PHOENIX | OPERATING COMPANY

November 1, 2024

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: Ronin 1 SWD
SW 1/4 SE 1/4, Section 35, Township 29N, Range 57E. P.M.M.
Roosevelt County, Montana

Dear Mr. Gizicki,

Phoenix Operating LLC (Phoenix) respectfully submits this application for an Underground Injection Control (UIC) permit for the referenced location and as described in the attached application. A check in the amount of $150.00 is included in this application submittal, Check #27948.

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 December 5, 2024. A public legal notice will be published in the Helena Independent Record and the Northern Plains Independent upon confirmation of the scheduled docket date, and evidence and proof of publication will be supplemented to MBOGC upon receipt.

If you have any questions concerning the enclosed application, please contact myself at (435) 789-1017 or to Mark Johnson with Phoenix Operating LLC at (303) 548-1953.

Sincerely,

Mark Johnson
EVP Land/Regulatory/HSE
Phoenix Operating LLC

Amy Doebele
Authorized Agent for Phoenix Operating LLC
UELS, LLC

PHOENIX | OPERATING COMPANY

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MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

October 30, 2024

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

Attn: Mr. John Gizicki
UIC Program Manager

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Sincerely,

Amy Doebele
Authorized Agent for Phoenix Operating LLC
UELS, LLC

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FORM NO. 22 R 10/09 SUBMIT IN QUADRUPLICATE TO: ARM 36.22.307 ARM 36.22.601

MONTANA BOARD OF OIL AND GAS CONSERVATION
2535 ST. JOHNS AVENUE, BILLINGS, MONTANA 59102

Application for Permit To:

Drill ☑ Deepen ☐ Re-enter ☐
Oil ☐ Gas ☐ Other SWD ☑

Operator: PHOENIX OPERATING LLC
Address: 4643 S ULSTER STREET, SUITE 1510
City: DENVER State: CO Zip: 80237
Telephone Number: 855-868-4244

Surface Location of Well (quarter-quarter and footage measurements):
485' FSL, 2416' FEL, SWSE, 35, T29N, R57E

Proposed Total Depth and Bottom-hole Location(s) if directional or horizontal well:
5537' MD, TVD

Lease Name: RONIN
Lease Type (Private/State/Federal): PRIVATE
Well Number: 1 SWD
Field Name or Wildcat: WILDCAT - ROOSEVELT COUNTY
Unit Name (if applicable):
Objective Formation(s): INYAN KARA
Township, Range, and Section: T29N, R57E, SECTION 35
County: ROOSEVELT
Elevation (indicate GL or KB): 2101' GL

Size and description of drilling/spacing unit and applicable order, if any:	Formation at total depth:	Anticipated Spud Date:
	INYAN KARA	3/1/2025

Hole Size	Casing Size	Weight / Foot	Grade (API)	Depth	Sacks of Cement	Type of Cement
13.5	9.625	36	J-55	2100	884	BJ CEM TYPE III
8.75	7	23	L-80	5049	462	BJ CEM TYPE III
6	4.5	11.6	L-80	5537	0	UNCEMENTED

Describe Proposed Operations:
Describe or attach labeled diagram of blowout preventer equipment. Indicate if air drilled or describe mud program.

SEE ATTACHMENTS FOR DETAILS
PHOENIX OPERATING LLC REQUESTS A VARIANCE TO RUN OPEN HOLE LOGS ON THE SUBJECT WELL.

BOARD USE ONLY

Approved (date) _____ Permit Fee _____
By _____ Check Number _____
Permit Expires _____
Title _____ Permit Number _____

THIS PERMIT IS SUBJECT TO THE CONDITIONS OF APPROVAL STATED ON THE BACK

API Number: 25 - _____ - _____

The undersigned hereby certifies that the information contained on this application is true and correct:

Signed (Agent) [signature]
Title AUTHORIZED AGENT
Date 10/28/2024
Telephone Number 435-789-1017

Samples Required: NONE _____ ALL _____ FROM _____ feet to _____ feet
Core chips to address below, full cores to USGS, Core Laboratory, Arvada, CO. Required samples must be washed, dried and delivered prepaid to:

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

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SUPPLEMENTAL INFORMATION

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

1. Attach a survey plat certified by a registered surveyor. The survey plat must show the location of the well with reference to the nearest lines of an established public survey.

2. Attach an 8 1/2 x 11" photocopy of that portion of a topographic map showing the well location, the access route from county or other established roads, residences, and water wells within a 1/2 mile radius of the well.

3. Attach a sketch of the well site showing the dimensions and orientation of the site, the size and location of pits, topsoil stockpile, and the estimated cut/fill at the corners and centerstake. (Note: the diagram need not be done by an engineer or surveyor). Attach a sketch of a top view and two side views of the reserve pit(s), if utilized. The reserve pit sketch must show the length, width, depth, cut and fill, amount of freeboard, area of topsoil stockpile, and the height and width of berms.

4. Describe the type and amount of material or liner, if any, to be used to seal the reserve pit. If a synthetic liner is used, indicate the liner thickness (mils), bursting strength, tensile strength, tear strength, puncture resistance, hydrostatic resistance, or attach the manufacturer's specifications.

5. Describe the proposed plan for the treatment and/or the disposal of reserve pit fluids and solids after the well is drilled. If the operator intends to dispose of or treat the reserve pit contents off-site, specify the location and the method of waste treatment and disposal. (Note: The operator must comply with all applicable federal, state, county, and local laws and regulations with regard to the handling, transportation, treatment, and disposal of solid wastes.)

6. Does construction of the access road or location, or some other aspect of the drilling operation require additional federal, state, or local permits or authorizations? If yes, indicate the type of permit or authorization required:

- ☐ No additional permits needed
- ☐ 310 Permit (apply through county conservation district)
- ☐ Air quality permit (apply through Montana Department of Environmental Quality)
- ☐ Water discharge permit (apply through Montana Department of Environmental Quality)
- ☐ Water use permit (apply through Montana Department of Natural Resources and Conservation)
- ☐ Solid waste disposal permit (apply through Montana Department of Environmental Quality)
- ☐ State lands drilling authorization (apply through Montana Department of Natural Resources and Conservation)
- ☐ Federal drilling permit (specify agency)
- ☐ Other federal, state, county, or local permit or authorization: (specify type) _____

NOTICES:

1. Date and time of spudding must be reported to the Board verbally or in writing within 72 hours after the commencement of drilling operations.

2. The operator must give notice of drilling operations to the surface owner as required by Section 82-10-503, MCA, before the commencement of any surface activity.

BOARD USE ONLY | CONDITIONS OF APPROVAL

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

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

UELS, LLC

MONTANA BOARD MONTANA BOARD OF OIL & GAS CON 0023786 10/28/2024

27948

REFERENCE	INVOICE NUMBER	INV DATE	INVOICE AMOUNT	ADJUSTMENT	DISCOUNT	WRITE OFF	NET AMOUNT PAID
0027780	PHOENIX-RONIN1SWD	10/28/2024	$150.00	$150.00	$0.00	$0.00	$150.00
			$150.00	$150.00	$0.00	$0.00	$150.00

THIS CHECK IS VOID WITHOUT A BLUE & RED BACKGROUND AND A WATERMARK - HOLD UP TO THE LIGHT TO VERIFY

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
85 South 200 East
Vernal, UT 84078

ZIONS FIRST NATIONAL BANK
VERNAL OFFICE 3 WEST MAIN
VERNAL, UT 84078
31-5/1240

27948

DATE 10/28/2024
AMOUNT $150.00

PAY ONLY 150 00 CENTS

PAY One Hundred Fifty Dollars and 00 Cents

TO THE ORDER OF
MONTANA BOARD OF OIL & GAS CON
2535 ST. JOHNS AVENUE
BILLINGS MT 59102

Tracy D. Hendricks

CHECK IS PRINTED ON SECURITY PAPER WHICH INCLUDES A MICROPRINT BORDER & FLUORESCENT FIBERS

⑈027948⑈ ⑆124000054⑆00224655 1⑈

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GAS CONSERVATION • BILLINGS

State of Montana
Board of Oil & Gas

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Docket No:_____
Underground Injection Control Application

Ronin 1 SWD
Section 35, T29N, R57E

Phoenix Operating LLC
December 5, 2024

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Phoenix Operating LLC
RONIN PAD
SHL: 448' FSL & 2416' FEL
SWSE, SECTION 35, T29N, R57E P.M.M.
ROOSEVELT COUNTY, MONTANA

The following is submitted in support of our application to permit the drilling and completion of the Ronin 1 SWD well for the purposes of water injection into the Dakota Group and related rocks within the proposed Wildcat field, Roosevelt County, as required by rule 36.22.1403 of the Rules and Regulations of the Montana Board of Oil & Gas Conservation.

UIC PERMIT APPLICATION

1(a) Location:

The Ronin 1 SWD well has been proposed for the drilling and completion of a water injection well within the Wildcat field in Roosevelt County, Montana as described below. Attachment I depicts the surface hole location and a quarter ¼-mile radius representing the area of review (AOR) for this vertical well.

1(b) Well Location Description:

The Ronin 1 SWD well is a proposed disposal well located in Section 35, T29N, R57E, P.M.M. in Roosevelt County Montana. The surface ownership of this well site is located on Fee/Fee and is owned by Richard and Diane Hansen.

1(c) Maps of Wells/Area of Review:

There are currently no oil and gas wells within the ¼-mile AOR. Phoenix will drill four (4) horizontal oil wells at this location in the 4th quarter of 2024.

1(d) Location of all Pipelines:

The Ronin 1 SWD surface facilities will be constructed on the same pad as the injection well. Injection fluids will come from the oil wells both being currently drilled and proposed for this location. The Ronin 1 SWD may be tied into Phoenix's pending saltwater gathering system in the future.

1(e) Area Producing Formations, Fresh Water Aquifers and Water Well information:

The Three Forks (Bakken) formation is not currently being produced within the quarter mile AOR of the proposed Ronin 1 SWD. Operator anticipates the Three Forks (Bakken) to produce between 10,045' and 10,077' TVD when the wells on the Ronin pad are POL.

Fresh water well data was obtained from the Montanan Department of Natural Resources and Conservation, Water Resources, Division. There are no water wells within the ¼ -mile AOR of the proposed injector.

Any potential USWDs are protected from the proposed injection zone by surface casing set at 2,100' and cemented to the surface. A production tubing string and an injection packer will result in further isolation of fresh USWDs from injected fluids.

1(f) Name and Geological Description of Injection Zone:

Injection Zone:

The Inyan Kara within the Lower Cretaceous Dakota Group is roughly 518' thick based on the Barr Enoch L 1-26 (25085212760000). The Inyan Kara formation consists of alternating fluvial deltaic sandstones, siltstones and shales. There are several porosity intervals between 5,049' and 5,567' TVD with sandstone packages ranging in thickness from 5' to 80'.

Upper Confining Zone:

The Mowry formation within the lower Cretaceous Dakota Group is made up of shales and bentonitic claystone of offshore marine origin. The Mowry is expected between 4,631' TVD and 5,049' TVD and is approximately 418' thick and overlies the Inyan Kara. The Mowry confines the upper boundary for the Inyan Kara.

Lower Confining Zone:

The Jurassic Swift formation lies conformably below the Inyan Kara. The Swift is made up of shallow marine shale and siltstone and is approximately 544' thick in this area. The Swift is expected at a depth of 5,567' TVD through 6,111' TVD. The Swift confines the lower boundary for the Inyan Kara.

All TVD depths are based on a 15' KB rig.

The offset wells did not have porosity logs for the shallow section, but clean GR and low resistivity equates to porosity in the Inyan Kara Formation.

1(g) Open Hole Logs:

The Ronin 1 SWD will be a new drill SWD. The logging program will consist of a CBL-VDL-GR-CCL log ran from TD to Surface, along with Triple Combo + MWD-GR log ran from the base of surface casing to surface. Any logs and test data run on the Ronin 1 SWD will be supplied to the MBOGC.

1(h) Description of Wellbore Construction:

Attached to this document is the MBOGC's Form 2 and wellbore configuration, requesting drilling and completing of the subject well as an SWD. Appendix V shows the proposed wellbore design. Perforations will be selected after logs are run. Section 6 of the Drilling Plan describes the plan for drilling and completion for the subject well. The Dakota Group perforations will be acidized with 15% HCl and rock salt or polymer diverter at the wellhead during stimulation.

1(i) Description of Injection Fluid:

The Ronin 1 SWD will be used to inject produced water from Phoenix operated wells producing from the Three Forks (Bakken) formation drilled on the well pad. See Appendix VIII, which represents a water analysis from a Bakken well in the area that will be injected at the Ronin 1 SWD. Due to limited Three Forks (Bakken) produced water availability within the area of review, Phoenix Operating LLC proposes to utilize produced water collected from a nearby producing well as the source water for injection. Samples were collected from the Milloy 10-3-24 #2H well, located NENE, Section 15, T155N, R104W, Williams County, North Dakota approximately 7 miles South, and have been provide in Appendix VII. Samples were also collected from the Snyder 1-12 #1H well, located in Lot 12, Section1, T28N, R57E, Roosevelt, Montana, approximately 2 miles south west. Water samples from the Snyder 1-12 #1H are being analyzed, and will be provided once received.

Average and maximum daily volumes of injected water are expected to be 17,500 bbls per day and 20,000 bbls per day respectively, depending on production from wells, storage capabilities of the facility, and final maximum allowable injection pressure (MAIP).

Surface injection pressures will not be allowed to exceed a maximum based on the EPA accepted fracture grading of 0.733 psi/ft and the following equation:

$$MAIP = (FG)*(D_{Top}) - (SG)*(NPG)*(D_{Top})$$

- MAIP = Maximum allowable injection pressure
- FG = Assumed fracture gradient in Confining Zone – Shale = 0.8 psi/ft
- SG = Specific Gravity of injection fluid = 1.21
- NGP = Normal pressure gradient = 0.433 psi/ft
- D_{Top} = Depth to top of the injection zone = 5,049'

MAIP = (0.8 psi/ft *5,049 ft) – (1.21*0.433 psi/ft*5,049 ft) = 1,393 psi

1(j) Names of Owner of Record:

The surface owners and mineral owners are within the AOR are presented in Appendix IX. Phoenix Operating LLC has notified the current operators, surface owners and lease owners in accordance with 36.22.1410, notification requirements for an underground injection permit. Appendix X is an affidavit attesting to the fact that notices have been mailed.

List of Appendices/Attachments:

I	¼ -Mile Area of Review Map
II	Plat of SWD Location
III	Representative Log
IV	Sundry Notices
V	Proposed Drilling & Completion Procedure
VI	Proposed Wellbore Schematic/Directional Plan
VII	SWD Layout Diagram
VIII	Water Analysis – Source Waters
IX	List of Surface Owners/Mineral Owners in ¼ -Mile AOR
X	Affidavit of Notification to Landowners
XI	Example of Landowner Notifications of Application for Injection
XII	Notice of Intention to Apply for a Class II Well
XIII	Affidavits of Publication

I. Ronin 1 SWD AOR Map

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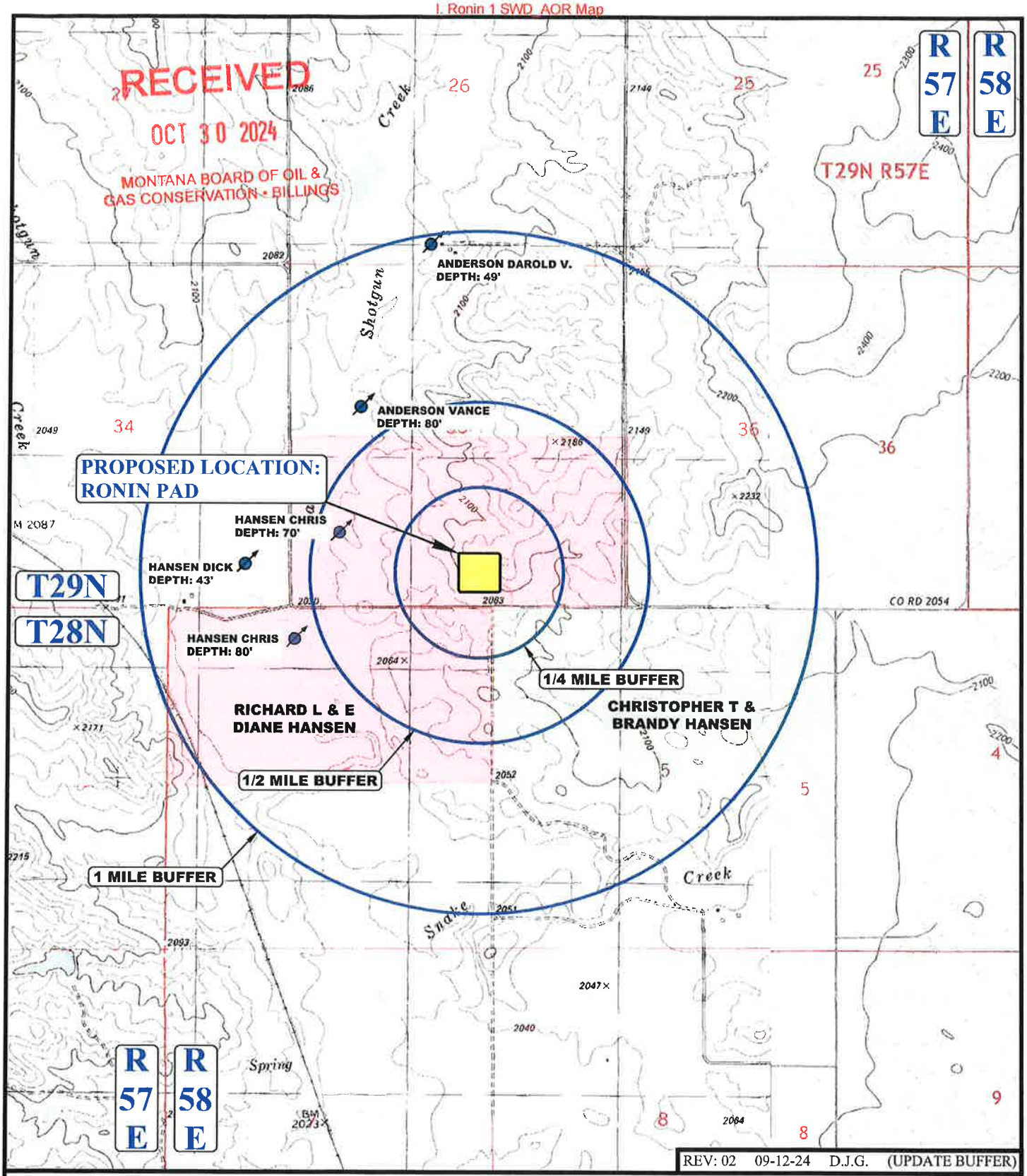


REV: 02 09-12-24 D.J.G. (UPDATE BUFFER)

LEGEND:

WATER WELLS

N

PHOENIX OPERATING LLC

RONIN PAD
SW 1/4 SE 1/4, SECTION 35, T29N, R57E, P.M.M.
ROOSEVELT COUNTY, MONTANA

SURVEYED BY	C.B., D.D.	06-03-24	SCALE
DRAWN BY	K.C.	06-27-24	1 : 24,000
WELL PROXIMITY MAP			TOPO C

UINTAH ENGINEERING & LAND SURVEYING

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

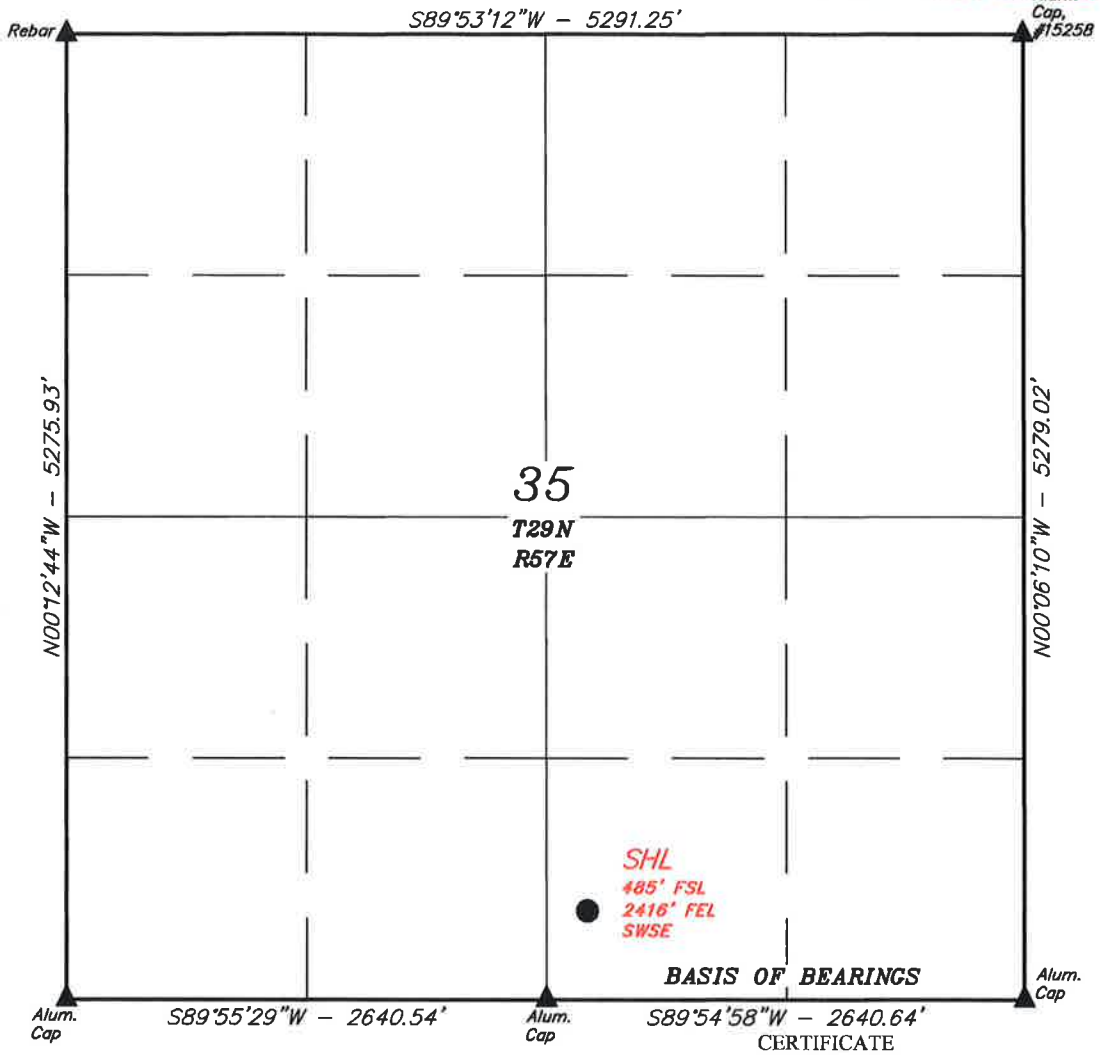
III. Ronin 1 SWD Representative Log

LEGEND:

● = PROPOSED WELLHEAD.

▲ = SECTION CORNERS LOCATED.

NOTE:
Distances referenced on plat to section lines are perpendicular.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

MONTANA
SCOTT C. KOTERBA
10801LS
09-12-24
LICENSED LAND SURVEYOR

SCOTT C. KOTERBA
REGISTERED LAND SURVEYOR
REGISTRATION NO. 10801LS
STATE OF MONTANA

1000' 500' 0' 1000'

EXISTING GROUND ELEVATION = 2101.2'

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 48°13'00.86" (48.216906°)
LONGITUDE = -104°16'10.53" (-104.269591°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 48°13'00.79" (48.216885°)
LONGITUDE = -104°16'08.73" (-104.269091°)

BASIS OF BEARINGS
BASIS OF BEARINGS IS A G.P.S. OBSERVATION

PHOENIX | OPERATING COMPANY

UINTAH ENGINEERING & LAND SURVEYING

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

N

PHOENIX OPERATING LLC

RONIN SWD
SW 1/4 SE 1/4, SECTION 35, T29N, R57E, P.M.M.
ROOSEVELT COUNTY, MONTANA

SURVEYED BY	C.B., D.D.	06-03-24	SCALE
DRAWN BY	D.J.G.	09-12-24	1" = 1000'

WELL LOCATION PLAT

III. Representative Log

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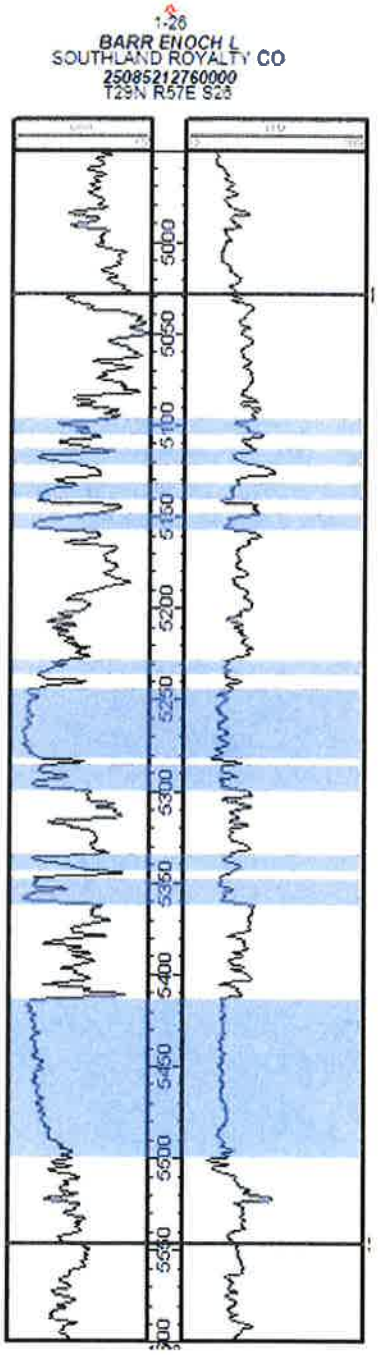
INKR



SWIFT

FORM NO. 2 R 10/09

ARM 36.22.307, 601, 605, 1003, 1004, 1011, 1013, 1103, 1222, 1240, 1301, 1306, 1309, and 1417

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

Address 4643 ULSTER STREET, SUITE 1510

City DENVER State CO Zip Code 80237

Telephone 855-868-4244 Fax

Location of well (1/4-1/4 section and footage measurements):
485' FSL 2416' FEL
SWSE SECTION 24, T30N, R59E

Lease Name: RONIN

Type (Private/State/Federal/Tribal/Allotted): PRIVATE

Well Number: 1 SWD

Unit Agreement Name:

Field Name or Wildcat: WILDCAT, ROOSEVELT

Township, Range, and Section: T29N, R57E, SECTION 35

County: ROOSEVELT

API Number: 25 | | (State | County | Well)

Well Type (oil, gas, injection, other): INJECTION

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

Notice of Intention to Change Plans		Subsequent Report of Mechanical Integrity Test	
Notice of Intention to Run Mechanical Integrity Test		Subsequent Report of Stimulation or Treatment	
Notice of Intention to Stimulate or to Chemically Treat		Subsequent Report of Perforation or Cementing	
Notice of Intention to Perforate or to Cement		Subsequent Report of Well Abandonment	
Notice of Intention to Abandon Well		Subsequent Report of Pulled or Altered Casing	
Notice of Intention to Pull or Alter Casing		Subsequent Report of Drilling Waste Disposal	
Notice of Intention to Change Well Status		Subsequent Report of Production Waste Disposal	
Supplemental Well History		Subsequent Report of Change in Well Status	
Other (specify) INTENT TO DRILL & COMPLETE CLASS II INJECTION WELL	✓	Subsequent Report of Gas Analysis (ARM 36.22.1222)	

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 OPERATING LLC RESPECTFULLY REQUEST APPROVAL TO DRILL & COMPLETE A DISPOSAL WELL AT THE REFERENCED LOCATION FOR INJECTION OF CLASS II E&P WASTS. NOTICES HAS BEEN PROVIDED TO PARTIES WITHIN 1/4 MILE AREA OF REVIEW OF THE PROPOSED LOCATION. AN APPLICATION FOR HEARING ON THE MONTANA BOARD OF OIL & GAS CONSERVATION DOCKET. HAS BEEN REQUESTED FOR DECEMBER 5, 2024.
PHOENIX OPERATING LLC REQUESTS A VARIANCE TO NOT RUN OPEN HOLE LOGS ON THE SUBJECT WELL.

BOARD USE ONLY

Approved _____ Date

Name Title

The undersigned hereby certifies that the information contained on this application is true and correct:

10-28-2024 Amy Doebele
Date Signed (Agent)

AMY DOEBELE, AUTHORIZED AGENT
Print Name and Title

Telephone: 435-789-1017

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Phoenix Operating LLC
Drilling Plan

Ronin 1 SWD

SWSE Sec 35, T29N-R57E
485' FSL 2416' FEL
Roosevelt County, MT

1. Estimated Formation Tops

Formation	MD	TVD	Comments
Pierre Shale	1920'	1920'	9-5/8" surface casing set at 2,100 & cemented to surface.
Greenhorn	4326'	4326'	
Mowry	4631'	4631'	
Inyan Kara	5049'	5049'	
Swift	5567'	5567'	
Planned TD	5537'	5537'	

Formation elevations are based on a finished pad elevation of 2,109' and a KB elevation of 2,124' (15' rig substructure height).

2. BOP and Pressure Containment Data

Depth Intervals	BOP Equipment
0' to 2,100'	13-1/2" surface hole. No pressure control equipment utilized.
2,100' to TD	11", 3,000 psi Hydraulic Double Ram Type BOP's 11", 3,000 psi Annular BOP
Drilling spool to accommodate choke and kill lines.	
Ancillary equipment and choke manifold to be rated to 3,000 psi. All BOP tests will be performed in accordance with the requirements of onshore order No 2.	
BOP handwheels may be under and or within the substructure of the rig if the drilling used is set up to operate most efficiently in this manner.	

Auxiliary equipment:

a) Upper and lower Kelly cock will be installed while drilling.
b) Inside BOP or stab-in valve will be available on rig floor.
c) Safety valve(s) and subs to fit all string connections will be on floor during drilling operations.
d) Mud monitoring will be visually observed.

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3. Casing & Cement Programs

a) The proposed casing program is as follows:

		Casing Depth		Casing Details					Cmt
	Hole Size	From	To	OD	Weight	Grade	Cplg	Condition	Cmt Top
Conductor	16"	0'	80'	20"	84#	J-55		New	Surface
Surface	13-1/2"	0'	2100'	9-5/8"	36#	J-55	LTC	New	Surface
Intermediate	8-3/4"	0'	5049'	7"	23#	L-80	LTC	New	2,100'
Production	6"	4999'	5537'	4.5"	11.6#	L-80	BTC	New	Un-Cemented

b) Cementing Program:

9-5/8" Surface Casing	**Cement Details**
TOC at Surface – 55% excess.	**Lead:** 613 sx (226 bbls) of 12.5 lb/gall, 2.08 ft^3/sx BJ CEM S100 Type III with 0.13 lb/sx Celloflake, 2.0 lbs/sx $CaCl_2$, 2.0 lbs/sx Sodium Metasilicate, 5% Gypsum and 0.3% Anti-foaming agent (FP-25).
TOC at 1,800'-55% excess.	**Tail:** 271 sx (71bbls) of 14.2 lb/gall, 1.99 ft^3/sx BJ CEM S100 Type III with 0.13 lb/sx IntegraSeal, 2.0 lbs/sx Sodium Metasilicate, 5% Gypsum (BWOB) and 0.3% FP-25 (defoamer, BWOB).

7" Intermediate Casing	**Cement Details**
TOC at 2,100' (BSC) – 65% excess.	**Lead:** 295 sx (114.5 bbls) of 12.0 lb/gall, 1.46 ft^3/sx BJ CEM I100 Type III with 0.25 lb/sx IntegraSeal, 5 lb/sx BA-95 (bonding agent) 3% KCL (BWOW), 0.1% R-7C (retarder), 0.4%FL-66 (fluid loss), 0.30% R-3 (retarder) and 0.1% IntegraGuard GW-86 (scavenger). Additives by BWOB.
TOC at 4,150' – 40% excess.	**Tail:** 167 sx (42.8 bbls) of 14.0 lb/fall, 1.44 ft^3/sx BJ CEM I100, 20% Fly Ash, 80% Class G, 0.13 lb/sx IntegraSeal Cellophane, 1.0 lb/sx IntegraSeal Pheno, 0.1% IntegraGuard GW-86 (scavenger), and 0.4% FI-66 (fluid loss). Additives by BWOB

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4. Drilling Fluids Program

From:		To:	
Spud (0')		2,100' 13 ½" Surface Hole, Fresh Water, Gel & Lime Sweeps	
MW, ppg:	8.5 to 9.0	PV, cp:	0 to 25
YP, lb/100 ft^2	0 to 8	pH:	7.0 to 8.5
Funnel Vis, sec:	28 to 50	LGS:	LT 6%

Note: If shallow surface sand or gravel is encountered, rig will mud-up with gel (increase viscosity).

From:		To:	
2,100'		5,049' 8-3/4" Production section – Oil Based Mud	
MW, ppg:	9.2 to 10.0	Elec Stability, v:	400 to 600
YP, lb/100 ft^2:	4 to 12	PV, cp:	12 to 25
Funnel Vis, sec:	40 to 50	HTHP WL, cc:	10 to 20
Oil Water Ratio:	70/30 to 80/20	Chlorides, ppm:	30,000 to 50,000
LGS:	LT 6%	NaCl, mg/l:	250,000 to 300,000

Cuttings Plan: Closed loop system will be utilized during surface and production drilling operations. All drill cuttings will be disposed of at 13 Mile Landfill, Williston, ND.

5. Evaluation Program

Cores:	No Coring is planned.
Testing:	No DST's are planned.
Samples:	No cuttings are planned to be collected on this well.
Surveys:	MWD will be utilized from surface to TD. Surveys will be taken on a 30' survey interval after entering the Mowry.

The logging program will be as follows:

Depth Interval	Depth Interval
Base of surface casing to TD	GR
7", Production casing (TD to surface)	CBL-GR

Directional Planning / Anit-Collision:

The Ronin 1 SWD well is planned as a vertical well with a 50 ft target radius from the wellhead. anti-collision avoidance modeling will be completed before spud. Anti-Collision reports will be based on known offset wells to Phoenix Operating LLC within the vicinity of the planned wellbore path.

6. Drilling/Completion Program:

1. Move in drilling rig (Notify State Inspector prior to spud).
2. Pick up BHA and drill the Surface interval as follows:
    a. 13-1/2" Bit and MWD/Directional Tools.
    b. Fresh water will be utilized.
    c. Drill approx. 150' into the Pierre Shale formation.
3. At TD circulate to condition hole.
4. TOOH and lay down BHA
5. Run 9-5/8" J55-36# LTC casing.

   a. Centralizers on bottom 3 joints minimum.
   b. Float shoe and float collar to be utilized.
6. Pump surface casing cement job per cementing program.
   a. Spacer, Lead Slurry, Tail Slurry, Displace with fresh water.
7. Pressure test surface casing (Required pressure & time).
8. Install Wellhead and BOP.
   a. Nipple up 3M BOP stack and test per BLM Onshore Order No. 2.
   b. Install wear-bushing.
9. Pick up BHA and drill the Production interval as follows:
   a. 8 3/4" bit and MWD/Directional tools.
   b. *MWD gamma every 30' after entering the Mowry.*
   c. Oil-based drilling fluid will be utilized.
   d. Drill to the top of the Inyan Kara formation ~5049' TVD.
10. At TD circulate to condition hole and make a wiper trip to the surface shoe.
11. TOOH and lay down BHA.
12. Run 7" L80 – 23# LTC casing.
   a. Casing will be centralized.
   b. Float shoe and Float collar to be utilized.
13. Pump Intermediate cement per cementing program.
   a. Spacer, Lead Slurry, Tail Slurry, Displace with salt water.
14. Wait on cement prior to drilling out 7" shoe and drilling 6" open hole section.
15. Run CBL on 7" casing, from PBTD to surface. CBL must be reviewed prior to drilling out the shoe.
   a. If unable to get to the bottom with CBL tools a clean out will be required.
   b. *CBL on the Intermediate casing must be completed prior to starting drilling of the open hole and submitted to the State for review prior to running the 4 ½" liner.*
16. Pressure test production casing to 1500 psi.
17. Once CBL has been reviewed, pick up BHA and drill the Open-Hole interval as follows:
   a. 6" bit and MWD/Directional tools.
   b. *MWD gamma every 30' after entering the Mowry formation.*
   c. *A geologist must be onsite to catch samples every 30' once in the Inyan Kara formation.*
   d. Brine drilling fluid will be utilized.
   e. Drill to a maximum of ~5,537' TVD. Approximately 30' above the top of the Swift formation.
   f. *If it is suspected that the Swift is encountered while drilling, there will be an all stop for evaluation.*
18. At TD circulate to condition hole.
19. TOOH and lay down BHA.
20. Run 4 1/2" P-110-11.6# BTC pre-perforated liner.

DESCRIPTION		OD	ID
5" ID x 8' Polished Bore Receptacle **(PBR)**		5.750"	5.000"
4 1/2" x 7" OptiPak Liner Hanger Packer BTC pin		5.875"	3.920"
1	Jts 4 1/2" 11.6# IPC Blank BTC Liner	5.000"	4.000"
1	Jts 4 1/2" 11.6# Blank BTC Liner	5.000"	4.000"
~ 7 - 8	Jts 4 1/2" 11.6# Pre-Perf BTC Liner	5.000"	4.000"
Guide Shoe Joint w/ Aluminum Nose and Side Ports		5.000"	.750"

   a. 4 ½" nickel plated, Liner Hanger and packer will be set within 100' of the open hole in 7" casing with good cement bond.
   b. Run 4 ½" Blank to below 7" shoe.
21. TOOH and lay down drill pipe and liner tools.
22. Secure well and release drilling rig.
23. Install 7 1/16" – 5M tubing head and master valve.
24. MIRU service rig. Install and test BOPs.

25. Recover Dakota water sample from formation.
    a. Check pressure and attempt to establish flow from the Dakota.
    b. If flow is established, flow fluid to surface and recover a fluid sample.
    c. If unable to recover fluid, RIH with 2 7/8" tubing and packer. Set packer above the liner top and attempt to swab the well to recover formation fluids to surface.
    d. If unable to recover fluid samples at surface, RIH with wireline and recover a downhole sample.
    e. Take samples to lab for full water analysis.
26. Run 3 1/2" L80-9.3# BTC Internally Plastic-Coated tubing.
    a. Seal assembly ran and stung into PBR at liner top.
    b. Land tubing hanger in wellhead with tubing in 45k compression.
27. Perform MIT on tubing annulus, seal assembly and packer.
    a. Notify State inspector prior to performing MIT. Inspector must witness MIT.
    b. MIT to 1000 psi for15 minutes, or as directed by the State inspector.
28. RDMO rig and service equipment.
29. Install 4 1/16" – 5M master valve.
30. Install flowlines from facility to wellhead.
    a. Flowlines must be pressure tested to 100 psi above the permitted MASP from the Injection Pump to the Wellhead prior to injection.
    b. Pressure test results must be reported to the NDIC via sundry.
31. Begin injection test.
32. Acidize well as needed to improve injection.
    a. Acidize with 15% HCl and rock-salt or polymer diverter.

7. Abnormal Pressure and H2S Gas

No abnormal pressure, temperatures or other hazards are anticipated. H2S gas is not expected to be encountered in this wellbore. However, precautions will be taken to monitor for H2S while drilling the vertical section.

8. Hydraulic Fracturing Stimulation – N/A

No hydraulic fracturing will be attempted on this wellbore.

9. Contact Information:

Phoenix Operating LLC
4643 South Ulster Street, Suite 1510
Denver, CO 80237
Attn: Mark Johnson
Email mjohnson@phxoperating.com
303.548.1953

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OCT 30 2024
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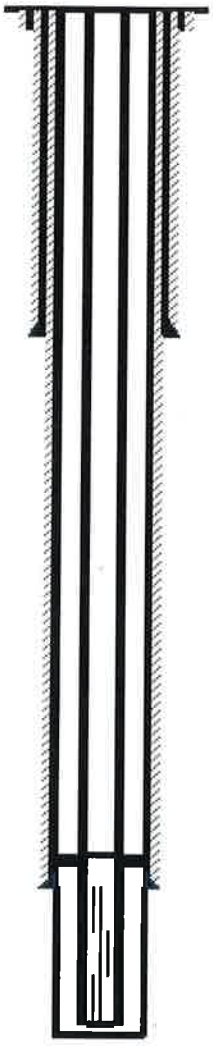
PHOENIX | OPERATING COMPANY

Ronin 1 SWD

Inyan Kara Injection
Roosevelt County, Montana
SHL: 485ft FSL & 2206ft FEL of Sec 35-T29N-R57E

Proposed Vertical Wellbore



TMD 5537'
TVD 5537'

Wellhead Description

Cameron 7 1/16" - 5M

Casing Description

String	Size	Weight	Grade	Cplg	Top	Bottom	Hole Size	Cement Top
Conductor	16"	84#	J-55		0'	80'	20"	Surface
Surface	9 5/8"	36#	J-55	LTC	0'	2100'	13 1/2"	Surface
Intermediate	7"	23#	L-80	LTC	0'	5049'	8 3/4"	2100'
Liner	4 1/2"	11.6#	L-80	BTC	4999'	5537'	6"	Un-Cemented

*7" Casing set and cemented at the top of the Dakota formation
*Shoe-Track consists of one 7" Single-Valve Float Shoe, one joint of 7"casing, and one 7" Single-Valve Float Collar. Shoe-Track will be cemented from the Float Shoe to the Float Collar (~40').

*4 1/2" liner will be ran with a liner hanger and liner-top packer
*4 1/2" liner-top packer will be set no greater than 100' above the 7" shoe in good cement verified by CBL

Tubing Description (Est'd Depth - Top of Liner)

Size	Weight	Grade	Cplg	Top	Bottom
3 1/2" IPC	9.3#	L-80	EUE	0'	4999'

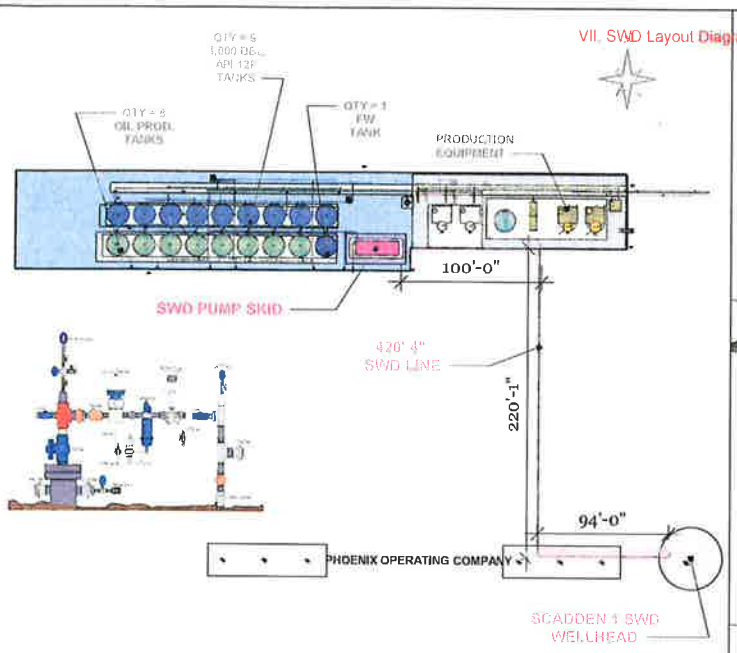
*Tubing ran with a seal assembly stung into PBR in liner top
*MIT performed to 1000 psi on tubing annulus, packer and seal assembly

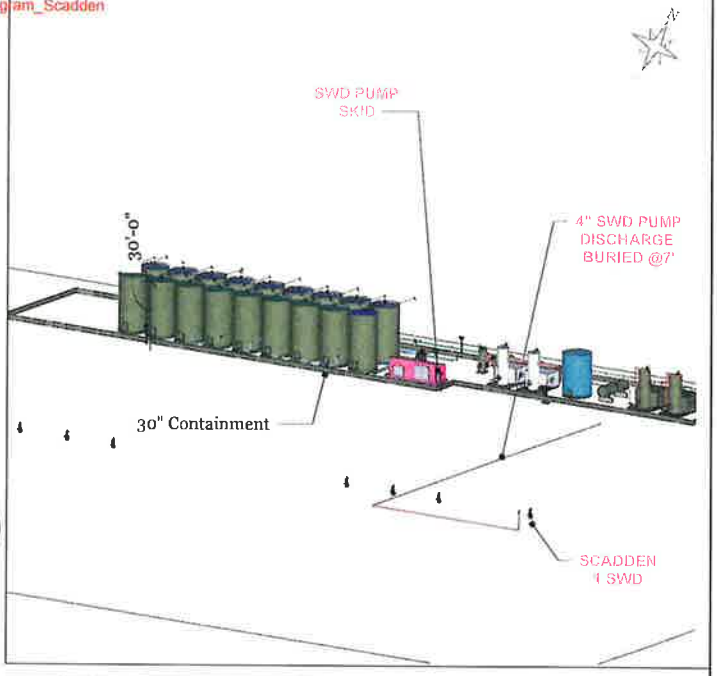
6" OH - Perforated Liner

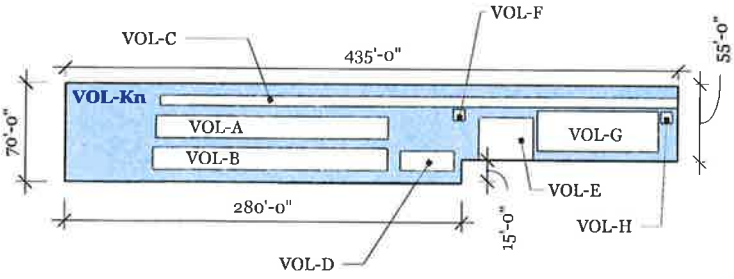
Formation	Top	Bottom	Stimulation
Dakota	5049'	5537'	15% HCl + Rock Salt or Polymer Diverter

*Above depths are Measured Depths from KB
*TD at least 30' above the top of the Swift formation

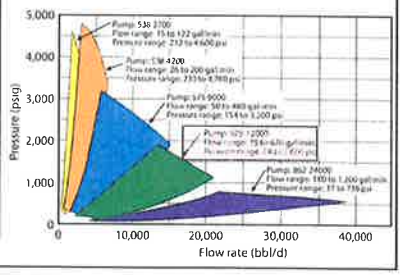
VII. SWD Layout Diagram_Scadden







AREA	DESCRIPTION	VOLUME (BBL)
VOL-A	TANKS	863
VOL-B	TANKS	863
VOL-C	PIPE RACK	291
VOL-D	SWD PUMP	233
VOL-E	FUTURE HTs	357
VOL-F	SALES GAS KO	24
VOL-G	HT Building	1,107
VOL-H	LP KO	29
VOL-Kt	GROSS CONTAINMENT	12,222
VOL-Kn	**NET CONTAINMENT**	**8,455**



PHOENIX | OPERATING COMPANY

SWD FACILITY LAYOUT DIAGRAM

PHOENIX OPERATING COMPANY
SCADDEN SOUTH PAD

SCADDEN 1 SWD

BEAR

REVISIONS

	MM/DD/YY	REMARKS
1	09/05/24	SS - Initial Draft
2	__/__/__	---
3	__/__/__	---
4	__/__/__	---
5	__/__/__	---

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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

Member ACIL

Account #: 23037 **Client:** Astro-Chem Laboratory, Inc.
Workorder: Milloy 10-3-24 #2H Well Pad (65921)

Brenda Benth
Astro-Chem
4102 2nd Ave W
Williston, ND 58801

Certificate of Analysis

Approval

All data reported has been reviewed and approved by:

Stacy Zander

Stacy Zander, Bismarck Assistant Lab Manager Bismarck, ND

Analyses performed under Minnesota Department of Health Accreditation conforms to the current TNI standards.

NEW ULM LAB CERTIFICATIONS:
MN LAB # 027-015-125 ND WW/DW # R-040

BISMARCK LAB CERTIFICATIONS:
MN LAB # 038-999-267 ND W/DW # ND-016 SD SDWA

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

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

Member ACIL

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	

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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

Member ACIL

Account #: 23037 **Client:** Astro-Chem Laboratory, Inc.

ASTRO-CHEM LAB
PO Box 972
Williston, ND 58802-0972

Chain of Custody & Analyt

www.astrochem

Astro – Chem Laboratory, I
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
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	Quote: Bottle Order

Report Information (if different)

Company/Name	Phoenix Operating
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	astrochem@midconetwork.com
Receive Report	☐Hard Copy ☒Email

ents

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 ☐ No

Matrix Codes: A - Air; W - Water; S - Soils/Solids; V - Vegetation; B - Bioassay; O - Oil; DW - Drinking Water

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 (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	Specific Gravity	Density	See Attached	RUSH TAT	LAB ID (Laboratory Use Only)
1	Treater (Production Water)	09/21/2024	10:30 am	1	W	✓	✓			
2	(03616)									
3										
4										
5										
6										
7										
8										
9										

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Dave Scadden - Left in Vestibule	09/24/2024	D.S. Vestibule	Christina Jungels	09/24/2024	
	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
					2754 09/24/1055	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check	Amount $	Receipt Number (cash/check only)
				21.0 °C					

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

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

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

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

Enclosures

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

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

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

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

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

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

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

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

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

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

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
6010D MET ICP	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	
2320B Alkalinity	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		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**295000**	mg/L	250	1		09/27/24 18:38		MW,PP
4500H+ pH, Electrometric	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
Resistivity	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
SM2510 Specific Conductance	Analytical Method: SM 2510 Pace Analytical Services - Minneapolis							
Specific Conductance	**209000**	umhos/cm	5.0	1		10/01/24 14:36		
Specific Gravity	Analytical Method: ASTM D5057 Pace Analytical Services - Minneapolis							
Specific Gravity	**1.22**			1		10/09/24 22:12		N2
300.0 IC Anions	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	
353.2 Nitrate + Nitrite	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

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

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

QC Batch: 970670
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
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	10708927001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

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

QC Batch: 971542
QC Batch Method: SM 2320B
Analysis 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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

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

QC Batch: 970573
QC Batch Method: SM 2540C
Analysis 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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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QUALITY CONTROL DATA

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

QC Batch: 972286
QC Batch Method: SM 4500-H+B
Analysis 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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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QUALITY CONTROL DATA

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

QC Batch: 971086
QC Batch Method: SM 2510
Analysis 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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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QUALITY CONTROL DATA

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

QC Batch: 972576
QC Batch Method: ASTM D5057
Analysis 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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

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

QC Batch: 971880
QC Batch Method: EPA 300.0
Analysis 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	50383317002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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

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

Associated Lab Samples: 10709475001

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

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

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

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.

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

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		

ASTRO-CHEM LAB, INC.
4102 2nd Ave. W.
P.O. Box 972
Williston, ND 58801
701-572-7355
www.astrochemlab.com

CHAIN of CUSTODY

Page 1 of 1

Client: Phoenix Operating LLC.
Project: Milloy 10-3-24 #2H Well Pad
Project Manager: Mark Johnson
Telephone No.
Fax No.
Method of Shipment: FEDEX OVERNIGHT
Special Detection Limit/Reporting

ACL "Oilfield Water"

Container Preservative **: 1 U U 2

**Preservative Types: (1) nitric acid (2) sulfuric acid (3) hydrochloric acid (4) sodium hydroxide (5) zinc acetate (6) methanol (7) sodium bisulfate (8) sodium thiosulfate (9) hexane (A) ascorbic acid (B) ammonium sulfate (C) ammonium hydroxide (D) TSP (U) unpreserved (O) Other

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other	Sampling Date	Sampling Time	Analysis Requested: Ca, Mg, Na, Fe, Cr, Ba, K, Sr, Zn	Chloride, Sulfate, pH, Conductivity, Resistivity, Total Dissolved Solids	Specific Gravity, Alkalinity (Carbonate & Bicarbonate)	Nitrate+Nitrite	Turn Around Time (working days)
Milloy 10-3-24 #2H Well Pad (Treater)	(36615)	4	X				9/21/24	10:39 AM	X	X	X	X	

WO#: 10709475
10709475

REMARKS:
astrochem@midconetwork.com
www.astrochemlab.com

Sample Received Intact: Yes No
Temperature received: Ice No ice

Relinq. by sampler	Date / Time	Received by (Signature)
D.S. (Vestibule)	9/24/24	Brenda Benth Brenda Benth
Relinquished by: Brenda Benth Brenda Benth	Date / Time: 9/25/24 2:00 pm	Received by
Relinquished by	Date / Time	Received by
Relinquished by	Date / Time	Received by laboratory / Date / Time

Lab Work No.

Methods for Analysis (ACL OIL WATER GUIDELINES)

Alkalinity (2320B)
- Alkalinity, Bicarbonate (CaCO3)
- Alkalinity, Carbonate (CaCO3)
- Alkalinity, Total as CaCO3

Nitrate + Nitrite (353.2)
- Nitrogen, NO2 plus NO3

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, Inc PROJECT #:

WO#: 10709475

PM: AR4 Due Date: 10/10/24

CLIENT: 11 Astro Che

COURIER: ☐ Client ☐ Commercial ☐ FedEx ☐ Pace ☐ SpeeDee ☐ UPS ☐ USPS

TRACKING NUMBER: 7788 1470 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 ☐ Melted ☐ None

Thermometer: ☐ T1 (0461) ☐ T2 (0436) ☐ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☑ T9 (0727) ☐ 01339252 (1710)

Did Samples Originate in West Virginia: ☐ YES ☑ NO	Were All Container Temps taken: ☐ YES ☐ NO ☑ N/A
Correction Factor: -0.1 Cooler Temp Read w/Temp Blank: 0.9 °C Cooler Temp Corrected w/Temp Blank: 0.8 °C	Average Corrected Temp (no Temp Blank Only): _____ °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: JMW 9/26/24
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): ☐ DULUTH ☑ MINNEAPOLIS ☐ VIRGINIA	YES	NO	N/A	COMMENT(S)
Chain of Custody Present and Filled Out?	☑	☐		1.
Chain of Custody Relinquished?	☑	☐		2.
Sampler Name and/or Signature on COC?	☐	☐	☑	3.
Samples Arrived within Hold Time?	☑	☐		4. If Fecal: ☐ <8 hrs ☐ >8 hr, <24 hr ☐ No
Short Hold Time Analysis (<72 hr)?	☐	☑		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Other: _____
Rush Turn Around Time Requested?	☐	☑		6.
Sufficient Sample Volume?	☑	☐		7.
Correct Containers Used? – Pace Containers Used?	☑ ☑	☐ ☐	☐	8.
Containers Intact?	☑	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☑	10. Is sediment visible in the dissolved container: ☐ YES ☐ 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: ☐ Oil ☐ Soil ☑ Water ☐ Other	☑	☐		11. If NO, write ID/Date/Time of container below: PO label on Sample id only match with Lab Sample number ☐ 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_3, H_2SO_4, < 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.	☑ ☑ ☐	☐ ☐ ☐	☐ ☐ ☑	12. Sample #: 001 ☑ HNO_3 ☑ H_2SO_4 ☐ NaOH ☐ Zinc Acetate Positive for Residual Chlorine: ☐ YES ☐ NO pH Paper Lot # (Residual Chlorine / 0-6 Roll: 205224 / 0-6 Strip / 0-14 Strip) ☐ See Exceptions form ENV-FRM-MIN4-0142
Headspace in Methyl Mercury Container?	☐	☐	☑	13.
Extra labels present on soil VOA or WIDRO containers? Headspace in VOA Vials (greater than 6mm)?	☐ ☐	☐ ☐	☑ ☑	14. ☐ See Exceptions form ENV-FRM-MIN4-0140
Trip Blanks Present? Trip Blank Custody Seals Present?	☐ ☐	☑ ☐	☐ ☑	15. 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: 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

Pace

☐ Rush Multiplier____X
☒ Samples Pre-Logged into eCOC

Workorder: 10709475 **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

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

Requested Analysis

WO#: 35908965
35908965

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers BP2U1/1	Resistivity
1	Milloy 10-3-24 #2H Well Pad	PS	9/21/2024 10:30	10709475001	Water	1	X
2							
3							
4							
5							

LAB USE ONLY

Transfers	Released By	Date/Time	Received By	Date/Time
1	Mck U/Pace	9/27/24 1020	RB Pace	10/1/24 1200
2				
3				

Comments

Cooler Temperature on Receipt ____ °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.*

VIII. Water Analysis - Source Waters

Pace

Sample Condition Upon Receipt Form

WO#: 35908965
PM: JHW1 Due Date: 10/11/24
CLIENT: PACMIN

Project #

Project Manager:

Client:

Date and Initials of person:
Examining contents: BP

Verifying pH: _____

Thermometer Used: T414 Date: 10/01/24 Time: 1143 Initials: HAM1

State of Origin _____ ☐ For WV projects all containers verified to ≤6 °C

Cooler #1 Temp.°C	1.5 (Visual)	+0.1 (Correction Factor)	1.6 (Actual)	☐Samples on ice, cooling process has begun
Cooler #2 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐Samples on ice, cooling process has begun
Cooler #3 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐Samples on ice, cooling process has begun
Cooler #4 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐Samples on ice, cooling process has begun
Cooler #5 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐Samples on ice, cooling process has begun
Cooler #6 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐Samples on ice, cooling process has begun
Recheck for OOT °C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	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** ☑Yes ☐No | **Filled Out:** ☑Yes ☐No ☐N/A | **Sampler Name:** ☑Yes ☐No ☐N/A
Relinquished To Pace: ☑Yes ☐No ☐N/A | **Sampling Date(s):** ☑Yes ☐No ☐N/A | **Sampling Time(s):** ☑Yes ☐No ☐N/A

Samples Arrived within Hold Time	☑Yes	☐No	☐N/A	Comments
Rush Turnaround Requested on COC	☐Yes	☑No	☐N/A	Comments
Sufficient Volume	☑Yes	☐No	☐N/A	Comments
Correct Containers Used	☑Yes	☐No	☐N/A	Comments
Containers Intact	☑Yes	☐No	☐N/A	Comments
Sample Labels Match COC (Sample ID, Date/Time of Collection)	☑Yes	☐No	☐N/A	Comments
All containers needing acid / base preservation have been checked	☐Yes	☐No	☑N/A	
All containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: Vials, Microbiology, O&G, PFAS	☐Yes	☐No	☑N/A	
Headspace in Volatile Vials? (>6mm)	☐Yes	☐No	☑N/A	
Trip Blank Present	☐Yes	☐No	☑N/A	

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

RECEIVED
OCT 30 2024
MONTANA BOARD OF OIL & GAS CONSERVATION - BILLINGS

Comments / Resolutions (use back for additional comments): No Client label on Container matched by JA label

Labeled by: BP **Reviewed by:** EAS **Delivered by:** EAS

Qualtrax Document ID: 33786

RECEIVED
OCT 30 2024
MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Surface Owners within AOR

Richard L. Hansen and E. Diane Hansen
5532 Road 1009
Bainville, MT 59212

Christopher & Brandy Hansen
P.O. Box 14
Bainville, MT 59212

Lease Mineral Owners within AOR

Ricky Duane Hansen
a/k/a Rick Duane Hansen
14 Burlington Avenue
Billings, MT 59101

Daniel K. Lambert
P.O. Box 107
Bainville, MT 59212

Robert Rudolph
5360 Road 1009
Bainville, MT 59212

Darin Fisher
45 South 1840 West
Saint George, UT 84770

Phoenix Capital Group Holdings, LLC
18575 Jamboree Road, Suite 830
Irvine, CA 92612

Jerry Axel Hansen
P.O. Box 377
Willow, AK 99688

Lynette Stump
12518 West Lagrange
Boise, ID 83709

Joseph Delbert Hansen
1232 Avenue C Apartment #6
Billings, MT 59102

Darlas R. Rogers
P.O. Box 133
Bainville, MT 59213

Lyle G. Lambert
P.O. Box 66
Bainville, MT 59212

Michael Paul Hansen
522 18th Street West
Billings, MT 59102

Liana L. Peters
P.O. Box 194
Froid, MT 59225

Unleased Mineral Owners within AOR

Darin Fisher
45 South 1840 West
Saint George, UT 84770

Lynette Stump
12518 West Lagrange
Boise, ID 83709

BEFORE THE BOARD OF OIL AND GAS CONSERVATION OF THE STATE OF MONTANA

IN THE MATTER OF THE APPLICATION FOR PHOENIX OPERATING LLC FOR THE HEARING OF ITS REQUEST FOR A UIC PERMIT FOR THE RONIN 1 SWD WELL, 485' FSL 2416' FEL, SECTION 35, T29N, R57E, P.M.M. ROOSEVELT COUNTY, MONTANA, FOR THE PURPOSE OF WATER INJECTION	AFFIDAVIT OF NOTIFICATION

Date: October 28, 2024

RECEIVED

OCT 30 2024

MONTANA BOARD OF OIL & GAS CONSERVATION • BILLINGS

State of Utah
County of Uintah

Amy Doebele, being first duly sworn, deposes and says:

That Notice of advising of Phoenix Operating LLC' application for UIC permit in the captioned matter, in the form attached as "Exhibit A", was mailed to each current operator, surface owner and lease owner within the area of review at the addresses shown in the exhibit attached to the Notice, by mailing a true copy thereof this 29 day of Oct., 2024, postage prepaid, First Class USPS Mail. This affidavit is given as evidence of compliance with A.R.M. 36.22.1410.

Amy Doebele
Authorized Agent

Subscribed and sworn before me on this 29 day of Oct., 2024.

Notary Public of the State of Utah
My Commission Expires: May 19, 2026

GORDON CHRIS GARDINER
NOTARY PUBLIC - STATE OF UTAH
COMMISSION# 724731
COMM. EXP. 05-19-2026

October 29, 2024

To: Mineral lease owner within ¼ mile of the proposed saltwater disposal well.

RE: Proposed Saltwater Disposal Well

Location of proposed Disposal Well & Facility: Ronin 1 SWD
SW 1/4 SE 1/4, Section 35, Township 29N, Range 57W. P.M.M.
Roosevelt County, Montana

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 mineral 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 Mark Johnson with Phoenix Operating LLC at (303) 548-1953.

Sincerely,

Amy Doebele
Authorized Agent for Phoenix Operating LLC

October 29, 2024

To: Christopher & Brandy Hansen
P.O. Box 14
Bainville, MT 59212

RE: Proposed Saltwater Disposal Well

Location of proposed Disposal Well & Facility: Ronin 1 SWD
SW 1/4 SE 1/4, Section 35, Township 29N, Range 57W. P.M.M.
Roosevelt County, Montana

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.

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Sincerely,

Amy Doebele
Authorized Agent for Phoenix Operating LLC

October 29, 2024

To: Richard & Diane Hansen
5532 Road 1009
Bainville, MT 59212

RE: Proposed Saltwater Disposal Well

Location of proposed Disposal Well & Facility: Ronin 1 SWD
SW 1/4 SE 1/4, Section 35, Township 29N, Range 57W. P.M.M.
Roosevelt County, Montana

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.

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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 Mark Johnson with Phoenix Operating LLC at (303) 548-1953.

Sincerely,

Amy Doebele
Authorized Agent for Phoenix Operating LLC

October 29, 2024

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: Ronin 1 SWD
SW 1/4 SE 1/4, Section 35, Township 29N, Range 57W. 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 December 5, 2024.

If you have any questions concerning the enclosed application, please contact myself at (435) 789-1017 or to Mark Johnson with Phoenix Operating LLC at (303) 548-1953.

Sincerely,

Amy Doebele
Authorized Agent for Phoenix Operating LLC
UELS, LLC

Phoenix Operating - Ronin 1 SWD
BEFORE THE BOARD OF OIL AND GAS CONSERVATION
OF THE STATE OF MONTANA

In the Matter of the application of

Phoenix Operating LLC

for a Class II Injection well permit.

NOTICE OF INTENTION TO APPLY FOR A

CLASS II INJECTION WELL PERMIT

This public legal notice is scheduled to be published in the Helena Independent Record on November 2, 2024. Upon publication, receipt of the proof of publication will be provided to MBOGC.

1. Name and address of Applicant:
Phoenix Operating LLC
4643 S. Ulster Street
Suite 1510
Denver, CO 80237

2. Legal Description including County and Approximate Footages of Surface Location of Proposed Oil and Gas Well: (and projected bottom-hole location, if a directional or horizontal well)
Ronin 1 SWD
Surface Hole: 485' FSL 2416' FEL
SWSE Section 35, Township 29 North, Range 57 East
Roosevelt County, MT

3. Source of fluids to be injected
Produced water from Three Forks (Bakken) wells

4. Zone or formation into which injection will occur, including depth
Dakota from 5,049 -5,537'

5. An aquifer exemption will be requested as part of the application since the proposed injection zone contains water with less than 10,000 ppm total dissolved solids.
Pursuant to Rules 36.22.1409, Administrative Rules of Montana, the Montana Board of Oil and Gas Conservation will hold a public meeting upon the application of Phoenix Operating LLC for a Class II underground injection permit for the well or project set forth above. Said hearing will be held at the Montana Board of Oil & gas Hearing Room at 2535 St. John's Ave. Billings, Montana, beginning at 9:00 am on Thursday, December 5, 2024.
November 2, 2024 ###### **MNAXLP**