

SITE-SPECIFIC QUALITY ASSURANCE & QUALITY CONTROL AUDIT



Permit Closure Type – Final

PERMIT CLOSURE REPORT – DESIGNATION LAND USE CHANGE

Location ID: 472704

Location Name: Dier Facility/2N67W

Report Date

16 Aug 2024

Soil Sage has conducted a thorough data audit as part of our Quality Assurance and Quality Control (QA/QC) protocols. The audit revealed this site has gone through a land use change.

Quality Assurance & Quality Control Audit

Auditor	Soil Sage
Audit Date	27 Jun 2024

Audit Methodology

The following source materials were consulted during the QA and QC audit process:

- ✓ Site Permit Closures provided by CIVITAS Resources
- ✓ Colorado Oil & Gas Information System – COGIS Database
- ✓ On-site Evaluation and Proprietary Soil Sage Drone Imagery data collection
- ✓ Review of legacy imagery for site location and facility parameters
- ✓ Natural Resources Conservation Service (NRCS) Map Unit Description
- ✓ Hydrology Map

All pertinent data, imagery, and materials are included at the end of this report.

Site Description

Name	Dier Facility/2N67W		
Location ID	472704		
Operator / #	CRESTONE PEAK RESOURCES OPERATING LLC / 10633		
Field	WATTENBERG / 90750		
County, State	Weld, CO		
Lat/Long	40.145969 / -104.910309		
	<input checked="" type="checkbox"/>	Planned Location	As Drilled
Facility Status	CL	Location	SWSE 8 2N67W
Facility Status Date	12/19/2020	Access Road	Oil and Gas Access
Facility Entities	<input checked="" type="checkbox"/>	Tank Battery	Pits
		Wells	<input checked="" type="checkbox"/> Off-Location Flowlines (Form 44)
		Domestic Taps	On-Location Flowlines (Form 42)
Equipment Remaining on Site	<input checked="" type="checkbox"/>	None	Debris or Non-Oil & Gas
		List of Equipment:	
Environment Incidents & Remediation	<input checked="" type="checkbox"/>	None	Spill or Release (Form 19)
		Remediation (Form 27/27A)	
Inspection Corrective Actions (CA)s	No Corrective Actions (CA)s were detected during the QA & QC Audit.		
	Complete ECMC Inspection Search Results: Link		
Sundry Notice (Form 4)	<p>Form 4 Doc # & Date: 402598262 & 01/11/2023</p> <ul style="list-style-type: none"> ○ Purpose: REPORT OF WORK DONE. Date Work Completed 02/15/2021. Rule 502 variance requested. Must provide detailed info regarding request. ○ Outcome: Denied ○ Operator Comments: Failed 01/11/2023 This form was prepared to support the request for reclamation variance outlined in the Engineering/Environmental tab and attached document. ○ Attachments: Variance Request Doc # 402599397 		
On Location Flowlines (Form 42)	No Form 42s were detected during the QA & QC Audit.		

**Off-Location Flowlines
(Form 44)**

Form 44 Doc # & Date: [402192179](#) & 03/03/2020

- **Purpose:** Registration
- **Abandonment Date:** None Stated
- **ECMC Approval Date & Signee:** 03/03/2020 by Jeff Robbins
- **Operator Comments:** Operator Flowline ID: [12319734_FL](#) Dier 34-8 Flowline Registration.
Operator Flowline ID: [12319919_FL](#) Dier 44-8 Flowline Registration.
- **Note:** This Form 44 includes data for two Off-Location Flowlines: [472728](#) and [472729](#).

Flowline Facility Information

- **ECMC Flowline ID:** [472728](#)
- **Operator Flowline ID:** 12319734_FL
- **Status & Date:** CL & 12/19/2019
- **Flowline Type:** Wellhead Line
- **Type of Fluids Transported:** Multiphase
- **Start Point Location ID:** [330836](#)
- **Start Point Riser Lat/Long:** 40.147344/-104.912587 (DIER #34-8 Well)
- **Equipment at Start Point:** Well
- **End Point Location ID:** [472704](#)
- **End Point Riser Lat/Long:** 40.146169/-104.910353 (Dier Facility/2N67W Production Facilities)
- **Equipment at End Point Riser:** Separator

Flowline Facility Information

- **ECMC Flowline ID:** [472729](#)
- **Operator Flowline ID:** 12319919_FL
- **Status & Date:** CL & 12/19/2019
- **Flowline Type:** Wellhead Line
- **Type of Fluids Transported:** Multiphase
- **Start Point Location ID:** [333234](#)
- **Start Point Riser Lat/Long:** 40.146906/-104.906359 (DIER #44-8 Well)
- **Equipment at Start Point:** Well
- **End Point Location ID:** [472704](#)
- **End Point Riser Lat/Long:** 40.146180/ -104.910353 (Dier

	<p>Facility/2N67W Production Facilities)</p> <ul style="list-style-type: none"> ○ Equipment at End Point Riser: Separator
Field Inspection Form (Form INSP)	No Field Inspection Forms were detected during the QA & QC Audit
COGIS Tank Facilities Information (Scout Card)	No Tank Battery documents were detected during this QA/QC Audit. However, the Tank Battery is referenced in Form 44 Doc # 402192179 as the end point location of the off location flowlines and is on-site.
COGIS Well Information (Scout Card)	No Well documents were detected during this QA/QC Audit. However, associated Well information can be found at Location ID 330836 , DIER #34-8 (API# 05-123-19734) and Location ID 333234 , DIER #44-8 (API# 05-123-19919).

ECMC Abbreviations: [Location & Facility Status Codes](#), [Inspection Types & Statuses](#) and [ECMC Help](#).

Audit Key Findings – Designation Land Use Observations

PREVIOUS LAND USE	CURRENT LAND USE
<p>Reference Imagery for Infrastructure: DRCOG 2018</p>	<p>Remotely Sensed Imagery: 21 Aug 2023</p>
<p>Designation: Oil & Gas Facility</p>	<p>Designation: Residential Landscaping</p>

The following imagery sources were reviewed during this audit:

EarthExplorer, DRCOG 2002 - 2014, NAIP Imagery 2011, 2013, 2015, 2017, 2019, 2021, ESRI Maxar and Remotely Sensed Imagery Sep 2022

Closure Information

Location ID [472704](#) Dier Facility/2N67W is in Weld County, Colorado near the intersection of County Road 22 and County Road 17. There are Off-Location Flowlines between this production facility and wells at Location ID [330836](#) and [333234](#). This Location has undergone a Land Use Change from Oil & Gas to Residential Landscaping. The previously disturbed extent is covered with Landscaping Fabric.

The production facility at Location ID [472704](#), was closed and reclaimed in December 2020. The off-location flowlines (Flowline IDs [472728](#) and [472729](#)) were reclaimed at this time.

Soil Sage drone imagery confirms that no equipment was left on site at this location after reclamation activities occurred.

Summary Acreage Table

Description	Acres
Historic Disturbance Extent	0.15
Access Road	Not Included
Flowline	Not Included
Tank Battery	Included
Well Pad	Not Included

Drone Information

Make	DJI
Model	M300/Mavic 3 Multispectral
Image Processing Software	Pix4dfields – RGB/Multispectral Imagery & Pix4dmatic – RGB Imagery
Pilot Name	Sam Streeter
Pilot FAA Certificate Number	4100157
Date of FAA Certificate Issuance	23 Dec 2023

Cardinal Photos

Site Investigation and Photos Date

21 Aug 2023

Cardinal directional photos of the site.



In View – Tank Battery, Flowlines

NORTH – 40.145518/-104.910389



In View – Tank Battery, Flowlines, Residential Driveway

NORTH – 40.145744/-104.910313



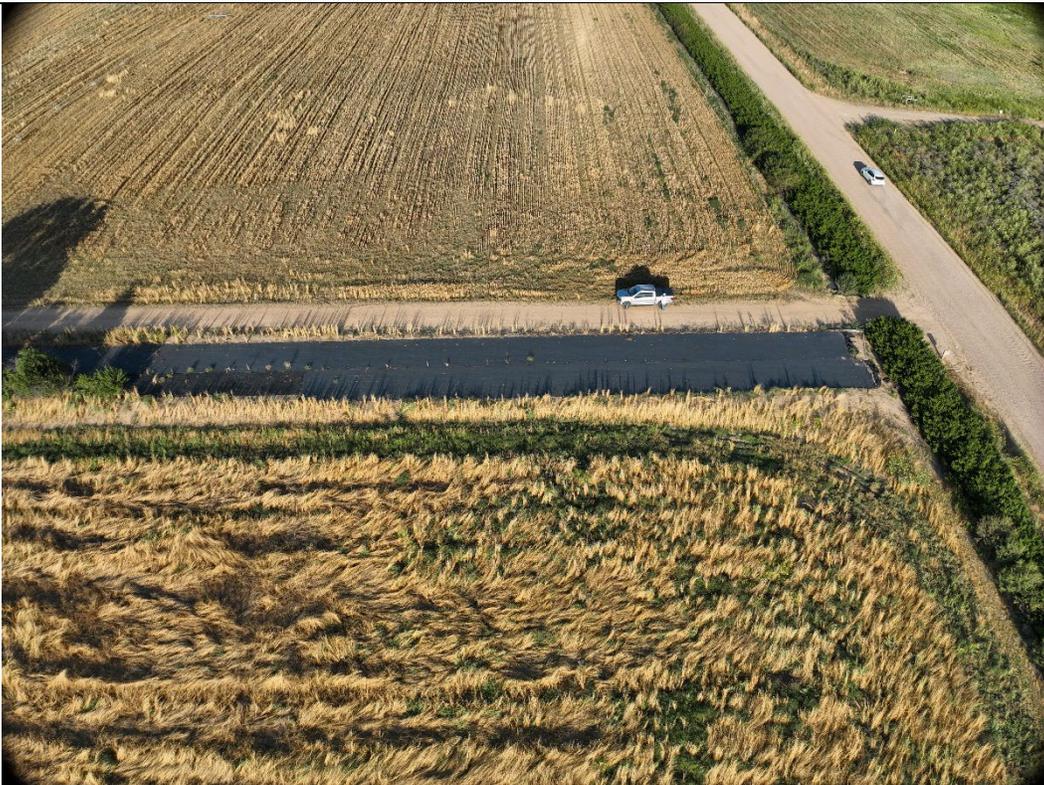
In View – Flowline

NORTHEAST – 40.146113/-104.909969



In View – Flowline

EAST – 40.146114/-104.909971



In View – Tank Battery, Flowlines

EAST – 40.146051/-104.911010



In View – Tank Battery, Flowlines

SOUTH – 40.146678/-104.910481



In View – Tank Battery, Flowlines

WEST – 40.146104/-104.909953

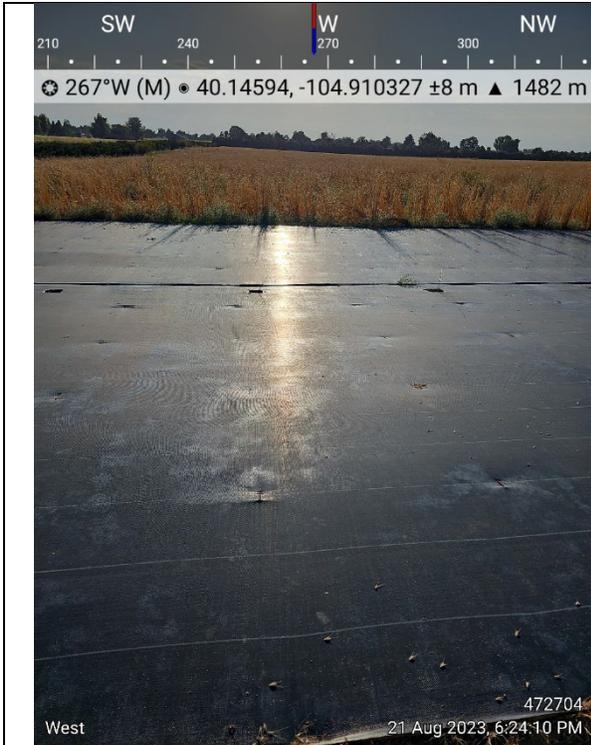
Tank Battery – Ground Photos

Site Investigation and Photos Date

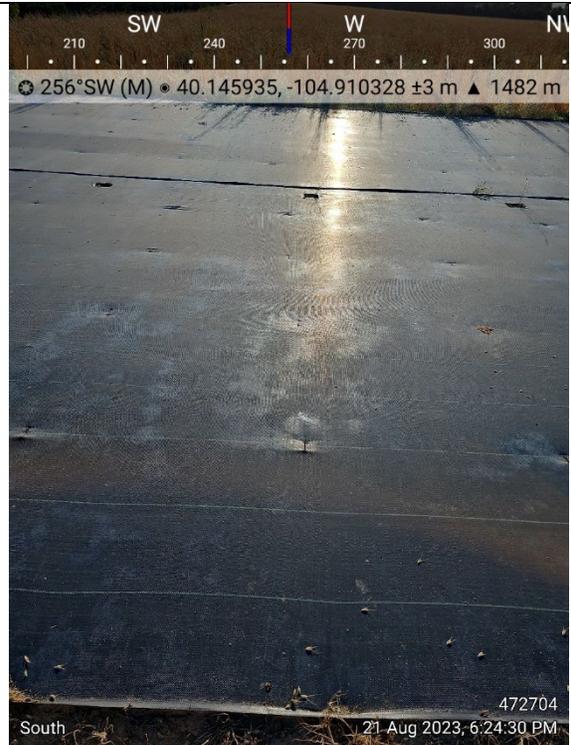
21 Aug 2023

Handheld photos taken at Location ID [472704](#) Production Facilities.

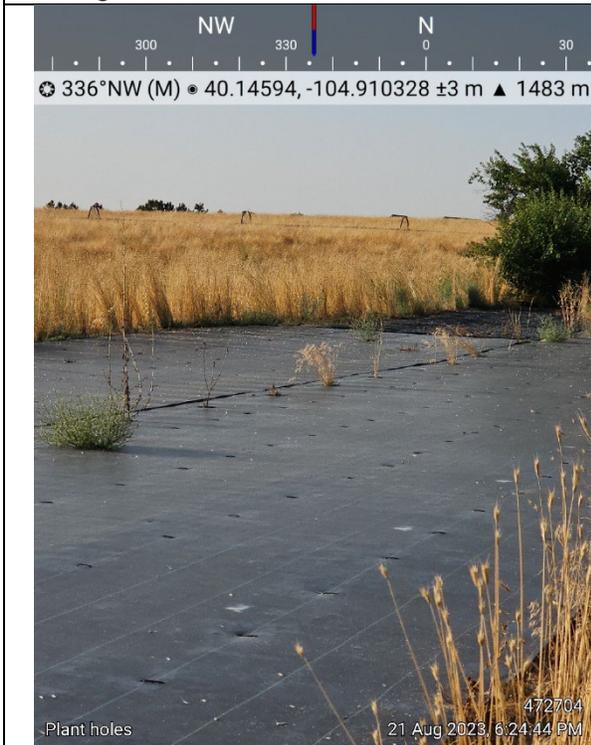




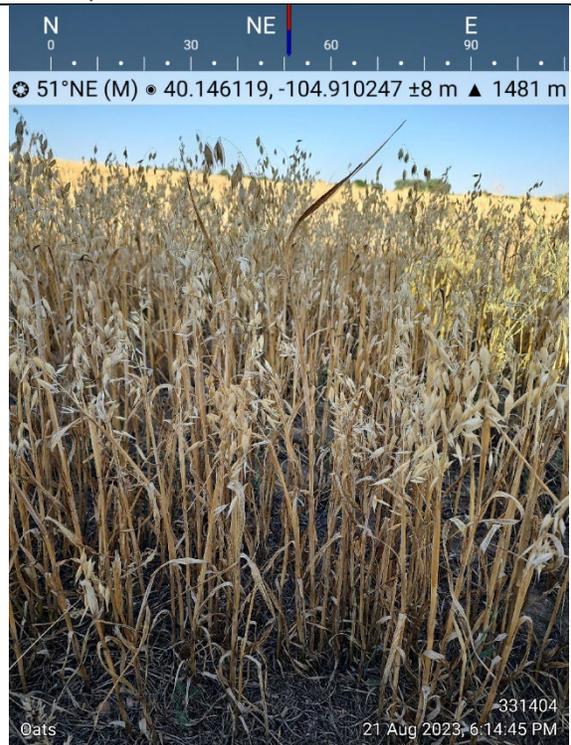
Looking West – 40.14594/-104.910327



Landscape Fabric – 40.145935/-104.910328



Landscape Fabric – 40.14594/-104.910328



Oats – 40.146119/-104.910247

ATTACHMENTS

Maps and Figures

Area Maps

Pre-Plugging Overview

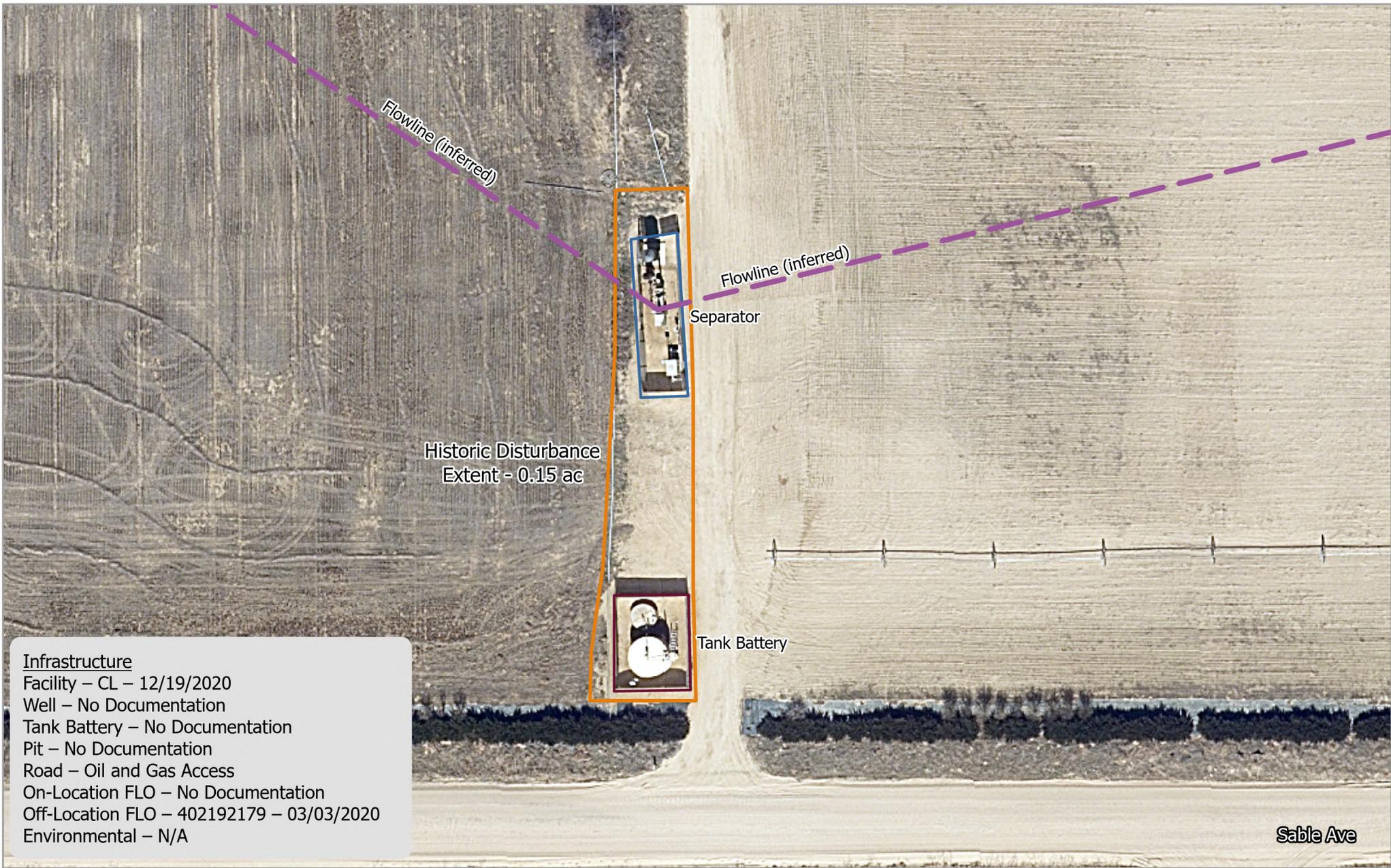
Post-Plugging Overview

Hydrology – (2 CCR 404-1 – 303.b.3.G pg.34)

Background Information

Natural Resources Conservation Service (NRCS) Map Unit Description

Reference Soil Document



Infrastructure

- Facility – CL – 12/19/2020
- Well – No Documentation
- Tank Battery – No Documentation
- Pit – No Documentation
- Road – Oil and Gas Access
- On-Location FLO – No Documentation
- Off-Location FLO – 402192179 – 03/03/2020
- Environmental – N/A

Sable Ave

**CIV - 472704 - Dier Facility/2N67W
Map Extent - Pre-Plugging Overview**

Imagery: DRCOG
 Imagery Date: 2018
 Map Date: 01 Aug 2024
 Datum: WGS 1984 UTM Zone 13N
 POC: Soil Sage

- Flowline
- Historic Disturbance Extent
- Tank Battery
- Separator



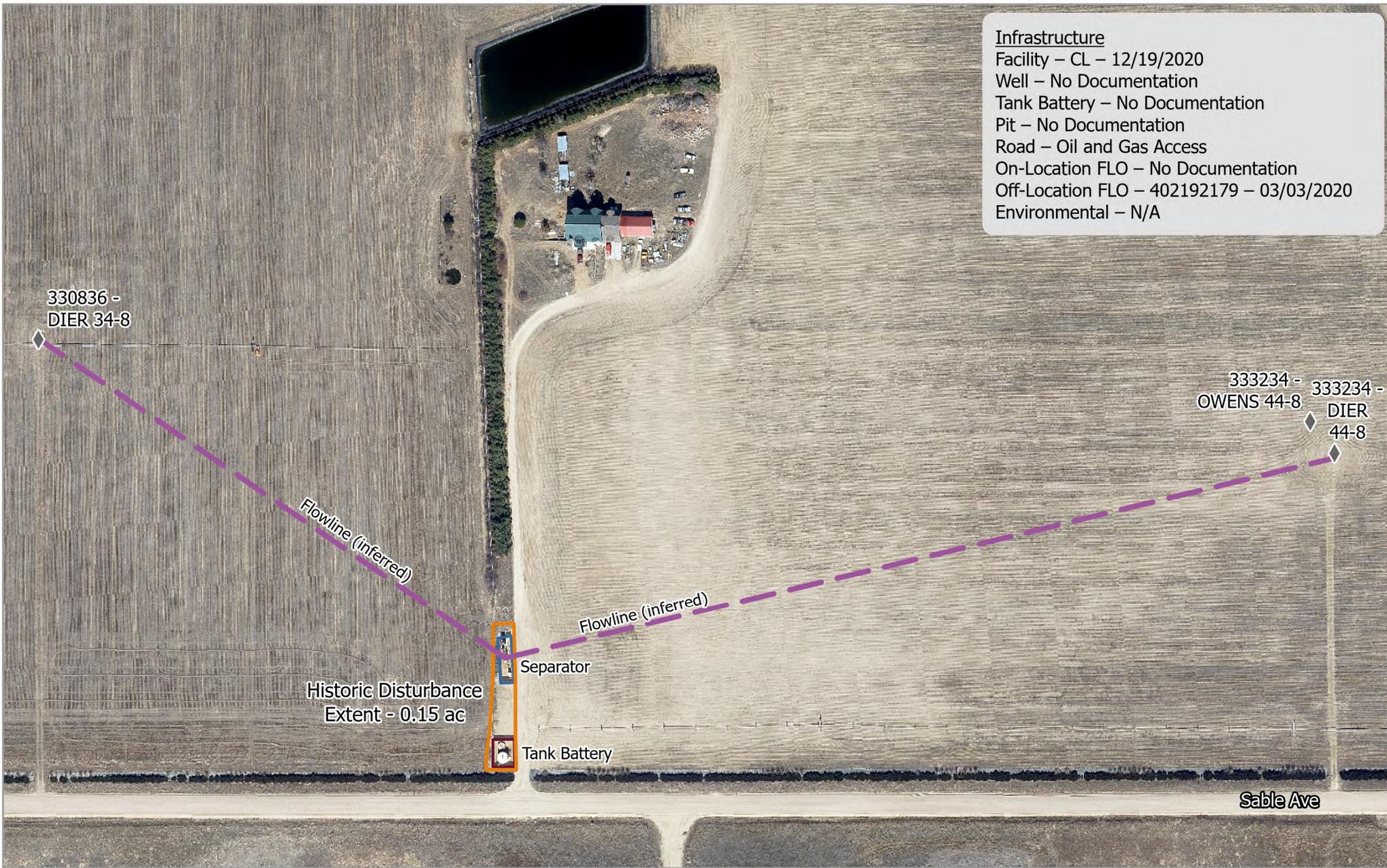
Total Disturbance:
0.15 Acres
Scale: 1:600

Pad Location:
40.145969
-104.910309



Service Credits - Maxar, Microsoft

Infrastructure
 Facility – CL – 12/19/2020
 Well – No Documentation
 Tank Battery – No Documentation
 Pit – No Documentation
 Road – Oil and Gas Access
 On-Location FLO – No Documentation
 Off-Location FLO – 402192179 – 03/03/2020
 Environmental – N/A



**CIV - 472704 - Dier Facility/2N67W
 Map Extent - Pre-Plugging Overview**

Imagery: DRCOG
 Imagery Date: 2018
 Map Date: 01 Aug 2024
 Datum: WGS 1984 UTM Zone 13N
 POC: Soil Sage

- ◆ Wells
- Flowline
- ▭ Historic Disturbance Extent
- ▭ Tank Battery
- ▭ Separator

0 30 60 120 Meters

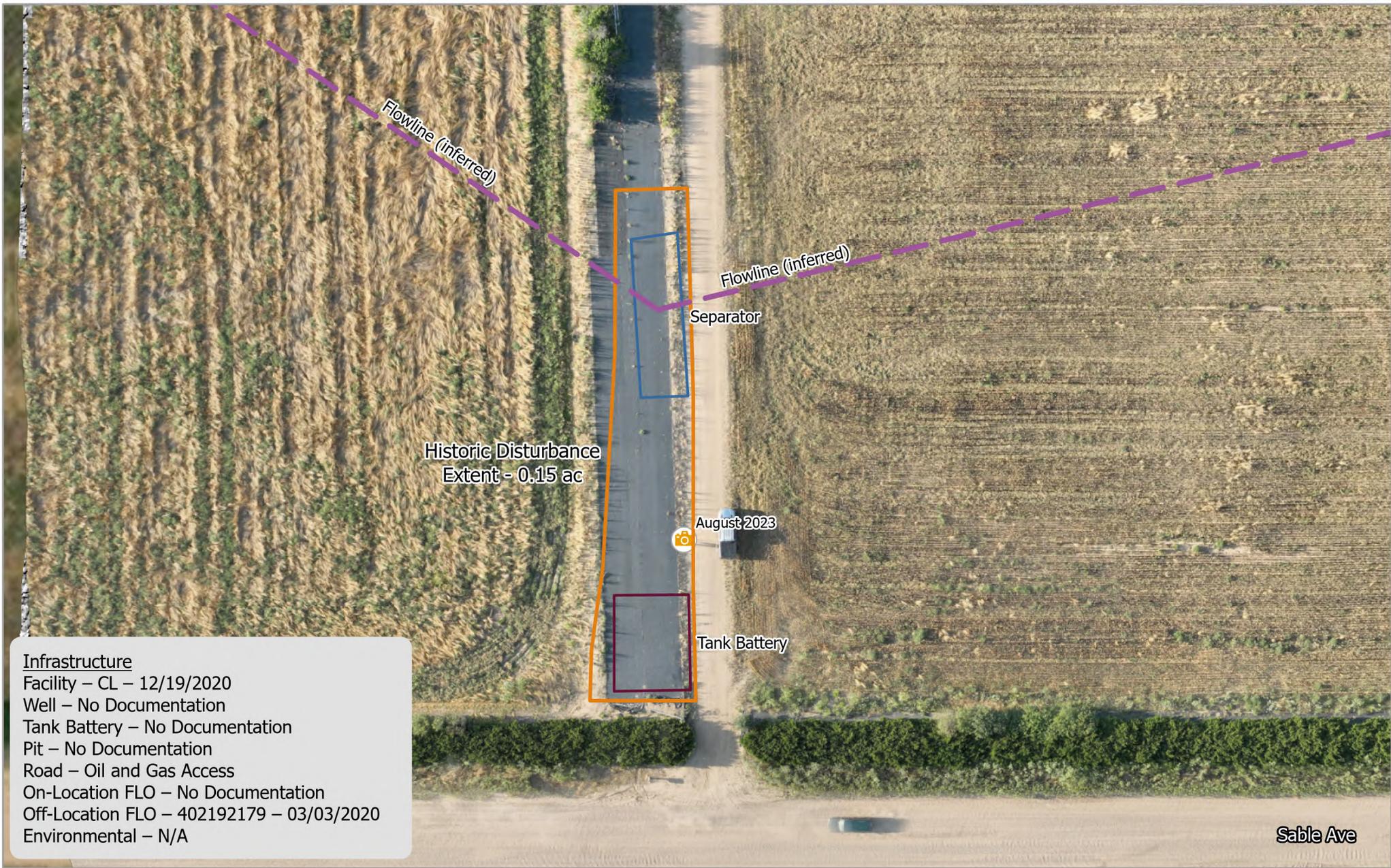
Total Disturbance: 0.15 Acres
 Scale: 1:2,100

Pad Location:
 40.145969
 -104.910309

N



Service Credits - Maxar, Microsoft



Infrastructure

- Facility – CL – 12/19/2020
- Well – No Documentation
- Tank Battery – No Documentation
- Pit – No Documentation
- Road – Oil and Gas Access
- On-Location FLO – No Documentation
- Off-Location FLO – 402192179 – 03/03/2020
- Environmental – N/A

**CIV - 472704 - Dier Facility/2N67W
Map Extent - Post-Plugging Overview**

Imagery: RS Orthomosaic and DSM; Maxar
 Imagery Date: 21 Aug 2023; 2023
 Map Date: 01 Aug 2024
 Datum: WGS 1984 UTM Zone 13N
 POC: Soil Sage

- Observation Points
- Flowline
- Historic Disturbance Extent
- Tank Battery
- Separator

0 5 10 20 Meters

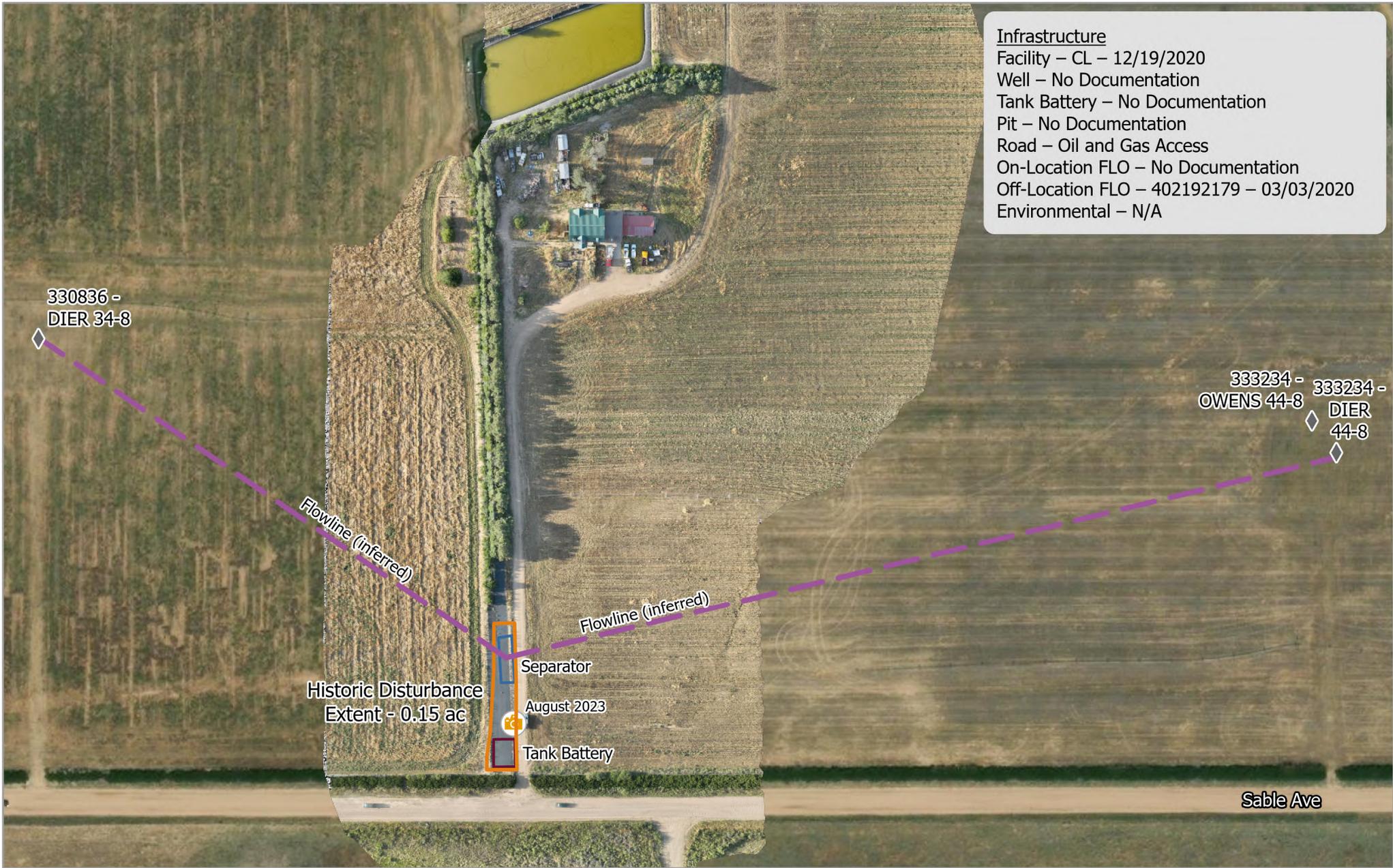
Total Disturbance: 0.15 Acres
 Scale: 1:600

Pad Location:
 40.145969
 -104.910309

Sable Ave

Service Credits - Maxar, Microsoft





Infrastructure
 Facility – CL – 12/19/2020
 Well – No Documentation
 Tank Battery – No Documentation
 Pit – No Documentation
 Road – Oil and Gas Access
 On-Location FLO – No Documentation
 Off-Location FLO – 402192179 – 03/03/2020
 Environmental – N/A

**CIV - 472704 - Dier Facility/2N67W
 Map Extent - Post-Plugging Overview**

Imagery: RS Orthomosaic and DSM; Maxar
 Imagery Date: 21 Aug 2023; 2023
 Map Date: 01 Aug 2024
 Datum: WGS 1984 UTM Zone 13N
 POC: Soil Sage

- ◆ Wells
- 📷 Observation Points
- Flowline
- ▭ Historic Disturbance Extent
- ▭ Tank Battery
- ▭ Separator

0 30 60 120 Meters

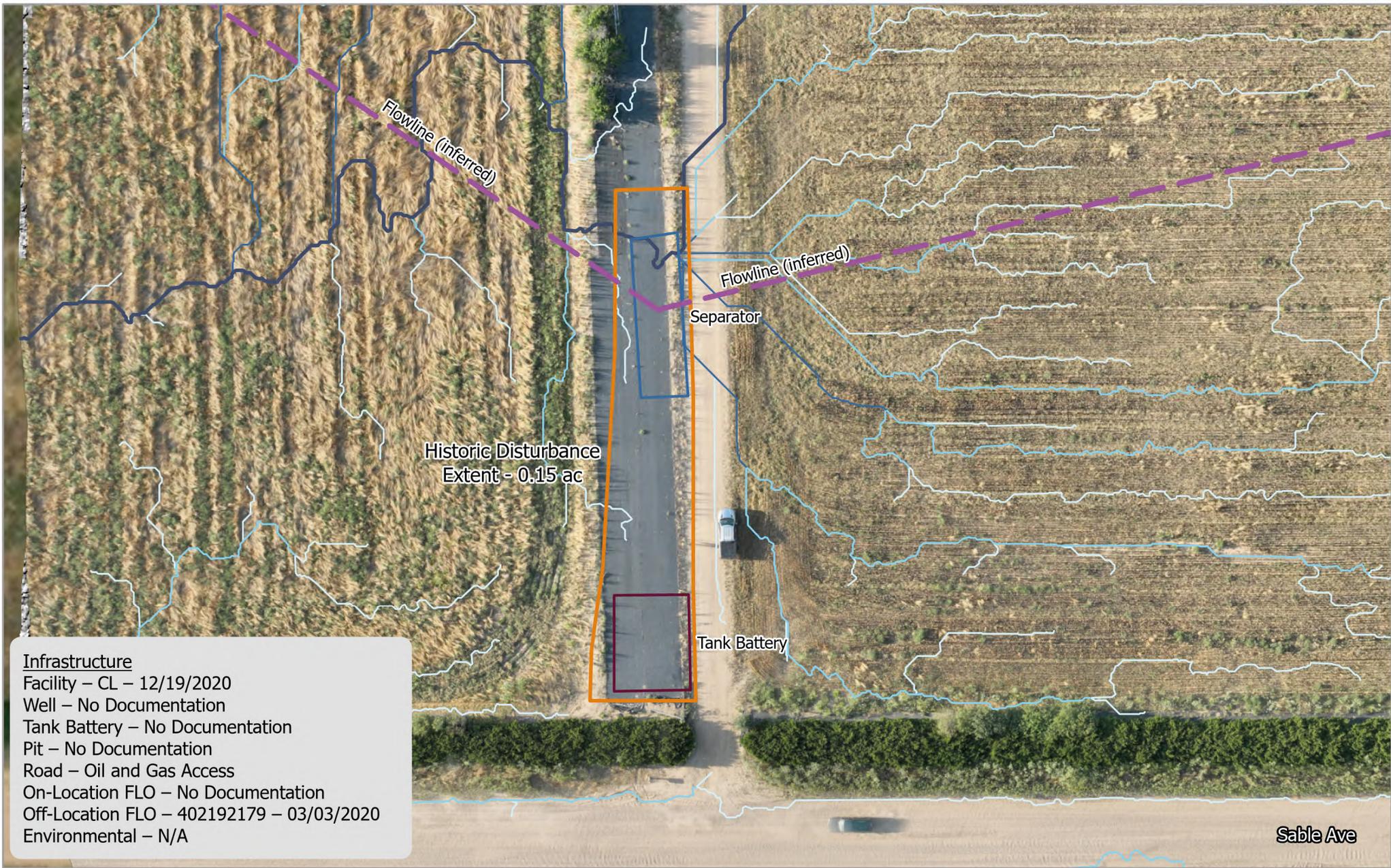
Total Disturbance:
0.15 Acres

Scale: 1:2,100

Pad Location:
40.145969
-104.910309



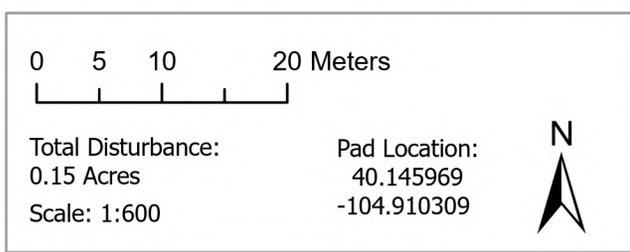
Service Credits - Maxar, Microsoft



Infrastructure
 Facility – CL – 12/19/2020
 Well – No Documentation
 Tank Battery – No Documentation
 Pit – No Documentation
 Road – Oil and Gas Access
 On-Location FLO – No Documentation
 Off-Location FLO – 402192179 – 03/03/2020
 Environmental – N/A

CIV - 472704 - Dier Facility/2N67W
Map Extent - Hydrology

Imagery: RS Orthomosaic and DSM
 Imagery Date: 21 Aug 2023
 Map Date: 01 Aug 2024
 Datum: WGS 1984 UTM Zone 13N
 POC: Soil Sage



Soil Properties

USDA Soil Description

Reference Soil Information

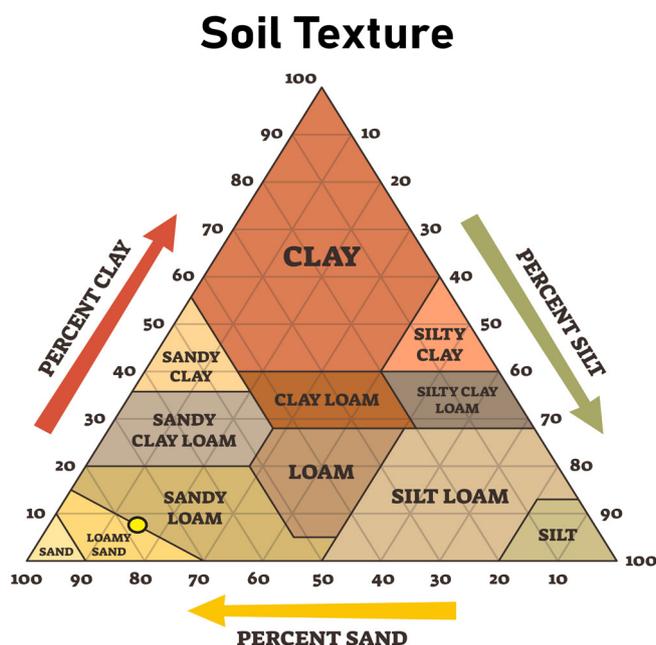
The location of the site is contained within two soil types, Vona Loamy Sand at two different slopes.

Map Unit 72 Reference Soil information - Vona Loamy Sand

This soil is formed from alluvium and/or eolian deposits. Landform is terraces and plains, with the Sandy Plains Ecological Site. Soils are well drained with a moderate water holding capacity, and slope 0 to 3 percent.

Depth (in)	Physical			Chemical			
	Texture	Bulk Density	Particle Size Percent sand, silt, clay	pH	EC	SAR	OM%
0-10	Loamy Sand	1.50	78-14-8	7.3	1.4	0.0	0.75
10-20	Fine Sandy Loam	1.45	67-20-13	7.5	2.0	0.0	0.75
20-30	Fine Sandy Loam	1.46	67-21-12	7.7	2.0	0.0	0.65
30-40	Sandy Loam	1.50	67-24-9	8.5	2.0	0.0	0.25
40-50	Sandy Loam	1.50	67-24-9	8.5	2.0	0.0	0.25
50 +	Sandy Loam	1.50	67-24-9	8.5	2.0	0.0	0.25

Soil Texture Triangle reflect the 0-10 in depth



Erosion Potential (10 inches)

- K Factor, Whole soil - .15. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.
- Wind Erodibility Group – 2. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.

Soil Properties

USDA Soil Description

Reference Soil Information

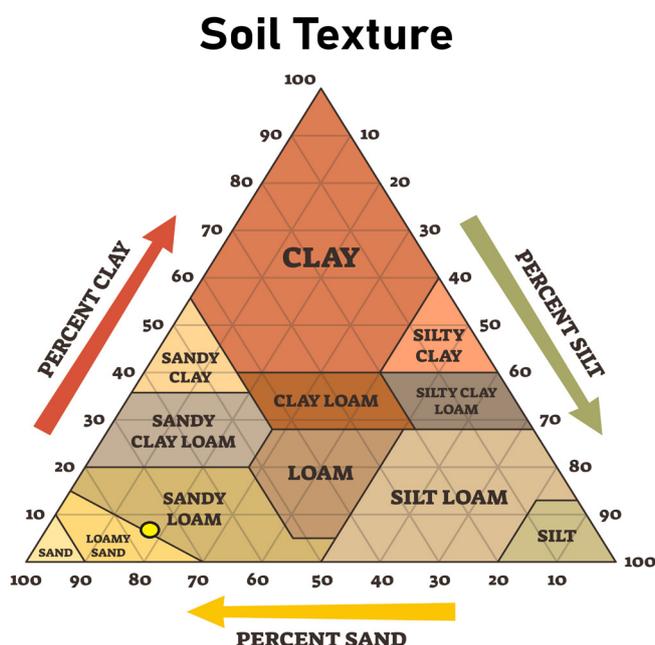
The location of the site is contained within two soil types, Vona Loamy Sand at two different slopes.

Map Unit 73 Reference Soil information - Vona Loamy Sand

This soil is formed from eolian sands. Landform is hills and hillslopes, with the Deep Sand Ecological Site. Soils are well drained with a moderate water holding capacity, and slope 3 to 5 percent.

Depth (in)	Physical			Chemical			
	Texture	Bulk Density	Particle Size Percent sand, silt, clay	pH	EC	SAR	OM%
0-10	Loamy Sand	1.62	75-18-7	7.3	0.1	0.0	0.93
10-20	Sandy Loam	1.61	67-22-11	7.5	0.1	0.0	0.61
20-30	Sandy Loam	1.59	67-23-10	8.1	0.1	0.0	0.25
30-40	Sandy Loam	1.59	67-23-10	8.1	0.1	0.0	0.25
40-50	Sandy Loam	1.58	73-20-7	8.1	0.1	0.0	0.17
50 +	Loamy Sand	1.58	78-17-5	8.1	0.1	0.0	0.10

Soil Texture Triangle reflect the 0-10 in depth



Erosion Potential (10 inches)

- K Factor, Whole soil - .20. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.
- Wind Erodibility Group – 2. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.