

SITE-SPECIFIC QUALITY ASSURANCE & QUALITY CONTROL AUDIT

Permit Closure Type – Final



PERMIT CLOSURE REPORT – DESIGNATION LAND USE CHANGE

Location ID - 321522

Location Name – GREEN MA-61S68W 17NWNE

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	10/29/2022

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	GREEN MA-61S68W 17NWNE		
Location ID	321522		
Operator / #	EXTRACTION OIL & GAS INC / 10459		
Field	WATTENBERG / 90750		
County / State	BROOMFIELD / CO	Lat/Long	39.969970 / -105.022280
Facility Status	CL	Location	NWNE 17 1S68W
Facility Status Date	11/22/2019	Access Road	Oil & Gas access road
Facility Entities	<input checked="" type="checkbox"/> Tank Battery	<input type="checkbox"/> Pits	
	<input checked="" type="checkbox"/> Wells	<input checked="" type="checkbox"/> Off-Location Flowlines	
	<input type="checkbox"/> Domestic Taps	<input type="checkbox"/> Flowlines	
Environment Incidents & Remediation	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Spill or Release (Form 19)	
	<input type="checkbox"/> 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)	<p>Form 44 Doc # & Date – 401830571 – 11/09/2018</p> <ul style="list-style-type: none"> ○ Purpose – Off-Location Flowline Registration ○ No Operator Comments <p>Flowline Facility Information</p> <ul style="list-style-type: none"> ○ COGCC Flowline ID – 459680 ○ Operator Flowline ID – 01409166FL ○ Status & Date – AC – 08/20/2020 ○ Type of Fluids Transported – Multiphase ○ Start Point Location ID – 321522 – Production Facilities ○ Start Point Riser Lat/Long – 39.969959 / -105.022234 ○ Equipment at Start Point – Well ○ End Point Location ID – 321508 – Production Facilities ○ End Point Riser Lat/Long – 39.966965 / -105.018711 ○ Equipment at End Point – Separator 		

COGIS Well Information (Scout Card)	<p>Well – GREEN MA #17-2 FACILITY ID 203606</p> <ul style="list-style-type: none"> ○ Well Status & Date – PA – 11/22/2019 ○ Form 42 – Doc # & Date – 402833442 – Submitted on 10/06/2021 Purpose – Offset Well Mitigation Completed. Permitted horizontal well requiring mitigation – API # 014-20784 ○ Form 6 Subsequent – Doc # & Date – 402267268 – Approved on 03/04/2020 by Eric Jacobson. ○ Form 42 – Doc # & Date – 402267701 – Submitted on 12/19/2019. Purpose – Offset Well Mitigation Completed. Permitted horizontal well requiring mitigation – API # 014-20848 ○ Form 42 – Doc # & Date – 402256314 – Submitted on 12/06/2019 Purpose – Flowlines Abandoned. Completed on 11/25/2019. ○ Form 42 – Doc # & Date – 402215254 – Submitted on 10/21/2019 Purpose – Update to Start of Plugging Operations
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Audit Key Findings - Designation Land Use Change Observations

PREVIOUS LAND USE	CURRENT LAND USE
Reference Imagery for Infrastructure – DRCOG 2002	Remotely Sense Imagery – 09/13/2022
Designation – Well Pad	Designation – Parking – Storage

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

This well can be closed due to the presents of two other wells that are being serviced by this tank battery, which remains active.

Site Summary

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

Site Investigation Date

09/13/2022

Reference Area Photos

13 Sep 2022

Cardinal directional and ground perspective photos of the site





East



South



West



Overhead

Ground perspective of the well site locations





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	321522 - GREEN MA-61S68W 17NWNE
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Reference Soil Information

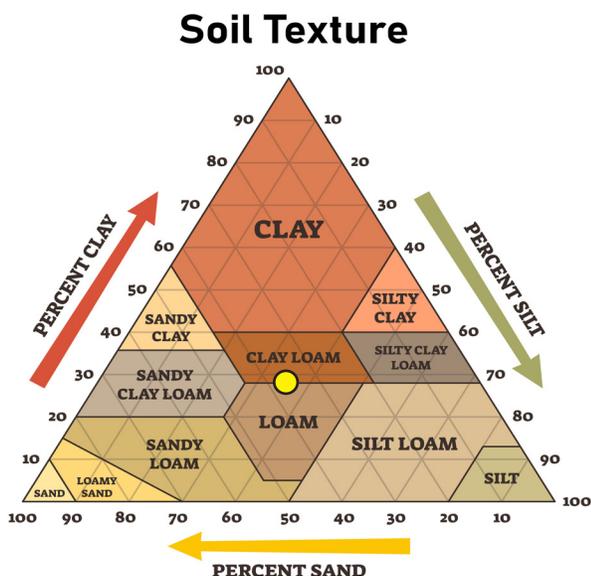
The location of the site is contained within two soil types, Platner loam at two different slopes.

Map Unit PIB Reference Soil information - Platner loam

This soil is formed from mixed eolian deposits over tertiary aged alluvium derived from igneous, metamorphic and sedimentary rock. Landform is interfluvial, with the Loamy Plains Ecological Site. Soils are well drained with a moderate water holding capacity, and slope 0-3 percent.

Depth (in)	Physical			Chemical			
	Texture	Bulk Density	Partical Size Percent sand, silt, clay	pH	EC	SAR	OM%
0-10	Loam	1.39	38-35-27	7.4	0.5	0.0	1.50
10-20	Clay	1.36	30-30-40	7.6	0.5	0.0	1.50
20-30	Loam	1.55	44-32-24	8.3	0.5	0.0	0.68
30-40	Sandy Clay Loam	1.55	61-19-20	8.5	0.5	0.0	0.50
40-50	Sandy Clay Loam	1.58	61-19-20	8.5	0.5	0.0	0.50
50 +	Sandy Clay Loam	1.58	61-19-20	8.5	0.5	0.0	0.50

Soil Texture Triangle reflect the 0-10 in depth



Erosion Potential (10 inches)

- K Factor, Whole soil - .43. 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 – 5. 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	321522 - GREEN MA-61S68W 17NWNE
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Reference Soil Information

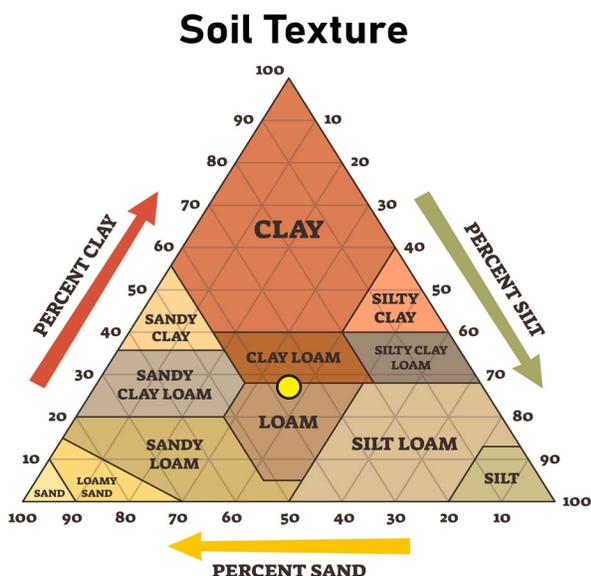
The location of the site is contained within two soil types, Platner loam at two different slopes.

Map Unit PIC Reference Soil information - Platner loam

This soil is formed from mixed eolian deposits over calcareous tertiary alluvium. Landform is interfluves, with the Loamy Plains Ecological Site. Soils are well drained with a moderate water holding capacity, and slope 3-5 percent.

Depth (in)	Physical			Chemical			
	Texture	Bulk Density	Partical Size Percent sand, silt, clay	pH	EC	SAR	OM%
0-10	Loam	1.44	38-35-27	7.4	0.5	0.0	1.06
10-20	Clay	1.36	30-30-40	7.6	0.5	0.0	1.00
20-30	Clay Loam	1.55	44-31-25	8.3	0.5	0.0	0.68
30-40	Sandy Clay Loam	1.55	64-17-19	8.5	0.4	0.0	0.50
40-50	Sandy Loam	1.59	69-15-16	8.5	0.1	0.0	0.50
50 +	Sandy Loam	1.59	69-15-16	8.5	0.1	0.0	0.50

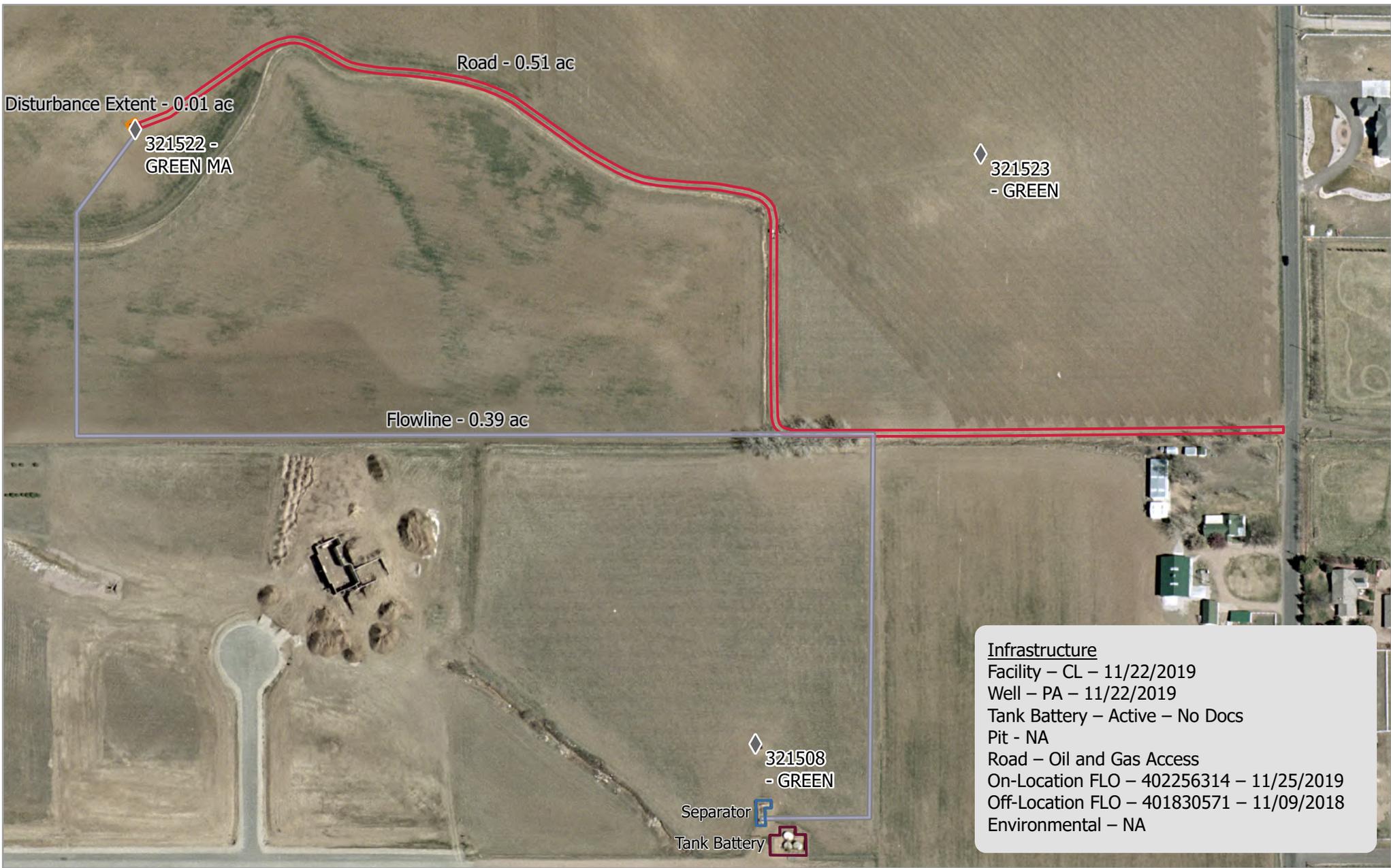
Soil Texture Triangle reflect the 0-10 in depth



Erosion Potential (10 inches)

- K Factor, Whole soil - .37. 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 – 5. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.



Infrastructure
 Facility – CL – 11/22/2019
 Well – PA – 11/22/2019
 Tank Battery – Active – No Docs
 Pit - NA
 Road – Oil and Gas Access
 On-Location FLO – 402256314 – 11/25/2019
 Off-Location FLO – 401830571 – 11/09/2018
 Environmental – NA

**CIV - 321522- GREEN MA
 Map Extent - DRCOG 2002**

Imagery: DRCOG
 Imagery Date: 2002
 Map Date: 08 Nov 2022
 Datum: NAD_1983_UTM_Zone_13N
 POC: Soil Sage

Legend

◆ Wells	Name
▭ Disturbance Extent	▭ Separator
▭ Road	▭ Tank Battery
▭ Flowline	

0 0.02 0.04 0.09 Miles

Overall Disturbance:
0.91 Acres

Scale: 1:2,500

Pad Location:
39.969970
-105.022280

N



Service Credits - Maxar, Microsoft



Infrastructure
 Facility – CL – 11/22/2019
 Well – PA – 11/22/2019
 Tank Battery – Active – No Docs
 Pit - NA
 Road – Oil and Gas Access
 On-Location FLO – 402256314 – 11/25/2019
 Off-Location FLO – 401830571 – 11/09/2018
 Environmental – NA

**CIV - 321522- GREEN MA
 Map Extent - DRCOG 2002**

Imagery: DRCOG
 Imagery Date: 2002
 Map Date: 08 Nov 2022
 Datum: NAD_1983_UTM_Zone_13N
 POC: Soil Sage

Legend

◆ Wells	□ Road
□ Disturbance Extent	□ Flowline

0 0.01 0.01 0.02 Miles

Overall Disturbance: 0.91 Acres
 Scale: 1:600

Pad Location: 39.969970
 -105.022280



Service Credits - Maxar, Microsoft



Infrastructure
 Facility – CL – 11/22/2019
 Well – PA – 11/22/2019
 Tank Battery – Active – No Docs
 Pit - NA
 Road – Oil and Gas Access
 On-Location FLO – 402256314 – 11/25/2019
 Off-Location FLO – 401830571 – 11/09/2018
 Environmental – NA

**CIV - 321522- GREEN MA
 Map Extent - Overview**

Imagery: RS Orthomosaic & ESRI Basemap Maxar
 Imagery Date: 13 Sep 2022, 22 Apr 2022
 Map Date: 09 Nov 2022
 Datum: NAD_1983_UTM_Zone_13N
 POC: Soil Sage

Legend

◆ Wells	□ Flowline
▭ Disturbance Extent	▭ Separator
▭ Road	▭ Tank Battery

0 0.02 0.04 0.09 Miles

Overall Disturbance: 0.91 Acres
 Scale: 1:2,500

Pad Location: 39.969970
 -105.022280

N



Service Credits - Maxar, Microsoft



Infrastructure
 Facility – CL – 11/22/2019
 Well – PA – 11/22/2019
 Tank Battery – Active – No Docs
 Pit - NA
 Road – Oil and Gas Access
 On-Location FLO – 402256314 – 11/25/2019
 Off-Location FLO – 401830571 – 11/09/2018
 Environmental – NA

**CIV - 321522- GREEN MA
 Map Extent - Overview**

Imagery: RS Orthomosaic & DSM
 Imagery Date: 13 Sep 2022
 Map Date: 08 Nov 2022
 Datum: NAD_1983_UTM_Zone_13N
 POC: Soil Sage

Legend

◆ Wells	▭ Road
▭ Disturbance Extent	▭ Flowline

0 0.01 0.01 0.02 Miles

Overall Disturbance: 0.91 Acres
 Scale: 1:600

Pad Location: 39.969970
 -105.022280

N



Service Credits - Maxar, Microsoft



Infrastructure
 Facility – CL – 11/22/2019
 Well – PA – 11/22/2019
 Tank Battery – Active – No Docs
 Pit - NA
 Road – Oil and Gas Access
 On-Location FLO – 402256314 – 11/25/2019
 Off-Location FLO – 401830571 – 11/09/2018
 Environmental – NA

**CIV - 321522- GREEN MA
 Map Extent - Hydrology**

Imagery: RS Orthomosaic & DSM
 Imagery Date: 13 Sep 2022
 Map Date: 08 Nov 2022
 Datum: NAD_1983_UTM_Zone_13N
 POC: Soil Sage

◆ Wells	Stream Order
▭ Disturbance Extent	— 1
▭ Road	— 2
▭ Flowline	— 3

0 0.01 0.01 0.02 Miles

Overall Disturbance: 0.91 Acres
 Scale: 1:600

Pad Location: 39.969970
 -105.022280

N



Service Credits - Maxar, Microsoft