

SITE-SPECIFIC QUALITY ASSURANCE & QUALITY CONTROL AUDIT

Permit Closure Type – Final



PERMIT CLOSURE REPORT – DESIGNATION LAND USE CHANGE

Location ID - 321351

Location Name – ARAPAHOE-61N69W36SESW

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	ARAPAHOE-61N69W36SESW		
Location ID	321351		
Operator / #	8 NORTH LLC / 10575		
Field	WATTENBERG 90750		
County / State	BOULDER / CO	Lat/Long	40.003480 / -105.069570
Facility Status	CL	Location	SESW 36 1N69W
Facility Status Date	02/15/2019	Access Road	Oil & Gas access road
Facility Entities	<input checked="" type="checkbox"/> Tank Battery	<input type="checkbox"/>	Pits
	<input checked="" type="checkbox"/> Wells	<input type="checkbox"/>	Off-Location Flowlines
	<input type="checkbox"/> Domestic Taps	<input checked="" type="checkbox"/>	Flowlines
Environment Incidents & Remediation	<input type="checkbox"/> None	<input type="checkbox"/>	Spill or Release (Form 19)
	<input checked="" 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 – 401851605 – 12/11/2018</p> <ul style="list-style-type: none"> ○ Purpose – Registration <p>Flowline Facility Information</p> <ul style="list-style-type: none"> ○ COGCC Flowline ID – 461374 ○ Operator Flowline ID – 01306354FL ○ Status & Date – 02/27/2019 ○ Types of Fluids Transported – Multiphase ○ Start Point Location ID – 321351 ○ Start Point Riser Lat/Long – 40.003495 / -105.069556 ○ Equipment at Start Point – Well ○ End Point Location ID – 460859 ○ End Point Riser Lat/Long – 40.003801 / -105.070176 <p>Equipment at End Point – Separator.</p>		

<p>Site Investigation and Remediation Workplan (Form 27)</p>	<p>Remediation Project # – 12305</p> <ul style="list-style-type: none"> ○ Form 27 Supplemental Doc # & Date – 401885866 – 01/11/2019 ○ Approved – 01/15/2019 by Chris Canfield. Approved operator’s request for a determination of No Further Action ○ Final Resolution – Case closed on 01/15/2019 <p>Form 27 Initial Doc # & Date – 401883071 – 12/20/2018</p> <ul style="list-style-type: none"> ○ Purpose – Facility decommissioning in support of final reclamation and Pit/PW vessel closure. ○ Operator Comments – Decommission and removal of the well site and production equipment associated with the final reclamation. ○ Type of Waste Requiring Remediation - E&P Waste, Produced Water ○ Impacted Media – Soils ○ Impacted Type – Undetermined ○ Completion of Site Investigation – Not listed on COGIS. ○ Impacted Facility ID – 321351 ○ Facility Type – Location ○ Facility Name – ARAPAHOE -61N69W 36SESW
<p>COGIS Well Information (Scout Card)</p>	<p>Well – ARAPAHOE #3-36 FACILITY ID 206759</p> <ul style="list-style-type: none"> ○ Well Status & Date – PA – 02/15/2019 ○ Form 10 – Doc # & Date – 402054937 on 08/28/2019 Purpose – Change of Operator. EXTRACTION OIL & GAS purchases well from 8 NORTH LLC on 09/30/2018. ○ Form 6 Subsequent – Doc # & Date – 401950888 – Approved on 06/07/2019 by Nick McFarland. ○ Form 42 – Doc # & Date – 401923082 submitted on 01/03/2019. Purpose – Flowlines Abandoned. Completed 12/21/2018. ○ Form 42 – Doc # & Date – 401866348 submitted on 12/07/2018. Purpose – Start of Plugging Operations 48 Hours notice.

Audit Key Findings - Designation Land Use Change Observations

PREVIOUS LAND USE	CURRENT LAND USE
Reference Imagery for Infrastructure – DRCOG 2014	Remotely Sense Imagery – 09/01/2022
Designation – Well Pad	Designation – Housing Development

The following imagery sources were reviewed during this audit:

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

Closure Information

COGIS Webpage link to Remediation Form 27: 401883071

https://cogcc.state.co.us/cogisdb/Incidents/reportDetail?report=rem&doc_num=401883071

Site Summary

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

Site Investigation Date

09/01/2022

Reference Area Photos

1 Sep 2022

Cardinal directional photos of the site





East



South



West



Overhead

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	321351 - ARAPAHOE-61N69W36SESW
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Reference Soil Information

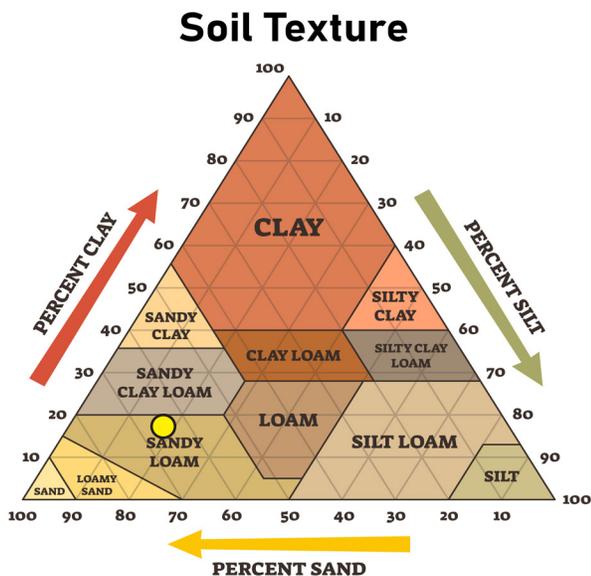
The location of the site is contained within two soil types, Ascalon sandy loam at two different slopes.

Map Unit AcA Reference Soil information - Ascalon sandy loam

This soil is formed from wind-reworked alluvium and/or calcareous sandy eolian deposits. Landform is interfluves, with the Sandy 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	Sandy Loam	1.52	63-19-18	7.1	0.1	0.0	0.84
10-20	Sandy Clay Loam	1.51	58-17-25	7.5	0.1	0.0	0.47
20-30	Sandy Clay Loam	1.48	62-15-23	8.2	0.1	0.0	0.22
30-40	Sandy Clay Loam	1.55	69-13-18	8.2	0.1	0.0	0.16
40-50	Sandy Loam	1.62	75-11-14	8.2	0.1	0.0	0.10
50 +	Sandy Loam	1.62	75-11-14	8.2	0.1	0.0	0.10

Soil Texture Triangle reflect the 0-10 in depth



Erosion Potential (10 inches)

- K Factor, Whole soil - .17. 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 – 4L. 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	321351 - ARAPAHOE-61N69W36SESW
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Reference Soil Information

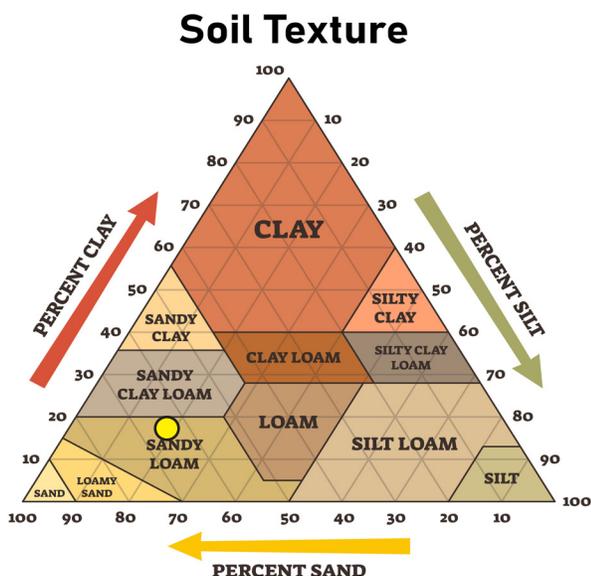
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Map Unit AcC Reference Soil information - Ascalon sandy loam

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10-20	Sandy Clay Loam	1.57	57-18-25	7.5	0.1	0.0	0.47
20-30	Sandy Clay Loam	1.50	55-22-23	8.2	0.1	0.0	0.22
30-40	Sandy Clay Loam	1.56	65-16-19	8.2	0.1	0.0	0.16
40-50	Sandy Loam	1.62	75-11-14	8.2	0.1	0.0	0.10
50 +	Sandy Loam	1.62	75-11-14	8.2	0.1	0.0	0.10

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- K Factor, Whole soil - .17. 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 – 3. 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 – 2/15/2019
 Well – PA – 2/15/2019
 Tank Battery – AC - 04/14/2021
 Pit - NA
 Road – Oil and Gas Access
 On-Location FLO – 401923082 – 12/21/2018
 Off-Location FLO – 401851605 – 12/11/2018
 Environmental – RPN – 12305
 Resolved – 1/15/2018

**CIV - 321351 - ARAPAHOE
 Map Extent - DRCOG 2010**

Imagery: DRCOG
 Imagery Date: 2010
 Map Date: 09 Nov 2022
 Datum: NAD_1983_UTM_Zone_13N
 POC: Soil Sage

Legend

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

0 0.02 0.04 0.07 Miles

Overall Disturbance:
0.53 acres

Scale: 1:1,800

Pad Location:
40.003480
-105.069570



Service Credits -



Infrastructure
 Facility – CL – 2/15/2019
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 On-Location FLO – 401923082 – 12/21/2018
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**CIV - 321351 - ARAPAHOE
 Map Extent - DRCOG 2010**

Imagery: DRCOG
 Imagery Date: 2010
 Map Date: 09 Nov 2022
 Datum: NAD_1983_UTM_Zone_13N
 POC: Soil Sage

Legend

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

0 0 0.01 0.02 Miles

Overall Disturbance:
0.53 acres

Scale: 1:500

Pad Location:
40.003480
-105.069570

N



Service Credits -



Infrastructure

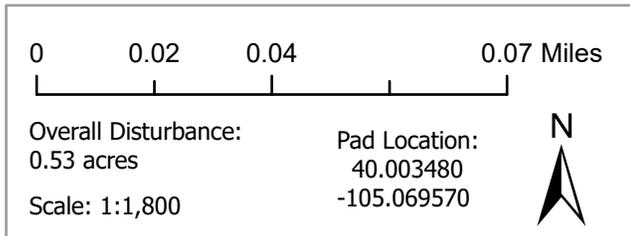
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- Environmental – RPN – 12305
- Resolved – 1/15/2018

**CIV - 321351 - ARAPAHOE
Map Extent - Overview**

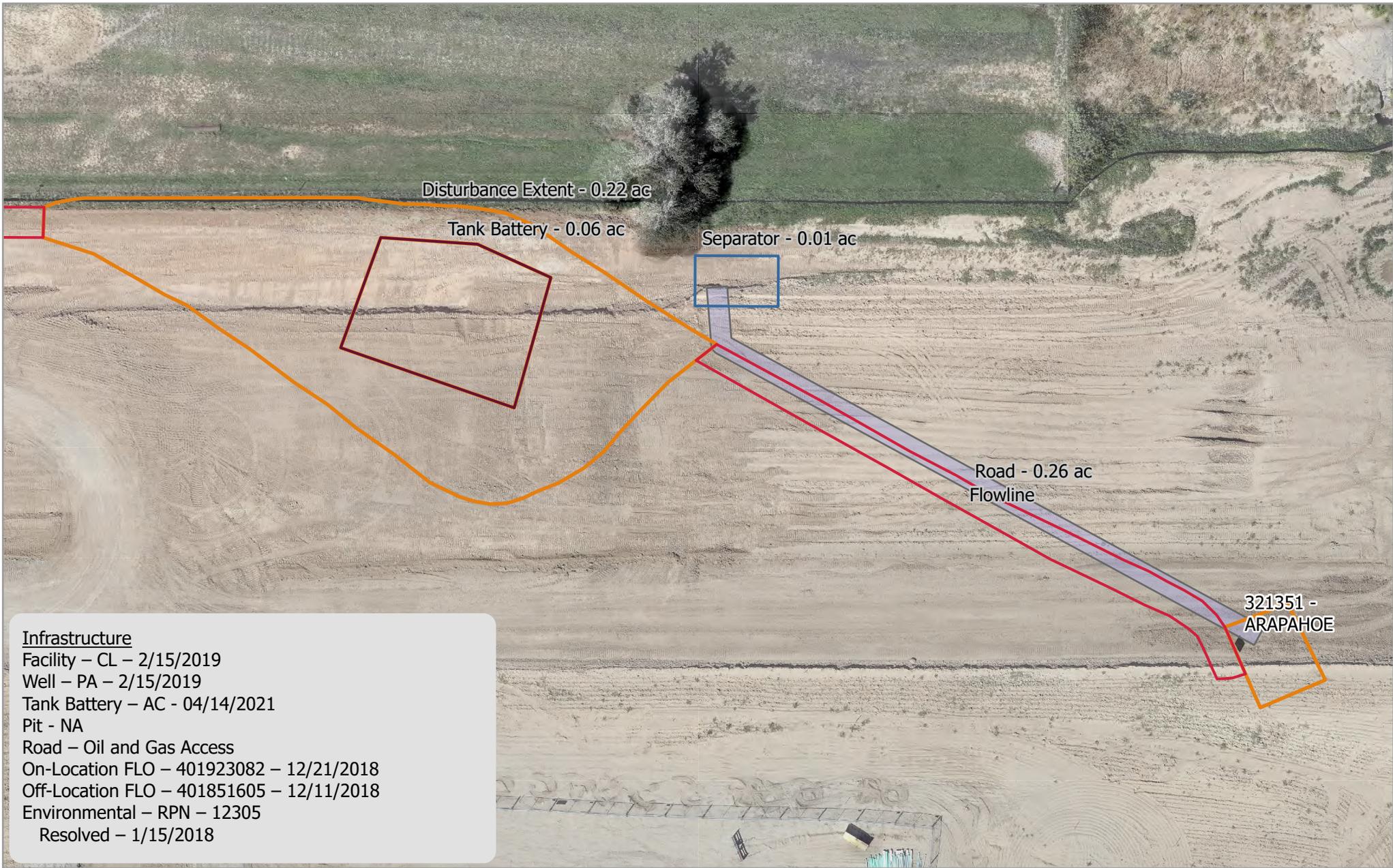
Imagery: RS Orthomosaic & DSM
 Imagery Date: 1 Sep 2022
 Map Date: 09 Nov 2022
 Datum: NAD_1983_UTM_Zone_13N
 POC: Soil Sage

Legend

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



Service Credits -



CIV - 321351 - ARAPAHOE
Map Extent - Overview

Imagery: RS Orthomosaic & DSM
 Imagery Date: 1 Sep 2022
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Legend

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

0 0 0.01 0.02 Miles

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Service Credits -



Infrastructure

- Facility - CL - 2/15/2019
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- On-Location FLO - 401923082 - 12/21/2018
- Off-Location FLO - 401851605 - 12/11/2018
- Environmental - RPN - 12305
- Resolved - 1/15/2018

CIV - 321351 - ARAPAHOE
Map Extent - Hydrology

Imagery: RS Orthomosaic & DSM
 Imagery Date: 1 Sep 2022
 Map Date: 09 Nov 2022
 Datum: NAD_1983_UTM_Zone_13N
 POC: Soil Sage

◆ Wells	▭ Flowline	Stream Order
▭ Disturbance Extent		1
▭ Road		2
▭ Tank Battery		3
▭ Separator		4

0 0.02 0.04 0.07 Miles

Overall Disturbance:
0.53 acres

Scale: 1:1,800

Pad Location:
40.003480
-105.069570

N

