

Methane Mitigation System
Quarterly Operations and Monitoring (O&M)
Summary

**DWR WATER WELL
PERMIT # 268360**

13606 WCR 2 ½
Brighton, Colorado
NWSE S32 T1N R66W

COGCC Remediation # 15469

Prepared by:



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1.0 Introduction

Tasman Geosciences, Inc. (Tasman) has prepared this quarterly operations and monitoring (O&M) summary on behalf of PDC Energy, Inc. (PDC) and Great Western Operating Company, LLC (collectively referred to as the Operators) for the methane mitigation system (System) installed at the (Property) associated with the Colorado Division of Water Resources (DWR) Well Permit Number 268360 (Well). The System was designed to mitigate methane concentrations in the Well water.

2.0 Location and Background

The Property is located at 13606 West County Road (WCR) 2 ½ in Brighton, Colorado, within the NWSE Quarter of Section 32, Township 1 North, Range 66 West. The Property coordinates are approximately 40.007457 degrees north latitude and -104.798748 degrees west longitude.

The Well is permitted for domestic use and is completed within the Laramie Fox Hills aquifer. The Well is constructed with a screened interval between 810 and 1,075 feet below ground surface (bgs), with a static water level of 463 feet bgs, according to DWR records. Water from the Well is pumped and conveyed into the basement of the residence, where it either enters the residential supply stream or is conveyed to exterior irrigation spigots.

As a part of an area water well study requested by the Colorado Oil and Gas Conservation Commission (COGCC), PDC retained Olsson Associates (Olsson) on May 8, 2020, to collect a preliminary baseline water sample from the Well in accordance with the COGCC Baseline Water Quality Sampling Program, Rule 318A. Laboratory results indicated that the sample exhibited a methane concentration of 11.6 milligrams per liter (mg/L) [Table 1]. Notification was provided to the COGCC, as the concentration exceeded the maximum reporting threshold of 10 mg/L. Subsequent isotopic and gas compositional analysis indicated that the methane exhibited properties of both thermogenic and biogenic origin.

On June 26, 2020, PDC retained Tasman to collect a supplemental baseline water sample from the Well. Laboratory and isotopic analyses confirmed an elevated methane concentration of 17.4 mg/L, with properties of thermogenic and biogenic origin.

As a result of the elevated methane concentration and properties of thermogenic origin, the Operators obtained consent from the landowners to install the System.

3.0 System Design

The System was designed to mitigate methane concentrations detected in the Well using a two-phased approach. The following sections summarize the design and installation for each component of the System. A System process and instrumentation diagram (P&ID) is provided as Figure 1. A photographic overview of the System is provided as Attachment B.

3.1 Well Ventilation

The ventilation portion of the System is designed to allow for passive ventilation of methane from the Well casing. A schedule-80 polyvinyl chloride (PVC) pipe stack is constructed directly over the Well, and is sealed with an aluminum screened vent cap (Figure 1).

The Well ventilation stack was installed on August 6, 2020. Following installation, approximately ½-gallon of Clorox® bleach was poured into the Well as a precautionary measure to ensure that no foreign elements were introduced during construction.

3.2 Water Treatment System

The water treatment portion of the System is designed to remove methane dissolved in the Well water using a combination of aeration technology and carbon filtration (Figure 1). All System equipment is housed within the basement of the residence. The water is conveyed from the Well through the existing residential pressure tank and filter into the System for treatment.

Once water enters the System, it is conveyed via 1-inch schedule-40 PVC piping through a screen filter and into an aeration tank equipped with enclosed misters. The process water is sprayed, or atomized, within the tank, thereby volatilizing the dissolved methane. Methane vapors are then transferred from the tank via a small blower through a 3-inch PVC vent stack for discharge outside of the residence. The top of the vent stack is installed on the exterior of the residence, above and away from any windows. Vapor collection and conveyance operate as a closed system to prevent methane accumulation within the basement.

Once treated, process water collects at the bottom of the aeration tank. When the water level in the tank falls below the low liquid level switch (LSL), the switch is engaged thereby opening the solenoid valve and initiating Well pump operation. When the water level in the tank reaches the maximum fill level, the high liquid level switch (LSH) is engaged and the solenoid valve closes.

As water is consumed within the residence, process water is transferred from the aeration tank using an enclosed submersible pump into a small pressure tank. Prior to entering the residential supply stream, process water is conveyed through a granular activated carbon (GAC) filter as a polishing measure.

The water treatment equipment was installed at the Property between August 24 and August 28, 2020. The System became operational on August 28, 2020.

4.0 System Sampling Program

The System sampling program is used to monitor operational efficacy and confirm methane concentrations are reduced below the target level of 10 mg/L. Following the initial system start-up sampling procedures, the sampling program will be conducted on a quarterly schedule and sampled within the third month of every quarter. The following sections provide an overview to the sampling program, as well as data for the reporting period.

4.1 Overview

Water samples are collected from the influent and effluent process streams of the System (Figure 1). The effluent sample port (EFF) is located downstream of the aeration tank and GAC filter. The influent sample port (INF) is located upstream of the aeration tank and downstream of existing residential pressure tank.

Effluent water samples are collected following one minute of purging at a rate of 250 to 500 milliliters (mL) per minute (min). Influent water samples are collected following parameter stabilization while purging at a rate of 250 to 500 mL/min, to ensure that samples are representative of formation conditions.

Samples are collected in laboratory-provided unpreserved glass 40-mL vials and designated using the following sample identification nomenclature:

Prefix [INF or EFF] – mmddyy – time [24-hour]

Sample vials are subsequently placed in an ice-filled cooler to maintain a temperature of approximately 4 degrees Celsius during transportation to the laboratory. Samples are submitted to Summit Scientific Laboratory (Summit) under standard chain-of-custody procedures for analysis of dissolved gases (methane, ethane, propane) by Environmental Protection Agency (EPA) Method RSK-175. Additionally, one sample is collected from the system influent in a laboratory-provided 750-mL IsoFlask™ and submitted to Dolan Integration Group (DIG) for isotopic and gas compositional analysis, per COGCC directive.

4.2 Quarterly Reporting Data

Quarterly sampling was conducted in the third month of the quarter on March 29, 2022. Analytical results indicated that post-treatment methane concentrations were reduced below the target level of 10 mg/L. Isotopic analyses completed by DIG confirmed that the elevated methane concentrations were thermogenic and biogenic in origin. Analytical results are summarized in Table 1 and the combined laboratory report is provided as Attachment A.

5.0 Upcoming Site Activities

System maintenance activities will be conducted concurrent with System sampling events on a quarterly schedule. Maintenance will include inspection, cleaning, and replacement of the System components, as needed.

Second quarter 2022 System sampling and maintenance will be conducted in June 2022.

TABLE

TABLE 1
DWR WATER WELL PERMIT # 268360
SYSTEM PROCESS WATER ANALYTICAL RESULTS SUMMARY TABLE

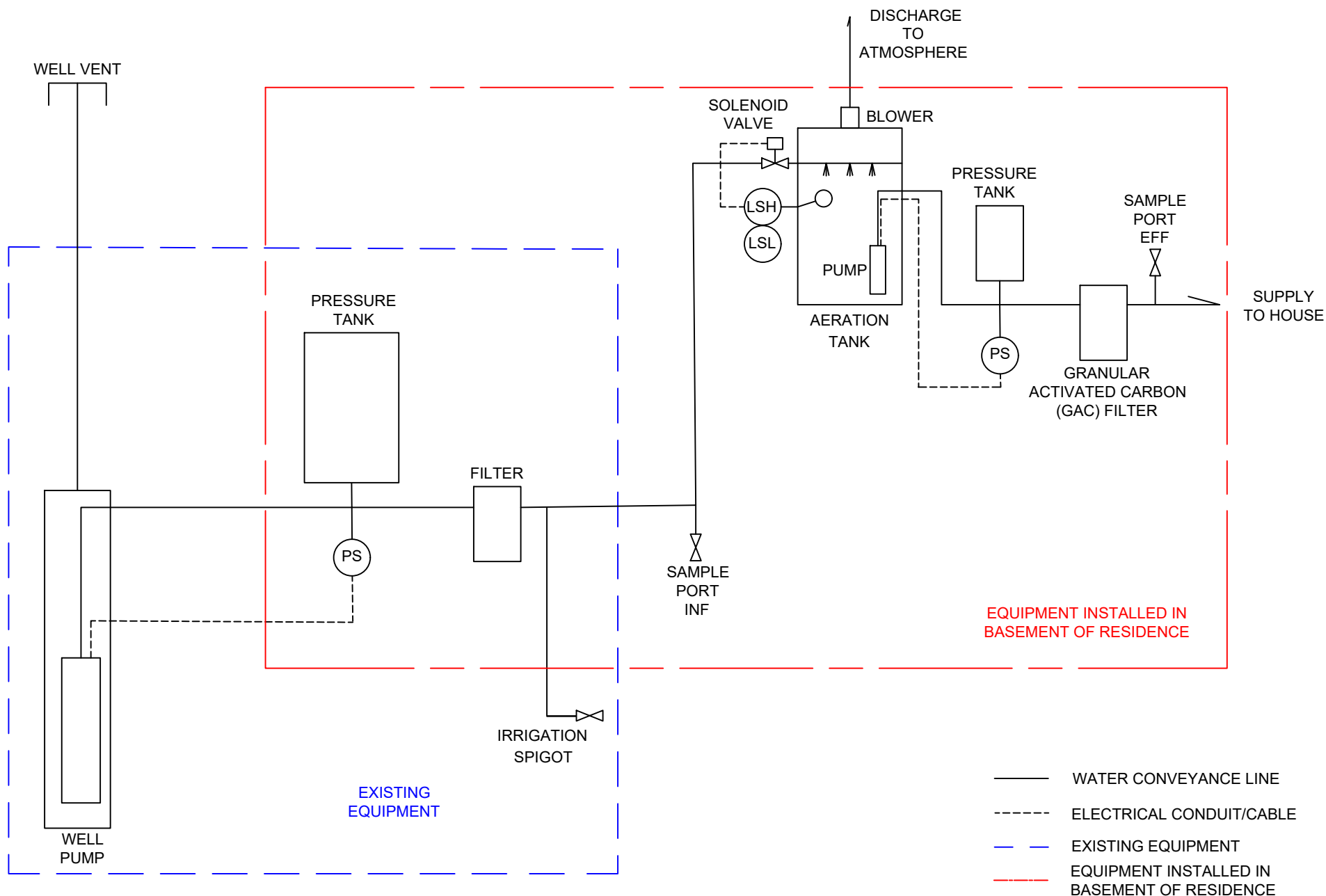


| Sample ID | Date Sampled | Methane (mg/L) | Ethane (mg/L) | Propane (mg/L) |
|----------------------------|--------------|-------------------|------------------|-------------------|
| Target Level (mg/L) | | 10 | - | - |
| EFF-083120-1010 | 8/31/2020 | 4.1 | 2.2 | 1.2 |
| EFF-090820-0926 | 9/8/2020 | 2.9 | 2.0 | 1.2 |
| EFF-091420-900 | 9/14/2020 | 3.4 | 1.9 | 1.2 |
| EFF-092120-0915 | 9/21/2020 | 4.0 | 1.7 | 0.99 |
| EFF-120420-1031 | 12/4/2020 | 3.0 | 1.8 | 1.6 |
| EFF-030921-1034 | 3/9/2021 | 3.5 | 2.0 | 1.3 |
| EFF-061521-1045 | 6/15/2021 | 3.2 | 1.7 | 1.2 |
| EFF-091421-1045 | 9/14/2021 | 1.1 | <0.010 | <0.010 |
| EFF-122121-1040 | 12/21/2021 | 3.3 | 1.8 | 1.1 |
| EFF-032922-1054 | 3/29/2022 | 4.2 | 2.4 | 1.0 |
| INF-082620-1139 | 8/26/2020 | 18 | 12 | 3.1 |
| INF-083120-1107 | 8/31/2020 | 12 | 5.1 | 2.7 |
| INF-090820-1019 | 9/8/2020 | 12 | 5.0 | 2.8 |
| INF-091420-937 | 9/14/2020 | 12 | 5.2 | 2.9 |
| INF-092120-1010 | 9/21/2020 | 12 | 5.2 | 4.1 |
| INF-120420-1118 | 12/4/2020 | 11 | 5.4 | 4.4 |
| INF-030921-1103 | 3/9/2021 | 11 | 4.3 | 2.3 |
| INF-061521-1127 | 6/15/2021 | 9.7 | 3.2 | 2.0 |
| INF-091421-1134 | 9/14/2021 | 12 | 5.6 | 2.9 |
| INF-122121-1107 | 12/21/2021 | 14 | 7.1 | 3.5 |
| INF-032922-1126 | 3/29/2022 | 11 | 5.6 | 2.9 |

Notes:

mg/L= Milligrams per liter

FIGURE



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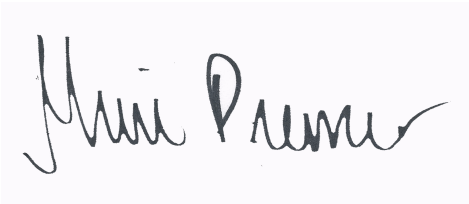
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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: DWR Permit #268360

Project Number: AFE # EX-000335

Project Manager: Karen Olson

Reported:
04/05/22 08:25

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------------|---------------|--------|----------------|----------------|
| EFF-032922-1054 | 2203506-01 | Water | 03/29/22 10:54 | 03/29/22 16:05 |
| INF-032922-1126 | 2203506-02 | Water | 03/29/22 10:54 | 03/29/22 16:05 |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

S_2

303-277-9310

Project Number: AFE # EX-000335

www.s2scientific.com

S₂

Sample Receipt Checklist

S2 Work Order# 2203506

Client: ROC energy/tasman Client Project ID: DWR Permit #2C083600


Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

| | | | | |
|--|---|--|--|--|
| | - | | | |
|--|---|--|--|--|

Matrix (Check all that apply) | Air ☐ Soil/Solid ☐ Water ☒ Other ☐Temp (°C) 3.7Thermometer # 1

| | Yes | No | N/A | Comments (if any) |
|--|-----|----|-----|-------------------|
| If samples require cooling, is the temperature < 6 °C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun. | - | | | on ICE |
| Were all samples received intact ⁽¹⁾ ? | - | | | |
| Was adequate sample volume provided ⁽¹⁾ ? | - | | | |
| If custody seals are present, are they intact ⁽¹⁾ ? | - | | | |
| Are samples due within 48 hours present? | - | | | 24 hrs |
| Are water samples with short hold times present? NOTE The short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen | | | - | |
| Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ? | - | | | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | - | | | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | - | | | |
| Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ? | - | | | |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative. | | - | | |
| Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc. | | | - | |
| If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments. | | | - | |
| If dissolved metals are requested, were samples field filtered? | | | - | |

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.


Custodian Printed Name

329.22

Date/Time



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04/05/22 08:25

EFF-032922-1054
2203506-01 (Water)

Summit Scientific

Dissolved Gases by RSK-175

Date Sampled: **03/29/22 10:54**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------|------------|-----------|-------|----------|---------|----------|----------|-------------|-------|
| | | Limit | Units | | | | | | |
| Methane | 4.2 | 1.0 | mg/L | 100 | BFC0707 | 03/30/22 | 03/30/22 | RSK-175 mod | |
| Ethane | 2.4 | 1.0 | " | " | " | " | " | " | |
| Propane | 1.0 | 1.0 | " | " | " | " | " | " | |

Date Sampled: **03/29/22 10:54**

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | Units | | | | | | |
| Surrogate: Ethene | | 110 % | 70-130 | | " | " | " | " | |

Summit Scientific

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Project: DWR Permit #268360

Project Number: AFE # EX-000335

Project Manager: Karen Olson

Reported:
04/05/22 08:25

INF-032922-1126

2203506-02 (Water)

Summit Scientific

Dissolved Gases by RSK-175

Date Sampled: **03/29/22 10:54**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------|------------|-----------|-------|----------|---------|----------|----------|-------------|-------|
| | | Limit | | | | | | | |
| Methane | 11 | 1.0 | mg/L | 100 | BFC0707 | 03/30/22 | 03/30/22 | RSK-175 mod | |
| Ethane | 5.6 | 1.0 | " | " | " | " | " | " | |
| Propane | 2.9 | 1.0 | " | " | " | " | " | " | |

Date Sampled: **03/29/22 10:54**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| <i>Surrogate: Ethene</i> | | 137 % | 70-130 | | " | " | " | " | S-06 |

Summit Scientific

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Denver CO, 80203

Project: DWR Permit #268360

Project Number: AFE # EX-000335

Project Manager: Karen Olson

Reported:
04/05/22 08:25

Dissolved Gases by RSK-175 - Quality Control

Summit Scientific

| Analyte | Reporting | | | Spike | Source | | %REC | | RPD | |
|---------|-----------|-------|-------|-------|--------|------|--------|-----|-------|-------|
| | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

Batch BFC0707 - GC

Blank (BFC0707-BLK1)

Prepared & Analyzed: 03/30/22

| | | | | | | | | | | |
|-------------------|--------|-------|------|--------|-----|--------|--|--|--|--|
| Methane | ND | 0.010 | mg/L | | | | | | | |
| Ethane | ND | 0.010 | " | | | | | | | |
| Propane | ND | 0.010 | " | | | | | | | |
| Surrogate: Ethene | 0.0448 | | " | 0.0364 | 123 | 70-130 | | | | |

LCS (BFC0707-BS1)

Prepared & Analyzed: 03/30/22

| | | | | | | | | | | |
|-------------------|--------|-------|------|--------|------|--------|--|--|--|--|
| Methane | 0.035 | 0.010 | mg/L | 0.0428 | 81.8 | 70-130 | | | | |
| Ethane | 0.098 | 0.010 | " | 0.0798 | 122 | 70-130 | | | | |
| Propane | 0.14 | 0.010 | " | 0.139 | 102 | 70-130 | | | | |
| Surrogate: Ethene | 0.0905 | | " | 0.0728 | 124 | 70-130 | | | | |

Duplicate (BFC0707-DUP1)

Source: 2203506-01

Prepared & Analyzed: 03/30/22

| | | | | | | | | | | |
|-------------------|--------|-----|------|--------|-----|--------|------|----|--|-------|
| Methane | 4.5 | 1.0 | mg/L | 4.2 | | | 6.42 | 30 | | |
| Ethane | 3.1 | 1.0 | " | 2.4 | | | 26.2 | 30 | | |
| Propane | 1.7 | 1.0 | " | 1.0 | | | 48.0 | 30 | | QR-03 |
| Surrogate: Ethene | 0.0500 | | " | 0.0364 | 137 | 70-130 | | | | S-06 |

Matrix Spike (BFC0707-MS1)

Source: 2203506-01

Prepared & Analyzed: 03/30/22

| | | | | | | | | | | |
|-------------------|--------|-----|------|--------|-----|--------|--------|--|--|-------|
| Methane | 4.5 | 1.0 | mg/L | 0.0428 | 4.2 | 701 | 70-130 | | | QM-02 |
| Ethane | 2.6 | 1.0 | " | 0.0798 | 2.4 | 301 | 70-130 | | | QM-02 |
| Propane | 1.2 | 1.0 | " | 0.139 | 1.0 | 151 | 70-130 | | | QM-02 |
| Surrogate: Ethene | 0.0800 | | " | 0.0728 | 110 | 70-130 | | | | |

Summit Scientific

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dig
Dolan Integration Group

Geochemistry for Energy

11025 Dover Street Unit 800
Westminster, CO 80021
p: 303.531.2030

Hydrocarbon Gas Composition and Stable Isotopes Data and Interpretation

Job #: 22037297
Lab #: DIG-027559
Client: Summit Scientific
Sample Name(s): INF-032922-1126

The analytical results, opinions, or interpretations contained in this report are based upon information and material supplied by the client for whose exclusive and confidential use this report has been made. The analytical results, opinions, or interpretations expressed represent the best judgment of Dolan Integration Group based on its experience, but any interpretation of test or other data, and any recommendation(s) based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions which are not infallible, and with respect to which professional engineers and analysts may differ. Accordingly, Dolan Integration Group makes no warranty or representation, expressed or implied, of any type, and expressly disclaims same as to the productivity, proper operations, or profitability of any oil, gas, coal, or other mineral, property, well, or sand in connection with which such report is used or relied upon for any reason whatsoever. This report shall not be reproduced, in whole or in part, without the written approval of Dolan Integration Group.

Dolan Integration Group shall use commercially reasonable efforts to maintain the Samples it receives from Customer in the condition in which same were initially received, and shall store, free of charge, any portion(s) of the Sample(s) not consumed or altered in the course of testing and analysis for a period of 60 days after their initial receipt, after which time the Samples will be destroyed. At Customer's written request and expense, Dolan Integration Group shall return unused Samples to Customer. At Customer's written request, Dolan Integration Group will also store and maintain Customer's Samples beyond the Free Storage Period for a monthly fee in accordance with Dolan Integration Group's the current storage rates. If Customer fails to timely pay any applicable storage charges, Dolan Integration Group shall

Analytical Report



Job #: 22037297
 Lab #: DIG-027559
 Client: Summit Scientific
 Sample Name: INF-032922-1126
 Date Sampled: 03/29/22
 Time Sampled: 10:54
 Sample Description: Isoflask
 Sampling Notes:
 Date Received: 03/30/22
 Date Analyzed: Gas Composition: 03/31/22 $\delta^{13}\text{C}$: 03/30/22 δD : 04/01/22
 Date Reported: 04/04/22
 Comments:

| Measured Values: | Measured ppm | Analyte mol % ^a | HC mol % | $\delta^{13}\text{C}$ ‰ VPDB | δD ‰ VSMOW | Comments |
|---|--------------|----------------------------|----------|------------------------------|--------------------------|--------------------|
| Nitrogen (N ₂) | 242354 | 24.54 | - | - | - | |
| Oxygen + Argon (O ₂ +Ar) | 57083 | 5.78 | - | - | - | |
| Carbon Dioxide (CO ₂) | 757 | 0.08 | - | - | - | |
| Helium (He) ^b | nd | nd | - | - | - | No headspace added |
| Hydrogen (H ₂) | nd | nd | - | - | - | |
| Methane (CH ₄) | 571785 | 57.90 | 83.20 | -51.2 | -269 | |
| Ethane (C ₂ H ₆) | 78123 | 7.91 | 11.37 | | - | |
| Ethene (C ₂ H ₄) | nd | nd | nd | | - | |
| Propane (C ₃ H ₈) | 29881 | 3.03 | 4.35 | | - | |
| iso-Butane (C ₄ H ₁₀) | 2429 | 0.25 | 0.35 | | - | |
| n-Butane (C ₄ H ₁₀) | 4242 | 0.43 | 0.62 | | - | |
| iso-Pentane (C ₅ H ₁₂) | 479 | 0.05 | 0.07 | | - | |
| n-Pentane (C ₅ H ₁₂) | 338 | 0.03 | 0.05 | | - | |
| Hexanes + (C ₆ H ₁₄) | nd | nd | nd | | - | |

| Calculated Values: | |
|---|--------|
| Total HCs (ppm) | 687277 |
| Gas Wetness (mol % C ₂ +C ₁ +)) | 16.80 |
| C ₁ /(C ₂ +C ₃) (mol/mol) | 5 |

^a Analyte concentrations normalized to 100% (Mol. % is approximately equal to Vol. %)

^b Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

HC= Hydrocarbons

nd = not detected

na = not analyzed

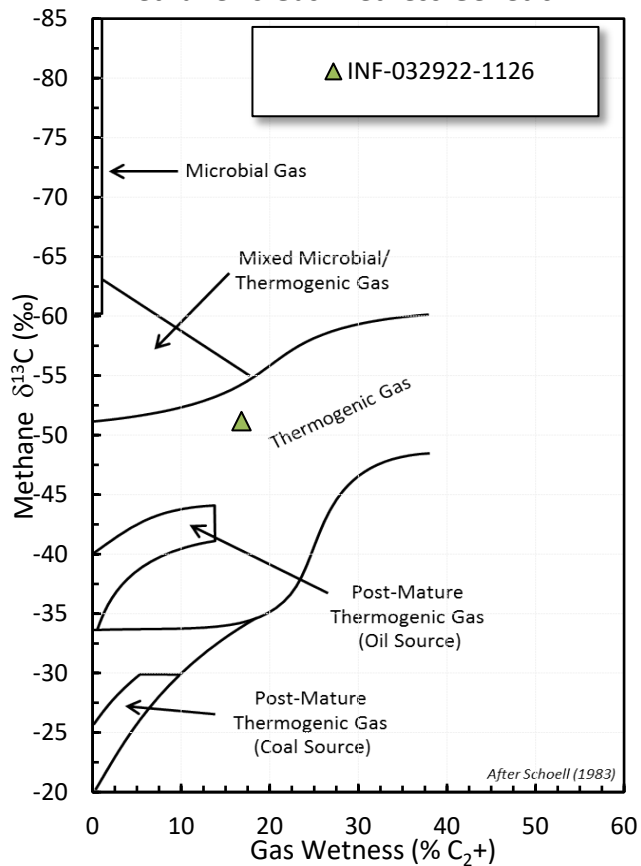
Stable isotope results based on multi-point laboratory calibration

Error $\delta^{13}\text{C}$ < 0.5 ‰

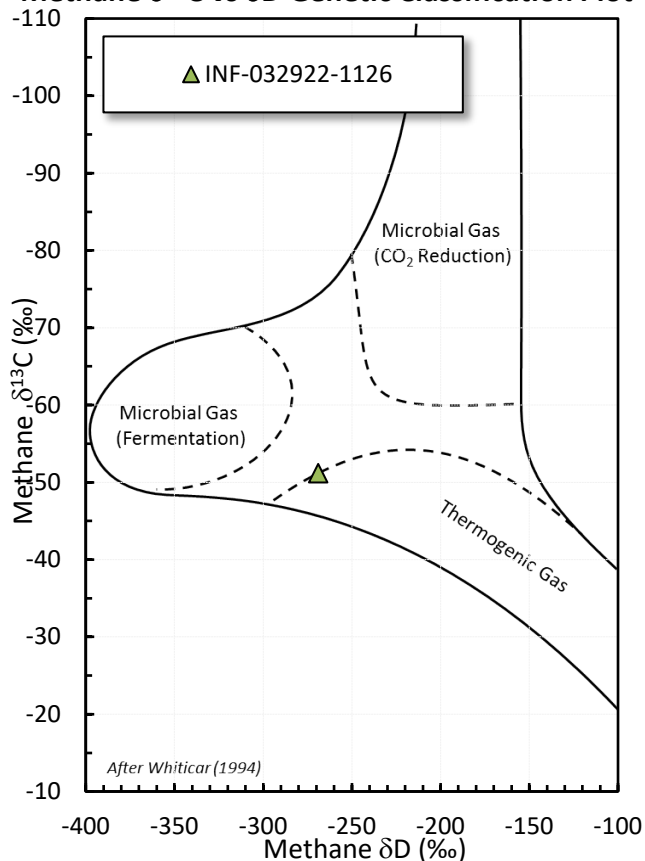
Error δD < 5.0 ‰

Stable Isotope Interpretive Plots

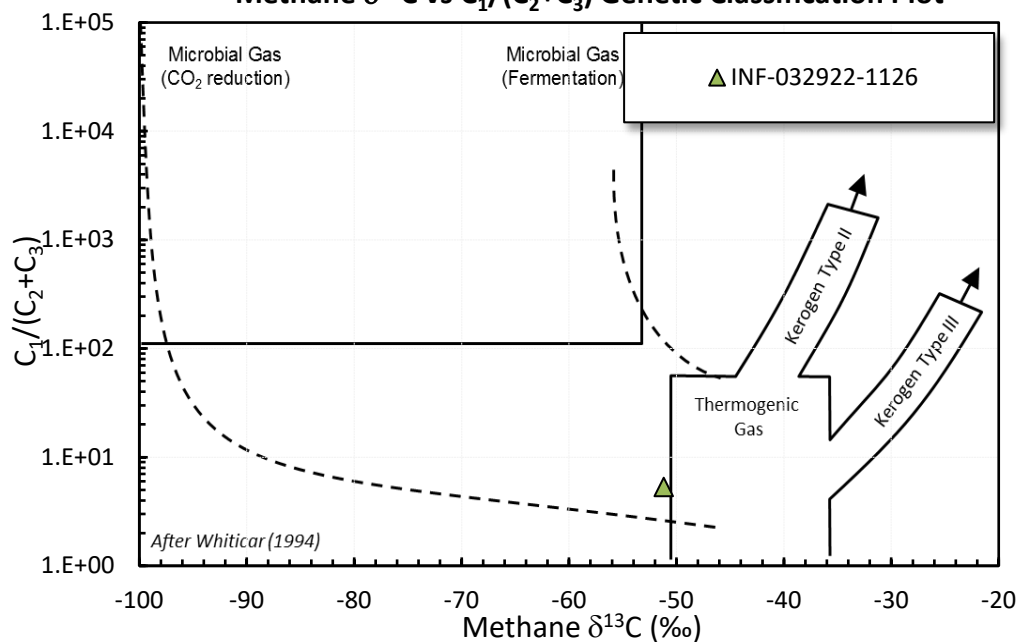
Methane vs Gas Wetness Genetic



Methane $\delta^{13}\text{C}$ vs δD Genetic Classification Plot



Methane $\delta^{13}\text{C}$ vs $\text{C}_1/(\text{C}_2+\text{C}_3)$ Genetic Classification Plot



Chain of Custody Form



Geochemistry
for Energy

main 303.531.2030 • info@digforenergy.com • digforenergy.com
Office and Lab 11025 Dover St • Ste 800 • Westminster, CO 80021

JOB 22037297
DIG-027559

| | | | | | |
|---|--|-------------------------------------|--|-------------------------|--|
| Send Data to: | | Send Invoice to (if different): | | Additional Information: | |
| Name: Muri Premier / Paul Shrewsbury | | Name: Ben Shrewsbury | | AFE #: | |
| Company: Summit Scientific | | Company: Summit Scientific | | Project: 2203586 | |
| Address: 4653 Table Mountain Drive | | Address: 4653 Table Mountain Drive | | PO #: | |
| City, State: Golden, CO 80403 | | City, State: Golden, CO 80403 | | Location: | |
| Phone: 303-277-9310 | | Phone: 303-277-9310 | | Sampled By: | |
| Email: mpremier@s2scientific.com / pshrewsbury@s2scientific.com | | Email: bshrewsbury@s2scientific.com | | API #: | |

| | | | |
|--------------------|-------------------------------|--------------------------|------------------------------------|
| Turnaround Time**: | Standard (≤ 10 Business days) | Rush (≤ 5 Business days) | Expedited Rush (≤ 3 Business days) |
|--------------------|-------------------------------|--------------------------|------------------------------------|

| Container Number | Sample Identification | Date Sampled | Time | Sample Type* | Gas Composition | d13C of Methane (C1) | d13C of Ethane (C2) | d13C of Propane+ (C3+) | d13C of Carbon Dioxide (CO2) | dD of Methane (C1) | Whole Oil Gas Chromatography | d18O and dD Isotopes of Water | RSK 175 Dissolved Gas Quantification |
|------------------|-----------------------|--------------|------|--------------|-------------------------------------|-------------------------------------|---------------------|------------------------|------------------------------|-------------------------------------|------------------------------|-------------------------------|--------------------------------------|
| | INF-032922-1126 | 3/29 | 1054 | Other | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | <input checked="" type="checkbox"/> | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |
| | | | | Other | | | | | | | | | |

| | | | | | | | |
|---------------------------|-------------------|---------|-------|-----------------------|---------|---------|------|
| Chain of Custody Record | | | | Comments: | | | |
| Relinquished by Signature | Company | Date | Time | Received by Signature | Company | Date | Time |
| | Summit Scientific | 3/30/22 | 11:05 | | DIG | 3/30/22 | 1105 |

*Gas composition vs RSK-175 - Gas composition is a basic analysis of the concentration (ppm) of gases within the headspace of the sample (headspace is created at the lab). RSK-175 is a specific analysis technique combined with calculations to give the total dissolved gas of each species in the water sample (mg/L). Why one or the other? Gas composition gives us a quick, general look at relative concentrations and ratios (e.g., gas wetness). RSK-175 gives us an exact total of gas present in the sample (headspace and dissolved in the water). Questions? Give us a call at 303-531-2030.

** Rush and Expedited Rush turnaround time analysis will incur additional costs at 2x and 3x the standard turnaround time pricing.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: DWR Permit #268360

Project Number: AFE # EX-000335
Project Manager: Karen Olson

Reported:
04/05/22 08:25

Notes and Definitions

| | |
|-------|---|
| S-06 | The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interferences. |
| QR-03 | The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values. |
| QM-02 | The RPD and/or percent recovery for this QC sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample. |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

ATTACHMENT B

DWR WATER WELL PERMIT # 268360
Methane Mitigation System
Photographic Overview

Well Ventilation



Water Treatment System

