

# Location Checklist



<b>Operator / #</b>	EXTRACTION OIL & GAS INC / 10459		
<b>Location ID &amp; Name</b>	<a href="#">323570</a> HUNGENBERG-66N65W/33SWNE		
<b>County</b>	WELD, CO		
<b>Well Information</b>	Well Name:	HUNGENBERG #7-33	
	Well API #:	<a href="#">05-123-13211</a>	
	Lat/Long as Drilled:	40.445110 / -104.666350	
	Plug Date & Form 6s Doc #:	09/28/2018, <a href="#">401796637</a>	
<b>Facility Entities</b>	<input checked="" type="checkbox"/> Tank Battery (Off-Site)		Pits
	<input checked="" type="checkbox"/> Wells	<input checked="" type="checkbox"/>	On-Location Flowlines (Form 42) Doc #: <a href="#">401826399</a>
	<input type="checkbox"/> Domestic Taps	<input checked="" type="checkbox"/>	Off-Location Flowlines (Form 44) Doc #: <a href="#">401896378</a>
<b>Equipment On-Site</b>	<input checked="" type="checkbox"/> None		Debris
		Pit mouse/rat holes, cellars backfilled	
<b>Access Road</b>	<input checked="" type="checkbox"/> Regraded	<input checked="" type="checkbox"/>	Contoured
	<input type="checkbox"/> Culverts removed	<input checked="" type="checkbox"/>	Gravel removed
		Pre-Existing (Must provide supporting documentation)	
<b>Reclamation Status</b>	<input checked="" type="checkbox"/>	Location and associated disturbances reclaimed	
		Subsidence	
<b>Spills or Releases (Form 19)</b>	<input checked="" type="checkbox"/> No		Yes
<b>Remediation (Form 27/27A)</b>	<input checked="" type="checkbox"/> No		Yes
<b>On-Location Flowlines</b>	<input type="checkbox"/> No	<input checked="" type="checkbox"/>	Yes
<b>Off-Location Flowlines</b>	<input type="checkbox"/> No	<input checked="" type="checkbox"/>	Yes
<b>Inspection Corrective Actions</b>	<input type="checkbox"/> No	<input checked="" type="checkbox"/>	Yes – Resolved 2018
<b>Sundry Notice</b>	Form 4 Doc # & Date:	<a href="#">402199999</a> & 10/23/2019	
	Purpose:	Report of Work Done: Final Reclamation Implementation	
	Comments:	The approval of this Form 4 is an acknowledgement that the document was received. It is not an approval of the final reclamation as the outcome of the methods will be determined on the ground during an inspection at a future date. This was a notice for completion of Final Reclamation activities.	
	Attachments:	Aerial Photograph Document # <a href="#">402200011</a>	
<b>Drone Information</b>	Make & Model	DJI M300	
	Image Processing Software	Pix4dfields – RGB/Multispectral Imagery & Pix4dmatic – RGB Imagery	
	Pilot Name & FAA Certificate #	Sam Streeter – 4100157	
	Date of FAA Certificate Issuance	12/23/2023 (original 03/24/2018)	

**SITE-SPECIFIC QUALITY ASSURANCE  
& QUALITY CONTROL AUDIT**



**Final Reclamation Complete Notice – Cropland Drone Imagery**

**PERMIT CLOSURE REPORT – CROPLAND**

**Location ID** 323570

**Location Name** HUNGENBERG-66N65W/33SWNE

**Report Date**

18 Dec 2023

Soil Sage has conducted a thorough data audit as part of our Quality Assurance and Quality Control (QA/QC) protocols. This report was developed in accordance with the ECMC Operator Guidance – Operator supplied cropland drone imagery and information for submitting a final reclamation complete notice.

**Crop Year and Type**

Crop 2023 – Corn

Crop 2022 – Corn

**Quality Assurance & Quality Control Audit**

<b>Auditor</b>	Soil Sage
<b>Audit Date</b>	17 Oct 2023

**Audit Methodology**

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

- ✓ 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

All pertinent data, imagery, and materials are included at the end of this report.

## Site Description

<b>Name</b>	HUNGENBERG-66N65W/33SWNE		
<b>Location ID</b>	<a href="#">323570</a>		
<b>Operator / #</b>	EXTRACTION OIL & GAS INC / 10459		
<b>Field</b>	GREELEY / 32760		
<b>County, State</b>	WELD, CO		
<b>Lat/Long</b>	40.444634 / -104.665779		
	<input checked="" type="checkbox"/>	Planned Location	As Drilled
<b>Facility Status</b>	CL	<b>Location</b>	SWNE 33 6N65W
<b>Facility Status Date</b>	09/28/2018		
<b>Facility Entities</b>	<input checked="" type="checkbox"/>	Tank Battery (Off-Site)	Pits
	<input checked="" type="checkbox"/>	Wells	<input checked="" type="checkbox"/> Off-Location Flowlines ( <b>Form 44</b> )
		Domestic Taps	<input checked="" type="checkbox"/> On-Location Flowlines ( <b>Form 42</b> )
		Electric Utilities	
<b>Equipment on Site</b>	<input checked="" type="checkbox"/>	No	Yes
		If yes, list:	
		Pit mouse/rat holes, cellars backfilled	
<b>Access Road</b>	<input checked="" type="checkbox"/>	Regraded	<input checked="" type="checkbox"/> Contoured
		Culverts Removed	<input checked="" type="checkbox"/> Gravel Removed
		Pre-Existing: must provide supporting documentation	
<b>Environment Incidents &amp; Remediation</b>	<input checked="" type="checkbox"/>	None	Spill or Release ( <b>Form 19</b> )
		Remediation ( <b>Form 27/27A</b> )	
<b>Variance Requests</b>	<b>No Variance Requests were detected during this QA &amp; QC Audit.</b>		
<b>Inspection Corrective Actions (CA)s</b>	<b>Corrective Actions (CA)s were detected during the QA &amp; QC Audit.</b>		
	<p><b>CA Overall Status:</b> 1 of 1 Completed</p> <p><b>CA-Approving Inspection Doc # &amp; Date:</b> <a href="#">691200779</a> &amp; 11/09/2018</p> <ul style="list-style-type: none"> <li>○ <b>Inspector:</b> Bret Evins</li> </ul> <p><b>Originating Field Inspection Report (FIR) Doc #:</b> <a href="#">684904909</a> &amp; 01/29/2018</p> <ul style="list-style-type: none"> <li>○ <b>CA Date:</b> 01/23/2018</li> </ul> <p>Unused riser at wellhead. See Photo 3. Comply with Rule 603.f. For unused, unmarked flowline risers 24 hrs to lock out tag out. 30 days to remove riser.</p>		
	<b>Complete ECMC Inspection Search Results:</b> <a href="#">Link</a>		

<p><b>Sundry Notice (Form 4)</b></p>	<p><b>Form 4 Doc # &amp; Date:</b> <a href="#">402199999</a> &amp; 10/23/2019</p> <ul style="list-style-type: none"> <li>○ <b>Purpose:</b> Report of Work Done: Final Reclamation Implementation</li> <li>○ <b>Comments:</b> This form was prepared as notice of successful completion of reclamation implementation (earthwork and seeding) and intent to maintain reclamation until site conditions support completion of a vegetation assessment and submittal of a Final Reclamation Completion Notice (FRCN). In accordance with ECMC Rule 306.f, a landowner consultation on the conditions of the final reclamation was completed on 7/31/2019 via on site. The site has been prepared for return to agriculture and shall be seeded by the landowner with their desired crop.</li> <li>○ <b>Attachments:</b> Aerial Photograph Document #<a href="#">402200011</a></li> </ul>
<p><b>On Location Flowlines (Form 42)</b></p>	<p><b>Form 42s were detected during the QA &amp; QC Audit.</b> See individual scout card data for details.</p>
<p><b>Off-Location Flowlines (Form 44)</b></p>	<p><b>Form 44 Doc # &amp; Date:</b> <a href="#">401896378</a> &amp; 02/28/2019</p> <ul style="list-style-type: none"> <li>○ <b>Purpose:</b> Off Location Flowline Abandonment</li> <li>○ <b>Abandonment Date:</b> 11/05/2018</li> <li>○ <b>ECMC Approval Date &amp; Signee:</b> 02/28/2019 by Jeff Robbins</li> <li>○ <b>Operator Comments:</b> Flowline was removed on 11-5-18.</li> </ul> <p><b>Flowline Facility Information</b></p> <ul style="list-style-type: none"> <li>○ <b>ECMC Flowline ID:</b> <a href="#">460501</a></li> <li>○ <b>Operator Flowline ID:</b> 12313211FL</li> <li>○ <b>Status &amp; Date:</b> AC &amp; 02/28/2019</li> <li>○ <b>Flowline Type:</b> Production Line</li> <li>○ <b>Type of Fluids Transported:</b> Multiphase</li> <li>○ <b>Start Point Location ID:</b> <a href="#">323570</a></li> <li>○ <b>Start Point Riser Lat/Long:</b> 40.445129 / -104.666373 (Hungenberg #7-33 Well)</li> <li>○ <b>Equipment at Start Point:</b> Well</li> <li>○ <b>End Point Location ID:</b> <a href="#">448669</a></li> <li>○ <b>End Point Riser Lat/Long:</b> 40.446420 / -104.668022 (Hungenberg TB Location 7-33 Production Facilities)</li> <li>○ <b>Equipment at End Point:</b> Separator</li> </ul>
<p><b>Field Inspection Form (Form INSP)</b></p>	<p><b>Form INSP Doc # &amp; Date:</b> <a href="#">691200779</a> &amp; 11/09/2018</p> <ul style="list-style-type: none"> <li>○ <b>Status Summary:</b> None Checked</li> <li>○ <b>Inspected Facilities:</b> Well HUNGENBERG 7-33</li> </ul>

	<ul style="list-style-type: none"> <li>○ <b>Inspection Status:</b> PA</li> <li>○ <b>Inspection Date &amp; Inspector:</b> 11/09/2018 by Bret Evins</li> <li>○ <b>Comments:</b> This is a PLUGGED &amp; ABANDONED well site inspection. The well appears to have been P&amp;A'd. All battery site equipment has been removed. Wellhead still appears at wellsite ground surface. Has not been cut or capped. Refer to FIR #<a href="#">691200778</a> and/or Facility ID #<a href="#">448670</a> for tank battery info.</li> <li>○ <b>Attachments:</b> Photo Document #<a href="#">691200781</a></li> </ul> <p><b>Form INSP Doc # &amp; Date:</b> <a href="#">684904909</a> &amp; 01/29/2018</p> <ul style="list-style-type: none"> <li>○ <b>Status Summary:</b> Follow Up Inspection Required, Corrective Action Response Requested</li> <li>○ <b>Inspected Facilities:</b> Well HUNGENBERG 7-33</li> <li>○ <b>Inspection Status:</b> SI</li> <li>○ <b>Inspection Date &amp; Inspector:</b> 01/22/2018 by Conor Pesicka</li> <li>○ <b>Comments:</b> Idle Well SI, last produced Jun 2017. Bradenhead plumbed to surface. Unused riser at wellhead.</li> <li>○ <b>Corrective Action:</b> Comply with Rule 603.f . For unused, unmarked flowline risers 24 hrs to lock out tag out. 30 days to remove riser. <b>CA Date:</b> 01/23/2018</li> <li>○ <b>Attachments:</b> Photo Document #<a href="#">684904911</a></li> </ul>
<p><b>COGIS Tank Facilities Information (Scout Card)</b></p>	<p><b>Tank Battery Name:</b> Hungenberg Battery 7-33</p> <p><b>FACILITY ID:</b> <a href="#">448670</a></p> <ul style="list-style-type: none"> <li>○ <b>Status &amp; Date:</b> AC &amp; 12/12/2016</li> <li>○ <b>Lat/Long:</b> 40.446206 / -104.668135</li> <li>○ <b>Note:</b> This is an off-site tank battery located at Location ID <a href="#">448669</a>.</li> </ul>
<p><b>COGIS Well Information (Scout Card)</b></p>	<p><b>Well Name:</b> HUNGENBERG #7-33</p> <p><b>API#:</b> <a href="#">05-123-13211</a></p> <p><b>FACILITY ID:</b> 245416</p> <ul style="list-style-type: none"> <li>○ <b>Status &amp; Date:</b> PA &amp; 09/28/2018</li> <li>○ <b>Lat/Long As Drilled:</b> 40.445110 / -104.666350</li> <li>○ <b>Form 6 Subsequent Doc # &amp; Date:</b> <a href="#">401796637</a> &amp; 03/14/2019</li> <li>○ <b>Form 42 Doc # &amp; Date:</b> <a href="#">401945430</a> &amp; 02/20/2019</li> </ul> <p><b>Purpose:</b> Offset Mitigation Completed. This well was mitigated per the Horizontal Offset Policy. Permitted horizontal well requiring mitigation - API # <a href="#">123-45281</a>. Appropriate documentation for mitigation has been/will be submitted.</p>

	<ul style="list-style-type: none"> <li>○ <b>Form 42 Doc # &amp; Date:</b> <a href="#">401826399</a> &amp; 11/05/2018 <b>Purpose:</b> Flowlines Abandoned – per RULE 1103. Date Completed: 08/10/2018</li> <li>○ <b>Form 42 Doc # &amp; Date:</b> <a href="#">401771872</a> &amp; 09/24/2018 <b>Purpose:</b> Start of Plugging Operations – 48-hour notice required</li> <li>○ <b>Form 4 Doc # &amp; Date:</b> <a href="#">401149885</a> &amp; 12/02/2016 <b>Purpose:</b> Interim reclamation complete, site ready for inspection.</li> </ul>
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ECMC Abbreviations: [Location & Facility Status Codes](#), [Inspection Types & Statuses](#) and [ECMC Help](#).

## Audit Key Findings – Designation Land Use Observations

PREVIOUS LAND USE	CURRENT LAND USE
<b>Reference Imagery for Infrastructure:</b> DRCOG 2014	<b>Remotely Sensed Imagery:</b> 23 Mar 2023; 23 Aug 2023
<b>Designation:</b> Oil & Gas Facility	<b>Designation:</b> Cropland

### 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

## Site Observation Notes

No additional information.

## Closure Information

Hungenberg #7-33 well (API #[05-123-13211](#)) is located in Weld County, Colorado near the intersection of N. Balsam Ave and County Road 64. The well was accessed via a well access road off of N. Balsam Ave. There is an Off-Location Flowline between this well and production facility Hungenberg TB Location 7-33 [448669](#).

There was a Corrective Action at this location in 2018 due to an unused riser at the wellhead. This was resolved and the ECMC approved the CA in an inspection in 2018.

Hungenberg #7-33 well (API #[05-123-13211](#)) was plugged and abandoned on 09/28/2018. The access road was reclaimed at this time. The associated facility, Hungenberg TB Location 7-33 [448669](#), was closed and reclaimed in 2018.

Soil Sage drone imagery confirms that no equipment was left on site at this location after reclamation activities occurred.

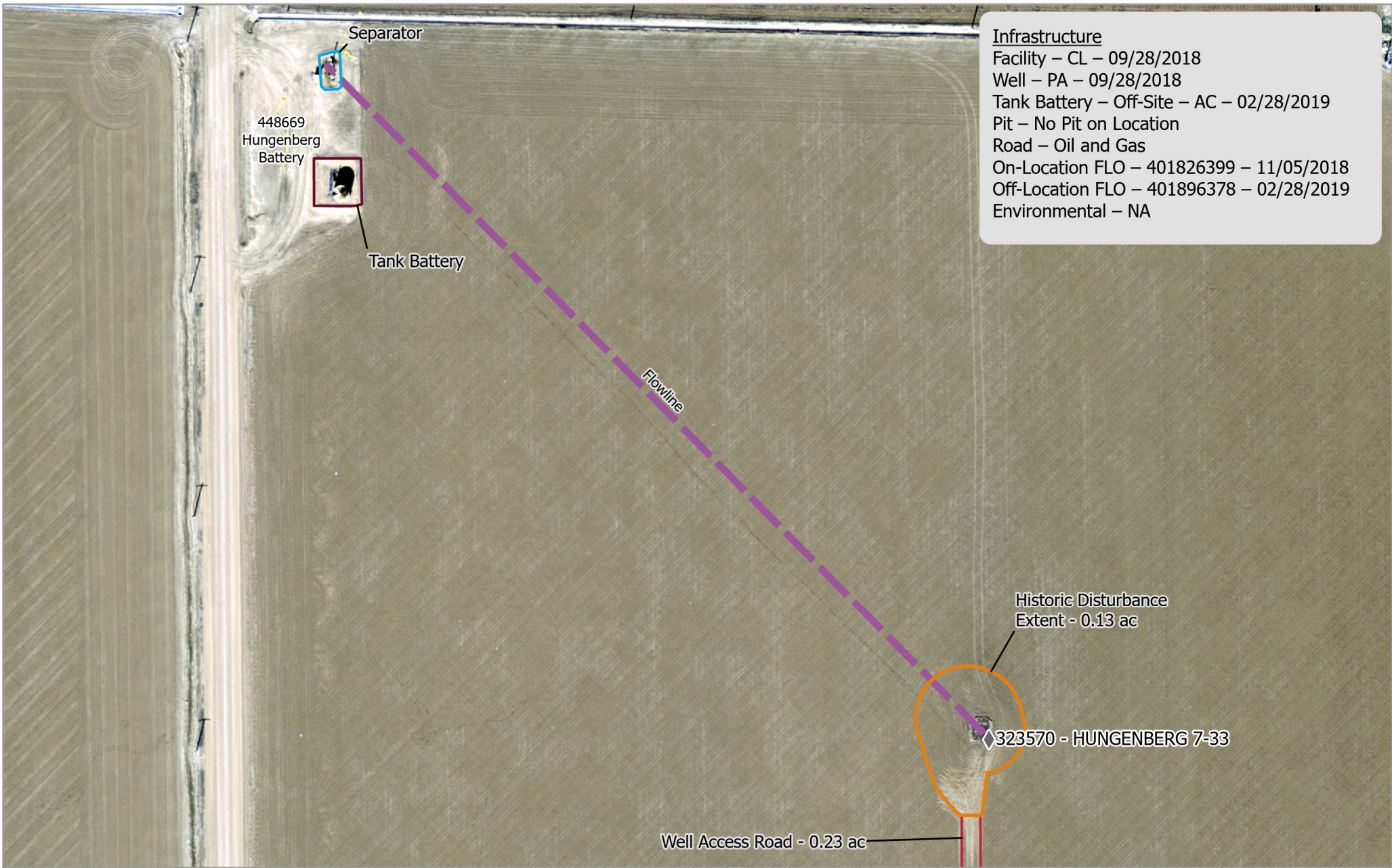
## Summary Acreage Table

Description	Acres
Historic Disturbance Extent	0.50
Access Road	0.37
Flowline	Not Included
Tank Battery	Off-Site
Well Pad	0.13

## Drone Information

Make	DJI
Model	M300
Image Processing Software	Pix4dfields – RGB/Multispectral Imagery & Pix4dmatic – RGB Imagery
Pilot Name	Sam Streeter
Pilot FAA Certificate Number	4100157
Date of FAA Certificate Issuance	12/23/2023 (original 03/24/2018)

# Pre-Plugging Active Operations Location Overview



**CIV - 323570 - HUNGENBERG 7-33**  
**Map Extent - Pre-Plugging Overview**

Imagery: DRCOG  
 Imagery Date: 2014  
 Map Date: 17 Dec 2023  
 Datum: WGS 1984 UTM Zone 13N  
 POC: Soil Sage

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

0 30 60 Meters

Total Disturbance:  
0.36 Acres

Scale: 1:1,100

Pad Location:  
40.445110  
-104.666350

N



**Infrastructure**

Facility – CL – 09/28/2018

Well – PA – 09/28/2018

Tank Battery – Off-Site – AC – 02/28/2019

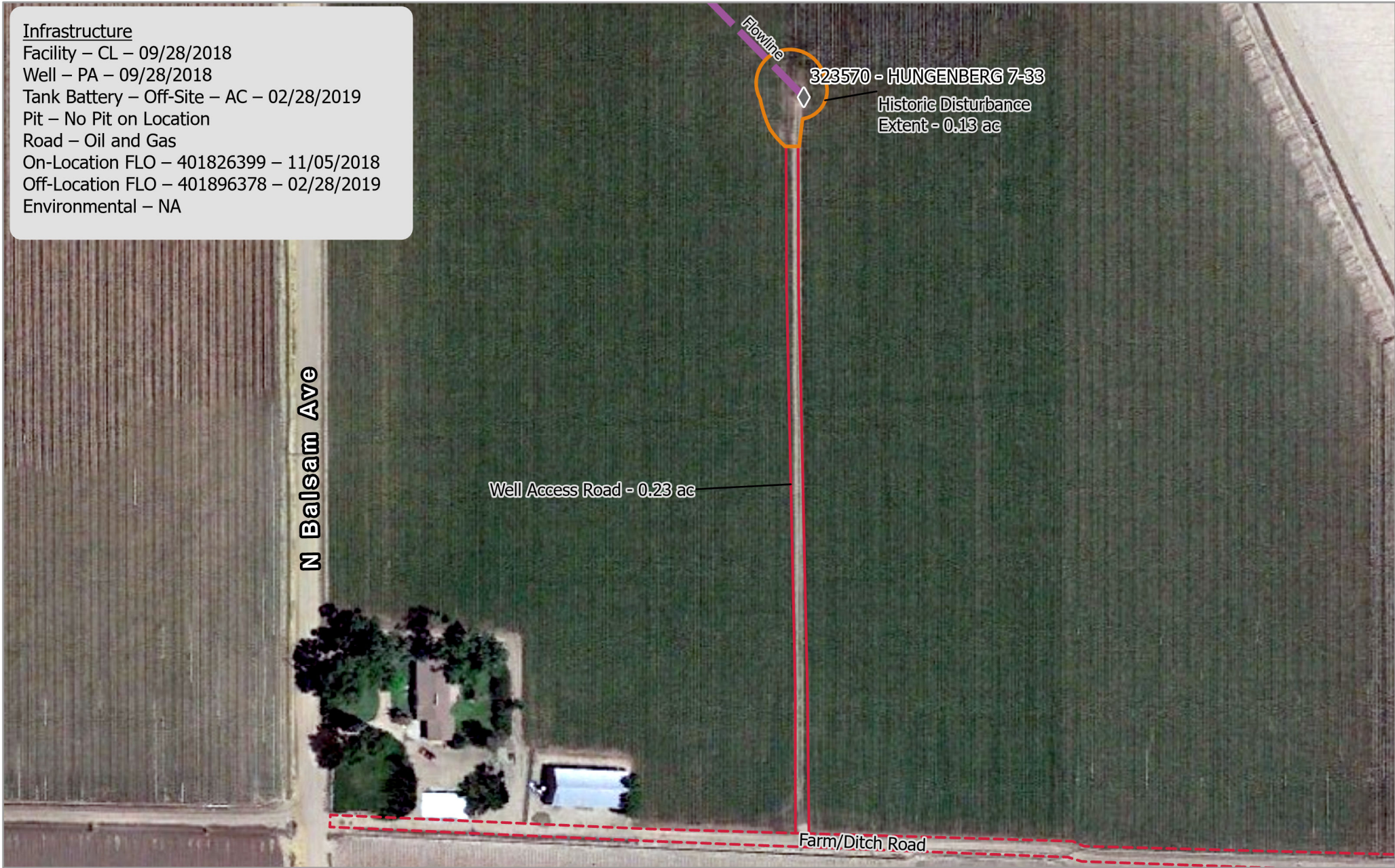
Pit – No Pit on Location

Road – Oil and Gas

On-Location FLO – 401826399 – 11/05/2018

Off-Location FLO – 401896378 – 02/28/2019

Environmental – NA



**CIV - 323570 - HUNGENBERG 7-33**

**Map Extent - Pre-Plugging Road**

**Overview**

Imagery: Landsat/Copernicus

Imagery Date: 19 Jul 2014

Map Date: 17 Dec 2023

Datum: WGS 1984 UTM Zone 13N

POC: Soil Sage

**Legend**

- ◆ Wells
- Flowline
- Historic Disturbance Extent
- Road



Scale: 1:1,700

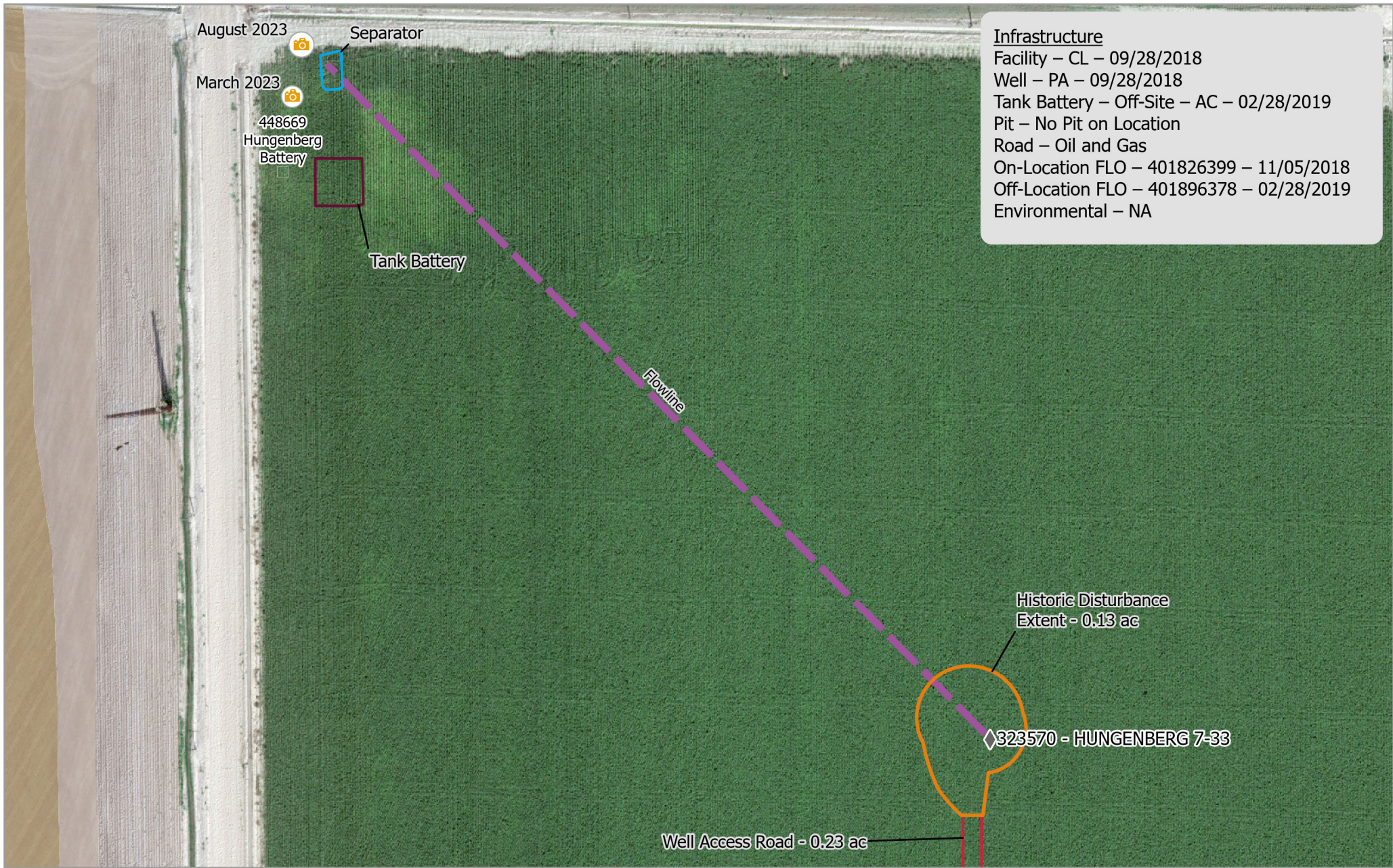
Pad Location:  
40.445110  
-104.666350



Service Credits - Maxar, Microsoft



## Post-Plugging and Abandonment Location Overview



**Infrastructure**  
 Facility – CL – 09/28/2018  
 Well – PA – 09/28/2018  
 Tank Battery – Off-Site – AC – 02/28/2019  
 Pit – No Pit on Location  
 Road – Oil and Gas  
 On-Location FLO – 401826399 – 11/05/2018  
 Off-Location FLO – 401896378 – 02/28/2019  
 Environmental – NA

**CIV - 323570 - HUNGENBERG 7-33**  
**Map Extent - Post-Plugging Overview**

Imagery: RS Orthomosaic, DSM  
 Imagery Date: 23 Aug 2023, 23 March 2023  
 Map Date: 17 Dec 2023  
 Datum: WGS 1984 UTM Zone 13N  
 POC: Soil Sage

◆ Wells	▭ Historic Disturbance Extent
📷 Photo Points	▭ Road
— Flowline	▭ Tank Battery
	▭ Separator

0 30 60 Meters

Total Disturbance: 0.36 Acres  
 Scale: 1:1,100

Pad Location:  
 40.445110  
 -104.666350

N



Service Credits - Maxar, Microsoft

**Infrastructure**

Facility – CL – 09/28/2018

Well – PA – 09/28/2018

Tank Battery – Off-Site – AC – 02/28/2019

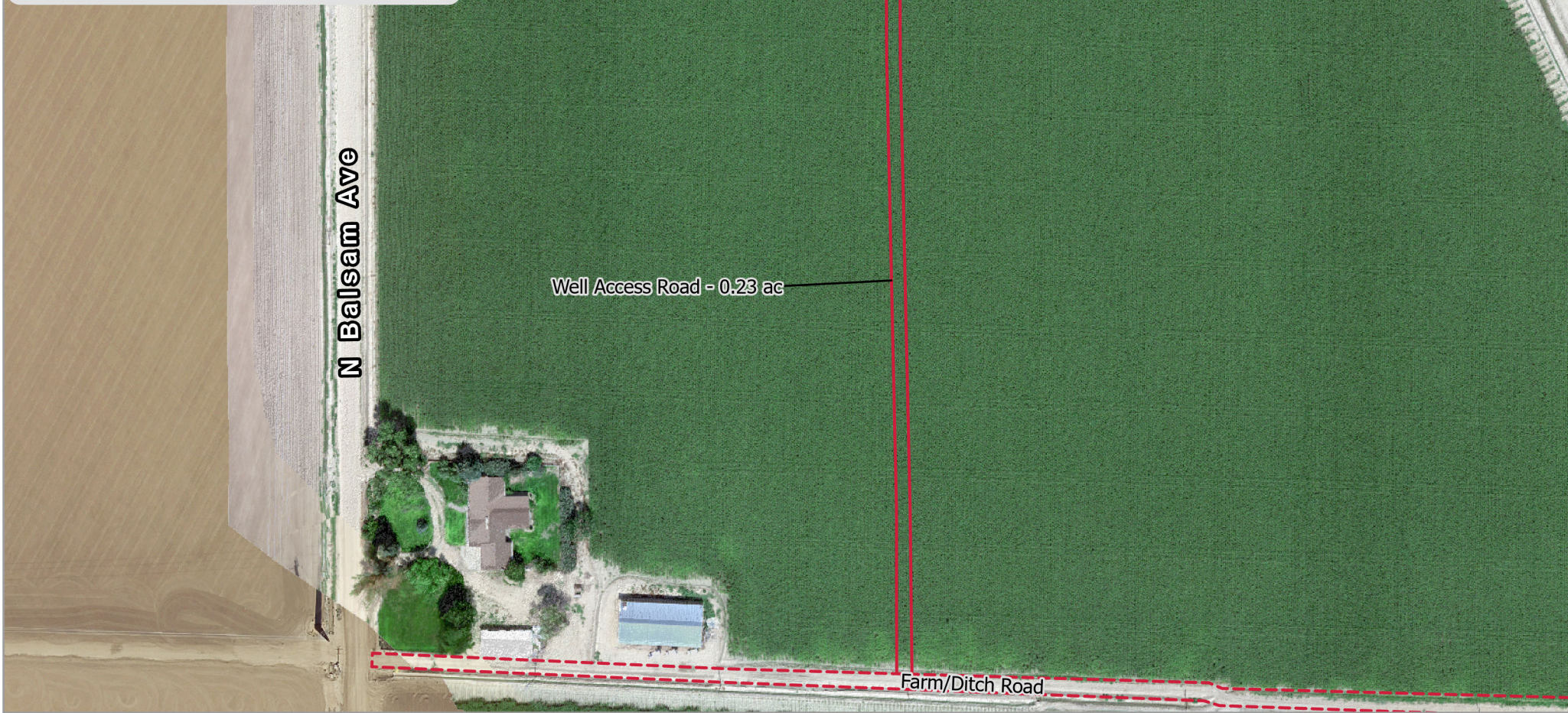
Pit – No Pit on Location

Road – Oil and Gas

On-Location FLO – 401826399 – 11/05/2018

Off-Location FLO – 401896378 – 02/28/2019

Environmental – NA



**CIV - 323570 - HUNGENBERG 7-33**  
**Map Extent - Post-Plugging Road**  
**Overview**

Imagery: RS Orthomosaic, DSM  
Imagery Date: 23 Aug 2023, 23 March 2023  
Map Date: 17 Dec 2023  
Datum: WGS 1984 UTM Zone 13N  
POC: Soil Sage

**Legend**

- ◆ Wells
- Flowline
- ▭ Historic Disturbance Extent
- ▭ Road



Total Disturbance:  
0.50 Acres  
Scale: 1:1,700

Pad Location:  
40.445110  
-104.666350



Service Credits - Maxar, Microsoft

## Cardinal Directional Drone Photos & Reference Area Photos

*Site Investigation and Photos Date*

23 Aug 2023

*Drone Photo Height*

150 feet

Cardinal directional photos of the site. Reference overview map.





**In View** – Well, Access Road, Flowline

**EAST** – 40.444596 / -104.666758



**In View** – Well, Access Road, Flowline

**SOUTH** – 40.445528 / -104.665789



**In View – Well, Tank Battery, Access Road, Flowline**

**WEST – 40.444593 / -104.664482**



**In View – Well, Tank Battery, Flowline**

**NORTHWEST – 40.443835 / -104.665205**



**In View – Well, Tank Battery, Access Road, Flowline**      **OVERHEAD– 40.443835 / -104.665206**



**In View – Tank Battery, Access Road, Flowline**      **NORTH – 40.445212 / -104.667934**



**In View – Tank Battery, Access Road, Flowline**

**EAST – 40.446184 / -104.668919**



**In View – Tank Battery, Access Road, Flowline**

**SOUTH – 40.447513 / -104.668820**



**In View – Tank Battery, Access Road, Flowline**

**WEST – 40.446260 / -104.667053**



**In View – Tank Battery, Access Road, Flowline**

**SOUTHEAST – 40.447132 / -104.668795**

# Off-Location Tank Battery Within Cropland – Handheld Photographic Evidence

## Site Investigation and Photos Date

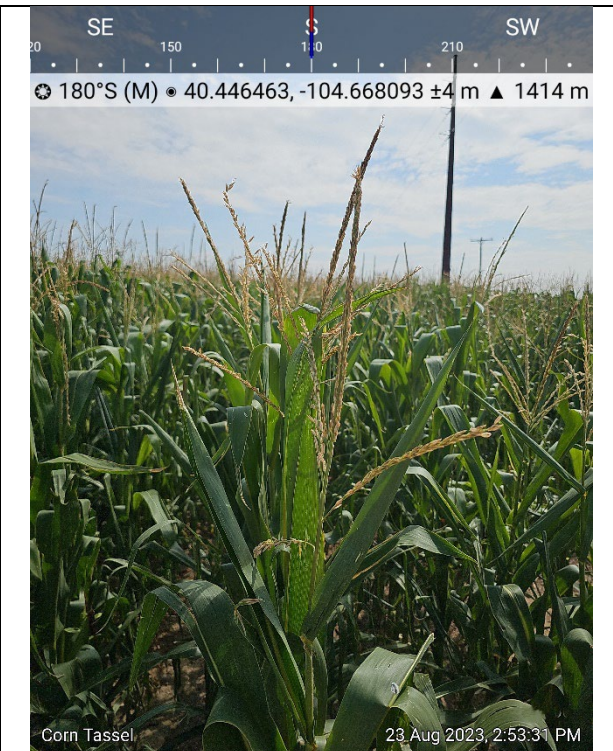
23 Aug 2023

Handheld photos taken from N. Balsam Ave looking East and South towards Hungenberg 7-33 Well from the [448669](#) Hungenberg Tank Battery. No handheld photos taken from Hungenberg 7-33 Well due to crop height.

<p>Looking East towards flowline and wellhead from tank battery and separator location – 40.446335 / -104.668244</p>	<p>Looking South from tank battery and separator location – 40.446497 / -104.667108</p>



Looking South from tank battery and separator location at corn field – 40.446488 / -104.668073



Looking South from tank battery and separator location at corn tassel – 40.446463 / -104.668093



Looking at Corn Ear from tank battery and separator location – 40.446459 / -104.668090

## Cardinal Directional Drone Photos Showing No Equipment Remaining

*Site Investigation and Photos Date*

23 Mar 2023

*Drone Photo Height*

235 feet

No handheld photos due to recent planting/plowing. Cardinal directional photos of the site. Reference overview map.



**In View** – Well, Tank Battery, Access Road, Flowline

**NORTH** – 40.442491 / -104.666568



**In View – Well, Access Road, Flowline**

**EAST – 40.444032 / -104.669130**



**In View – Well, Access Road, Flowline**

**SOUTH – 40.446681 / -104.665732**



**In View** – Well, Tank Battery, Access Road, Flowline

**WEST** – 40.444942 / -104.663541

# Tank Battery Within Cropland – Handheld Photographic Evidence

*Site Investigation and Photos Date*

23 Mar 2023

Handheld photos taken from N. Balsam Ave. looking at tank battery and separator location.



Looking North at tank battery and separator location – 40.446373 / 104.668121



Looking East at tank battery and separator location – 40.446362 / -104.668122



Looking East at tank battery and separator location – 40.446367 / -104.668118



Looking South at tank battery and separator location – 40.446358 / -104.668120



Looking West at tank battery and separator location – 40.446368 / -104.668128

# ATTACHMENTS

## Maps and Figures

### *Area Maps*

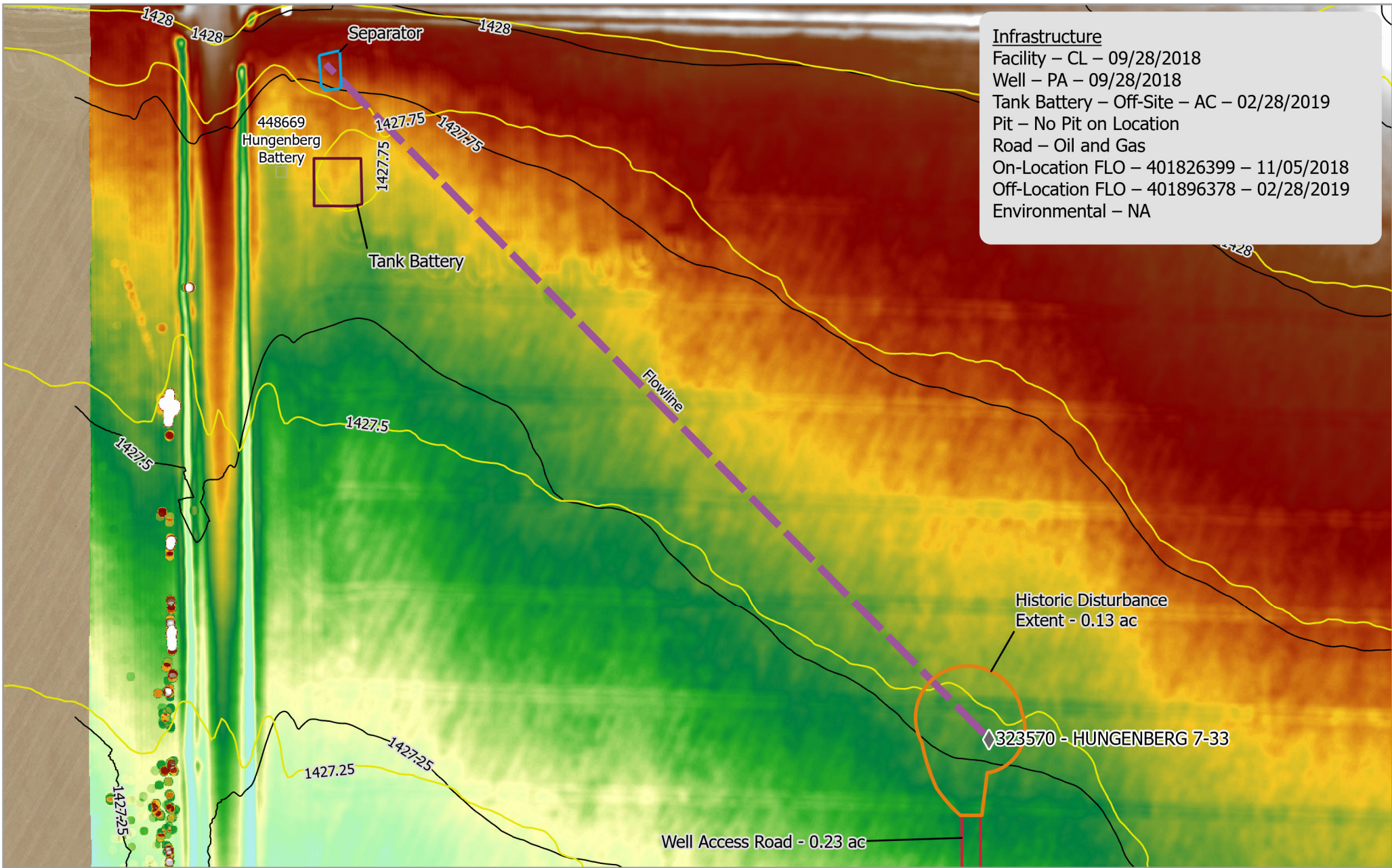
Elevation & Contours

Hydrology

## Background Information

### *Natural Resources Conservation Service (NRCS) Map Unit Description*

Reference Soil Document



**Infrastructure**  
 Facility – CL – 09/28/2018  
 Well – PA – 09/28/2018  
 Tank Battery – Off-Site – AC – 02/28/2019  
 Pit – No Pit on Location  
 Road – Oil and Gas  
 On-Location FLO – 401826399 – 11/05/2018  
 Off-Location FLO – 401896378 – 02/28/2019  
 Environmental – NA

**CIV - 323570 - HUNGENBERG 7-33**  
**Map Extent - Elevation & Contours**

Imagery: RS DSM, CWCB  
 Imagery Date: 23 March 2023, 2014  
 Map Date: 17 Dec 2023  
 Datum: WGS 1984 UTM Zone 13N  
 POC: Soil Sage

◆ Wells	□ Tank Battery
~ 0.25 m Contour (2023)	□ Separator
~ 0.25 m Contour (2014)	Elevation
— Flowline	Meters
○ Historic Disturbance Extent	1456
□ Road	1408

0 30 60 Meters

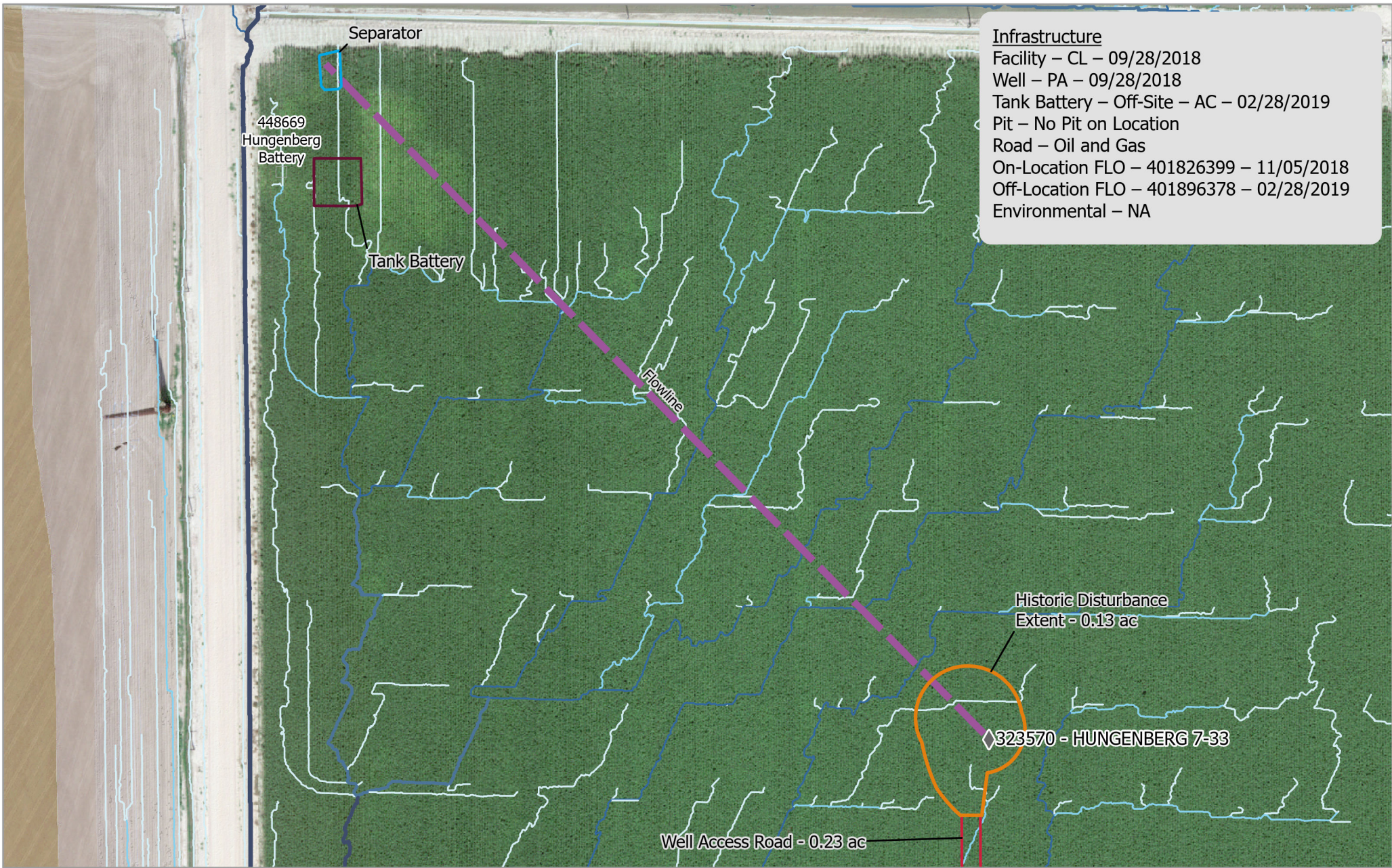
Total Disturbance: 0.36 Acres  
 Scale: 1:1,100

Pad Location:  
 40.445110  
 -104.666350

N



Service Credits - Maxar, Microsoft



**Infrastructure**  
 Facility – CL – 09/28/2018  
 Well – PA – 09/28/2018  
 Tank Battery – Off-Site – AC – 02/28/2019  
 Pit – No Pit on Location  
 Road – Oil and Gas  
 On-Location FLO – 401826399 – 11/05/2018  
 Off-Location FLO – 401896378 – 02/28/2019  
 Environmental – NA

**CIV - 323570 - HUNGENBERG 7-33**  
**Map Extent - Hydrology**

Imagery: RS Orthomosaic, DSM  
 Imagery Date: 23 Aug 2023, 23 March 2023  
 Map Date: 17 Dec 2023  
 Datum: WGS 1984 UTM Zone 13N  
 POC: Soil Sage

◆ Wells	Stream Order
— Flowline	1
— Historic Disturbance Extent	2
— Road	3
— Tank Battery	4
— Separator	5
	6

0 30 60 Meters

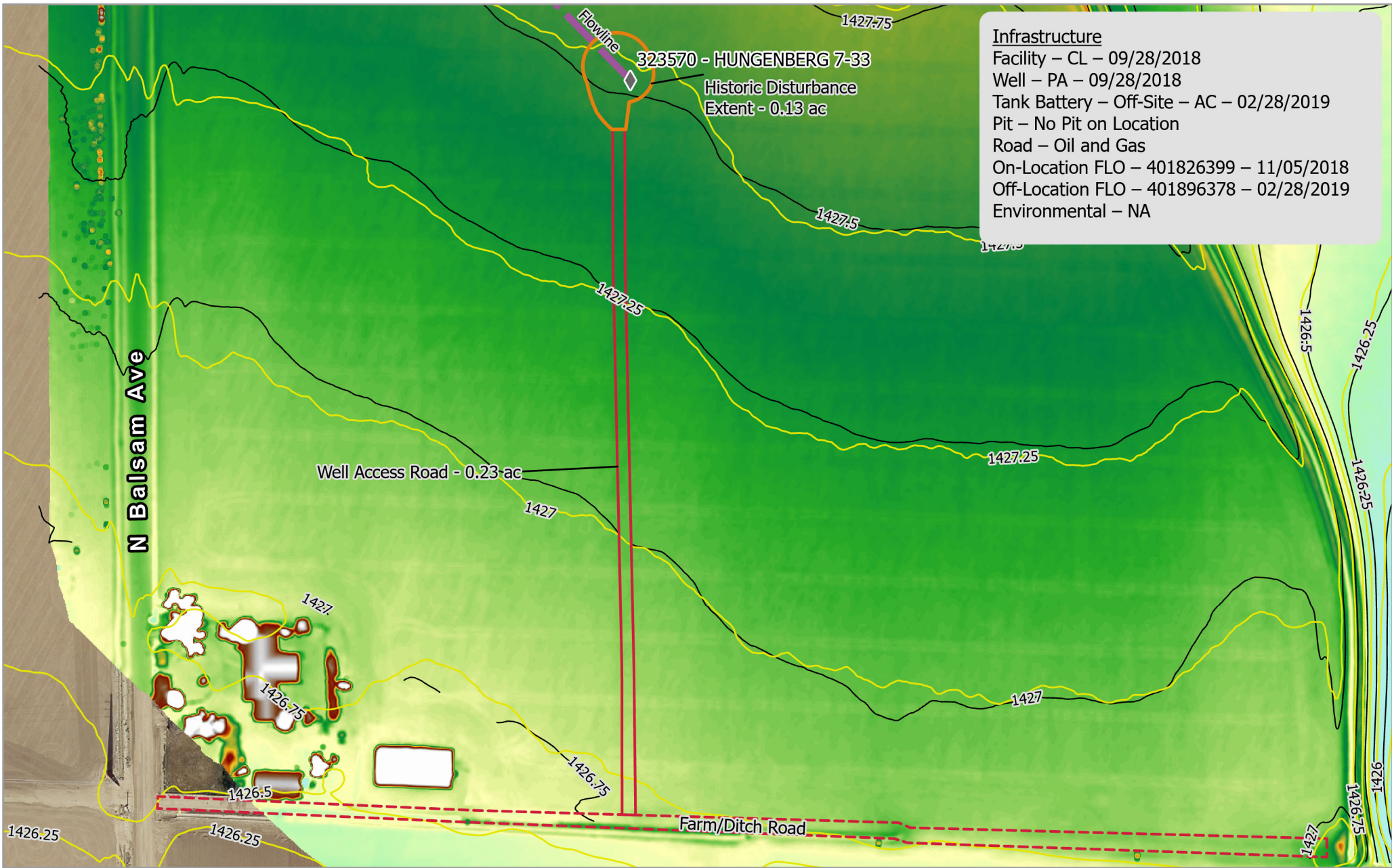
Total Disturbance:  
0.36 Acres

Scale: 1:1,100

Pad Location:  
40.445110  
-104.666350



Service Credits - Maxar, Microsoft



**Infrastructure**  
 Facility – CL – 09/28/2018  
 Well – PA – 09/28/2018  
 Tank Battery – Off-Site – AC – 02/28/2019  
 Pit – No Pit on Location  
 Road – Oil and Gas  
 On-Location FLO – 401826399 – 11/05/2018  
 Off-Location FLO – 401896378 – 02/28/2019  
 Environmental – NA

**CIV - 323570 - HUNGENBERG 7-33**  
**Map Extent - Access Road Elevation & Contours**

Imagery: RS DSM, CWCB  
 Imagery Date: 23 March 2023, 2014  
 Map Date: 19 Dec 2023  
 Datum: WGS 1984 UTM Zone 13N  
 POC: Soil Sage

◆ Wells	□ Road
~ 0.25 m Contour (2023)	Elevation
~ 0.25 m Contour (2014)	Meters
— Flowline	1456
□ Historic Disturbance Extent	1408

0 50 100 Meters

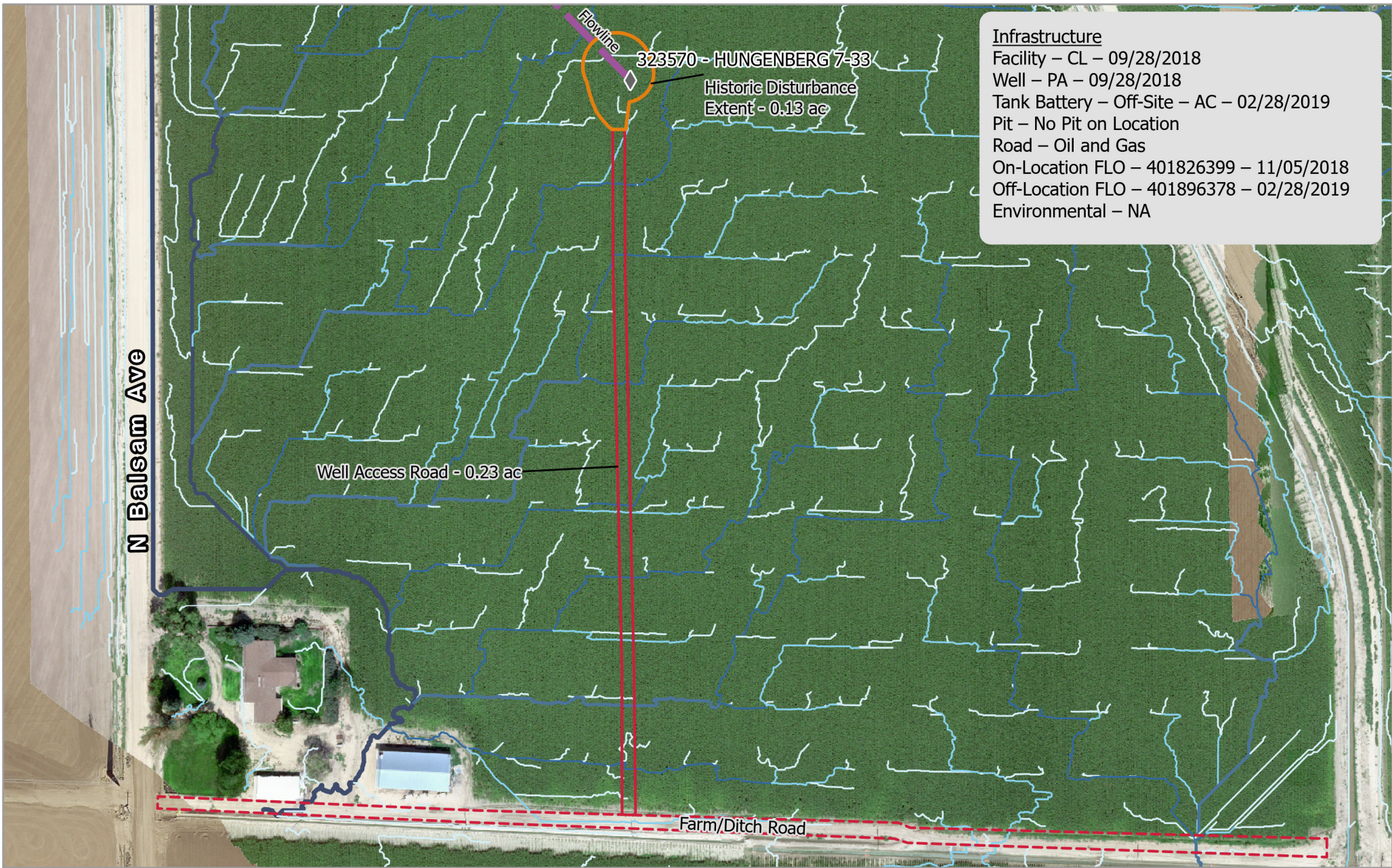
Scale: 1:1,700

Pad Location:  
 40.445110  
 -104.666350

N



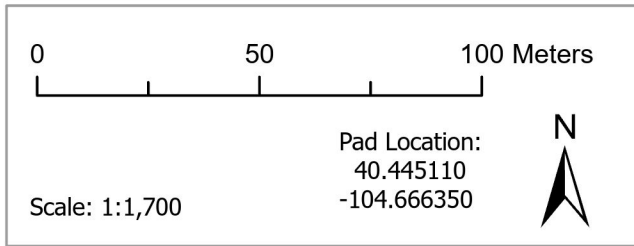
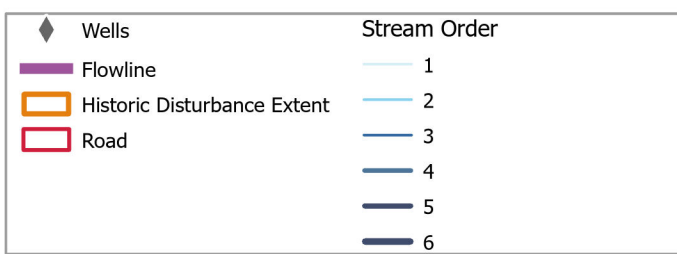
Service Credits - Maxar, Microsoft



**Infrastructure**  
 Facility – CL – 09/28/2018  
 Well – PA – 09/28/2018  
 Tank Battery – Off-Site – AC – 02/28/2019  
 Pit – No Pit on Location  
 Road – Oil and Gas  
 On-Location FLO – 401826399 – 11/05/2018  
 Off-Location FLO – 401896378 – 02/28/2019  
 Environmental – NA

**CIV - 323570 - HUNGENBERG 7-33**  
**Map Extent - Access Road Hydrology**

Imagery: RS Orthomosaic, DSM  
 Imagery Date: 23 Aug 2023, 23 March 2023  
 Map Date: 19 Dec 2023  
 Datum: WGS 1984 UTM Zone 13N  
 POC: Soil Sage



Service Credits - Maxar, Microsoft

# Soil Properties

## USDA Soil Description

### Reference Soil Information

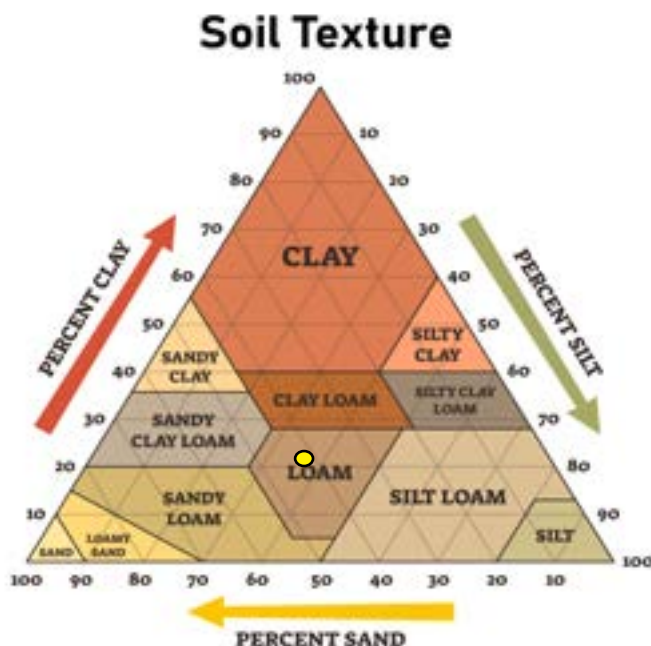
The location of the site is contained within one soil type, Kim loam.

### 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.

## Soil Reference Information

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There is a general relationship of soil bulk density to root growth based on soil texture. Bulk densities ideal for root growth are less than 1.60 g/cc for sandy textures, less than 1.40 g/cc for loamy textures, and less than 1.10 g/cc for clayey textures. Bulk densities that restrict root growth are greater than 1.80 g/cc for sandy textures, 1.65 g/cc for loamy textures, and 1.47 g/cc for clayey textures.