



March 2, 2026

Montana Board of Oil and Gas Conservation  
2535 St. Johns Avenue  
Billings, MT 59102

Attn: Mr. John Gizicki  
UIC Program Manager

RE: Application for UIC Permit and Authorization to Drill a Class II Injection Well  
**Location of proposed Disposal Well & Facility: BONSAI 1 SWD**  
Lot 1, Section 3, Township 28N, Range 57E. P.M.M.  
Roosevelt County, Montana

Dear Mr. Gizicki,

Phoenix Operating LLC (Phoenix) respectfully requests approval of an Underground Injection Control (UIC) permit for the referenced location and as described in the attached application. Phoenix has provided notice to the appropriate parties within ¼ mile area of review of the proposed well location and requests that the application be placed on the docket for the MBOGC hearing scheduled April 9<sup>th</sup>, 2026.

If you have any questions concerning the enclosed application, please do not hesitate to reach out.

Sincerely,

Tori Siemieniewski  
Director – Bakken Regulatory  
Phoenix Operating LLC  
701-870-2961

David Scadden  
Chief Operating Officer, Partner  
Phoenix Operating LLC  
307-214-7909





February 26, 2026

Montana Board of Oil and Gas Conservation  
2535 St. Johns Avenue  
Billings, MT 59102

Attn: Mr. John Gizicki  
UIC Program Manager

RE: Application for UIC Permit and Authorization to Drill a Class II Injection Well  
**Location of proposed Disposal Well & Facility: BONSAI 1 SWD**  
Lot 1, Section 3, Township 28N, Range 57E. P.M.M.  
Roosevelt County, Montana

RECEIVED  
FEB 27 2026  
MONTANA BOARD OF OIL &  
GAS CONSERVATION • BILLINGS

Dear Mr. Gizicki,

Phoenix Operating LLC (Phoenix) respectfully requests approval of an Underground Injection Control (UIC) permit for the referenced location and as described in the attached application. Phoenix has provided notice to the appropriate parties within ¼ mile area of review of the proposed well location and requests that the application be placed on the docket for the MBOGC hearing scheduled April 9<sup>th</sup>, 2026.

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Sincerely,

Tori Siemieniewski  
Director – Bakken Regulatory  
Phoenix Operating LLC  
701-870-2961

**Submit In Quadruplicate To:**  
**MONTANA BOARD OF OIL AND GAS CONSERVATION**  
**2535 ST. JOHNS AVENUE**  
**BILLINGS, MONTANA 59102**

**SUNDRY NOTICES AND REPORT OF WELLS**

Operator PHOENIX OPERATING LLC		Lease Name: BONSAI
Address 4643 SOUTH ULSTER STREET, SUITE 1510		Type (Private/State/Federal/Tribal/Allotted): Private
City DENVER	State CO	Zip Code 80237
Telephone 303-548-1953	Fax	Well Number: 1 SWD
Location of well (1/4-1/4 section and footage measurements): Lot 1 Section 3, T28N, R57E, 516' FNL & 515' FEL		Unit Agreement Name:
		Field Name or Wildcat: Elm Coulee NE
		Township, Range, and Section: Section 3, T28N, R57E
API Number: <b>25</b>   _____   _____ State County Well	Well Type (oil, gas, injection, other):  INJECTION	County: Roosevelt

Indicate below with an X the nature of this notice, report, or other data:

Notice of Intention to Change Plans	<input type="checkbox"/>	Subsequent Report of Mechanical Integrity Test	<input type="checkbox"/>
Notice of Intention to Run Mechanical Integrity Test	<input type="checkbox"/>	Subsequent Report of Stimulation or Treatment	<input type="checkbox"/>
Notice of Intention to Stimulate or to Chemically Treat	<input type="checkbox"/>	Subsequent Report of Perforation or Cementing	<input type="checkbox"/>
Notice of Intention to Perforate or to Cement	<input type="checkbox"/>	Subsequent Report of Well Abandonment	<input type="checkbox"/>
Notice of Intention to Abandon Well	<input type="checkbox"/>	Subsequent Report of Pulled or Altered Casing	<input type="checkbox"/>
Notice of Intention to Pull or Alter Casing	<input type="checkbox"/>	Subsequent Report of Drilling Waste Disposal	<input type="checkbox"/>
Notice of Intention to Change Well Status	<input type="checkbox"/>	Subsequent Report of Production Waste Disposal	<input type="checkbox"/>
Supplemental Well History	<input type="checkbox"/>	Subsequent Report of Change in Well Status	<input type="checkbox"/>
Other (specify) Intent to drill and complete a _____	<input checked="" type="checkbox"/>	Subsequent Report of Gas Analysis (ARM 36.22.1222)	<input type="checkbox"/>
Class II Injection Well	<input type="checkbox"/>		<input type="checkbox"/>

**Describe Proposed or Completed Operations:**

Describe planned or completed work in detail. Attach maps, well-bore configuration diagrams, analyses, or other information as necessary. Indicate the intended starting date for proposed operations or the completion date for completed operations.

Phoenix respectfully requests approval to drill and complete a disposal well at the above-referenced location for the injection of Class II E&P waste. Notice has been provided to all parties within the quarter mile area of review. An application for hearing has been docketed with the Montana Board of Oil and Gas Conservation and is scheduled for April 2026.

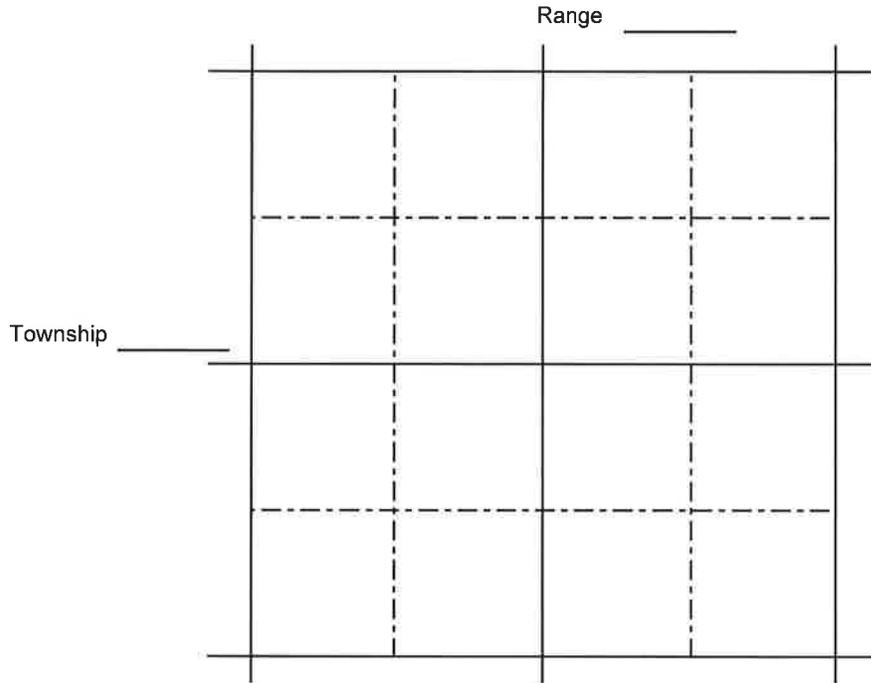
Phoenix requests a variance from running open hole logs on the subject well. Offset logs can be found for the LEONARD 1-13 (API#25085211790000).

<b>BOARD USE ONLY</b>	The undersigned hereby certifies that the information contained on this application is true and correct:
Approved _____ Date	2/24/2026  Date Signed (Agent)
	<b>Megan Griffith, Regulatory Specialist</b> Print Name and Title
Name _____ Title _____	Telephone: _____ 720-250-8737

**SUPPLEMENTAL INFORMATION**

NOTE: Additional information or attachments may be required by Rule or by special request.

Plot the location of the well or site that is the subject of this notice or report.



**BOARD USE ONLY**

**CONDITIONS OF APPROVAL**

The operator must comply with the following condition(s) of approval:

Failure to comply with the conditions of approval may void this permit.

## UIC Plan BONSAI 1 SWD

### 1. Operator Description

#### Phoenix Operating LLC

4643 South Ulster Street, Suite 1510  
Denver, CO 80237

### 2. Proposed Well Location

Well Name: BONSAI 1 SWD  
Location: 516' FNL & 515' FEL, Section 3, T28N, R57E, Roosevelt County.  
Field: Elm Coulee NE  
Ungraded Ground Elevation: 2234'  
Finished Pad Elevation: 2246'

### 3. Lithologic Description of the Proposed Injection & Confining Zone

#### Injection Zone: Inyan Kara Formation

Estimated Top: 5126' TVD  
Estimated Thickness: 619'

Description: consists of alternating fluvial deltaic sandstones, siltstones, and shales varying thickness and lateral extent. Stratigraphic variability in the Inyan Kara is generally interpreted to be the result of multiple episodes of erosion and subsequent channel-filling.

#### Upper Confining Zone: Mowry Formation

Estimated Top: 4392' TVD  
Estimated Thickness: 734'

Description: medium to dark gray, soft, flaky, often bentonitic, shale. Lower Cretaceous Dakota Group consists of offshore marine shales and bentonitic claystone.

#### Lower Confining Zone: Swift Formation

Estimated Top: 5745' TVD  
Estimated Thickness: 502'

Description: dark gray to greenish, fissile, waxy, silty, and often calcareous shale. The Jurassic Swift formation lies conformably below the Inyan Kara. The Swift is made up of shallow marine shale and siltstone.

\*Offset geologic tops calculated from LEONARD 1-13(API#25085211790000).

### 4. Maximum Injection Pressure Calculation

Maximum injection pressure was determined utilizing the following formula in accordance with §146.23

$$\text{MSIP} = (\text{Depth of Perf(TVD)}) * (\text{Frac. Grad.}) - (\text{Water Grad.}) * (\text{SG Injectate}) * (\text{Depth of Perf})$$

MSIP = Maximum Surface Injection Pressure (measured at surface)

Depth of Perf = Top Perf (TVD)

0.733 psi/ft = Fracture Gradient

0.433 psi/ft = Freshwater gradient, psi/ft.

SG Injectate = specific gravity (of injected fluid from produced water samples)

0.433 = freshwater gradient, psi/ft.

$$\text{MSIP} = (5266 * 0.733) - (0.433 * 1.21) * 5266$$

$$\text{MSIP} = 1137.55 \text{ psi}$$

## 5. Proposed Injection Program

The Operator plans to drill a saltwater injection well and inject into the Inyan Kara formation of the Dakota Group. See above sections 4 and 5 for proposed injection volume and pressure maximums. The well has no plans to take third party volumes at this time. The proposed well is to be utilized by wells drilled from the same well pad. See appendix C for well list. No truck unloading is currently planned. □

## 6. Facilities Design

The proposed tanks will be constructed of steel in accordance to industry specifications. The design and construction of each bulk storage container will be compatible with the characteristics of the product it contains including temperature and pressure conditions. Piping between fixed above ground bulk storage tanks will be supported to minimize stress.

A 3' high metal containment will be constructed around the tank battery. A geomembrane liner shall be installed that extends and overlaps the steel wall containment maintaining continuous impermeable surface. A site perimeter berm approximately 2' high will be installed as well.

Please note: The proposed well is located on site with planned oil wells. The SWD facilities and the oil facilities are co-located within the same berms.

## 7. Spill Prevention and Monitoring Controls:

In addition to the previously mentioned secondary and tertiary containment (#7), the Operated facilities are equipped with 24-hour SCADA (Supervisory Control and Data Acquisition) remote monitoring systems. Onsite alarms are routed to the local PLC/HMI (Programmable Logic Controller/Human-Machine Interface), and then transmitted to SCADA. This setup enables real-time communication of potential issues at remote production facilities, significantly reducing detection time. The system alerts Operations personnel, allowing them to respond promptly and mitigate any concerns before they escalate into incidents. Below are some of the associated alarms:

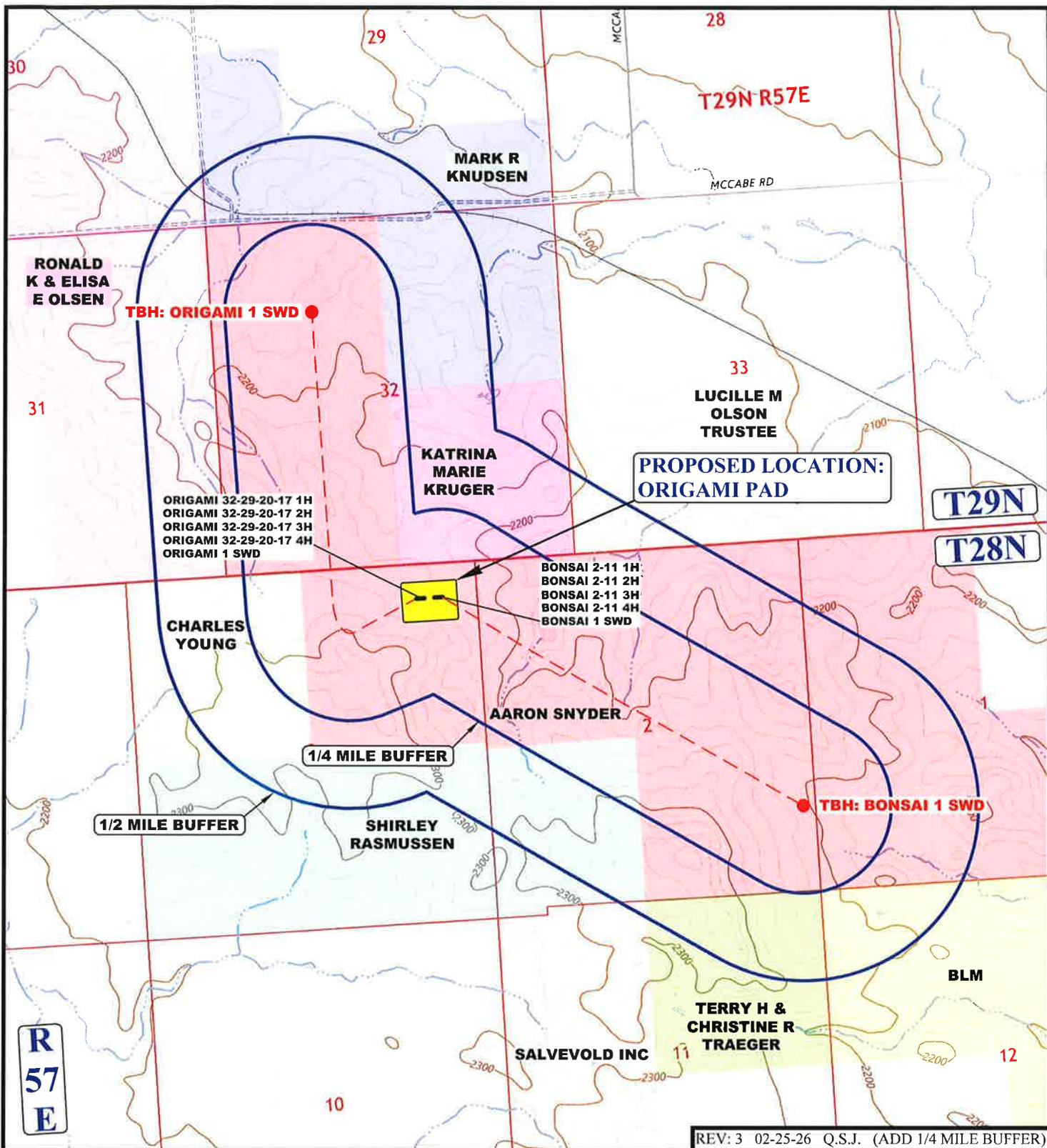
- Tank alarms: Each tank is equipped with a high-level alarm. If the fluid level continues to rise, an additional alarm is triggered to close the Emergency Shut Down Valve (ESDV) on the facility's inlet streams, preventing more fluid from entering the tank.
- Separator alarms: Each treater is fitted with a high-level alarm. Should the level continue rising, a secondary alarm will initiate closure of the ESDV on the facility's inlet streams to halt additional fluid inflow.
- Additional SCADA monitoring includes: tubing pressure, vibration monitoring, and low- and high-flow alarms, among others.

In accordance with EPA regulations, a SPCC (Spill Prevention, Control, and Countermeasure) Plan will be implemented within six months of commissioning. The plan evaluates site-specific measures for spill prevention and control, and outlines documented response protocols. The Operator currently conducts regular SPCC inspections to ensure compliance with applicable regulations. Additionally, annual SPCC training is mandatory for all personnel handling oil.

## 8. Appendices

- i. AOR Maps
- ii. FW SAMPLE ANALYSIS
- iii. REPRESENTATIVE LOG
- iv. WATER ANALYSIS (2 SOURCE WELLS)
- v. DRILLING & COMPLETIONS PLAN
- vi. WBD
- vii. LIST OF OWNERS (Surface & Mineral) WITHIN 1/4 MILE
- viii. AFFIDAVIT OF MAILING
- ix. EXAMPLE OF LANDOWNER NOTIFICATIONS (SURFACE & MINERAL)

**Appendix I**  
**AOR MAP**  
**BONSAI 1 SWD**



REV: 3 02-25-26 Q.S.J. (ADD 1/4 MILE BUFFER)

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

**LEGEND:**

**PHOENIX OPERATING LLC**

**ORIGAMI PAD**  
**LOT 1, SECTION 3, T28N, R57E, P.M.M.**  
**ROOSEVELT COUNTY, MONTANA**

SURVEYED BY	C.B., D.D.	04-15-25	SCALE
DRAWN BY	D.I.G.	12-09-25	1 : 24,000

**WELL PROXIMITY MAP**      **TOPO C**



**UELS, LLC**  
 Corporate Office \* 85 South 200 East  
 Vernal, UT 84078 \* (435) 789-1017

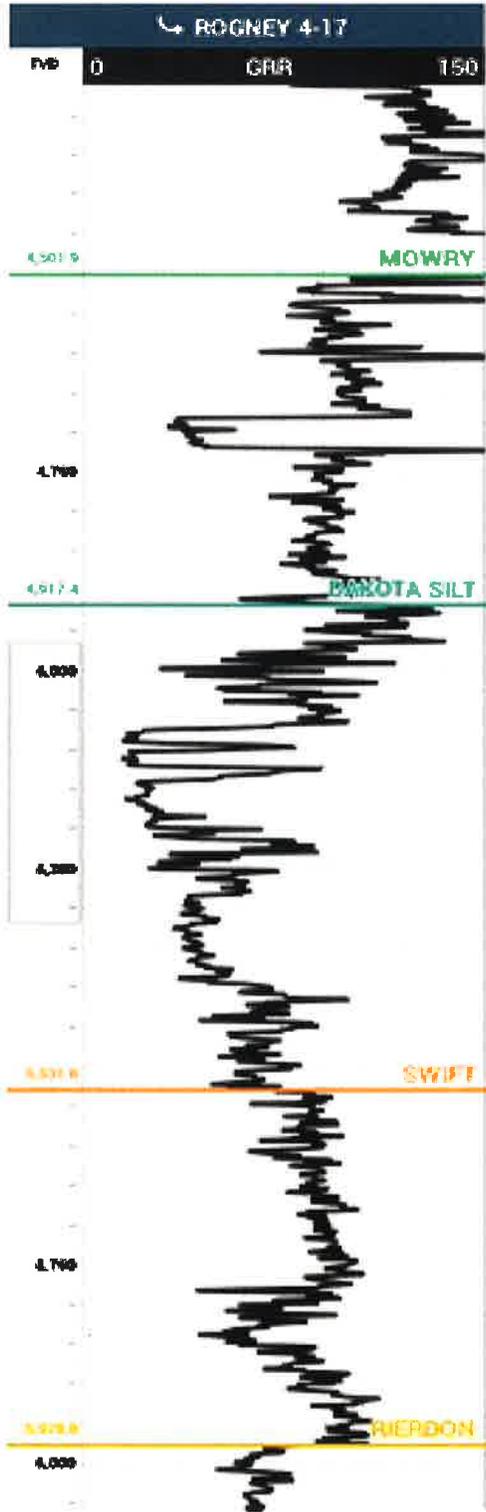


**Appendix II**  
**FW SAMPLE ANALYSIS**  
**BONSAI 1 SWD**

Per conversations with MBOGC UIC, a representative sample is already on file. No submission needed.

Appendix III  
REPRESENTATIVE LOG  
BONSAI 1 SWD

Well: LEONARD 1-13  
API: 25085211790000



**Appendix IV**  
**WATER ANALYSIS (2 SOURCE WELLS)**  
**BONSAI 1 SWD**

See below for source well list. Phoenix Operating is currently permitting multiple wells on the same pad location as this proposed SWD. The Operator plans to only inject water from on pad wells. However, the sample included is representative of produced water in the area and was obtained from the nearby Milloy 10-3-24 #2H and Snyder 1-12 #1H wells.

<b>File No:</b>	<b>Well Name:</b>	<b>Permit Status</b>
TBD	ORIGAMI 32-29-20-17 1H	Submitted
TBD	ORIGAMI 32-29-20-17 2H	Submitted
TBD	ORIGAMI 32-29-20-17 3H	Submitted
TBD	ORIGAMI 32-29-20-17 4H	Submitted
TBD	BONSAI 2-11 1H	Submitted
TBD	BONSAI 2-11 2H	Submitted
TBD	BONSAI 2-11 3H	Submitted
TBD	BONSAI 2-11 4H	Submitted





**MINNESOTA VALLEY TESTING LABORATORIES, INC.**

1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890  
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724  
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885  
www.MVTL.com



**Account #:** 23037

**Client:** Astro-Chem Laboratory, Inc.

**Analytical Results**

**Lab ID:** 65921001      **Date Collected:** 09/21/2024 10:30      **Matrix:** Groundwater  
**Sample ID:** Treater (Production Water)      **Date Received:** 09/27/2024 10:55      **Collector:** Client

**Temp @ Receipt (C):** 21.0      **Received on Ice:** No

**Parameter**      **Results**      **Units**      **RDL**      **DF**      **Prepared**      **Analyzed**      **Qual**

**Method: ASTM D1298**

Density	1.210 @ 65.0 F	g/cm3		1		10/01/2024 11:30	
Specific Gravity	1.210 @ 65.0 F	at 60/60F		1		10/01/2024 12:24	

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

**Report Date:** Wednesday, October 2, 2024 4:29:04 PM



MINNESOTA VALLEY TESTING LABORATORIES, INC.

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2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885
www.MVTL.com



Account #: 23037

Client: Astro-Chem Laboratory, Inc.



Chain of Custody & Analy

Astro - Chem Laboratory, Inc.
WO: 65921



Page 1 of 1

Account Information (Billing Information)

Company Name: Astro-Chem Lab, Inc.
Contact: Christina Jungels
Phone: 701-572-7355
Mailing Address: PO Box 972
City, State, Zip: Williston, ND 58802-0972
Email: astrochem@midconetwork.com

Report Information (if different)

Company Name: Phoenix Operatin...
Contact:
Phone:
Mailing Address:
City, State, Zip:
Email: astrochem@midconetwork.com

Project Information

Project Name, PWSID, Permit, etc. Milloy 10-3-24 #2H Well Pad
Sampler Name: Dave Scadden
Sampler Phone: 303-548-1953
Sample Origin State: ND
EPA/State Compliance: Yes

- Matrix Codes: A - Air, W - Water, S - Solids, V - Vegetation, B - Biosassay, O - Oil, DW - Drinking Water

Analysis Requested table with columns for Specific Gravity and Density.

All turnaround times are standard unless marked as RUSH.
Astro-Chem Lab MUST be contacted prior to RUSH sample submittal for charges and scheduling!

Sample Identification

Table with columns: Sample ID, Description, Date, Time, Number of Containers, Matrix, Specific Gravity, Density, LAB ID.

Signature and Date section for Custody Record and Laboratory Use Only.

In certain circumstances, samples submitted to Astro-Chem Lab, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-01/21 v.4

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL.

Report Date: Wednesday, October 2, 2024 4:29:04 PM



October 10, 2024

Christina Jungels  
Astro-Chem Lab, Inc.  
4102 2nd Ave. W.  
Williston, ND 58801

RE: Project: Phoenix Operating, LLC  
Pace Project No.: 10709475

Dear Christina Jungels:

Enclosed are the analytical results for sample(s) received by the laboratory on September 26, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Andrea Richardson  
andrea.richardson@pacelabs.com  
(218)341-6080  
Project Manager

Enclosures

cc: Accounts Payable, Astro-Chem Lab, Inc.



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



**CERTIFICATIONS**

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

**Pace Analytical Services, LLC - Minneapolis MN**

1700 Elm Street SE, Minneapolis, MN 55414  
 Alabama Certification #: 40770  
 Alaska Contaminated Sites Certification #: 17-009  
 Alaska DW Certification #: MN00064  
 Arizona Certification #: AZ0014  
 Arkansas DW Certification #: MN00064  
 Arkansas WW Certification #: 88-0680  
 California Certification #: 2929  
 Colorado Certification #: MN00064  
 Connecticut Certification #: PH-0256  
 DoD Certification via A2LA #: 2926.01  
 EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137  
 Florida Certification #: E87605  
 Georgia Certification #: 959  
 GMP+ Certification #: GMP050884  
 Hawaii Certification #: MN00064  
 Idaho Certification #: MN00064  
 Illinois Certification #: 200011  
 Indiana Certification #: C-MN-01  
 Iowa Certification #: 368  
 ISO/IEC 17025 Certification via A2LA #: 2926.01  
 Kansas Certification #: E-10167  
 Kentucky DW Certification #: 90062  
 Kentucky WW Certification #: 90062  
 Louisiana DEQ Certification #: AI-03086  
 Louisiana DW Certification #: MN00064  
 Maine Certification #: MN00064  
 Maryland Certification #: 322  
 Michigan Certification #: 9909  
 Minnesota Certification #: 027-053-137  
 Minnesota Dept of Ag Approval: via MN 027-053-137  
 Minnesota Petrofund Registration #: 1240

Mississippi Certification #: MN00064  
 Missouri Certification #: 10100  
 Montana Certification #: CERT0092  
 Nebraska Certification #: NE-OS-18-06  
 Nevada Certification #: MN00064  
 New Hampshire Certification #: 2081  
 New Jersey Certification #: MN002  
 New York Certification #: 11647  
 North Carolina DW Certification #: 27700  
 North Carolina WW Certification #: 530  
 North Dakota Certification (A2LA) #: R-036  
 North Dakota Certification (MN) #: R-036  
 Ohio DW Certification #: 41244  
 Ohio VAP Certification (1700) #: CL101  
 Oklahoma Certification #: 9507  
 Oregon Primary Certification #: MN300001  
 Oregon Secondary Certification #: MN200001  
 Pennsylvania Certification #: 68-00563  
 Puerto Rico Certification #: MN00064  
 South Carolina Certification #: 74003001  
 Tennessee Certification #: TN02818  
 Texas Certification #: T104704192  
 Utah Certification #: MN00064  
 Vermont Certification #: VT-027053137  
 Virginia Certification #: 460163  
 Washington Certification #: C486  
 West Virginia DEP Certification #: 382  
 West Virginia DW Certification #: 9952 C  
 Wisconsin Certification #: 999407970  
 Wyoming UST Certification via A2LA #: 2926.01  
 USDA Permit #: P330-19-00208

**Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
 Alaska DEC- CS/UST/LUST  
 Alabama Certification #: 41320  
 California Certification# 3096  
 Colorado Certification: FL NELAC Reciprocity  
 Connecticut Certification #: PH-0216  
 Delaware Certification: FL NELAC Reciprocity  
 DoD-ANAB #:ADE-3199  
 Florida Certification #: E83079  
 Georgia Certification #: 955  
 Guam Certification: FL NELAC Reciprocity  
 Hawaii Certification: FL NELAC Reciprocity  
 Illinois Certification #: 200068  
 Indiana Certification: FL NELAC Reciprocity  
 Kansas Certification #: E-10383  
 Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity  
 Louisiana Environmental Certificate #: 05007  
 Maine Certification #: FL01264  
 Maryland Certification: #346  
 Massachusetts Certification #: M-FL1264  
 Michigan Certification #: 9911  
 Mississippi Certification: FL NELAC Reciprocity  
 Missouri Certification #: 236  
 Montana Certification #: Cert 0074  
 Nebraska Certification: NE-OS-28-14  
 Nevada Certification: FL NELAC Reciprocity  
 New Hampshire Certification #: 2958  
 New Jersey Certification #: FL022  
 New York Certification #: 11608  
 North Carolina Environmental Certificate #: 667  
 North Carolina Certification #: 12710

**REPORT OF LABORATORY ANALYSIS**

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## CERTIFICATIONS

Project: Phoenix Operating, LLC  
Pace Project No.: 10709475

---

### Pace Analytical Services Ormond Beach

North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity  
Utah FL NELAC Reciprocity  
Utah  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Phoenix Operating, LLC  
Pace Project No.: 10709475

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10709475001	Milloy 10-3-24 #2H Well Pad	Water	09/21/24 10:30	09/26/24 08:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Phoenix Operating, LLC  
Pace Project No.: 10709475

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10709475001	Milloy 10-3-24 #2H Well Pad	EPA 6010D	DM	9	PASI-M
		SM 2320B	KEO	3	PASI-M
		SM 2540C	JKH	1	PASI-M
		SM 4500-H+B	KEO	1	PASI-M
		EPA 120.1 Resistivity	SWB	1	PASI-O
		SM 2510	KEO	1	PASI-M
		ASTM D5057	JKH	1	PASI-M
		EPA 300.0	JFP	2	PASI-M
		EPA 353.2	JFP	1	PASI-M

PASI-M = Pace Analytical Services - Minneapolis  
PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

Sample: **Milloy 10-3-24 #2H Well Pad** Lab ID: **10709475001** Collected: 09/21/24 10:30 Received: 09/26/24 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D MET ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Minneapolis						
Barium	24000	ug/L	500	10	09/30/24 13:03	10/01/24 12:05	7440-39-3	
Calcium	16200000	ug/L	25000	10	09/30/24 13:03	10/01/24 12:05	7440-70-2	
Chromium	ND	ug/L	500	10	09/30/24 13:03	10/01/24 12:05	7440-47-3	D3
Iron	127000	ug/L	2500	10	09/30/24 13:03	10/01/24 12:05	7439-89-6	
Magnesium	1250000	ug/L	25000	10	09/30/24 13:03	10/01/24 12:05	7439-95-4	
Potassium	8070000	ug/L	125000	10	09/30/24 13:03	10/01/24 12:05	7440-09-7	
Sodium	89500000	ug/L	500000	100	09/30/24 13:03	10/01/24 12:10	7440-23-5	
Strontium	1310000	ug/L	2500	100	09/30/24 13:03	10/01/24 12:10	7440-24-6	
Zinc	17800	ug/L	1000	10	09/30/24 13:03	10/01/24 12:05	7440-66-6	
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis						
Alkalinity, Total as CaCO3	58.4	mg/L	5.0	1		10/03/24 12:08		
Alkalinity,Bicarbonate (CaCO3)	58.4	mg/L	5.0	1		10/03/24 12:08		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		10/03/24 12:08		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Minneapolis						
Total Dissolved Solids	295000	mg/L	250	1		09/27/24 18:38		MW,PP
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B Pace Analytical Services - Minneapolis						
pH at 25 Degrees C	5.5	Std. Units	0.10	1		10/08/24 12:45		H6
<b>Resistivity</b>		Analytical Method: EPA 120.1 Resistivity Pace Analytical Services - Ormond Beach						
Resistivity	1.9	ohms-cm	0.50	1		10/02/24 14:00		N2
<b>SM2510 Specific Conductance</b>		Analytical Method: SM 2510 Pace Analytical Services - Minneapolis						
Specific Conductance	209000	umhos/cm	5.0	1		10/01/24 14:36		
<b>Specific Gravity</b>		Analytical Method: ASTM D5057 Pace Analytical Services - Minneapolis						
Specific Gravity	1.22			1		10/09/24 22:12		N2
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis						
Chloride	167000	mg/L	6000	5000		10/07/24 10:02	16887-00-6	
Sulfate	256	mg/L	120	100		10/05/24 03:08	14808-79-8	
<b>353.2 Nitrate + Nitrite</b>		Analytical Method: EPA 353.2 Pace Analytical Services - Minneapolis						
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	1		10/06/24 11:45		

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

QC Batch: 970670 Analysis Method: EPA 6010D  
 QC Batch Method: EPA 3010A Analysis Description: 6010D Water  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10709475001

METHOD BLANK: 5072402 Matrix: Water  
 Associated Lab Samples: 10709475001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	ug/L	ND	10.0	10/01/24 11:18	
Calcium	ug/L	ND	500	10/01/24 11:18	
Chromium	ug/L	ND	10.0	10/01/24 11:18	
Iron	ug/L	ND	50.0	10/01/24 11:18	
Magnesium	ug/L	ND	500	10/01/24 11:18	
Potassium	ug/L	ND	2500	10/01/24 11:18	
Sodium	ug/L	ND	1000	10/01/24 11:18	
Strontium	ug/L	ND	5.0	10/01/24 11:18	
Zinc	ug/L	ND	20.0	10/01/24 11:18	

LABORATORY CONTROL SAMPLE: 5072403

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	993	99	80-120	
Calcium	ug/L	20000	19600	98	80-120	
Chromium	ug/L	1000	977	98	80-120	
Iron	ug/L	20000	20000	100	80-120	
Magnesium	ug/L	20000	19800	99	80-120	
Potassium	ug/L	20000	19900	100	80-120	
Sodium	ug/L	20000	20300	102	80-120	
Strontium	ug/L	1000	1020	102	80-120	
Zinc	ug/L	1000	1040	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5072404 5072405

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		10708927001 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Barium	ug/L	18.0	1000	1000	1000	990	98	97	75-125	1	20	
Calcium	ug/L	85.3 mg/L	20000	20000	101000	97900	81	63	75-125	3	20	P6
Chromium	ug/L	ND	1000	1000	964	955	96	95	75-125	1	20	
Iron	ug/L	3480	20000	20000	22900	22600	97	96	75-125	1	20	
Magnesium	ug/L	125 mg/L	20000	20000	141000	136000	80	55	75-125	4	20	P6
Potassium	ug/L	14.1 mg/L	20000	20000	34600	33800	103	99	75-125	2	20	
Sodium	ug/L	56.1 mg/L	20000	20000	73300	70900	86	74	75-125	3	20	M1
Strontium	ug/L	559	1000	1000	1540	1510	98	96	75-125	2	20	
Zinc	ug/L	ND	1000	1000	1000	995	100	99	75-125	1	20	

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**QUALITY CONTROL DATA**

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

QC Batch: 971542 Analysis Method: SM 2320B  
 QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity  
 Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10709475001

METHOD BLANK: 5076911 Matrix: Water  
 Associated Lab Samples: 10709475001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	10/03/24 08:46	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	10/03/24 08:46	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	10/03/24 08:46	

LABORATORY CONTROL SAMPLE & LCSD: 5076912 5076913

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	44.0	42.6	110	106	90-110	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5076914 5076915

Parameter	Units	10709079009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	93.6	40	40	134	135	100	103	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5076916 5076917

Parameter	Units	10709141012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	170	40	40	201	202	76	80	80-120	1	20 P6	

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**QUALITY CONTROL DATA**

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

QC Batch: 970573 Analysis Method: SM 2540C  
 QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10709475001

METHOD BLANK: 5072111 Matrix: Water  
 Associated Lab Samples: 10709475001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	09/27/24 18:37	

LABORATORY CONTROL SAMPLE: 5072112

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	992	99	80-120	

SAMPLE DUPLICATE: 5072113

Parameter	Units	10709141012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	206	196	5	10	

SAMPLE DUPLICATE: 5072114

Parameter	Units	10709194003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	157	151	4	10	

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**QUALITY CONTROL DATA**

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

QC Batch: 972286 Analysis Method: SM 4500-H+B  
 QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10709475001

LABORATORY CONTROL SAMPLE: 5081033

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH at 25 Degrees C	Std. Units	5	5.0	100	98-102	H6

SAMPLE DUPLICATE: 5081034

Parameter	Units	10709552003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	4.3	4.2	1	3	H6

SAMPLE DUPLICATE: 5081035

Parameter	Units	10710487004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	0	3	H6

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**QUALITY CONTROL DATA**

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

QC Batch: 971086 Analysis Method: SM 2510  
 QC Batch Method: SM 2510 Analysis Description: SM2510 Specific Conductance  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10709475001

METHOD BLANK: 5074750 Matrix: Water  
 Associated Lab Samples: 10709475001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Specific Conductance	umhos/cm	ND	5.0	10/01/24 13:16	

LABORATORY CONTROL SAMPLE: 5074751

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance	umhos/cm	1000	933	93	90-110	

SAMPLE DUPLICATE: 5074752

Parameter	Units	10708260023 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	882	817	8	20	

SAMPLE DUPLICATE: 5074753

Parameter	Units	10708260024 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	1170	1170	1	20	

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**QUALITY CONTROL DATA**

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

QC Batch: 972576      Analysis Method: ASTM D5057  
 QC Batch Method: ASTM D5057      Analysis Description: Spec.Gravity/ASTM D5057  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10709475001

SAMPLE DUPLICATE: 5082528

Parameter	Units	10709912001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Gravity		1.22	1.22	0	20	N2

SAMPLE DUPLICATE: 5082529

Parameter	Units	10709914001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Gravity		1.22	1.22	0	20	N2

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**QUALITY CONTROL DATA**

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

QC Batch: 971880 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10709475001

METHOD BLANK: 5078609 Matrix: Water  
 Associated Lab Samples: 10709475001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	10/04/24 23:06	
Sulfate	mg/L	ND	1.2	10/04/24 23:06	

LABORATORY CONTROL SAMPLE: 5078610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.2	100	90-110	
Sulfate	mg/L	50	50.4	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5078611 5078612

Parameter	Units	5078611		5078612		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50383317002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	42600 ug/L	50	50	79.6	84.4	74	84	80-120	6	20 M1
Sulfate	mg/L	28200 ug/L	50	50	68.7	72.9	81	89	80-120	6	20

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**QUALITY CONTROL DATA**

Project: Phoenix Operating, LLC  
 Pace Project No.: 10709475

QC Batch: 971645	Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2	Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10709475001	Laboratory: Pace Analytical Services - Minneapolis

METHOD BLANK: 5077223 Matrix: Water  
 Associated Lab Samples: 10709475001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	10/06/24 11:11	

LABORATORY CONTROL SAMPLE: 5077224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.1	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5077225 5077226

Parameter	Units	10709141012		5077225		5077226		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.1	1.1	108	106	90-110	2	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5077227 5077228

Parameter	Units	10709145001		5077227		5077228		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.1	1.1	107	106	90-110	1	20

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## QUALIFIERS

Project: Phoenix Operating, LLC  
Pace Project No.: 10709475

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.  
H6 Analysis initiated outside of the 15 minute EPA required holding time.  
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.  
MW Due to matrix interference, achieving a constant weight is not possible.  
N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.  
P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.  
PP The mass of dried residue obtained did not meet the test method requirements based on volume used.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Phoenix Operating, LLC  
Pace Project No.: 10709475

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10709475001	Milloy 10-3-24 #2H Well Pad	EPA 3010A	970670	EPA 6010D	971065
10709475001	Milloy 10-3-24 #2H Well Pad	SM 2320B	971542		
10709475001	Milloy 10-3-24 #2H Well Pad	SM 2540C	970573		
10709475001	Milloy 10-3-24 #2H Well Pad	SM 4500-H+B	972286		
10709475001	Milloy 10-3-24 #2H Well Pad	EPA 120.1 Resistivity	1045614		
10709475001	Milloy 10-3-24 #2H Well Pad	SM 2510	971086		
10709475001	Milloy 10-3-24 #2H Well Pad	ASTM D5057	972576		
10709475001	Milloy 10-3-24 #2H Well Pad	EPA 300.0	971880		
10709475001	Milloy 10-3-24 #2H Well Pad	EPA 353.2	971645		

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**Methods for Analysis (ACL OIL WATER GUIDELINES)**

Alkalinity (2320B)

Alkalinity, Bicarbonate (CaCO<sub>3</sub>)

Alkalinity, Carbonate (CaCO<sub>3</sub>)

Alkalinity, Total as CaCO<sub>3</sub>

Nitrate + Nitrite (353.2)

Nitrogen, NO<sub>2</sub> plus NO<sub>3</sub>

pH, Electrometric (4500H+B)

8 Metals-Barium, Chromium, Iron, Zinc, Calcium, Magnesium, Sodium, Potassium (6010D MET ICP)

Chloride & Sulfate (300.0 IC Anlons)

Resistivity (D1125-14)

Specific Conductance (SM2510)

Specific Gravity (ASTM D5057)

Strontium (6020B MET ICPMS)

Total Dissolved Solids (2540C)

# ENV-FRM-MIN4-0150 v17\_Sample Condition Upon Receipt

CLIENT NAME: Astro-Chem Lab, Inc PROJECT #: \_\_\_\_\_

**WO#: 10709475**

COURIER:  Client  Commercial  FedEx  Pace  
 SpeedDee  UPS  USPS

PM: AR4 Due Date: 10/10/24  
 CLIENT: 11 Astro Che

TRACKING NUMBER: 7788 1420 3365  See Exceptions form ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present:  YES  NO Seals Intact:  YES  NO Biological Tissue Frozen:  YES  NO  N/A  
 Packing Material:  Bubble Bags  Bubble Wrap  None  Other Temp Blank:  YES  NO Type of Ice:  Blue  Dry  Wet  
 Thermometer:  T1 (0461)  T2 (0436)  T3 (0459)  T4 (0402)  T5 (0178)  T6 (0235)  
 T7 (0042)  T8 (0775)  T9 (0727)  01339252 (1710)  Melted  None

Did Samples Originate In West Virginia: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Were All Container Temps taken: <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
Correction Factor: <u>-0.1</u> Cooler Temp Read w/Temp Blank: <u>0.9</u> °C Cooler Temp Corrected w/Temp Blank: <u>0.8</u> °C	Average Corrected Temp (no Temp Blank Only): _____ °C
NOTE: Temp should be above freezing to 6°C.	
<input type="checkbox"/> See Exceptions Form ENV-FRM-MIN4-0142 <input type="checkbox"/> 1 Container	

USDA Regulated Soil: <input checked="" type="checkbox"/> N/A - Water Sample/Other (describe): _____	Initials & Date of Person Examining Contents: <u>JMW 9/26/24</u>
Did Samples originate from one of the following states (check maps) - AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Did samples originate from a foreign source (international, including Hawaii and Puerto Rico): <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.	

LOCATION (check one): <input type="checkbox"/> DULUTH <input checked="" type="checkbox"/> MINNEAPOLIS <input type="checkbox"/> VIRGINIA	YES	NO	N/A	COMMENT(S)								
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.								
Chain of Custody Relinquished?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.								
Sampler Name and/or Signature on COC?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.								
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. If Fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8 hr, <24 hr <input type="checkbox"/> No								
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. <input type="checkbox"/> BOD / cBOD <input type="checkbox"/> Fecal coliform <input type="checkbox"/> Hex Chrom <input type="checkbox"/> HPC <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Ortho Phos <input type="checkbox"/> Total coliform/E. coli <input type="checkbox"/> Other: _____								
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6.								
Sufficient Sample Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.								
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.								
- Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.								
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. Is sediment visible in the dissolved container: <input type="checkbox"/> YES <input type="checkbox"/> NO								
Is sufficient information available to reconcile the samples to the COC? NOTE: If ID/Date/Time don't match fill out section 11. Matrix: <input type="checkbox"/> Oil <input type="checkbox"/> Soil <input checked="" type="checkbox"/> Water <input type="checkbox"/> Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. If NO, write ID/Date/Time of container below: <u>NO label on sample id only match with Lab Sample number</u> <input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0142								
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil & Grease, DRO/8015 (water) and Dioxins/PFAS NOTE: If adding preservation to the container, verify with the PM first. Clients may require adding preservative to the field and equipment blanks when this occurs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. Sample #: <u>001</u> <input checked="" type="checkbox"/> HNO <sub>3</sub> <input checked="" type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> Zinc Acetate Positive for Residual Chlorine: <input type="checkbox"/> YES <input type="checkbox"/> NO <b>pH Paper Lot #</b> <table border="1"> <tr> <th>Residual Chlorine</th> <th>0-6 Roll</th> <th>0-6 Strip</th> <th>0-14 Strip</th> </tr> <tr> <td></td> <td><u>205229</u></td> <td></td> <td></td> </tr> </table> <input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0142	Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip		<u>205229</u>		
Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip									
	<u>205229</u>											
Headspace In Methyl Mercury Container?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.								
Extra labels present on soil VOA or WIDRO containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.								
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0140								
Trip Blanks Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15.								
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Pace Trip Blank Lot # (if purchased): _____								

CLIENT NOTIFICATION / RESOLUTION

Person Contacted: \_\_\_\_\_ Date & Time: \_\_\_\_\_

Comments / Resolution: \_\_\_\_\_

FIELD DATA REQUIRED:  YES  NO

Project Manager Review: Anchea Richardson Date: 9/27/24

NOTE: When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).  
 Labeled By: JMW Line: 2

# Internal Transfer Chain of Custody



Rush Multiplier  X  
 Samples Pre-Logged into eCOC  
 Workorder Name: Phoenix Operating, LLC

State Of Origin: ND  
 Cert. Needed:  Yes  No  
 Owner Received Date: 9/26/2024

Results Requested By: 10/10/2024  
 Requested Analysis

Report To  
 Andrea Richardson  
 Pace Analytical Minnesota  
 1700 Elm Street  
 Minneapolis, MN 55414  
 Phone (218)341-6080

Subcontract To  
 Pace Analytical Ormond Beach  
 8 East Tower Circle  
 Ormond Beach, FL 32174  
 Phone (386)672-5668



Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Resistivity	LAB USE ONLY
						Container	Volume		
1	Milloy 10-3-24 #2H Well Pad	PS	9/21/2024 10:30	10709475001	Water	1		X	
2									
3									
4									
5									

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Mick V. Pace	9/24/2024	R. Pace	10/10/2024	
2					
3					

Cooler Temperature on Receipt \_\_\_\_\_ °C  
 Received on Ice  Y  N  
 Samples Intact  Y  N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace

Sample Condition Upon Receipt Form  
**WO#: 35908965**  
 PM: JMW1 Due Date: 10/11/24  
 CLIENT: PACMIN

Project #  
 Project Manager:  
 Client:

Date and Initials of person:  
 Examining contents: BP  
 Verifying pH: \_\_\_\_\_  
 Initials: KAMI

Thermometer Used: T414 Date: 10/01/24 Time: 1143

State of Origin \_\_\_\_\_  For WV projects all containers verified to  $\leq 6^{\circ}\text{C}$

Cooler #1 Temp.  $^{\circ}\text{C}$  15 (Visual) +0.1 (Correction Factor) 1.6 (Actual)  
 Cooler #2 Temp.  $^{\circ}\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #3 Temp.  $^{\circ}\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #4 Temp.  $^{\circ}\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #5 Temp.  $^{\circ}\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #6 Temp.  $^{\circ}\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Rncheck for OOT  $^{\circ}\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Samples on ice, cooling process has begun  
 Time: \_\_\_\_\_ Initials: \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other:  
 Shipping Method:  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  Other:  
 Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # 6476 5646 1809  
 Custody Seal Present:  Yes  No Seal properly placed and intact:  Yes  No

Ice:  Wet  Blue  Dry  None  Melted

Packing Material:  Bubble Wrap  Bubble Bags  None  Other:

Samples shorted to lab:  Yes  No (If yes, complete the following)  
 Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_  
 Bottle Quantity / Type: \_\_\_\_\_

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Relinquished To Pace: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Samples Arrived within Hold Time	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Rush Turnaround Requested on COC	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Sufficient Volume	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Correct Containers Used	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Containers Intact	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
Sample Labels Match COC (Sample ID, Date/Time of Collection)	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A   Comments:
All containers needing acid / base preservation have been checked	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
All containers needing preservation are found to be in compliance with EPA recommendation:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Exceptions: Vials Microbiology O&G PFAS	
Headspace in Volatile Vials? (>6mm)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Trip Blank Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

**Preservation Information**  
 Preservative: \_\_\_\_\_ Date: \_\_\_\_\_  
 Lot / Trace: \_\_\_\_\_ Time: \_\_\_\_\_  
 Amount added (mL): \_\_\_\_\_ Initials: \_\_\_\_\_

Comments / Resolutions (use back for additional comments): NO Client label on container matched by J&K label

Labeled by: BP Reviewed by: EPA Delivered by: EPA



November 07, 2024

Christina Jungels  
Astro-Chem Lab, Inc.  
4102 2nd Ave. W.  
Williston, ND 58801

RE: Project: Phoenix Operating  
Pace Project No.: 10713009

Dear Christina Jungels:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Andrea Richardson*

Andrea Richardson  
andrea.richardson@pacelabs.com  
(218)341-6080  
Project Manager

Enclosures

cc: Accounts Payable, Astro-Chem Lab, Inc.



## REPORT OF LABORATORY ANALYSIS

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### CERTIFICATIONS

Project: Phoenix Operating  
Pace Project No.: 10713009

#### Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414  
 Alabama Certification #: 40770  
 Alaska Contaminated Sites Certification #: 17-009  
 Alaska DW Certification #: MN00064  
 Arizona Certification #: AZ0014  
 Arkansas DW Certification #: MN00064  
 Arkansas WW Certification #: 88-0680  
 California Certification #: 2929  
 Colorado Certification #: MN00064  
 Connecticut Certification #: PH-0256  
 DoD Certification via A2LA #: 2926.01  
 EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137  
 Florida Certification #: E87605  
 Georgia Certification #: 959  
 GMP+ Certification #: GMP050884  
 Hawaii Certification #: MN00064  
 Idaho Certification #: MN00064  
 Illinois Certification #: 200011  
 Indiana Certification #: C-MN-01  
 Iowa Certification #: 368  
 ISO/IEC 17025 Certification via A2LA #: 2926.01  
 Kansas Certification #: E-10167  
 Kentucky DW Certification #: 90062  
 Kentucky WW Certification #: 90062  
 Louisiana DEQ Certification #: AI-03086  
 Louisiana DW Certification #: MN00064  
 Maine Certification #: MN00064  
 Maryland Certification #: 322  
 Michigan Certification #: 9909  
 Minnesota Certification #: 027-053-137  
 Minnesota Dept of Ag Approval: via MN 027-053-137  
 Minnesota Petrofund Registration #: 1240

Mississippi Certification #: MN00064  
 Missouri Certification #: 10100  
 Montana Certification #: CERT0092  
 Nebraska Certification #: NE-OS-18-06  
 Nevada Certification #: MN00064  
 New Hampshire Certification #: 2081  
 New Jersey Certification #: MN002  
 New York Certification #: 11647  
 North Carolina DW Certification #: 27700  
 North Carolina WW Certification #: 530  
 North Dakota Certification (A2LA) #: R-036  
 North Dakota Certification (MN) #: R-036  
 Ohio DW Certification #: 41244  
 Ohio VAP Certification (1700) #: CL101  
 Oklahoma Certification #: 9507  
 Oregon Primary Certification #: MN300001  
 Oregon Secondary Certification #: MN200001  
 Pennsylvania Certification #: 68-00563  
 Puerto Rico Certification #: MN00064  
 South Carolina Certification #:74003001  
 Tennessee Certification #: TN02818  
 Texas Certification #: T104704192  
 Utah Certification #: MN00064  
 Vermont Certification #: VT-027053137  
 Virginia Certification #: 460163  
 Washington Certification #: C486  
 West Virginia DEP Certification #: 382  
 West Virginia DW Certification #: 9952 C  
 Wisconsin Certification #: 999407970  
 Wyoming UST Certification via A2LA #: 2926.01  
 USDA Permit #: P330-19-00208

#### Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174  
 Alaska DEC- CS/UST/LUST  
 Alabama Certification #: 41320  
 California Certification# 3096  
 Colorado Certification: FL NELAC Reciprocity  
 Connecticut Certification #: PH-0216  
 Delaware Certification: FL NELAC Reciprocity  
 DoD-ANAB #:ADE-3199  
 Florida Certification #: E83079  
 Georgia Certification #: 955  
 Guam Certification: FL NELAC Reciprocity  
 Hawaii Certification: FL NELAC Reciprocity  
 Illinois Certification #: 200068  
 Indiana Certification: FL NELAC Reciprocity  
 Kansas Certification #: E-10383  
 Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity  
 Louisiana Environmental Certificate #: 05007  
 Maine Certification #: FL01264  
 Maryland Certification: #346  
 Massachusetts Certification #: M-FL1264  
 Michigan Certification #: 9911  
 Mississippi Certification: FL NELAC Reciprocity  
 Missouri Certification #: 236  
 Montana Certification #: Cert 0074  
 Nebraska Certification: NE-OS-28-14  
 Nevada Certification: FL NELAC Reciprocity  
 New Hampshire Certification #: 2958  
 New Jersey Certification #: FL022  
 New York Certification #: 11608  
 North Carolina Environmental Certificate #: 667  
 North Carolina Certification #: 12710

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## CERTIFICATIONS

Project: Phoenix Operating

Pace Project No.: 10713009

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### Pace Analytical Services Ormond Beach

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Utah FL NELAC Reciprocity

Utah

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Phoenix Operating  
Pace Project No.: 10713009

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10713009001	Snyder 1-12 #1H	Water	10/21/24 16:00	10/23/24 09:45

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### SAMPLE ANALYTE COUNT

Project: Phoenix Operating  
Pace Project No.: 10713009

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10713009001	Snyder 1-12 #1H	EPA 6010D	IP	9	PASI-M
		SM 2320B	KEO	3	PASI-M
		SM 2540C	JFP	1	PASI-M
		SM 4500-H+B	KEO	1	PASI-M
		EPA 120.1 Resistivity	SWB	1	PASI-O
		SM 2510	KEO	1	PASI-M
		ASTM D5057	JKH	1	PASI-M
		EPA 300.0	AR3	2	PASI-M
		EPA 353.2	JFP	1	PASI-M

PASI-M = Pace Analytical Services - Minneapolis  
PASI-O = Pace Analytical Services - Ormond Beach

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**ANALYTICAL RESULTS**

Project: Phoenix Operating  
 Pace Project No.: 10713009

Sample:	Snyder 1-12 #1H	Lab ID:	10713009001	Collected:	10/21/24 16:00	Received:	10/23/24 09:45	Matrix:	Water
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6010D MET ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Minneapolis							
Barium	7870	ug/L	100	10	10/24/24 09:41	10/27/24 14:20	7440-39-3		
Calcium	12500000	ug/L	25000	50	10/24/24 09:41	10/27/24 14:25	7440-70-2		
Chromium	ND	ug/L	100	10	10/24/24 09:41	10/27/24 14:20	7440-47-3	D3	
Iron	25500	ug/L	500	10	10/24/24 09:41	10/27/24 14:20	7439-89-6		
Magnesium	1210000	ug/L	5000	10	10/24/24 09:41	10/27/24 14:20	7439-95-4		
Potassium	6480000	ug/L	125000	50	10/24/24 09:41	10/27/24 14:25	7440-09-7		
Sodium	74300000	ug/L	1000000	1000	10/24/24 09:41	10/27/24 14:54	7440-23-5		
Strontium	962000	ug/L	5000	1000	10/24/24 09:41	10/27/24 14:54	7440-24-6		
Zinc	237	ug/L	200	10	10/24/24 09:41	10/27/24 14:20	7440-66-6		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis							
Alkalinity, Total as CaCO3	108	mg/L	5.0	1		11/01/24 15:43			
Alkalinity,Bicarbonate (CaCO3)	108	mg/L	5.0	1		11/01/24 15:43			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		11/01/24 15:43			
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	260000	mg/L	1250	1		10/28/24 15:39		PP	
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B Pace Analytical Services - Minneapolis							
pH at 25 Degrees C	6.0	Std. Units	0.10	1		11/01/24 13:49		H6	
<b>Resistivity</b>		Analytical Method: EPA 120.1 Resistivity Pace Analytical Services - Ormond Beach							
Resistivity	1.9	ohms-cm	0.50	1		10/29/24 13:16		N2	
<b>SM2510 Specific Conductance</b>		Analytical Method: SM 2510 Pace Analytical Services - Minneapolis							
Specific Conductance	203000	umhos/cm	5.0	1		11/05/24 12:58			
<b>Specific Gravity</b>		Analytical Method: ASTM D5057 Pace Analytical Services - Minneapolis							
Specific Gravity	1.19			1		10/24/24 17:03		N2	
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	120000	mg/L	6000	5000		11/07/24 07:03	16887-00-6		
Sulfate	196	mg/L	120	100		11/06/24 13:16	14808-79-8		
<b>353.2 Nitrate + Nitrite</b>		Analytical Method: EPA 353.2 Pace Analytical Services - Minneapolis							
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	1		10/31/24 12:15			

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: Phoenix Operating  
 Pace Project No.: 10713009

QC Batch: 975588 Analysis Method: EPA 6010D  
 QC Batch Method: EPA 3010A Analysis Description: 6010D Water  
 Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10713009001

METHOD BLANK: 5099349 Matrix: Water  
 Associated Lab Samples: 10713009001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	ug/L	ND	10.0	10/27/24 13:50	
Calcium	ug/L	ND	500	10/27/24 13:50	
Chromium	ug/L	ND	10.0	10/27/24 13:50	
Iron	ug/L	ND	50.0	10/27/24 13:50	
Magnesium	ug/L	ND	500	10/27/24 13:50	
Potassium	ug/L	ND	2500	10/27/24 13:50	
Sodium	ug/L	ND	1000	10/27/24 13:50	
Strontium	ug/L	ND	5.0	10/27/24 13:50	
Zinc	ug/L	ND	20.0	10/27/24 13:50	

LABORATORY CONTROL SAMPLE: 5099350

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1020	102	80-120	
Calcium	ug/L	20000	19300	96	80-120	
Chromium	ug/L	1000	1020	102	80-120	
Iron	ug/L	20000	20500	102	80-120	
Magnesium	ug/L	20000	19800	99	80-120	
Potassium	ug/L	20000	20300	101	80-120	
Sodium	ug/L	20000	19900	99	80-120	
Strontium	ug/L	1000	1030	103	80-120	
Zinc	ug/L	1000	1020	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5099351 5099352

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10712883001 Result	Spike Conc.	Spike Conc.	Result						
Barium	ug/L	216	1000	1000	1240	1230	103	102	75-125	1	20
Calcium	ug/L	335000	20000	20000	357000	354000	107	95	75-125	1	20
Chromium	ug/L	42.6	1000	1000	1080	1080	104	103	75-125	1	20
Iron	ug/L	8610	20000	20000	29300	29200	104	103	75-125	1	20
Magnesium	ug/L	31100	20000	20000	52000	51500	105	102	75-125	1	20
Potassium	ug/L	149000	20000	20000	171000	169000	110	102	75-125	1	20
Sodium	ug/L	61800	20000	20000	82300	81200	102	97	75-125	1	20
Strontium	ug/L	350	1000	1000	1370	1350	102	100	75-125	1	20
Zinc	ug/L	1500	1000	1000	2460	2440	97	95	75-125	1	20

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**QUALITY CONTROL DATA**

Project: Phoenix Operating  
 Pace Project No.: 10713009

QC Batch: 977280 Analysis Method: SM 2320B  
 QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10713009001

METHOD BLANK: 5107575 Matrix: Water  
 Associated Lab Samples: 10713009001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	11/01/24 12:27	
Alkalinity, Bicarbonate (CaCO3)	mg/L	ND	5.0	11/01/24 12:27	
Alkalinity, Carbonate (CaCO3)	mg/L	ND	5.0	11/01/24 12:27	

LABORATORY CONTROL SAMPLE & LCSD: 5107576 5107577

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	43.0	42.3	108	106	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5107578 5107579

Parameter	Units	10712881001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	168	40	40	211	214	107	116	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5107580 5107581

Parameter	Units	10712881002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	227	40	40	273	270	113	107	80-120	1	20	

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: Phoenix Operating  
 Pace Project No.: 10713009

QC Batch: 976301 Analysis Method: SM 2540C  
 QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
 Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10713009001

METHOD BLANK: 5102892 Matrix: Water  
 Associated Lab Samples: 10713009001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10/28/24 15:38	

LABORATORY CONTROL SAMPLE: 5102893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1020	102	80-120	

SAMPLE DUPLICATE: 5102894

Parameter	Units	10712612006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	101	101	0	10	

SAMPLE DUPLICATE: 5102895

Parameter	Units	10712842001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	20300	18000	12	10	D6

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: Phoenix Operating  
 Pace Project No.: 10713009

QC Batch: 977285      Analysis Method: SM 4500-H+B  
 QC Batch Method: SM 4500-H+B      Analysis Description: 4500H+B pH  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10713009001

LABORATORY CONTROL SAMPLE: 5107588

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH at 25 Degrees C	Std. Units	5	5.1	102	98-102	H6

SAMPLE DUPLICATE: 5107589

Parameter	Units	10712469003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.2	6.2	1	3	H6

SAMPLE DUPLICATE: 5107590

Parameter	Units	10712469004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	7.0	1	3	H6

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: Phoenix Operating

Pace Project No.: 10713009

QC Batch: 1051690

Analysis Method: EPA 120.1 Resistivity

QC Batch Method: EPA 120.1 Resistivity

Analysis Description: Resistivity

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 10713009001

SAMPLE DUPLICATE: 5781375

Parameter	Units	10713018001 Result	Dup Result	RPD	Max RPD	Qualifiers
Resistivity	ohms-cm	1.9	1.9	0	20	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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**QUALITY CONTROL DATA**

Project: Phoenix Operating  
 Pace Project No.: 10713009

QC Batch: 977841 Analysis Method: SM 2510  
 QC Batch Method: SM 2510 Analysis Description: SM2510 Specific Conductance  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10713009001

METHOD BLANK: 5110532 Matrix: Water  
 Associated Lab Samples: 10713009001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Specific Conductance	umhos/cm	ND	5.0	11/05/24 12:45	

LABORATORY CONTROL SAMPLE: 5110534

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance	umhos/cm	1000	904	90	90-110	

SAMPLE DUPLICATE: 5110535

Parameter	Units	10712921001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	630	627	0	20	

SAMPLE DUPLICATE: 5110538

Parameter	Units	10712960001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	450	447	0	20	

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**QUALITY CONTROL DATA**

Project: Phoenix Operating  
 Pace Project No.: 10713009

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QC Batch: 975834	Analysis Method: ASTM D5057
QC Batch Method: ASTM D5057	Analysis Description: Spec.Gravity/ASTM D5057
Associated Lab Samples: 10713009001	Laboratory: Pace Analytical Services - Minneapolis

---

SAMPLE DUPLICATE: 5100343

Parameter	Units	10713018001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Gravity		1.19	1.19	0	20	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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**QUALITY CONTROL DATA**

Project: Phoenix Operating  
 Pace Project No.: 10713009

QC Batch: 978010 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Minneapolis  
 Associated Lab Samples: 10713009001

METHOD BLANK: 5111297 Matrix: Water  
 Associated Lab Samples: 10713009001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	11/06/24 09:30	
Sulfate	mg/L	ND	1.2	11/06/24 09:30	

LABORATORY CONTROL SAMPLE: 5111298

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.6	99	90-110	
Sulfate	mg/L	50	50.3	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5111299 5111300

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10712898005	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	<445 ug/L	50	50	45.4	45.6	90	90	80-120	0	20
Sulfate	mg/L	166000 ug/L	250	250	426	426	104	104	80-120	0	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5111301 5111302

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10713075001	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	205	250	250	410	410	82	82	80-120	0	20
Sulfate	mg/L	173	250	250	388	388	86	86	80-120	0	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: Phoenix Operating  
 Pace Project No.: 10713009

QC Batch: 977090 Analysis Method: EPA 353.2  
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
 Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10713009001

METHOD BLANK: 5106369 Matrix: Water

Associated Lab Samples: 10713009001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	10/31/24 11:58	

LABORATORY CONTROL SAMPLE: 5106370

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.1	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5106371 5106372

Parameter	Units	5106371		5106372		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		10712898010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, NO2 plus NO3	mg/L	<33.7 ug/L	1	1	1.2	1.2	112	112	90-110	0	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5106373 5106374

Parameter	Units	5106373		5106374		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		10712921001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, NO2 plus NO3	mg/L	19.0	10	10	29.1	28.3	101	93	90-110	3	20	

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## QUALIFIERS

Project: Phoenix Operating

Pace Project No.: 10713009

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

PP The mass of dried residue obtained did not meet the test method requirements based on volume used.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Phoenix Operating  
Pace Project No.: 10713009

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10713009001	Snyder 1-12 #1H	EPA 3010A	975588	EPA 6010D	975895
10713009001	Snyder 1-12 #1H	SM 2320B	977280		
10713009001	Snyder 1-12 #1H	SM 2540C	976301		
10713009001	Snyder 1-12 #1H	SM 4500-H+B	977285		
10713009001	Snyder 1-12 #1H	EPA 120.1 Resistivity	1051690		
10713009001	Snyder 1-12 #1H	SM 2510	977841		
10713009001	Snyder 1-12 #1H	ASTM D5057	975834		
10713009001	Snyder 1-12 #1H	EPA 300.0	978010		
10713009001	Snyder 1-12 #1H	EPA 353.2	977090		

### REPORT OF LABORATORY ANALYSIS

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**Methods for Analysis (ACL OIL WATER GUIDELINES)**

Alkalinity (2320B)

Alkalinity, Bicarbonate (CaCO<sub>3</sub>)

Alkalinity, Carbonate (CaCO<sub>3</sub>)

Alkalinity, Total as CaCO<sub>3</sub>

Nitrate + Nitrite (353.2)

Nitrogen, NO<sub>2</sub> plus NO<sub>3</sub>

pH, Electrometric (4500H+B)

8 Metals-Barium, Chromium, Iron, Zinc, Calcium, Magnesium, Sodium, Potassium (6010D MET ICP)

Chloride & Sulfate (300.0 IC Anions)

Resistivity (D1125-14)

Specific Conductance (SM2510)

Specific Gravity (ASTM D5057)

Strontium (6020B MET ICPMS)

Total Dissolved Solids (2540C)

# ENV-FRM-MIN4-0150 v17\_Sample Condition Upon Receipt

CLIENT NAME: Astro - Chem Lab PROJECT #: \_\_\_\_\_

WO#: 10713009

PM: AR4 Due Date: 11/06/24

CLIENT: 11 Astro Che

COURIER:  Client  Commercial  FedEx  Pace  
 Speedee  UPS  USPS

TRACKING NUMBER: 7792 4238 3190  See Exceptions form ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present:  YES  NO Seals Intact:  YES  NO Biological Tissue Frozen:  YES  NO  N/A  
 Packing Material:  Bubble Bags  Bubble Wrap  None  Other Temp Blank:  YES  NO Type of Ice:  Blue  Dry  Wet  
 Thermometer:  T1 (0461)  T2 (0436)  T3 (0459)  T4 (0402)  T5 (0178)  T6 (0235)  T7 (0042)  T8 (0775)  T9 (0727)  01339252 (1710)  Melted  None

Did Samples Originate in West Virginia:  YES  NO Were All Container Temps taken:  YES  NO  N/A  
 Correction Factor: 0.2 Cooler Temp Read w/Temp Blank: 1.4 °C Average Corrected Temp (no Temp Blank Only): \_\_\_\_\_ °C  
 Cooler Temp Corrected w/Temp Blank: 1.2 °C  
 NOTE: Temp should be above freezing to 6°C.  See Exceptions Form ENV-FRM-MIN4-0142  1 Container

USDA Regulated Soil:  N/A - Water Sample/Other (describe): \_\_\_\_\_ Initials & Date of Person Examining Contents: JA 10/23/24  
 Did Samples originate from one of the following states (check maps) - AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA:  YES  NO Did samples originate from a foreign source (international, including Hawaii and Puerto Rico):  YES  NO  
 NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

LOCATION (check one): <input type="checkbox"/> DULUTH <input type="checkbox"/> MINNEAPOLIS <input type="checkbox"/> VIRGINIA	YES	NO	N/A	COMMENT(S)												
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.												
Chain of Custody Relinquished?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.												
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.												
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. If Fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8 hr, <24 hr <input type="checkbox"/> No												
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. <input type="checkbox"/> BOD / cBOD <input type="checkbox"/> Fecal coliform <input type="checkbox"/> Hex Chrom <input type="checkbox"/> HPC <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Ortho Phos <input type="checkbox"/> Total coliform/E. coli <input type="checkbox"/> Other: _____												
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6.												
Sufficient Sample Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.												
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.												
- Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.												
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. Is sediment visible in the dissolved container: <input type="checkbox"/> YES <input type="checkbox"/> NO												
Is sufficient information available to reconcile the samples to the COC? NOTE: If ID/Date/Time don't match fill out section 11.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. If NO, write ID/Date/Time of container below:  <input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0142												
Matrix: <input type="checkbox"/> Oil <input type="checkbox"/> Soil <input checked="" type="checkbox"/> Water <input type="checkbox"/> Other																
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil & Grease, DRO/8015 (water) and Dioxins/PFAS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. Sample #: <u>001/11 001/11</u> <input checked="" type="checkbox"/> HNO <sub>3</sub> <input checked="" type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> Zinc Acetate Positive for Residual Chlorine: <input type="checkbox"/> YES <input type="checkbox"/> NO												
NOTE: If adding preservation to the container, verify with the PM first. Clients may require adding preservative to the field and equipment blanks when this occurs.				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">pH Paper Lot #</th> </tr> <tr> <th>Residual Chlorine</th> <th>0-6 Roll</th> <th>0-6 Strip</th> <th>0-14 Strip</th> </tr> </thead> <tbody> <tr> <td></td> <td><u>205224</u></td> <td></td> <td></td> </tr> </tbody> </table>	pH Paper Lot #				Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip		<u>205224</u>		
pH Paper Lot #																
Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip													
	<u>205224</u>															
NOTE: If adding preservation to the container, verify with the PM first. Clients may require adding preservative to the field and equipment blanks when this occurs.				<input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0142												
Headspace in Methyl Mercury Container?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.												
Extra labels present on soil VOA or WIDRO containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.												
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0140												
Trip Blanks Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.												
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Pace Trip Blank Lot # (if purchased): _____												

CLIENT NOTIFICATION / RESOLUTION FIELD DATA REQUIRED:  YES  NO  
 Person Contacted: \_\_\_\_\_ Date & Time: \_\_\_\_\_  
 Comments / Resolution: \_\_\_\_\_

Project Manager Review: Anchea Richardson Date: 10/24/24

NOTE: When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: JMW Line: 3

# Internal Transfer Chain of Custody



Rush Multiplier  X  
 Samples Pre-Logged into eCOC  
 Workorder: 10713009    Workorder Name: Phoenix Operating  
 State Of Origin: ND    Cert. Needed:  Yes     No  
 Owner Received Date: 10/23/2024    Results Requested By: 11/6/2024

Report To: Subcontract To: Requested Analysis

Andrea Richardson  
 Pace Analytical Minnesota  
 1700 Elm Street  
 Minneapolis, MN 55414  
 Phone (218)341-6080

Pace Analytical Ormond Beach  
 8 East Tower Circle  
 Ormond Beach, FL 32174  
 Phone (386)672-5668

WO#: 35914692



Resistivity

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
						BP2U2/2		
1	Snyder 1-12 #1H	PS	10/21/2024 16:00	10713009001	Water	1		X
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	Nick V Pace	10/24/24 1440	AUG 1H	10-25-24 1200				
2								
3								

Cooler Temperature on Receipt 4.6 °C    Custody Seal Y or N    Received on Ice Y or N    Samples Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.



Sample Condition Upon Receipt Form (SCUR)

WO#: 35914692

PM: JMW1

Due Date: 11/06/24

CLIENT: PACMIN

Project #

Project Manager:

Client:

Date and initials of person:

Examining contents: RP

Verifying pH:

Thermometer Used: T-409

Date: 10-25-24

Time: 1223

Initials: AFS

State of Origin:

For WV projects, all containers verified to <math>\le 8^{\circ}\text{C}</math>

Cooler #1 Temp.  $^{\circ}\text{C}$  4.6 (Visual) 0 (Correction Factor) 4.6 (Actual)

Cooler #2 Temp.  $^{\circ}\text{C}$  (Visual) (Correction Factor) (Actual)

Cooler #3 Temp.  $^{\circ}\text{C}$  (Visual) (Correction Factor) (Actual)

Cooler #4 Temp.  $^{\circ}\text{C}$  (Visual) (Correction Factor) (Actual)

Cooler #5 Temp.  $^{\circ}\text{C}$  (Visual) (Correction Factor) (Actual)

Cooler #6 Temp.  $^{\circ}\text{C}$  (Visual) (Correction Factor) (Actual)

Recheck for OOT  $^{\circ}\text{C}$  (Visual) (Correction Factor) (Actual)

Samples on ice, cooling process has begun.

Time: Initials:

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Shipping Method:  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  Other

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # 4243 3575 7160

Custody Seal Present:  Yes  No Seal properly placed and intact:  Yes  No

Ice:  Wet  Blue  Dry  None  Melted

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Samples shorted to lab:  Yes  No (If yes, complete the following)

Shorted Date:

Shorted Time:

Bottle Quantity / Type:

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A								
	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A								
Samples Arrived within Hold Time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Rush Turnaround Requested on COC	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Sufficient Volume.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Correct Containers Used.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Containers Intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Sample Labels Match COC (Sample ID, Date/Time of Collection).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
All containers needing acid / base preservation have been checked	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
All containers needing preservation are found to be in compliance with EPA recommendation:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
Exceptions: Viols, Microbiology, O&G, PFAS									
Headspace in Volatile Vials? (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
<table border="1"> <tr> <td colspan="2">Preservation Information</td> </tr> <tr> <td>Preservative: _____</td> <td>Date: _____</td> </tr> <tr> <td>Lot / Trace: _____</td> <td>Time: _____</td> </tr> <tr> <td>Amount added (mL): _____</td> <td>Initials: _____</td> </tr> </table>		Preservation Information		Preservative: _____	Date: _____	Lot / Trace: _____	Time: _____	Amount added (mL): _____	Initials: _____
Preservation Information									
Preservative: _____	Date: _____								
Lot / Trace: _____	Time: _____								
Amount added (mL): _____	Initials: _____								

Comments / Resolutions (use back for additional comments):

NO client labels on container

Labeled by: RP

Reviewed by: EAS

Delivered by: EAY

**Appendix VIII**  
**AFFIDAVIT OF MAILING**  
**BONSAI 1 SWD**

**AFFIDAVIT OF MAILING**

STATE OF COLORADO       §  
  §  
COUNTY OF DENVER       §

The undersigned, Paula Frisbee, of lawful age, first duly sworn on her oath states that she is a duly authorized agent of Phoenix Operating LLC, does hereby certify that she has sent (via certified mail) a Notice of Application for Fluid Injection to the surface and lease owners within a radius of ¼ mile from the location of proposed ORIGAMI 1 SWD and BONSAI 1 SWD wells, Lot 1 of Section 3, Township 28 North, Range 57 East, Roosevelt County, MT.

The following contains the address and legal description of the land ownership for surface and lease owners.

Surface Owner:

Legal Description:

RONALD AND ELISA OLSEN  
1495 RO 2 Drive  
Culbertson, MT 59218

E2 Sec. 31 & SE Sec. 30  
T29N, R57E  
Roosevelt County, MT

MARK R KNUDSEN  
3206 Crocus Ave  
Bismarck, ND 58501

NE Sec. 32 & NWSW, SWSW, SESW,  
SESE, SWSE Sec 29 T29N, R57E  
Roosevelt County, MT

LUCILLE M OLSON  
P.O. Box 1446  
Williston, ND 58802

S2 Sec. 33  
T29N, R57E  
Roosevelt County, MT

KATRINA MARIE KRUGER  
P.O. Box 90  
Joliet, MT 59041

SE Sec. 32  
T29N, R57E  
Roosevelt County, MT

CHARLES YOUNG  
4397 Road 1020  
Froid, MT 59226

NW Sec. 3  
T28N, R57E  
Roosevelt County, MT

AARON SNYDER  
P.O. Box 796  
Culbertson, MT 59218

E2 Sec. 32, T29N, R57E; NE Sec. 3,  
NW & E2 Sec. 2, W2 Sec. 1, T29N, R57E  
Roosevelt County, MT

SHIRLEY RASMUSSEN  
c/o Julane Poland P.O.A.  
P.O. Box 622  
Culbertson, MT 59218

S2 Sec. 3, SW Sec. 2  
T28N, R57E  
Roosevelt County, MT

TERRY H & CHRISTINE TRAEGER  
1218 Road 2060  
Bainville, MT 59212

NE Sec. 11  
T28N, R57E  
Roosevelt County, MT

SALVEVOLD INC.  
P.O. Box 417  
Culbertson, MT 59218

W2 Sec. 11  
T28N, R57E  
Roosevelt County, MT

Lease Owner:

BNSF Railway Company  
2500 Lou Menk Drive, AOB-3  
Fort Worth, TX 76131

Christina Veal  
9905 Essex Avenue  
Oklahoma City, OK 73120

Darin Jon Mosier  
6260 East Jester Circle North  
Prescott Valley, AZ 86314

Edward Stephon Mosier  
821 Village Meadow Drive  
Ballwin, MO 63021

Eric R. Larson  
3138 South Abigail Way  
Boise, ID 83706

John Edd Mosier  
3033 North Windsong, Suite 202  
Prescott Valley, AZ 86314

Joshua Patterson  
2023 Wilkinson Avenue  
Panama City Beach, FL 32408

Joy D. Collett  
11951 Clonlee Avenue  
Grenada Hills, CA 91344

Kaleb Mosier  
9905 Essex Avenue  
Oklahoma City, OK 73120

Terrie Pitts  
13444 Pitts Road  
Garfield, AR 72732

The Marie C. Boyle Revocable Trust  
138 South Pinecrest Street  
Wichita, KS 67218

Wildcat Oil and Gas, LLC  
P.O. Box 2221  
Bismarck, ND 58502

Legal Description:

W2SW, SESW, SWSE Sec. 29  
T29N, R57E  
Roosevelt County, MT

W2SW, SESW, SWSE Sec. 29  
T29N, R57E  
Roosevelt County, MT

W2SW, SESW, SWSE Sec. 29  
T29N, R57E  
Roosevelt County, MT

W2SW, SESW, SWSE Sec. 29  
T29N, R57E  
Roosevelt County, MT

NE Sec. 32  
T29N, R57E  
Roosevelt County, MT

W2SW, SESW, SWSE Sec. 29  
T29N, R57E  
Roosevelt County, MT

W2SW, SESW, SWSE Sec. 29  
T29N, R57E  
Roosevelt County, MT

NE Sec. 32  
T29N, R57E  
Roosevelt County, MT

W2SW, SESW, SWSE Sec. 29  
T29N, R57E  
Roosevelt County, MT

W2SW, SESW, SWSE Sec. 29  
T29N, R57E  
Roosevelt County, MT

W2SW, SESW, SWSE Sec. 29  
T29N, R57E  
Roosevelt County, MT

SE Sec. 3  
T28N, R57E  
Roosevelt County, MT

By: Paula Frisbee  
Paula Frisbee, Director of Land and Administration  
Phoenix Operating LLC

Dated: 02.27.2026

**ACKNOWLEDGMENT**

STATE OF COLORADO           §  
  §  
COUNTY OF DENVER           §

On this 27<sup>th</sup> day of February, 2026 before me, a Notary Public, personally appeared Paula Frisbee, Director of Land and Administration known to me to be the person whose name is subscribed to the foregoing instrument as an agent of Phoenix Operating LLC and acknowledged to me that they executed the same as her free act and deed for the purposes therein expressed, in the capacity stated, and as the act and deed of said company.

Calina Bowman  
Notary Public

(Seal)

CALINA BOWMAN  
Notary Public  
State of Colorado  
Notary ID # 20244011315  
My Commission Expires 03-20-2028

My Commission Expires: 3/20/2028

**Appendix IX**  
**LANDOWNER NOTIFICATION LETTERS**  
**BONSAI 1 SWD**

Examples of Landowner Notification Letters (Surface, Lease & Operator)



CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

February 26, 2026

To: Surface Owner  
Address  
City, State, Zip

From: Phoenix Operating LLC  
4643 South Ulster Street Suite 1510  
Denver, Colorado 80237

Re: Proposed Private Saltwater Disposal Well – BONSAI 1 SWD  
Surface Hole: 516' FNL & 515' FEL, Lot 1  
Section 3, Township 28 North, Range 57 East, Roosevelt County, MT  
Bottom Hole: 1278' FSL & 158' FEL, Lot 6  
Section 2, Township 28 North, Range 57 East, Roosevelt County, MT

This letter is to advise you that Phoenix Operating LLC (Phoenix) plans to drill and complete the subject well into a Class II saltwater disposal well. Water will be injected into the Dakota group for the purpose of disposal operations.

In accordance with the rules and regulations of the Montana Board of Oil & Gas Conservation (MBOG), Phoenix is required to give notice that it has made an application to perform this work to each surface owner within a one-quarter mile radius of the injection site. The MBOGC will conduct a hearing regarding this application. For the hearing date, please contact the MBOGC by phone at (406) 656-0040, or visit their website at <https://dnrc.mt.gov/BOGC/>. Your comments or objections regarding this application may be directed to the MBOGC at that time.

Written comments or objections may be submitted prior to the hearing to the following address:

Montana Board of Oil & Gas Conservation  
2535 St. Johns Avenue  
Billings, MT 59102

Please direct any and all of your communication regarding this proposed project, including more information about the upcoming hearing, to Mr. John Gizicki with the MBOGC at (406) 656-0040 or to me with Phoenix Operating LLC at (701) 770-8484.

Respectfully,

*Ashleigh Borud*

Ashleigh Borud  
Surface Land Lead – Firebird Services, LLC  
aborud@phoenixenergy.com



CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

February 26, 2026

To: Lease Owner  
Address  
City, State, Zip

From: Phoenix Operating LLC  
4643 South Ulster Street Suite 1510  
Denver, Colorado 80237

Re: Proposed Private Saltwater Disposal Well – BONSAI 1 SWD  
Surface Hole: 516' FNL & 515' FEL, Lot 1  
Section 3, Township 28 North, Range 57 East, Roosevelt County, MT  
Bottom Hole: 1278' FSL & 158' FEL, Lot 6  
Section 2, Township 28 North, Range 57 East, Roosevelt County, MT

This letter is to advise you that Phoenix Operating LLC (Phoenix) plans to drill and complete the subject well into a Class II saltwater disposal well. Water will be injected into the Dakota group for the purpose of disposal operations.

In accordance with the rules and regulations of the Montana Board of Oil & Gas Conservation (MBOG), Phoenix is required to give notice that it has made an application to perform this work to each lease owner within a one-quarter mile radius of the injection site. The MBOGC will conduct a hearing regarding this application. For the hearing date, please contact the MBOGC by phone at (406) 656-0040, or visit their website at <https://dnrc.mt.gov/BOGC/>. Your comments or objections regarding this application may be directed to the MBOGC at that time.

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Respectfully,

*Ashleigh Borud*

Ashleigh Borud  
Surface Land Lead – Firebird Services, LLC  
aborud@phoenixenergy.com



CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

February 26, 2026

To: BNSF Railway Company  
2500 Lou Menk Drive, AOB-3  
Fort Worth, TX 76131

From: Phoenix Operating LLC  
4643 South Ulster Street Suite 1510  
Denver, Colorado 80237

Re: Proposed Private Saltwater Disposal Well – BONSAI 1 SWD  
Surface Hole: 516' FNL & 515' FEL, Lot 1  
Section 3, Township 28 North, Range 57 East, Roosevelt County, MT  
Bottom Hole: 1278' FSL & 158' FEL, Lot 6  
Section 2, Township 28 North, Range 57 East, Roosevelt County, MT

Proposed Private Saltwater Disposal Well – ORIGAMI 1 SWD  
Surface Hole: 516' FNL & 905' FEL, Lot 1  
Section 3, Township 28 North, Range 57 East, Roosevelt County, MT  
Bottom Hole: 1380' FNL & 1560' FWL, SENW  
Section 32, Township 29 North, Range 57 East, Roosevelt County, MT

This letter is to advise you that Phoenix Operating LLC (Phoenix) plans to drill and complete the subject wells into Class II saltwater disposal wells. Water will be injected into the Dakota group for the purpose of disposal operations.

In accordance with the rules and regulations of the Montana Board of Oil & Gas Conservation (MBOGC), Phoenix is required to give notice that it has made an application to perform this work to each lease owner within a one-quarter mile radius of the injection site. The MBOGC will conduct a hearing regarding this application. For the hearing date, please contact the MBOGC by phone at (406) 656-0040, or visit their website at <https://dnrc.mt.gov/BOGC/>. Your comments or objections regarding this application may be directed to the MBOGC at that time.

Written comments or objections may be submitted prior to the hearing to the following address:

Montana Board of Oil & Gas Conservation  
2535 St. Johns Avenue  
Billings, MT 59102

Please direct any and all of your communication regarding this proposed project, including more information about the upcoming hearing, to Mr. John Gizicki with the MBOGC at (406) 656-0040 or to me with Phoenix Operating LLC at (855) 565-4244 or [ownerinquiry@phoenixenergy.com](mailto:ownerinquiry@phoenixenergy.com).

Respectfully,

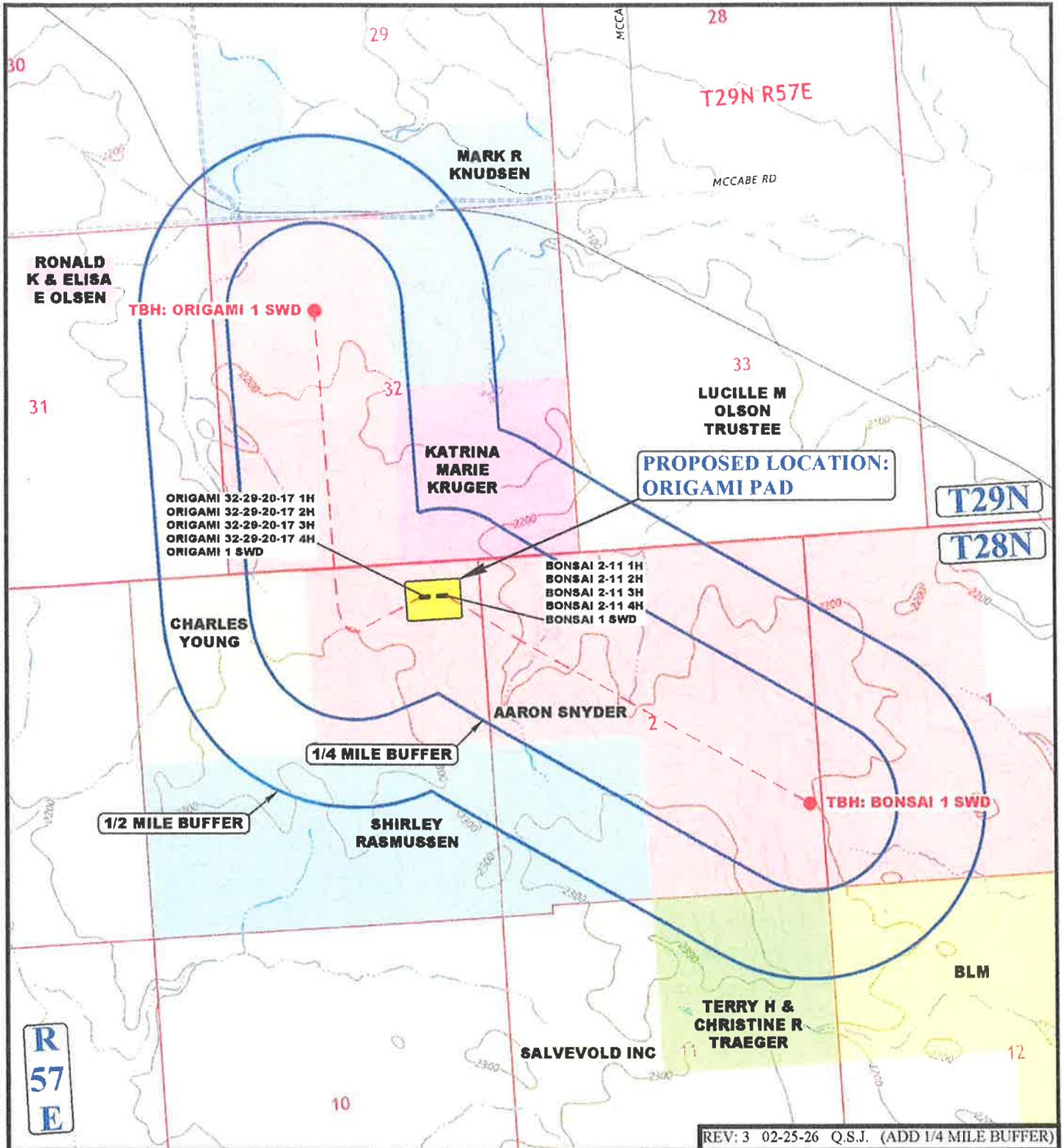
*Paula Frisbee*

Paula Frisbee  
Director of Land and Administration

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Phoenix Operating LLC

4643 S Ulster Street, Suite 1510, Denver, CO 80237 | 855-565-4244



REV: 3 02-25-26 Q.S.J. (ADD 1/4 MILE BUFFER)

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

**LEGEND:**



**PHOENIX OPERATING LLC**

**ORIGAMI PAD**  
**LOT 1, SECTION 3, T28N, R57E, P.M.M.**  
**ROOSEVELT COUNTY, MONTANA**

SURVEYED BY	C.B., D.D.	04-15-25	SCALE
DRAWN BY	D.J.G.	12-09-25	1 : 24,000
<b>WELL PROXIMITY MAP</b>			<b>TOPO C</b>



**UELS, LLC**  
 Corporate Office \* 85 South 200 East  
 Vernal, UT 84078 \* (435) 789-1017

