Colorado Oil & Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, CO 80203

**Subject: KP Kauffman – Pete Montoya Pipeline Repair Pressure Test**

Dear COGCC:

Campos EPC (CEPC) witnessed the post repair pressure test of the Pete Montoya pipeline near Dacono, CO, owned by KP Kauffman on October 21, 2022. The pipe repairs consisted of stringing HDPE inside the existing 12" steel pipe approximately 600 feet in either direction from the location of the previous failure in both directions. The pressure test was performed on a one-mile section of pipeline which included the 1200 ft repaired section.

The post repair pressure test was performed for a 1-hour duration. The 1-hour duration requirement was based on verbal instructions received from Mark Schlagenhauf and Joe MacLaren with COGCC on October 21, 2022.

Section 1104.h.1.A of the Flowline Regulations (1100 Series) states that an "*initial pressure test must be conducted for a minimum of four hours or in compliance with the manufacturer's specifications and in accordance with one of the following standards.*" Section 1104.h.1.A.vii is applicable for PE piping and requires the test to be in accordance with ASTM F2164-13 or the "*manufacturer's specifications and must test the line to at least maximum anticipated operating pressure.*" ASTM F2164 and HDPE manufacturer data both specify a 1-hour pressure test as acceptable.

The hydrostatic pressure test was performed following the steps outlined below.

1. Install chart recorder to the test segment.
2. For line repair and return to service, line is purged of air.
3. Segment is isolated and energized using energy source (water), bringing pressure up to max pressure required for pressure test.
4. Pressure test is recorded and held for a minimum of 1 hour.
5. Once pressure test is complete, draw down test is to be conducted and recorded by slowly opening the isolation valve furthest from chart recorder to ensure communication with the test segment.

A successful hydrostatic pressure test was performed at 25 psig per the chart recorder the morning of October 21, 2022. The recommended Design Pressure of the pipeline is 20 psig and the pressure test was performed at 1.25 times the Design Pressure. The total length of pipe tested was approximately 1200 ft.

The chart recorder data and Pressure Test Log are attached for reference.

Sincerely,

John Kelly, PE

Attachment:

- Pressure test photographs
- Pressure Test Record
- Test section and chart recorder map
- Chart recorder paper

## Pressure Test Design:

Company : KPK Report No:

Facility Name: Pete Montoya Line Job Order:

Line No:

Project Description: Pipe Repair Post Leak

From Station No: To Station No:

Operating Office: Reference Drawing:

Type of Asset being tested: PE and Steel Test Medium:

Gauge Location/Station #:

State: Colorado County: Weld Township:

| Pipe Materials Description | | | | | | | |
|---|---|---|---|---|---|---|---|
| Length (Ft) | Outside Diameter (Inches) | Wall Thickness (Inches) | Grade | SMYS (psi) | Seam Type | In-Service (y/n) | New (y/n) |
| 1200' | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Minimum Pressure Rating with test (Fitting, Valve, Flange): psi

Lowest design pressure within test: psi

Lowest SMYS within test:

MAOP: 20 psi

Min. flange or valve ANSI rating in test section: psi

Maximum Test Pressure: psig

As Determined By:

- 100 % SMYS
- Line Pressure + 50 psig
- 1.5 x design
- Flange/valve rating
- 2 x design
- % SMYS =
- Other - Describe:

Minimum Test Pressure: _____ psig

As Determined By:

_____ 1.5 x design _____ Line Pressure + 50 psig

_____ 1.25 x design _____ %SMYS = _____

_____ System MAOP _____ System Operating Pressure

_____ Other - Describe: _____

this section only applies for tests completed using water as the medium

| Pressure Correction: | Station | High | Low |
|---|---|---|---|
| High elevation of pipe | | | |
| Elevation of gauge | | | |
| Low elevation of pipe | | | |
| Difference in elevation | | 0 | 0 |
| Pressure Correction (Difference in elevation x 0.433 psi/ft) | | 0 | 0 |

Allowable Gauge Pressure:

| | | |
|---|---|---|
| Minimum test pressure (from above) | 0 | A |
| High pressure correction (from above) | 0 | B |
| Minimum allowable gauge pressure | 0 | C |

C = A + B : min test pressure at high point plus elevation pressure correction is the min allowable gauge pressure to maintain minumum test pressure at high point

| | | |
|---|---|---|
| Maximum test pressure (from above) | 0 | D |
| Low pressure correction (from above) | 0 | E |
| Maximum allowable gauge pressure | 0 | F |

F = D - E : max test pressure at low point minus elevation pressure correction is the max allowable gauge pressure to not exceed max pressure at low point

pressure test design completed by: _____ date: _____

Pressure test design field review completed by: _____ date: _____

**Attach elevation analysis, pipe and fitting specfications to completed form, as necessary.**

## Pressure Test Record

Company : KPK Report No:

Facility Name: Pete Montoya Line Job Order:

Line No:

Project Description: Pipe Repair Post Leak

From Station No: To Station No:

Operating Office: Reference Drawing:

Type of Asset being tested: Test Medium:

Gauge Location/Station #:

State: Colorado County: Weld Township:

Test Start Date: 10/21/2022 Start Time: 9:36 AM PM (circle appropriate response)

Test End Date: 10/21/2022 End Time: 11:30 AM PM (circle appropriate response)

Actual Test Duration: 1hr 39 min

Actual Test Pressure: 25 psi

Actual Min. Gauge Pressure: Actual Max. Gauge Pressure:

High Pressure Correction: - Low Pressure Correction: +

Actual Min. Test Pressure: = Actual Max. Pressure: =

Leaks/Failures present during test? yes no (circle appropriate response)

If yes, provide circumstance and cause of leaks or failures and whether they were remediated during the test or a new test is required

Test Supervisor: Date:

Test Contractor: Date:

Company Representative: Date:

Project Manager: Mani Silva Date:

## Pressure Test Log

Company : KPK

Report No:

Facility Name: Pete Montoya Line

Job Order:

Line No:

Project Description: Pipe Repair Post Leak

From Station No:

To Station No:

| | |
|---|---|
| Pipe Length | 1200' |
| Pipe Size | 12" |
| Pipe Material | PE in Steel |
| Test Duration | 1hr 39 min |
| Test Pressure | 25 psi |

Deadweight or recording gauge Serial No: Calibration date:

Pipe Temperature Recorder Serial No: Calibration date:

Ambient Temperature Recorder Serial No: Calibration date:

| Time | Pressure | Ambient Temp (Deg F) | Pipe Temp (Deg F) | Water Volume Added | Water Volume Removed | Stroke Count | Remarks |
|---|---|---|---|---|---|---|---|
| 9:30 AM | 25.5 | 60 | 75 | | | | Pre-Test Conditions |
| 9:36 AM | 25 | 60 | 75 | | | | Test Start |
| 9:46 AM | 25 | 60 | 75 | | | | |
| 9:56 AM | 25 | 60 | 75 | | | | |
| 10:06 AM | 25 | 58 | 75 | | | | |
| 10:16 AM | 25.5 | 62 | 75 | | | | |
| 10:26 AM | 25.5 | 62 | 75 | | | | |
| 10:36 AM | 25.5 | 62 | 75 | | | | |
| 10:46 AM | 25.5 | 62 | 75 | | | | |
| 10:56 AM | 25.5 | 62 | 75 | | | | |
| 11:06 AM | 25.5 | 62 | 75 | | | | |
| 11:12 AM | 25.5 | 65 | 75 | | | | |
| 11:15 AM | 25.5 | 68 | 75 | | | | Test End |
| 11:30 AM | 11 psi | 71 | 75 | | | | De-Pressuring Final Pressure |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Completed by: KRISTA C. WARREN

Signature:

Date: 10/21/2022

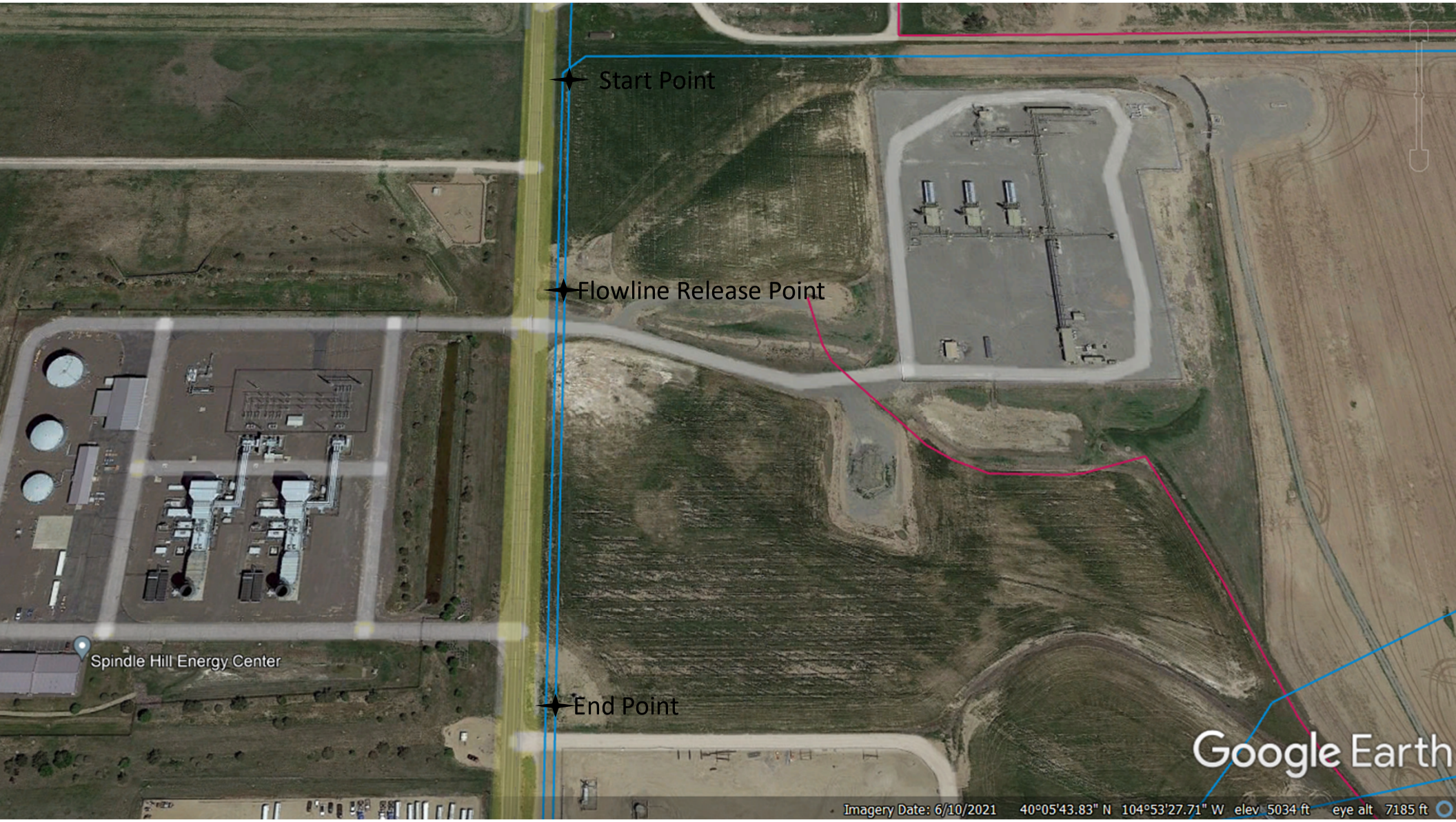
Attach Additional pages as needed to be completed during test period

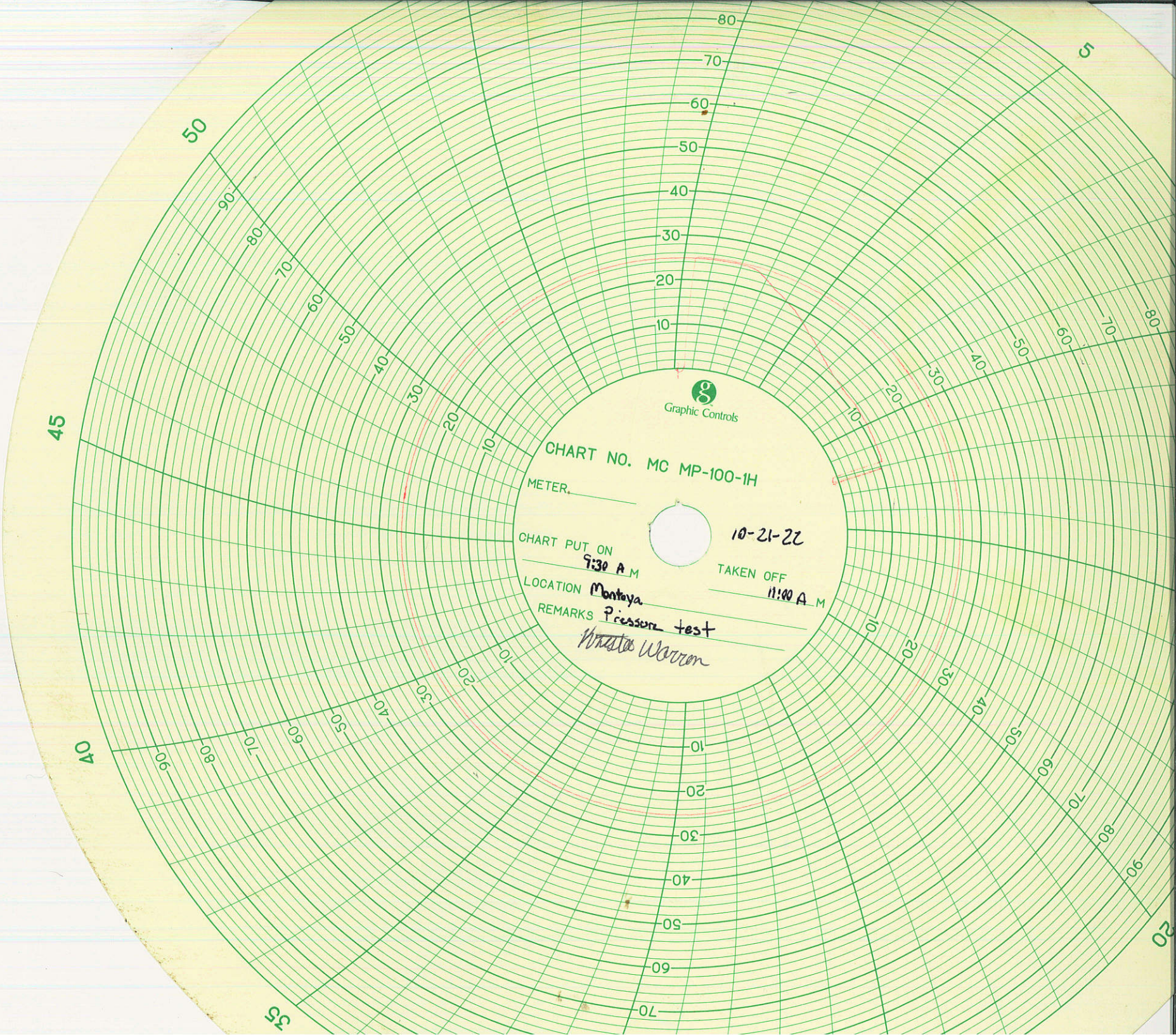


Retain Permanently


BARTON
SER NO. 202E-337336
S.W.P. 2500
D.P. RANGE 100"
STATIC PR. RANGE 50#
RANGE SPRING MATERIAL
STATIC TUBE MATERIAL
CLOCK ROT'N
VOLTS
CYCLES
CHART NO.
BELLOWS MATERIAL 316SS
BELLOWS FILL LIQUID M
FLOW RANGE
METER FACTOR
CAUTION
SEE I/O MANUAL FOR WARRANTY REQUIREMENT
ITT BARTON
CITY OF INDUSTRY, CA. U.S.A.


Chart recorder
19
19
Pete Montoya


Start Point
Flowline Release Point
Spindle Hill Energy Center
End Point
Google Earth
Imagery Date: 6/10/2021 40°05'43.83" N 104°53'27.71" W elev 5034 ft eye alt 7185 ft


Graphic Controls
CHART NO. MC MP-100-1H
METER
CHART PUT ON 9:30 A M
10-21-22
TAKEN OFF 11:00 A M
LOCATION Montoya
REMARKS Pressure test
Wristee Warren