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 – 327044
Location Name – ROBB-PM F-65N65W 15SWNE

Report Date

13 Dec 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	12/07/2022

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	ROBB-PM F-65N65W 15SWNE			
Location ID	327044			
Operator / #	EXTRACTION OIL & GAS INC / 10459			
Field	WATTENBERG / 90750			
County / State	WELD / CO		**Lat/Long**	40.400550 / -104.646780 Planned Location
Facility Status	AC		**Location**	SWNE 15 5N65W
Facility Status Date	04/20/2021		**Access Road**	Oil & Gas Access Road
Facility Entities	☑	Tank Battery	☐	Pits
	☑	Wells	☑	Off-Location Flowlines (**Form 44**)
	☐	Domestic Taps	☑	On-Location Flowlines (**Form 42**)
Environment Incidents & Remediation	☐	None	☐	Spill or Release (**Form 19**)
	☑	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 Site Related Facilities.** See individual scout card data below for report details.			
Off-Location Flowlines (Form 44)	**Form 44 Doc # & Date –** 402525158 – 04/20/2021 ○ **Purpose –** Off-Location Flowline Abandonment Verification ○ **Abandonment Date –** 06/22/2018 ○ **Operator Comments –** The entire 2" steel and 1" poly was removed. **Flowline Facility Information** ○ **COGCC Flowline ID –** 459250 (Well Emma F #15-21D) ○ **Operator Flowline ID –** 12330283FL ○ **Status & Date –** AC – 04/20/2021 ○ **Flowline Type –** Wellhead Line ○ **Type of Fluids Transported –** Multiphase ○ **Start Point Location ID –** 327044 – Well Site ○ **Start Point Riser Lat/Long –** 40.400488 / -104.646406 (ROBB-PM F) ○ **Equipment at Start Point –** Well ○ **End Point Location ID –** 327044 – Production Facilities			

	○ **End Point Riser Lat/Long –** 40.400910 / -104.646208 (ROBB-PM F) ○ **Equipment at End Point –** Separator
	Flowline Facility Information ○ **COGCC Flowline ID –** 457710 (Well Emma F #15-18D) ○ **Operator Flowline ID –** 12330282FL ○ **Status & Date –** AC – 04/20/2021 ○ **Flowline Type –** Wellhead Line ○ **Type of Fluids Transported –** Multiphase ○ **Start Point Location ID –** 327044 – Well Site ○ **Start Point Riser Lat/Long –** 40.400543 / -104.646424 (ROBB-PM F) ○ **Equipment at Start Point –** Well ○ **End Point Location ID –** 327044 – Production Facilities ○ **End Point Riser Lat/Long –** 40.400903 / -104.646259 (ROBB-PM F) ○ **Equipment at End Point –** Separator
Site Investigation and Remediation Workplan (Form 27/27A)	**Remediation Project # –** 11434 **Form 27A – Supplemental Doc # & Date –** 401692749 – 09/13/2018 ○ **Closure Request Approved –** 09/13/2018 by Candice (Nikki) Graber ○ **Final Resolution –** Case closed on 09/13/2018 **Form 27 Initial Doc# & Date –** 401666134 – 06/15/2018 ○ **Purpose –** Pit/PW vessel closure, Facility decommissioning in support of final reclamation ○ **Operator Comments –** This form was prepared for the purpose of generating a remediation project number to support decommissioning of the production equipment associated with final reclamation of this location. It is intended to meet the requirements of COGCC Rule 905.b for the closure of three partially buried produced water vessel. This form references the Location ID, since the partially buried produced water vessels are on an unrecognized tank battery within this location. ○ **Type of Waste Requiring Remediation –** E&P Waste, Produced Water ○ **Impacted Media –** Soil ○ **Impacted Type –** Undetermined ○ **Facility ID –** 327044 ○ **Facility Type –** Location/Tank Battery

	○ **Site Investigation Plan Start Date –** 06/07/2018
Field Inspection Form (Form INSP)	**Form INSP – Doc # & Date –** 682502668 – 10/11/2017 ○ **Status Summary** – This Is a Follow Up Inspection ○ **Inspected Facilities** – Well ROBB-PM F 15-7 ○ **Inspection Status** – RI ○ **Inspection Date & Inspector** – 10/05/2017 by Aaron Trujillo ○ **Comments**: Inspection Doc #675103755 identified riser at well remain on the location and required it to be removed. This riser has been removed. **Form INSP – Doc # & Date –** 675103755 – 08/04/2017 ○ **Status Summary** – Follow Up Inspection Required ○ **Inspected Facilities** – Well ROBB-PM F 15-7, Tank Battery Robb-Emma Battery ○ **Inspection Status** – RI ○ **Inspection Date & Inspector** – 07/24/2017 by Aaron Trujillo ○ **Comments** – Riser at well and related facilities at the tank battery (including two additional risers) remain on the location. Comply with the reclamation rules to remove all debris, abandoned gathering line risers, and flowline risers, and equipment within three months of plugging (06/06/2016) the associated facility. All work should have been conducted by 09/06/2016.
COGIS Tank Facilities Information (Scout Card)	**Tank Battery –** Robb-Emma Battery – **FACILITY ID** 448583 ○ **Tank Battery Status & Date –** AC – 12/06/2016 ○ **Lat/Long –** 40.401160 / -104.646323 ○ **Form 27A – Supplemental Doc # & Date –** 401692749 – 09/13/2018 See Site Investigation & Remediation Workplan above for details. ○ **Form 27 – Initial Doc # & Date –** 401666134 – 06/15/2018 See Site Investigation & Remediation Workplan above for details.
COGIS Well Information (Scout Card)	**Well –** ROBB-PM F #15-7 – **API#** 05-123-14055 – **FACILITY ID** 246258 ○ **Well Status & Date –** PA – 06/06/2016 ○ **Lat/Long As Drilled –** 40.400550 / -104.646780 ○ **Form 6 Subsequent – Doc # & Date –** 401081736 – Approved on 11/14/2016 by Steve Jenkins. ○ **Form 4 – LOG – Doc # & Date –** 400911686 – 10/06/2015 **Purpose –** Digital Well Log Upload (Gyro) **Approved** – 10/06/2015 by Andrew Stone

	○ **Note –** No On- or Off-Location Flowline documents were found.
	Well – EMMA F #15-18D – **API#** 05-123-30282 – **FACILITY ID** 411863 ○ **Well Status & Date –** PA – 06/01/2018 ○ **Lat/Long As Drilled –** 40.401034 / -104.646250 ○ **Form 6 Subsequent – Doc # & Date –** 401669172 – Approved on 11/15/2018 by Eric Jacobson. ○ **Form 42 – FLO – Doc # & Date –** 401703541 – Submitted on 07/16/2018. **Purpose –** Flowlines Abandoned – per RULE 1103. Completed on 06/22/2018. ○ **Form 42 – PA – Doc # & Date –** 401632552 – Submitted on 05/08/2018. **Purpose –** Start of Plugging Operations 48 Hour Notice
	Well – EMMA F #15-21D – **API#** 05-123-30283 – **FACILITY ID** 411864 ○ **Well Status & Date –** PA – 04/11/2018 ○ **Lat/Long As Drilled –** 40.400492 / -104.646394 ○ **Form 6 Subsequent – Doc # & Date –** 401624810 – Approved on 11/15/2018 by Eric Jacobson. ○ **Form 42 – FLO – Doc # & Date –** 401672737 – Submitted on 06/13/2018. **Purpose –** Flowlines Abandoned – per RULE 1103. Completed on 04/10/2018. ○ **Form 42 – PA – Doc # & Date –** 401594540 – Submitted on 04/02/2018 **Purpose –** Start of Plugging Operations 48 Hour Notice

Audit Key Findings – Designation Land Use Change Observations

PREVIOUS LAND USE	CURRENT LAND USE
Reference Imagery for Infrastructure – DRCOG 2004, 2014, Maxar 2010	**Remotely Sensed Imagery –** September 20, 2022
Designation – Oil and Gas Facility	**Designation –** Fenced Goat Area

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

Form 10 Doc # 401257085 Change of Operator indicates Location 327044 ROBB-PM F-65N65W 15SWNE became a property of EXTRACTION OIL & GAS INC on 04/12/2017.

Form 27 Initial (Doc #401666134) states the Facility Type as "Location" but in the Form 27A (Doc #401692749), it is noted on Page 7 "the site information was changed for this supplemental to reflect the facility ID for the Robb-Emma Battery which was created after the Form 27 Initial (401666134) was submitted."

Due to landowner activity, in the form of a goat pasture, vegetation recovery is not possible.

Site Photos

Site Investigation and Reference Area Photos

08/31/2022

Cardinal directional and ground perspective photos of the site

North

East

South

West

Overhead

Tank Battery Overhead

Ground perspective of the well site locations

Goats

North

ATTACHMENTS

Maps and Figures

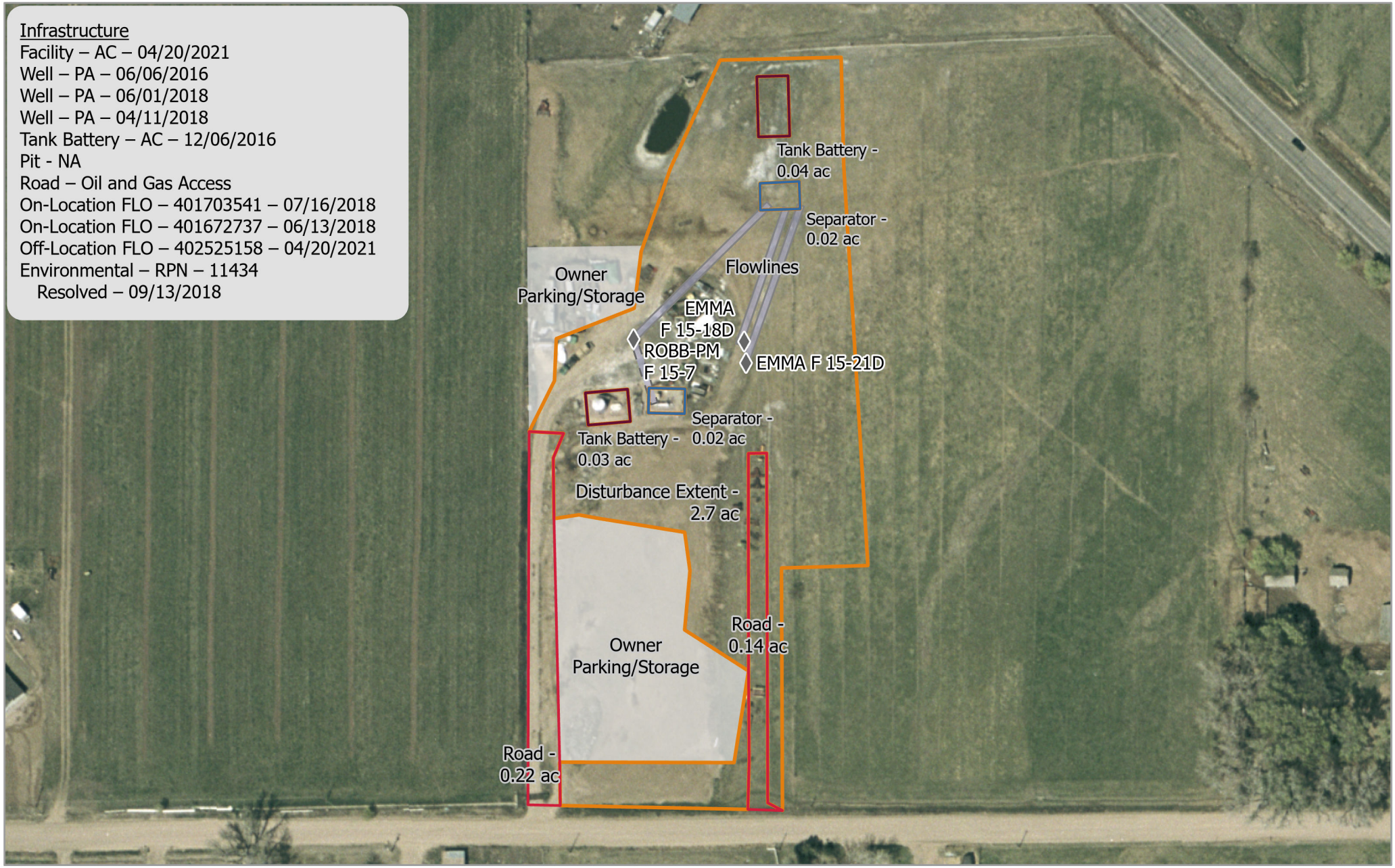
Area Maps

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



CIV - 327044- ROBB-PM F
Map Extent - DRCOG 2004

Imagery: DRCOG
Imagery Date: 2004
Map Date: 12 Dec 2022
Datum: WGS 1984 UTM Zone 13N
POC: Soil Sage

Legend

- Wells
- Disturbance Extent
- Road
- Separator
- Tank Battery
- Flowlines

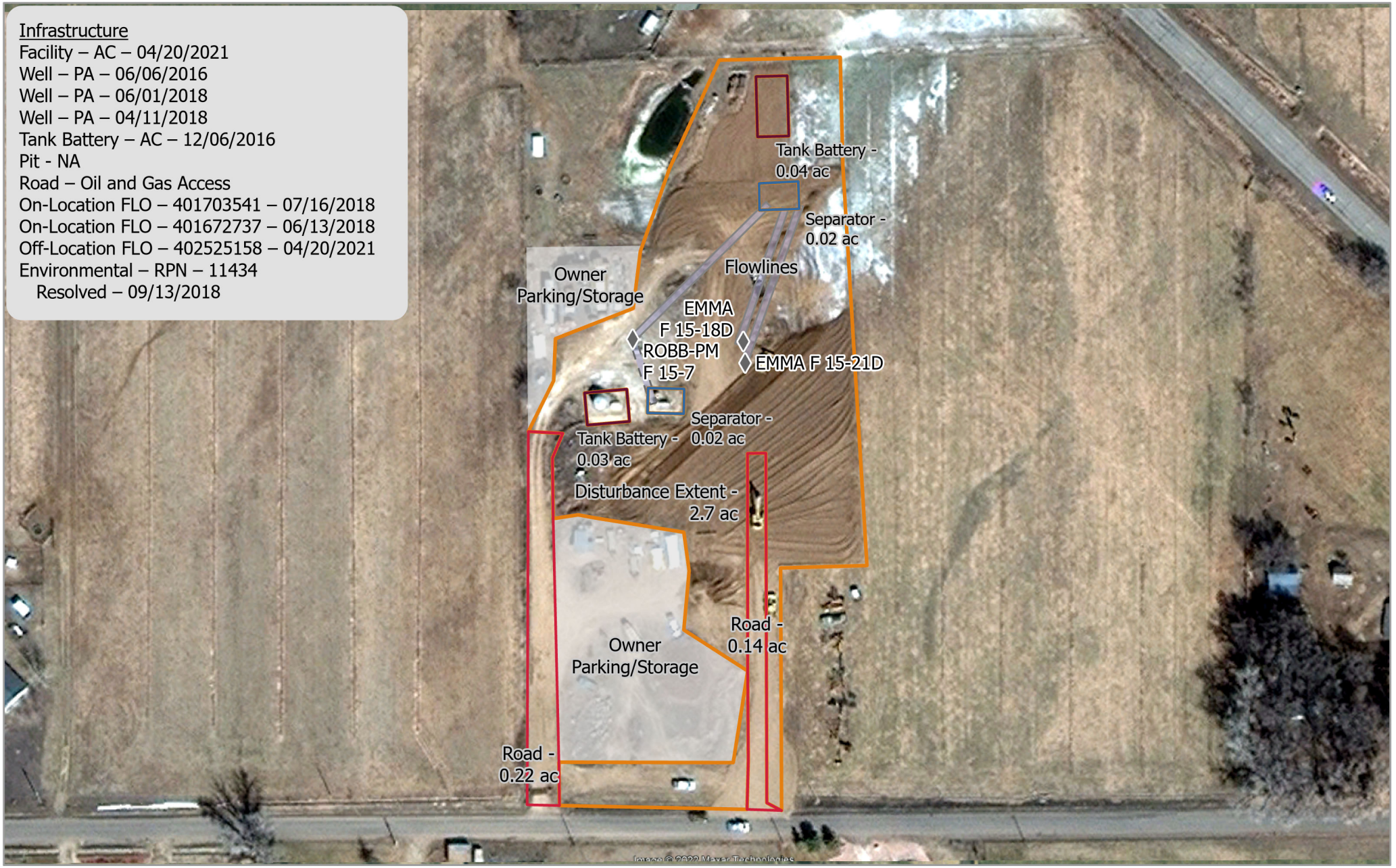
0 0.01 0.03 0.05 Miles

Overall Disturbance: 3.20 Acres

Scale: 1:1,500

Pad Location: 40.400550 -104.646780

N



CIV - 327044- ROBB-PM F
Map Extent - MAXAR 2010

Imagery: MAXAR
Imagery Date: 11 Mar 2010
Map Date: 12 Dec 2022
Datum: WGS 1984 UTM Zone 13N
POC: Soil Sage

Legend

- Wells
- Disturbance Extent
- Road
- Separator
- Tank Battery
- Flowlines

0 0.01 0.03 0.05 Miles

Overall Disturbance: 3.20 Acres

Scale: 1:1,500

Pad Location: 40.400550 -104.646780

N

CIV - 327044- ROBB-PM F
Map Extent - DRCOG 2014

Imagery: DRCOG
Imagery Date: 2014
Map Date: 12 Dec 2022
Datum: WGS 1984 UTM Zone 13N
POC: Soil Sage

Legend

- Wells
- Disturbance Extent
- Road
- Separator
- Tank Battery
- Flowlines

0 0.01 0.03 0.05 Miles

Overall Disturbance: 3.20 Acres

Scale: 1:1,500

Pad Location: 40.400550 -104.646780

N

Service Credits - Maxar, Microsoft

CIV - 327044- ROBB-PM F
Map Extent - Overview

Imagery: RS Orthomosaic & DSM
Imagery Date: 20 Sep 2022
Map Date: 12 Dec 2022
Datum: WGS 1984 UTM Zone 13N
POC: Soil Sage

Legend

- Wells
- Disturbance Extent
- Road
- Separator
- Tank Battery
- Flowlines

0 0.01 0.03 0.05 Miles

Overall Disturbance: 3.20 Acres

Scale: 1:1,500

Pad Location: 40.400550 -104.646780

N

CIV - 327044- ROBB-PM F
Map Extent - Hydrology

Imagery: RS Orthomosaic & DSM
Imagery Date: 20 Sep 2022
Map Date: 12 Dec 2022
Datum: WGS 1984 UTM Zone 13N
POC: Soil Sage

Wells
Disturbance Extent
Road
Separator
Tank Battery
Flowlines

Stream Order
1
2
3
4

0 0.01 0.03 0.05 Miles

Overall Disturbance:
3.20 Acres

Scale: 1:1,500

Pad Location:
40.400550
-104.646780

N

Soil Properties

USDA Soil Description

Location ID / Name	327044 - ROBB-PM F-65N65W 15SWNE

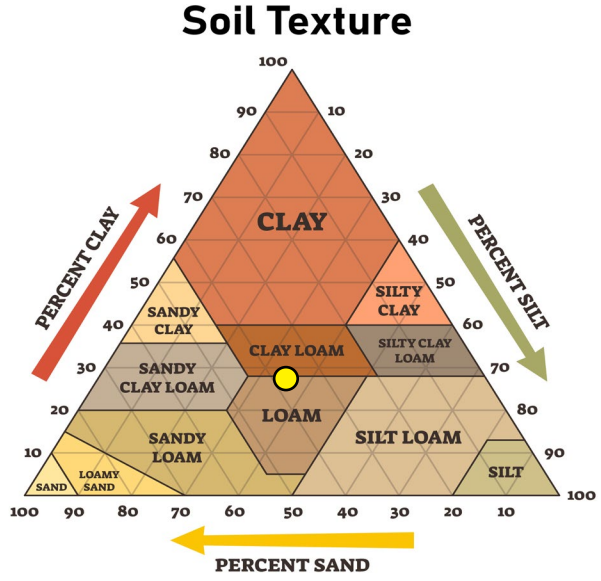
Reference Soil Information
The location of the site is contained within one soil type, Aquolls and Aquents.

Map Unit 3 Reference Soil information - Aquolls and Aquents

This soil is formed from recent alluvium. Landform is swales, flood plains, streams, stream terraces, with the Salt Meadow Ecological Site. Soils are poorly 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	Loam, Variable	1.28	39-35-26	7.9	2.0	0.0	2.00
10-20	Loam, Variable	1.28	39-35-26	7.9	2.0	0.0	2.00
20-30	Loam, Variable	1.28	39-35-26	7.9	2.0	0.0	2.00
30-40	Loam, Variable	1.28	39-35-26	7.9	2.0	0.0	2.00
40-50	Loam, Variable	1.35	51-29-20	7.9	2.0	0.0	1.70
50 +	Gravelly Sand, Very Gravelly Sand	1.62	97-1-2	7.9	2.0	0.0	0.50

Soil Texture Triangle reflect the 0-10 in depth



Erosion Potential (10 inches)

- K Factor, Whole soil - .24. 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 – 8. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.