SITE-SPECIFIC QUALITY ASSURANCE & QUALITY CONTROL AUDIT

Permit Closure Type – Final

Soil Sage
The wisdom to evolve lies beneath our feet
A Veteran Woman Owned Business

PERMIT CLOSURE REPORT – DESIGNATION LAND USE CHANGE

Location ID – 330962
Location Name – ECHEVERRIA-62N67W 2NWSW

Report Date

7 Nov 2022

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.

Initial Job Assignment

Client	CIVITAS Resources
Work Assignment	179 Site Permit Closures
Date	July 20, 2022

Quality Assurance & Quality Control Audit

Auditor	Soil Sage
Audit Date	10/26/2022

Audit Methodology

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

- ✓ Original List (spreadsheet) of proposed 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	ECHEVERRIA-62N67W 2NWSW			
Location ID	330962			
Operator / #	CRESTONE PEAK RESOURCES OPERATING LLC / 10633			
Field	WATTENBERG 90750			
County / State	WELD / CO	**Lat/Long**	40.165836 / -104.865392	
Facility Status	CL	**Location**	NWSW 2 2N67W	
Facility Status Date	04/30/2019	**Access Road**	Oil & Gas access road	
Facility Entities	☐	Tank Battery	☐	Pits
	☑	Wells	☐	Off-Location Flowlines
	☐	Domestic Taps	☑	Flowlines
Environment Incidents & Remediation	☑	None	☐	Spill or Release (**Form 19**)
	☐	Remediation (**Form 27**)		
Sundry Notice (Form 4)	**No Form 4s were detected during this QA & QC Audit.**			
On Location Flowlines (Form 42)	**Form 42s exist for Site Related Facilities.** See individual scout card data below for report details.			
Off-Location Flowlines (Form 44)	**No Form 44s were detected during this QA & QC Audit.**			
COGIS Well Information (Scout Card)	**Well –** ECHEVERRIA #13-2 FACILITY ID 256952 ● **Well Status & Date –** PA – 04/30/2019 ● **Form 6 Subsequent – Doc # & Date –** 402057340 – Approved on 08/21/2019 by Nick McFarland. ● **Form 42 – Doc # & Date –** 402018952 submitted on 04/24/2019. **Purpose –** Updated the date on a previously submitted Plugging Operations 48-hours notice – Doc # 402011380.			

Audit Key Findings - Designation Land Use Change Observations

PREVIOUS LAND USE	CURRENT LAND USE
Reference Imagery for Infrastructure – Landsat/Copernicus 2019	**Remotely Sense Imagery –** 09/15/2022
Designation – Well Pad/Agriculture	**Designation –** Livestock Pen

The following imagery sources were reviewed during this audit:

EarthExplorer, Landsat, DRCOG 2010 - 2014, NAIP Imagery 2011, 2013, 2015, 2017, 2019, 2021, ESRI Maxar and Remotely Sensed Imagery Sep 2022

Closure Information

No additional information

Site Summary

Based on the key findings of our thorough data audit, the following information is provided:

Site Investigation Date

09/15/2022

Reference Area Photos

Site photos.
15 Sep 2022
Photo locations correspond with the site map.

North

East

South

West

ATTACHMENTS

Maps and Figures

Area Maps

Previous Infrastructure Overview
Current Site 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

Soil Properties

USDA Soil Description

Location ID / Name	330962 - ECHEVERRIA-62N67W 2NWSW

Reference Soil Information

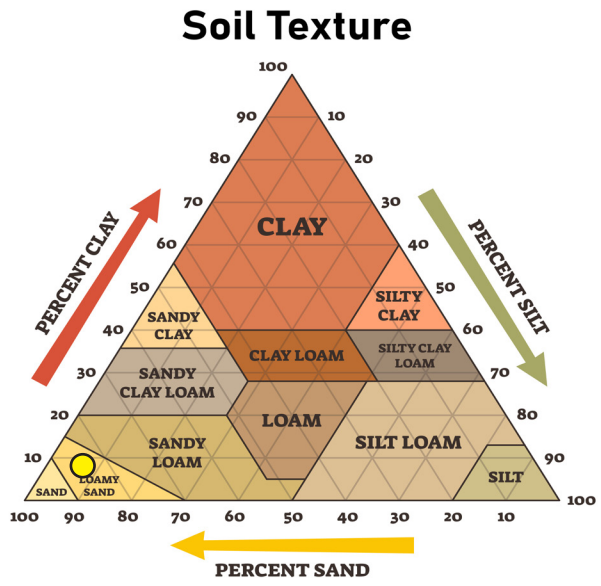
The location of the site is contained within two soil types, Loup-Boel loamy sands and Vona loamy sand.

Map Unit 35 Reference Soil information - Loup-Boel loamy sands

This soil is formed from sandy alluvium, stratified sandy alluvium. Landform is streams, drainageways, swales, with the Sandy Meadow Ecological Site. Soils are poorly drained with a low water holding capacity, and slope 0-3 percent.

	Physical			Chemical			
Depth (in)	Texture	Bulk Density	Partical Size Percent sand, silt, clay	pH	EC	SAR	OM%
0-10	Loamy Sand	1.53	84-9-7	8.2	0.0	0.0	3.00
10-20	Loamy Sand	1.53	82-12-6	8.2	0.0	0.0	2.62
20-30	Loamy Sand	1.53	80-16-4	8.2	0.0	0.0	2.00
30-40	Loamy Sand	1.53	80-16-4	8.2	0.0	0.0	2.00
40-50	Sandy Loam, Loamy Sand	1.43	67-19-14	8.2	0.0	0.0	0.50
50 +	Sandy Loam, Loamy Sand	1.43	67-19-14	8.2	0.0	0.0	0.50

Soil Texture Triangle reflect the 0-10 in depth



Erosion Potential (10 inches)

- K Factor, Whole soil - .05. 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

Location ID / Name	330962 - ECHEVERRIA-62N67W 2NWSW

Reference Soil Information

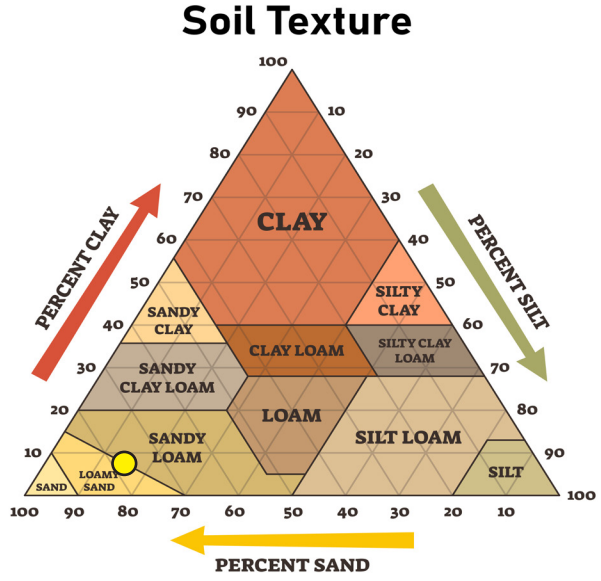
The location of the site is contained within two soil types, Loup-Boel loamy sands and Vona loamy sand.

Map Unit 72 Reference Soil information - Vona loamy sand

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

	Physical			Chemical			
Depth (in)	Texture	Bulk Density	Partical 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

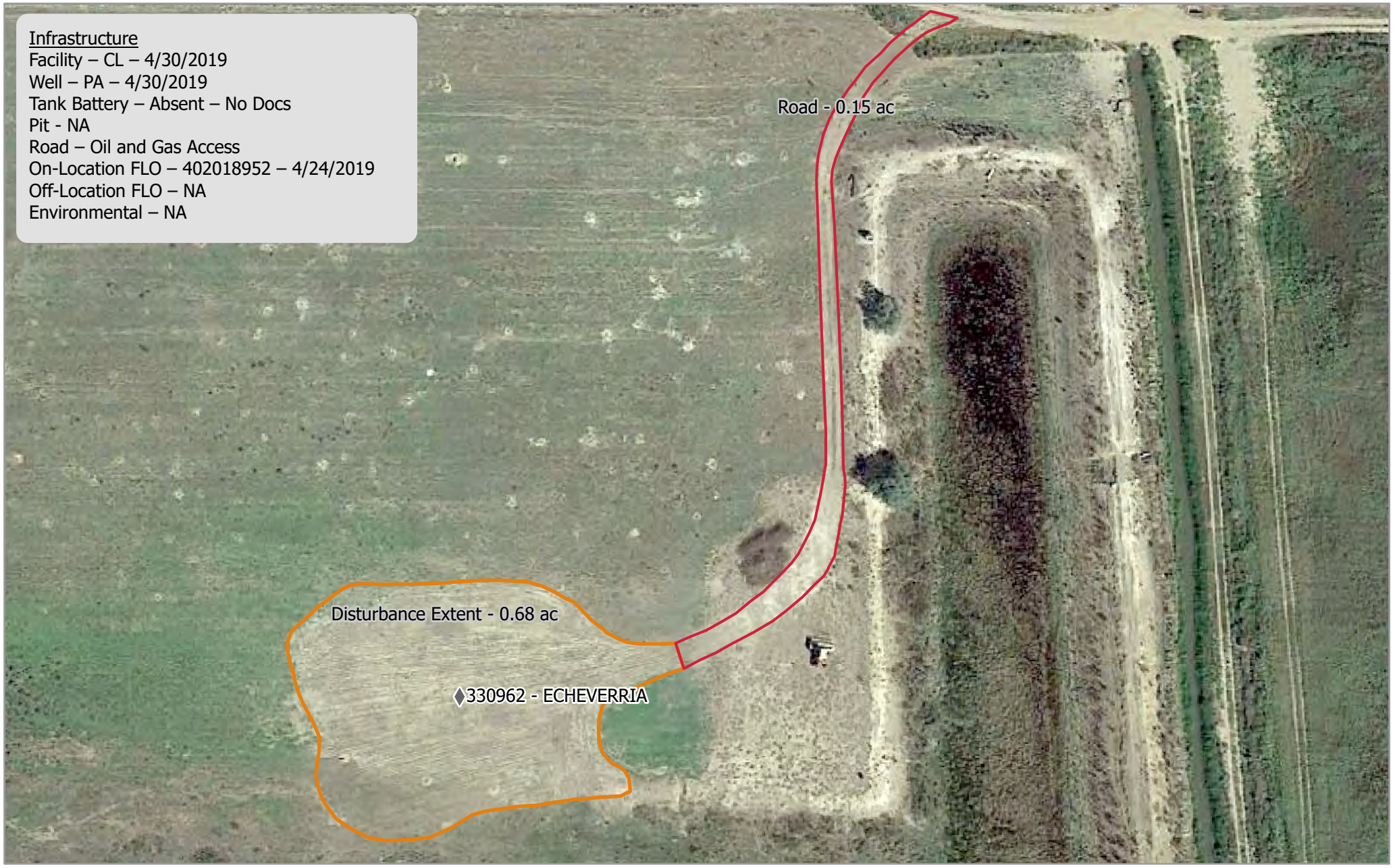
Soil Texture Triangle reflect the 0-10 in depth



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.



CIV - 330962 - ECHEVERRIA
Map Extent - 2019

Imagery: Landsat Copernicus
Imagery Date: 12 Sep 2019
Map Date: 07 Nov 2022
Datum: NAD_1983_UTM_Zone_13N
POC: Soil Sage

Legend

- Wells
- Disturbance Extent
- Road

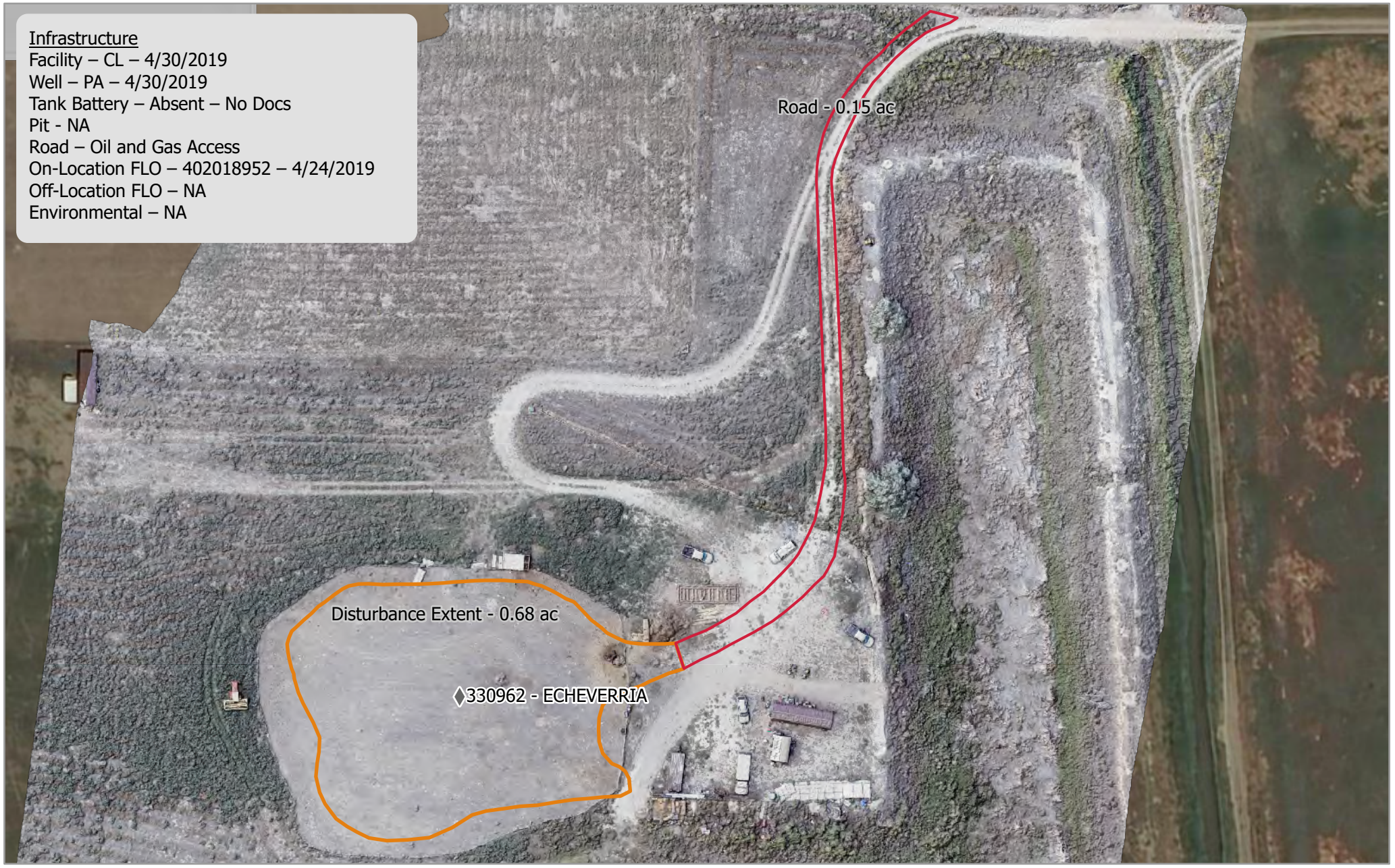
0 0.01 0.01 0.03 Miles

Overall Disturbance:
0.83 Acres

Scale: 1:1,000

Pad Location:
40.165836
-104.865392

N



Service Credits - Maxar, Microsoft

CIV - 330962 - ECHEVERRIA
Map Extent - Overview

Imagery: RS Orthomosaic & DSM
Imagery Date: 15 Sep 2022
Map Date: 07 Nov 2022
Datum: NAD_1983_UTM_Zone_13N
POC: Soil Sage

Legend

- Wells
- Disturbance Extent
- Road

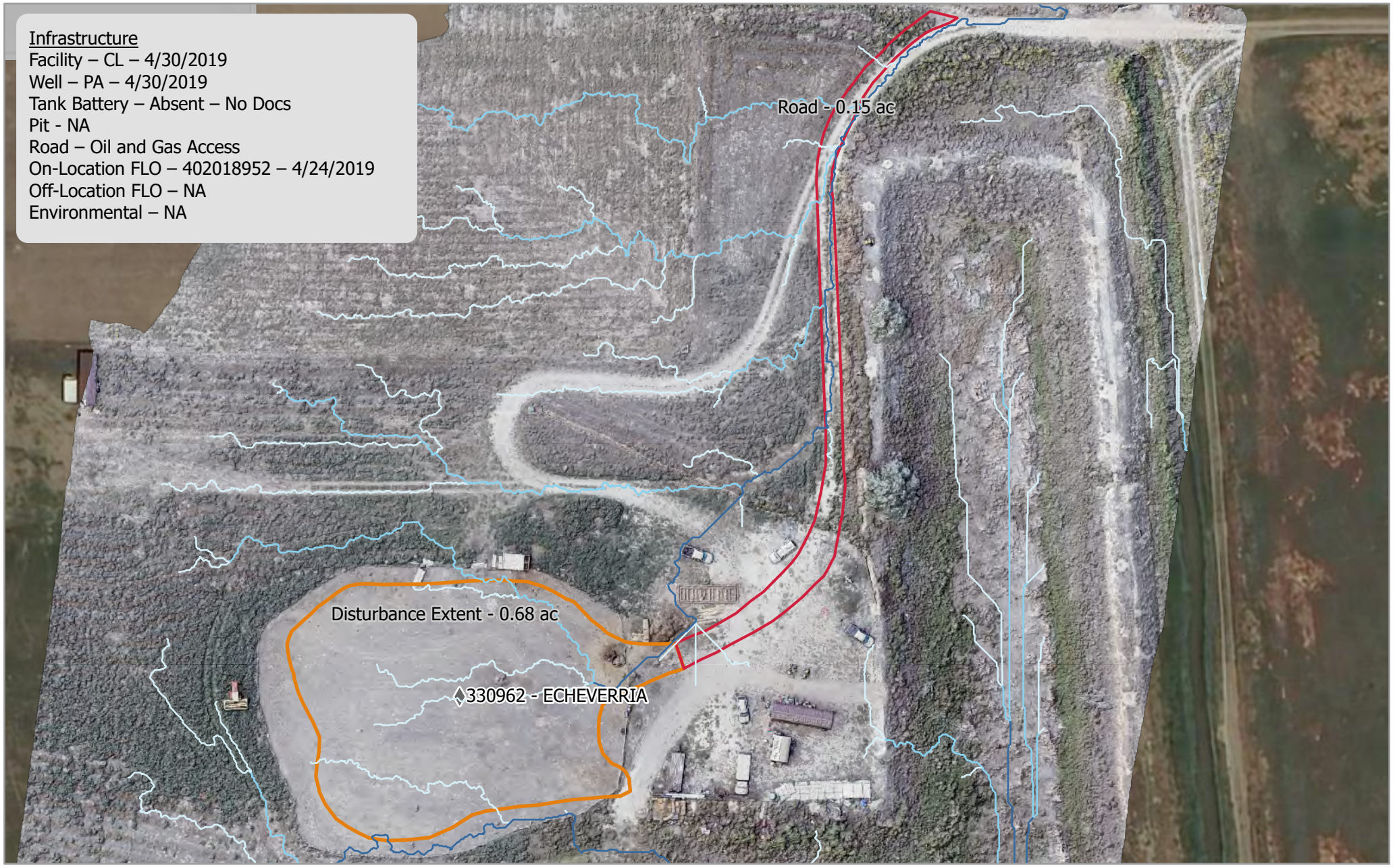
0 0.01 0.01 0.03 Miles

Overall Disturbance:
0.83 Acres

Scale: 1:1,000

Pad Location:
40.165836
-104.865392

N



Service Credits - Maxar, Microsoft

CIV - 330962 - ECHEVERRIA
Map Extent - Hydrology

Imagery: RS Orthomosaic & DSM
Imagery Date: 15 Sep 2022
Map Date: 07 Nov 2022
Datum: NAD_1983_UTM_Zone_13N
POC: Soil Sage

Wells
Disturbance Extent
Road

Stream Order
1
2
3

0 0.01 0.01 0.03 Miles

Overall Disturbance:
0.83 Acres

Scale: 1:1,000

Pad Location:
40.165836
-104.865392

N