

Site Specific Final Reclamation Completion Notice – Cropland Drone Imagery

Permit Closure Report – Cropland

Location ID: 332234

Location Name: Chesnut #5

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 Year and Type:

Crop Type 2023-Alfalfa

Crop Type 2024-Corn

Quality Assurance & Quality Control Audit

Performed by	HWA Wildlife Consulting, LLC
Audit Date	18 July 2024



Prepared by:

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Location Checklist:

Operator/#	PDC Energy INC #69175		
Location ID & Name	332234 & CHESNUT-65N64W/21CSE		
County	Weld County, CO		
Well Information	Well Name: Chesnut# 5		
	Well API#: 05-123-22006		
	Lat/Long as Drilled: 40.381301/-104.549740		
	Plug Date & Form 6S Doc #: 12/09/2016 & 401174598		
Facility Entities	X	Tank Battery	Pits
	X	Well	X On-location Flowlines Form 42 Doc #: 401209574
		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)	X	No	Yes
Site Investigation and Remediation Workplan (Form 27/27A)	X	No	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:		11/16/2018 & 401843639
	Purpose		Per Reclamation Supervisor Denise Arthur, granting requested extension to 4/30/2018
	Comments:		PDC is requesting an extension for the Chesnut #5 reclamation corrective action (Inspection # 682504046). The current corrective action complete date is December

		31st, 2018 and PDC would like the corrective action date extended to April 30th, 2019. The reason for this request is PDC informed the landowner about the denied variance request and the landowner requested the reclamation work be completed in the Spring 2019.
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 Summary:

Name	CHESNUT-65N64W/21CSE		
Location ID	332234		
Operator/#	PDC ENERGY INC/69175		
Field	Wattenberg/90750		
County, State	Weld, CO		
Lat/Long	40.381006/-104.550105		
	X	Planned location	As Drilled
Facility Status	CL	Location:	CSE 21 5N64W
Facility Status Date	12/15/2016		
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
		Pit mouse/rat holes, cellars backfilled	
Access Road	X	Regraded	X Contoured
	NA	Culvert removed	X Gravel Removed
		Pre-existing: must provide supporting documentations	
Environmental Incident and Remediations	X	None	Spill or Release (Form 19)
		Remediation (Form 27/27A)	

Variance Requests	Operator submitted doc. Doc. #401445079 requesting a variance to waive select requirements of rule 1004.a. to not reclaim the tank battery pad location, the well location, and the access road. The portion of the variance is approved to leave the 1,200 feet long access road, beginning at County Road 55. The portion of this variance to waive reclamation requirements of the tank battery pad location and well location is denied. This surface owner variance request has been approved with the following COAs: 1. Operator must reclaim both the battery and well location in accordance with COGCC Rule 1004. a. Operator must collaborate with the surface owner as to not interfere with farming activities during reclamation. 2. Corrective actions identified on a field inspection report must be performed by the corrective action date as a condition of approval for this variance until final reclamation is passed. 3. Operator will continue to monitor and manage the well/battery locations and access road for erosion and noxious weed control until final reclamation is passed.
Inspection Corrective Actions (CA)s	Corrective Actions (CA)s were identified.
Sundry Notice (Form 4)	Form 4 Doc # & Date: 11/16/2018 & 401843639 <ul style="list-style-type: none"> ○ Purpose Per Reclamation Supervisor Denise Arthur, granting requested extension to 4/30/2018 ○ Comments: PDC is requesting an extension for the Chesnut #5 reclamation corrective action (Inspection # 682504046). The current corrective action complete date is December 31st, 2018 and PDC would like the corrective action date extended to April 30th, 2019. The reason for this request is PDC informed the landowner about the denied variance request and the landowner requested the reclamation work be completed in the Spring 2019.
On-Location Flowlines (Form 42)	The on-location flowline was abandoned on 2/02/2017. Abandonment notice has given under Form 42 (401209574)
Off-Location Flowlines (Form 44)	The well was plugged and abandoned on 12/15/2016. The associated flowline was abandoned on 12/15/2016. 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)	No Form 27 was identified
Spill or Release (Form 19)	No Form 19 was identified
Field Inspection Form (Form INSP)	<p>Form Inspection Doc # & Date 682504046 & 10/22/2018</p> <ul style="list-style-type: none"> ○ Status Summary: Corrective action repose required ○ Inspection facilities: CHESNUT #5 ○ Inspection Status: RI ○ Inspection Date and Inspector: 10/22/2018 & Trujillo, Aaron ○ Notes: The portion of the surface owner variance request to waive reclamation requirements of the tank battery pad location and well location is denied. Perform reclamation on in accordance to COGCC 1000 series reclamation requirements/ standards and establish vegetation with total perennial, non-invasive uniform plant cover of at least eighty (80) percent of pre-disturbance or reference area levels at the well and tank battery locations.
COGIS Tank Facilities Information (Scout Card)	<p>Location Name: Chesnut #5 Tank Battery Location ID: 450470 Status and Date: CL & 3/02/2017 Lat/Long: 40.384580/-104.548037</p>
COGIS Well Information (Scout Card)	<p>Well name: CHESNUT #5 Facility ID: 271255 Status and Date: PA & 12/15/2016 Lat/Long as Drilled: 40.381301/-104.549740</p>

Site Description:

Audit Key Findings – Designation Land Use Observations

PREVIOUS LAND USE	CURRENT LAND USE
Reference imagery for infrastructure: NAIP 2011	Remote sensed Imagery: 07/18/2024
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 Chesnut #5 well (API # 05-123-22006) is located in Weld County Colorado, near the intersection County RD 55 and County Road 54 ½. The well was plugged and abandoned on December 15th, 2016. The associated on-location flowline was abandoned on February 2nd, 2017. The associated off-location flowline was abandoned on December 15th, 2016.

The Chesnut #5 Tank Battery (location ID: 450470) serviced the Chesnut #5 well. The Chesnut #5 tank battery has been permitted separately and can be passed independently but will be passed together in this report.

Operator submitted Doc # 401445079 requesting a variance to waive select requirements of rule 1004.a. to not reclaim the tank battery pad location, the well location, and the access road. The portion of the variance was approved to leave the 1,200 feet long access road, beginning at County Road 55. The portion of this variance to waive reclamation requirements of the tank battery pad location and well location was denied.

The Inspection form submitted on August 12th, 2017 (Doc #675103903) shows correction actions required for the Chesnut #5 well and tank battery. The correction action includes establishing vegetation with total perennial, non-invasive uniform plant cover of at least eighty (80) percent of pre-disturbance or reference area levels at the well and tank battery locations. The corrective action has been addressed and completed (FIR Resolution Form, Doc # 4019993960).

There were no documented spills/ releases or remediation projects in COGIS related to the Chesnut #5 well or associated tank battery. The access road begins near a new pad, and although a culvert remains near the original access road, it is now being used by the new pad.

Drone imagery confirms that no equipment remains after reclamation activities. The imagery also shows no disturbances or stunted crop growth resulting from the well, tank battery, flowlines, or access road.

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:

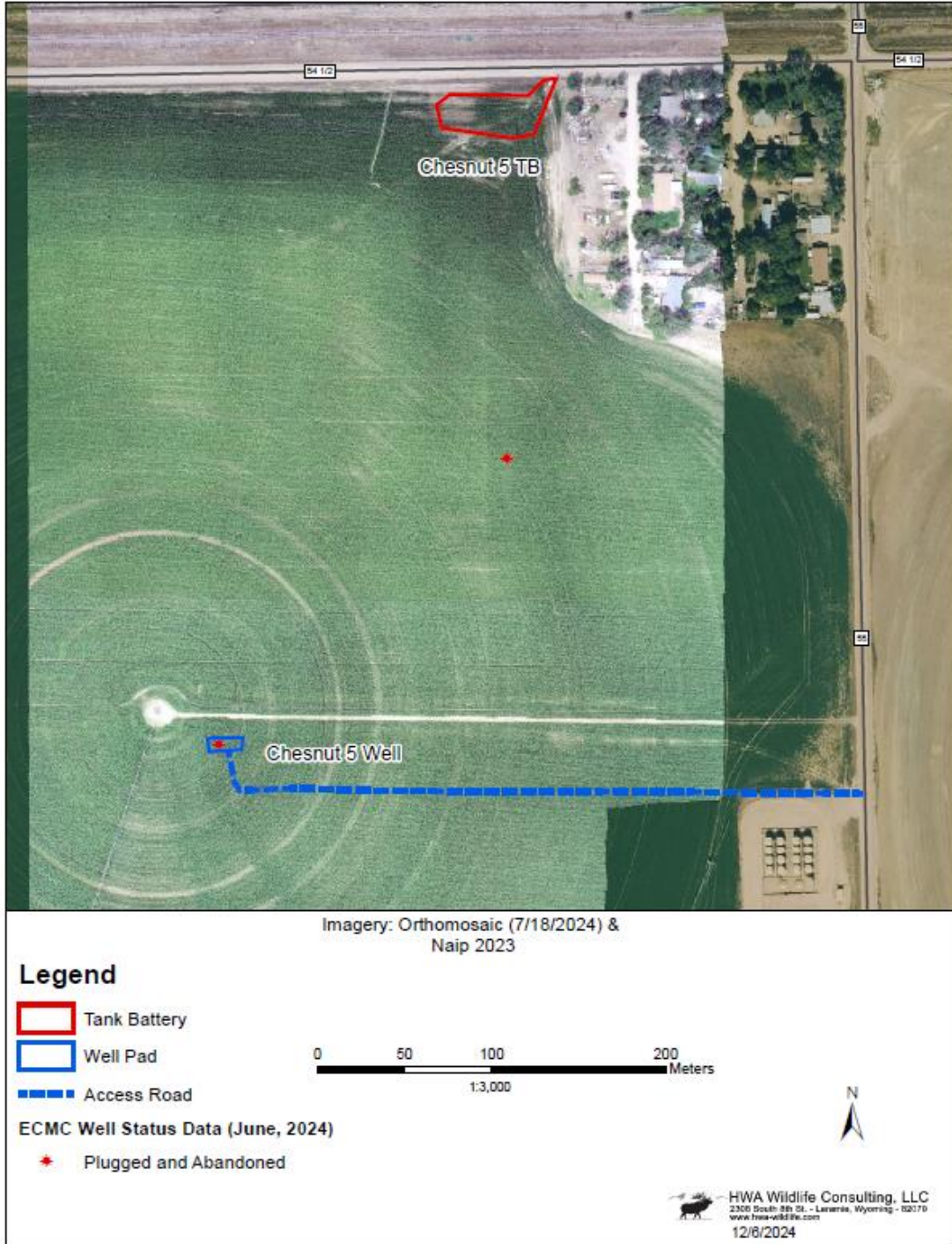


Figure 3. Post-plugging overview of the reclaimed well site and the associated access road, tank battery, and flowline.

Cardinal Directional Drone Photos and Reference Area Photos (7/18/2024):



Figure 4: Looking East towards well and reference area, 100 feet in height, Lat/Long: 40.381262/-104.550574.

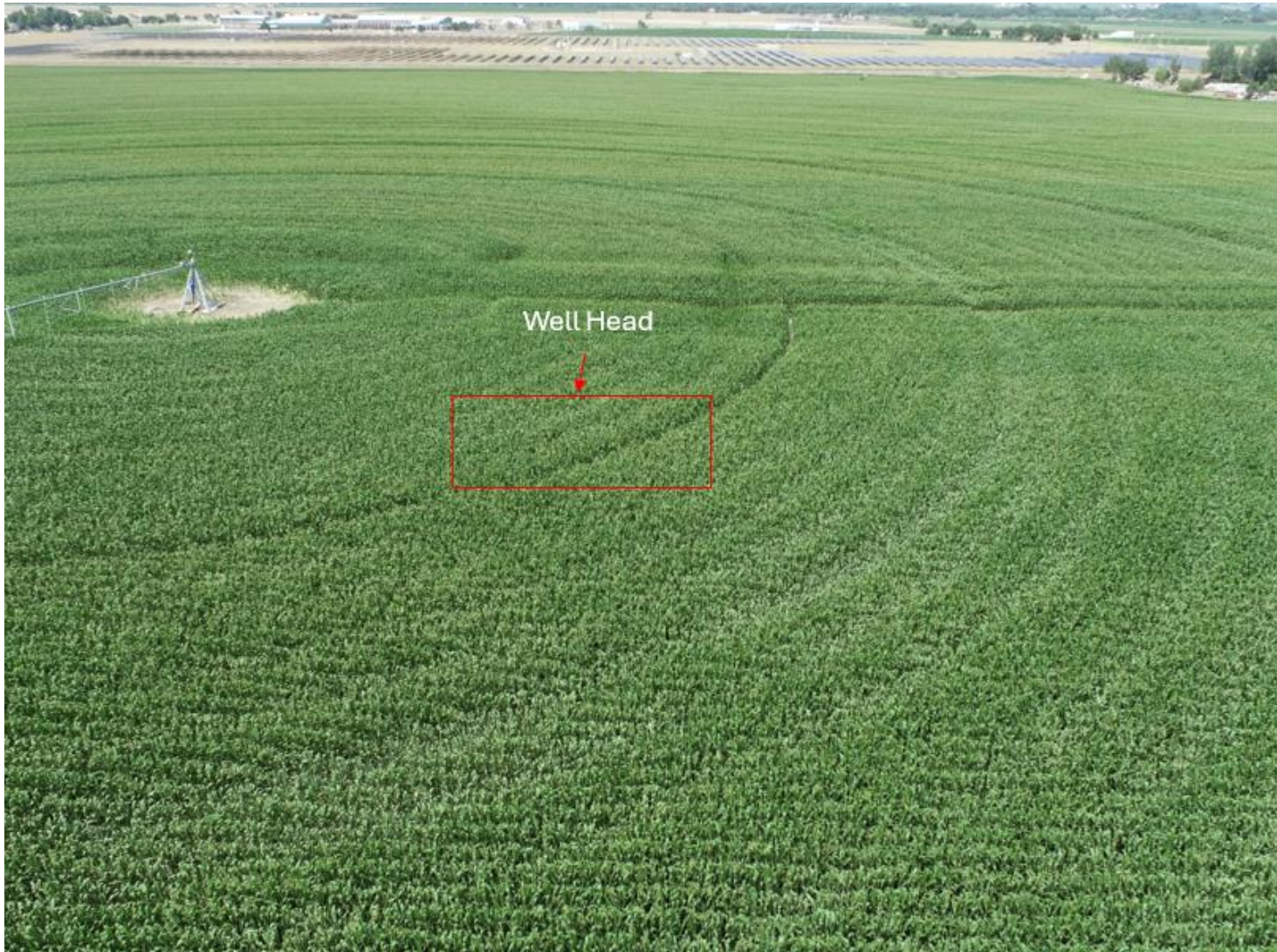


Figure 5: Looking North towards Well, 100 feet in height, Lat/Log: 40.380713/-104.549747.



Figure 6: Looking West towards well, 100 feet in height, Lat/Long: 40.381175/-104.548871.



Figure 7: Looking South towards well, 100 feet in height, Lat/Long: 40.381774/-104.549777.



Figure 8: Looking East towards access road well, 200 feet in height, Lat/Long: 40.380584/-104.55083.



Figure 9: Looking Northeast towards the flowline, 100 feet in height, Lat/Long: 40.380836/-104.550376.

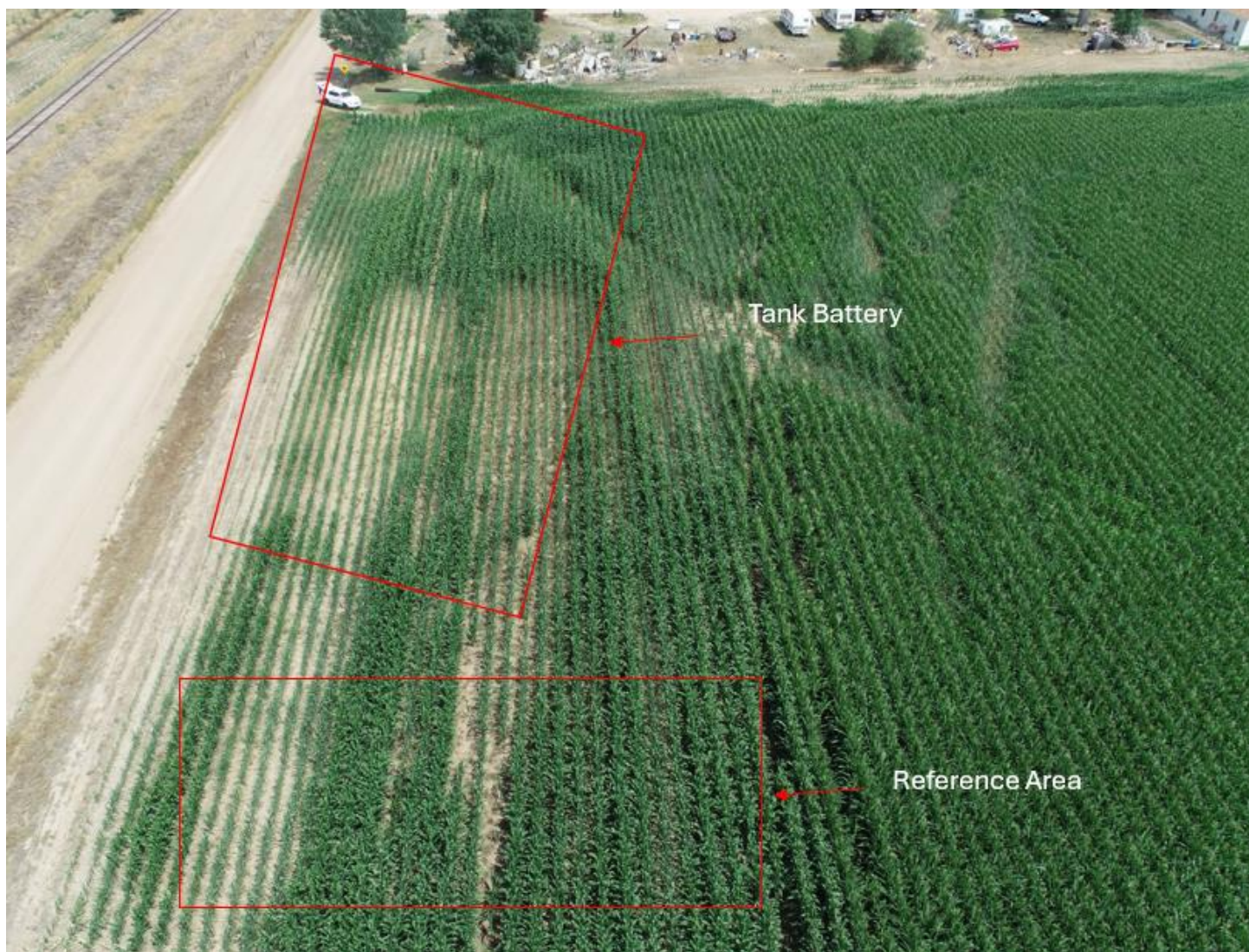


Figure 10: Looking East towards TB and reference area, 100 feet in height, Lat/Long: 40.384523/-104.548765.

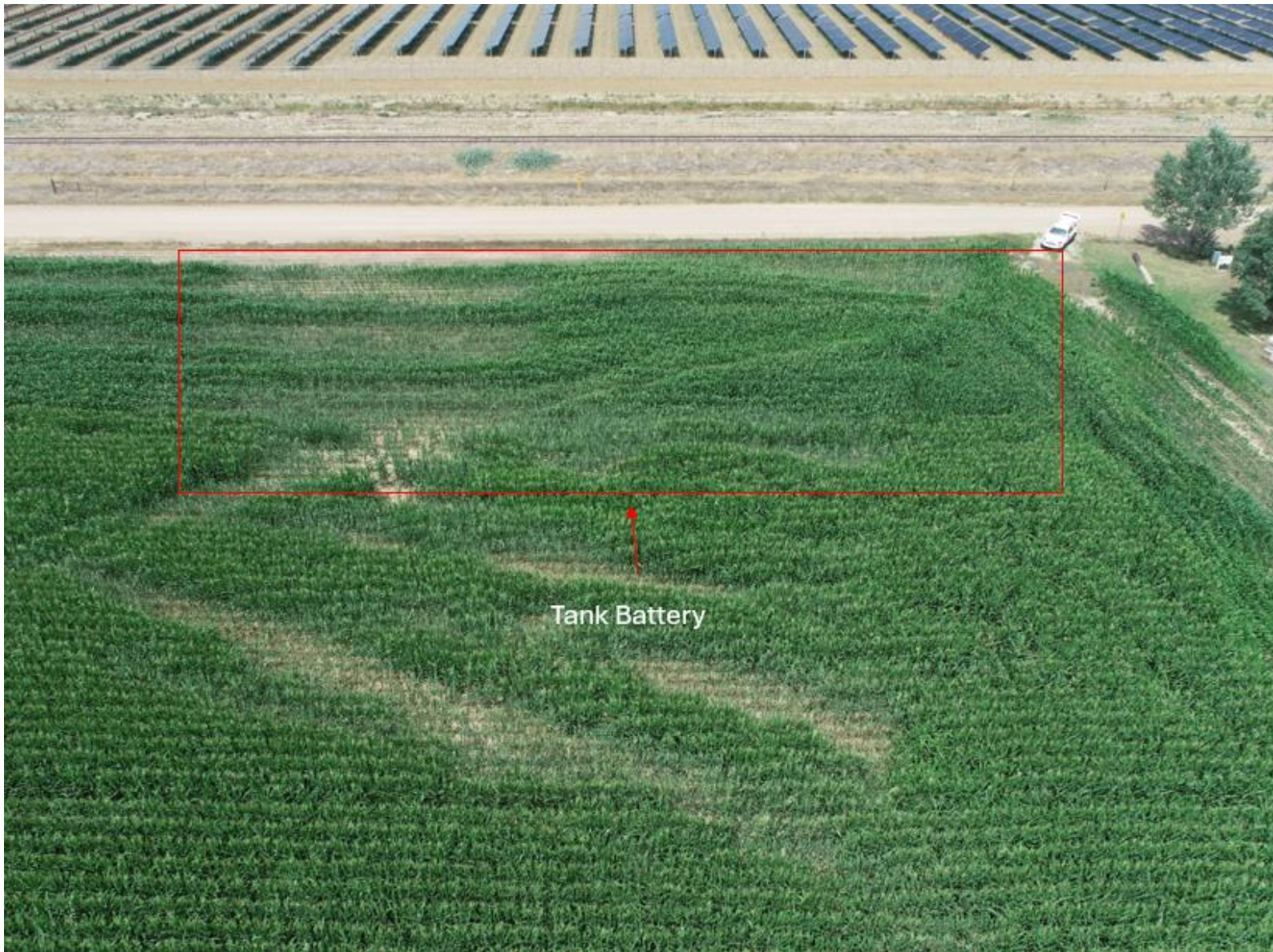


Figure 11: Looking North towards TB, 100 feet in height, Lat/Long: 40.383967/-104.547929.

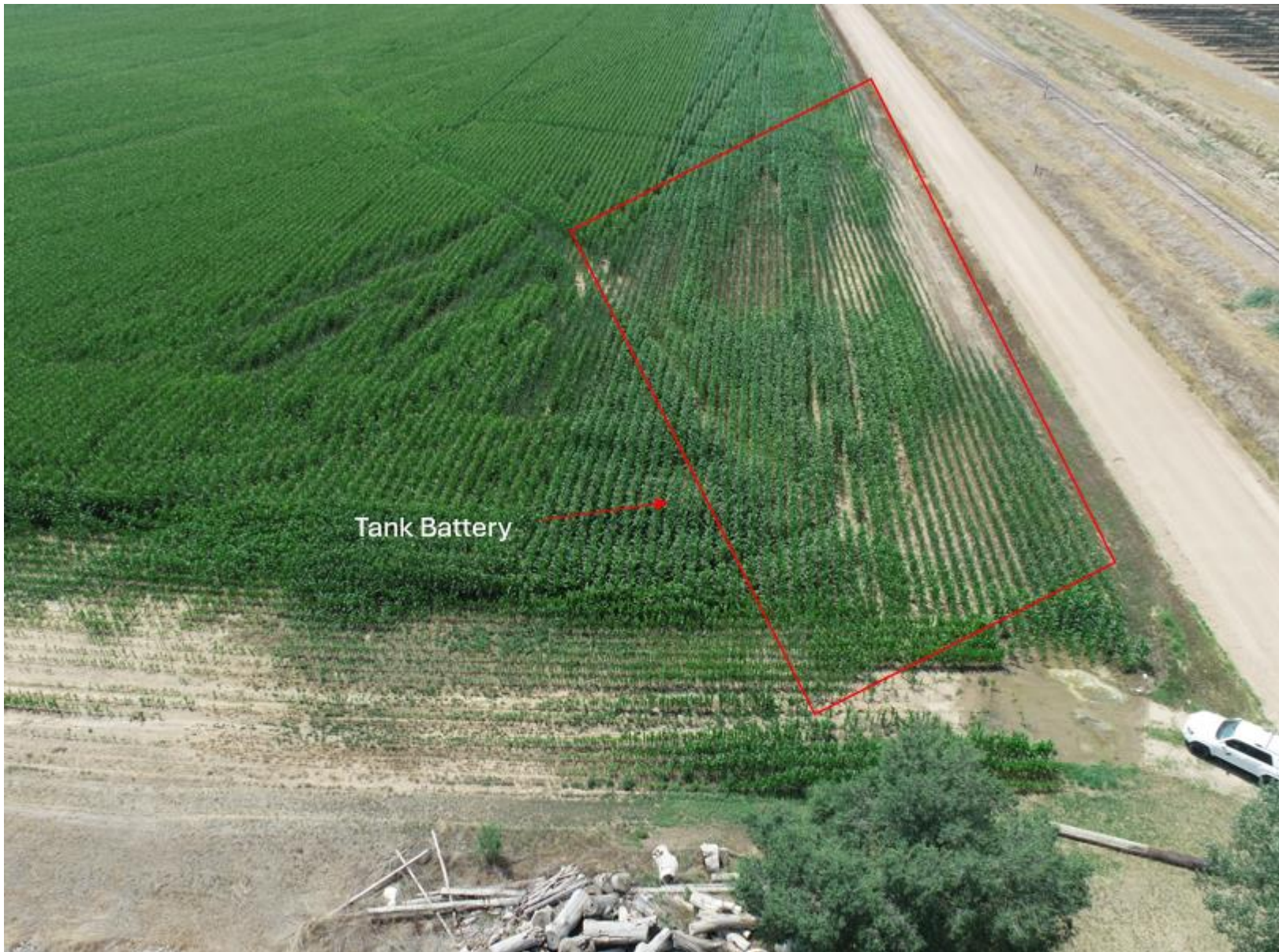


Figure 12: Looking West towards TB, 100 feet in height, Lat/Long: 40.384518/-104.547065.

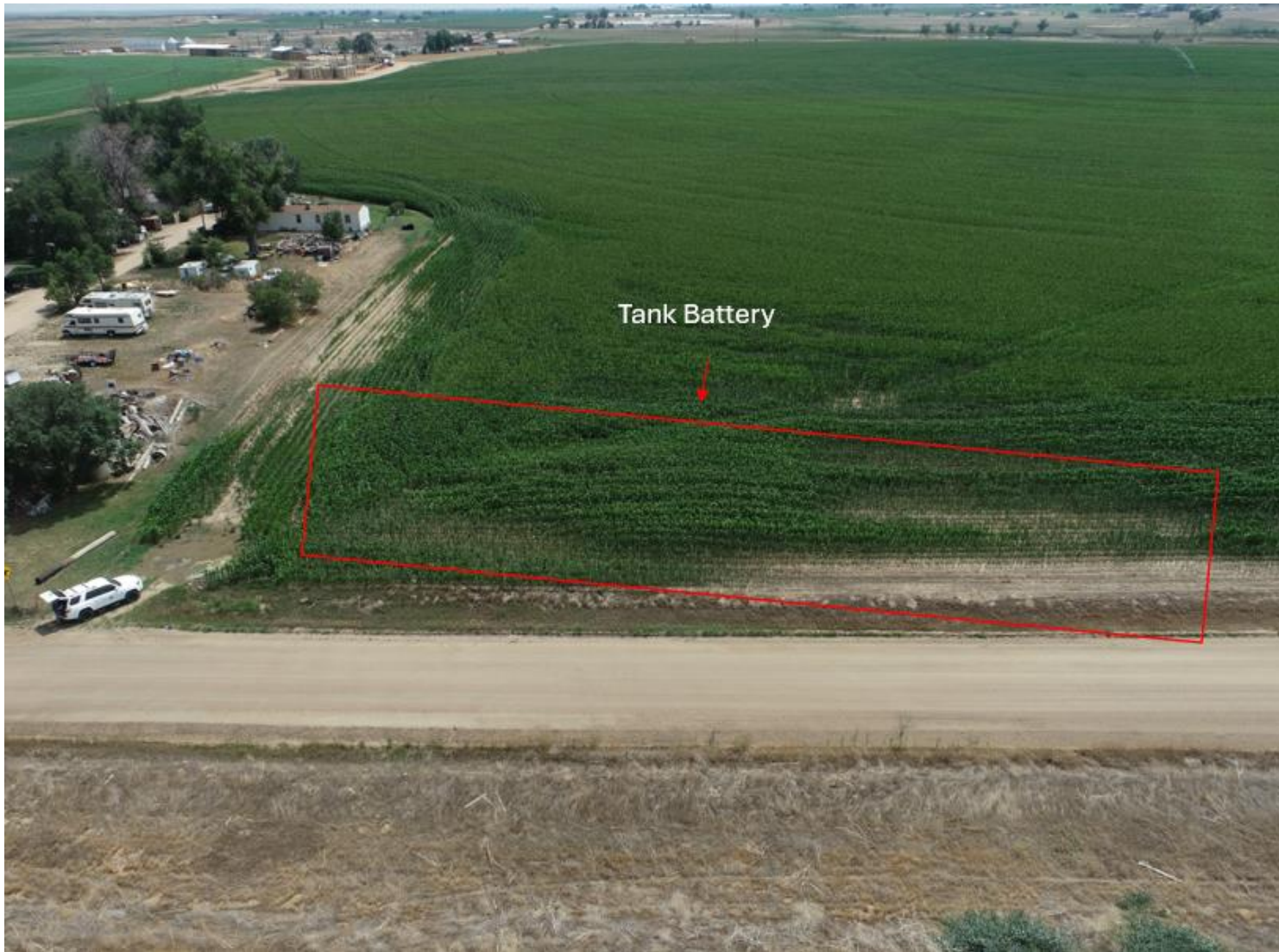


Figure 1: Looking South towards TB, 100 feet in height, Lat/Long: 40.385187/-104.547883.

Ground Photos (7/18/2024):



Figure 2: Looking Southeast from Northwest corner of TB.



Figure 3: Looking Southwest from Northeast corner of TB.



Figure 16: Looking northwest at the well access road (from the new well pad's Northwest Corner).



Figure 4: Looking West towards the well access road. Note: new pad in the first part of the photo. No stunted corn past the new pad.



Figure 18: Looking South at the Reference area from the Southeast corner of the TB.



Figure 5: Cropland Reference Photo showing corn in the appropriate reproductive growth stage.