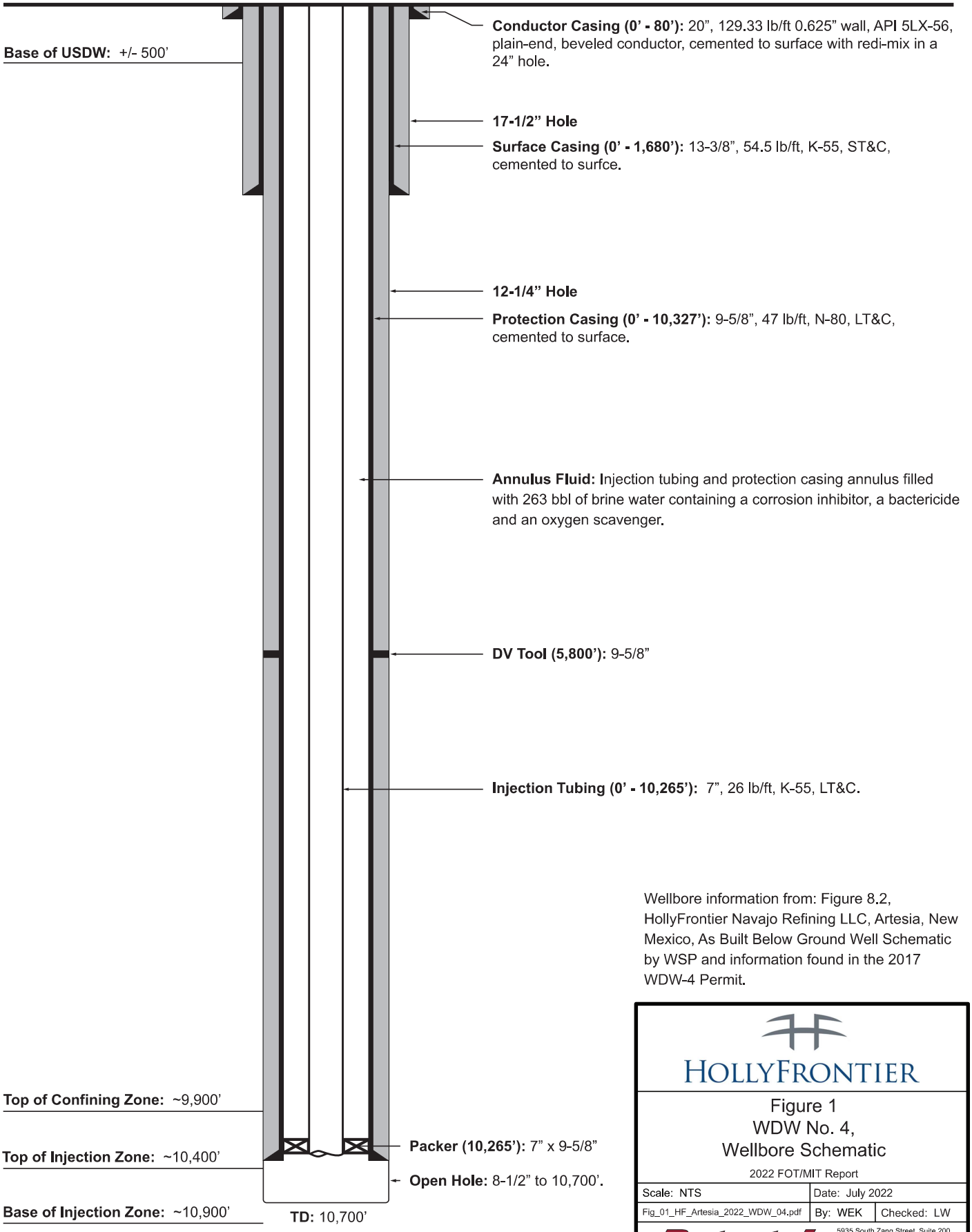
TABLE 5
ANNULUS PRESSURE TEST MEASUREMENTS

Time, Minutes	0	5	10	15	20	25	30
Pressure, Psi	652.0	649.8	648.3	645.3	634.9	631.0	628.8

FIGURES

OCD UIC Permit: UICI-008-4
Well API Number: 30-015-44677
Eddy County, New Mexico
Sec. 23, T17S-R27E
Lat. 32.815970° / Long. -104.250174° (NAD 83)

All depths referenced to Kelly Bushing (KB)
elevation 20' above ground level.
Ground Level Elevation: +3,563'



NOT TO SCALE

Wellbore information from: Figure 8.2, HollyFrontier Navajo Refining LLC, Artesia, New Mexico, As Built Below Ground Well Schematic by WSP and information found in the 2017 WDW-4 Permit.

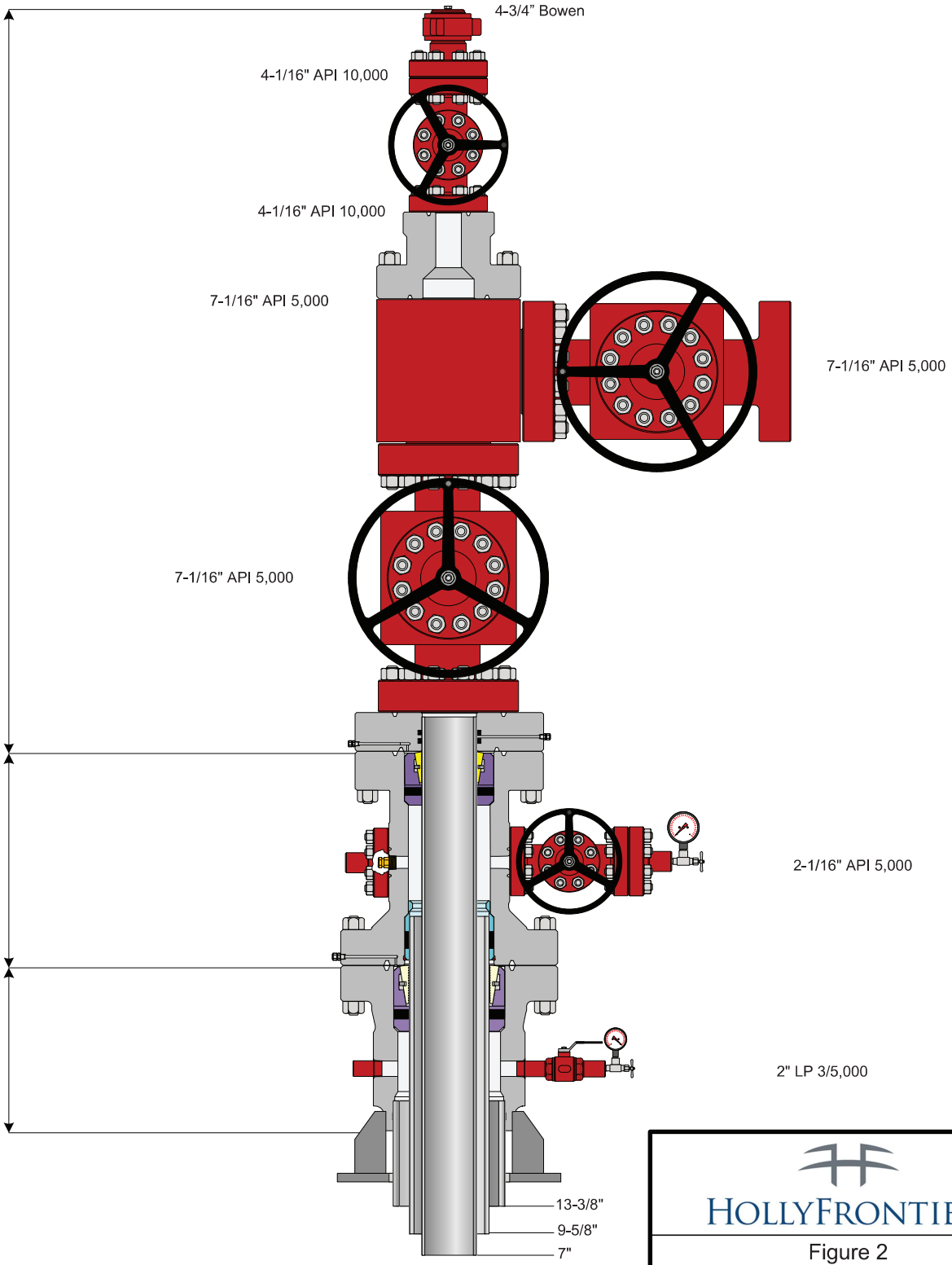
HOLLYFRONTIER

Figure 1
WDW No. 4,
Wellbore Schematic
2022 FOT/MIT Report

Scale: NTS	Date: July 2022	
Fig_01_HF_Artesia_2022_WDW_04.pdf	By: WEK	Checked: LW

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

OCD UIC Permit: UICI-008-4
Well API Number: 30-015-44677
Eddy County, New Mexico
Sec. 31, T17S-R27E
Lat. 32.81581° / Long. -104.25003° (NAD 83)



Wellhead information from:
Figure 8.3, Navajo Refining - HollyFrontier
by Weatherford.

NOT TO SCALE

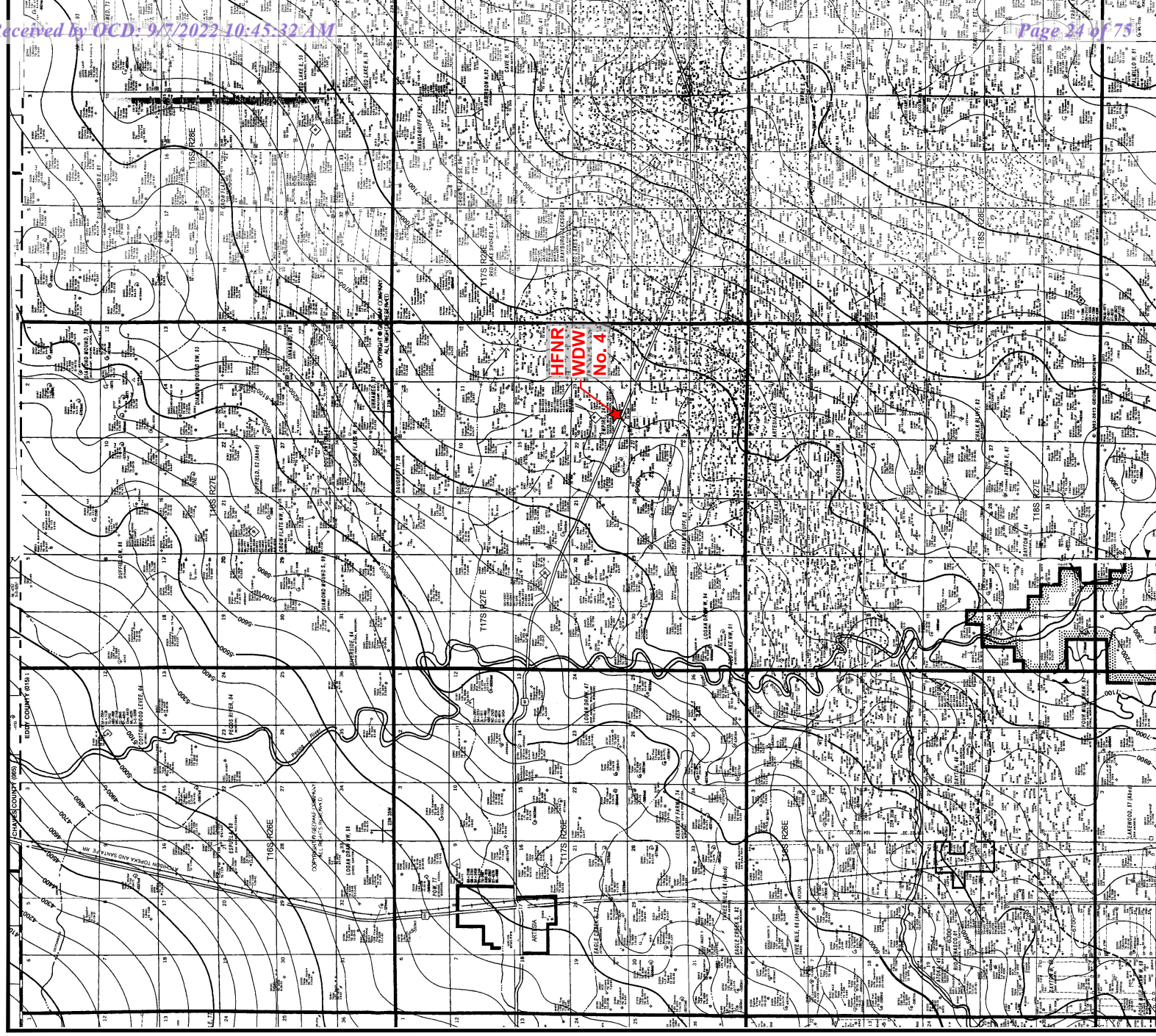
HOLLYFRONTIER

Figure 2
WDW No. 4,
Wellhead Schematic

2022 FOT/MIT Report

Scale: NTS	Date: July 2022	
Fig_02_HF_Artesia_2022_WDW_04.pdf	By: WEK	Checked: LW

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


HFNR
WDW
No. 4
EDDY COUNTY (015)
CHAVES COUNTY (005)
T16S R26E
T16S R27E
T17S R26E
T17S R27E
T18S R26E
T18S R27E
ARTESIA
PECOS RIVER
ATCHISON, TOPEKA AND SANTA FE RR

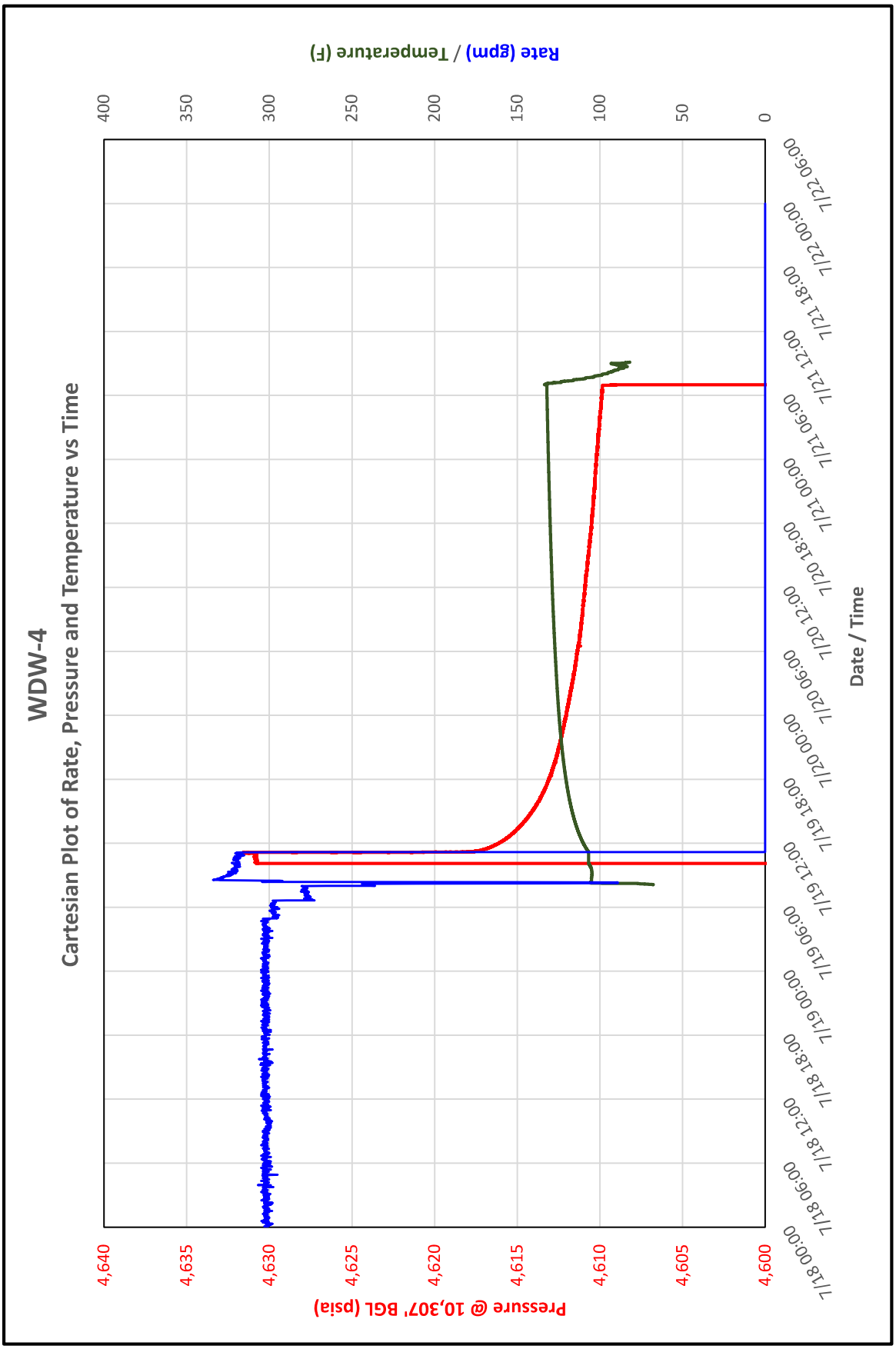


Figure 6
Cartesian Plot of Rate, Pressure and Temperature vs Time
2022 Well Testing

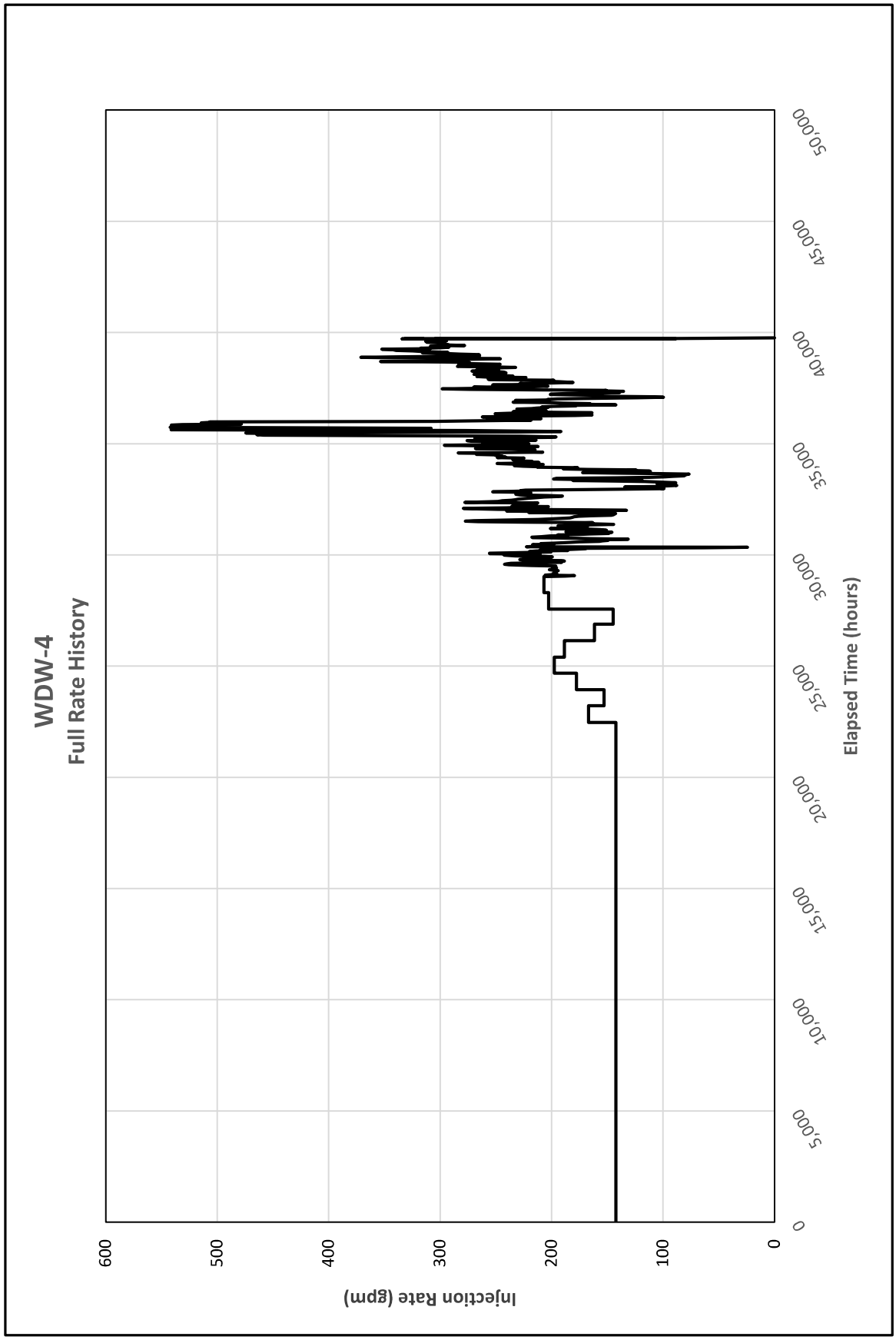


Figure 7
Full Rate History
2022 Well Testing

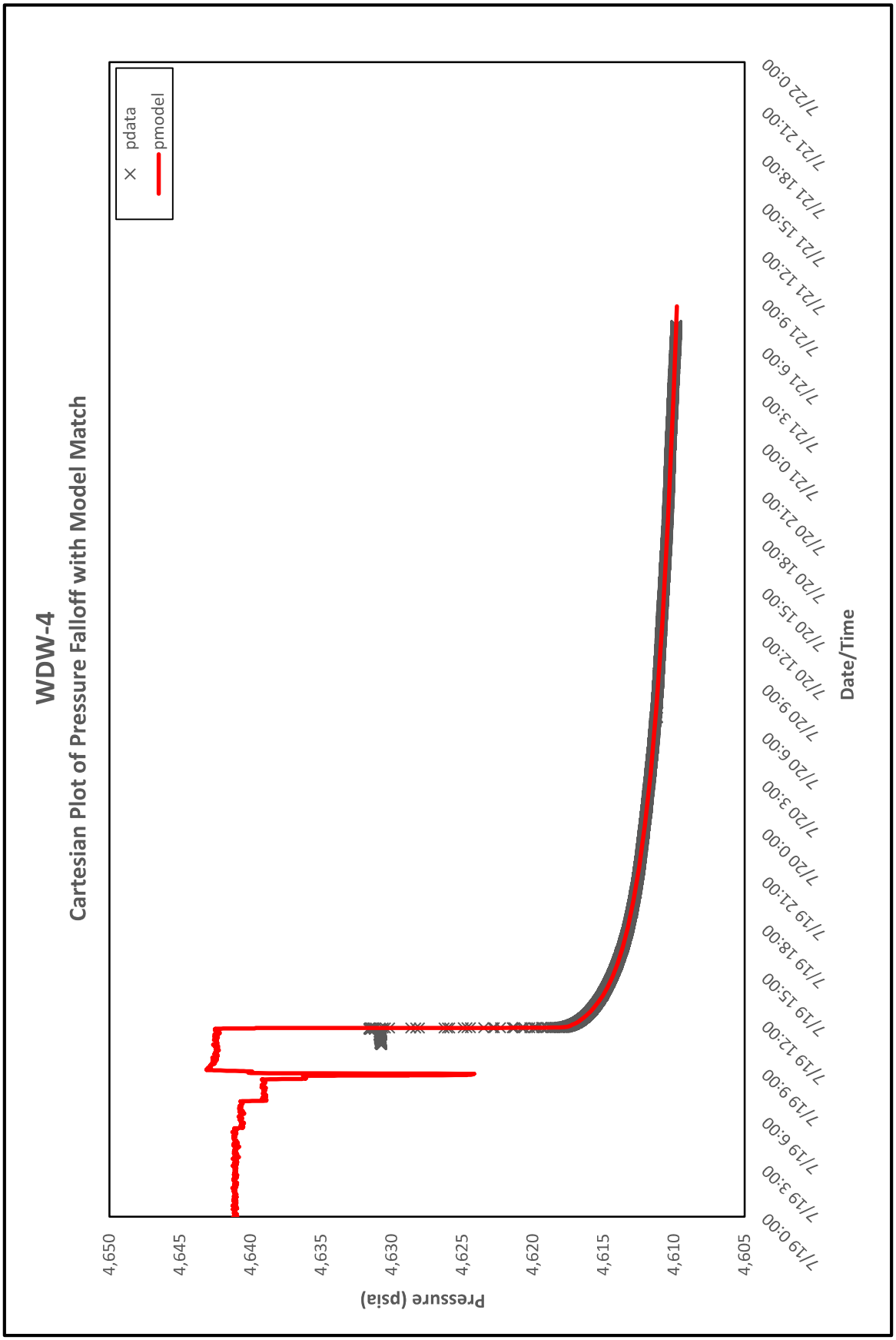


Figure 8
Cartesian Plot of Pressure Falloff with Model Match
2022 Well Testing

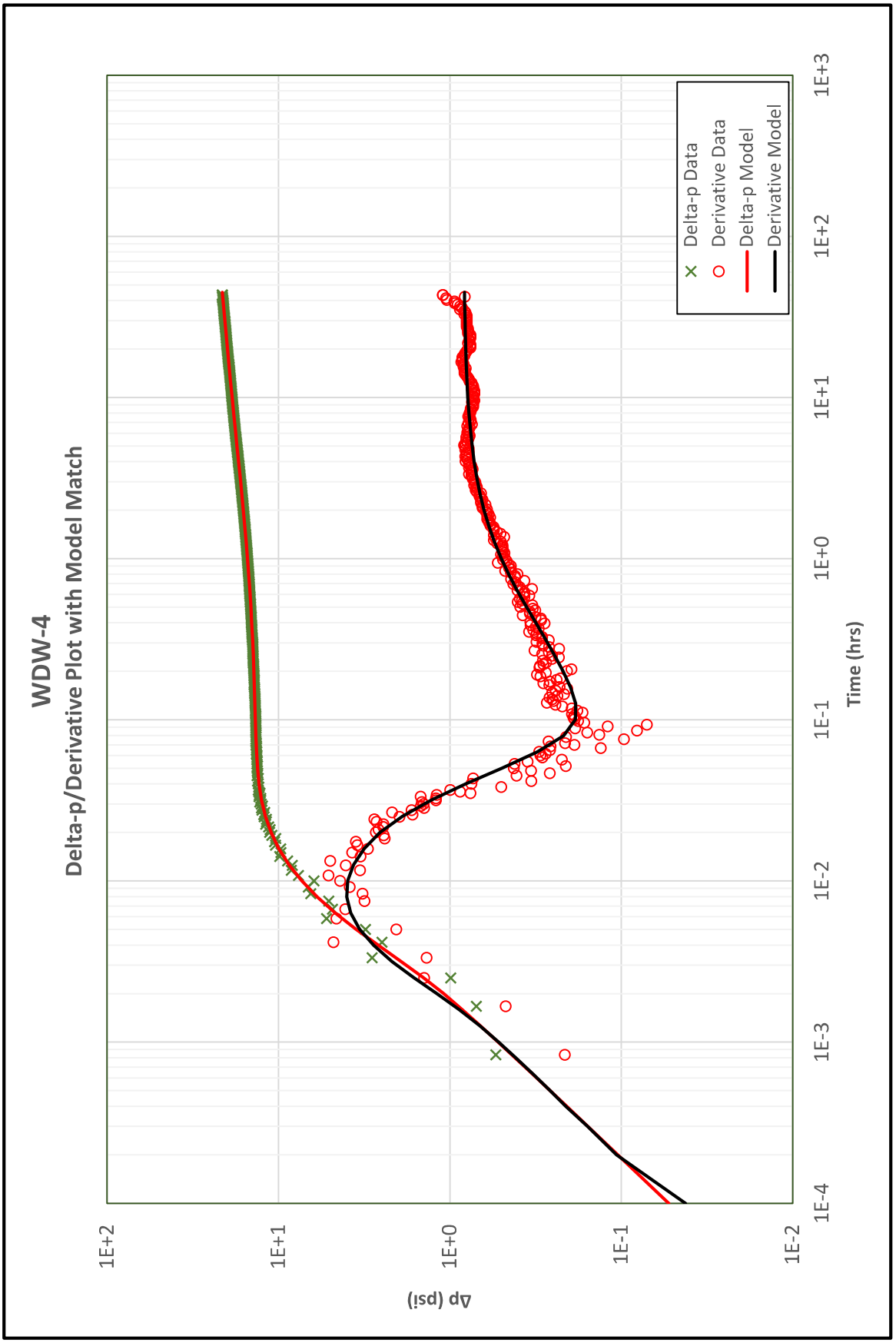


Figure 9
Delta-p/Derivative Plot with Model Match
2022 Well Testing

HOLLYFRONTIER

Petrotek

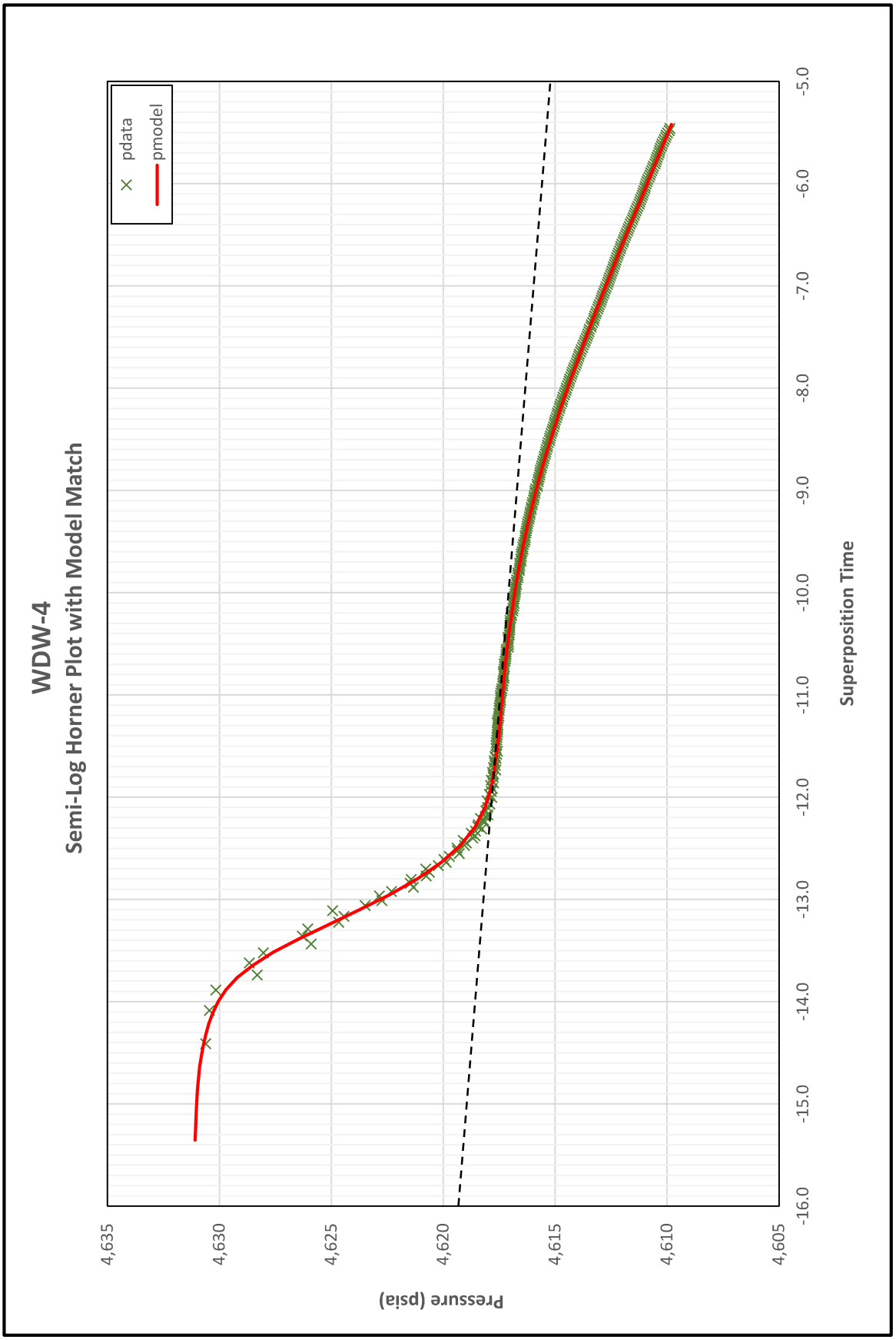


Figure 10
Semi-Log Horner Plot with Model Match
2022 Well Testing

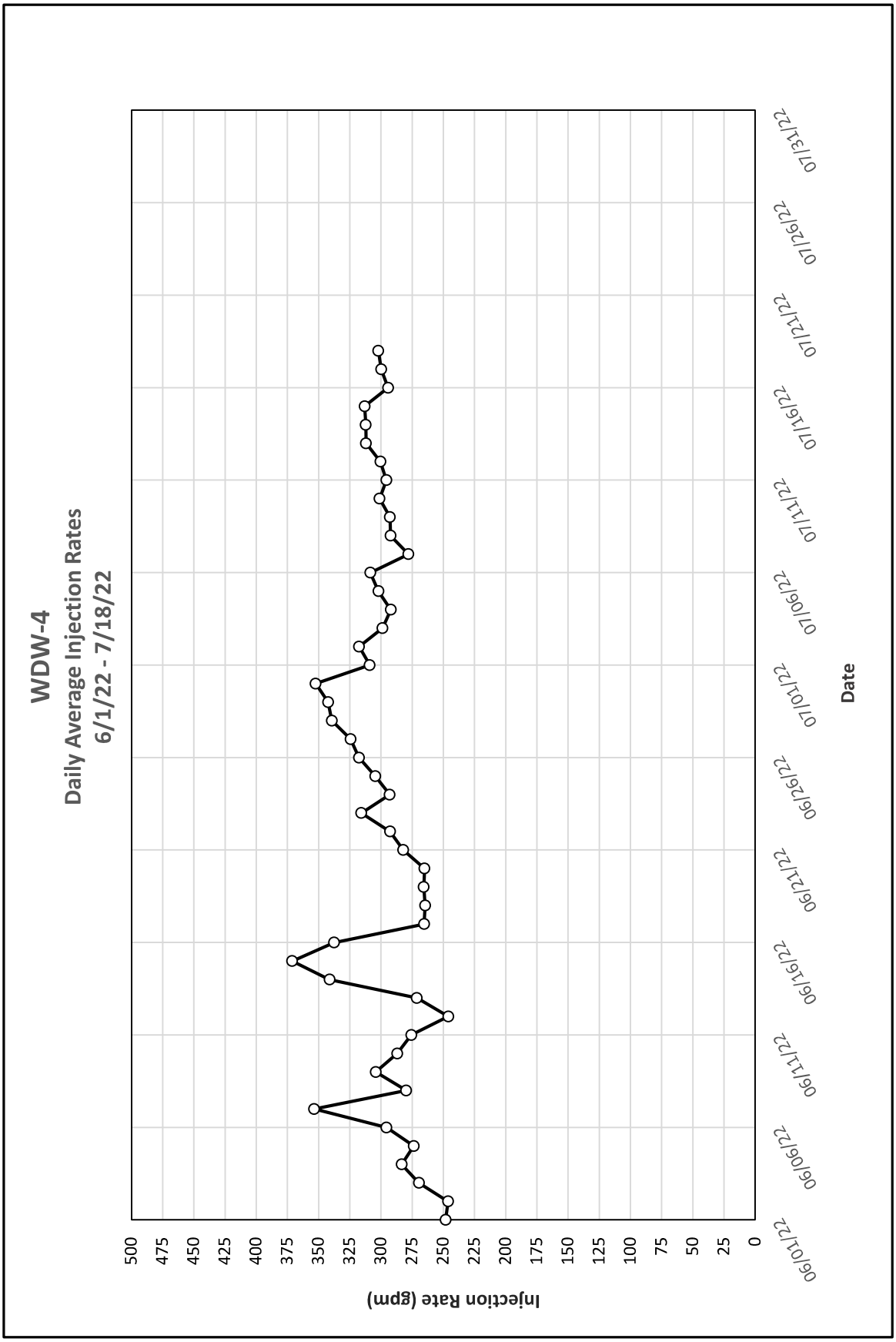
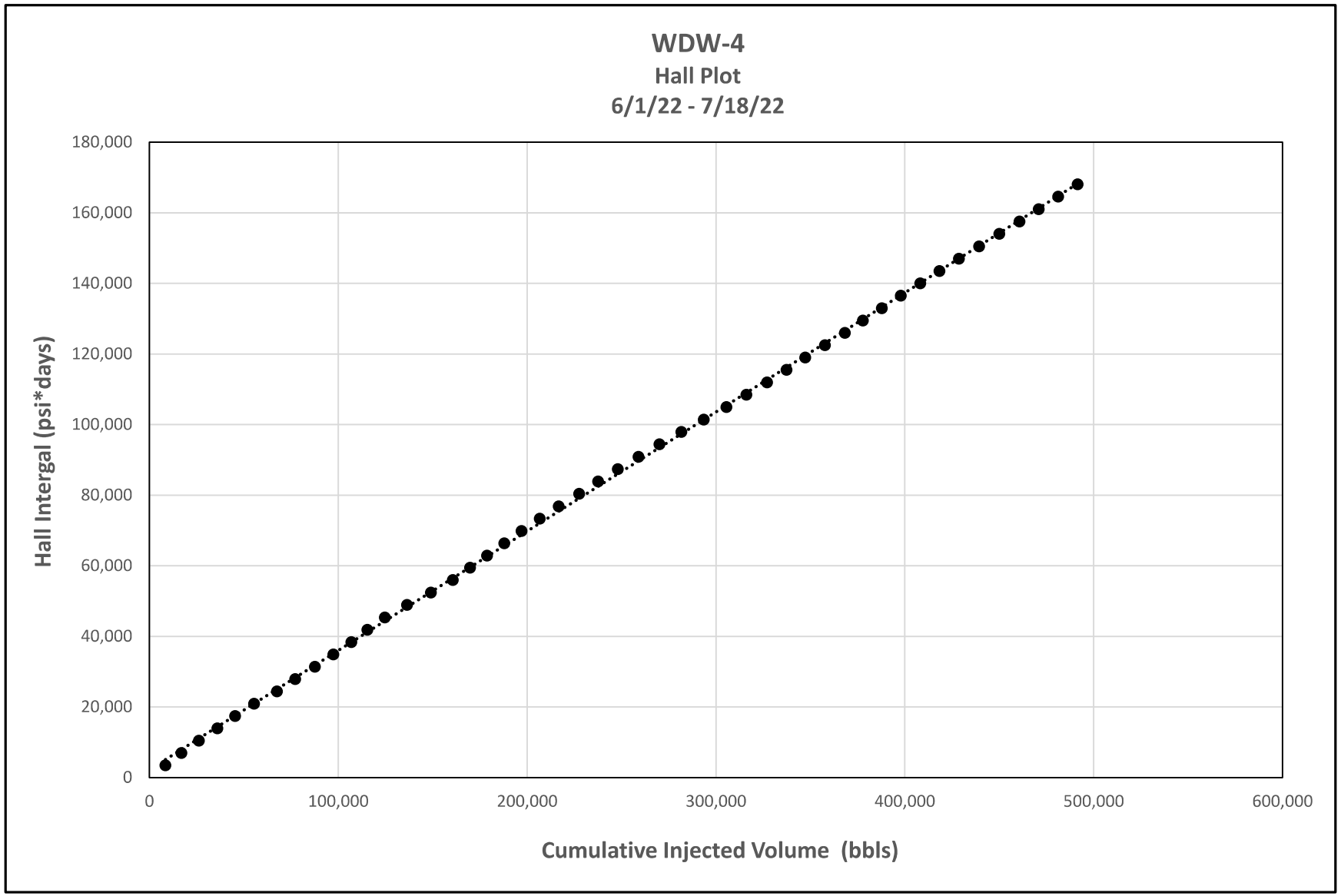


Figure 11
Daily Average Injection Rates
2022 Well Testing



HOLLYFRONTIER

Figure 12
Hall Plot
2022 Well Testing

Petrotek

ATTACHMENTS

Attachment 1
OCD Test Notification

Petrotek

Submit 1 Copy To Appropriate District 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

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

	WELL API NO. 30-015-44677
	5. Indicate Type of Lease STATE ☐ FEE ☐
	6. State Oil & Gas Lease No. NM0255527A
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well ☐ Gas Well ☒ Other: UIC INJECTION WELL	7. Lease Name or Unit Agreement Name WDW-4
	8. Well Number: WDW-4
2. Name of Operator HF SINCLAIR NAVAJO REFINERY	9. OGRID Number: 15694
3. Address of Operator P.O. BOX 159, ARTESIA, NM 88211-0159	10. Pool name or Wildcat SILURIAN-DEVONIAN
4. Well Location Unit Letter: K : 1319 feet from the SOUTH line and 2493 feet from the WEST line Section: 23 Township: 17S Range : 27E NMPM County: EDDY	
	11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 3,565' GL

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☒ PRESSURE FALL OFF TEST / MIT		OTHER:	☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

June 26th: Sunday: Day 1, Start constant rate injection into WDW- 4, as well as the other three (3) offset wells for at least 30 hours prior to shut-in of WDW-4 for Fall Off Testing. Target rate for WDW-4 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 to ensure steady flow. Samples of the injectate will be collected approximately every 10 hours and analyzed for pH and specific gravity.

June 27th: Monday: Day 2, Continue constant injection rate into all four wells.

June 28th: Tuesday: Day 3 While injection continues, will 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 a constant rate. Shut in WDW-4 and collect Fall Off Data for a minimum of 30 hours. WDW-1, WDW-2 and WDW- 3 will continue a constant injection rate until the Downhole Memory Gauges are retrieved.

June 29th: Wednesday: Day 4: WDW-4 is shut in and fall off data is being collected with the Downhole Memory Gauges.

June 30th: Thursday: Day 5: After the minimum of 30 hours of data collection, the gauges will be removed from the well making 5-minute gradient stops every 1,000 feet. Note the top of fill will be tagged either with the gauges prior to pulling them from the well, or a second run with sinker bars will be made after the tools are removed (TBD). Conduct MIT for a minimum of 30 minutes prior to rigging down. 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 Lewis R Dade TITLE: ENV. SPEC DATE: 05/17/2022

Type or print name: LEWIS R. DADE E-mail address: Lewis.Dade@hollyfrontier.com PHONE: 575-746-5281

For State Use Only

APPROVED BY: TITLE DATE

Conditions of Approval (if any):

Attachment 2
Annulus Pressure Gauge Certification

Petrotek

JMC INSTRUMENTS INC.
9829 E. Easter Ave. • Centennial, CO 80112
303.794.8833 • Fax 303.730.1220
Toll Free 1.800.327.7257
www.jmcinstruments.com

CERTIFIED CALIBRATION

CUSTOMER PETROTEK ORDER NO. _____

ITEM Digital Gauge RANGE 0-5000PSIG ITEM NO. 5284

TRUE VALUE	INDICATED VALUE	
PSIG	INCREASING READINGS	DECREASING READINGS
0.00	0	0
500.00	499.4	499.5
1000.00	998.9	999.1
1500.00	1498.5	1498.8
2000.00	1998.2	1998.4
2500.00	2497.7	2498.0
3000.00	2997.4	2997.6
3500.00	3497.0	3497.2
4000.00	3996.7	3996.5
4500.00	4496.5	4495.8
5000.00	4994.9	4994.9

Tested On: Deadweight Tester S/N# 1GA4474

Traceable to National Institute of Standards and Technology certificate # 17-043

Tested By: Brian McLain Date 22 November 2021

Remarks:

Crystal/AMETEK XP2i		SN 901241
Accuracy is +/-	.25	% of Full Scale or Better
Test Conditions	65 °F; 617	mmHg Atm. Pressure

Attachment 3
Downhole Pressure Gauge Certification

Petrotek

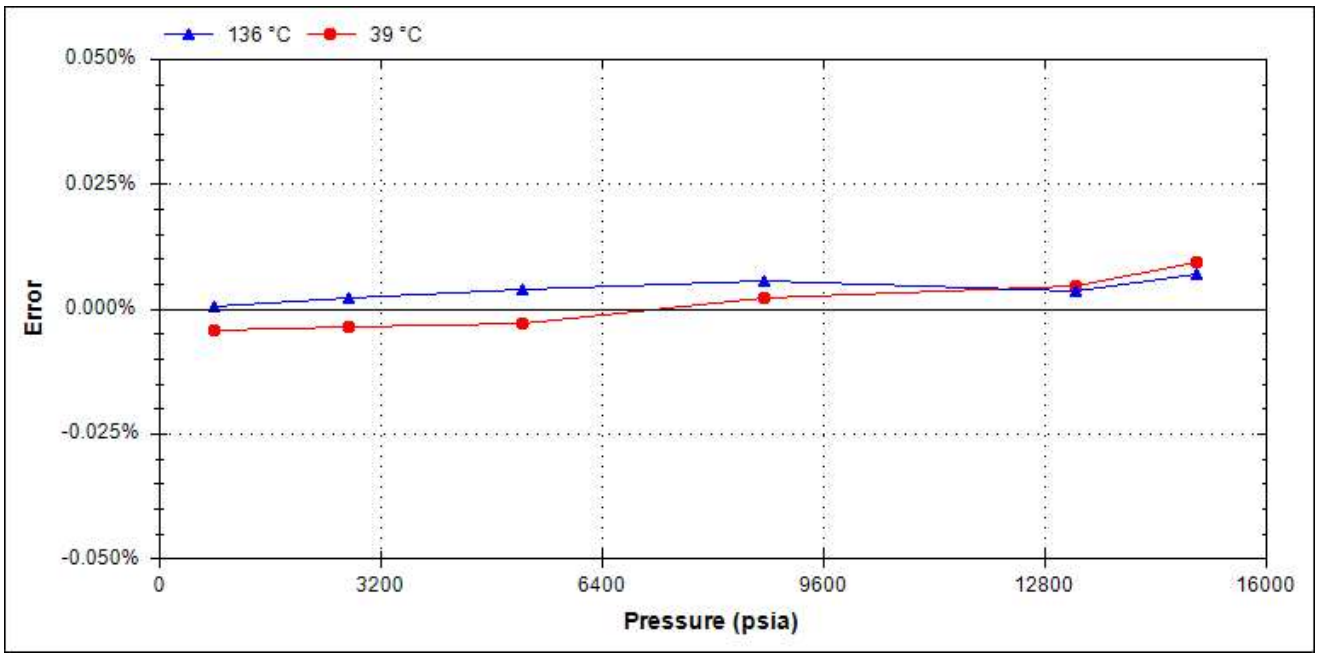
DataCan

"The Next Generation of Down Hole Tools"

Calibration Date:	28-May-21	**Calibration System:**	CALIBRATION03
Max Pressure Error:	0.010% F.S.	**Batch Number:**	20210104.143132
Max Temperature Error:	0.119 °C		
Part Number:	101696		
Serial Number:	224798		

1.25 OD Quartz DXB 2 Assembly			
Max Pressure		Max Temperature	
psi	kPa	ºF	ºC
16,000	110,316	351	177

Accuracy: As shown in the graph below, this DataCan Pressure gauge conforms to within +/- 0.030% F.S. of the pressure standard used in calibration, which is accurate to within +/- 0.01% of reading.



Working Standards

Sun Electronic Systems Environmental Chamber, Model: EC127, Serial: EC0020
DHI Instruments Pressure Controller, Model: PPCH-200M (30,000psi Reference), Serial: 1529

Traceability Statement

All working standards are traceable to nationally or internationally recognized standards.

Approved By:
DataCan Services Corp.

Calibrated By:
Angelo Pulido

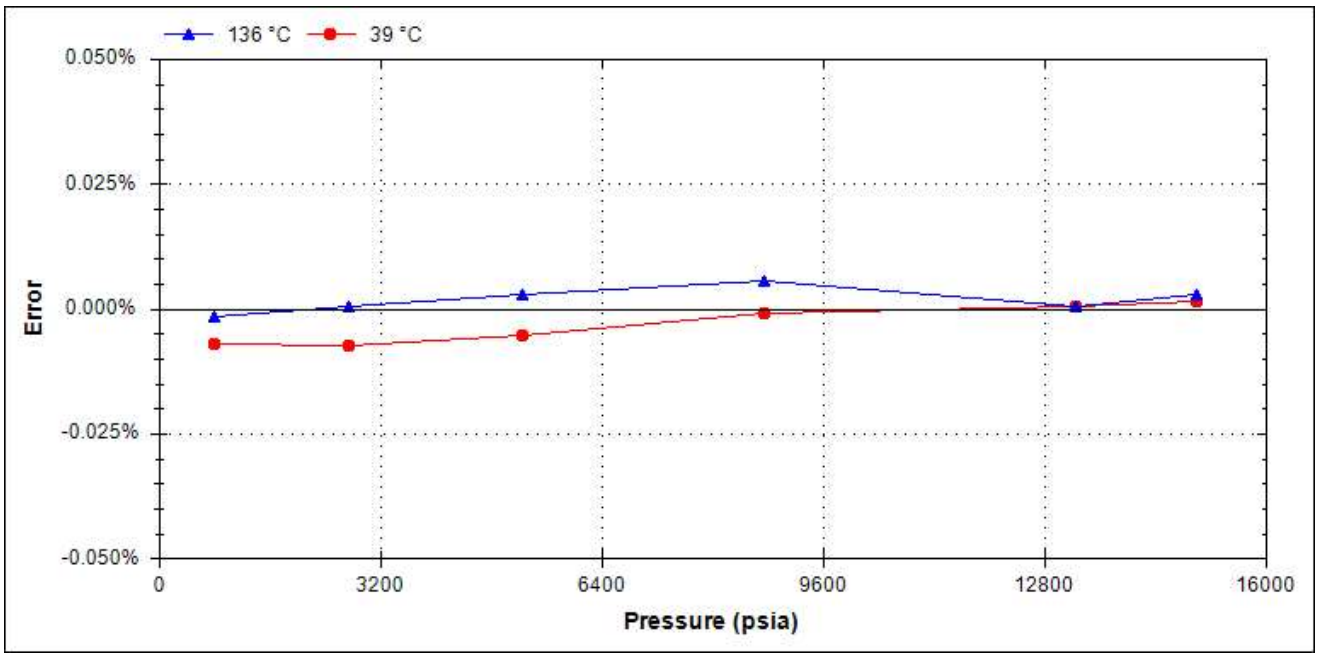
DataCan

"The Next Generation of Down Hole Tools"

Calibration Date:	28-May-21	**Calibration System:**	CALIBRATION03
Max Pressure Error:	0.010% F.S.	**Batch Number:**	20210104.143132
Max Temperature Error:	0.110 °C		
Part Number:	101696		
Serial Number:	224831		

1.25 OD Quartz DXB 2 Assembly			
Max Pressure		Max Temperature	
psi	kPa	ºF	ºC
16,000	110,316	351	177

Accuracy: As shown in the graph below, this DataCan Pressure gauge conforms to within +/- 0.030% F.S. of the pressure standard used in calibration, which is accurate to within +/- 0.01% of reading.



Working Standards

Sun Electronic Systems Environmental Chamber, Model: EC127, Serial: EC0020
DHI Instruments Pressure Controller, Model: PPCH-200M (30,000psi Reference), Serial: 1529

Traceability Statement

All working standards are traceable to nationally or internationally recognized standards.

Approved By:
DataCan Services Corp.

Calibrated By:
Angelo Pulido

Attachment 4
FESCO Injection Falloff Test Report

Petrotek

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

FLOWING GRADIENT SURVEY

Company:	Petrotek Engineering Corporation	Test Date:	07/19/2022
Well:	Navajo Refining Waste Disposal Well No. 4	Location:	Eddy County, NM
Field:	Davonia	Status:	Injecting water
Formation:	Unavailable		

Well Data:	Wellhead Connection: 4-1/16" BX-155 Flange	Gauge Type:	Electronic
	Elevation: 20 ft above GL	Gauge SN:	SP-224798
	Tubing: 3" Set at 10265 ft (Packer)	Gauge Range:	16000 psi
	Casing: 9.625" Set at 10327 ft (EOC)	Gauge OD:	1.2500"
	Perfs: 10327 - 10700 ft (MD)		
	Datum: 10514 ft (MD)		

Depth			Pressure					
MD ft	TVD ft	Delta Depth ft	WHP psig	BHT °F	Gauge Pressure psig	Delta Pressure psi	Pressure Gradient psi / ft	Comments
0	0	0	275	105.56	276.19	0.00	0.0000	
1000	1000	1000		105.19	714.73	438.54	0.4385	
2000	2000	1000		105.26	1129.48	414.75	0.4148	
3000	3000	1000		105.06	1545.44	415.96	0.4160	
4000	4000	1000		104.95	1962.88	417.44	0.4174	
5000	5000	1000		104.93	2382.49	419.61	0.4196	
6000	6000	1000		105.02	2803.60	421.11	0.4211	
7000	7000	1000		105.21	3225.39	421.79	0.4218	
8000	8000	1000		105.54	3649.40	424.01	0.4240	
9000	9000	1000		106.04	4073.95	424.55	0.4245	
10000	10000	1000		106.73	4499.44	425.49	0.4255	
10307	10307	307		106.97	4630.78	131.34	0.4278	

BHT at Test Depth:	106.97	°F	Oil Level:	Injecting	Previous BHP: U/A
Extrapolated BHP at Datum:	4719.33	psig	Water Level:	Injecting	BHP Change: U/A
BHP Gradient at Datum :	0.4278	psi/ft	Csg Press:	N/A	

Remarks: MIRU slickline. RIH and cleared 10307 ft with weight bar. POOH. RIH with electronic gauge making injecting gradient stops to 10307 ft. Flow well for 1 hr. SI well for 43.8 hr BHP Falloff Test. POOH making static gradient stops. RDMO.

Certified: FESCO, Ltd. - Midland, TX

By: Michael Carnes
District Manager - (432) 332-3211

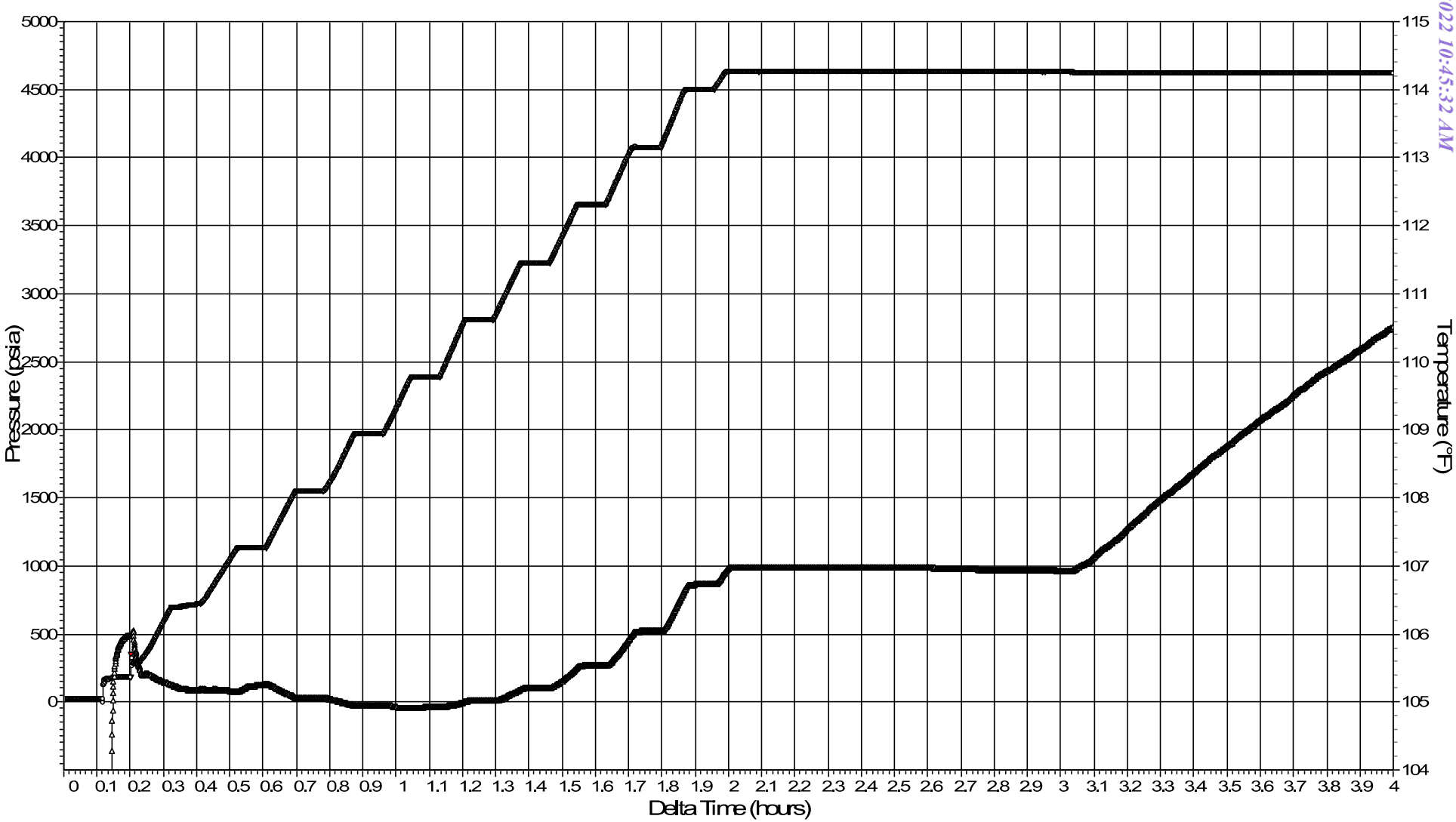
Job No.: J202207231401.001A Page 1

Petrotek Engineering Corporation

Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Test Date: 07/19 - 07/21/2022

Gauge Type: Electronic
Gauge Range: 16000 psi
Gauge SN: SP-224798

Cartesian Plot



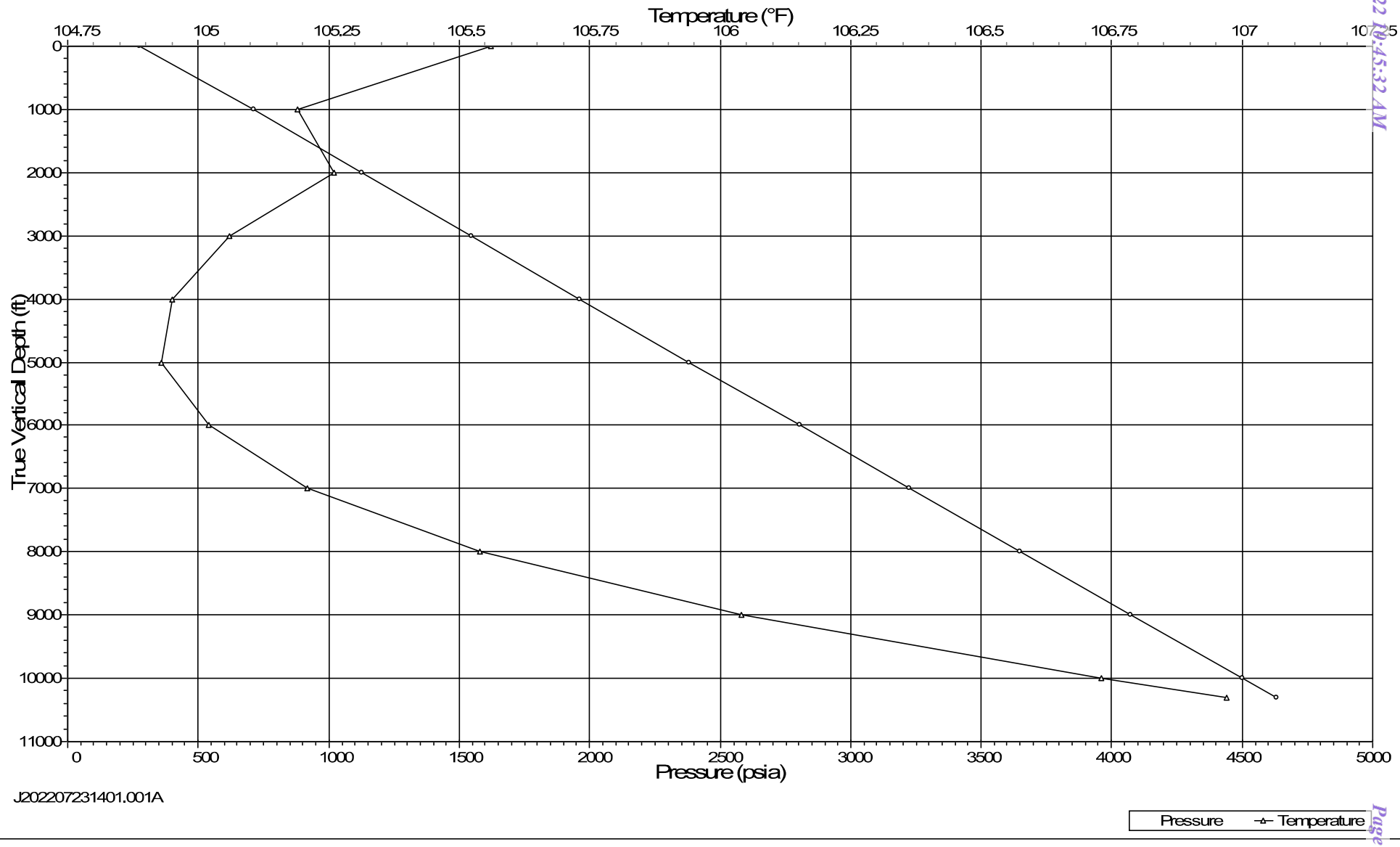
J202207231401.001A

Petrotek Engineering Corporation

Flowing Gradient Plot

Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Test Date: 07/19/2022

Gauge Type: Electronic
Gauge Range: 16000 psi
Gauge SN: SP-224798



J202207231401.001A

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

STATIC GRADIENT SURVEY

Company:	Petrotek Engineering Corporation	Test Date:	07/21/2022
Well:	Navajo Refining Waste Disposal Well No. 4	Location:	Eddy County, NM
Field:	Davonia	Status:	SI 43.8 hrs
Formation:	Unavailable		

Well Data:	Wellhead Connection: 4-1/16" BX-155 Flange	Gauge Type:	Electronic
	Elevation: 20 ft above GL	Gauge SN:	SP-224798
	Tubing: 3" Set at 10265 ft (Packer)	Gauge Range:	16000 psi
	Casing: 9.625" Set at 10327 ft (EOC)	Gauge OD:	1.2500"
	Perfs: 10327 - 10700 ft (MD)		
	Datum: 10514 ft (MD)		

Depth			Pressure					
MD ft	TVD ft	Delta Depth ft	WHP psig	BHT °F	Gauge Pressure psig	Delta Pressure psi	Pressure Gradient psi / ft	Comments
0	0	0	160	85.10	158.67	0.00	0.0000	Water to surface
1000	1000	1000		85.49	589.43	430.76	0.4308	
2000	2000	1000		88.94	1020.61	431.18	0.4312	
3000	3000	1000		92.24	1451.97	431.36	0.4314	
4000	4000	1000		95.22	1883.48	431.51	0.4315	
5000	5000	1000		98.91	2315.35	431.87	0.4319	
6000	6000	1000		103.54	2747.47	432.12	0.4321	
7000	7000	1000		108.84	3179.98	432.51	0.4325	
8000	8000	1000		116.04	3612.25	432.27	0.4323	
9000	9000	1000		123.42	4044.21	431.96	0.4320	
10000	10000	1000		131.47	4475.77	431.56	0.4316	
10307	10307	307	160	132.49	4609.32	133.55	0.4350	

BHT at Test Depth:	132.49 °F	Oil Level:	None	Previous BHP:	U/A
Extrapolated BHP at Datum:	4699.37 psig	Water Level:	Surface	BHP Change:	U/A
BHP Gradient at Datum :	0.4350 psi/ft	Csg Press:	N/A		

Remarks: MIRU slickline. RIH and cleared 10307 ft with weight bar. POOH. RIH with electronic gauge making injecting gradient stops to 10307 ft. Flow well for 1 hr. SI well for 43.8 hr BHP Falloff Test. POOH making static gradient stops. RDMO.

Certified: FESCO, Ltd. - Midland, TX

By: Michael Carnes
District Manager - (432) 332-3211

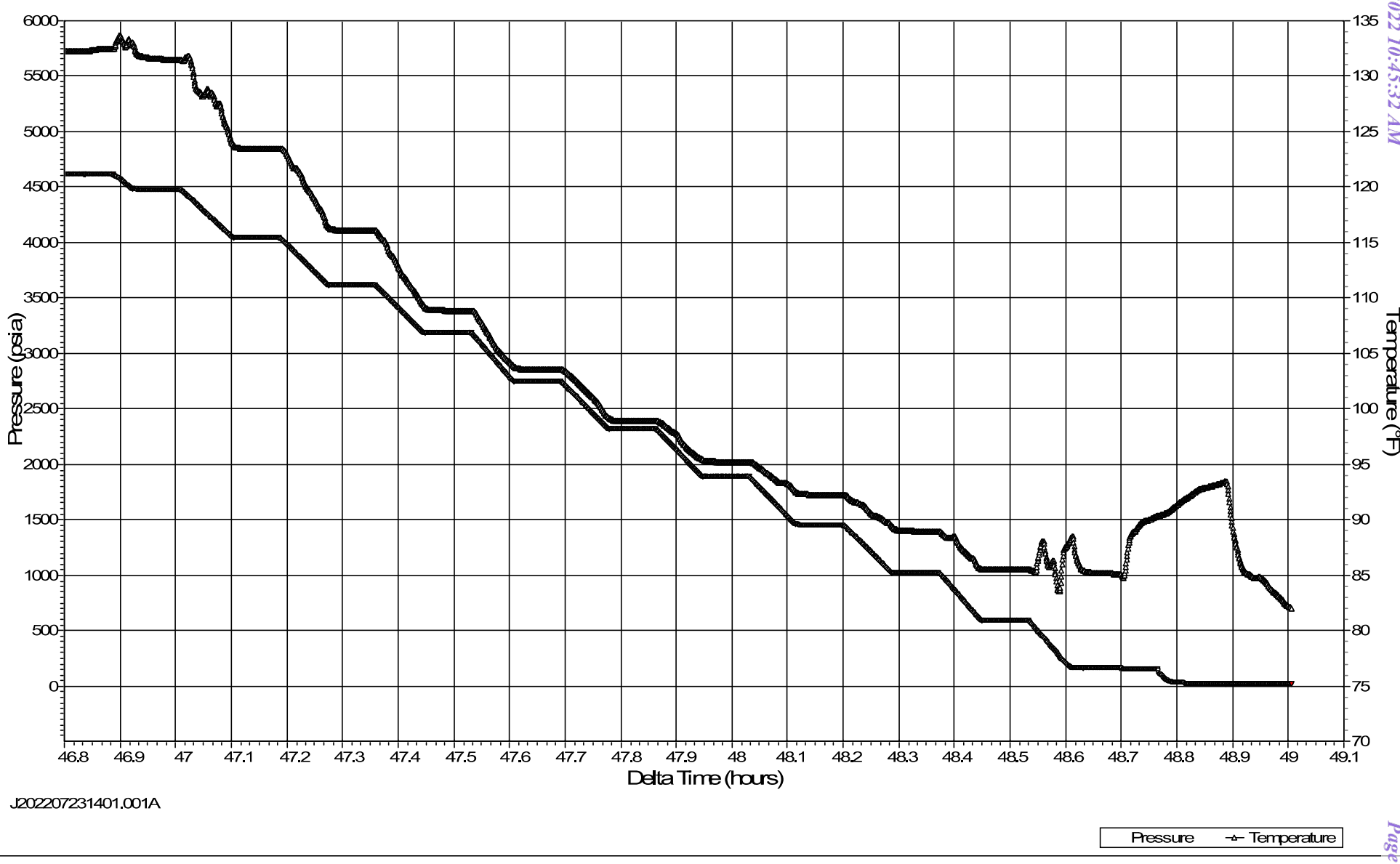
Job No.: J202207231401.001A Page 1

Petrotek Engineering Corporation

Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Test Date: 07/19 - 07/21/2022

Gauge Type: Electronic
Gauge Range: 16000 psi
Gauge SN: SP-224798

Cartesian Plot



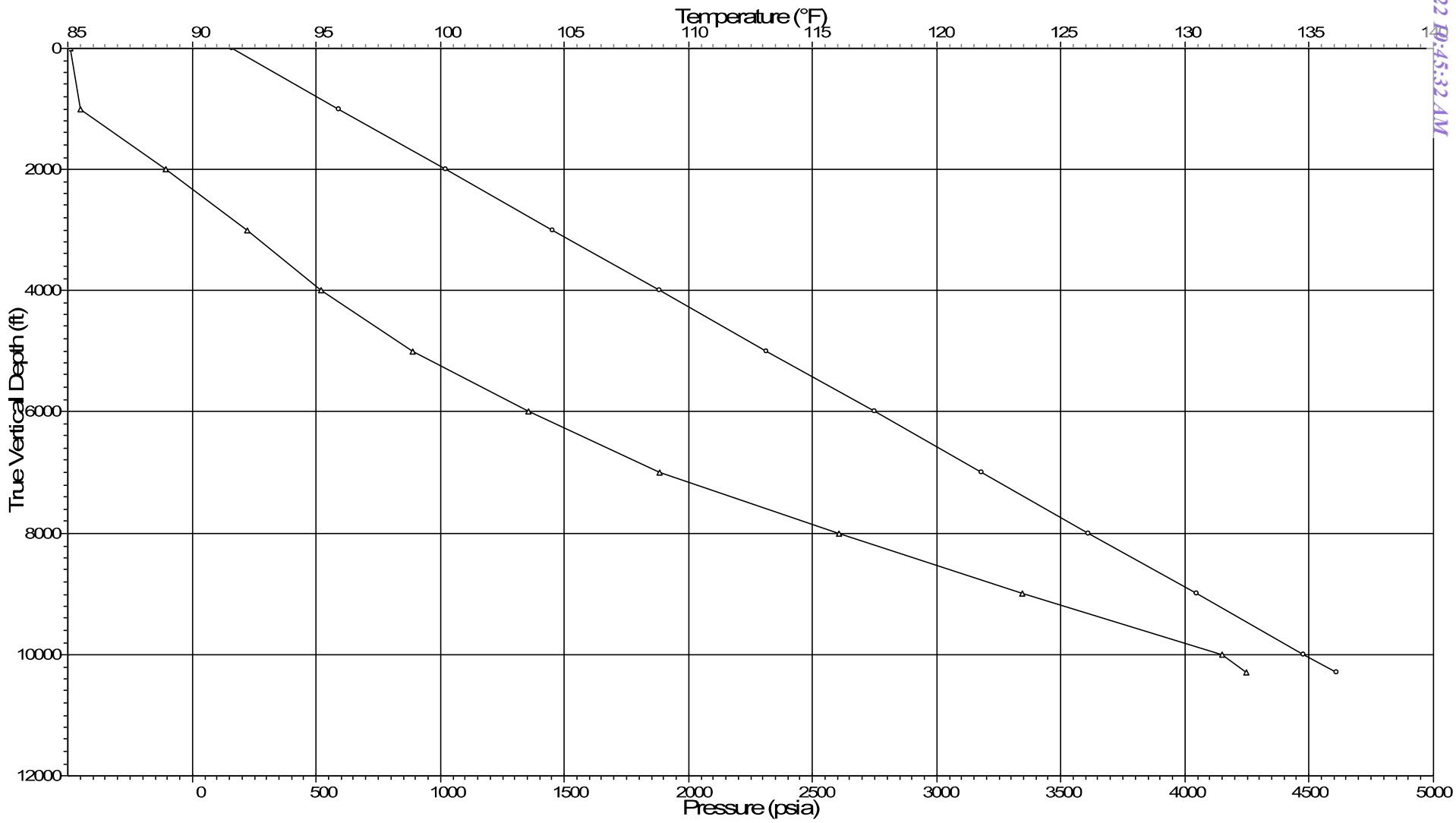
J202207231401.001A

Petrotek Engineering Corporation

Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Test Date: 07/21/2022

Gauge Type: Electronic
Gauge Range: 16000 psi
Gauge SN: SP-224798

Static Gradient Plot



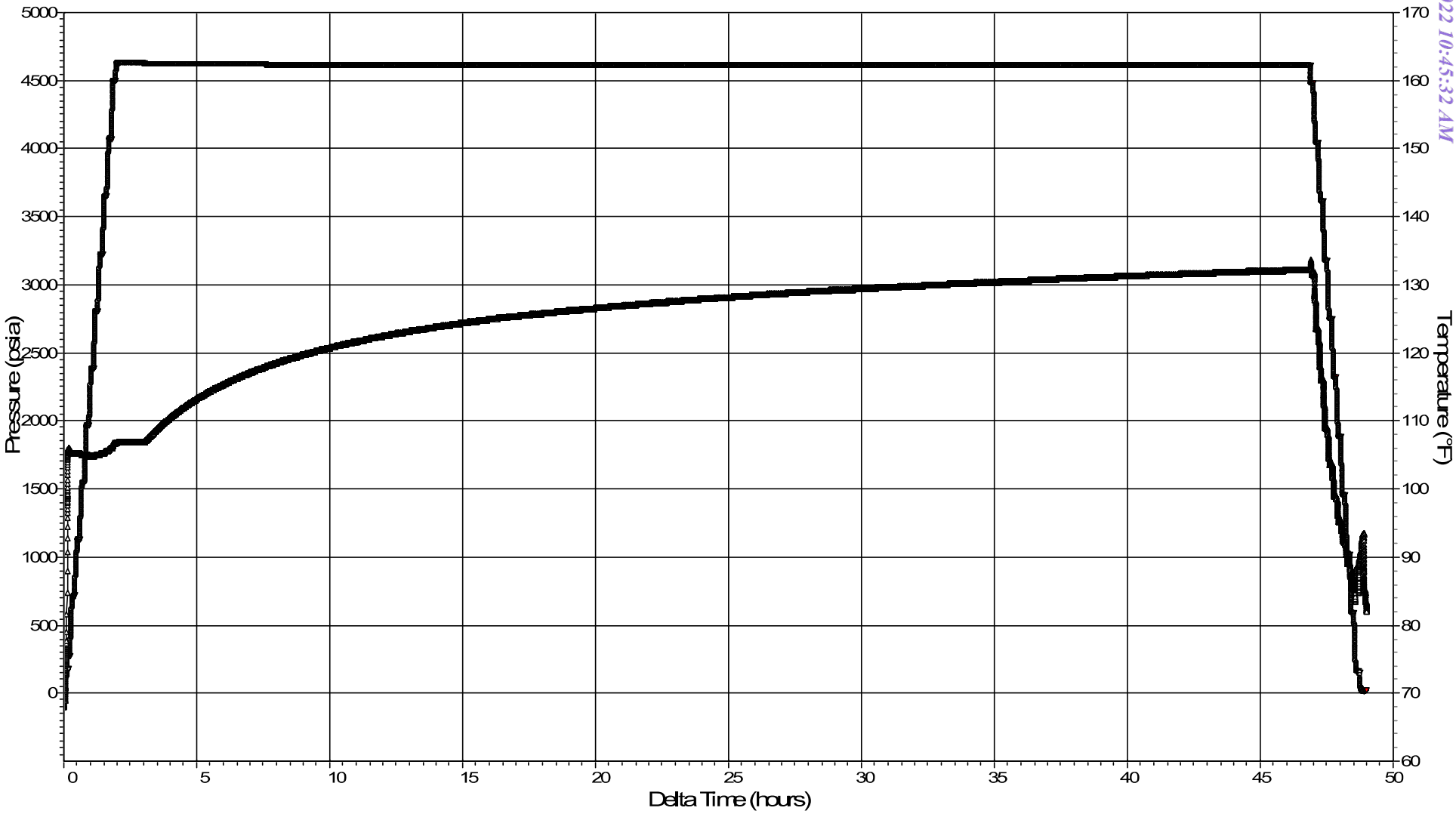
J202207231401.001A

Petrotek Engineering Corporation

Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Test Date: 07/19 - 07/21/2022

Gauge Type: Electronic
Gauge Range: 16000 psi
Gauge SN: SP-224798

Cartesian Plot



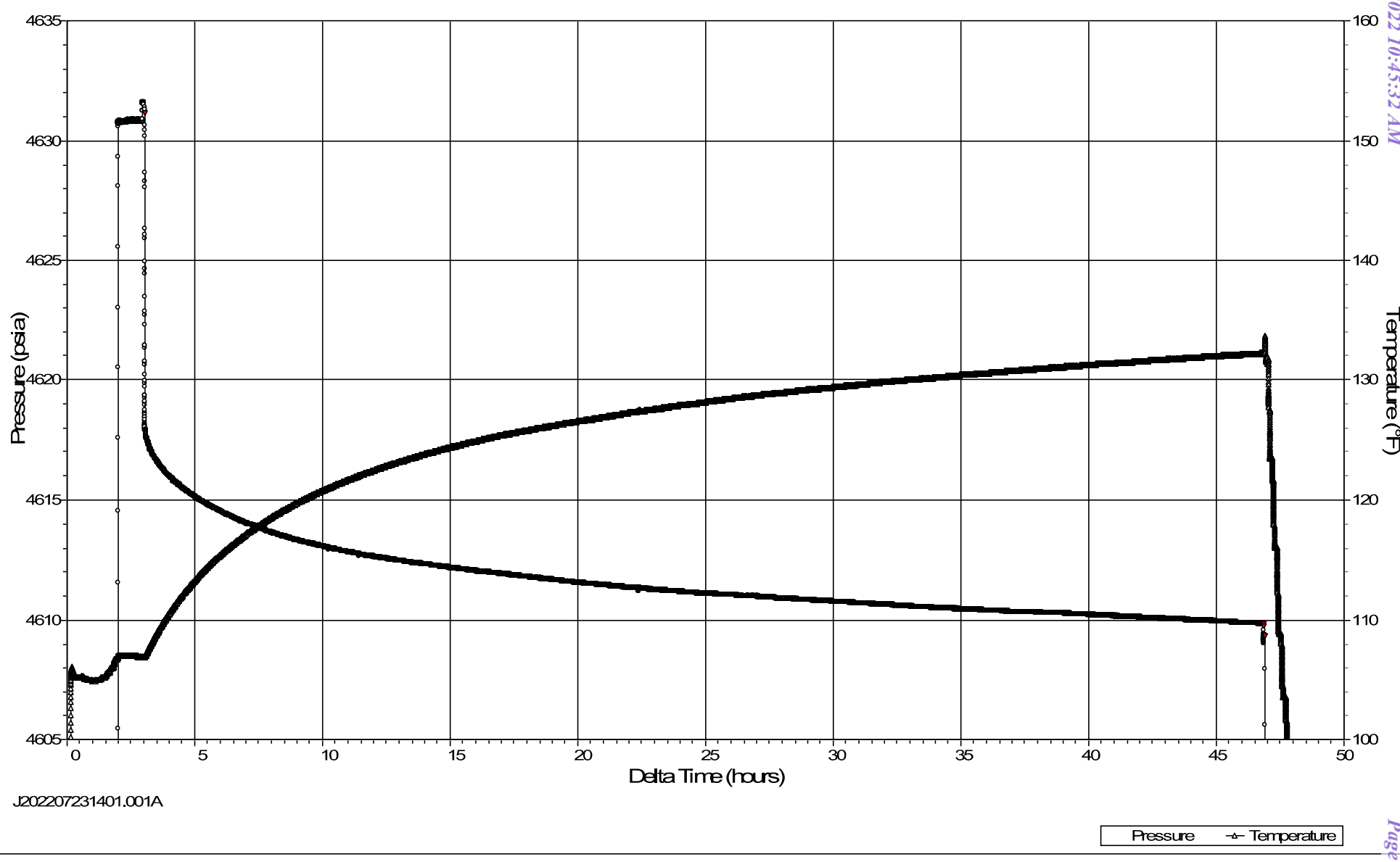
J202207231401.001A

Petrotek Engineering Corporation

Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Test Date: 07/19 - 07/21/2022

Gauge Type: Electronic
Gauge Range: 16000 psi
Gauge SN: SP-224798

Cartesian Plot



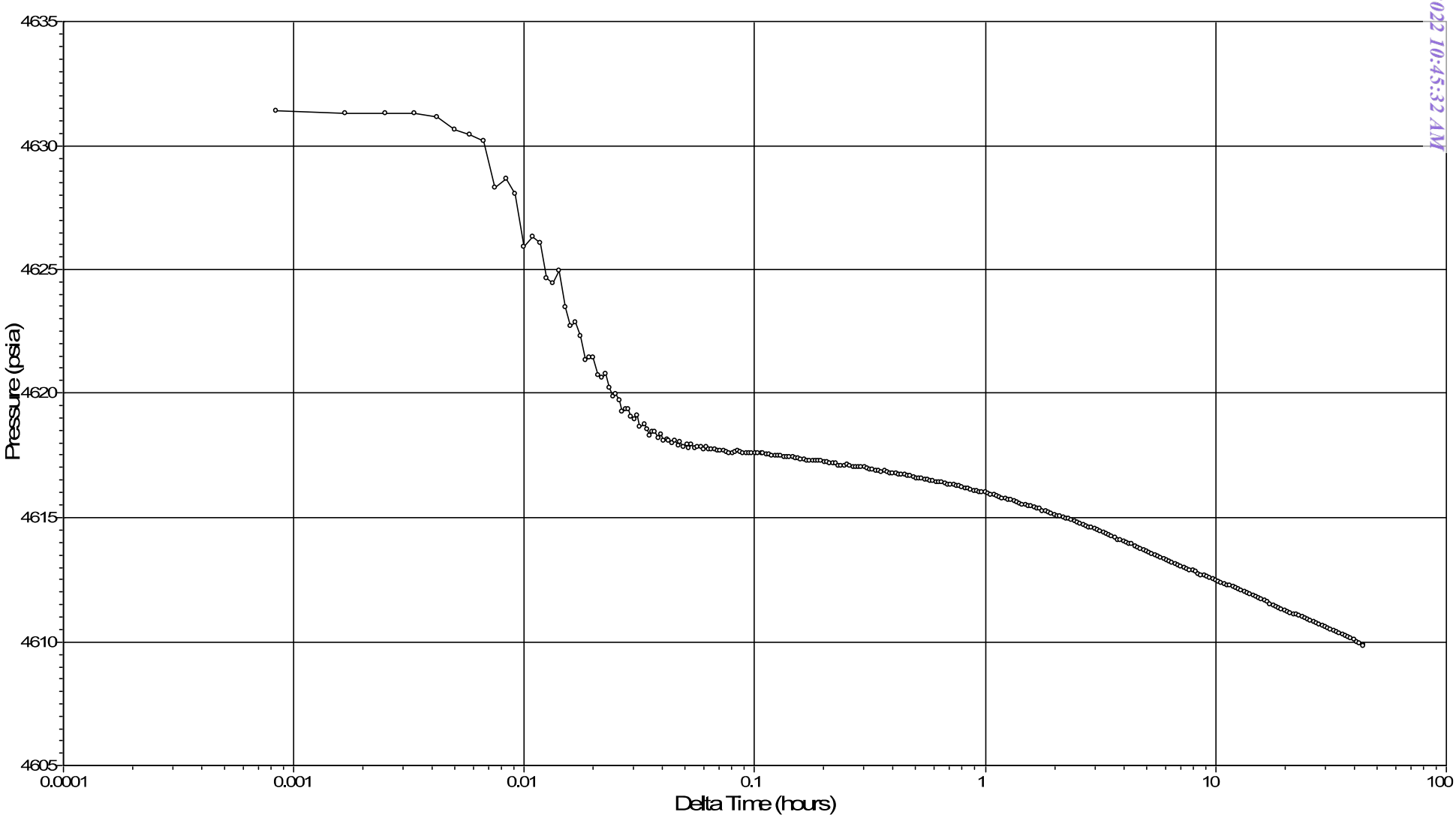
J202207231401.001A

Petrotek Engineering Corporation

Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Test Date: 07/19 - 07/21/2022

Gauge Type: Electronic
Gauge Range: 16000 psi
Gauge SN: SP-224798

Semilog Plot (Falloff Test)



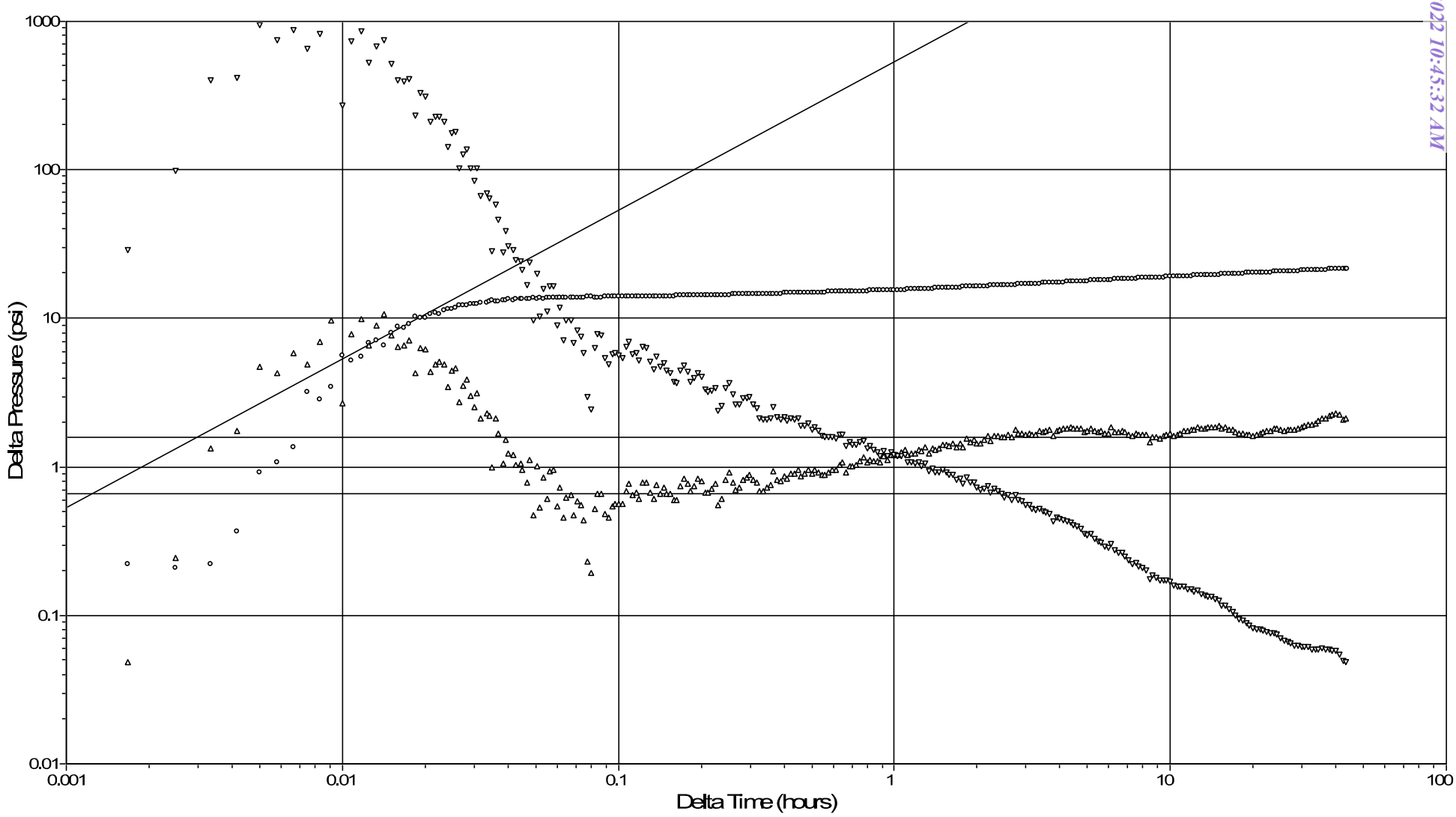
J202207231401.001A

Petrotek Engineering Corporation

Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Test Date: 07/19 - 07/21/2022

Gauge Type: Electronic
Gauge Range: 16000 psi
Gauge SN: SP-224798

Log Plot (Falloff Test)



FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company:	Petrotek Engineering Corporation	Test Date:	07/19 - 07/21/2022
Well:	Navajo Refining Waste Disposal Well No. 4	Gauge Depth:	10307 ft
Field:	Davonia	Gauge Type:	Electronic
Location:	Eddy County, NM	Gauge SN:	SP-224798
Perfs:	10327 - 10700 ft (MD)	Gauge Range:	16000 psi
Formation:	Unavailable	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
07/19/22	09:07:35	-3.02361		20.22		67.97	Powered up gauge.
07/19/22	09:08:00	-3.01667		19.56		68.11	
07/19/22	09:09:00	-3.00000		19.08		68.81	
07/19/22	09:10:00	-2.98333		17.87		70.62	
07/19/22	09:11:00	-2.96667		17.90		72.40	
07/19/22	09:12:00	-2.95000		17.18		74.45	
07/19/22	09:13:00	-2.93333		17.48		76.43	
07/19/22	09:14:00	-2.91667		18.60		77.09	
07/19/22	09:15:00	-2.90000		149.00		95.65	
07/19/22	09:15:06	-2.89833		161.71		97.13	Pressured up lubricator.
07/19/22	09:16:00	-2.88333		166.79		102.02	
07/19/22	09:17:00	-2.86667		177.18		105.66	
07/19/22	09:18:00	-2.85000		177.76		105.90	
07/19/22	09:19:00	-2.83333		177.94		105.97	
07/19/22	09:19:42	-2.82167		177.85		105.98	IWHP increased.
07/19/22	09:19:48	-2.82000		349.62		105.98	IWHP decreased.
07/19/22	09:20:00	-2.81667		288.49		106.03	
07/19/22	09:20:57	-2.80083		275.95		105.57	Casing Pressure = N/A
07/19/22	09:21:00	-2.80000	275	276.19		105.56	RIH making injecting gradient stops.
07/19/22	09:22:00	-2.78333		323.70		105.40	
07/19/22	09:23:00	-2.76667		380.29		105.40	
07/19/22	09:24:00	-2.75000		454.54		105.36	
07/19/22	09:25:00	-2.73333		532.08		105.32	
07/19/22	09:26:00	-2.71667		609.45		105.29	
07/19/22	09:27:00	-2.70000		687.46		105.25	
07/19/22	09:27:03	-2.69917		691.10		105.25	Arrived at 1000 ft stop.
07/19/22	09:28:00	-2.68333		688.71		105.22	
07/19/22	09:29:00	-2.66667		696.68		105.20	
07/19/22	09:30:00	-2.65000		709.54		105.18	
07/19/22	09:31:00	-2.63333		713.04		105.18	
07/19/22	09:32:00	-2.61667		714.51		105.18	
07/19/22	09:32:15	-2.61250		714.73		105.19	Left 1000 ft stop.
07/19/22	09:33:00	-2.60000		747.65		105.19	
07/19/22	09:34:00	-2.58333		808.29		105.18	
07/19/22	09:35:00	-2.56667		872.67		105.19	
07/19/22	09:36:00	-2.55000		936.82		105.18	
07/19/22	09:37:00	-2.53333		1001.07		105.17	
07/19/22	09:38:00	-2.51667		1065.31		105.16	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/19/22	09:39:00	-2.50000		1127.89		105.16	
07/19/22	09:39:06	-2.49833		1130.29		105.16	Arrived at 2000 ft stop.
07/19/22	09:40:00	-2.48333		1130.18		105.20	
07/19/22	09:41:00	-2.46667		1130.13		105.22	
07/19/22	09:42:00	-2.45000		1130.09		105.23	
07/19/22	09:43:00	-2.43333		1129.44		105.25	
07/19/22	09:44:00	-2.41667		1129.31		105.26	
07/19/22	09:44:06	-2.41500		1129.48		105.26	Left 2000 ft stop.
07/19/22	09:45:00	-2.40000		1195.13		105.24	
07/19/22	09:46:00	-2.38333		1274.16		105.20	
07/19/22	09:47:00	-2.36667		1353.52		105.16	
07/19/22	09:48:00	-2.35000		1430.96		105.12	
07/19/22	09:49:00	-2.33333		1509.35		105.08	
07/19/22	09:49:36	-2.32333		1546.04		105.06	Arrived at 3000 ft stop.
07/19/22	09:50:00	-2.31667		1546.04		105.06	
07/19/22	09:51:00	-2.30000		1545.83		105.06	
07/19/22	09:52:00	-2.28333		1545.76		105.06	
07/19/22	09:53:00	-2.26667		1545.58		105.06	
07/19/22	09:54:00	-2.25000		1545.50		105.06	
07/19/22	09:54:33	-2.24083		1545.44		105.06	Left 3000 ft stop.
07/19/22	09:55:00	-2.23333		1567.02		105.06	
07/19/22	09:56:00	-2.21667		1632.16		105.04	
07/19/22	09:57:00	-2.20000		1705.33		105.01	
07/19/22	09:58:00	-2.18333		1786.61		104.99	
07/19/22	09:59:00	-2.16667		1871.48		104.97	
07/19/22	10:00:00	-2.15000		1955.08		104.95	
07/19/22	10:00:15	-2.14583		1964.09		104.95	Arrived at 4000 ft stop.
07/19/22	10:01:00	-2.13333		1963.40		104.94	
07/19/22	10:02:00	-2.11667		1963.32		104.94	
07/19/22	10:03:00	-2.10000		1963.16		104.94	
07/19/22	10:04:00	-2.08333		1963.34		104.94	
07/19/22	10:05:00	-2.06667		1962.48		104.95	
07/19/22	10:05:15	-2.06250		1962.88		104.95	Left 4000 ft stop.
07/19/22	10:06:00	-2.05000		2015.69		104.94	
07/19/22	10:07:00	-2.03333		2095.20		104.93	
07/19/22	10:08:00	-2.01667		2179.54		104.92	
07/19/22	10:09:00	-2.00000		2267.32		104.92	
07/19/22	10:10:00	-1.98333		2354.91		104.92	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company:	Petrotek Engineering Corporation	Test Date:	07/19 - 07/21/2022
Well:	Navajo Refining Waste Disposal Well No. 4	Gauge Depth:	10307 ft
Field:	Davonia	Gauge Type:	Electronic
Location:	Eddy County, NM	Gauge SN:	SP-224798
Perfs:	10327 - 10700 ft (MD)	Gauge Range:	16000 psi
Formation:	Unavailable	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
07/19/22	10:10:33	-1.97417		2384.54		104.92	Arrived at 5000 ft stop.
07/19/22	10:11:00	-1.96667		2382.74		104.92	
07/19/22	10:12:00	-1.95000		2382.80		104.92	
07/19/22	10:13:00	-1.93333		2382.65		104.93	
07/19/22	10:14:00	-1.91667		2382.67		104.93	
07/19/22	10:15:00	-1.90000		2382.56		104.93	
07/19/22	10:15:30	-1.89167		2382.49		104.93	Left 5000 ft stop.
07/19/22	10:16:00	-1.88333		2422.89		104.93	
07/19/22	10:17:00	-1.86667		2516.22		104.94	
07/19/22	10:18:00	-1.85000		2610.71		104.95	
07/19/22	10:19:00	-1.83333		2703.99		104.98	
07/19/22	10:20:00	-1.81667		2797.65		105.00	
07/19/22	10:20:09	-1.81417		2803.67		105.01	Arrived at 6000 ft stop.
07/19/22	10:21:00	-1.80000		2803.45		105.02	
07/19/22	10:22:00	-1.78333		2803.59		105.02	
07/19/22	10:23:00	-1.76667		2803.79		105.02	
07/19/22	10:24:00	-1.75000		2803.47		105.02	
07/19/22	10:25:00	-1.73333		2803.20		105.02	
07/19/22	10:25:09	-1.73083		2803.60		105.02	Left 6000 ft stop.
07/19/22	10:26:00	-1.71667		2870.56		105.03	
07/19/22	10:27:00	-1.70000		2955.10		105.06	
07/19/22	10:28:00	-1.68333		3039.88		105.10	
07/19/22	10:29:00	-1.66667		3124.46		105.14	
07/19/22	10:30:00	-1.65000		3207.68		105.19	
07/19/22	10:30:18	-1.64500		3225.40		105.20	Arrived at 7000 ft stop.
07/19/22	10:31:00	-1.63333		3225.54		105.21	
07/19/22	10:32:00	-1.61667		3225.33		105.21	
07/19/22	10:33:00	-1.60000		3225.56		105.21	
07/19/22	10:34:00	-1.58333		3225.60		105.21	
07/19/22	10:35:00	-1.56667		3225.18		105.21	
07/19/22	10:35:18	-1.56167		3225.39		105.21	Left 7000 ft stop.
07/19/22	10:36:00	-1.55000		3275.68		105.23	
07/19/22	10:37:00	-1.53333		3360.54		105.28	
07/19/22	10:38:00	-1.51667		3444.66		105.34	
07/19/22	10:39:00	-1.50000		3528.64		105.41	
07/19/22	10:40:00	-1.48333		3617.53		105.48	
07/19/22	10:40:27	-1.47583		3650.22		105.52	Arrived at 8000 ft stop.
07/19/22	10:41:00	-1.46667		3649.29		105.53	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company:	Petrotek Engineering Corporation	Test Date:	07/19 - 07/21/2022
Well:	Navajo Refining Waste Disposal Well No. 4	Gauge Depth:	10307 ft
Field:	Davonia	Gauge Type:	Electronic
Location:	Eddy County, NM	Gauge SN:	SP-224798
Perfs:	10327 - 10700 ft (MD)	Gauge Range:	16000 psi
Formation:	Unavailable	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
07/19/22	10:42:00	-1.45000		3649.18		105.54	
07/19/22	10:43:00	-1.43333		3649.25		105.54	
07/19/22	10:44:00	-1.41667		3649.19		105.54	
07/19/22	10:45:00	-1.40000		3649.26		105.54	
07/19/22	10:45:27	-1.39250		3649.40		105.54	Left 8000 ft stop.
07/19/22	10:46:00	-1.38333		3691.76		105.55	
07/19/22	10:47:00	-1.36667		3781.17		105.64	
07/19/22	10:48:00	-1.35000		3871.97		105.74	
07/19/22	10:49:00	-1.33333		3962.62		105.85	
07/19/22	10:50:00	-1.31667		4049.36		105.96	
07/19/22	10:50:24	-1.31000		4073.62		106.01	Arrived at 9000 ft stop.
07/19/22	10:51:00	-1.30000		4074.69		106.03	
07/19/22	10:52:00	-1.28333		4073.62		106.04	
07/19/22	10:53:00	-1.26667		4073.65		106.04	
07/19/22	10:54:00	-1.25000		4073.69		106.04	
07/19/22	10:55:00	-1.23333		4073.77		106.04	
07/19/22	10:55:27	-1.22583		4073.95		106.04	Left 9000 ft stop.
07/19/22	10:56:00	-1.21667		4124.80		106.07	
07/19/22	10:57:00	-1.20000		4221.47		106.20	
07/19/22	10:58:00	-1.18333		4321.52		106.37	
07/19/22	10:59:00	-1.16667		4421.94		106.53	
07/19/22	11:00:00	-1.15000		4499.15		106.69	Arrived at 10000 ft stop.
07/19/22	11:01:00	-1.13333		4499.28		106.72	
07/19/22	11:02:00	-1.11667		4499.24		106.73	
07/19/22	11:03:00	-1.10000		4499.30		106.73	
07/19/22	11:04:00	-1.08333		4499.28		106.73	
07/19/22	11:05:00	-1.06667		4499.44		106.73	Left 10000 ft stop.
07/19/22	11:06:00	-1.05000		4554.58		106.79	
07/19/22	11:07:00	-1.03333		4617.58		106.91	
07/19/22	11:07:30	-1.02500		4630.77		106.96	Suspended gauge at 10307 ft.
07/19/22	11:08:00	-1.01667		4630.75		106.97	
07/19/22	11:09:00	-1.00000		4630.77		106.97	
07/19/22	11:10:00	-0.98333		4630.82		106.97	
07/19/22	11:11:00	-0.96667		4630.78		106.97	
07/19/22	11:12:00	-0.95000		4630.77		106.97	
07/19/22	11:13:00	-0.93333		4630.78		106.97	10307 ft stop.
07/19/22	11:14:00	-0.91667		4630.75		106.97	
07/19/22	11:15:00	-0.90000		4630.75		106.97	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/19/22	11:16:00	-0.88333		4630.77		106.97	
07/19/22	11:17:00	-0.86667		4630.77		106.97	
07/19/22	11:18:00	-0.85000		4630.78		106.97	
07/19/22	11:19:00	-0.83333		4630.78		106.97	
07/19/22	11:20:00	-0.81667		4630.80		106.97	
07/19/22	11:21:00	-0.80000		4630.78		106.97	
07/19/22	11:22:00	-0.78333		4630.77		106.97	
07/19/22	11:23:00	-0.76667		4630.78		106.97	
07/19/22	11:24:00	-0.75000		4630.81		106.97	
07/19/22	11:25:00	-0.73333		4630.82		106.97	
07/19/22	11:26:00	-0.71667		4630.78		106.97	
07/19/22	11:27:00	-0.70000		4630.81		106.97	
07/19/22	11:28:00	-0.68333		4630.80		106.97	
07/19/22	11:29:00	-0.66667		4630.78		106.97	
07/19/22	11:30:00	-0.65000		4630.79		106.97	
07/19/22	11:31:00	-0.63333		4630.79		106.97	
07/19/22	11:32:00	-0.61667		4630.80		106.97	
07/19/22	11:33:00	-0.60000		4630.78		106.97	
07/19/22	11:34:00	-0.58333		4630.80		106.97	
07/19/22	11:35:00	-0.56667		4630.80		106.97	
07/19/22	11:36:00	-0.55000		4630.82		106.97	
07/19/22	11:37:00	-0.53333		4630.85		106.97	
07/19/22	11:38:00	-0.51667		4630.82		106.97	
07/19/22	11:39:00	-0.50000		4630.81		106.97	
07/19/22	11:40:00	-0.48333		4630.81		106.97	
07/19/22	11:41:00	-0.46667		4630.86		106.97	
07/19/22	11:42:00	-0.45000		4630.83		106.97	
07/19/22	11:43:00	-0.43333		4630.83		106.97	
07/19/22	11:44:00	-0.41667		4630.82		106.97	
07/19/22	11:45:00	-0.40000		4630.82		106.96	
07/19/22	11:46:00	-0.38333		4630.82		106.96	
07/19/22	11:47:00	-0.36667		4630.83		106.96	
07/19/22	11:48:00	-0.35000		4630.83		106.96	
07/19/22	11:49:00	-0.33333		4630.84		106.96	
07/19/22	11:50:00	-0.31667		4630.81		106.96	
07/19/22	11:51:00	-0.30000		4630.82		106.96	
07/19/22	11:52:00	-0.28333		4630.82		106.96	
07/19/22	11:53:00	-0.26667		4630.84		106.95	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/19/22	11:54:00	-0.25000		4630.81		106.95	
07/19/22	11:55:00	-0.23333		4630.82		106.95	
07/19/22	11:56:00	-0.21667		4630.81		106.95	
07/19/22	11:57:00	-0.20000		4630.82		106.95	
07/19/22	11:58:00	-0.18333		4630.83		106.95	
07/19/22	11:59:00	-0.16667		4630.82		106.95	
07/19/22	12:00:00	-0.15000		4630.78		106.94	
07/19/22	12:01:00	-0.13333		4630.81		106.94	
07/19/22	12:02:00	-0.11667		4630.81		106.94	
07/19/22	12:03:00	-0.10000		4630.81		106.94	
07/19/22	12:04:00	-0.08333		4630.83		106.94	
07/19/22	12:04:21	-0.07750		4630.81		106.94	IBHP increased.
07/19/22	12:04:42	-0.07167		4631.60		106.94	IBHP stabilized.
07/19/22	12:05:00	-0.06667		4631.55		106.94	
07/19/22	12:06:00	-0.05000		4631.56		106.94	
07/19/22	12:07:00	-0.03333		4631.57		106.93	
07/19/22	12:08:00	-0.01667		4631.56		106.93	
07/19/22	12:09:00	0.00000		4631.52	0.00	106.93	Shut in well for 40 hr BHP Falloff Test.
07/19/22	12:09:03	0.00083		4631.42	-0.10	106.93	
07/19/22	12:09:06	0.00167		4631.30	-0.22	106.93	
07/19/22	12:09:09	0.00250		4631.31	-0.21	106.93	
07/19/22	12:09:12	0.00333		4631.30	-0.22	106.93	
07/19/22	12:09:15	0.00417		4631.15	-0.37	106.93	
07/19/22	12:09:18	0.00500		4630.61	-0.91	106.93	
07/19/22	12:09:21	0.00583		4630.45	-1.07	106.93	
07/19/22	12:09:24	0.00667		4630.16	-1.36	106.93	
07/19/22	12:09:27	0.00750		4628.31	-3.21	106.93	
07/19/22	12:09:30	0.00833		4628.66	-2.86	106.93	
07/19/22	12:09:33	0.00917		4628.04	-3.48	106.93	
07/19/22	12:09:36	0.01000		4625.90	-5.62	106.93	
07/19/22	12:09:39	0.01083		4626.30	-5.22	106.93	
07/19/22	12:09:42	0.01167		4626.06	-5.46	106.93	
07/19/22	12:09:45	0.01250		4624.67	-6.85	106.94	
07/19/22	12:09:48	0.01333		4624.44	-7.08	106.94	
07/19/22	12:09:51	0.01417		4624.94	-6.58	106.94	
07/19/22	12:09:54	0.01500		4623.49	-8.03	106.94	
07/19/22	12:09:57	0.01583		4622.74	-8.78	106.94	
07/19/22	12:10:00	0.01667		4622.85	-8.67	106.94	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/19/22	12:10:03	0.01750		4622.31	-9.21	106.95	
07/19/22	12:10:06	0.01833		4621.33	-10.19	106.95	
07/19/22	12:10:09	0.01917		4621.47	-10.05	106.95	
07/19/22	12:10:12	0.02000		4621.43	-10.09	106.95	
07/19/22	12:10:15	0.02083		4620.76	-10.76	106.96	
07/19/22	12:10:18	0.02167		4620.62	-10.90	106.96	
07/19/22	12:10:21	0.02250		4620.78	-10.74	106.96	
07/19/22	12:10:24	0.02333		4620.22	-11.30	106.96	
07/19/22	12:10:27	0.02417		4619.87	-11.65	106.97	
07/19/22	12:10:30	0.02500		4619.97	-11.55	106.97	
07/19/22	12:10:33	0.02583		4619.73	-11.79	106.97	
07/19/22	12:10:36	0.02667		4619.28	-12.24	106.97	
07/19/22	12:10:39	0.02750		4619.37	-12.15	106.98	
07/19/22	12:10:42	0.02833		4619.38	-12.14	106.98	
07/19/22	12:10:45	0.02917		4619.05	-12.47	106.98	
07/19/22	12:10:48	0.03000		4618.97	-12.55	106.98	
07/19/22	12:10:51	0.03083		4619.11	-12.41	106.99	
07/19/22	12:10:54	0.03167		4618.68	-12.84	106.99	
07/19/22	12:11:00	0.03333		4618.75	-12.77	107.00	
07/19/22	12:11:03	0.03417		4618.56	-12.96	107.00	
07/19/22	12:11:06	0.03500		4618.28	-13.24	107.00	
07/19/22	12:11:09	0.03583		4618.46	-13.06	107.00	
07/19/22	12:11:12	0.03667		4618.44	-13.08	107.00	
07/19/22	12:11:18	0.03833		4618.20	-13.32	107.01	
07/19/22	12:11:21	0.03917		4618.34	-13.18	107.01	
07/19/22	12:11:24	0.04000		4618.12	-13.40	107.01	
07/19/22	12:11:30	0.04167		4618.17	-13.35	107.01	
07/19/22	12:11:33	0.04250		4618.10	-13.42	107.01	
07/19/22	12:11:39	0.04417		4618.02	-13.50	107.02	
07/19/22	12:11:42	0.04500		4618.09	-13.43	107.02	
07/19/22	12:11:48	0.04667		4617.91	-13.61	107.02	
07/19/22	12:11:51	0.04750		4618.04	-13.48	107.02	
07/19/22	12:11:57	0.04917		4617.83	-13.69	107.03	
07/19/22	12:12:03	0.05083		4617.94	-13.58	107.03	
07/19/22	12:12:06	0.05167		4617.81	-13.71	107.03	
07/19/22	12:12:12	0.05333		4617.92	-13.60	107.04	
07/19/22	12:12:18	0.05500		4617.79	-13.73	107.05	
07/19/22	12:12:24	0.05667		4617.85	-13.67	107.05	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company:	Petrotek Engineering Corporation	Test Date:	07/19 - 07/21/2022
Well:	Navajo Refining Waste Disposal Well No. 4	Gauge Depth:	10307 ft
Field:	Davonia	Gauge Type:	Electronic
Location:	Eddy County, NM	Gauge SN:	SP-224798
Perfs:	10327 - 10700 ft (MD)	Gauge Range:	16000 psi
Formation:	Unavailable	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
07/19/22	12:12:30	0.05833		4617.83	-13.69	107.06	
07/19/22	12:12:36	0.06000		4617.75	-13.77	107.06	
07/19/22	12:12:42	0.06167		4617.85	-13.67	107.07	
07/19/22	12:12:48	0.06333		4617.73	-13.79	107.07	
07/19/22	12:12:54	0.06500		4617.74	-13.78	107.08	
07/19/22	12:13:03	0.06750		4617.75	-13.77	107.09	
07/19/22	12:13:09	0.06917		4617.68	-13.84	107.10	
07/19/22	12:13:15	0.07083		4617.71	-13.81	107.11	
07/19/22	12:13:24	0.07333		4617.71	-13.81	107.12	
07/19/22	12:13:30	0.07500		4617.66	-13.86	107.13	
07/19/22	12:13:39	0.07750		4617.61	-13.91	107.14	
07/19/22	12:13:48	0.08000		4617.58	-13.94	107.15	
07/19/22	12:13:57	0.08250		4617.64	-13.88	107.17	
07/19/22	12:14:03	0.08417		4617.68	-13.84	107.17	
07/19/22	12:14:12	0.08667		4617.65	-13.87	107.19	
07/19/22	12:14:21	0.08917		4617.60	-13.92	107.19	
07/19/22	12:14:33	0.09250		4617.60	-13.92	107.21	
07/19/22	12:14:42	0.09500		4617.59	-13.93	107.22	
07/19/22	12:14:51	0.09750		4617.58	-13.94	107.23	
07/19/22	12:15:03	0.10083		4617.59	-13.93	107.24	
07/19/22	12:15:12	0.10333		4617.58	-13.94	107.25	
07/19/22	12:15:24	0.10667		4617.60	-13.92	107.26	
07/19/22	12:15:33	0.10917		4617.58	-13.94	107.27	
07/19/22	12:15:45	0.11250		4617.53	-13.99	107.27	
07/19/22	12:15:57	0.11583		4617.52	-14.00	107.29	
07/19/22	12:16:09	0.11917		4617.49	-14.03	107.30	
07/19/22	12:16:21	0.12250		4617.50	-14.02	107.32	
07/19/22	12:16:36	0.12667		4617.51	-14.01	107.33	
07/19/22	12:16:48	0.13000		4617.47	-14.05	107.34	
07/19/22	12:17:03	0.13417		4617.45	-14.07	107.36	
07/19/22	12:17:15	0.13750		4617.46	-14.06	107.37	
07/19/22	12:17:30	0.14167		4617.45	-14.07	107.38	
07/19/22	12:17:45	0.14583		4617.43	-14.09	107.40	
07/19/22	12:18:00	0.15000		4617.38	-14.14	107.41	
07/19/22	12:18:15	0.15417		4617.37	-14.15	107.44	
07/19/22	12:18:33	0.15917		4617.35	-14.17	107.46	
07/19/22	12:18:48	0.16333		4617.34	-14.18	107.48	
07/19/22	12:19:06	0.16833		4617.29	-14.23	107.51	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/19/22	12:19:24	0.17333		4617.30	-14.22	107.54	
07/19/22	12:19:42	0.17833		4617.30	-14.22	107.56	
07/19/22	12:20:00	0.18333		4617.30	-14.22	107.58	
07/19/22	12:20:21	0.18917		4617.26	-14.26	107.61	
07/19/22	12:20:39	0.19417		4617.28	-14.24	107.63	
07/19/22	12:21:00	0.20000		4617.24	-14.28	107.65	
07/19/22	12:21:21	0.20583		4617.21	-14.31	107.67	
07/19/22	12:21:42	0.21167		4617.20	-14.32	107.70	
07/19/22	12:22:06	0.21833		4617.20	-14.32	107.73	
07/19/22	12:22:27	0.22417		4617.19	-14.33	107.75	
07/19/22	12:22:51	0.23083		4617.09	-14.43	107.78	
07/19/22	12:23:15	0.23750		4617.07	-14.45	107.82	
07/19/22	12:23:39	0.24417		4617.09	-14.43	107.86	
07/19/22	12:24:06	0.25167		4617.12	-14.40	107.88	
07/19/22	12:24:33	0.25917		4617.06	-14.46	107.90	
07/19/22	12:25:00	0.26667		4617.05	-14.47	107.94	
07/19/22	12:25:27	0.27417		4617.02	-14.50	107.97	
07/19/22	12:25:57	0.28250		4617.03	-14.49	108.01	
07/19/22	12:26:27	0.29083		4617.02	-14.50	108.04	
07/19/22	12:26:57	0.29917		4617.01	-14.51	108.07	
07/19/22	12:27:27	0.30750		4616.98	-14.54	108.09	
07/19/22	12:28:00	0.31667		4616.95	-14.57	108.14	
07/19/22	12:28:33	0.32583		4616.91	-14.61	108.17	
07/19/22	12:29:06	0.33500		4616.86	-14.66	108.20	
07/19/22	12:29:42	0.34500		4616.86	-14.66	108.24	
07/19/22	12:30:18	0.35500		4616.84	-14.68	108.29	
07/19/22	12:30:57	0.36583		4616.86	-14.66	108.33	
07/19/22	12:31:36	0.37667		4616.82	-14.70	108.38	
07/19/22	12:32:15	0.38750		4616.80	-14.72	108.42	
07/19/22	12:32:54	0.39833		4616.78	-14.74	108.47	
07/19/22	12:33:36	0.41000		4616.76	-14.76	108.52	
07/19/22	12:34:21	0.42250		4616.75	-14.77	108.57	
07/19/22	12:35:03	0.43417		4616.73	-14.79	108.62	
07/19/22	12:35:51	0.44750		4616.72	-14.80	108.66	
07/19/22	12:36:36	0.46000		4616.67	-14.85	108.70	
07/19/22	12:37:24	0.47333		4616.66	-14.86	108.75	
07/19/22	12:38:15	0.48750		4616.63	-14.89	108.80	
07/19/22	12:39:06	0.50167		4616.59	-14.93	108.86	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/19/22	12:39:57	0.51583		4616.59	-14.93	108.92	
07/19/22	12:40:54	0.53167		4616.57	-14.95	108.98	
07/19/22	12:41:48	0.54667		4616.53	-14.99	109.03	
07/19/22	12:42:45	0.56250		4616.52	-15.00	109.10	
07/19/22	12:43:45	0.57917		4616.49	-15.03	109.16	
07/19/22	12:44:45	0.59583		4616.47	-15.05	109.21	
07/19/22	12:45:48	0.61333		4616.44	-15.08	109.28	
07/19/22	12:46:54	0.63167		4616.42	-15.10	109.34	
07/19/22	12:48:00	0.65000		4616.40	-15.12	109.39	
07/19/22	12:49:09	0.66917		4616.35	-15.17	109.48	
07/19/22	12:50:18	0.68833		4616.33	-15.19	109.56	
07/19/22	12:51:30	0.70833		4616.31	-15.21	109.63	
07/19/22	12:52:45	0.72917		4616.30	-15.22	109.71	
07/19/22	12:54:00	0.75000		4616.27	-15.25	109.79	
07/19/22	12:55:21	0.77250		4616.26	-15.26	109.86	
07/19/22	12:56:42	0.79500		4616.22	-15.30	109.92	
07/19/22	12:58:06	0.81833		4616.19	-15.33	110.00	
07/19/22	12:59:30	0.84167		4616.16	-15.36	110.06	
07/19/22	13:01:00	0.86667		4616.11	-15.41	110.16	
07/19/22	13:02:30	0.89167		4616.08	-15.44	110.23	
07/19/22	13:04:03	0.91750		4616.08	-15.44	110.33	
07/19/22	13:05:39	0.94417		4616.03	-15.49	110.41	
07/19/22	13:07:18	0.97167		4616.01	-15.51	110.50	
07/19/22	13:09:03	1.00083		4615.99	-15.53	110.59	
07/19/22	13:10:48	1.03000		4615.94	-15.58	110.69	
07/19/22	13:12:36	1.06000		4615.91	-15.61	110.78	
07/19/22	13:14:27	1.09083		4615.90	-15.62	110.88	
07/19/22	13:16:21	1.12250		4615.85	-15.67	110.96	
07/19/22	13:18:18	1.15500		4615.83	-15.69	111.07	
07/19/22	13:20:21	1.18917		4615.78	-15.74	111.17	
07/19/22	13:22:24	1.22333		4615.76	-15.76	111.28	
07/19/22	13:24:33	1.25917		4615.72	-15.80	111.38	
07/19/22	13:26:45	1.29583		4615.69	-15.83	111.48	
07/19/22	13:29:03	1.33417		4615.64	-15.88	111.61	
07/19/22	13:31:21	1.37250		4615.62	-15.90	111.71	
07/19/22	13:33:48	1.41333		4615.57	-15.95	111.81	
07/19/22	13:36:15	1.45417		4615.53	-15.99	111.94	
07/19/22	13:38:48	1.49667		4615.50	-16.02	112.06	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company:	Petrotek Engineering Corporation	Test Date:	07/19 - 07/21/2022
Well:	Navajo Refining Waste Disposal Well No. 4	Gauge Depth:	10307 ft
Field:	Davonia	Gauge Type:	Electronic
Location:	Eddy County, NM	Gauge SN:	SP-224798
Perfs:	10327 - 10700 ft (MD)	Gauge Range:	16000 psi
Formation:	Unavailable	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
07/19/22	13:41:24	1.54000		4615.48	-16.04	112.17	
07/19/22	13:44:06	1.58500		4615.45	-16.07	112.29	
07/19/22	13:46:54	1.63167		4615.40	-16.12	112.41	
07/19/22	13:49:45	1.67917		4615.36	-16.16	112.53	
07/19/22	13:52:42	1.72833		4615.33	-16.19	112.66	
07/19/22	13:55:42	1.77833		4615.27	-16.25	112.78	
07/19/22	13:58:51	1.83083		4615.26	-16.26	112.92	
07/19/22	14:02:03	1.88417		4615.21	-16.31	113.05	
07/19/22	14:05:21	1.93917		4615.17	-16.35	113.18	
07/19/22	14:08:45	1.99583		4615.12	-16.40	113.33	
07/19/22	14:12:15	2.05417		4615.06	-16.46	113.47	
07/19/22	14:15:51	2.11417		4615.04	-16.48	113.60	
07/19/22	14:19:33	2.17583		4615.02	-16.50	113.74	
07/19/22	14:23:21	2.23917		4614.95	-16.57	113.88	
07/19/22	14:27:15	2.30417		4614.94	-16.58	114.02	
07/19/22	14:31:18	2.37167		4614.88	-16.64	114.17	
07/19/22	14:35:27	2.44083		4614.85	-16.67	114.33	
07/19/22	14:39:45	2.51250		4614.78	-16.74	114.49	
07/19/22	14:44:09	2.58583		4614.75	-16.77	114.64	
07/19/22	14:48:39	2.66083		4614.70	-16.82	114.79	
07/19/22	14:53:21	2.73917		4614.67	-16.85	114.94	
07/19/22	14:58:09	2.81917		4614.61	-16.91	115.11	
07/19/22	15:03:03	2.90083		4614.57	-16.95	115.25	
07/19/22	15:08:09	2.98583		4614.52	-17.00	115.42	
07/19/22	15:13:24	3.07333		4614.48	-17.04	115.58	
07/19/22	15:18:45	3.16250		4614.43	-17.09	115.74	
07/19/22	15:24:18	3.25500		4614.37	-17.15	115.90	
07/19/22	15:30:00	3.35000		4614.35	-17.17	116.07	
07/19/22	15:35:51	3.44750		4614.29	-17.23	116.24	
07/19/22	15:41:54	3.54833		4614.23	-17.29	116.42	
07/19/22	15:48:09	3.65250		4614.20	-17.32	116.59	
07/19/22	15:54:33	3.75917		4614.11	-17.41	116.77	
07/19/22	16:01:06	3.86833		4614.08	-17.44	116.94	
07/19/22	16:07:54	3.98167		4614.04	-17.48	117.13	
07/19/22	16:14:51	4.09750		4614.00	-17.52	117.30	
07/19/22	16:22:03	4.21750		4613.95	-17.57	117.47	
07/19/22	16:29:27	4.34083		4613.91	-17.61	117.65	
07/19/22	16:37:03	4.46750		4613.85	-17.67	117.84	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/19/22	16:44:51	4.59750		4613.80	-17.72	118.02	
07/19/22	16:52:54	4.73167		4613.75	-17.77	118.20	
07/19/22	17:01:12	4.87000		4613.68	-17.84	118.40	
07/19/22	17:09:45	5.01250		4613.64	-17.88	118.59	
07/19/22	17:18:30	5.15833		4613.60	-17.92	118.77	
07/19/22	17:27:33	5.30917		4613.53	-17.99	118.95	
07/19/22	17:36:51	5.46417		4613.48	-18.04	119.15	
07/19/22	17:46:27	5.62417		4613.43	-18.09	119.33	
07/19/22	17:56:18	5.78833		4613.38	-18.14	119.52	
07/19/22	18:06:24	5.95667		4613.33	-18.19	119.71	
07/19/22	18:16:51	6.13083		4613.28	-18.24	119.91	
07/19/22	18:27:36	6.31000		4613.23	-18.29	120.10	
07/19/22	18:38:39	6.49417		4613.18	-18.34	120.29	
07/19/22	18:50:03	6.68417		4613.14	-18.38	120.48	
07/19/22	19:01:45	6.87917		4613.09	-18.43	120.67	
07/19/22	19:13:48	7.08000		4613.03	-18.49	120.86	
07/19/22	19:26:12	7.28667		4612.98	-18.54	121.06	
07/19/22	19:38:57	7.49917		4612.94	-18.58	121.25	
07/19/22	19:52:06	7.71833		4612.88	-18.64	121.45	
07/19/22	20:05:36	7.94333		4612.85	-18.67	121.64	
07/19/22	20:19:33	8.17583		4612.80	-18.72	121.84	
07/19/22	20:33:51	8.41417		4612.70	-18.82	122.05	
07/19/22	20:48:36	8.66000		4612.69	-18.83	122.22	
07/19/22	21:03:48	8.91333		4612.64	-18.88	122.42	
07/19/22	21:19:24	9.17333		4612.59	-18.93	122.61	
07/19/22	21:35:27	9.44083		4612.55	-18.97	122.81	
07/19/22	21:52:00	9.71667		4612.51	-19.01	123.00	
07/19/22	22:09:03	10.00083		4612.47	-19.05	123.20	
07/19/22	22:26:33	10.29250		4612.41	-19.11	123.39	
07/19/22	22:44:36	10.59333		4612.36	-19.16	123.58	
07/19/22	23:03:09	10.90250		4612.33	-19.19	123.77	
07/19/22	23:22:15	11.22083		4612.28	-19.24	123.96	
07/19/22	23:41:54	11.54833		4612.24	-19.28	124.15	
07/20/22	00:02:09	11.88583		4612.19	-19.33	124.34	
07/20/22	00:22:57	12.23250		4612.14	-19.38	124.53	
07/20/22	00:44:24	12.59000		4612.10	-19.42	124.71	
07/20/22	01:06:27	12.95750		4612.04	-19.48	124.90	
07/20/22	01:29:09	13.33583		4611.99	-19.53	125.09	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/20/22	01:52:30	13.72500		4611.94	-19.58	125.27	
07/20/22	02:16:33	14.12583		4611.90	-19.62	125.45	
07/20/22	02:41:18	14.53833		4611.84	-19.68	125.62	
07/20/22	03:06:45	14.96250		4611.80	-19.72	125.80	
07/20/22	03:33:00	15.40000		4611.73	-19.79	125.97	
07/20/22	03:59:57	15.84917		4611.69	-19.83	126.15	
07/20/22	04:27:45	16.31250		4611.63	-19.89	126.32	
07/20/22	04:56:18	16.78833		4611.58	-19.94	126.49	
07/20/22	05:25:42	17.27833		4611.52	-20.00	126.66	
07/20/22	05:56:00	17.78333		4611.47	-20.05	126.84	
07/20/22	06:27:09	18.30250		4611.42	-20.10	127.03	
07/20/22	06:59:12	18.83667		4611.36	-20.16	127.22	
07/20/22	07:32:12	19.38667		4611.31	-20.21	127.47	
07/20/22	08:06:12	19.95333		4611.25	-20.27	127.57	
07/20/22	08:41:09	20.53583		4611.20	-20.32	127.76	
07/20/22	09:17:06	21.13500		4611.16	-20.36	127.93	
07/20/22	09:54:09	21.75250		4611.11	-20.41	128.11	
07/20/22	10:32:15	22.38750		4611.07	-20.45	128.30	
07/20/22	11:11:30	23.04167		4611.02	-20.50	128.48	
07/20/22	11:51:51	23.71417		4610.98	-20.54	128.66	
07/20/22	12:33:24	24.40667		4610.94	-20.58	128.84	
07/20/22	13:16:09	25.11917		4610.89	-20.63	129.00	
07/20/22	14:00:09	25.85250		4610.84	-20.68	129.17	
07/20/22	14:45:27	26.60750		4610.79	-20.73	129.32	
07/20/22	15:32:06	27.38500		4610.74	-20.78	129.49	
07/20/22	16:20:03	28.18417		4610.68	-20.84	129.66	
07/20/22	17:09:27	29.00750		4610.63	-20.89	129.84	
07/20/22	18:00:15	29.85417		4610.57	-20.95	130.01	
07/20/22	18:52:33	30.72583		4610.52	-21.00	130.18	
07/20/22	19:46:24	31.62333		4610.47	-21.05	130.34	
07/20/22	20:41:48	32.54667		4610.41	-21.11	130.51	
07/20/22	21:38:48	33.49667		4610.37	-21.15	130.68	
07/20/22	22:37:30	34.47500		4610.33	-21.19	130.85	
07/20/22	23:37:54	35.48167		4610.29	-21.23	131.03	
07/21/22	00:40:03	36.51750		4610.23	-21.29	131.20	
07/21/22	01:44:03	37.58417		4610.18	-21.34	131.36	
07/21/22	02:49:54	38.68167		4610.12	-21.40	131.53	
07/21/22	03:57:39	39.81083		4610.06	-21.46	131.70	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company:	Petrotek Engineering Corporation	Test Date:	07/19 - 07/21/2022
Well:	Navajo Refining Waste Disposal Well No. 4	Gauge Depth:	10307 ft
Field:	Davonia	Gauge Type:	Electronic
Location:	Eddy County, NM	Gauge SN:	SP-224798
Perfs:	10327 - 10700 ft (MD)	Gauge Range:	16000 psi
Formation:	Unavailable	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
07/21/22	05:07:24	40.97333		4609.99	-21.53	131.87	
07/21/22	06:19:12	42.17000		4609.92	-21.60	132.03	
07/21/22	07:33:06	43.40167		4609.86	-21.66	132.20	
07/21/22	07:57:45	43.81250		4609.84	-21.68	132.25	Ended BHP Falloff Test
07/21/22	07:57:48	43.81333		4609.73		132.25	Prepared slickline to pull gauge.
07/21/22	07:57:51	43.81417		4609.58		132.25	
07/21/22	07:57:54	43.81500		4609.44		132.25	
07/21/22	07:57:57	43.81583		4609.23		132.25	
07/21/22	07:58:00	43.81667		4609.17		132.25	
07/21/22	07:59:00	43.83333		4609.13		132.41	
07/21/22	08:00:00	43.85000		4609.28		132.49	
07/21/22	08:00:48	43.86333	160	4609.32		132.49	POOH making static gradient stops.
07/21/22	08:01:00	43.86667		4600.29		132.59	
07/21/22	08:02:00	43.88333		4548.44		133.05	
07/21/22	08:03:00	43.90000		4479.04		132.99	Arrived at 10000 ft stop.
07/21/22	08:04:00	43.91667		4476.20		131.76	
07/21/22	08:05:00	43.93333		4475.91		131.61	
07/21/22	08:06:00	43.95000		4475.85		131.54	
07/21/22	08:07:00	43.96667		4475.82		131.50	
07/21/22	08:08:00	43.98333		4475.80		131.47	
07/21/22	08:08:03	43.98417		4475.77		131.47	Left 10000 ft stop.
07/21/22	08:09:00	44.00000		4411.91		131.85	
07/21/22	08:10:00	44.01667		4334.44		128.64	
07/21/22	08:11:00	44.03333		4256.26		128.86	
07/21/22	08:12:00	44.05000		4177.32		127.34	
07/21/22	08:13:00	44.06667		4100.92		125.58	
07/21/22	08:13:48	44.08000		4046.03		123.79	Arrived at 9000 ft stop.
07/21/22	08:14:00	44.08333		4044.99		123.61	
07/21/22	08:15:00	44.10000		4044.36		123.48	
07/21/22	08:16:00	44.11667		4044.27		123.45	
07/21/22	08:17:00	44.13333		4044.24		123.43	
07/21/22	08:18:00	44.15000		4044.22		123.42	
07/21/22	08:18:45	44.16250		4044.21		123.42	Left 9000 ft stop.
07/21/22	08:19:00	44.16667		4028.90		123.44	
07/21/22	08:20:00	44.18333		3948.84		122.21	
07/21/22	08:21:00	44.20000		3865.22		121.26	
07/21/22	08:22:00	44.21667		3781.66		119.64	
07/21/22	08:23:00	44.23333		3697.57		118.15	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/21/22	08:24:00	44.25000		3615.59		116.45	
07/21/22	08:24:06	44.25167		3613.36		116.36	Arrived at 8000 ft stop.
07/21/22	08:25:00	44.26667		3612.39		116.12	
07/21/22	08:26:00	44.28333		3612.31		116.08	
07/21/22	08:27:00	44.30000		3612.28		116.06	
07/21/22	08:28:00	44.31667		3612.26		116.05	
07/21/22	08:29:00	44.33333		3612.25		116.04	
07/21/22	08:29:03	44.33417		3612.25		116.04	Left 8000 ft stop.
07/21/22	08:30:00	44.35000		3545.31		115.25	
07/21/22	08:31:00	44.36667		3461.52		113.77	
07/21/22	08:32:00	44.38333		3377.05		112.08	
07/21/22	08:33:00	44.40000		3293.18		110.95	
07/21/22	08:34:00	44.41667		3208.36		109.70	
07/21/22	08:34:27	44.42417		3180.90		109.16	Arrived at 7000 ft stop.
07/21/22	08:35:00	44.43333		3180.17		108.94	
07/21/22	08:36:00	44.45000		3180.04		108.89	
07/21/22	08:37:00	44.46667		3180.00		108.87	
07/21/22	08:38:00	44.48333		3179.99		108.85	
07/21/22	08:39:00	44.50000		3179.98		108.84	
07/21/22	08:39:27	44.50750		3179.98		108.84	Left 7000 ft stop.
07/21/22	08:40:00	44.51667		3135.98		108.55	
07/21/22	08:41:00	44.53333		3039.27		107.12	
07/21/22	08:42:00	44.55000		2941.54		105.72	
07/21/22	08:43:00	44.56667		2842.92		104.66	
07/21/22	08:44:00	44.58333		2750.04		103.84	
07/21/22	08:44:03	44.58417		2748.11		103.80	Arrived at 6000 ft stop.
07/21/22	08:45:00	44.60000		2747.57		103.59	
07/21/22	08:46:00	44.61667		2747.51		103.56	
07/21/22	08:47:00	44.63333		2747.49		103.55	
07/21/22	08:48:00	44.65000		2747.49		103.55	
07/21/22	08:49:00	44.66667		2747.48		103.54	
07/21/22	08:49:03	44.66750		2747.47		103.54	Left 6000 ft stop.
07/21/22	08:50:00	44.68333		2676.76		103.11	
07/21/22	08:51:00	44.70000		2594.44		102.33	
07/21/22	08:52:00	44.71667		2509.05		101.49	
07/21/22	08:53:00	44.73333		2422.89		100.64	
07/21/22	08:54:00	44.75000		2336.52		99.42	
07/21/22	08:54:18	44.75500		2316.54		99.17	Arrived at 5000 ft stop.

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/21/22	08:55:00	44.76667		2315.43		98.96	
07/21/22	08:56:00	44.78333		2315.36		98.93	
07/21/22	08:57:00	44.80000		2315.36		98.92	
07/21/22	08:58:00	44.81667		2315.36		98.91	
07/21/22	08:59:00	44.83333		2315.36		98.91	
07/21/22	08:59:21	44.83917		2315.35		98.91	Left 5000 ft stop.
07/21/22	09:00:00	44.85000		2267.02		98.71	
07/21/22	09:01:00	44.86667		2180.28		98.03	
07/21/22	09:02:00	44.88333		2093.79		97.25	
07/21/22	09:03:00	44.90000		2005.93		96.24	
07/21/22	09:04:00	44.91667		1917.91		95.59	
07/21/22	09:04:27	44.92417		1883.95		95.40	Arrived at 4000 ft stop.
07/21/22	09:05:00	44.93333		1883.56		95.27	
07/21/22	09:06:00	44.95000		1883.49		95.24	
07/21/22	09:07:00	44.96667		1883.48		95.23	
07/21/22	09:08:00	44.98333		1883.48		95.22	
07/21/22	09:09:00	45.00000		1883.48		95.22	
07/21/22	09:09:27	45.00750		1883.48		95.22	Left 4000 ft stop.
07/21/22	09:10:00	45.01667		1839.67		95.04	
07/21/22	09:11:00	45.03333		1753.60		94.45	
07/21/22	09:12:00	45.05000		1666.09		93.80	
07/21/22	09:13:00	45.06667		1577.82		93.29	
07/21/22	09:14:00	45.08333		1491.50		92.94	
07/21/22	09:14:30	45.09167		1452.76		92.49	Arrived at 3000 ft stop.
07/21/22	09:15:00	45.10000		1452.10		92.31	
07/21/22	09:16:00	45.11667		1452.03		92.27	
07/21/22	09:17:00	45.13333		1452.01		92.25	
07/21/22	09:18:00	45.15000		1452.00		92.25	
07/21/22	09:19:00	45.16667		1451.98		92.24	
07/21/22	09:19:30	45.17500		1451.97		92.24	Left 3000 ft stop.
07/21/22	09:20:00	45.18333		1419.28		92.12	
07/21/22	09:21:00	45.20000		1338.80		91.57	
07/21/22	09:22:00	45.21667		1256.76		91.11	
07/21/22	09:23:00	45.23333		1172.00		90.36	
07/21/22	09:24:00	45.25000		1087.77		89.95	
07/21/22	09:24:48	45.26333		1021.83		89.45	Arrived at 2000 ft stop.
07/21/22	09:25:00	45.26667		1021.15		89.21	
07/21/22	09:26:00	45.28333		1020.55		89.02	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company: Petrotek Engineering Corporation
Well: Navajo Refining Waste Disposal Well No. 4
Field: Davonia
Location: Eddy County, NM
Perfs: 10327 - 10700 ft (MD)
Formation: Unavailable

Test Date: 07/19 - 07/21/2022
Gauge Depth: 10307 ft
Gauge Type: Electronic
Gauge SN: SP-224798
Gauge Range: 16000 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
07/21/22	09:27:00	45.30000		1020.64		88.98	
07/21/22	09:28:00	45.31667		1020.62		88.96	
07/21/22	09:29:00	45.33333		1020.62		88.95	
07/21/22	09:29:48	45.34667		1020.61		88.94	Left 2000 ft stop.
07/21/22	09:30:00	45.35000		1010.50		88.93	
07/21/22	09:31:00	45.36667		921.81		88.34	
07/21/22	09:32:00	45.38333		825.92		87.81	
07/21/22	09:33:00	45.40000		727.83		86.84	
07/21/22	09:34:00	45.41667		631.64		85.86	
07/21/22	09:34:30	45.42500		590.30		85.52	Arrived at 1000 ft stop.
07/21/22	09:35:00	45.43333		589.43		85.48	
07/21/22	09:36:00	45.45000		589.43		85.48	
07/21/22	09:37:00	45.46667		589.44		85.48	
07/21/22	09:38:00	45.48333		589.43		85.49	
07/21/22	09:39:00	45.50000		589.43		85.49	
07/21/22	09:39:33	45.50917		589.43		85.49	Left 1000 ft stop.
07/21/22	09:40:00	45.51667		550.89		85.38	
07/21/22	09:41:00	45.53333		452.07		87.89	
07/21/22	09:42:00	45.55000		354.71		85.96	
07/21/22	09:43:00	45.56667		252.15		83.88	
07/21/22	09:44:00	45.58333		175.29		88.00	
07/21/22	09:45:00	45.60000		160.43		86.00	
07/21/22	09:45:30	45.60833		158.95		85.39	Gauge at surface.
07/21/22	09:46:00	45.61667		158.75		85.29	
07/21/22	09:47:00	45.63333		158.63		85.16	
07/21/22	09:48:00	45.65000		158.69		85.14	
07/21/22	09:49:00	45.66667		158.68		85.11	
07/21/22	09:49:21	45.67250	160	158.67		85.10	Surface stop.
07/21/22	09:50:00	45.68333		144.04		85.44	
07/21/22	09:51:00	45.70000		150.53		88.94	
07/21/22	09:52:00	45.71667		150.02		89.84	
07/21/22	09:53:00	45.73333		149.97		90.16	
07/21/22	09:53:30	45.74167		150.23		90.34	Pressured down lubricator.
07/21/22	09:54:00	45.75000		88.68		90.45	
07/21/22	09:55:00	45.76667		33.80		90.93	
07/21/22	09:56:00	45.78333		26.34		91.61	
07/21/22	09:57:00	45.80000		18.55		92.16	
07/21/22	09:58:00	45.81667		14.84		92.74	

FESCO, Ltd.

1000 Fesco Ave. - Alice, Texas 78332

RESERVOIR PRESSURE FALLOFF TEST

Company:	Petrotek Engineering Corporation	Test Date:	07/19 - 07/21/2022
Well:	Navajo Refining Waste Disposal Well No. 4	Gauge Depth:	10307 ft
Field:	Davonia	Gauge Type:	Electronic
Location:	Eddy County, NM	Gauge SN:	SP-224798
Perfs:	10327 - 10700 ft (MD)	Gauge Range:	16000 psi
Formation:	Unavailable	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
07/21/22	09:59:00	45.83333		13.94		92.95	
07/21/22	10:00:00	45.85000		11.66		93.20	
07/21/22	10:00:51	45.86417		11.73		93.45	Test complete.
07/21/22	10:01:00	45.86667		19.85		93.24	
07/21/22	10:02:00	45.88333		17.98		87.64	
07/21/22	10:03:00	45.90000		15.31		85.19	
07/21/22	10:04:00	45.91667		15.30		84.75	
07/21/22	10:05:00	45.93333		16.30		84.47	
07/21/22	10:06:00	45.95000		16.65		83.47	
07/21/22	10:07:00	45.96667		17.74		82.69	
07/21/22	10:07:57	45.98250		17.63		81.99	Powered down gauge.

Remarks: MIRU slickline. RIH and cleared 10307 ft with weight bar. POOH. RIH with electronic gauge making injecting gradient stops to 10307 ft. Flow well for 1 hr. SI well for 43.8 hr BHP Falloff Test. POOH making static gradient stops. RDMO.

Certified: FESCO, Ltd. - Midland, TX

By: Michael Carnes
District Manager - (432) 332-3211

Job No.: J202207231401.001A

Attachment 5
Falloff Test Summary

Petrotek

DW No. 4
Falloff Test Summary

Reservoir Properties

Net Pay (h)	330	ft
Porosity (Φ)	25.0	%
Formation Compressibility (c_f)	3.50E-06	psi^{-1}
Total Compressibility (c_t)	6.20E-06	psi^{-1}
Wellbore Radius (r_w)	0.353	ft

Fluid Properties

Viscosity (μ)	0.47	cp
Fluid Compressibility (c_f)	2.70E-06	psi^{-1}
Formation Volume Factor (B)	1.00	bbl/stb

Model Parameters

Wellbore Storage	Changing hegeman
Well Model	Vertica
Reservoir Model	Homogenous
Boundary Model	Intersecting faults

Analysis Results

Well & Wellbore

Initial Wellbore Storage	7.59E-01	bbl/psi
Final Wellbore Storage	1.73E-01	bbl/psi
D_t [changing storage]	1.22E-02	hr
Skin	38.5	

Reservoir & Boundary

Permeability (k)	3,018	md
Transmissibility	2,118,788	md-ft/cp
Radius of Investigation (r_i)	12,521	ft
Fault Distance	632	ft
Fault Angle	66.1	deg

Attachment 6
AOR Well List

Petrotek

Operator Name	Well Name	API	Type	Status	Surface Location	Latitude	Longitude	Spud Date	Plug Date
OXY USA WTP LIMITED PARTNERSHIP	OXY CHARLEMAGNE FEDERAL #001	30-015-30181	Oil	Active	E-26-17S-27E	32.807945	-104.255875	6/23/1998	
Spur Energy Partners LLC	ARCO B FEDERAL COM #001	30-015-21047	Gas	Active	L-26-17S-27E	32.803532	-104.255913	12/31/1973	
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00589	Oil	Plugged (site released)	L-26-17S-27E	32.803436	-104.255951		
OXY USA WTP LIMITED PARTNERSHIP	OXY ROSENKAVLIER FEDERAL #001	30-015-30908	Gas	Active	D-23-17S-27E	32.825066	-104.255760	2/5/2000	
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #002	30-015-00686	Oil	Plugged (site released)	E-26-17S-27E	32.807938	-104.254799		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00583	Oil	Plugged (site released)	E-26-17S-27E	32.807869	-104.254799		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00582	Oil	Plugged (site released)	D-26-17S-27E	32.809750	-104.254784		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00471	Oil	Plugged (site released)	D-23-17S-27E	32.825062	-104.254692		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #006	30-015-00474	Oil	Plugged (site released)	M-23-17S-27E	32.813381	-104.254753		
OXY USA WTP LIMITED PARTNERSHIP	YESO VIKING FEDERAL #003	30-015-41340	Oil	Active	K-23-17S-27E	32.818611	-104.252480	7/22/2013	
OXY USA WTP LIMITED PARTNERSHIP	OXY VIKING FEDERAL #001	30-015-29281	Gas	Active	N-23-17S-27E	32.814266	-104.252594	12/28/1996	
OXY USA WTP LIMITED PARTNERSHIP	YESO VIKING FEDERAL #007	30-015-41425	Oil	Active	N-23-17S-27E	32.813480	-104.250679	12/27/2013	
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00584	Oil	Plugged (site released)	F-26-17S-27E	32.806080	-104.250519		
ALAMO PERMIAN RESOURCES, LLC	BERRY FEDERAL #029	30-015-00472	Gas	Plugged (site released)	F-23-17S-27E	32.821419	-104.251488	1/22/1962	1/30/2013
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #005	30-015-00473	Oil	Plugged (site released)	J-23-17S-27E	32.818764	-104.248344		
OXY USA WTP LIMITED PARTNERSHIP	YESO VIKING FEDERAL #004	30-015-41341	Oil	Active	J-23-17S-27E	32.818485	-104.247917	7/30/2013	
HANSON ENERGY	BERRY FEDERAL #034	30-015-31113	Oil	Plugged (site released)	G-23-17S-27E	32.822304	-104.246185	5/9/2000	1/18/2008
SDX RESOURCES INC	WODEN FEDERAL #001	30-015-30386	Gas	Plugged (site released)	B-23-17S-27E	32.825024	-104.246178	7/15/1999	
OXY USA WTP LIMITED PARTNERSHIP	YESO VIKING FEDERAL #008	30-015-41468	Oil	Active	N-23-17S-27E	32.815281	-104.247864	1/4/2014	
ALAMO PERMIAN RESOURCES, LLC	BERRY FEDERAL #030	30-015-21510	Gas	Plugged (site released)	O-23-17S-27E	32.814327	-104.247276		11/30/2012
LIME ROCK RESOURCES A, L.P.	TRIGG FEDERAL #002	30-015-31193	Oil	Plugged (site released)	G-26-17S-27E	32.806042	-104.246201	8/28/2000	10/5/2010
OXY USA WTP LIMITED PARTNERSHIP	YESO VIKING FEDERAL #009	30-015-41261	Oil	Active	P-23-17S-27E	32.815537	-104.244568	2/9/2014	
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #014	30-015-00585	Oil	Plugged (site released)	H-26-17S-27E	32.806019	-104.244057		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #006	30-015-00580	Oil	Plugged (site released)	A-26-17S-27E	32.809650	-104.244057		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00587	Oil	Plugged (site released)	I-26-17S-27E	32.804260	-104.244057		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #010	30-015-00588	Oil	Plugged (site released)	I-26-17S-27E	32.802445	-104.244057		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #007	30-015-00475	Oil	Plugged (site released)	P-23-17S-27E	32.813259	-104.241905		
OXY USA WTP LIMITED PARTNERSHIP	YESO VIKING FEDERAL #005	30-015-41260	Oil	Active	I-23-17S-27E	32.816959	-104.243622	12/9/2013	
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #015	30-015-00586	Oil	Plugged (site released)	H-26-17S-27E	32.806000	-104.241905		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00579	Oil	Plugged (site released)	A-26-17S-27E	32.811771	-104.241516		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00453	Oil	Plugged (site released)	P-14-17S-27E	32.827728	-104.241875		
Redwood Operating LLC	MATTHEWS 25 FEDERAL #001	30-015-40804	Oil	Active	E-25-17S-27E	32.806480	-104.239761	11/8/2012	
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #036	30-015-31179	Oil	Plugged (site released)	D-24-17S-27E	32.822273	-104.237976		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #003	30-015-00519	Oil	Plugged (site released)	E-25-17S-27E	32.805973	-104.237610		
ALAMO PERMIAN RESOURCES, LLC	BERRY FEDERAL #027	30-015-00483	Gas	Plugged (site released)	E-24-17S-27E	32.822273	-104.237587		12/13/2011
Spur Energy Partners LLC	DOGWOOD FEDERAL #003	30-015-39763	Oil	Active	F-25-17S-27E	32.807781	-104.236244	4/6/2012	
OXY USA WTP LIMITED PARTNERSHIP	OXY CHOPSTICKS FEDERAL #002	30-015-31743	Gas	Active	N-24-17S-27E	32.815090	-104.235458	6/4/2001	
ALAMO PERMIAN RESOURCES, LLC	BERRY A #022	30-015-00497	Gas	Plugged (site released)	K-24-17S-27E	32.818665	-104.235451		6/9/2012
Spur Energy Partners LLC	REDBUD FEDERAL #001	30-015-32694	Oil	Active	C-25-17S-27E	32.810928	-104.234978	4/1/2003	
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #019	30-015-00499	Oil	Plugged (site released)	K-24-17S-27E	32.816929	-104.234573		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-01532	Oil	Plugged (site released)	N-24-17S-27E	32.814125	-104.234383		
ALAMO PERMIAN RESOURCES, LLC	BERRY A #011	30-015-00498	Gas	Plugged (site released)	K-24-17S-27E	32.816841	-104.233299		11/29/2021
SDX RESOURCES INC	BERRY A #021	30-015-01239	Oil	Plugged (site released)	K-24-17S-27E	32.818653	-104.233299		3/24/2000
ROVER OPERATING, LLC	BERRY A #033	30-015-25154	Injection	Active	K-24-17S-27E	32.816845	-104.234184	4/2/1985	
CONCHO EXPLORATION	HONDO FEDERAL GAS COM #003	30-015-32614	Gas	Plugged (site released)	B-27-17S-27E	32.808987	-104.264458	5/22/2003	6/13/2003
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #002	30-015-21443	Oil	Plugged (site released)	O-22-17S-27E	32.814266	-104.264412		
SDX RESOURCES INC	BERRY A #031Y	30-015-21668	Oil	Plugged (site released)	G-22-17S-27E	32.821426	-104.264381		6/20/2000
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #031	30-015-21569	Oil	Plugged (site released)	E-22-17S-27E	32.821392	-104.264381		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00470	Oil	Plugged (site released)	H-22-17S-27E	32.820511	-104.261162		
Redwood Operating LLC	EAGLE 27 FEDERAL #001	30-015-29936	Oil	Plugged (site released)	A-27-17S-27E	32.811573	-104.260719	10/15/1998	12/23/2021
COG OPERATING LLC	RJ UNIT #105	30-015-29803	Oil	Plugged (site released)	A-27-17S-27E	32.810871	-104.259071	12/11/1997	10/16/2014
Murchison Oil and Gas, LLC	MARALO FEDERAL #004	30-015-30795	Gas	Plugged (site released)	I-22-17S-27E	32.817516	-104.260101		2/27/2007
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-01237	Oil	Plugged (site released)	A-27-17S-27E	32.810707	-104.259071		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00458	Oil	Plugged (site released)	P-15-17S-27E	32.827786	-104.258980		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00581	Oil	Plugged (site released)	D-26-17S-27E	32.811585	-104.256912		
PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	30-015-00454	Oil	Plugged (site released)	M-14-17S-27E	32.827789	-104.256828		
OXY USA WTP LIMITED PARTNERSHIP	YESO VIKING FEDERAL #002	30-015-41339	Oil	Active	L-23-17S-27E	32.818623	-104.256775	11/6/2013	
OXY USA WTP LIMITED PARTNERSHIP	YESO VIKING FEDERAL #006	30-015-41342	Oil	Active	M-23-17S-27E	32.815105	-104.256889	11/28/2013	
Redwood Operating LLC	EAGLE 27 B FEDERAL #003	30-015-29937	Oil	Active	B-27-17S-27E	32.811535	-104.265511	1/22/1998	
Murchison Oil and Gas, LLC	MARALO FEDERAL #002	30-015-30532	Gas	Active	G-22-17S-27E	32.822308	-104.263298	12/19/1998	
Redwood Operating LLC	MATTHEWS 25 FEDERAL #003	30-015-41698	Oil	Active	D-25-17S-27E	32.809628	-104.239761	1/18/2017	
Redwood Operating LLC	MATTHEWS 25 FEDERAL #002	30-015-41721	Oil	Active	E-25-17S-27E	32.806328	-104.237206	4/19/2014	
Contango Resources, Inc.	TRIGG FEDERAL #001	30-015-30956	Oil	Active	B-26-17S-27E	32.810936	-104.246208	5/1/2000	
OXY USA WTP LIMITED PARTNERSHIP	OXY HARVESTER FEDERAL #001	30-015-30882	Gas	Active	I-26-17S-27E	32.803337	-104.242981	3/7/2000	

Attachment 7
Digital Data

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 141214

COMMENTS

Operator: NAVAJO REFINING COMPANY, L.L.C. P.O. Box 159 Artesia, NM 88211	OGRID: 15694
	Action Number: 141214
	Action Type: [C-103] NOI General Sundry (C-103X)

COMMENTS

Created By	Comment	Comment Date
cchavez	Fall-Off Test 2022	10/19/2022

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

CONDITIONS

Action 141214

CONDITIONS

Operator: NAVAJO REFINING COMPANY, L.L.C. P.O. Box 159 Artesia, NM 88211	OGRID: 15694
	Action Number: 141214
	Action Type: [C-103] NOI General Sundry (C-103X)

CONDITIONS

Created By	Condition	Condition Date
cchavez	Conditions of Approval: 1) Tag and record well TD in advance of well workovers/testing/logging. 2) Plan for increased inject. vol. w max. & increased rate of injection (at onset of injection period & to achieve steady-state injection rate prior to FOT monitoring) for all future FOTs on this highly permeable infinitely extensive inject. zones to adequately stress the injection zone prior to FOT monitoring.	10/19/2022