

Site Specific Final Reclamation Completion Notice – Cropland Drone Imagery

Permit Closure Report – Cropland

Location ID: 327274

Location Name: Succo Gas #4-20

Report Date:

12/13/2024

HWA Wildlife Consulting has reviewed the data provided in this report. 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 Type 2023-Corn

Crop Type 2024-Corn

Quality Assurance & Quality Control Audit

Performed by	HWA Wildlife Consulting, LLC
Audit Date	15 August 2024



Prepared by:

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Location Checklist:

Operator/#	PDC Energy INC #69175			
Location ID & Name	327274 & SUCCO GAS UNIT-62N66W/20NWSE			
County	Weld County, CO			
Well Information	Well Name: Succo Gas #4-20			
	Well API#: 05-123-14423			
	Lat/Long as Drilled: 40.120753/-104.797676			
	Plug Date & Form 6S Doc #: 11/3/2017 & 401475130			
Facility Entities	X	Tank Battery		Pits
	X	Well	X	On-location Flowlines Form 42 Doc #: 401519409
		Domestic Taps		Off-location Flowlines Form 44 Doc #: NA
Equipment On-site	X	None		Debris
		Pit mouse/rat holes, cellars backfilled		
Access Road	X	Regraded	X	Contoured
	NA	Culvert removed	X	Gravel removed
		Pre-Existing: must provide supporting documentation		
Reclamation Status	X	Location and associated disturbances reclaimed		
		Subsidence		
Spills or Releases (Form 19)		No	X	Yes
Site Investigation and Remediation Workplan (Form 27/27A)		No	X	Yes
On-Location Flowlines		No	X	Yes
Off-Location Flowlines		No	X	Yes
Inspection Corrective Actions		No	X	Yes
Sundry Notice	Form 4 Doc # & Date:		402016688 & 4/29/2019	
	Purpose		Purpose: Rule 502 variance requested	
	Comments:		Variance Request for the Succo Gas GU 4,43-20 tank battery/access road and the access road for Succo GU 3-20 access road that is being used by another	

		operator and a drive way for the current home
Drone Information	Make and Model	DJI Phantom 4 Pro & WM331S
	Image Processing Software	Drone Deploy
	Pilot Name & FAA Certification #	Emily Schmidt & 5021087
	Date of FAA Certificate Issuance	24 June 2024

Location Checklist:

Name	SUCCO GAS UNIT-62N66W/20NWSE		
Location ID	327274		
Operator/#	PDC ENERGY INC/69175		
Field	Wattenberg/90750		
County, State	Weld, CO		
Lat/Long	40.120918/-104.797700		
	X	Planned location	As Drilled
Facility Status	AC	Location	NWSE 20 2N66W
Facility Status Date	11/3/2017		
Facility Entities	X	Tank Battery (Off-Site)	Pits
	X	Wells	X On-Location Flowlines
		Domestic Taps	X Off-Location Flowlines
		Electric Utilities	
Equipment On-site	X	No	Yes
		Pre-Existing: must provide supporting documentation	
Access Road	X	Regraded	X Contoured
	NA	Culvert removed	X Gravel Removed
		Pre-existing: must provide supporting documentations	
Environmental Incident and Remediations		None	X Spill or Release (Form 19)
	X	Remediation (Form 27/27A)	
Variance Requests	A final reclamation variance was granted for a portion of the western access road, access road southeast of property owners house that goes to the former tank battery, and the tank battery. Tank battery has been utilized for the intended purpose for farm equipment storage. Location has been built upon and stabilized to minimize erosion per Rule 1004.d.		
Inspection Corrective Actions (CA)s	Corrective Actions (CA)s were detected during the inspection		
Sundry Notice (Form 4)	Form 4 Doc # & Date: 402016688 & 4/29/2019 ○ Purpose: Rule 502 variance requested		

	<ul style="list-style-type: none"> ○ Comment: Variance Request for the Succo Gas GU 4,43-20 tank battery/access road and the access road for Succo GU 3-20 access road that is being used by another operator and a drive way for the current home
On-Location Flowlines (Form 42)	Flowlines abandoned 12/5/2017. Abandonment notice given under Form 42 (401519409).
Off-Location Flowlines (Form 44)	The well was plugged and abandoned on 11/3/2017. The associated flowline was abandoned on 11/3/2017. It is PDC's belief that this flowline was properly abandoned according to the regulations in effect at the time of the abandonment. PDC has diligently searched their records in order to provide all documentation that is available. In accordance with the record keeping requirements within Rule 206.F.1, PDC does not have flowline abandonment notice records to include with this sundry.
Site Investigation and Remediation Workplan (Form 27/27A)	Remediation Project #: 12381 Form 27 Initial Doc # & Date: 401900398 & 1/25/2019 <ul style="list-style-type: none"> ○ Purpose: 909.c.(1), Rule 905: Pit or PW vessel closure ○ Comments: PDC and COGCC discussions, this form services as a closure request for the 2014-2015 removal of the following produced water vessels: Coors Fee 2-6, V 6-4, 5, 6, 12-6; Matt 1; Miller 33-20;; Succo GU 4, 43-20. Form 27A Supplemental Docs # & Date: 402582241 & 2/16/2022 <ul style="list-style-type: none"> ○ Purpose: 909.c.(1), Rule 905: Pit or PW vessel closure ○ Lat/Long of Remediation: 40.120082/-104.797144 ○ Closure Request Approved: 6/15/2020 by Peter Gintautas ○ Final Resolution: Case Resolved on 6/15/2020 ○ Note: Confirmation samples collected from the final excavation extent indicated that hydrocarbon impacts were successfully removed during excavation activities. Reference the attached site-specific approved No Further Action (NFA) requests.
Spill or Release (Form 19)	Form 19 Doc and Date: 400864427 & 7/8/2015 <ul style="list-style-type: none"> ○ Spill/Release Point ID: 442471 ○ Date Discovered: 7/6/2015 ○ Date Closed: 7/24/2015 ○ Notes: On July 6, 2015, a historic release was discovered during dump line replacement and produced water tank removal activities at the Succo GU 4, 43-20 production facility. Approximately 2,530 cubic yards of impacted material were removed and

	<p>transported to the Buffalo Ridge Landfill in Keenesburg, Colorado for disposal under PDC waste manifests. Soil encountered in the excavation area was field screened for (VOC) concentrations using a photoionization detector (PID). Soil samples were collected from the sidewalls and base of the excavation area at depths ranging between 6 feet and 11 feet below ground surface (bgs). Soil samples were submitted to Summit Scientific Laboratories in Golden, Colorado for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, and total petroleum hydrocarbons (TPH) - gasoline range organics (GRO) by USEPA Method 8260B, and TPH - diesel range organics (DRO) by USEPA Method 8015. The soil sample (SS01) collected from the base of the final excavation extent below the former produced water vessel was also submitted for analysis of pH, electrical conductivity (EC), and sodium adsorption ratio (SAR). Analytical results indicated soil samples collected from the final extent of the excavation area exhibited constituent concentrations below COGCC Table 910-1 soil standards. herein, PDC is requesting a No Further Action (NFA) determination for this release.</p>
<p>Field Inspection Form (Form INSP)</p>	<p>Form Inspection Doc # & Date: 697503241 & 9/13/2021</p> <ul style="list-style-type: none"> ○ Status Summary: Corrective action response required ○ Inspection facilities: SUCCO GAS UNIT 4-20 well/ Succo GU 4, 43-20 Battery ○ Inspection Date and Inspector 9/13/2021 & Binschus, Chris ○ Notes: Operator has performed the previous corrective action to reclaim the wellhead location. Vegetation meets Rule 1004 standards; however, now there is subsidence. The surface owner stated the subsidence is impacting flood irrigation and not getting irrigation water all the way to the west. Based on historic aerial imagery from 2020 and field observations, crop growth did appear to be stunted out in the western crop field, which is directly west of the subsidence. There were approximately 3, maybe more, flowline potholes that have also subsided within the crop field where agricultural equipment is used.
<p>COGIS Tank Facilities Information (Scout Card)</p>	<p>Location Name: Succo GU #4, 43-20 Battery Facility ID: 452625 Status & Date: AC & 10/19/2017</p>

	Lat/Long: 40.120082/-104.797144
COGIS Well Facilities Information (Scout Card)	Well name: SUCCO GAS UNIT #4-20 Facility ID: 246626 Status and Date: PA & 11/3/2017 Lat/Long as Drilled: 40.120753/-104.797676

Site Description:

Audit Key Findings – Designation Land Use Observations

PREVIOUS LAND USE	CURRENT LAND USE
Reference imagery for infrastructure: NAIP 2011	Remote sensed Imagery: 8/15/2024
Designation: Oil and Gas Facility	Designation: Cropland

The following imagery sources were reviewed during this investigation:

NAIP Imagery 2005, 2006, 2009, 2011, 2013, 2017, 2019, and 2023.

Closure Information

The Succo Gas #4-20 well (API # 05-123-14423) is located in Weld County, Colorado, near the intersection of County Rd 18 1/2 and County Road 31. The well was plugged and abandoned on November 3rd, 2017. The associated on-location flowline was abandoned on December 9th, 2017. The associated off-location flowline was abandoned on November 3rd, 2017. The Succo Gas #4-20 well was serviced by the Succo GU #4, 43-20 tank battery, which has been permitted separately.

In April 2019, a Variance Request for a 1001.c Surface Owner Waiver was submitted for the Succo GU #4, 43-20 tank battery. A final reclamation variance was granted for a portion of the western access road, the access road southeast of the property owner’s house that goes to the former tank battery, and the tank battery. The tank battery has been utilized for the intended purpose of farm equipment storage.

On July 6th, 2015, a historic release was discovered during dump line replacement and produced water tank removal activities at the Succo GU #4, 43-20 tank battery. Site assessment activities were completed to delineate the lateral extent of remaining hydrocarbon impacts after historic release was discovered during dump line replacement and produced water. Soil excavation activities occurred until contaminated material was removed. The case was resolved on July 24th, 2015.

There was a Site Investigation and Remediation Workplan for the removal of the produced water vessels for the Succo GU #4, 43-20 tank battery. Confirmation samples collected from the final excavation extent indicated that hydrocarbon impacts were successfully removed during excavation activities. The case was closed on July 15th, 2020.

Inspection corrective actions were submitted on September 15th, 2021. The inspection noted that the operator has performed the previous corrective action to reclaim the wellhead location. Vegetation meets Rule 1004 standards; however, now there is subsidence. The surface owner stated the subsidence is impacting flood irrigation and not getting irrigation water all the way to the west. Based on historic aerial imagery from 2020 and field observations, crop growth did appear to be stunted out in the western crop field, which is directly west of the subsidence. There were approximately 3, maybe more, flowline potholes that have also subsided within the crop field where agricultural equipment is used. According to the FIR Resolution form (402913899), the operator stated that the corrective action is complete. COGCC Staff member Chris Binschus spoke with the surface owner on January 4th, 2022, and confirmed that recontouring and backfilling have been completed, although seeding still needs to be performed.

Drone imagery confirms that no equipment remains following reclamation activities. There is no sign of disturbance or stunted crop within the well, access road, flowlines, or TB (not associated within the approved variance).

Drone information:

Make	DJI Phantom Pro
Model	WM331S
Image Processing Software	Drone Deploy
Pilot Name	Emily Schmidt
Pilot Certification Number	5021087
Date of FAA Certification Issuance	24 June 2024

Location Overview:

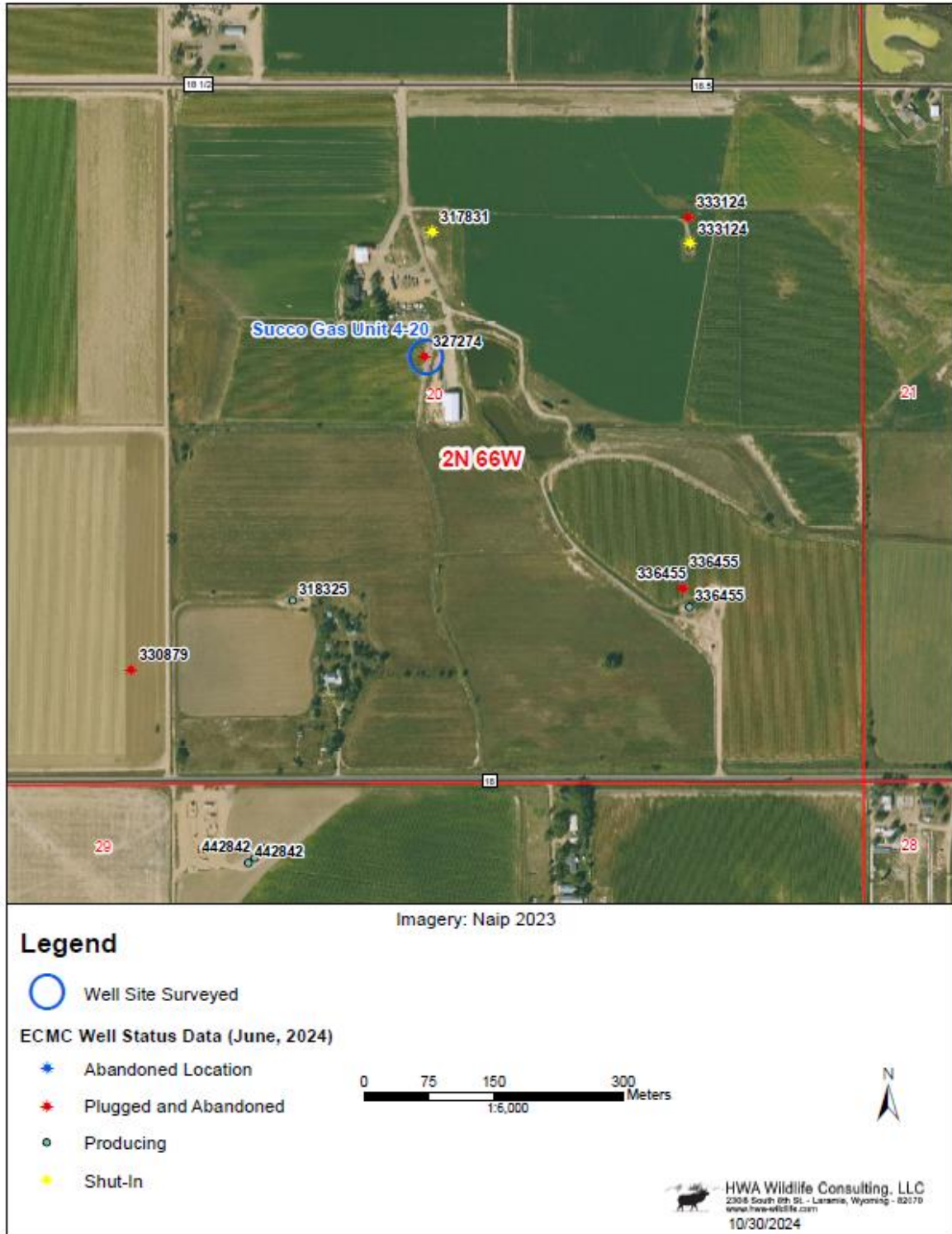


Figure 1. Overview of the reclaimed well site surveyed during 2024.

Pre-Plugging Active Operation Location Overview:



Figure 2. Pre-plugging overview of the reclaimed well site and the associated access road, tank battery, and flowline.

Post-Plugging and Abandonment Location Overview:

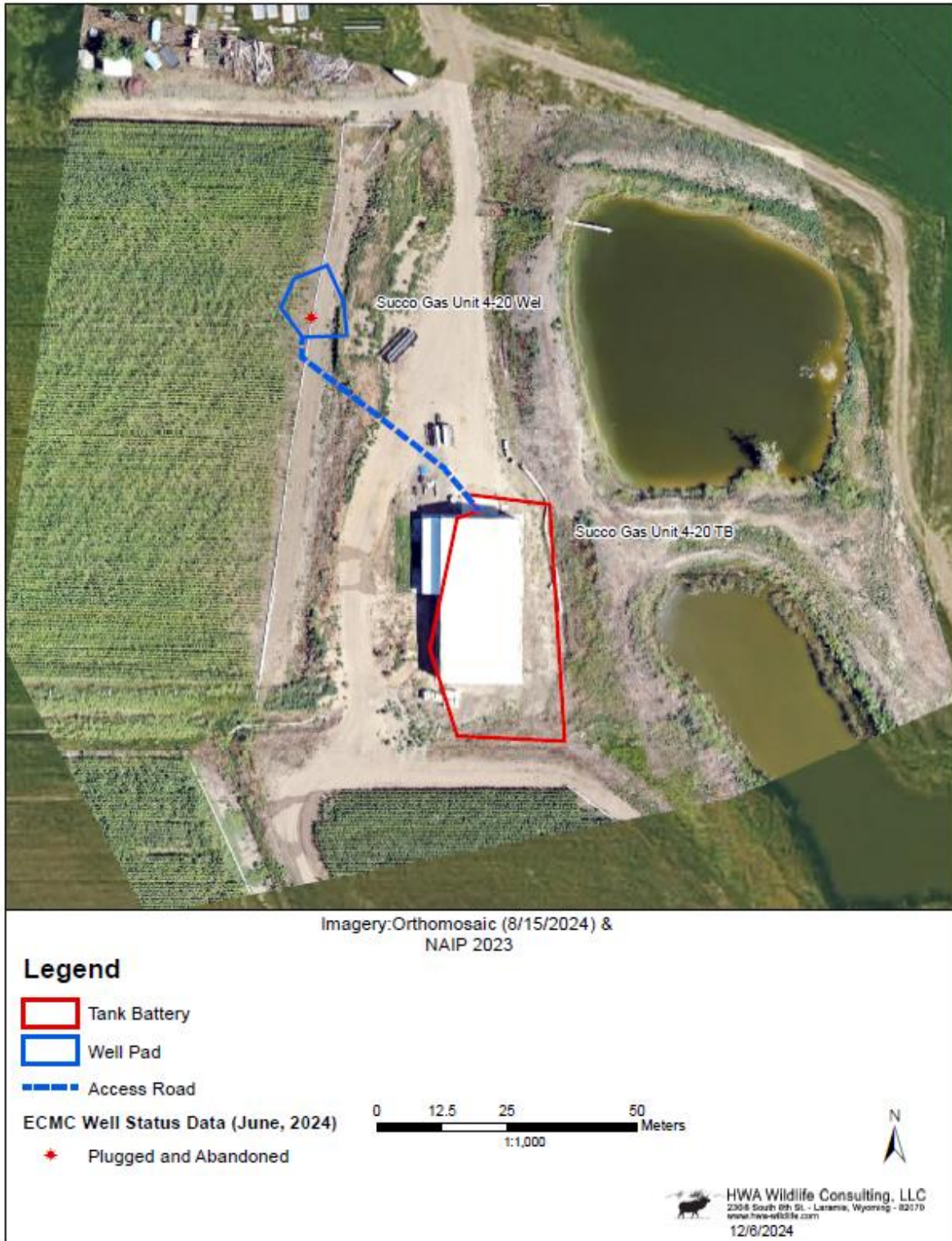


Figure 3. Post-plugging overview of the reclaimed well site and the associated access road, tank battery, and flowline.

Cardinal Directional Drone Photos and Reference Area Photos (8/15/2024):



Figure 4: Looking North towards well, 100 feet in height, Lat/Long: 40.119877/-104.797956.



Figure 5: Looking East towards well, 100 feet in height: Lat/Long: 40.120685/-104.799314.



Figure 6: Looking West towards well and reference area, 100 feet in height, Lat/Long: 40.121078/-104.797004.

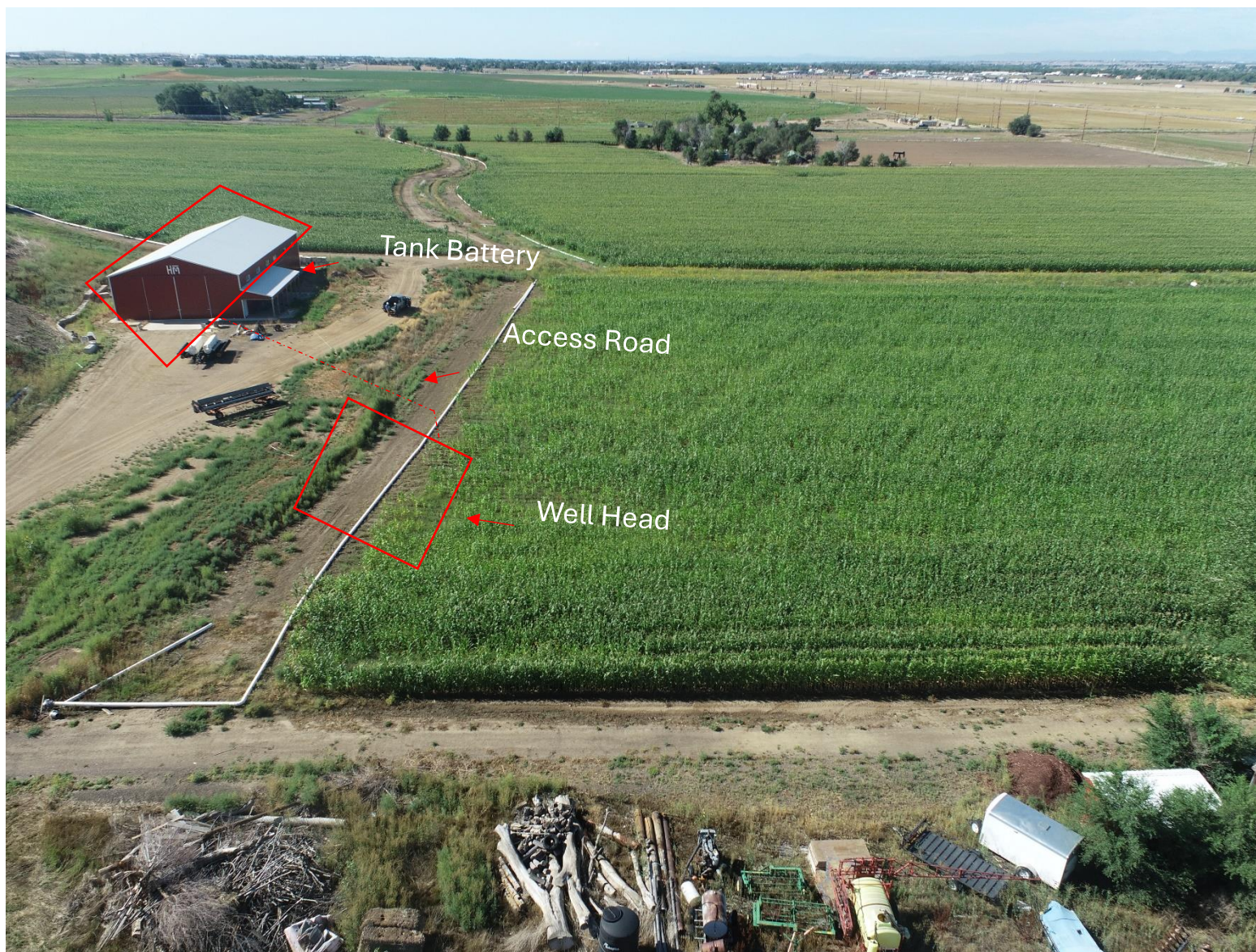


Figure 7: Looking South towards well, access road, and flowline, 100 feet in height, Lat/Long: 40.12149/-104.797807.



Figure 8: Looking North towards TB, 100 feet in height, Lat/Long: 40.119707/-104.79737.



Figure 9: Looking East towards TB, 100 feet in height, Lat/Long: 40.120273/-104.798186.



Figure 10: Looking West towards TB, 100 feet in height, Lat/Long: 40.120242/-104.796435.



Figure 11: Looking South towards TB, 100 feet in height, Lat/Long: 40.121119/-104.797249.



Figure 12: Cropland Reference Photo showing corn in the appropriate reproductive growth stage.