

Site Specific Final Reclamation Completion Notice – Cropland Drone Imagery

Permit Closure Report – Cropland

Location ID: 319532

Location Name: Sitzman #1

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	17 July 2024



Prepared by:

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Location Checklist:

Operator/#	PDC Energy INC #69175			
Location ID & Name	319532 & Sitzman #1			
County	Weld County, CO			
Well Information	Well Name: Sitzman #1			
	Well API#: 05-123-11421			
	Lat/Long as Drilled: 40.368565/-104.656562			
	Plug Date & Form 6S Doc #: 3/28/2018 & 401618858			
Facility Entities	X	Tank Battery		Pits
	X	Well	X	On-location Flowlines Form 42 Doc #: 401600443
		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	X	No		Yes
Sundry Notice	No Sundry Notice (Form 4s) related to 900-1200 Series Rules were identified.			
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	SITZMAN-65N65W/27NWSW		
Location ID	319532		
Operator/#	PDC ENERGY INC/69175		
Field	Wattenberg/90750		
County, State	Weld, CO		
Lat/Long	40.368575/-104.656508		
	X	Planned location	As Drilled
Facility Status	CL	Location	NWSW 27 5N65W
Facility Status Date	5/3/2018		
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		None	X Spill or Release (Form 19)
	X	Remediation (Form 27/27A)	
Variance Requests	No variance requests were identified		
Inspection Corrective Actions (CA)s	No Corrective Actions (CA)s were identified.		
Sundry Notice (Form 4)	No Sundry Notice (Form 4) related to 900-1200 Series Rules were identified.		
On-Location Flowlines (Form 42)	Flowlines abandoned 3/22/2018. Abandonment notice was given under Form 42 (401734409)		
Off-Location Flowlines (Form 44)	The well was plugged and abandoned on 3/28/2018. The associated flowline was abandoned on 3/28/2018. 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 #: 11252 Form 27 Initial Doc # & Date: 401600443 & 4/09/2018 <ul style="list-style-type: none"> ○ Purpose: 909.c.(1), Rule 905: Pit or PW vessel closure and 909.c.(2), Rule 906: Spill/Release Remediation 		

	<ul style="list-style-type: none"> Operator Comment: On March 9, 2018, historic petroleum hydrocarbon impacts were discovered below the produced water vessel during plug and abandonment activities at the Sitzman 1U tank battery. Excavation activities were subsequently initiated below the former production tanks. Between March 9 and March 13, 2018, approximately 340 cubic yards of impacted material were removed and transported to the North Weld Waste Management Facility in Ault, Colorado for disposal under PDC waste manifests. Four (4) soil samples (SS01 - SS04) were collected during the initial site investigation at depths ranging between 10 and 18 feet below ground surface (bgs) and submitted to Summit Scientific Laboratories (Summit) for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, total petroleum hydrocarbons (TPH) – gasoline range organics (GRO) by United States Environmental Protection Agency (USEPA) Method 8260, and TPH – diesel range organics (DRO) by USEPA Method 8015. Analytical results indicated TPH concentrations were above the applicable COGCC Table 910-1 soil standards in soil samples SS01, SS03, and SS04. Delineation of remaining petroleum hydrocarbon impacts in soil is required and will be conducted during remediation activities. In addition, groundwater conditions on site must be assessed. <p>Form 27A Supplemental Docs # & Date: 402329793 & 3/04/2020</p> <ul style="list-style-type: none"> Purpose: 909.c.(1), Rule 905: Pit or PW vessel closure and 909.c.(2), Rule 906: Spill/Release Remediation Lat/Long of Remediation: 40.369520/ -104.657630 Closure Request Approved: 3/09/2020 by Candice (Nikki) Graber Final Resolution: Case Resolved: 3/09/2020
Spill or Release (Form 19)	<p>Doc # & Date: 401573178 & 3/19/2018</p> <ul style="list-style-type: none"> Sill/Release Point ID: 45307 Closure Date: 4/26/2018 Notes: On March 9, 2018, historic petroleum hydrocarbon impacts were discovered during plug and abandonment activities. Work proceeding under Form 27 (Remediation project #:11252).

Field Inspection Form (Form INSP)	Form Inspection Doc # & Date: 693700043 & 10/17/2018 <ul style="list-style-type: none"> ○ Status Summary: All PDC inspection ○ Inspection facilities: SITZMAN #1 ○ Inspection Status: EI ○ Inspection Date and Inspector: 10/17/2018 & Allison, Rick ○ Note: Operator installing monitoring wells as part of Remediation Project #11252. COGCC onsite to witness boring advanced at BH03. Impacts to groundwater are apparent at the 14-19 foot interval. Operator collected samples from saturated zone for analysis.
COGIS Tank Facilities Information (Scout Card)	No tank battery scout card was detected. The tank battery was referenced in Form 19 (Doc #: 401573178) and Form 27 (Doc #: 401573178).
COGIS Well Facilities Information (Scout Card)	Well Name: SITZMAN #1 Facility ID: 243629 Status and Date: PA & 3/28/2018 Lat/Long as Drilled: 40.368565/-104.656562

Site Description:

Audit Key Findings – Designation Land Use Observations

PREVIOUS LAND USE	CURRENT LAND USE
Reference imagery for infrastructure: NAIP 2011	Remote sensed Imagery: 7/17/2024
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 Sitzman #1 well (API # 05-123-11421) is located in Weld County, Colorado near the intersection of Couty RD 43 and County Road 54. The well was plugged and abandoned on March 28th, 2018. The associated on-location flowline was abandoned on March 3rd, 2018. The associated off-location flowline was abandoned on March 28th, 2018. The Sitzman 1U tank battery serviced the Sitzman # 1 well. The well and the associated TB will be passed together in this report.

On March 9th, 2018, historic petroleum hydrocarbon impacts were discovered below the produced water vessel during plug and abandonment activities at the Sitzman 1U tank battery. Based on the remediation and confirmation sampling activities conducted at the site between 2018 and 2020, hydrocarbon impacts associated with the historic release were successfully removed. In addition, post-remediation confirmation groundwater sampling was conducted in accordance with COGCC directive. The case was closed on March 9th, 2020.

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. The northern portion of the tank battery is now within a residential lot that is fenced. The rest of the tank battery is located within a fallow field/crop corner that matches the reference area.

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:

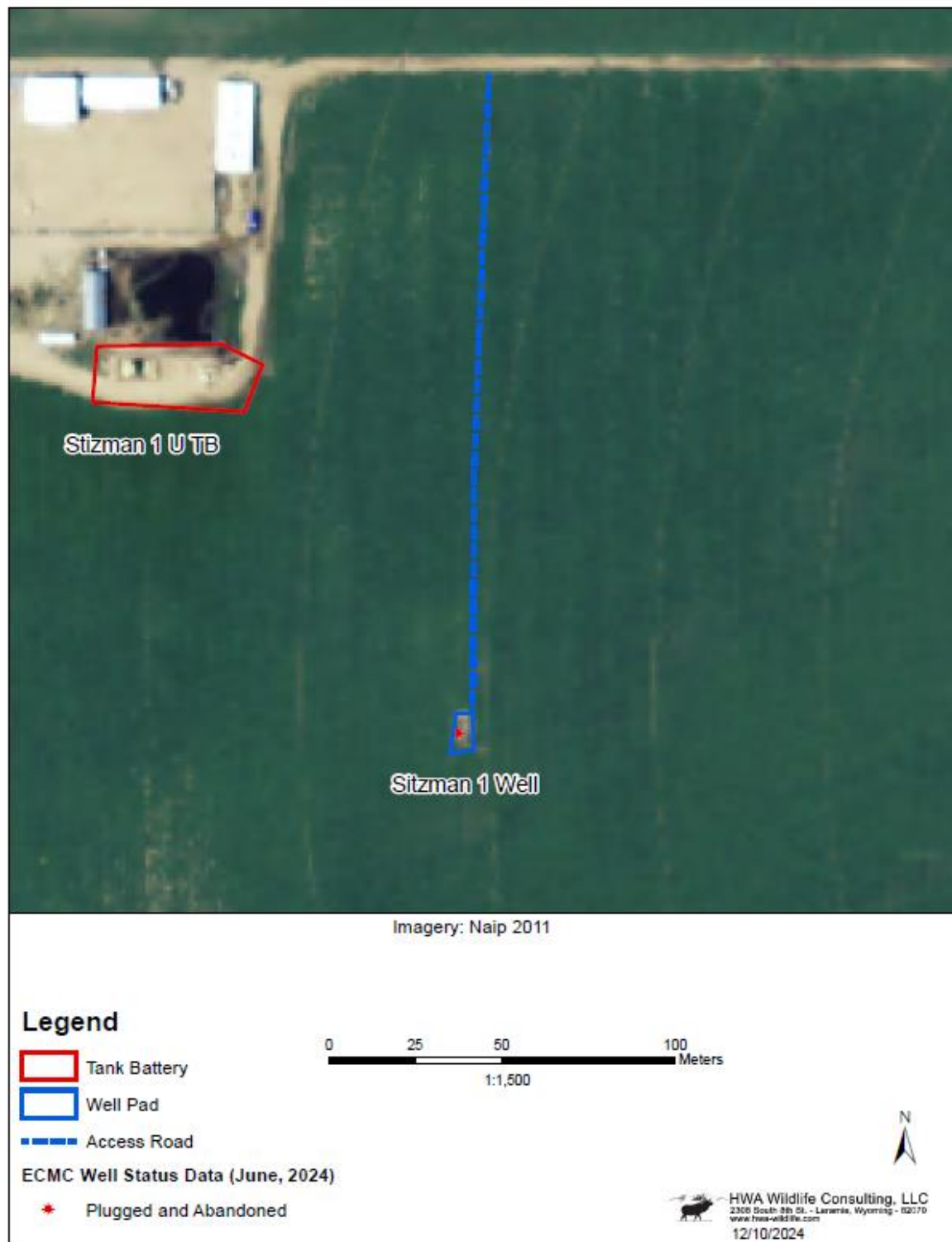


Figure 2. Pre-plugging overview of the reclaimed well site and the associated access road, tank battery, and flowline.

Post-Plugging and Abandonment Location Overview:

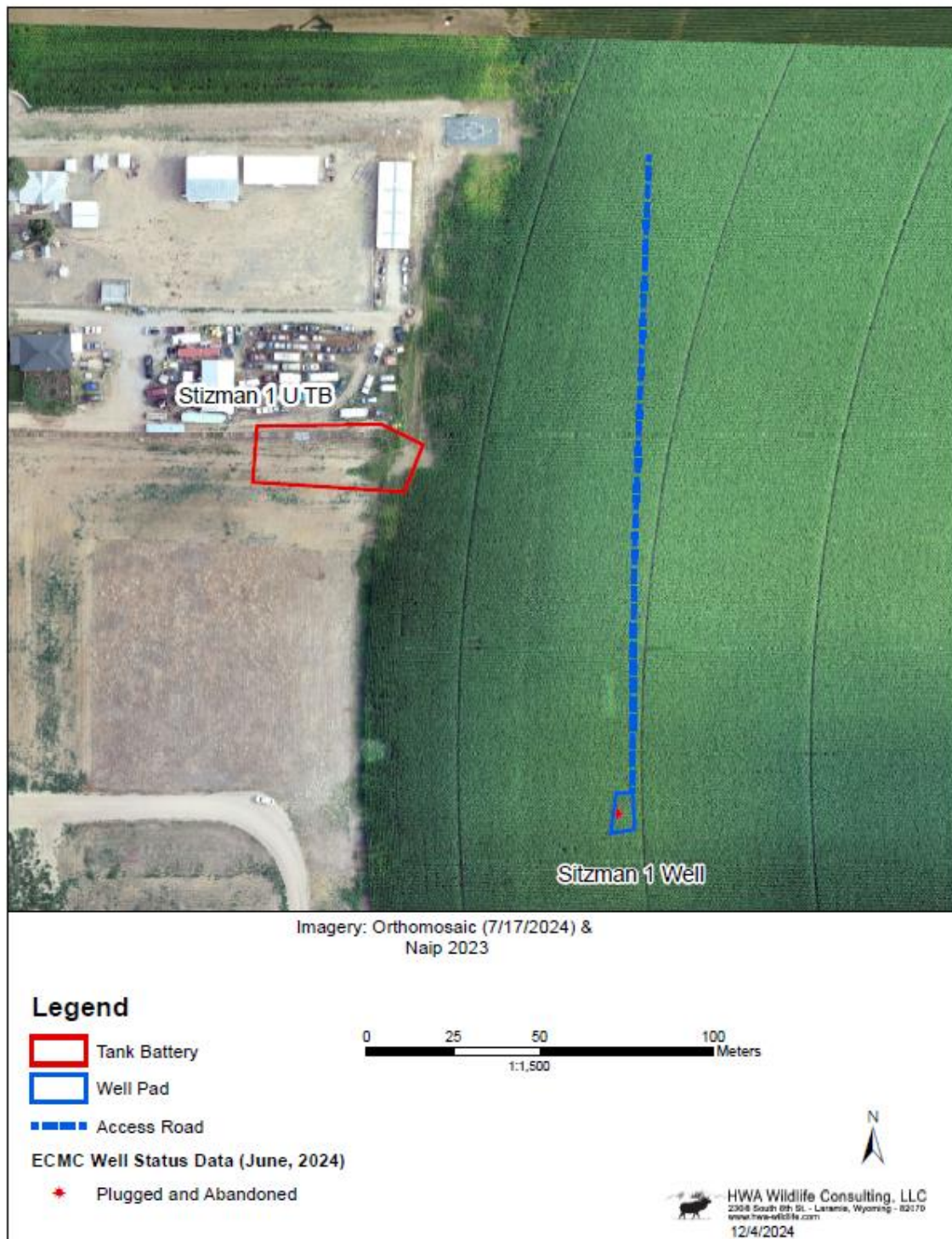


Figure 3. Post-plugging overview of the reclaimed well site and the associated access road, tank battery, and flowline.

Cardinal Directional Drone Photos and Reference Area Photos (7/17/2024):



Figure 4: Looking East towards well and reference area, 100 feet in height, Lat/Long: 40.368751/-104.657627.



Figure 5: Looking North towards well, access road, and flowline, 100 feet in height, Lat/Long: 40.368016/-104.656885.



Figure 6: Looking South towards well, 100 feet in height, Lat/Long: 40.369386/-104.656565.



Figure 7: Looking West towards well, 100 feet in height, Lat/Long: 40.368558/-104.656028.



Figure 8: Looking East towards TB, 100 feet in height, Lat/Long: 40.369649/-104.65882.



Figure 9: Looking North towards TB, 100 feet, Lat/Long: 40.368827/-104.657753.



Figure 10: Looking South towards TB, 100 feet in height, Lat/Long: 40.370382/-104.657634.



Figure 11: Looking West towards TB and reference area, 100 feet in height, Lat/Long: 40.369652/-104.656577.

Ground Photos (7/17/2024):



Figure 12: Looking North at TB.



Figure 13: Looking East at TB.

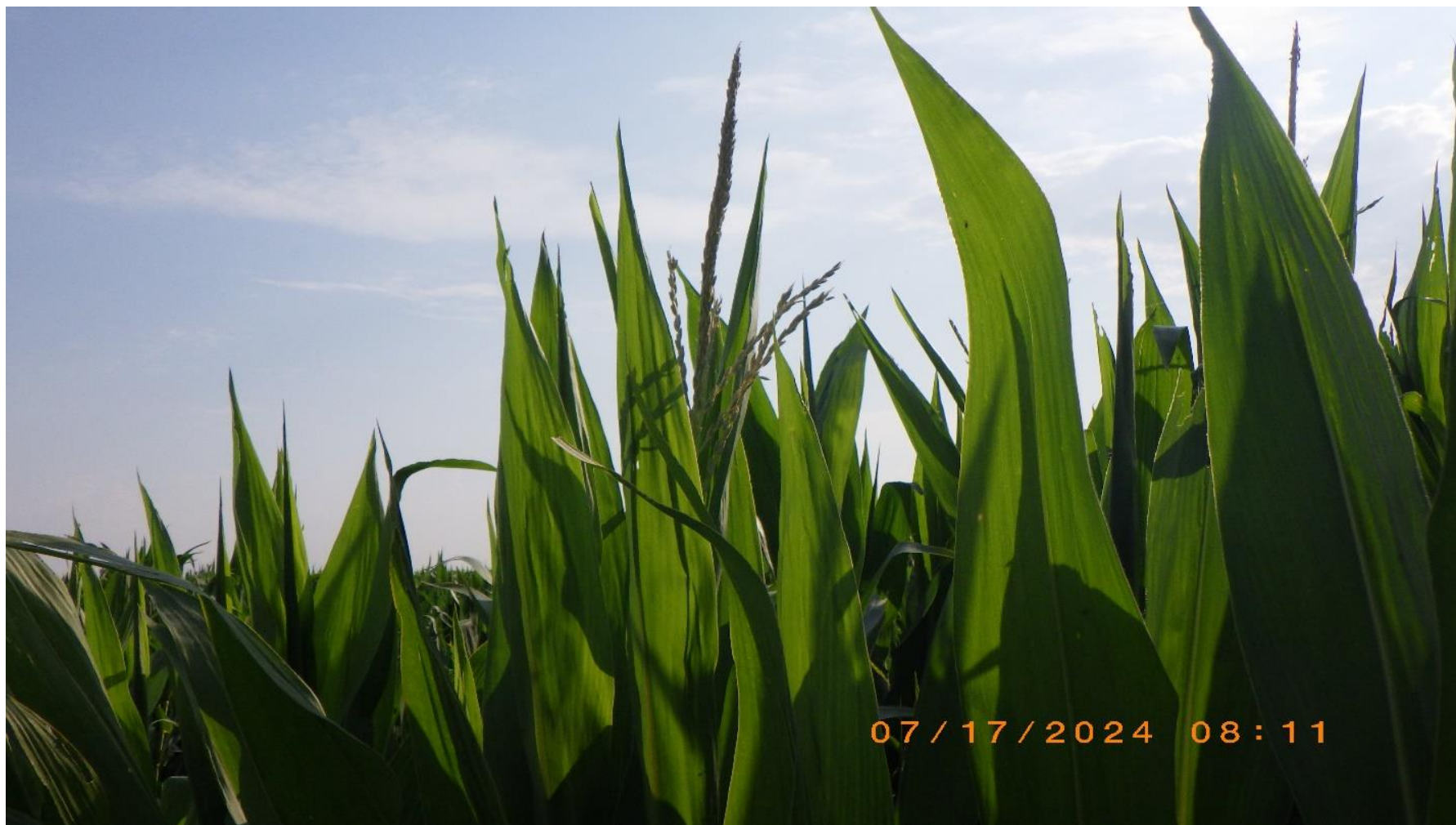


Figure 14: Reference Photo showing corn in the appropriate reproductive growth stage.