HERITAGE ENERGY

November 17, 2025

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

RECEIVED
JAN 07 2026
MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Attn: Mr. John Gizicki
UIC Program Director

Re: Application for UIC Permit and Authorization to Drill a Class II Injection Well, Neptune 24-1 SWD in NENE of Sec. 24 T26N R55E, Richland County, MT

Dear Mr. Gizicki

Heritage Energy Operating, LLC respectfully requests approval of an Underground Injection Control (UIC) permit for the referenced location and as described in the attached application. Heritage has provided notice to appropriate parties within the 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 for February 12, 2026.

If you have any questions concerning the enclosed application, please contact me at (405) 202-3874.

Sincerely,

Josh C. Cornell
Chief Executive Officer
Heritage Energy Operating, LLC

State of Montana

Board of Oil and Gas Conservation

Docket No: _____

Underground Injection Control
Application

Neptune 24-1 SWD

Sec. 24 T26N R55E

Heritage Energy Operating, LLC

2448 E. 81st Street, Suite 3600, Tulsa, OK 74137

(918) 600-0801

The following is submitted in support of our application to permit the drilling and completion of the Neptune 24-1 SWD well for the purposes of water injection into the Dakota Group and related rocks within the proposed Wildcat, Richland Field, as required by Rule 36.22.1403 of the Rules and regulations of the Montana Board of Oil & Gas Conservation.

1(a) Well locations:

The Neptune 24-1 SWD well has been proposed for drilling and completion of a water injection well within the Wildcat, Richland Field in Richland County, Montana as described below. Appendix I, depicts the surface location and a quarter ¼-mile radius representing the area of review for this well at the SHL and the BHL.

Neptune 24-1 SWD
440' FNL, 1071' FEL
NENE Sec. 24 T26N R55E

1(b) Wells Located within the ¼-mile Area of Review (AOR):

There are no active oil or gas wells within the ¼-Mile AOR.

There are no plugged and abandoned wells within the ¼-Mile AOR.

1(c) Location of All Pipelines:

The Neptune 24-1 SWD surface facilities will be constructed on the same pad as the injection well.

Injection fluids will come from multiple oil wells located on the same pad.

The Neptune 24-1 SWD may be tied into a pipeline system in the future.

1(d) Area Producing Formations, Fresh Water Aquifers and Water Well Information:

There are no wells that have tested the productive Williston formations within the ¼-Mile AOR.

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

Location	S-T-R	Well ID	Well Name	Depth
NA	NA	NA	NA	NA

Any potential USWDs are protected from the proposed injection zone by surface casing to be set at 2,090' and cemented to surface. The production string, tubing

and injection packer will result in further isolation of fresh USWDs from injected fluid.

1(e) Name and Geologic Description of Injection Zone:

The combined lower Cretaceous Dakota/Inyan Kara within the Dakota Group are roughly 420' thick in this area based on grid tops for the Dakota/Inyan Kara and the lower confining Swift formation. The Dakota/Inyan Kara consists of a sequence of alternating fluvial and deltaic sands, silts, and shales. It unconformably overlies the Swift formation. There are several prospective porosity intervals for injection from 4,800 to 5,300' TVD with sand packages ranging from 10' to 55' in thickness.

The Cretaceous Mowry formation is the overlying confining formation for the Daktoa Inyan Kara. The Mowry is estimated to be approximately 186' thick and comprised of black to gray, siliceous, fissile shales and siltstones containing bentonite layers.

The Jurassic Swift formation is the lower confining formation for the Dakota Inyan Kara. It is predominantly a transgressive-regressive, clastic, shallow marine deposit composed of dark-gray to greenish shales, and slightly calcareous, glauconitic siltstones and sandstones. The basal 170' to 200' are predominantly beds of slightly calcareous, dark-gray to greenish, waxy shales, commonly interbedded with glauconitic siltstones and sandstones with occasional carbonate units consisting of sand-sized skeletal packstones and grainstones. The upper half of the Swift is mostly shaly, glauconitic siltstones and sandstones with associated shales. The Swift formation is approximately 352' thick in this area.

1(f) Additional information on producing wells in the AOR:

There are no active oil or gas wells within the ¼-Mile AOR.

1(g) Open Hole Logs:

The Neptune 24-1 SWD will be a new drill SWD. The logging program will consist of a CBL/CCL/GR log ran from TD to Surface during the completion of the well. Any logs and test data run on the Neptune 24-1 SWD will be supplied to the MBOGC.

1(h) Description of Wellbore Construction:

Appendix IV, attached to this document is the MBOGC's Form 2 requesting drilling and completing the subject well as an SWD. Appendix V, depicts the proposed wellbore configuration for the Neptune 24-1 SWD. Perforations will be selected after logs will be run. Appendix VI, illustrates the plan for completion of the subject

well. The Dakota Group perforations will be acidized with 12,000 gallons of 15% HCL using rock salt for diversion with a maximum allowable treating pressure of 5,000 PSIG at the wellhead during stimulation.

The 13 ½" surface section will be drilled to 2,090' and then 9 5/8" casing will be set and cemented to surface. We will then drill out and drill the 8 ¾" Intermediate section to 5,297' where 7" casing will be set and cemented back to the 9 5/8" shoe depth. We will then drill out and drill 6" production liner section to TD at approximately 5,760' and we will run 4 ½" production liner set hanger and liner top assembly.

1(i) Description of Injection Fluid:

The Neptune 24-1 SWD will initially be used to inject produced water from wells producing from the Bakken formation from the same pad location. The well may in the future be tied into a pipeline system to inject produced wells from the area. If this future pipeline connection is made water from the Bakken, Red River, Madison and other producing intervals of the Williston Basin produced from well in the area may also be disposed of in the Neptune 24-1 SWD.

1(j) Names of Owners of Record:

The surface owners and mineral owners within the AOR are presented in Appendix VIII. Heritage Energy Operating, LLC has notified the current operators, surface owners and lease owners in accordance with 35.22.1410 1) notification requirements for an underground injection permit. Appendix IX is an affidavit attesting to the fact that notices have been made.

1(k) List of Appendices:

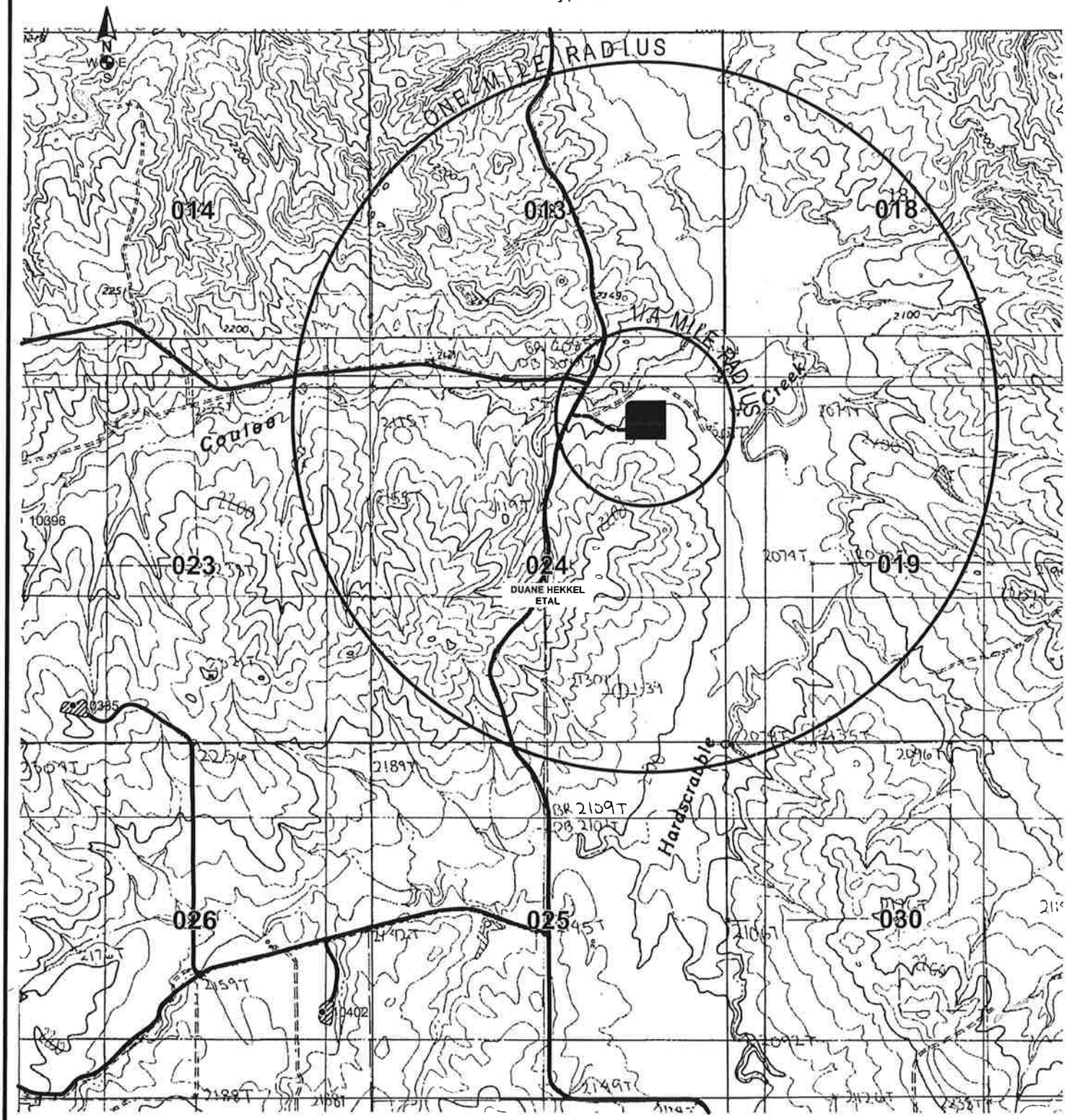
I	¼-Mile Area of Review Map
II	Plat of SWD Location
III	Representative Log
IV	Sundry Notices
V	Proposed Wellbore Schematic
VI	Proposed Completion Procedure
VII	Water Analysis – Source Waters
VIII	List of Surface Owners/Mineral Owners in ¼-Mile AOR
IX	Affidavit of Notification to Landowners
X	Example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

Appendix I

HERITAGE ENERGY, LLC

NEPTUNE 24-1 SWD
440' FNL & 1071' FEL

NE1/4 Section 24, T26N, R55E - Montana Principal Meridian
Richland County, Montana



NO GAS/OIL WELLS ARE LOCATED WITHIN ONE-MILE OF THE NEAREST PROJECTED WELL HOLE.

LEGEND

PROPOSED ACCESS - - - -
EXISTING ROAD ———

HIGHLANDS ENGINEERING
OFFICE: 701.483.2444
WWW.HIGHLANDSENG.COM

SHEET NAME:	DATE:	DRAWN BY:	SCALE:	PROJ. NO.	SHEET NO.
GAS/OIL WELL MAP	08/07/25	JSY	1"=2000'	251813	13 of 14

H:\251813\PROJECT CAD\251813 GM.DWG

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Legend

- P&A Class V
- Class V Injection
- P&A Coal Bed Methane
- Coal Bed Methane
- P&A Dry Hole
- P&A Injection, EOR
- Active Injection, EOR
- P&A Gas
- Producing Gas
- P&A Gas Storage
- Completed Gas Storage
- P&A Injection, Indian Lands
- Completed Injection, Indian Lands
- P&A Monitor/Observation
- Completed Monitor/Observation
- P&A Oil and Gas
- Oil and Gas
- P&A Oil
- Producing Oil
- P&A Injection - Disposal
- Injection - Disposal
- P&A Water Source
- Water Source
- P&A Domestic Water
- Domestic Water
- Carbon Dioxide
- Domestic Gas
- Injection & Production
- Spudded/Permit to Drill
- Expired, Not Released Oil
- Stratigraphic Test
- Unknown

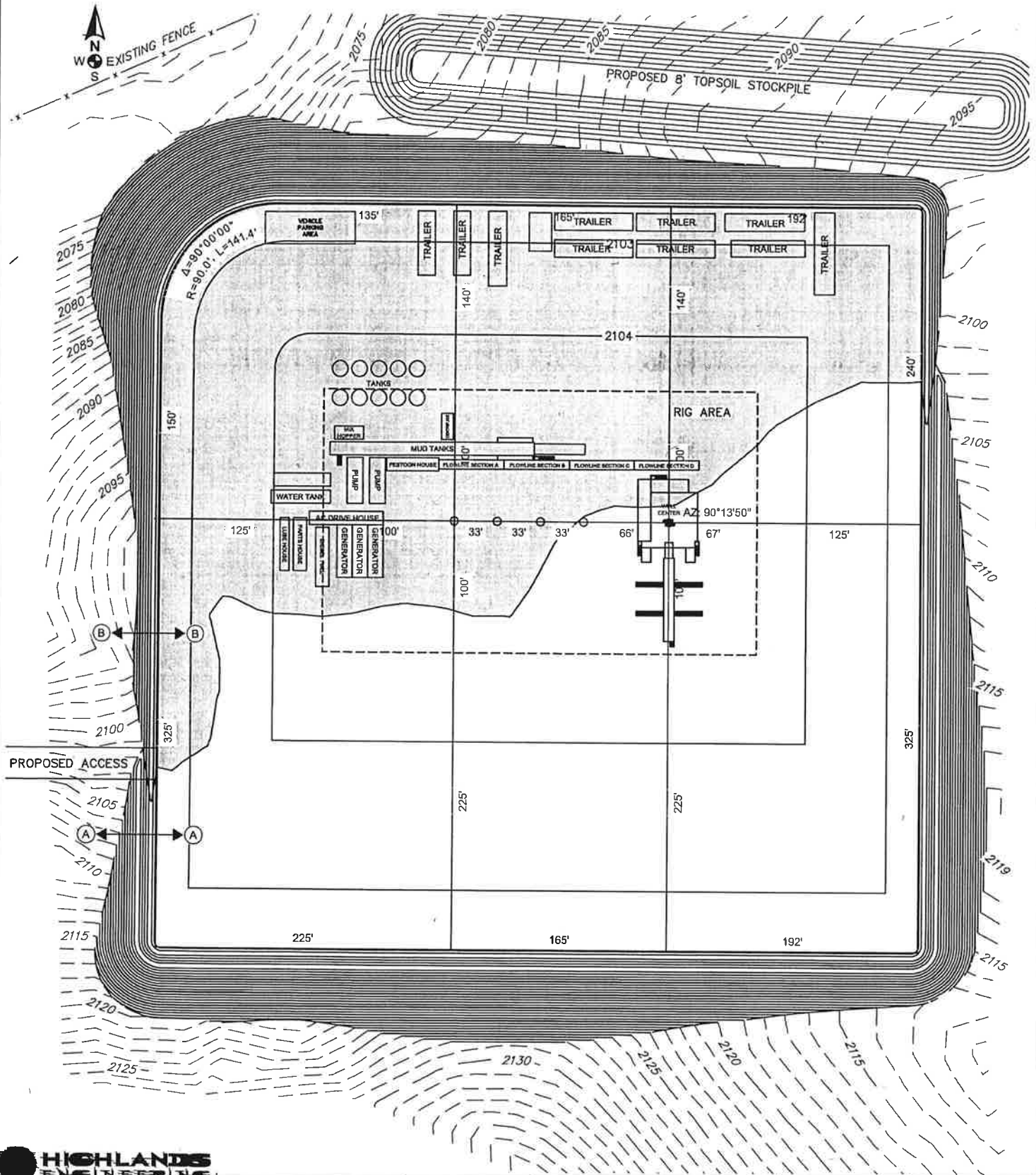
HIGHLANDS ENGINEERING
OFFICE: 701.483.2444
WWW.HIGHLANDSENG.COM

SHEET NAME:	DATE:	DRAWN BY:	SCALE:	PROJ. NO.	SHEET NO.
GIS SYMBOLS	08/07/25	JSY	N/A	251813	14 of 14

Appendix II

HERITAGE ENERGY, LLC
NEPTUNE 24-1 SWD
440' FNL & 1071' FEL

NE1/4 Section 24, T26N, R55E - Montana Principal Meridian
Richland County, Montana



HIGHLANDS ENGINEERING
OFFICE: 701.483.2444
WWW.HIGHLANDSENG.COM

SHEET NAME:	DATE:	DRAWN BY:	SCALE:	PROJ. NO.	SHEET NO.
RIG LAYOUT	08/07/25	JSY	1"=100'	251813	7 of 14

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Appendix III

Heritage Energy Operating, LLC

Representative Log

Eldridge 7-31

25-083-21261

Sec 31, T26N R56E

Horizontal Scale = 2.0

Vertical Scale = 20.0

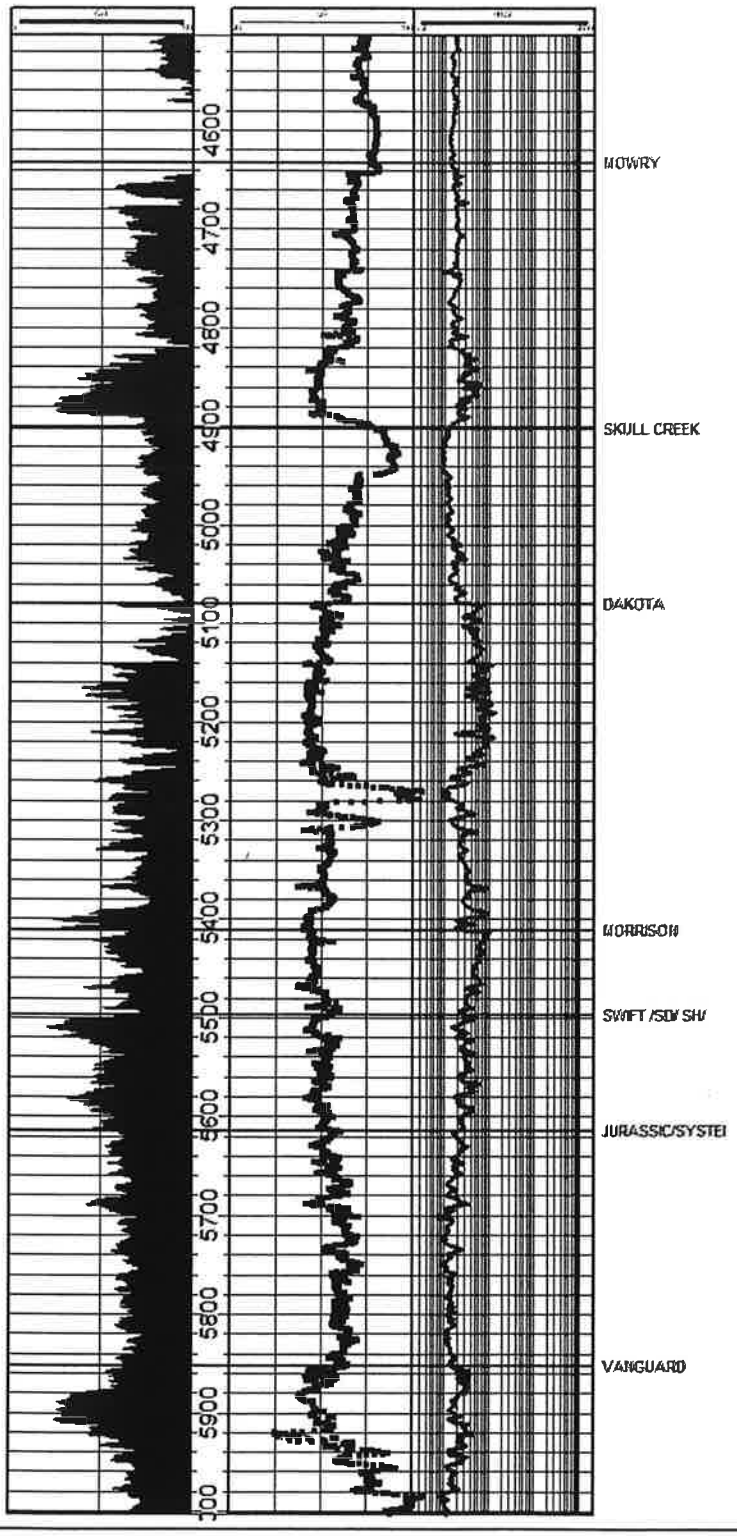
Vertical Exapperation = 0

LOG CURVES

0	_____	100	GR (GAPI)
0.02	_____	20	LLD (ohmm) LLD
20.0	_____	150	DT

9/10/2025

25083212610000
ELDRIDGE
7-31
T26N R56E S31
TEXACO INC PRD DEPRT



FORM NO. 2 R 10/09

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

RECEIVED

JAN 07 2026

MONTANA BOARD OF OIL & GAS CONSERVATION - BILLINGS

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 Heritage Energy Operating, LLC

Address 2448 E. 81st Street Suite 3600

City Tulsa State OK Zip Code 74137

Telephone 918-600-0801 Fax

Lease Name: Neptune

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

Well Number: 24-1 SWD

Location of well (1/4-1/4 section and footage measurements): NE/4 NE/4 of Section 24-T26N-R55E (440' FNL & 1071' FEL)

Unit Agreement Name:

Field Name or Wildcat: Wildcat

Township, Range, and Section: 24-T25N-R55E

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

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

County: Richland

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 a 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.

Heritage Energy Operating, LLC requests approval to drill and complete a disposal well at the referenced location for injection of Class II E&P waste. Notice has been provided to parties within the 1/4 mile area of review of the proposed location. An application for hearing on the Montana Board of Oil and Gas Conservation docket has been requested for Februrary 12, 2026.

Heritage Energy Operating, LLC requests 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:

1-2-2026 Josh C. Cornell
Date Signed (Agent)

Josh C. Cornell, Chief Executive Officer
Print Name and Title

Telephone: 918-600-0801

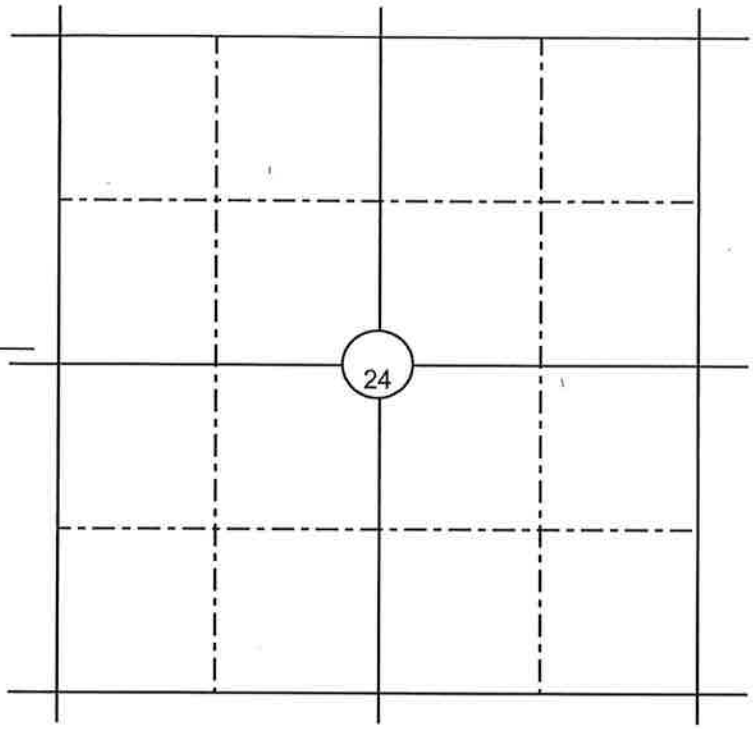
SUPPLEMENTAL INFORMATION

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.

Range 55E

Township 26N



BOARD USE ONLY	CONDITIONS OF APPROVAL

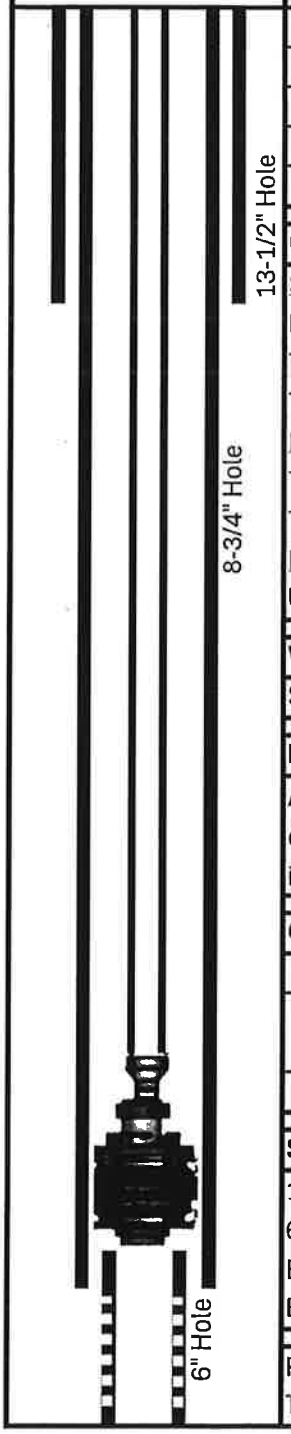
The operator must comply with the following condition(s) of approval:

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

Heritage Energy Operating, LLC
Neptune 24-1 SWD
Sec 24 T26N R55E
440' FNL & 1071' FEL
Richland County, MT

RKB: 2129'

Proposed Installation



Casing Detail

Description	OD	ID	Set Depth	Length
Conductor - 65# H-40	16	15.25	80'	80'
Surface Casing - 36# J-55 LTC	9.625	8.92	2090'	2090'
Intermediate Casing - 26# J-55 LTC	7	6.276	4924'	4924'
Liner - 11.6# P-110 BTC	4.5	4	5286'	490'

Cement Detail

Surface Casing:
Lead: 332 sx 11.5 ppg Varicem CMT, 2.4 ft3/sx
Tail: 138 sx 11.5 ppg Varicem CMT, 1.53 ft3/sx
TOC: Surface
Intermediate Casing:
Tail: 261 sx 13.0 ppg Varicem CMT,1.75 ft3/sx
TOC: 2090'
Liner:
Uncemented Open Hole Completion

Wellhead

Stack: 11" 5M

Perforations	**Perf Depth**	
Abrasive jet perforating will be utilized to create perforations in the casing and abrasively penetrate formation across the injection interval.	First Perf:	5286'
	Last Perf:	4944'

Completion	OD	ID	Set Depth	Length
4.5" 11.6# P-110 BTC	4.5"	3.875"	4796'	490'
7" x 3.5" Nickle Plated Opti-Pak Liner Hanger-Packer	7"	5"	4786'	10'
4.5" 11.6# L-80	4.5"	3.875"	13'	4773'

Stimulation:

12,000 Gal of 15% HCL
6,000#'s Rock Salt Diversion
Est. Treat Rate: 10 bpm
Est. Treat Max Pressure: 5,000 psi

PBTD @ 5286' MD, 5286' TVD	Geo Refs	Top of Dakota	4886'
TD @ 5286' MD, 5286' TVD		Top of Swift	5306'

Appendix VI: Completion Procedure
Montana Board of Oil & Gas Commission
Underground Injection Control – Permit Application

Heritage Energy Operating LLC
Neptune 24-1 SWD
Sec. 24 T26N R55E
Richland County, MT

API No: _____

COMPLETION PROCEDURE

August 20, 2025

Neptune 24-1 SWD
Richland Co. MT

WELL DATA

Total Well Depth	5306' MD, 5306' TVD
GL	2103'
RKB	26'

Casing

OD	WT	GRADE	CONN	ID	DRIFT	INTERVAL	YIELD	COLLAPSE
9-5/8"	36#	J-55	LTC	8.921	8.765	0 – 2090'	3520	2020
7"	26#	J-55	LTC	6.276	6.151	0 – 4924'	4980	4320
4-1/2"	11.6#	P-110	BTC	4.000	3.875	4786' – 5286'	10690	7580

Tubing (PROPOSED)

OD	WT	GRADE	CONN	ID	DRIFT	INTERVAL	YIELD	COLLAPSE
4-1/2"	11.6#	L-80	BTC	4	3.875	0' – 4786'	7780	6350

Objective:

A. OPERATIONAL REQUIREMENTS

1. Prior to each major operation, hold a pre-job safety/planning meeting (PJSM) with all personnel involved in the operation. Discuss the upcoming operation and safety concerns and solicit feedback from all personnel involved.
2. Keep track of daily activities on your Daily Report
3. Inspect any tanks prior to filling.
4. Physically caliper, measure, photograph and log in the Daily Report ALL tools that enter the well bore

B. COMPLETE THE WELL FOR INJECTION

1. Contact MBOGC within 24 hours of commencement.
2. Set and test workover rig anchors.
3. Move in and rig up workover rig, mud pump, mud tank, power swivel, pipe racks, catwalk, and 2-400 bbl tanks.
4. Move in and unload 5600' 2-7/8" PH6 work string on pipe racks.
    a. Visually inspect before use.

Neptune 24-1 SWD
Richland Co. MT

5. Install a 7-1/16" 5000 psi BOP with 2-7/8" pipe rams/blind rams and a 5000 psi Washington Head.
6. Pick up and go in hole with a used 3 ¾" rock bit with 2-7/8" work string.
7. Trip in hole to Float Collar at est. depth of 5,286'.
8. Circulate hole with 10# brine.
9. TOOH. LD first 400'. Stand back rest of string.
10. Rig up Wireline and Run CBL to verify cement above the Dakota.
11. RU Coil Tubing to Perforate the Dakota (all pers = 1 spf, 72 degree phasing). Pump proppant to jet cut perforations in 4.5" liner. Determine shot depts based off of CBL.
12. Trip in hole with 7" packer on 2-7/8" work string and set packer at 4,786' to acidize the perfs.
13. Acidize perfs with:
    a. 12,000 gal 15% HCL containing mud cleanout surfactants and 1 ppg rock salt pumped per attached procedure. Ramp treatment pressure up to 10 BPM. Do not exceed tubular burst strength during treatment.
    b. Follow acid with 400 bbl fresh water at 10 BPM. Displace fresh water with tbg volume of salt water.
    c. Record ISIP, 5 minute, and 10 minute shut-in pressures. Pump test injection zone at 2 – 20 BPM. Record injection pressures during injectivity test.
14. Release packer and trip out of hole with 2-7/8" work string. Lay down work string and packer.
15. Trip in hole with 7.00" Arrowset 1-X Nickel coated packer and 4-1/2" tubing. Set packer at 4,786' and displace annulus with 10 ppg brine treated with packer fluid chemical.
16. ND BOP/NU injection wellhead. Test casing-tubing annulus to 1,000 psi with MBOGC inspector as witness. Install permanent pressure gauge on casing-tubing annulus to monitor pressure.
17. Rig down and move out workover rig.

4102 2nd Ave. West

ASTRO-CHEM LAB, INC.

Williston, North Dakota 58802-0972
P.O Box 972

Phone: (701) 572-7355

Appendix VII

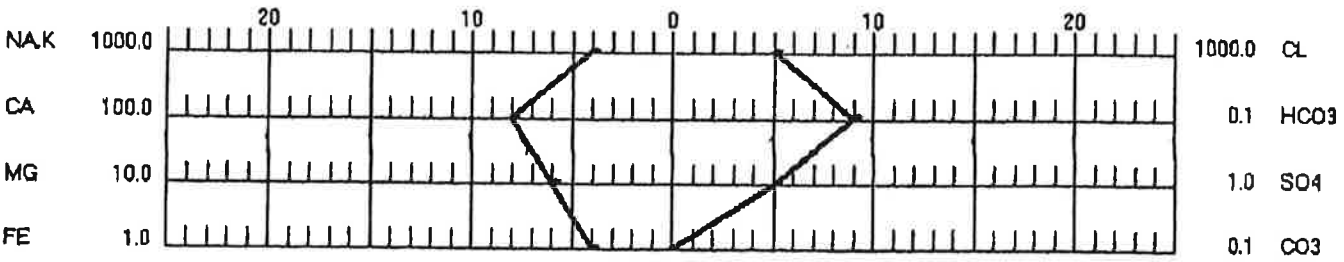
WATER ANALYSIS REPORT

Sample Number: W-17-2473
Date of Analysis: 06/06/2017
Company: Kraken Operating, LLC.
City: Houston
State: TX
Well Number: Shayla 34-33 #1H
Date Received: 05/25/2017
DST Number:
Sample Source: Flowback Treater
Location: SESE Section: 27 Township: 27N Range: 57E County: Roosevelt
Formation: MIDDLE BAKKEN
Depth:
Distribution: Distribution List

Resistivity @ 77 °F	0.043	Ohm-Meters	pH	5.49
Specific Gravity @ 77 °F	1.185		H2S	Negative
Total Dissolved Solids (Calculated)	285229	mg/L	(240700	ppm)
Sodium Chloride (Calculated)	280263	mg/L	(236509	ppm)

CATION	MEQ/L	mg/L	ANION	MEQ/L	mg/L
CALCIUM	840.0	16833	CHLORIDE	4794.0	169962
MAGNESIUM	60.0	729	CARBONATE	0.0	0
SODIUM	3884.3	89300	BICARBONATE	0.9	55
IRON	3.8	71.0	SULFATE	5.3	253
CHROMIUM	0.1	0.7	NITRATE	0.0	0
BARIUM	0.4	28.6			
POTASSIUM	175.2	6850			
STRONTIUM	25.6	1120.0			
ZINC	0.9	28.1			

WATER ANALYSIS PATTERN



Remarks: Sampled 5-24-17
MTM #097524

Analyzed By: C. Jungels

Appendix VII

ASTRO-CHEM LAB, INC.

4102 2nd Ave. W.
Williston, North Dakota 58802-0972
Phone: (701) 572-7355
P.O. Box 972

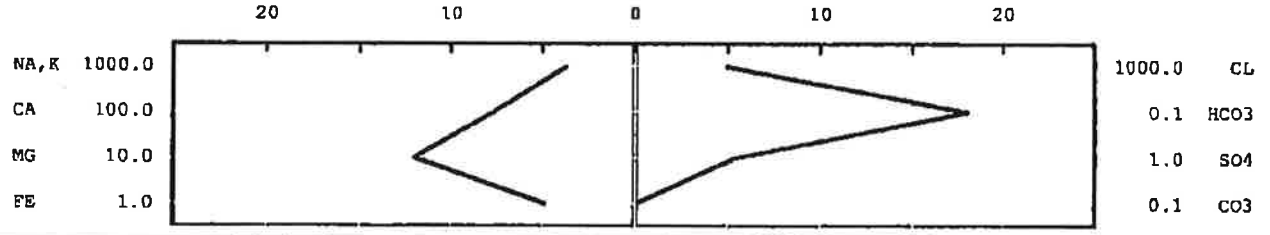
WATER ANALYSIS REPORT

Sample Number: 20-00976 Date of Analysis: 3/11/2020
Company: Kraken Operating, LLC.
City: Houston State: TX
Well Number: Taylor 14-23-2H
Sample Source: Test Separator
Date Received: 3/10/2020 Date Sampled: 3/8/2020
Formation: Depth:
Location: Section: Twp: Rng: County:
Distribution: Distribution List

Resistivity @ 77 °F	0.042 Ohm-Meters		pH	5.90
Specific Gravity @ 77 °F	1.190		H_2S	Negative
Total Dissolved Solids (Calculated)	280474 mg/L	235693 ppm		
Sodium Chloride (Calculated)	285209 mg/L	239672 ppm		

CATION	MEQ/L	mg/L	ANION	MEQ/L	mg/L
CALCIUM	760.0	15230	CHLORIDE	4878.6	172961
MAGNESIUM	120.0	1458	CARBONATE	0.0	0
SODIUM	3653.8	84000	BICARBONATE	1.8	110
IRON	4.8	89.7	SULFATE	5.4	260
CHROMIUM	0.1	0.9	NITRATE	0.0	0
BARIUM	0.6	44.6			
POTASSIUM	143.5	5610			
STRONTIUM	15.7	690.0			
ZINC	0.6	20.4			

WATER ANALYSIS PATTERN



Remarks: Sampled by Ben Borg

Analyzed By: C. Jungels

Underground Injection Control (UIC) Permit
Neptune 24-1 SWD

List of Surface Ownership:

Township 26 North, Range 55 East, M.P.M
Section 13: E2E2, S2SW4, SW4SE4
Section 24: E2E2, NW4SE4, NW4NE4, N2NW4

Barbee Hekkel, Duane Hekkel and Tammy Olson, as JTWROS 4958 Road 1029 Froid, MT 59226 -027 (2005)
Barbee Hekkel, Duane Hekkel and Tammy Olson, as JTWROS, Contract Purchasers from Sonja Smart 916 34th Street Great Falls, MT 59401 (2005)
Pennie Muth 32492 County Road 143 Brockton, MT 59213 (2005)

List of Working Interest & Mineral Ownership:

Township 26 North, Range 55 East, M.P.M
Section 13: E2E2, S2SW4, SW4SE4
Section 24: E2E2, NW4SE4, NW4NE4, N2NW4

1.	Barbee Hekkel, Duane Hekkel and Tammy Olson, as JTWROS 4958 Road 1029 Froid, MT 59226 -027 (2005)
2.	Sonja Smart 916 34th Street Great Falls, MT 59401 (2005)
3.	Pennie Muth f/k/a **Pennie Parsons** 32492 County Road 143 Brockton, MT 59213 (2005)
4.	Mary Kathryn Zimmer a/k/a Mary Zimmer 708 West Wren Lane Glendive, MT 59330 (2005)
5.	Gregory C. MacDonald a/k/a Greg MacDonald 2935 Palm Dr. Billings, MT 59102 (2005)
6.	Evelyn M. Oman 19700 Edge Cliff Blvd. Cleveland, OH (1968)
7.	Jennifer Kautz f/k/a Jennifer Schroeder 3720 Ben Hogan Lane Billings, MT 59106 (2023)
8.	Michael John Conroy a/k/a Mike Conroy P.O. Box 58 Broadview, MT 59015 (2005)

9.	Helen Carol Swoboda a/k/a Carol Swoboda 2106 No. 2nd Ave. Hillsboro, OR 97124 (2005)
10.	Grace Amelia Dawson a/k/a Grace A. Dawson 4993 Krystal Lane Conway, SC 29527
11.	Sheryl A. Spalinger 2460 Gold Rush Helena, MT 59601 (2023)
12.	Douglas E. Sexe 3105 Kingwood Court Great Falls, MT 59404 (2023)
13.	Dennis J. Sexe 1112 Harrison Street Great Falls, MT 59404 (2023)
14.	James Donald Conroy a/k/a James Conroy a/k/a Jim Conroy 613 32nd Avenue North East Great Falls, MT 59404 (2005)
15.	Kelli I. MacDonald 170 Eden Road Great Falls, MT 59405 (2023)
16.	Kathleen Matson a/k/a Kathy Matson f/k/a Kathleen Conroy (2005) 2521 Gold Rush Helena, MT 59601
17.	Gayle Ely, Personal Representative of the Estate of Kathryn A. MacDonald 11280 SE 121st Court Clackamas, OR 97015 (1998)
18.	Gayle MacDonald Ely a/k/a Gayle M. Ely f/k/a Gayle MacDonald 12042 SE Sunnyside Road #508 Clackamas, OR 97015 (2014)
19.	Sister Irene Marie (Marilyn Conroy) St. Daniel Convent 5300 South Natoma Avenue Chicago, IL (1968)
20.	Marilyn Ann Hogan a/k/a Marilyn Hogan 6167 Shady Mill Road Houston, TX 77040 (1993)
21.	Hedberg Family Limited Partnership, a Texas limited partnership P.O. Box 470337 Fort Worth TX 76147 (1997)
22.	Guthrie Hard Hat G, LP, a Texas limited partnership 611South Main Big Spring, TX 79720 (2014)
23.	Doris Pike Guthrie Montana Trust for Mary Lynne Guthrie Perry(now known as Mary Lynne Guthrie Thompson) 611South Main Big Spring, TX 79720 (2015)

24.	Mary Lynne Guthrie Perry Montana Trust for Brian Howard Perry 611South Main Big Spring, TX 79720 (2015)
25.	Guthrie Minerals LP, a Texas limited partnership 611South Main Big Spring, TX 79720 (2015)
26.	Heritage Energy Operating, LLC 2448 East 81st Street, Suite 3600 Tulsa, OK 74137

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

IN THE MATTER OF THE APPLICATION OF HERITAGE ENERGY OPERATING, LLC FOR THE HEARING OF ITS REQUEST FOR A UIC PERMIT FOR THE NEPTUNE 24-1 SWD WELL, 440' FNL AND 1,071' FEL OF SECTION 24, TOWNSHIP 26 NORTH, RANGE 55 EAST, M.P.M., RICHLAND COUNTY, MONTANA, FOR THE PURPOSE OFWATER INJECTION	AFFIDAVIT OF NOTIFICATION

DATE: November 11, 2025

State of Montana
County of Richland

Joshua C. Cornell, being first duly sworn, deposes and says:

That Notice advising of Heritage Energy Operating, LLC's application for UIC permit in the captioned matter, in the form attached as Exhibit "A", was mailed to each current operator, surface owner and leasehold owner within the area of review at the addresses shown in the exhibit attached to the Notice, by mailing a true copy thereof of this 11th day of November, 2025, postage prepaid, first class mail. This affidavit is given as evidence of compliance with A.R.M. 36.22.1410.

Joshua C. Cornell

Subscribed and sworn to before me this 5th day of January, 2026.

Notary Public for the State of Oklahoma
Residing at Tulsa County
My Commission Expires 6-22-27

ONALEE HALES
Notary Public, State of Oklahoma
Commission # 15005858
My Commission Expires 6-22-27

{SEAL}

Appendix X

HERITAGE ENERGY

NOTICE

September 9, 2025

To: Surface and Mineral Owners

From: Heritage Energy Operating, LLC
2448 E. 81st Street, Suite 3600
Tulsa, Oklahoma 74137

RE: Proposed Private Saltwater Disposal Well

Location of proposed Disposal Well and Facility (Neptune 24-1)
NENE of Section 24, Township 26 North, Range 55 East, Richland County, MT

Please be advised that Heritage Energy Operating, LLC (Heritage) has applied to the Montana Board of Oil and Gas Conservation (MBOGC) to drill a saltwater disposal well and construct an associated facility at the above desired location. Heritage will be seeking a final approval from the MBOGC on February 12, 2026 at a hearing in Billings, MT at the MBOGC Hearing Room at 2535 St. John's Avenue, Billings, Montana 59102, beginning at 8:00 am.

Pursuant to the requirements of project application and regulations of the MBOGC, you are hearby notified of this project.

Respectfully,

Joshua C. Cornell
Heritage Energy Operating, LLC
918-600-0801

Appendix XI

Public Notice

BEFORE THE BOARD OF OIL AND GAS CONSERVATION OF THE STATE OF MONTANA NOTICE OF INTENTION TO APPLY FOR A CLASS II INJECTION WELL PERMIT

In the matter of the application of Heritage Energy Operating, LLC.

For a Class II injection well permit:

1. Name and Address of Applicant: Heritage Energy Operating, LLC at 2448 E. 81st Street, Suite 3600, Tulsa, Oklahoma 74137

2. Well or Project Name, County, and Location: Neptune 24-1 SWD, 440' FNL, 1,071' FEL, NENE, Section 24, Township 26 North, Range 55 East in Richland County, MT.

3. Source of Fluids injected: Produced Bakken Water from nearby wells.

4. Propose injecting produced water into the Dakota/Inyan Kara at a depth of approximately 4,800 to 5,300 ft.

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 Rule 36.22.1409, Administrative Rules of Montana, the Montana Board of Oil and Gas Conservation will hold a public hearing upon the application of Heritage Energy 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 and Gas Hearing Room at 2535 St. Johns Ave., Billings, Montana beginning at 9:00 AM on Thursday, February 12, 2026.

MNAXLP SHM000208 Published

December 31, 2025

HERITAGE ENERGY

November 17, 2025

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

RECEIVED
JAN 07 2026
MONTANA BOARD OF OIL &
GAS CONSERVATION - BILLINGS

Attn: Mr. John Gizicki
UIC Program Director

Re: Request for Aquifer Exemption
Neptune 24-1 SWD in NENE of Sec. 24 T26N R55E, Richland County, MT

Dear Mr. Gizicki

Please accept the Aquifer Exemption request to supplement the Heritage Energy Operating, LLC Neptune 24-1 SWD UIC Application for the February 12, 2026, Montana Board of Oil and Gas hearing.

The Neptune 24-1 SWD is a new drill targeted for injection into the Dakota/Inyan Kara. There is water data available on the Dakota/Inyan Kara and the assumption is that an aquifer exemption will be required unless water quality data from the Neptune 24-1 SWD indicates water not acceptable as USDW. An aquifer exemption is required if the proposed injection zone contains water that is less than 10,000 ppm of total dissolved solids (TDS), and therefore defined as an Underground Source of Drinking Water (USDW).

There is swab analysis from the Dakota/Inyan Kara formation outside the area of review that indicates the TDS is less than 10,000 ppm. The Inyan Kara notes as Lower Dakota in the water analysis provided swabbed higher than 10,000 ppm TDS after 11 swab runs. The TDS of the Dakota and Inyan Kara will be confirmed with swab results upon completion. In addition to swab results, cost analysis data indicates that a Dakota/Inyan Kara freshwater supply well in this area is unlikely. The basis for the exemption is that the Dakota/Inyan Kara does not currently serve as a source of drinking water because the Dakota/Inyan Kara is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical.

Based on data from numerous published sources, two aquifers in the area meet the criteria of a USDW. These are shallow alluvium associated with larger streams and the Yellowstone River and the Upper Cretaceous Fox Hills Hell Creek sandstone aquifer. Neither of these would be affected by injection at the proposed location. There are no water wells producing from any zones located within the one quarter mile area of review. There are not any water wells producing from any zones located within an expanded ½ mile view around the injection well. There are no water supply wells penetrating the Dakota formation within ½ mile area surrounding the proposed location for the Neptune 24-1 SWD which is specifically requested information per 36.22.1418(1)(a).

To protect freshwater zones, drilling practices include drilling through these possible freshwater zones and setting surface casing. Surface casing is cemented to surface. There are only gamma ray logs that run through the Fox Hills formation due to this formation being isolated behind casing and cement. To supplement information on the depth of possible freshwater zones, the Applicant references Montana Bureau of Mines and Geology reports on groundwater throughout the area. Underground Sources of Drinking Water (USDW) having TDS of less than 1200 mg/liter are available to the base of the Fox Hills at a depth of 1000 to 1200 ft. Per the Montana Bureau of Mines and Geology Montana Ground Water Assessment Atlas No. 1 from 2000, estimates the Base of the Fox Hills at approximately 1250 to 1450 ft.

The Dakota/Inyan Kara are not used as USDW in this area due to the existence of shallower freshwater aquifers. As a comparison to and based on recent drilling performance from A-1 Drilling in Laurel, MT, the cost to drill a 1,500 ft water well to the Fox Hills including the pump is approximately $472,000. A water well company would need to contract a drilling rig company to drill a Dakota/Inyan Kara well due to the depth limitations of water well drilling rigs. Based on Heritage data, the cost to drill a well a Dakota/Inyan Kara well to 6,000 ft and complete the zone would be approximately $2,071,000. Therefore, the applicant estimates the cost of drilling a well into the Dakota/Inyan Kara to be over three times the cost of drilling a well to the Fox Hills. Additionally, the cost of treating the Dakota/Inyan Kara waters would greatly exceed the cost of treating the Fox Hills Water. See Exhibit 7A.

1) Descriptive Data – Plat Map showing boundaries of the exempted aquifer. The Environmental Protection Agency (EPA), in UIC guidance 34, defined the minimum data set needed for aquifer exemptions; these will include at least all oil and gas boreholes within the area, all public and private water wells within the area and at least ¼ mile beyond the boundary any existing wellhead protection areas, and the locations of all relevant water samples.

    - There are no private water wells located within the ½ mile boundary around the proposed injection well.

- There are not any water samples available within the ½ mile radius. The water sample for the Dakota/Inyan Kara is shown in Exhibit 4A.
- There are not any Dakota/Inyan kara oil producing wells in this area as shown in Exhibit 1A producing wells and formations.
- See Exhibit 2A for a map of water wells and producing wells.

2) Narrative description of the proposed exempted aquifer listing formation name, approximate depth or elevation, confining zone, as well as geologic definition of the exempted area. Include adequate wireline logs to demonstrate vertical confinement from sources of drinking water.

The Neptune 24-1 SWD is to be completed into the Dakota/Inyan Kara formations. See Exhibit 3A: Cross Section of Dakota/Inyan Kara.

Water quality information for the proposed disposal zones in the immediate area of the Neptune 24-1 SWD is not available. However, a water sample from the Dakota in RR Lonetree Edna 1-13 SWD located 15.6 miles southeast of the proposed disposal site had total dissolved solids of between 5,173 to 10,352 mg/l, and water from the Dakota and Inyan Kara in the Neptune 24-1 SWD is expected to be similar. The samples from the Lone Tree Edna 1-13 SWD (aka RR Lonetree Edna 1-13 SWD in the MOGC database) were acquired by swab testing the interval and measuring the TDS for the interval. The upper Dakota water lies between 3,000 ppm and 10,000 ppm cutoff and most likely will require an aquifer exemption.

Proposed injection zones for the Neptune 24-1 SWD are as follows:

Formation	Lithology	Top (ft)	Bottom (ft)	Net Pay (ft)	Pressure (psi)	Porosity
Dakota/Inyan Kara	Sandstone	4,800	5,300	186	2,125	21%

The depth, net pay and porosity is based on sonic and density log estimates in the following wellbores: BLM 1-4 (3.5 miles NE), Thompson F&J 41-35 (2.2 miles SSW), and Georges 1-4 (5 miles SW) (. The porosity was derived from either a density curve calculated on a limestone matrix, or a sonic log curve calculated using consolidated sand stone with pure water matrix. Formation pressure was estimated using a water gradient of 0.435 psi/ft.

The confining formation for the proposed injection zones are the Mowry for the Dakota.

Formation	Lithology	Top (ft)	Bottom (ft)	Height(ft)
Mowry	Shale	4,439	4,625	186
Swift	Shale	5,306	5,758	352

The Cretaceous Mowry formation is the overlying confining formation for the Dakota. The Mowry is estimated to be approximately 186' thick and comprised of black to gray, siliceous, fissile shales and siltstones containing bentonite layers.

The Jurassic Swift formation is the lower confining formation for the Dakota/Inyan Kara. It is predominantly a transgressive-regressive, clastic, shallow marine deposit composed of dark-gray to greenish shales, and slightly calcareous, glauconitic siltstones and sandstones. The basal 150' to 200' are predominantly beds of slightly calcareous, dark-gray to greenish, waxy shales, commonly interbedded with glauconitic siltstones and sandstones with occasional carbonate units consisting of sand-sized skeletal packstones and grainstones. The upper half of the Swift is mostly shaly, glauconitic siltstones and sandstones with associated shales. The Swift formation is approximately 352' thick in this area.

The actual fracture gradients for these confining zones are unknown, but fracture gradients for the confining shale layers are known to be higher than those for the underlying sandstone injection zone.

Considering the vertical distance to any USDW and the maximum feasible injection rate that could occur, the likelihood of a fracture extending from the proposed disposal zones to any USDW under any reasonable disposal conditions is considered low.

3) Thickness, area, and average porosity of the reservoir to be exempted. If the proposed UIC well within the exempted area is an SWD, calculate the volume of connate water that will be displaced by the injectate using the following formula (this pore figure is made part of the MBOGC permit for the included SWD well. For example, if the pore volume calculation shows the exempted aquifer to contain 5.0 million barrels withiin the exempted area, the UIC permit will terminate when the cumulative injected volume reaches 5.0 million barrels of saltwater)

Dakota/Inyan Kara Calculations

Pore Volume (in barrels) = $(p \times r^2 \times h \times f)/5.63$

Where:

r = radius of the exempted area, in feet (usually 1320')

h = average thickness, in feet, of the proposed exempted aquifer

f = average porosity, in decimal, of the proposed exempted aquifer

Dakota/Inyan Kara: $(3.14)(1320)^2(186)(0.21)/5.63 = 3.79 \times 10^7$

Minimum Water Injection Rate	0 BWPD
Average Water Injection Rate	2,000 BWPD
Maximum Water Injection Rate	10,000 BWPD
Radius of Emplaced Fluid	
Receive Net Thickness	186 FT
Injection Period (15 years)	5,475 DAYS
Injection Rate	58 GPM
Injection Rate	2,000 BWPD
Injection Rate	11,229 FT^3/DAY
Porosity	21%
Radius - Emplaced Fluid	709 FT
Radius - Emplaced Fluid	0.13 MILES
r=(Q*time*5.63/((pi)*h*porosity))^0.5	

4) Water Quality analysis of the aquifer for exemption. How was water quality determined?

   - Water sample from a well 15.6 miles to the southeast of Neptune 24-1 SWD. See Exhibit 4A for the swab results of the water samples from Lone Tree Edna 1-13 SWD.

In addition to the technical data, the affidavit of notification to all concerned parties is attached as Exhibit 8A. Please contact me if there are any questions regarding this submission.

Sincerely,

William D. Diggs
Chief Operating Officer
Heritage Energy Operating, LLC
918-600-0801
billd@heritageenergyllc.com

List of All Exhibits

Exhibit 1A	Map of General Area with Area of Review (AOR)
Exhibit 2A	Map of freshwater wells with Area of Review (AOR)
Exhibit 3A	Map of gas/oil wells with Area of Review (AOR)
Exhibit 4A	Geologic Cross Section of the Dakota/Inyan Kara
Exhibit 5A	Water Analysis of Injection Intervals
Exhibit 6A	Estimated cost of drilling Dakota USDW
Exhibit 7A	Estimated cost of drilling Fox Hills USDW
Exhibit 8A	Planned Wellbore Diagram
Exhibit 9A	Affidavit of Notification to Surface and Mineral Owners

Exhibit 1A

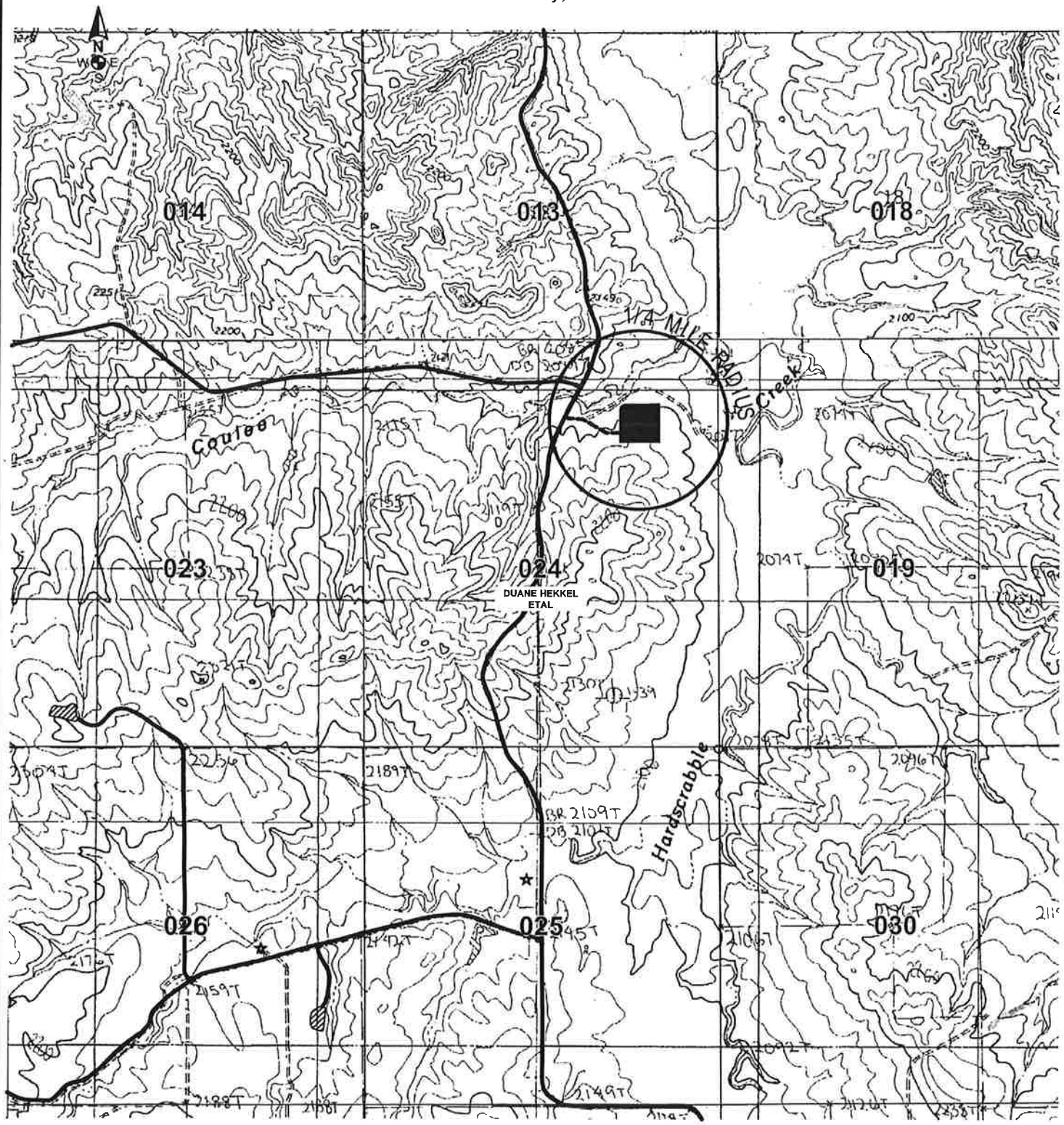
HERITAGE ENERGY, LLC

NEPTUNE 24-1 SWD

440' FNL & 1071' FEL

NE1/4 Section 24, T26N, R55E - Montana Principal Meridian

Richland County, Montana



NO DWELLINGS ARE LOCATED WITHIN 1/4-MILE
OF THE NEAREST PROJECTED WELL HOLE.

LEGEND

PROPOSED ACCESS ----------

EXISTING ROAD ——————

EXISTING DWELLING ★

HIGHLANDS ENGINEERING
OFFICE: 701.483.2444
WWW.HIGHLANDSENG.COM

SHEET NAME:	DATE:	DRAWN BY:	SCALE:	PROJ. NO.	SHEET NO.
DWELLING MAP	08/07/25	JSY	1"=2000'	251813	11 of 14

H:\251813\PROJECT CAD\251813 QM.DWG

LAST SAVED: 08/07/2025 1:25 PM BY JOHN.YORK

Exhibit 2A

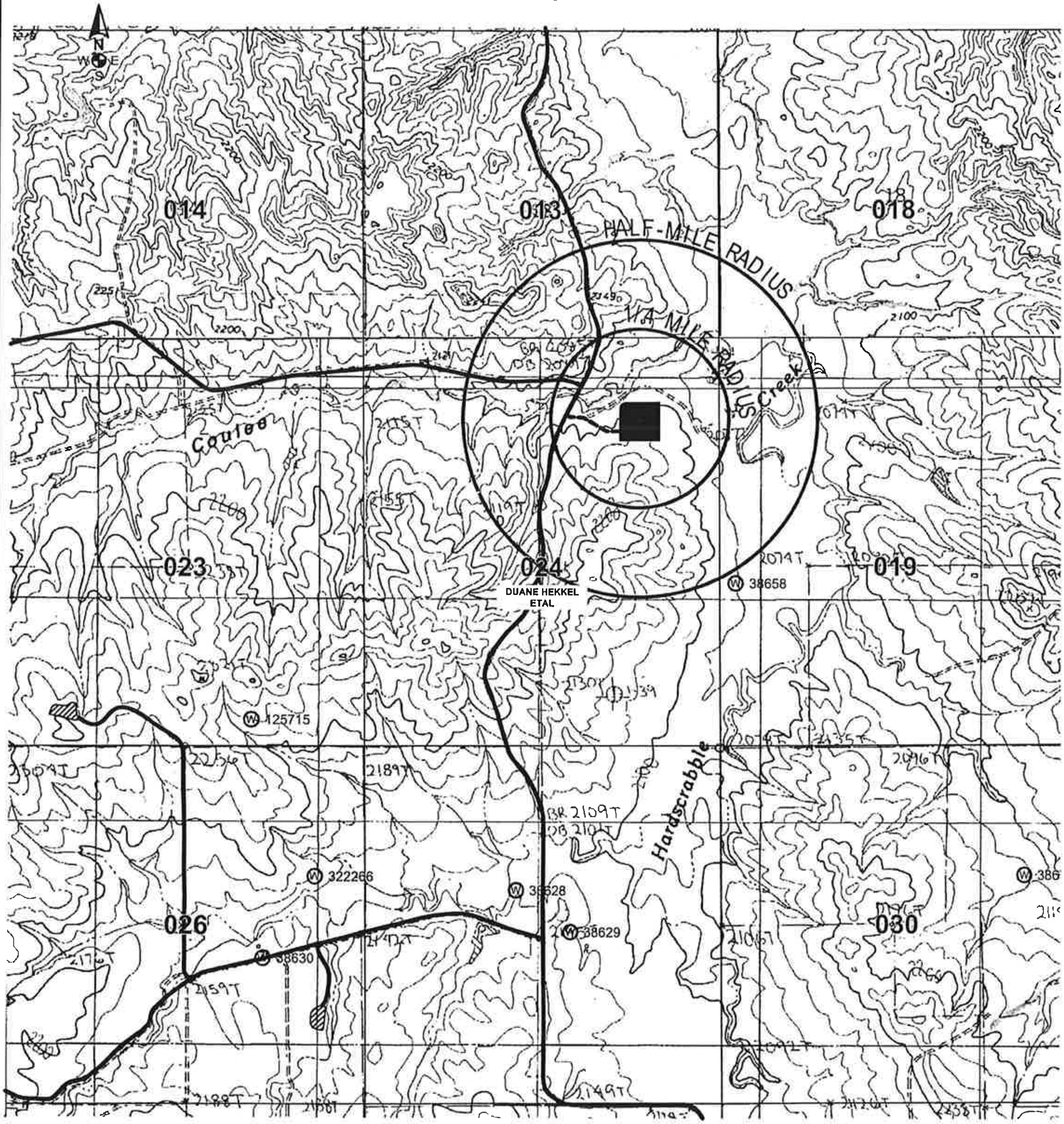
HERITAGE ENERGY, LLC

NEPTUNE 24-1 SWD

440' FNL & 1071' FEL

NE1/4 Section 24, T26N, R55E - Montana Principal Meridian

Richland County, Montana



NO WATER WELLS ARE LOCATED WITHIN 1/2-MILE OF THE NEAREST PROJECTED WELL HOLE.

LEGEND

PROPOSED ACCESS	dashed line
EXISTING ROAD	solid line
WATER WELL	(W)

HIGHLANDS ENGINEERING

OFFICE: 701.483.2444

WWW.HIGHLANDSENG.COM

SHEET NAME:	DATE:	DRAWN BY:	SCALE:	PROJ. NO.	SHEET NO.
WATER WELL MAP	08/07/25	JSY	1"=2000'	251813	12 of 14

H:\251813\PROJECT CAD\251813 QM.DWG

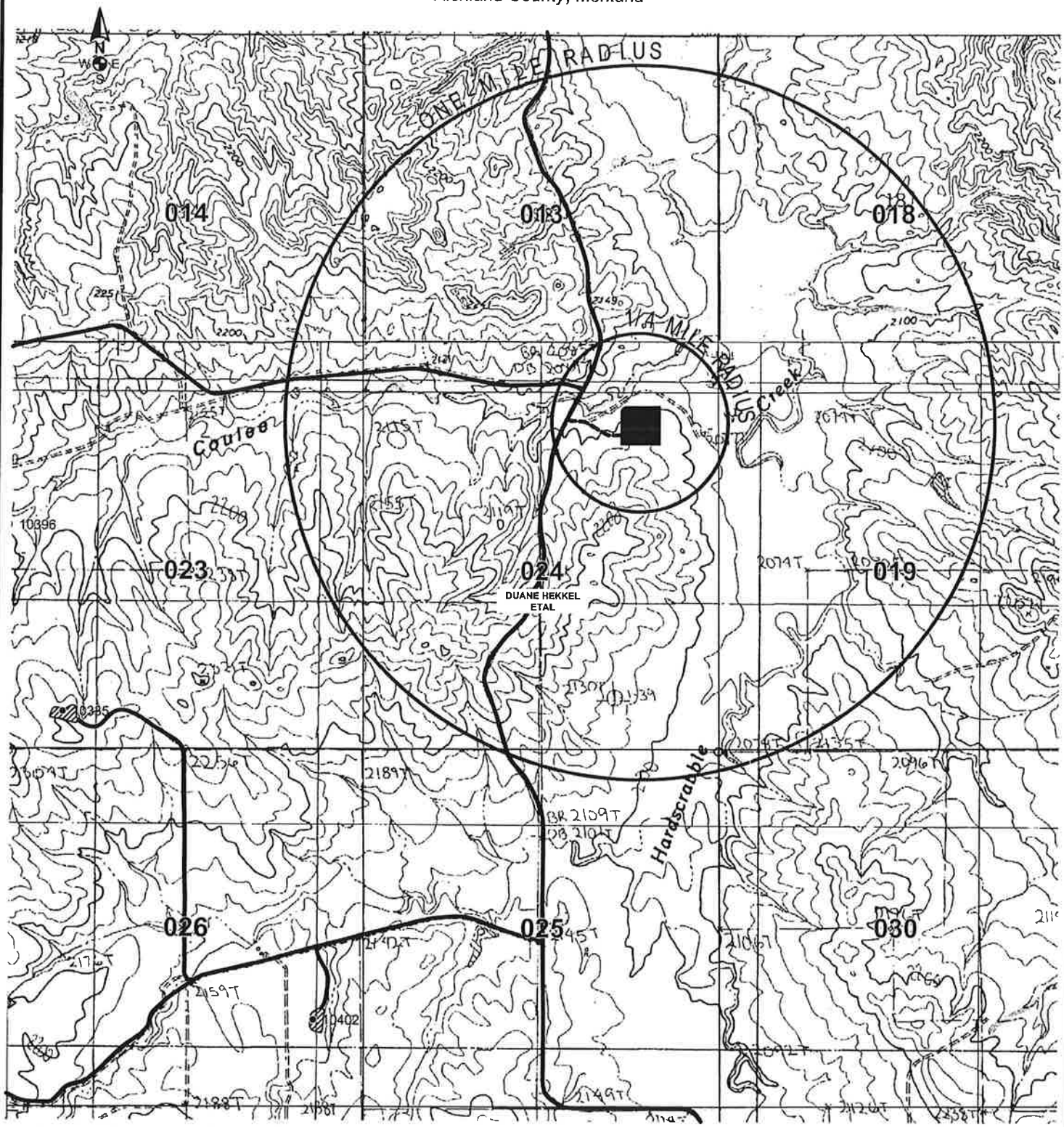
LAST SAVED: 08/07/2025 1:25 PM BY JOHN.YORK

Exhibit 3A

HERITAGE ENERGY, LLC

NEPTUNE 24-1 SWD
440' FNL & 1071' FEL

NE1/4 Section 24, T26N, R55E - Montana Principal Meridian
Richland County, Montana



NO GAS/OIL WELLS ARE LOCATED WITHIN ONE-MILE OF THE NEAREST PROJECTED WELL HOLE.

LEGEND

PROPOSED ACCESS
EXISTING ROAD

HIGHLANDS ENGINEERING
OFFICE: 701.483.2444
WWW.HIGHLANDSENG.COM

SHEET NAME:	DATE:	DRAWN BY:	SCALE:	PROJ. NO.	SHEET NO.
GAS/OIL WELL MAP	08/07/25	JSY	1"=2000'	251813	13 of 14

H:\251813\PROJECT CAD\251813 GM.DWG

LAST SAVED: 08/07/2025 1:25 PM BY JOHN.YORK

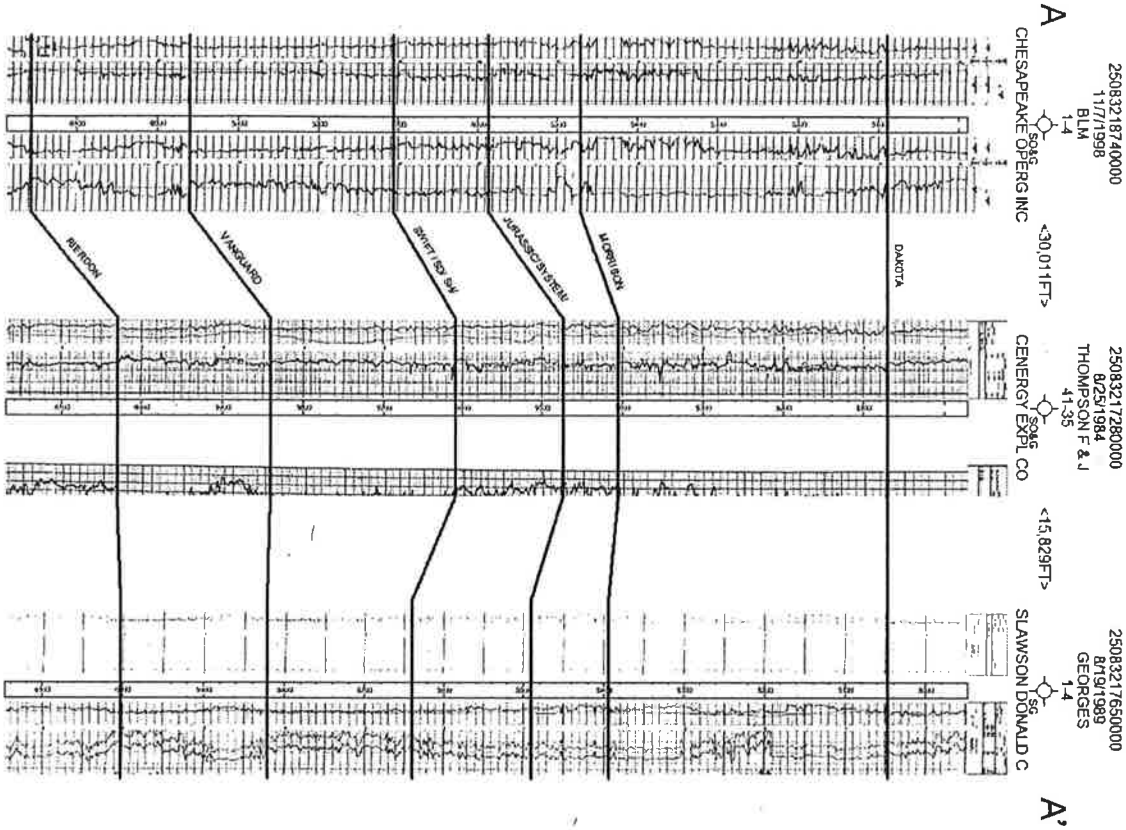
Legend

- P&A Class V
- Class V Injection
- P&A Coal Bed Methane
- Coal Bed Methane
- P&A Dry Hole
- P&A Injection, EOR
- Active Injection, EOR
- P&A Gas
- Producing Gas
- P&A Gas Storage
- Completed Gas Storage
- P&A Injection, Indian Lands
- Completed Injection, Indian Lands
- P&A Monitor/Observation
- Completed Monitor/Observation
- P&A Oil and Gas
- Oil and Gas
- P&A Oil
- Producing Oil
- P&A Injection - Disposal
- Injection - Disposal
- P&A Water Source
- Water Source
- P&A Domestic Water
- Domestic Water
- Carbon Dioxide
- Domestic Gas
- Injection & Production
- Spudded/Permit to Drill
- Expired, Not Released Oil
- Stratigraphic Test
- Unknown

HIGHLANDS ENGINEERING
OFFICE: 701.483.2444
WWW.HIGHLANDSENG.COM

SHEET NAME:	DATE:	DRAWN BY:	SCALE:	PROJ. NO.	SHEET NO.
GIS SYMBOLS	08/07/25	JSY	N/A	251813	14 of 14

Exhibit 4A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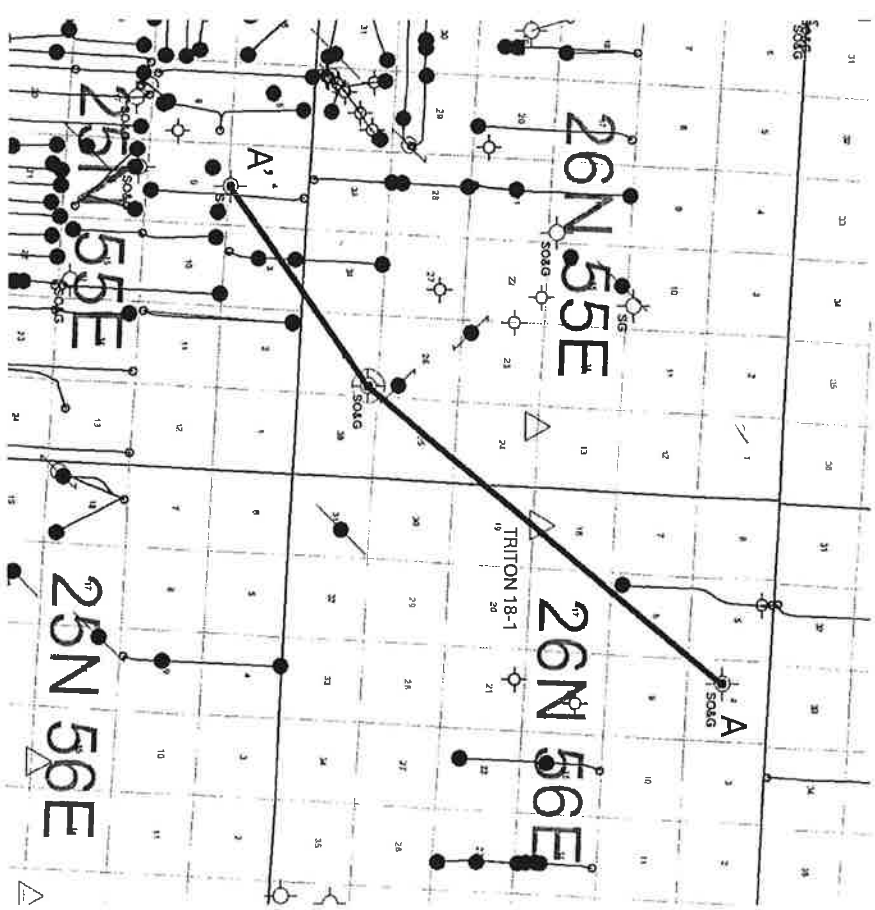

26N 55E
25N 55E
26N 56E
25N 56E
TRITON 18-1
A
A'
SO&G
SG

Exhibit 5A

SAITHE ANALYTICAL LABORATORY, INC.

501 W. 2ND STREET
P.O.BOX 1527
WILLISTON, ND. 58801
701-572-3633

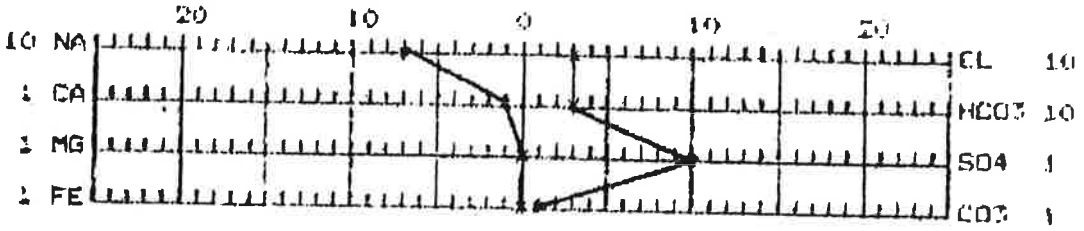
WATER ANALYSIS REPORT

OPERATOR:	ENERPLUS L.P.	DATE:	4/8/09
WELL NO.	LONE TREE EDNA 1-13	LAB NO.:	W-09-1703
FIELD:	not listed	FORMATION:	Upper Dakota
COUNTY:	Richland	INTERVAL:	3588-3608
STATE:	MT	DST #:	
LOC:	not listed	SAMPLE	RUN #9-SAMPLE 65 BBLS OUT

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM	1710.0	74.4	CHLORIDE	1125.5	31.7
CALCIUM	13.0	0.6	CARBONATE	24.0	0.8
MAGNESIUM	3.8	0.3	BICARBONATE	1977.0	32.4
IRON	0.6	0.0	SULFATE	456.8	9.5
POTASSIUM	11.8	0.3	NITRATE	0.0	0.0
BARIUM	0.0	0.0			
CHROMIUM	0.0	0.0			

SPECIFIC GRAVITY @ 77°F	1.006	PH	7.88
RESISTIVITY @ 77°F, ohm-meters	1.558	NACL (Calc.)	1855.9
TOTAL DISSOLVED SOLIDS (Calc.) MG/L	5322.6	HYDROGEN SULFIDE	NEG

WATER ANALYSIS PATTERN - MEQ/L



REMARKS: Run #9 Sample 65 BBLS out.
Received 4/8/09.

DISTRIBUTION OF RESULTS
Rocky Border -- Sidney MT.
Lynn Sundby -- Halliburton - Williston ND.

Exhibit 5A

SATHER ANALYTICAL LABORATORY, INC.

701 W. 2ND STREET P.O.BOX 1577 WILLISTON, ND. 58801 701-572-3632

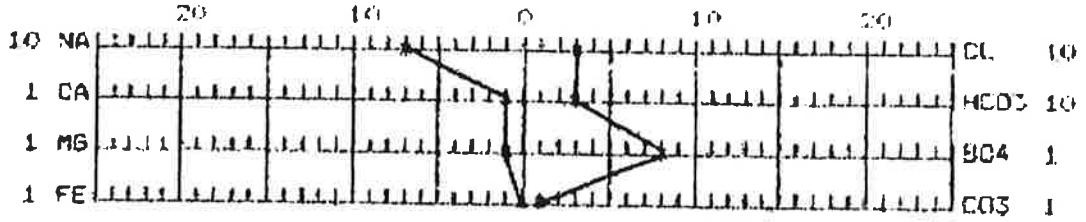
WATER ANALYSIS REPORT

OPERATOR:	ENERPLUS L.P.	DATE:	4/8/09
WELL NO.	LONE TREE EDNA 1-13	LAB NO.:	W-09-1705
FIELD:	not listed	FORMATION:	Upper Dakota
COUNTY:	Richland	INTERVAL:	5388-5608
STATE:	MT	DST #:	
LOC:	not listed	SAMPLE	RUN #16-SAMPLE 130 BBLS BACK

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM	1680.0	73.1	CHLORIDE	1114.7	31.4
CALCIUM	14.8	0.7	CARBONATE	31.5	1.1
MAGNESIUM	7.6	0.6	BICARBONATE	1922.1	31.5
IRON	1.2	0.1	SULFATE	391.2	8.1
POTASSIUM	9.9	0.3	NITRATE	0.0	0.0
BARIUM	0.0	0.0			
CHROMIUM	0.0	0.0			

SPECIFIC GRAVITY @ 77°F	1.000	PH	7.85
RESISTIVITY @ 77°F,ohm-meters	1.569	NACL (Calc.)	1838.1
TOTAL DISSOLVED SOLIDS (Calc.) MG/L	5173.0	HYDROGEN SULFIDE	NEG

WATER ANALYSIS PATTERN MEQ/L



REMARKS - Run #16 Sample 130 BBLS Back.
Received 4/8/09.

DISTRIBUTION OF RESULTS
Rocky Gorder -- Sidney MT.
Lynn Sundby -- Halliburton - Williston ND.

Exhibit 5A

STATLIE ANALYTICAL LABORATORY, INC.
301 W. 2ND STREET P.O.BOX 1057 701-572-3632
WILLISTON, ND. 58801

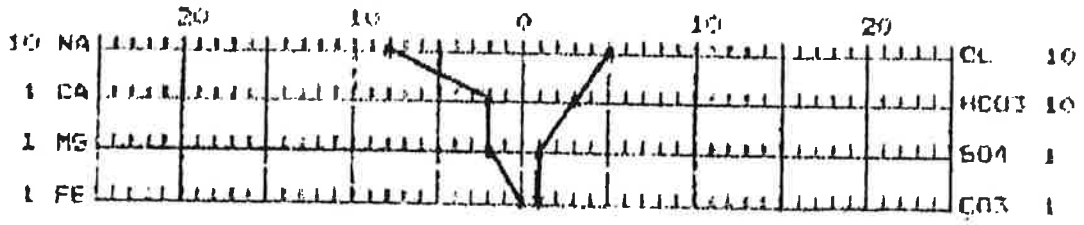
WATER ANALYSIS REPORT

OPERATOR:	ENERPLUS RESOURCES U.S.	DATE:	4/7/09
WELL NO.	LONE TREE EDNO 1-13	LAB NO.:	W-09-1677
FIELD:	not listed	FORMATION:	Lower Dakota
COUNTY:	Richland	INTERVAL:	5044'-5064'
STATE:	MT	DST #:	
LOC:	not listed	SAMPLE	4TH RUN - TUBING SWAB 4/6/09

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM	1700.0	73.6	CHLORIDE	1893.9	53.4
CALCIUM	40.7	2.0	CARBONATE	28.5	0.9
MAGNESIUM	22.9	1.9	BICARBONATE	1726.9	28.3
IRON	1.0	0.1	SULFATE	67.3	1.4
POTASSIUM	32.3	0.8	NITRATE	0.0	0.0
BARIUM	0.0	0.0			
CHROMIUM	0.0	0.0			

SPECIFIC GRAVITY @ 77°F	1.000	PH	8.01
RESISTIVITY @ 77°F,ohm-meters	1.442	NACL (Calc.)	7122.9
TOTAL DISSOLVED SOLIDS (Calc.) MG/L	5713.4	HYDROGEN SULFIDE	NEG

WATER ANALYSIS PATTERN - MEQ/L



REMARKS - 4th RUN TUBING SWAB 4/6/09.

DISTRIBUTION OF RESULTS
Rocky Gorder -- Sidney MT.
Lynn Sunday -- Halliburton - Williston ND

Exhibit 5A

SATHE ANALYTICAL LABORATORY, INC.

301 W. 2ND STREET
P.O.BOX 1827
WILLISTON, ND. 58801
701-572-3632

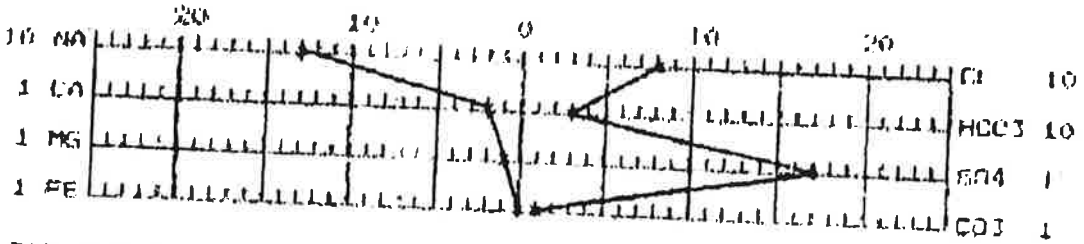
WATER ANALYSIS REPORT

OPERATOR:	ENERPLUS RESOURCES U.P.	DATE:	4/7/09
WELL NO.	LONE TREE EDNA 1-13	LAB NO.:	W-09-1673
FIELD:	not listed	FORMATION:	Lower Dakota
COUNTY:	Richland	INTERVAL:	5844'-5864'
STATE:	MT	DST #:	
LOC:	not listed	SAMPLE	5TH SWAB RUN-FORMATION 4/6/09

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM	2880.0	125.3	CHLORIDE	2921.9	82.4
CALCIUM	37.0	1.8	CARBONATE	18.0	0.6
MAGNESIUM	13.4	1.1	BICARBONATE	1702.5	27.9
IRON	2.1	0.1	SULFATE	827.7	17.2
POTASSIUM	49.2	1.3	NITRATE	0.0	0.0
BARIUM	0.0	0.0			
CHROMIUM	0.0	0.0			

SPECIFIC GRAVITY @ 77°F	1.006	PH	7.79
RESISTIVITY @ 77°F,ohm-meters	1.018	NACL (Calc.)	4818.2
TOTAL DISSOLVED SOLIDS (Calc.) MG/L	8451.8	HYDROGEN SULFIDE	NEG

WATER ANALYSIS PATTERN - MEQ/L



REMARKS - 5th RUN SWAB - FORMATION SAMPLE 4/6/09.
Received 4/7/09.

DISTRIBUTION OF RESULTS
Rocky Border -- Sidney MT.
Lynn Sundby -- Halliburton - Williston ND.

Exhibit 5A

SOILS ANALYTICAL LABORATORY, INC.

301 W. 2ND STREET P.O. BOX 1537 701 572-3632
WILLISTON, ND. 58801

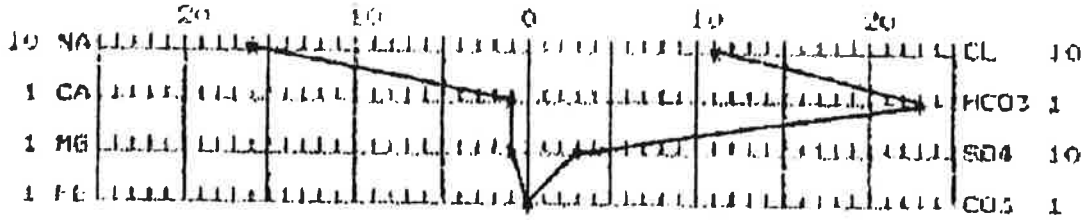
WATER ANALYSIS REPORT

OPERATOR:	ENERPLUS RESOURCES L.P.	DATE:	4/7/07
WELL NO.	LONE TREE EDNA 1-13	LAB NO.:	W-07-1694
FIELD:	not listed	FORMATION:	Lower Dakota
COUNTY:	Richland	INTERVAL:	5844' -5864'
STATE:	MT	DST #:	
LOC:	not listed	SAMPLE	11th SWAB RUN-TOTAL 105 BBLS

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM	3380.0	155.7	CHLORIDE	3766.1	106.2
CALCIUM	29.6	1.5	CARBONATE	0.0	0.0
MAGNESIUM	11.4	0.9	BICARBONATE	1415.7	23.2
IRON	0.2	0.0	SULFATE	1532.2	31.9
POTASSIUM	17.4	0.4	NITRATE	0.0	0.0
BARIUM	0.0	0.0			
CHROMIUM	0.0	0.0			

SPECIFIC GRAVITY @ 77°F	1.000	PH	7.55
RESISTIVITY @ 77°F,ohm-meters	0.912	NACL (Calc.)	6210.2
TOTAL DISSOLVED SOLIDS (Calc.) MG/L	10352.5	HYDROGEN SULFIDE	NIL

WATER ANALYSIS PATTERN - MEQ/L



REMARKS - 11th RUN SWAB - TOTAL 105 BBL 4/6/07.
Received 4/7/07.

DISTRIBUTION OF RESULTS
Rocky Gordon -- Sidney MT.
Lynn Sunsby -- Halliburton - Williston ND.

Exhibit 6A

AFE #:

AUTHORITY FOR EXPENDITURE

Well Name and Number:	**Dakota Water Well**	Operator:	Heritage
Legal Description:		TD & Formation:	
County, State:	Richland, MT	Date Prepared By:	8/1/2025 AMS
Scope of Work:	Drill & Complete 6,000' Vertical Water Well		

ACCT. CODE	DESCRIPTION OF EXPENDITURE		GROSS COST ESTIMATE			
	INTANGIBLES		**DRILL**	**COMP**	**FAC**	**TOTAL**
01	Damages, Permits, Surveys, Right of Way, etc.		$ -	$ -	$ -	
02	Location and Roads		$ 247,500	$ -	$ 7,500	$ 255,000
03	Drilling Rig:	9.5 Days @ $35,000 per day	$ 332,500			$ 332,500
04	Completion Rig:			$ 40,000		$ 40,000
05	Mobilize, RU, RD, Demobilize		$ -	$ -		
06	Fuel & Power	9.5 Days @ 1,800 gal per day @ $3.00 per g	$ 51,300	$ 2,000		$ 53,300
07	Drilling Water and Completion Fluids		$ 5,000	$ 5,000		$ 10,000
08	Contract Labor, Welding, Casing Crews		$ 70,000	$ 16,000		$ 86,000
09	Bits	2 bits @ $19,000 per Bit	$ 38,000	$ -		$ 38,000
10	Drilling Fluids - Oil Based					
11	Drilling Fluids - Water-Based		$ 40,000			$ 40,000
12	Formation Testing		$ -	$ -		
13	Openhole Logging and Surveys		$ -	$ -		
14	Cementing and Cement Services		$ 90,000	$ -		$ 90,000
15	Downhole Rentals and Services		$ 8,800	$ -		$ 8,800
16	Casedhole Logging, Perforating and Other Wireline Services			$ 16,000		$ 16,000
17	Stimulation and Services (HP, Chems, Sand)			$ 18,000		$ 18,000
18	Flowback Equipment and Labor			$ -		
19	Supplies, Materials, Misc.		$ 1,000	$ -		$ 1,000
20	Geological Services, Mudlogging, Other Professional Services		$ 2,100		$ -	$ 2,100
21	Wellsite Supervision	19 days @ $1,950 per day	$ 37,050	$ 8,000	$ -	$ 45,050
22	Abandonment Expenses and Location Reclamation		$ 15,000			$ 15,000
23	Installation Services (through wellhead)		$ 17,000	$ 5,000		$ 22,000
24	Trucking, Hauling, Other Transportation Services		$ 80,000	$ 25,000	$ -	$ 105,000
25	Surface Rentals	9.5 days @ $4,500 per day	$ 42,750	$ 18,000	$ -	$ 60,750
26	Directional Drilling Tools and Services		$ -			
27	Closed Mud System Rentals and Services		$ 48,000			$ 48,000
28	Fishing Tools and Services		$ -	$ -		
29	Coiled Tubing		$ -	$ -		
30	Title Opinion and DOTO		$ -	$ -		
31	Overhead	9.5 days @ $300 per day	$ 2,850	$ 1,200		$ 4,050
32	Insurance		$ 5,000	$ -		$ 5,000
33	Intangible Contingency	5%	$ 56,700	$ 7,700	$ 400	$ 64,800
	TOTAL INTANGIBLE COSTS		**$ 1,190,550**	**$ 161,900**	**$ 7,900**	**$ 1,360,350**
	TANGIBLES		**DRILL**	**COMP**	**FAC**	**TOTAL**
51	Conductor Casing:	20" Pre-Set with Deep Mousehole	$ 35,000			$ 35,000
52	Surface Casing:	9.625", 36#, J55, BTC @ 1875'	$ 67,594			$ 67,594
53	Intermediate Casing:		$ -			
54	Production Csg/Liner:	7", 32#, P110, BTC @ 5397'	$ 222,792			$ 222,792
55	Tubing:			$ 42,000		$ 42,000
56	Sucker Rods			$ -		
57	Downhole Pump, Gas Lift, Tubing Anchor, etc.			$ -		
58	Wellhead Equipment		$ 25,000	$ 15,000	$ 8,000	$ 48,000
59	Artificial Lift Equipment			$ 100,000		$ 100,000
60	Liner Hanger, Packers and Subsurface Tools		$ 25,000	$ -		$ 25,000
61	Installation Costs			$ -	$ 15,000	$ 15,000
62	Tanks and Accessories			$ -	$ -	
63	Production Unit, Dehydrator, Compressor			$ -	$ -	
64	Heater Treater, FWKO			$ -	$ -	
65	Electrical Systems and Lines			$ -	$ 65,000	$ 65,000
66	Lease Lines			$ -		
67	Controllable Valves and Fittings			$ -	$ -	
68	Float Equipment & Centralizers		$ 50,000	$ -		$ 50,000
70	Non-Controllable Lease Materials			$ -		
71	Installation Costs			$ -		
72	Line Pipe			$ -	$ 6,570	$ 6,570
73	Metering Equipment			$ -	$ -	
74	Tangible Contingency	5%	$ 21,269	$ 7,850	$ 4,729	$ 33,848
	TOTAL TANGIBLE COSTS		**$ 446,655**	**$ 164,850**	**$ 99,299**	**$ 710,803**
	TOTAL WELL COSTS		**$ 1,637,205**	**$ 326,750**	**$ 107,199**	**$ 2,071,153**

This AFE is only an estimate. By returning a signed copy, you agree to pay your proportionate share of actual costs incurred.

W.I. OWNER APPROVAL: Company: _____

By: _____ Title: _____

Name (Print): _____ Date: _____

Exhibit 7A

AFE #:

AUTHORITY FOR EXPENDITURE

Well Name and Number:	Fox Hills Water Well	Operator:	Heritage
Legal Description:		TD & Formation:	
County, State:	Richland, MT	Date Prepared By:	8/1/2025 AMS
Scope of Work:	Drill & Complete 1,500' Vertical Water Well		

ACCT. CODE	DESCRIPTION OF EXPENDITURE		GROSS COST ESTIMATE			
	INTANGIBLES		DRILL	COMP	FAC	TOTAL
01	Damages, Permits, Surveys, Right of Way, etc.		$ -	$ -	$ -	
02	Location and Roads		$ 123,375	$ -	$ 7,875	$ 131,250
03	Drilling Rig:		$ 105,000			$ 105,000
04	Completion Rig:			$ -		
05	Mobilize, RU, RD, Demobilize		$ -	$ -		
06	Fuel & Power		$ 26,250			$ 26,250
07	Drilling Water and Completion Fluids		$ -			
08	Contract Labor, Welding, Casing Crews		$ 17,850	$ -		$ 17,850
09	Bits		$ -	$ -		
10	Drilling Fluids - Oil Based					
11	Drilling Fluids - Water-Based		$ 15,750			$ 15,750
12	Formation Testing		$ -	$ -		
13	Openhole Logging and Surveys		$ -	$ -		
14	Cementing and Cement Services		$ 31,500	$ -		$ 31,500
15	Downhole Rentals and Services		$ -	$ -		
16	Casedhole Logging, Perforating and Other Wireline Services			$ -		
17	Stimulation and Services (HP, Chems, Sand)			$ -		
18	Flowback Equipment and Labor			$ -		
19	Supplies, Materials, Misc.		$ 1,050	$ -		$ 1,050
20	Geological Services, Mudlogging, Other Professional Services		$ -		$ -	
21	Wellsite Supervision		$ 15,750	$ -	$ -	$ 15,750
22	Abandonment Expenses and Location Reclamation		$ -			
23	Installation Services (through wellhead)		$ -	$ -		
24	Trucking, Hauling, Other Transportation Services		$ -	$ -	$ -	
25	Surface Rentals		$ -	$ -	$ -	
26	Directional Drilling Tools and Services		$ -			
27	Closed Mud System Rentals and Services		$ -			
28	Fishing Tools and Services		$ -	$ -		
29	Coiled Tubing		$ -	$ -		
30	Title Opinion and DOTO		$ -	$ -		
31	Overhead		$ -	$ -		
32	Insurance		$ 5,250	$ -		$ 5,250
33	Intangible Contingency	5%	$ 17,100	$ -	$ 400	$ 17,500
	TOTAL INTANGIBLE COSTS		**$ 358,875**		**$ 8,275**	**$ 367,150**
	TANGIBLES		**DRILL**	**COMP**	**FAC**	**TOTAL**
51	Conductor Casing:					
52	Surface Casing:		$ 42,000			$ 42,000
53	Intermediate Casing:		$ -			
54	Production Csg/Liner:		$ -			
55	Tubing:			$ 10,500		$ 10,500
56	Sucker Rods			$ -		
57	Downhole Pump, Gas Lift, Tubing Anchor, etc.			$ -		
58	Wellhead Equipment		$ -	$ -	$ 5,250	$ 5,250
59	Artificial Lift Equipment			$ 42,000		$ 42,000
60	Liner Hanger, Packers and Subsurface Tools		$ -	$ -		
61	Installation Costs			$ -	$ -	
62	Tanks and Accessories			$ -	$ -	
63	Production Unit, Dehydrator, Compressor			$ -	$ -	
64	Heater Treater. FWKO			$ -	$ -	
65	Electrical Systems and Lines			$ -	$ -	
66	Lease Lines			$ -		
67	Controllable Valves and Fittings			$ -	$ -	
68	Float Equipment & Centralizers		$ -	$ -		
70	Non-Controllable Lease Materials			$ -		
71	Installation Costs			$ -		
72	Line Pipe			$ -	$ -	
73	Metering Equipment			$ -	$ -	
74	Tangible Contingency	5%	$ 2,100	$ 2,625	$ 263	$ 4,988
	TOTAL TANGIBLE COSTS		**$ 44,100**	**$ 55,125**	**$ 5,513**	**$ 104,738**
	TOTAL WELL COSTS		**$ 402,975**		**$ 13,788**	**$ 471,888**

This AFE is only an estimate. By returning a signed copy, you agree to pay your proportionate share of actual costs incurred.

W.I. OWNER APPROVAL: Company: _____

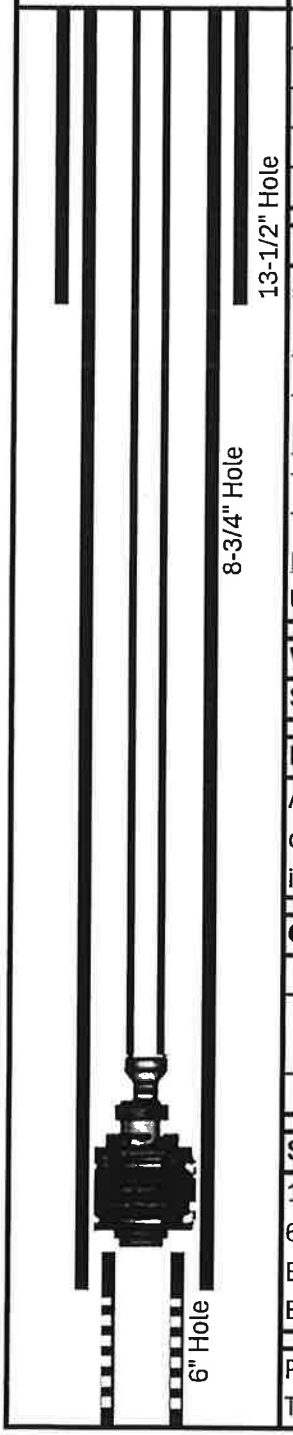
By: _____ Title: _____

Name (Print): _____ Date: _____

Heritage Energy Operating, LLC
Neptune 24-1 SWD
Sec 24 T26N R55E
440' FNL & 1071' FEL
Richland County, MT

RKB: 2129'

Proposed Installation



Casing Detail

Description	OD	ID	Set Depth	Length
Conductor - 65# H-40	16	15.25	80'	80'
Surface Casing - 36# J-55 LTC	9.625	8.92	2090'	2090'
Intermediate Casing - 26# J-55 LTC	7	6.276	4924'	4924'
Liner - 11.6# P-110 BTC	4.5	4	5286'	490'

Cement Detail

Surface Casing:
Lead: 332 sx 11.5 ppg Varicem CMT, 2.4 ft3/sx
Tail: 138 sx 11.5 ppg Varicem CMT, 1.53 ft3/sx
TOC: Surface
Intermediate Casing:
Tail: 261 sx 13.0 ppg Varicem CMT,1.75 ft3/sx
TOC: 2090'
Liner:
Uncemented Open Hole Completion

Wellhead

Stack: 11" 5M

Perforations	**Perf Depth**	
Abrasive jet perforating will be utilized to create perforations in the casing and abrasively penetrate formation across the injection interval.	First Perf:	5286'
	Last Perf:	4944'

Completion	OD	ID	Set Depth	Length
4.5" 11.6# P-110 BTC	4.5"	3.875"	4796'	490'
7" x 3.5" Nickle Plated Opti-Pak Liner Hanger-Packer	7"	5"	4786'	10'
4.5" 11.6# L-80	4.5"	3.875"	13'	4773'

Stimulation:

12,000 Gal of 15% HCL
6,000#'s Rock Salt Diversion
Est. Treat Rate: 10 bpm
Est. Treat Max Pressure: 5,000 psi

PBTD @ 5286' MD, 5286' TVD	Geo Refs	Top of Dakota	4886'
TD @ 5286' MD, 5286' TVD		Top of Swift	5306'

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

IN THE MATTER OF THE APPLICATION OF HERITAGE ENERGY OPERATING, LLC FOR THE HEARING OF ITS REQUEST FOR A UIC PERMIT FOR THE NEPTUNE 24-1 SWD WELL, 440' FNL AND 1,071' FEL OF SECTION 24, TOWNSHIP 26 NORTH, RANGE 55 EAST, M.P.M., RICHLAND COUNTY, MONTANA, FOR THE PURPOSE OFWATER INJECTION	AFFIDAVIT OF NOTIFICATION

DATE: November 11, 2025

State of Montana
County of Richland

Joshua C. Cornell, being first duly sworn, deposes and says:

That Notice advising of Heritage Energy Operating, LLC's application for UIC permit in the captioned matter, in the form attached as Exhibit "A", was mailed to each current operator, surface owner and leasehold owner within the area of review at the addresses shown in the exhibit attached to the Notice, by mailing a true copy thereof of this 11th day of November, 2025, postage prepaid, first class mail. This affidavit is given as evidence of compliance with A.R.M. 36.22.1410.

Joshua C. Cornell

Subscribed and sworn to before me this 5th day of January, 2026.

Notary Public for the State of Oklahoma
Residing at Tulsa County
My Commission Expires 6-22-27

ONALEE HALES
Notary Public, State of Oklahoma
Commission # 15005858
My Commission Expires 6-22-27

{SEAL}

Public Notice

BEFORE THE BOARD OF OIL AND GAS CONSERVATION OF THE STATE OF MONTANA NOTICE OF INTENTION TO APPLY FOR A CLASS II INJECTION WELL PERMIT

In the matter of the application of Heritage Energy Operating, LLC.

For a Class II injection well permit:

1. Name and Address of Applicant: Heritage Energy Operating, LLC at 2448 E. 81st Street, Suite 3600, Tulsa, Oklahoma 74137

2. Well or Project Name, County, and Location: Neptune 24-1 SWD, 440' FNL, 1,071' FEL, NENE, Section 24, Township 26 North, Range 55 East in Richland County, MT.

3. Source of Fluids injected: Produced Bakken Water from nearby wells.

4. Propose injecting produced water into the Dakota/Inyan Kara at a depth of approximately 4,800 to 5,300 ft.

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 Rule 36.22.1409, Administrative Rules of Montana, the Montana Board of Oil and Gas Conservation will hold a public hearing upon the application of Heritage Energy 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 and Gas Hearing Room at 2535 St. Johns Ave., Billings, Montana beginning at 9:00 AM on Thursday, February 12, 2026.

MNAXLP SHM000208 Published

December 31, 2025