



March 16, 2018

Director Julie Murphy  
Colorado Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801  
Denver, CO 80203

**RE: COGCC Rule 502.b Variance Request for 1001.c Surface Owner Waiver**  
**Facility Name: Teresa 1-27 Tank Battery and Access Point**  
**Location ID: 323128**  
**Township: 5N Range 65W: West. 6<sup>th</sup> P.M.**  
**Section 27: NENW**  
**Weld County, Colorado**

Dear Director Murphy,

PDC Energy, Inc. (PDC) has obtained a Surface Owner Waiver under Rule 1001.c for final reclamation of Teresa 1-27 tank battery and access point (Location ID: 323128). PDC has performed final reclamation on this location in accordance with the surface owner's request. Due to the surface owner's final reclamation requests of the location, we are requesting your approval for a variance from the requirements of Rule 1004.a, Rule 1004.c (1), Rule 1004.c (3), Rule 1004.d, and Rule 1004.e pursuant to Rule 1001.c.

The documents attached to this letter for the Teresa 1-27 former tank battery and access point (Location ID: 323128) were developed in accordance with the December 17, 2015, version of the COGCC Rule 1001.c: Reclamation Variances and Waivers guidance document (Guidance Document).

**Attachment A: Executed Final Reclamation Agreement**

Attachment A is a signed and executed agreement that PDC has entered into with the surface owner (Howard L. Moran) regarding reclamation. Attachment A, along with Exhibit A, fulfills the five (5) requirements listed in Section I of the Guidance Document.

**Attachment B: Operator Demonstration**

Attachment B, along with Exhibits A, B, and C, fulfills the eight (8) requirements of Section II.B in the Guidance Document to waive compliance with specified provisions of Rule 1004, via a Variance. Attachment B contains the required supporting documentation to demonstrate that granting this final reclamation variance for applicable requirements of Rule 1004 will not negatively impact public health, public safety, public welfare, the environment, or wildlife.

PDC has made a good faith effort to provide the necessary information and evidence requested in the December 17, 2015, version of the COGCC Rule 1001.c: Reclamation Variances and Waivers guidance document for the Director to evaluate our request for waiving specified provisions of Rule 1004 to fulfill the surface owner's request for final reclamation.

If you have any questions or concerns about PDC's variance request, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Phillip Porter", with a long horizontal flourish extending to the right.

Phillip Porter, CHMM  
EHS Compliance Specialist  
PDC Energy, Inc.

Attachments:

Attachment A: Executed Final Reclamation Agreement

Attachment B: Operator Demonstration

Exhibit A: Facility Maps

Exhibit B: Facility Photos

Exhibit C: Approved Well Abandonment - Subsequent Form 6

# Attachment A



District Office  
4000 Burlington Avenue  
Evans, CO 80620  
970-506-9272  
www.pdce.com

February 28, 2018

Howard L. Moran  
21260 County Road 54  
Greeley, CO 80631

Re: **Final Reclamation Agreement**  
**Teresa 1-27, API #05-123-12594** (*Well API # and Common Name*)  
Township 5 North, Range 65 West, 6th P.M.  
Section 27: Northeast Quarter of the Northwest Quarter  
Weld County, Colorado

Dear Mr. Moran (the "Surface Owner"):

PDC Energy, Inc. ("PDC") has previously consulted with you concerning the final reclamation of the above-captioned well(s) in accordance with your direction concerning future use of the land and applicable rules of the Colorado Oil and Gas Conservation Commission ("COGCC"). The well(s) were plugged and abandoned on June 5, 2015 and PDC has removed all associated well and production facility equipment from the site(s). Pursuant to COGCC Rule 1001.c, PDC and the Surface Owner, agree to enter into this Final Reclamation Agreement in order to set forth the respective rights and responsibilities of the parties, and to seek COGCC's waiver of compliance with certain 1000-series rules.

The specific portion of the oil and gas location, see attached photograph labeled as Exhibit A (the "Location") subject to this Final Reclamation Agreement and waiver include:

- Former tank battery location
- Access point to former tank battery location

The reasons for Surface Owner entering into this Final Reclamation Agreement and thereby waiving PDC's obligations for additional reclamation required under COGCC Rule 1004 at the Location include:

- The access point shown above is the only access point to the 80 acre parcel.
- Surface Owner wishes to retain the access and pad location in their existing size due to the hazardous nature of the county road in this area.
- The historical and future agricultural use of this field is for growing corn. During harvest owner needs the space to safely exit the county road with, and park, large harvesting implements and tractor trailers.

As the Surface Owner, you acknowledge that the current condition of the property subject to this Final Reclamation Agreement is satisfactory to you. Additionally, by executing this letter below, as the Surface

Owner, you also acknowledge that you knowingly, and forever, waive all reclamation protections otherwise afforded by COGCC Rule 1004 and that you will assume responsibility for any further reclamation activities you wish to have undertaken at these sites. Provided however, PDC must comply with all final reclamation requirements under the Rule 1000-series that may not be waived by Surface Owner including COGCC Rule 1004.c.(4-5).

If this Final Reclamation Agreement correctly reflects your agreement, please sign, date, and have your signature notarized on both originals of this letter, keep one for your files and return one to the undersigned.

Please be aware that although you have signed this Final Reclamation Agreement and PDC subsequently submits a reclamation variance request, the COGCC may deny such request and PDC will then be required to complete all final reclamation in accordance with the COGCC 1000 Series rules.

Thank you for your time and consideration in this matter. If you have any questions or comments, please contact me at (970) 459-7766.

Respectfully,

Paul Montville  
Surface Landman

I acknowledge and agree as set forth above.

Howard L. Moran (SURFACE OWNER)

Signed: Howard L. Moran  
Howard L. Moran

**ACKNOWLEDGEMENTS**

State of Colorado )  
 ) §  
County of Weld )

On this 28 day of FEBRUARY, 2018, before me personally appeared Howard L. Moran, known to me to be the persons described in and who executed the foregoing instrument, and who acknowledged to me that they executed the same.

(SEAL) 

PAUL F. MONTVILLE NOTARY PUBLIC - STATE OF COLORADO Notary Identification #20154035574 My Commission Expires 9/9/2019
--

My commission expires: 9/9/19

PM  
Notary Public

Exhibit A



Former tank battery location and access point. All equipment has been removed.

## Attachment B



March 16, 2018

**RE: Operator Demonstration for the Teresa 1-27 Former Tank Battery and Access Point  
Location ID: 323128  
Township 5 North, Range 65 West, 6<sup>th</sup> P.M.  
Section 27: NENW  
Weld County, Colorado**

The information below addresses the requirements detailed in Section II.B of the Colorado Oil and Gas Conservation Commission's (COGCC) Rule 1001.c: Reclamation Variances and Waivers guidance document (Guidance Document) dated December 17, 2015. Section II.B of the Guidance Document outlines the evaluation of whether public health, safety, and welfare are protected and how significant adverse environmental impacts are prevented if specified provisions of Rule 1004 are waived, via a Variance.

**Section II.B.1 – Evidence that all wells on the location have been Plugged and Abandoned (P&A) and that a Form 6 subsequent was submitted for each well.**

PDC Energy, Inc. (PDC) certifies that the former Teresa 1-27 wellhead (Location ID: 323128) has been Plugged & Abandoned (P&A) as per the COGCC Rules and the Form 6 Subsequent has been submitted and approved (Exhibit C: Document Number: 400862300).

**Section II.B.2 – Evidence that all oil and gas equipment has been removed, including flowline and gathering risers.**

PDC certifies that all oil and gas equipment, including flowline and gathering risers, has been removed from the location where the final reclamation variance is being requested. Exhibit A consists of aerial imagery and Exhibit B consists of facility photos taken on March 7, 2018 that demonstrate all equipment has been removed.

**Section II.B.3 – Evidence that all trash and debris belonging to the operator or its agents has been removed.**

PDC certifies that all trash and debris belonging to PDC or any of our contractors or agents has been removed from the location where the final reclamation variance is being requested. Exhibit A consists of aerial imagery and Exhibit B consists of facility photos taken on March 7, 2018 demonstrate all trash and debris has been removed.

**Section II.B.4 – Evidence that noxious weeds have been controlled as required by Rule 1004.**

PDC certifies that noxious weeds have been controlled and will be managed by PDC until approval of this final reclamation variance. Exhibit A consists of aerial imagery and Exhibit B consists of facility photos taken on March 7, 2018 demonstrate noxious weeds are controlled on the location.

**Section II.B.5 – Documentation of Good Faith Surface Owner Consultation regarding final reclamation pursuant to Rule 306.f.**

Attachment A, accompanied by Exhibit A, provides the “Final Reclamation Agreement” provided to and signed by the surface owner (Mr. Howard L. Moran) on February 28, 2018 for the Teresa 1-27 former Tank Battery and Access Point location (Location ID: 323128) documenting good faith consultation with the surface owner.

**Section II.B.6 – Documentation of existing state of reclamation.**

Teresa 1-27 well was P&A on June 5, 2015, and all associated well and production facility equipment has been removed PDC certifies that the location has been reclaimed in accordance with the request of the surface owner (see Attachment A). The surface owner requested that PDC not complete reclamation in the area of the former associated production equipment. The Areas requiring reclamation as per COGCC Rule 1004 include:

- Former tank battery location (approximately 40 feet by 100 feet)
- Access point to the former tank battery location

Exhibit A consists of aerial imagery and Exhibit B consists of facility photos taken on March 7, 2018 demonstrate the existing state of reclamation.

**Section II.B.7 – Evidence that site is stabilized and stormwater management is adequate pending COGCC’s final sign-off reclamation inspection.**

The location is within a productive corn field that the landowner will use for agricultural purposes. PDC will maintain the location to ensure proper stabilization and stormwater management until this variance is approved and all conditions of approval are fulfilled. Exhibit A consists of aerial imagery and Exhibit B consists of facility photos taken on March 7, 2018 demonstrate current site conditions, including adequate site stabilization and stormwater management. The former tank battery is protected with residual roadbase material that stabilizes the soil for the landowner’s intended purpose. The former tank battery location is bordered on the western side by perennial crops that serves as a vegetative buffer. The former Teresa 1-27 tank battery and access point (Location ID: 323128) are located in a crop field with level topography and minimal gradient. The former tank battery location and associated access point are more than 1,000 feet from the nearest surface water body and neither location is within a defined FEMA, State, or Weld County 100-Year Floodplain or wetland.

**Section II.B.8 – Operator analysis of protection of public health, safety, and welfare; and prevention of significant adverse environmental impacts.**

PDC has evaluated potential impacts to public health, safety, and welfare as well as potential significant adverse environmental impacts to this final reclamation variance to Rule 1004 (except Rules 1004.c.(4) and 1004.c.(5)). Based on the explanation below, PDC has determined that a variance from the applicable requirements of Rule 1004 for the former Teresa 1-27 former tank battery and access point (Location ID: 323128) would have NO NEGATIVE IMPACTS on public health, public safety, public welfare, environment, or wildlife.

#### Public Health Analysis

The specified final reclamation variance request from Rule 1004 is minor and with COGCC approval will maintain protection of public health. The location is on private property and, according to the "Surface Owners" COGCC GIS mapping layer, does not require any consultations with the Colorado Department of Public Health and Environment (CDPHE) or Colorado's Division of Water Resources (DWR).

#### Public Safety Analysis

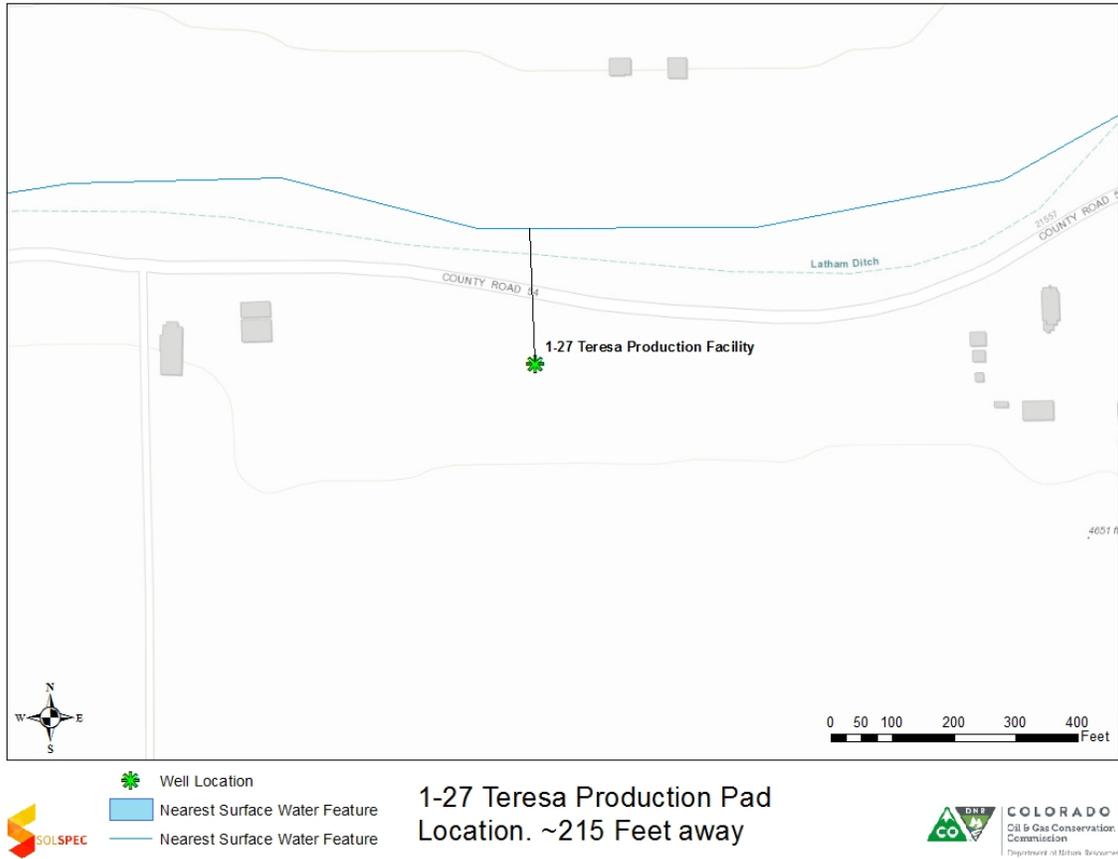
The specified final reclamation variance request from Rule 1004 is minor and will maintain protection of public safety. The location is a small parcel of land (0.199 acres) on private property. The former Teresa 1-27 tank battery is located on the south side of Weld County Road 54 and approximately 0.4 miles to the east of Weld County Road 43, and approximately 2.1 miles east of Evans, Colorado. The location is surrounded by rural land, agricultural properties and agricultural land. The former wellhead, located at 40.375556, -104.651667, has been P&A (see Exhibit C).

#### Public Welfare Analysis

The specified final reclamation variances requested from Rule 1004 are minor requests that maintain the protection of public welfare. The location is on private property and will be returned to agricultural use by the surface owner. The location is zoned "Rural" by Weld County and the surface owner's desired use of the land is consistent with Weld County land use zoning standards.

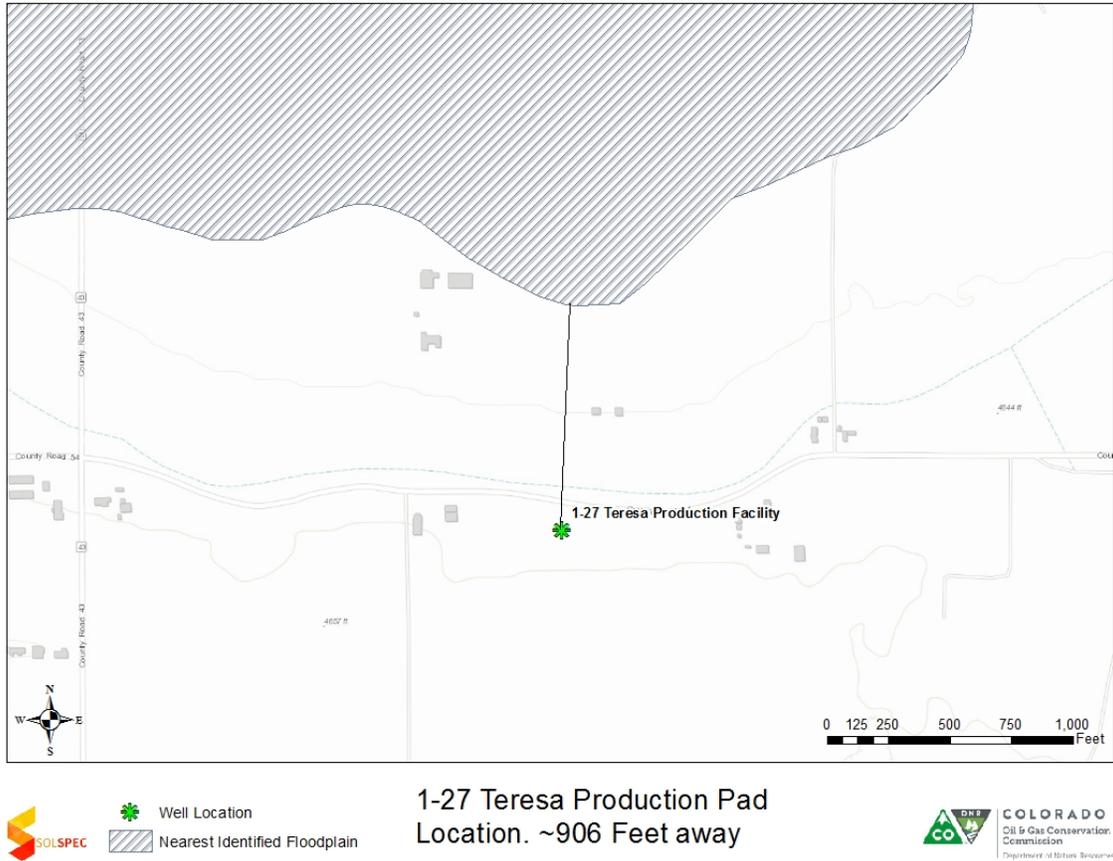
Environment

The former Teresa 1-27 tank battery does not fall within a Rule 317B Public Water System Protection area, according to the COGCC GIS “PWS 317B” mapping layer. The former Teresa 1-27 location is approximately 215 feet from the nearest surface water according to several COGCC GIS “Water Resources” mapping layers (Figure 1).



**Figure 1. Distance to nearest surface water feature for the former Teresa 1-27 tank battery location.**

The former Teresa 1-27 tank battery location does not fall within a defined FEMA, State, or Weld County 100-Year Floodplain, according to COGCC GIS “Floodplain” mapping layers and Weld County Floodplain data (Figure 2).



**Figure 2. Distance to nearest 100-Year Floodplain for the former Teresa 1-27 tank battery location.**

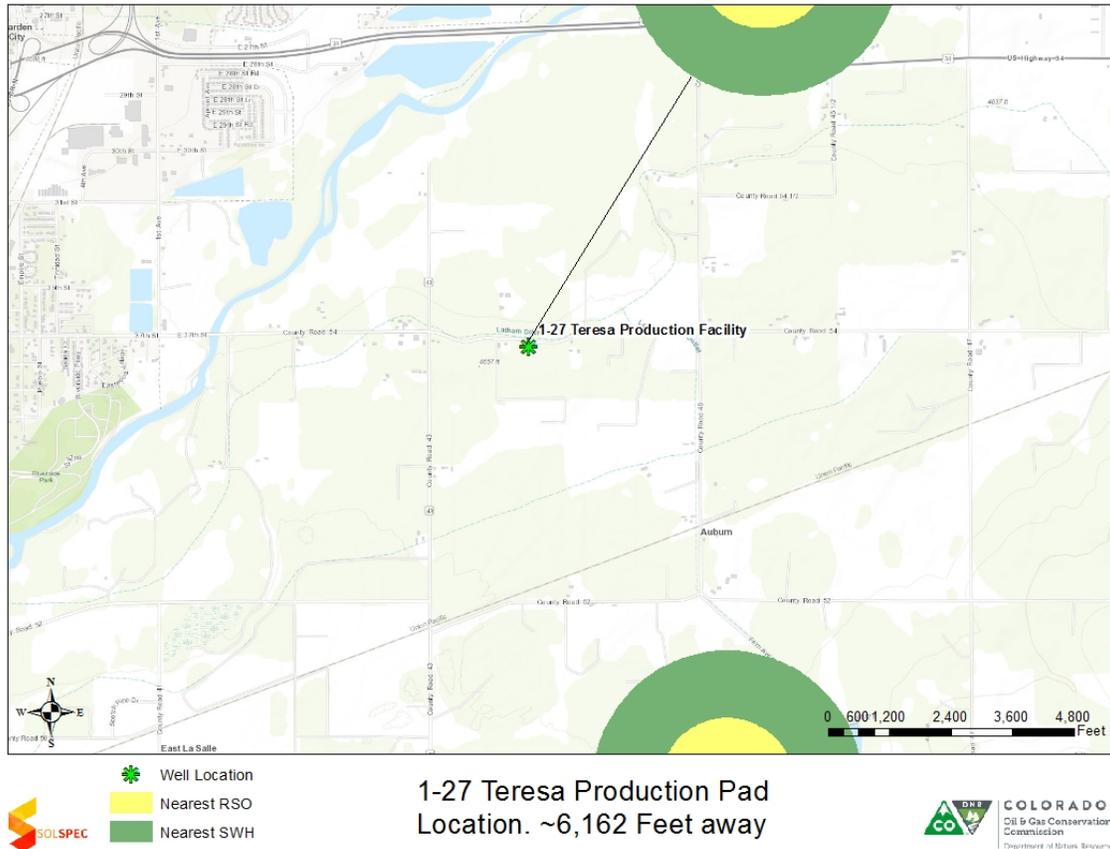
The former Teresa 1-27 tank battery location is approximately 365 feet southwest of the nearest groundwater well, according to COGCC GIS “DWR\_Wells” mapping layer, which is based on Colorado’s DWR information (Figure 3).



Figure 3. Distance to nearest groundwater well for the former Teresa 1-27 tank battery location.

## Wildlife

The former Teresa 1-27 tank battery location is not within a defined “Restricted Surface Occupancy” (RSO) or “Sensitive Wildlife Habitat” (SWH) area as identified in the COGCC GIS “CPW\_RSO” and “CPW\_SWH” mapping layers (Figure 4). The nearest defined SWH area is 6,162 feet to the northeast.



**Figure 4. Distance to nearest Restricted Surface Occupancy (RSO) or Sensitive Wildlife Habitat (SWH) for the former Teresa 1-27 tank battery location.**

**Based on this evaluation it has been established that:**

- given the small size of the location;
- the nature of the variance;
- the fact that the location is on private property;
- the fact that the location is not within a wetland or 100-Year Floodplain; and
- the fact that the location is not within a RSO or SWH area;

Granting this final reclamation variance for the former Teresa 1-27 tank battery, access point, and wellhead (Location ID: 323128) would have NO NEGATIVE IMPACTS on public health, public safety, public welfare, environment, or wildlife.



**PDC Energy, Inc.**  
**Teresa 1-27 Former Tank Battery and**  
**Access Point**

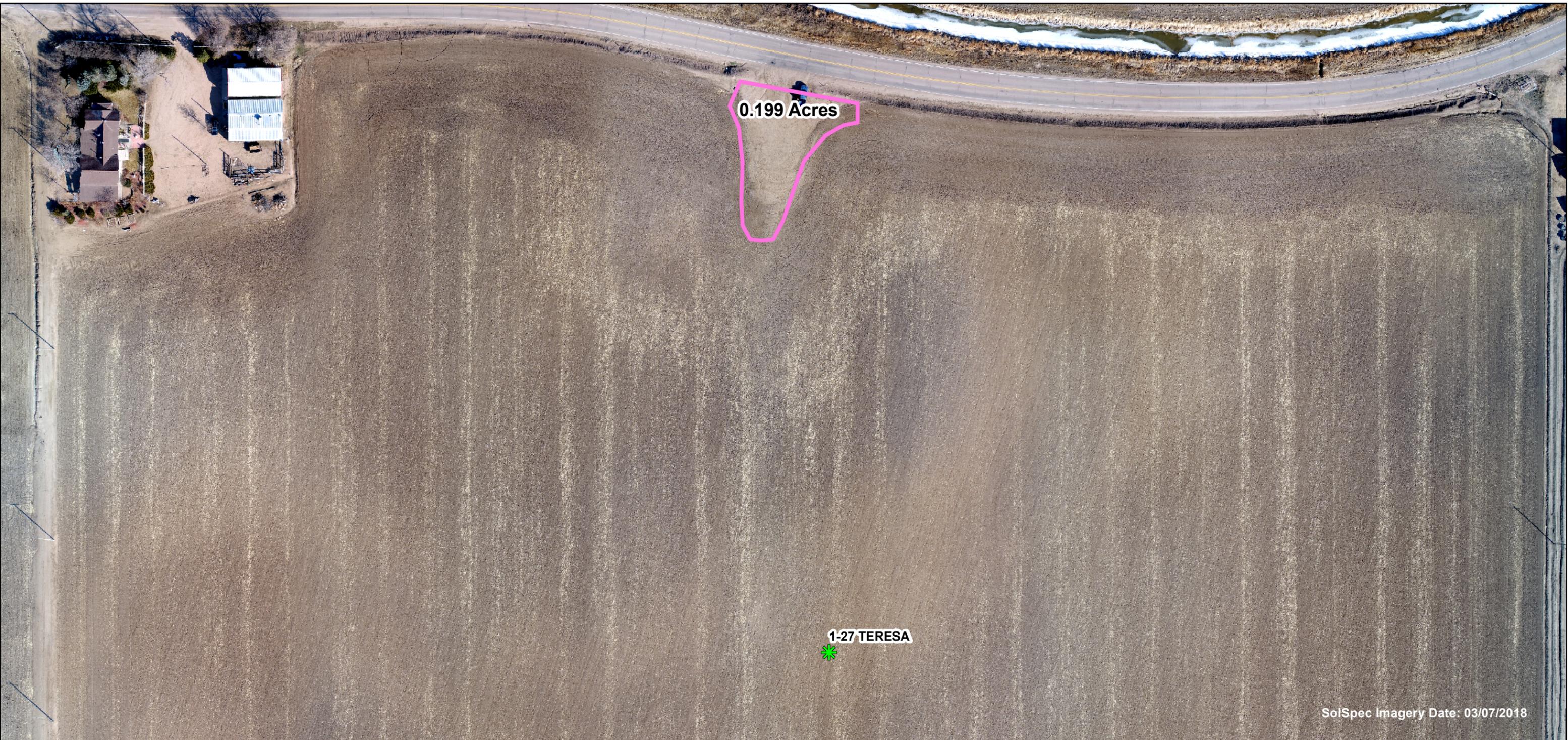
**Exhibit A, B, and C**

**Prepared By:**  
**SolSpec Solutions, LLC**  
**And**  
**Duraroot Environmental Consulting, LLC**



**Exhibit A:**  
**Facility Map**

# Exhibit A - Teresa 1-27 Tank Battery



SolSpec Imagery Date: 03/07/2018

## Legend

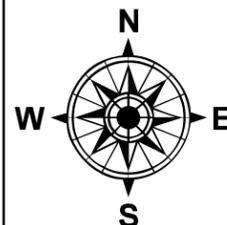
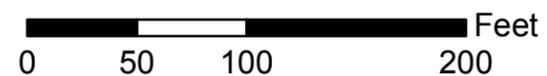
 Wellhead Location

 Production Pad Disturbance

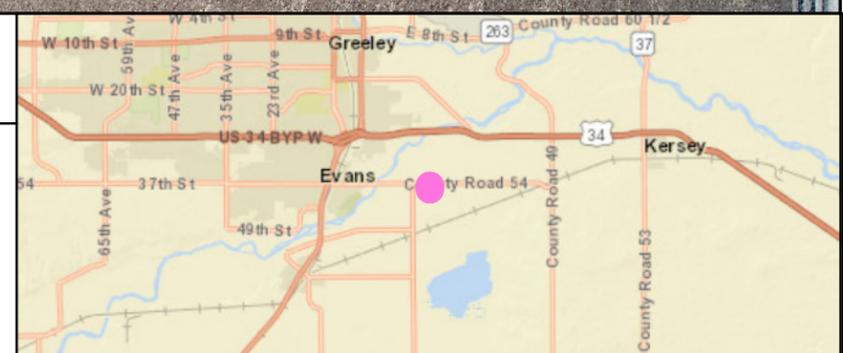
Total: 0.199 Acres\*

\*Estimated acres

1:1,000



Date: 03/12/2018  
Drone Pilot: Adam Dutko  
Projection: WGS 1984 UTM Zone 13N  
Produced by: Sol Spec, LLC



**Exhibit B:**  
**Facility Photos**

# Exhibit B: FACILITY PHOTOS

PREPARED BY: PDC ENERGY, INC.



**Facility:** Teresa 1-27 Former Tank Battery & Access Point

**Legal Description:** NENW SEC 27 5N 65W

**Date of Assessment:** March 7, 2018

**COGCC Location ID#:** 323128

**County:** Weld

**Date Prepared:** March 12, 2018



Photo 1. The Teresa 1-27 Former Tank Battery & Access Point facing north, March 7, 2018. Location: 40.37657, -104.65186



Photo 2. The Teresa 1-27 Former Tank Battery & Access Point facing south, March 7, 2018. Location: 40.37673, -104.65196



Photo 3. The Teresa 1-27 Former Tank Battery & Access Point facing east, March 7, 2018. Location: 40.37694, -104.65179



Photo 4. The Teresa 1-27 Former Tank Battery & Access Point facing west, March 7, 2018. Location: 40.37674, -104.65168

# Exhibit B: FACILITY PHOTOS

PREPARED BY: PDC ENERGY, INC.



**Facility:** Teresa 1-27 Former Tank Battery & Access Point

**Legal Description:** NENW SEC 27 5N 65W

**Date of Assessment:** March 7, 2018

**COGCC Location ID#:** 323128

**County:** Weld

**Date Prepared:** March 12, 2018



Photo 5. The Teresa 1-27 Access Point facing west, March 7, 2018.

Location: 40.37687, -104.65168

**Exhibit C:**

**Approved Well Abandonment - Subsequent Form 6**

Document Number:  
400862300

Date Received:  
07/01/2015

**WELL ABANDONMENT REPORT**

This form is to be submitted as an Intent to Abandon whenever an abandonment is planned on a borehole. After the abandonment is complete, this form shall again be submitted as a Subsequent Report of the actual work completed. The approved intent shall be valid for six months after the approval date, after that period, a new intent will be required. Attachments required with the Intent to Abandon are wellbore diagrams of the current configuration and the proposed configuration with plugs set.

A Subsequent Report of Abandonment shall indicate the actual work completed. Attachments required with a Subsequent Report are a wellbore diagram showing plugs that were set and casing remaining in the hole, the job summaries from all plugging contractors used, including wireline and cementing (third party verification) and any logs that may have been run during abandonment.

OGCC Operator Number: 69175 Contact Name: Jenifer Hakkarinen

Name of Operator: PDC ENERGY INC Phone: (303) 865800

Address: 1775 SHERMAN STREET - STE 3000 Fax: \_\_\_\_\_

City: DENVER State: CO Zip: 80203 Email: Jenifer.Hakkarinen@pdce.com

**For "Intent" 24 hour notice required,** Name: \_\_\_\_\_ Tel: \_\_\_\_\_

**COGCC contact:** Email: \_\_\_\_\_

API Number 05-123-12594-00

Well Name: TERESA Well Number: 1-27

Location: QtrQtr: NENW Section: 27 Township: 5N Range: 65W Meridian: 6

County: WELD Federal, Indian or State Lease Number: 68184

Field Name: WATTENBERG Field Number: 90750

Notice of Intent to Abandon  Subsequent Report of Abandonment

*Only Complete the Following Background Information for Intent to Abandon*

Latitude: 40.375556 Longitude: -104.651667

GPS Data:  
Date of Measurement: 05/04/2010 PDOP Reading: 2.5 GPS Instrument Operator's Name: Chuck Kraft

Reason for Abandonment:  Dry  Production Sub-economic  Mechanical Problems  
 Other \_\_\_\_\_

Casing to be pulled:  Yes  No Estimated Depth: \_\_\_\_\_

Fish in Hole:  Yes  No If yes, explain details below

Wellbore has Uncemented Casing leaks:  Yes  No If yes, explain details below

Details: \_\_\_\_\_

**Current and Previously Abandoned Zones**

Formation	Perf. Top	Perf. Btm	Abandoned Date	Method of Isolation	Plug Depth
SUSSEX	4337	4380	06/02/2015	B PLUG CEMENT TOP	4258
CODELL	7023	7028	06/02/2015	B PLUG CEMENT TOP	6600
NIOBRARA	6716	6928	06/02/2015	B PLUG CEMENT TOP	6600

Total: 3 zone(s)

**Casing History**

Casing Type	Size of Hole	Size of Casing	Weight Per Foot	Setting Depth	Sacks Cement	Cement Bot	Cement Top	Status
SURF	12+1/4	8+5/8	24	329	250	329	0	
1ST	7+7/8	4+1/2	11.6	7,119	220	7,119	3,910	CBL

## Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6600 with 2 sacks cmt on top. CIBP #2: Depth 4285 with 2 sacks cmt on top.  
 CIBP #3: Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top. CIBP #4: Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top.  
 CIBP #5: Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top.

NOTE: Two(2) sacks cement required on all CIBPs.

Set 150 sks cmt from 3513 ft. to 2872 ft. Plug Type: STUB PLUG Plug Tagged:   
 Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged:   
 Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged:   
 Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged:   
 Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged:

Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks. Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth  
 Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks. Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth  
 Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks. Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth  
 (Cast Iron Cement Retainer Depth)

Set 410 sacks half in. half out surface casing from 616 ft. to 0 ft. Plug Tagged:   
 Set \_\_\_\_\_ sacks at surface  
 Cut four feet below ground level, weld on plate Above Ground Dry-Hole Marker:  Yes  No  
 Set \_\_\_\_\_ sacks in rat hole Set \_\_\_\_\_ sacks in mouse hole

### Additional Plugging Information for Subsequent Report Only

Casing Recovered: 3419 ft. 4+1/2 inch casing Plugging Date: 06/05/2015  
 of \_\_\_\_\_  
 \*Wireline Contractor: Nabors \*Cementing Contractor: Magna  
 Type of Cement and Additives Used: \_\_\_\_\_  
 Flowline/Pipeline has been abandoned per Rule 1103  Yes  No \*ATTACH JOB SUMMARY

#### Technical Detail/Comments:

Teresa 1-27 (05-123-12594) / Plugging Procedure (Subsequent)  
 Producing formation: Niobrara-Codell  
 Existing Perforations: Niobrara 6716'-6928'; Codell 7023'-7028'  
 Squeezed Perforations: Sussex 4337'-4380'  
 TD: 7130' PBD: 7045'  
 Surface Casing: 8 5/8" 24# @ 340' w/ 250 sks cmt.  
 Production Casing: 4 1/2" 11.6# @ 7123' w/ 220 sks cmt (TOC 3912').

#### Procedure:

1. MIRU pulling unit. MIRU Summit Slickline. Run gyro survey from 6900' to surface.
2. MIRU Magna wireline company. TIH with CIBP. Set BP at 6660' with 2 sxs cmt on top.
3. TIH with CIBP. Set BP at 4285' with 2 sxs cmt on top.
4. TIH with casing cutter. Cut off 4 1/2" casing at 3419'. Pull 4 1/2" casing.
5. TIH with tubing to 3513'. RU cementers. Mix and pump 150 sxs of 15.8#/gal CI G cement at 3513'.
6. Tag TOC at 2872'. Reset tubing to 616'. Mix and pump 300 sxs of 15.8#/gal CI G cement at 616'.
7. Tag TOC at 345'. Mix and pump 110 sxs of 15.8#/gal CI G cement at 345'. Cement circ to surface.
8. Cut casing 6' below ground level and weld on cap.

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: \_\_\_\_\_ Print Name: Jenifer Hakkarinen  
 Title: Regulatory Tech Date: 7/1/2015 Email: Jenifer.Hakkarinen@pdce.com

Based on the information provided herein, this Well Abandonment Report (Form 6) complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved:

Date: 8/9/2016

**CONDITIONS OF APPROVAL, IF ANY:**

**COA Type**

**Description**

COA Type	Description

**Attachment Check List**

**Att Doc Num**

**Name**

400862300	FORM 6 SUBSEQUENT SUBMITTED
400862313	WELLBORE DIAGRAM
400862319	CEMENT JOB SUMMARY

Total Attach: 3 Files

**General Comments**

**User Group**

**Comment**

**Comment Date**

Permit	Form 7 OK.	8/9/2016 12:53:03 PM
Public Room	Document verification complete 01/06/16	1/6/2016 9:42:08 AM

Total: 2 comment(s)