

SITE-SPECIFIC QUALITY ASSURANCE & QUALITY CONTROL AUDIT

Permit Closure Type – Final



PERMIT CLOSURE REPORT – DESIGNATION LAND USE CHANGE

Location ID - 319611

Location Name – HAAS-66N67W 15NESE

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	10/31/2022

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	HAAS-66N67W 15NESE		
Location ID	319611		
Operator / #	EXTRACTION OIL & GAS INC / 10459		
Field	SEVERENCE 77030		
County / State	WELD / CO	Lat/Long	40.484493 / -104.872766
Facility Status	AC	Location	NESE 15 6N67W
Facility Status Date	04/14/2017	Access Road	Pre-existing access road
Facility Entities	<input checked="" type="checkbox"/> Tank Battery	<input checked="" type="checkbox"/> Pits	
	<input checked="" type="checkbox"/> Wells	<input type="checkbox"/> Off-Location Flowlines	
	<input type="checkbox"/> Domestic Taps	<input checked="" type="checkbox"/> On-Location Flowlines	
Environment Incidents & Remediation	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Spill or Release (Form 19)	
	<input checked="" type="checkbox"/> Remediation (Form 27)		
Sundry Notice (Form 4)	Form 4s exist for Related Facilities – See individual scout card data for report details.		
On-Location Flowlines (Form 42)	Form 42s exist for Related Facilities – See individual scout card data for report details.		
Off-Location Flowlines (Form 44)	No Form 44s were detected during this QA & QC Audit.		
COGIS Spill or Release (Form 19) (Scout Card)	<p>Spill or Release – FACILITY 445284 – Status CL – 03/29/2017</p> <ul style="list-style-type: none"> ● Form 19 Resolving Doc # & Date – 401246011 – 03/29/2017 <ul style="list-style-type: none"> ○ Date Closed – 03/29/2017 ● Form 19 Initial Doc # & Date – 401015105 – 03/24/2016 <ul style="list-style-type: none"> ○ Date of Discovery – 03/22/2016 ○ Spill Type – Historical Release (discovered during relocation of tank battery – reference Form 4 #041005022 – 03/28/2016) ○ Reference Location Facility ID & Type – 319611 – Tank Battery ○ Operator – GREAT WESTERN OPERATING COMPANY LLC ○ Operator Comments – Work proceeding under an approved Form 27 – Doc # 401235959 (Remediation Project # 10100). 		

<p>Site Investigation and Remediation Workplan (Form 27/27A)</p>	<p>Remediation Project # – 10100</p> <ul style="list-style-type: none"> ● Form 27A - Supplemental Doc # & Date – 402746402 on 07/14/2021 <ul style="list-style-type: none"> ○ Final Resolution – Case Closed – 07/14/2021 – Rick Allison ● Form 27 – Initial Doc# & Date – 401235959 on 03/17/2017 <ul style="list-style-type: none"> ○ Purpose – Remediation of Spill and Releases ○ Type of Waste Requiring Remediation – E&P Waste, Produced Water ○ Impacted Media – Groundwater Impacted Type – Yes ○ Impacted Media – Soils Impacted Type – Yes ○ Facility ID – 445284 ○ Facility Type – Spill or Release
<p>COGIS Tank Facilities Information (Scout Card)</p>	<p>Tank Battery – HAAS-66N67W #15NESE</p> <ul style="list-style-type: none"> ● Tank Battery Status & Date – AC – 04/14/2009 ● Form 4 Doc # & Date – 041005022 – 03/28/2016 Purpose – Relocation of tank battery due to potential hazards of encroaching property development. Approved – 03/28/2016 by Doug Andrews ● Form 19 Resolving Doc # & Date – 401246011 – 03/29/2017 See Site Investigation & Remediation Workplan above for details.
<p>COGIS Well Information (Scout Card)</p>	<p>Well – HAAS #1 FACILITY ID 243772</p> <ul style="list-style-type: none"> ● Well Status & Date – PA – 04/14/2017 ● Form 6 Subsequent Doc # & Date – 401281229 – Approved on 5/30/2018 by Eric Jacobson. ● Form 42 – Doc # & Date – 401351135 submitted on 07/24/2017 Purpose – Flowlines Abandoned. Completed on 05/15/2017 ● Form 42 – Doc # & Date – 401244027 submitted on 03/27/2017 Purpose – Start of Plugging Operations 48 hour notice. ● Form 4 Doc # – 401150321 Purpose – Interim reclamation complete. Site ready for inspection. Approved – 12/02/2016 by Chris Binschus
<p>COGIS Pit Information (Scout Card)</p>	<p>Pit – HAAS 1# - FACILITY ID 111150</p> <ul style="list-style-type: none"> ● Pit Operator – SMITH OIL PROPERTIES INC / 79905 ● Pit Status & Date – CL – 09/23/1999

Audit Key Findings - Designation Land Use Change Observations

PREVIOUS LAND USE	CURRENT LAND USE
Reference Imagery for Infrastructure – DRCOG 2012	Remotely Sense Imagery – 09/14/2022
Designation – Agricultural Processing and Staging Area	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

Notes from Tank Battery Scout Card – Operator moved tank battery to next to the well due to property development encroaching on the tank battery via Form 4 Sundry Doc #401005044. Doug A. 3/28/16.

Notes from Form 19 – Resolving doc –

- The produced water vessel was removed from the site and the Haas production site has been relocated and sold to Extraction.
- Operator Comments - Work proceeding under an approved Form 27 (Remediation Project # 10100) to resolve Spill ID 445284.

Form 27 (web page) related to the SPILL OR RELEASE location:

https://cogcc.state.co.us/cogisdb/Incidents/reportDetail?report=rem&doc_num=401235959

Note from Form 4 Sundry Notice - Operator Comments - We purchased the Haas #1 tank battery from Bill Barrett located in NESE section 15, T6N, R67W. Recently there were some developers who built a turning lane that came within 10' of our tank battery. It was not part of their initial plan to be that close to us, but they strayed from those plans causing a safety hazard with the turning lane. Due to this safety concern, we took immediate action to move the tank battery. Its current coordinates are now at 40.484556 and -104.872644. Attached is an updated facility layout, location drawing and cultural distances. Berms have been constructed along all sides of the tanks and separators.

Site Summary

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

Site Investigation Date

09/21/2022

Reference Area Photos

Site photos

21 Sept 2022

Cardinal directional photos of the site





East



South



West

On the ground photos



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	319611 - HAAS-66N67W 15NESE
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Reference Soil Information

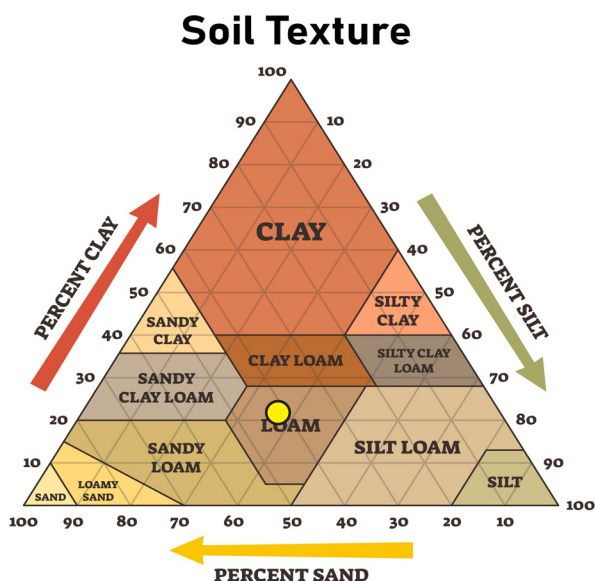
The location of the site is contained within one soil type, Kim loam.

Map Unit 32 Reference Soil information - Kim loam

This soil is formed from mixed eolian deposits derived from sedimentary rock. Landform is plains, alluvial fans, with the Loamy Plains Ecological Site. Soils are well drained with a moderate water holding capacity, and slope 1-3 percent.

Depth (in)	Physical			Chemical			
	Texture	Bulk Density	Partical Size Percent sand, silt, clay	pH	EC	SAR	OM%
0-10	Loam	1.33	42-37-21	7.9	0.0	0.0	0.75
10-20	Loam	1.33	42-37-21	7.9	0.0	0.0	0.75
20-30	Loam	1.33	42-37-21	7.9	0.0	0.0	0.75
30-40	Loam	1.33	42-37-21	7.9	0.0	0.0	0.75
40-50	Fine Sandy Loam	1.43	65-20-15	7.9	0.0	0.0	0.25
50 +	Fine Sandy Loam	1.43	65-20-15	7.9	0.0	0.0	0.25

Soil Texture Triangle reflect the 0-10 in depth



Erosion Potential (10 inches)

- K Factor, Whole soil - .28. 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.

Infrastructure

Facility – AC – 4/14/2017
Well – PA – 4/14/2017
Tank Battery – AC - 4/14/2009
Pit -CL – 09/23/1999
Road – Pre-existing
On-Location FLO – 401351135 – 5/15/2017
Off-Location FLO - NA
Environmental – RPN – 10100
Resolved – 7/14/2021



CIV - 319611- HAAS
Map Extent - DRCOG 2012

Imagery: DRCOG
Imagery Date: 2012
Map Date: 07 Nov 2022
Datum: NAD_1983_UTM_Zone_13N
POC: Soil Sage

Legend

- ◆ Wells
- ▭ Disturbance Extent
- ▭ Tank Battery

0 0.01 0.03 0.05 Miles

Overall Disturbance: 0.16 Acres
Scale: 1:1,400

Pad Location: 40.484550
-104.872640



Service Credits - Maxar, Microsoft

Infrastructure

Facility – AC – 4/14/2017

Well – PA – 4/14/2017

Tank Battery – AC - 4/14/2009

Pit -CL – 09/23/1999

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Off-Location FLO - NA

Environmental – RPN – 10100

Resolved – 7/14/2021



Disturbance Extent - 0.002 ac

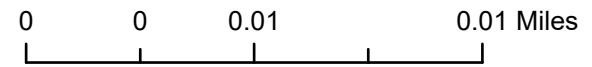
319611 - HAAS

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**CIV - 319611- HAAS
Map Extent - Overview**

Imagery: RS Orthomosaic & DSM
Imagery Date: 14 Sep 2022
Map Date: 07 Nov 2022
Datum: NAD_1983_UTM_Zone_13N
POC: Soil Sage

Legend

- ◆ Wells
- ▭ Disturbance Extent
- ▭ Tank Battery

0 0.01 0.03 0.05 Miles

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Resolved – 7/14/2021

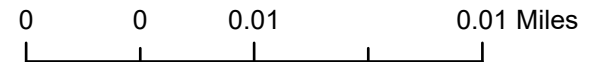


**CIV - 319611- HAAS
Map Extent - Overview**

Imagery: RS Orthomosaic & DSM
Imagery Date: 14 Sep 2022
Map Date: 07 Nov 2022
Datum: NAD_1983_UTM_Zone_13N
POC: Soil Sage

Legend

- ◆ Wells
- ▭ Disturbance Extent



Overall Disturbance:
0.16 Acres
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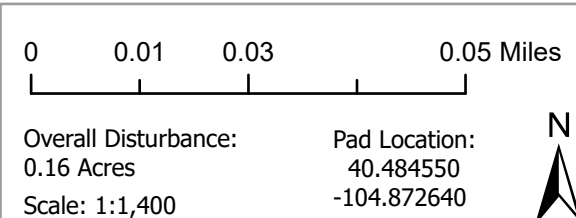
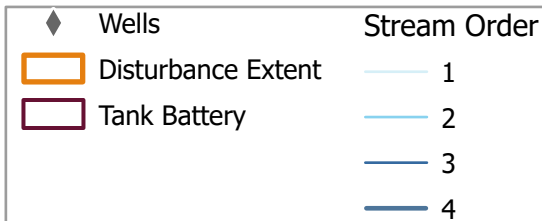
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Facility – AC – 4/14/2017
Well – PA – 4/14/2017
Tank Battery – AC - 4/14/2009
Pit -CL – 09/23/1999
Road – Pre-existing
On-Location FLO – 401351135 – 5/15/2017
Off-Location FLO - NA
Environmental – RPN – 10100
Resolved – 7/14/2021



**CIV - 319611- HAAS
Map Extent - Hydrology**

Imagery: RS Orthomosaic & DSM
Imagery Date: 14 Sep 2022
Map Date: 07 Nov 2022
Datum: NAD_1983_UTM_Zone_13N
POC: Soil Sage



Service Credits - Maxar, Microsoft

