

State of Colorado Oil and Gas Conservation Commission

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Document Number:

401036699

Date Received:

04/28/2016

Spill report taken by:

Spill/Release Point ID:

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

Name of Operator: PDC ENERGY INC Operator No: 69175 Phone Numbers: (970) 506-9273 Address: 1775 SHERMAN STREET - STE 3000 City: DENVER State: CO Zip: 80203 Contact Person: Zack Liensenfeld Mobile: (970) 373-6581 Email: zack.liensenfeld@pdce.com

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401034905

Initial Report Date: 04/25/2016 Date of Discovery: 04/22/2016 Spill Type: Historical Release

Spill/Release Point Location:

Location of Spill/Release: QTRQTR NWSW SEC 31 TWP 2N RNG 68W MERIDIAN 6

Latitude: 40.093056 Longitude: -105.053056

Municipality (if within municipal boundaries): County: WELD

Reference Location:

Facility Type: WELL Facility/Location ID No. No Existing Facility or Location ID No. Well API No. (Only if the reference facility is well) 05-123-09521

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): 0 Estimated Condensate Spill Volume(bbl): 0 Estimated Flow Back Fluid Spill Volume(bbl): 0 Estimated Produced Water Spill Volume(bbl): Unknown Estimated Other E&P Waste Spill Volume(bbl): 0 Estimated Drilling Fluid Spill Volume(bbl): 0

Specify:

Land Use:

Current Land Use: CROP LAND Other(Specify): Weather Condition: Warm and Sunny Surface Owner: FEE Other(Specify):

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State Residence/Occupied Structure Livestock Public Byway Surface Water Supply Area As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A reportable historic spill was discovered at the Armstead 1 well head while abandoning the well. Current recovery efforts are mitigating impacts.

**List Agencies and Other Parties Notified:**

**OTHER NOTIFICATIONS**

Date	Agency/Party	Contact	Phone	Response
4/22/2016	COGCC	Chris Canfield	-	Via Email
4/22/2016	Land Owner	NA	-	Via Phone Call

**SPILL/RELEASE DETAIL REPORTS**

#1 Supplemental Report Date: 04/28/2016

FLUIDS	BBL's SPILLED	BBL's RECOVERED	Unknown
OIL	0	0	<input type="checkbox"/>
CONDENSATE	0	0	<input type="checkbox"/>
PRODUCED WATER			<input checked="" type="checkbox"/>
DRILLING FLUID	0	0	<input type="checkbox"/>
FLOW BACK FLUID	0	0	<input type="checkbox"/>
OTHER E&P WASTE	0	0	<input type="checkbox"/>

specify: \_\_\_\_\_

Was spill/release completely contained within berms or secondary containment? NO Was an Emergency Pit constructed? NO

*Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.*

**A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit**

Impacted Media (Check all that apply)  Soil  Groundwater  Surface Water  Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): 25 Width of Impact (feet): 25

Depth of Impact (feet BGS): 7 Depth of Impact (inches BGS): \_\_\_\_\_

How was extent determined?

On April 22, 2016, a historic release was discovered during plug and abandonment activities at the Armstead #1 wellhead. Approximately 160 cubic yards of impacted material were removed and transported to the Front Range Regional Landfill in Erie, Colorado for disposal under PDC waste manifests. Four (4) soil samples (SS01 – SS04) were collected from the final excavation extent at approximately 5 feet below ground surface (bgs). Soil samples were field screened for volatile organic compound (VOC) concentrations using a photoionization detector (PID). Samples were submitted to Summit Scientific Laboratories in Golden, Colorado for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, total petroleum hydrocarbons (TPH) – gasoline range organics (GRO) by USEPA Method 8260, and TPH – diesel range organics (DRO) by USEPA Method 8015. Analytical results indicated constituent concentrations were below COGCC Table 910-1 standards in the four soil sample locations. Groundwater was encountered in the excavation area at approximately 7 feet bgs. Between April 22 and April 27, 2016, approximately 320 barrels of groundwater were removed from the excavation area using a vacuum truck and transported to a licensed disposal facility. A groundwater sample (GW01) was subsequently collected from the excavation extent and submitted for laboratory analysis of BTEX. Analytical results indicated BTEX concentrations were below COGCC Table 910-1 groundwater standards. The excavation extent and soil and groundwater sample locations are illustrated on Figure 2. Soil analytical data is summarized in Table 1 and groundwater analytical data is summarized in Table 2. Laboratory reports are included as Attachment A. Based on the data described herein, PDC is requesting a No Further Action (NFA) determination for this release.

Soil/Geology Description:

Aquolls and Aquentis, gravelly substratum

Depth to Groundwater (feet BGS) 7 Number Water Wells within 1/2 mile radius: 16

If less than 1 mile, distance in feet to nearest  
 Water Well 300 None  Surface Water 105 None   
 Wetlands \_\_\_\_\_ None  Springs \_\_\_\_\_ None   
 Livestock \_\_\_\_\_ None  Occupied Building 1575 None

Additional Spill Details Not Provided Above:

### CORRECTIVE ACTIONS

#1 Supplemental Report Date: 04/28/2016

Cause of Spill (Check all that apply)  Human Error  Equipment Failure  Historical-Unknown  
 Other (specify) \_\_\_\_\_

Describe Incident & Root Cause (include specific equipment and point of failure)

A historic release was discovered during the plug and abandonment of the wellhead.

Describe measures taken to prevent the problem(s) from reoccurring:

The wellhead was abandoned.

Volume of Soil Excavated (cubic yards): 160

Disposition of Excavated Soil (attach documentation)  Offsite Disposal  Onsite Treatment  
 Other (specify) \_\_\_\_\_

Volume of Impacted Ground Water Removed (bbls): 320

Volume of Impacted Surface Water Removed (bbls): 0

### REQUEST FOR CLOSURE

**Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.**

Basis for Closure:  Corrective Actions Completed (documentation attached)

Work proceeding under an approved Form 27

Form 27 Remediation Project No: \_\_\_\_\_

#### OPERATOR COMMENTS:

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

Signed: \_\_\_\_\_ Print Name: Zack Liensenfeld

Title: EHS Professional Date: 04/28/2016 Email: zack.liensenfeld@pdce.com

#### COA Type

#### Description

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### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401037827	TOPOGRAPHIC MAP
401037828	SITE MAP
401037829	ANALYTICAL RESULTS

Total Attach: 3 Files

**General Comments**

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)