State of Montana

Board of Oil and Gas

Docket No: TBD

Underground Injection Control

Application

BR 41-35H 52

Section 35, Township 25N, Range 52E

White Rock Oil and Gas, LLC

June 12, 2025

May 7, 2025

WHITE ROCK OIL & GAS

John Gizicki
Underground Injection Control (UIC) Program Director
Montana Board of Oil and Gas Conservation
2535 St. Johns Avenue
Billings, MT 59102

RE: Request for Injection Permit
BR 41-35H 52 located in Section 35, Township 25N, Range 52E
Richland County, Montana

Dear Mr. John Gizicki,

Please find enclosed an Underground Injection Control (UIC) application by White Rock Oil and Gas, LLC. requesting an aquifer exemption for the Dakota/ Lakota Formations in the well, BR 41-35H 52, operated by White Rock Oil and Gas, LLC. In Elm Coulee field. This well will be plugged back and completed as a water disposal well.

I certify the information contained in this application is, to the best of my knowledge, true and correct, and the work associated with the operation proposed herein will be performed by White Rock Oil and Gas, LLC. in conformity with this application and the terms and conditions under which it is approved.

White Rock Oil and Gas, LLC. is requesting the application be placed on the docket for the MBOGC June 12, 2025 hearing.

If you have any questions concerning the enclosed application, please contact Tanner Butler, Operations Engineer at (214) 666-5494 or via email at tbutler@whiterockog.com.

Sincerely,

Rusty Ginnetti

Rusty Ginnetti
Chief Operating Officer
White Rock Oil and Gas, LLC.

Underground Injection Control (UIC) Permit Application
BR 41-35H 52 Injection

The following report and justification are submitted in support of the application by White Rock Oil and Gas, LLC. to permit the conversion of the BR 41-35H 52, which is a shut in Bakken producer, for the purpose of water injection into the Dakota/ Lakota formations as required by Rule 36-22-1403 of the Rules and Regulations of the Montana Board of Oil and Gas Conservation.

1(a) Location of Injection Well:

The BR 41-35H 52 well is herein proposed for conversion to a water injection well. This well was originally drilled and completed in the Middle Bakken. In 2005, a straddle packer assembly was left in the hole at a depth of 8,729 feet. During a July 2016 workover by previous operator, ConocoPhillips, a 5-3/4" bit and scraper was run and milled through 20 feet of scale above the straddle packer fish. Acid was spotted to clean up scale and the acid could not be pumped through the fish. Acid was circulated back out of the hole along with acid gas - H2S. Milling operations were continued until circulation was lost at 8,755.5 feet. The well was returned to production. During the subsequent workover by Conoco in July of 2018, the casing was found to be plugged. Diagnostics were then initiated to determine a suspected casing leak. A packer/RBP was ran and determined a casing leak from 3,582'-3,608'. Conoco Phillips ran a packer to produce the well under the casing leak without repairing. White Rock acquired the well in 2021. A workover was performed in February 2024. Tubing was parted at 6,718', which is 1,897' above the production packer Conoco ran. Due to the corrosion witnessed on recovered tubing, it was decided to latch up with overshot and cut tubing at ~ 8,500' to maximize recovery efforts on the second fishing attempt. Tubing was successfully recovered down to 8,484'. Two subsequent fishing attempts were made to jar the packer loose unsuccessfully. The well has been shut-in since 2024. Exhibit 1 shows the surface location and a circle of a quarter (1/4) mile radius representing the area of review (AOR) for this well.

BR 41-35H 52	250 ft FNL, 500 ft FEL	NENE, Sec 35, T25N, R52E

1(b) Wells within a Quarter Mile (1,320 ft) Area of Review (AOR):

There are not any wells drilled within ¼ mile AOR.

The closest wells to the BR 41-35H 52 are the State Blackjack 21-36H 52 Bakken well and the BR 21-35H 52 Bakken well which are outside the AOR at 0.53 mile and 0.50 miles respectively.

1(c) Location of all pipelines:

There are currently not pipelines installed to transport water to the BR 41-35H. Development plans due include the installation of a produced water gathering line. Produced water will be delivered by truck until the produced water gathering line is installed.

There is development planned in 2025 for a 3-producer, new drill pad in the southern half of Section 35, Twn. 25N, Rng. 52E. A line is planned to be installed to the BR 41-35H 52 from this pad. The line will be flushed with freshwater and pressure tested prior to use. There will be meters at this pad to verify shipment and injection water volumes are aligned.

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

There are not any wells within the ¼ mile Area of Review (AOR) producing from an oil and gas zone or any water wells. Although not within the area of review, the closest wells with surface locations within ½ mile of the BR 41-35H 52 are described.

BR 21-35H 52, (NENW, Section 35, T25N, R52E), 2,640 ft to the west of the proposed SWD well was drilled in 2006 as a Bakken Producer. The well continues to produce from the Bakken at approximately 9,200 feet TVD.

State Blackjack 21-36H 52, (NENW, Section 36, T25N, R52E), 2,810 ft to the east of the proposed SWD well was drilled in 2005 as a Bakken Producer. The well continues to produce from the Bakken at approximately 9,200 feet TVD.

Underground Sources of Drinking Water (USDW) is defined as an aquifer or its portion which: (1) Supplies any public water system, or (2) Contains a sufficient quantity of ground water to supply a public water system; and (i) Currently supplies drinking water for human consumption; or (ii) Contains fewer than 10,000 milligrams of total dissolved solids per liter. A review of the area that USDW with a TDS less than 10,000 mg/l may be available to the base of the Fox Hills. The proposed injection zones Lakota and Dakota formations may contain fluids with Total Dissolved Solids (TDS) between 3,000 and 10,000 mg/L. There is data within a 12 miles radius that indicates the TDS will be greater than 10,000 mg/L. Additional information about these zones, potential wells, and ground water protection is detailed in this section. An aquifer exemption was included in the SWD application for the Lakota and Dakota Formations.

Freshwater well data was obtained from the Ground Water Information Center (MBMG Data Center) website https://mbmggwic.mtech.edu/ . There are no freshwater wells which produce within the AOR of the proposed injector. See Exhibit 2. Map of Freshwater Wells. The closest freshwater wells are listed below (outside the AOR):

Well Name	Location	Use	Distance from Proposed SWD	Depth of Well
White Rock Oil and Gas	Sec 35, T25N, R52E	Industrial	0.51 miles	1,128 ft
Alfred Candee	Sec 7, T24N, R53E	Stockwater	1.00 miles	170 ft
Dorothy Freeman	Sec 7, T24N, R53E	Stockwater	1.24 miles	150 ft
Marvin and Ervin Goss	Sec 25, T25N, R52E	Stockwater	1.35 Miles	155 ft
Swihart Allen	Sec 27, T25N, R52E	Stockwater	1.90 Miles	40 ft

There is an upper member of the Fort Union, the Tongue River, normally less than 200' from the surface. There are several shallow water wells drilled for cattle watering and for domestic use that appear to be in this zone. There are not any of these wells in the area of review. There closest water quality sample in these shallow zones is the Swihart Allen in Section 27, T25N, R52E. Total dissolved solids for this water well 1.90 miles northwest of BR 41-35H 52 were 1,299 ppm. See Exhibit 3 for full water analysis.

The Hell Creek and Fox Hill zones act as potential sources of freshwater. The depth to the Fox Hills-Lower Creek Aquifer is approximately 1,000-1,200' in the area of the BR 41-35H per Depth to the Fox Hills – Lower Hell Creek Aquifer, Lower Yellowstone River Area map by Larry Smith which is part of the GWAA 1-2-03 publication dated 1998. White Rock has drilled a Fox Hills well near the BR 41-35H. Candee 1 WSW in Section 35, T25N, R52E lab confirmed total dissolved solids for this water well 0.51 miles west of BR 41-35H 52 of 1,433 ppm. See Exhibit 3 for full water analysis. Surface casing has been cemented to surface to protect shallower freshwater zones.

Any potential Underground Sources of Drinking Water (USDW) is protected from the proposed injection zone by surface casing set at 1,188 ft MD/TVD and cemented to surface. The production casing was set at 9,530 ft with a one-stage cement job. The lead cement consisted of 265 sacks of 65/35 Class G Poz 12.7 ppg cement slurry followed by tail cement of 520 sx of Class G 15.6 ppg slurry that resulted in an estimated Top of Cement (TOC) 5,500 ft. Due to TOC not being above proposed injection interval, a block squeeze will be performed above the Dakota to ensure isolation across the bounding Skull Creek shale. Tubing and an injection packer will result in further isolation of fresh USDW from produced water.

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

The BR 41-35H 52 SWD will be completed for disposal into the Lakota and Dakota formations.

Water quality information for the proposed disposal zones in the immediate area of BR 41-35H 52 is not available. However, a water sample from the Dakota in Verschoot 1-19 SWD located 11.0 miles southeast of the proposed disposal site had total dissolved solids of 20,346 mg/L. In addition, the Charlie Creek 8-23 SWD located 12 miles northeast had a TDS in the Lakota of 11,600 mg/L and water from the Dakota had a TDS of 11,500 mg/L. The Dakota and Lakota in the BR 41-35H 52 are expected to be similar. The samples from the Verschoot 1-19 SWD were acquired at the wellhead shortly after the well was recompleted as an injector. The Charlie Creek 8-23 samples were acquired by swabbing each zone. In some areas, the upper Dakota water lies between the 3,000 ppm and 10,000 ppm cutoff. Due to the distance between the BR 41-35H 52 and Dakota/Lakota water samples, White Rock will apply for an aquifer exemption. When the well is recompleted, swab analysis will be used to confirm the TDS.

Proposed injection zones for the BR 41-35H 52 SWD are as follows:

Formation	Lithology	Top (ft)	Bottom (ft)	Net pay (ft)	Pressure (psi)	Porosity
Dakota	Sandstone	4742	4871	22	2,090	12%
Lakota	Sandstone	5026	5343	104	2,555	17%

Depth and net pay for each of the proposed injections zones are estimate from the Cement Bond Log and Gamma Ray ran June 6, 2005, on the BR 41-35H 52. The porosity is based on the density logs across the zones of interest in the following wellbores: NP 1-33 (8 miles W) and Edeburn 1-2H (5 miles N). The porosity was derived from the bulk density curve calculated on a sandstone matrix. Formation pressure was estimated using a water gradient of 0.435 psi/ft.

The confining formations for the proposed injection zones are the Skull Creek for the Dakota and the Fuson for the Lakota.

The Jurassic Swift formation is the lower confining layer. It is primarily a transgressive-regressive, clastic, shallow marine deposit composed of dark gray to greenish shales, and 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 392 ft 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.

Formation	Lithology	Top (ft)	Bottom (ft)
Skull Creek	Shale	4,587	4,742
Fuson	Shale	4,871	5,026
Swift	Shale	5,343	5,735

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.

Proposed injection See Exhibit 4: Cross Section of Dakota/ Lakota, Exhibit 5: Log of Injection Interval, and Exhibit 6: Water Analysis of Injection Intervals.

1(f) Additional Information on Producing Wells within the AOR:

There are no producing wells within the area of review.

1(g) Open Hole Logs:

Logs and geologic information for the BR 41-35H 52 well are currently on file with MBOGC. A cement bond long currently exists for the BR 41-35H 52 with the top of cement at 5,500 ft. A block squeeze will have to be performed above the Dakota.

1(h) Description of the Wellbore Construction:

The current configuration of the wellbore, as indicated on the attached diagram, Exhibit 7. The well currently has multiple packer fish with current fish top at 8,484 ft. The fish are expected to be plugged based on previous workovers. Therefore a cast iron bridge plug will be set at 8450’ with 30 sx of Class G cement w/35% silica flour spotted on top.

A second cast iron bridge plug will be set at 5600’ with 10 sx of cement on top. Squeeze perfs will be added twenty feet above top of Dakota at 4722’. This holes will be squeezed under a cast iron cement retainer. The casing leak at 3582’-3609’ will be squeezed and repaired under a cast iron cement retainer. After drilling out two cast iron cement retainers previously mentioned and passing a pressure test, a subsequent CBL will be run to confirm the Dakota block squeeze yielded adequate TOC.

The interval proposed for disposal will be the Dakota from 4,742 -4,871 ft and the Lakota from 5,026 -5,343 ft. This interval will be likely be treated with 15% HCl upon approval of the permit to facilitate near wellbore debris and aid in injectivity. The well is currently shut waiting on permit approval.

When the well is recompleted, plastic coated equipment will be used to help mitigate corrosion and the tubing/casing annulus will be filled with packer fluid to protect from corrosion. Pressure gauges will be utilized on both the tubing and the tubing/ casing annulus to monitor pressures. This data will be recorded along with disposal rates and volumes on a daily basis.

1(i) Description of Injection Fluid:

The fluid to be injected will consist entirely of water produced with the Bakken in multiple White Rock wells. The anticipated injection volumes will be in the range of 1,000 to 4,000 BWPD. Actual injection rates may vary and volumes will be determined by the capacity of the well to take the fluid and at what injection pressure. Exhibit 9 is the representative water chemistry analysis of the produced Bakken water. No incompatibilities are expected.

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

$$IP_{MAX} = (FG)\ (D_{Top}) - (SG)\ (0.433)(D_{Top})$$

Where: IP_{MAX}= Maximum Surface Injection Pressure (psi)

FG = Assumed Fracture Gradient in Confining Zone = 0.733 psi/ft

SG = Specific Gravity of Injection Fluid = 1.18

D_{Top}= Depth at top of perforated interval of injection zone (ft)

The computed maximum injection pressure would be:

$$IP_{MAX} = (0.733\ psi/ft)(4{,}742\ ft) - (1.18)(0.433)(4{,}742\ ft)$$

$$IP_{MAX} = 1{,}053\ psi$$

The computed maximum injection pressure for the Dakota/ Lakota is 1,053 psi. An injection test (step-rate test) will be performed to determine the final injection pressures and volumes to ensure the formation parting pressure (fracture pressure) is not reached during injection operations. In comparison, the Simonsen A 1-4 max injection pressure is 1,317 psi.

1(j) Names and addresses of the leasehold owners, including unleased mineral owners, and the surface owners within the area of review of the input well(s).:

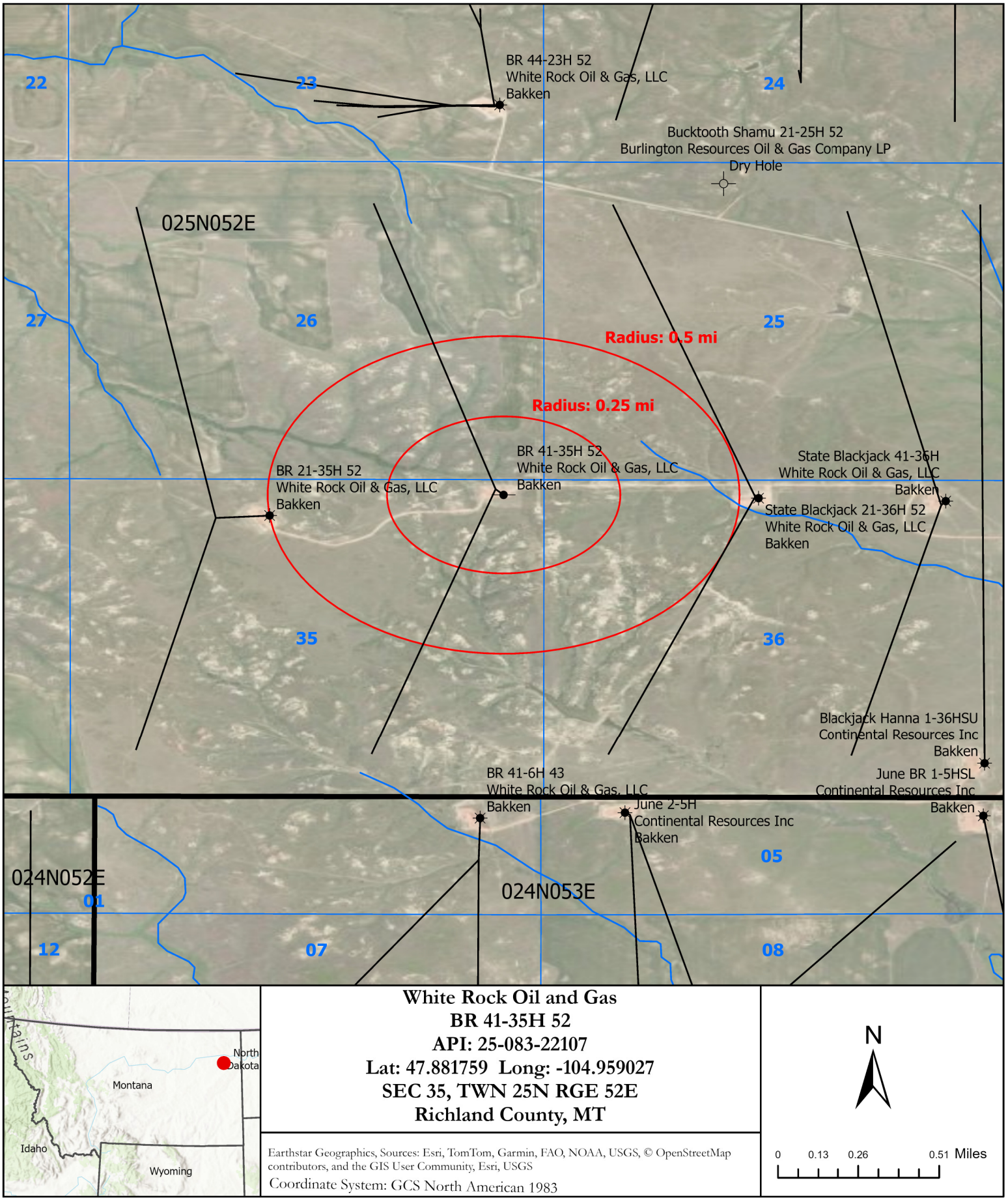
The names and addresses of leasehold and surface owners within the area of review for the proposed injection well are listed in Exhibit 10.

White Rock oil and Gas, LLC. will notify leasehold owners, surface owners, and unleased minerals in accordance with 36.22.1410(1) notification requirements for an underground injection permit. Affidavit of Notification to Surface and Mineral Owners along with an example of the mailed notice is attached in Exhibit 11 and Exhibit 12.

List of All Exhibits

Exhibit 1: Proposed Injection Well and Area of review.

WHITE ROCK OIL & GAS



White Rock Oil and Gas
BR 41-35H 52
API: 25-083-22107
Lat: 47.881759 Long: -104.959027
SEC 35, TWN 25N RGE 52E
Richland County, MT

N

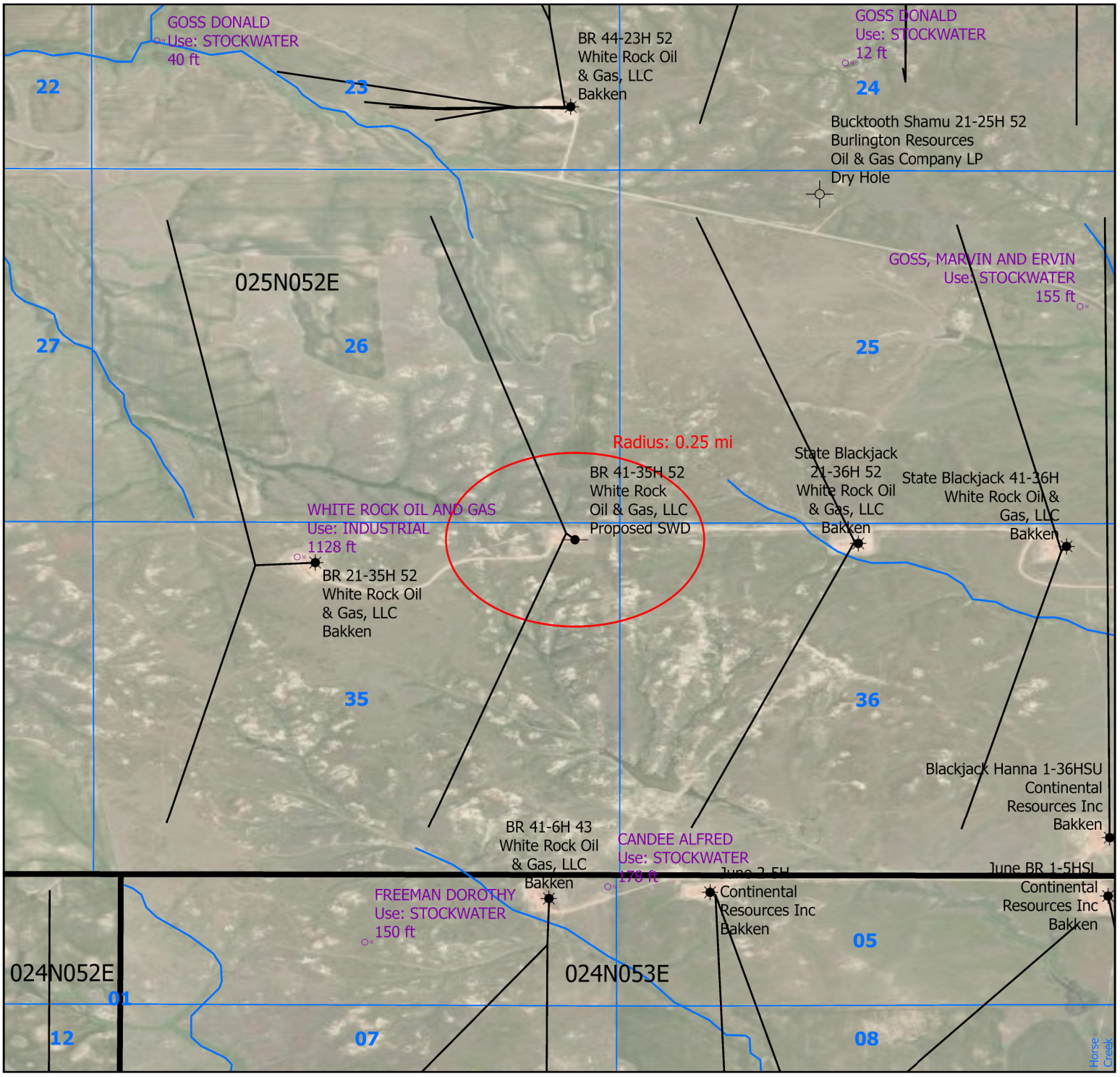
0 0.13 0.26 0.51 Miles

Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

Coordinate System: GCS North American 1983

Exhibit 2: Proposed SWD with freshwater wells within AOR

WHITE ROCK OIL & GAS



White Rock Oil and Gas
BR 41-35H 52
API: 25-083-22107
Lat: 47.881759 Long: -104.959027
SEC 35, TWN 25N RGE 52E
Richland County, MT

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS, Maxar

Coordinate System: GCS North American 1983

N

0 0.13 0.26 0.51 Miles

Ground-Water Information Center Water Quality Report

Site Name: SWIHART ALLEN

Report Date: 3/6/2025

Compare to Water Quality Standards

Location Information

Sample Id/Site Id:	1975Q1736 / 3063	Sample Date:	11/12/1975 11:25:00 AM
Location (TRS):	25N 52E 27 BABB	Agency/Sampler:	USGS / WRC
Latitude/Longitude:	47° 53' 46" N 104° 59' 38" W	Field Number:	MC-104
Datum:	NAD27	Lab Date:	1/19/1976
Altitude:	2295	Lab/Analyst:	MBMG / LAW
County/State:	RICHLAND / MT	Sample Method/Handling:	GRAB / 1000
Site Type:	WELL	Procedure Type:	DISSOLVED
Geology:	110ALVM	Total Depth (ft):	40
USGS 7.5' Quad:	ELMDALE NW 7 1/2'	SWL-MP (ft):	NR
PWS Id:		Depth Water Enters (ft):	20
Project:	GWCP01		

Major Ion Results

	mg/L	meq/L		mg/L	meq/L
Calcium (Ca)	159.100	7.939	Bicarbonate (HCO_3)	475.300	7.790
Magnesium (Mg)	102.100	8.402	Carbonate (CO_3)	0.000	0.000
Sodium (Na)	131.000	5.699	Chloride (Cl)	3.500	0.099
Potassium (K)	4.300	0.110	Sulfate (SO_4)	647.600	13.490
Iron (Fe)	0.010	0.000	Nitrate (as N)	3.800	0.271
Manganese (Mn)	0.010	0.000	Fluoride (F)	NR	0.000
Silica (SiO_2)	13.000		Orthophosphate (as P)	NR	0.000
Total Cations		22.150	**Total Anions**		21.650

Trace Element Results (µg/L)

Aluminum (Al):	NR	Cesium (Cs):	NR	Molybdenum (Mo):	NR	Strontium (Sr):	NR
Antimony (Sb):	NR	Chromium (Cr):	NR	Nickel (Ni):	NR	Thallium (Tl):	NR
Arsenic (As):	NR	Cobalt (Co):	NR	Niobium (Nb):	NR	Thorium (Th):	NR
Barium (Ba):	NR	Copper (Cu):	NR	Neodymium (Nd):	NR	Tin (Sn):	NR
Beryllium (Be):	NR	Gallium (Ga):	NR	Palladium (Pd):	NR	Titanium (Ti):	NR
Boron (B):	NR	Lanthanum (La):	NR	Praseodymium (Pr):	NR	Tungsten (W):	NR
Bromide (Br):	NR	Lead (Pb):	NR	Rubidium (Rb):	NR	Uranium (U):	NR
Cadmium (Cd):	NR	Lithium (Li):	NR	Silver (Ag):	NR	Vanadium (V):	NR
Cerium (Ce):	NR	Mercury (Hg):	NR	Selenium (Se):	NR	Zinc (Zn):	NR
						Zirconium (Zr):	NR

Field Chemistry and Other Analytical Results

**Total Dissolved Solids (mg/L):	1299.19	Field Hardness as $CaCO_3$ (mg/L):	NR	Ammonia (mg/L):	NR
**Sum of Diss. Constituents (mg/L):	1540.2	Hardness as $CaCO_3$:	817.52	T.P. Hydrocarbons (µg/L):	NR
Field Conductivity (µmhos):	1150	Field Alkalinity as $CaCO_3$ (mg/L):	NR	PCP (µg/L):	NR
Lab Conductivity (µmhos):	1708	Alkalinity as $CaCO_3$ (mg/L):	389.58	Phosphorus, TD (mg/L):	NR
Field pH:	NR	Ryznar Stability Index:	5.665	Field Nitrate (mg/L):	NR
Lab pH:	7.75	Sodium Adsorption Ratio:	1.9936	Field Dissolved O_2 (mg/L):	NR
Water Temp (°C):	NR	Langlier Saturation Index:	1.042	Field Chloride (mg/L):	NR
Air Temp (°C):	NR	Nitrite (mg/L as N):	NR	Field Redox (mV):	NR
Nitrate + Nitrite (mg/L as N)	NR	Hydroxide (mg/L as OH):	NR	Lab, Dissolved Organic Carbon (mg/L):	NR
Total Kjeldahl Nitrogen (mg/L as N)	NR	Lab, Dissolved Inorganic Carbon (mg/L):	NR	Lab, Total Organic Carbon (mg/L):	NR
Total Nitrogen (mg/L as N)	NR	Acidity to 4.5 (mg/L CaCO3)	NR	Acidity to 8.3 (mg/L CaCO3)	NR
As(III) (ug/L)	NR	As(V) (ug/L)	NR	Total Susp Solids (mg/L)	NR

Sample Condition:

Notes

Field Remarks: SHALLOW GW 048 * WELL LOCATED IN STREAM BED 200 FT S OF COUNTY ROAD *

Lab Remarks:

Explanation: **mg/L** = milligrams per Liter; **µg/L** = micrograms per Liter; **ft** = feet; **NR** = No Reading in GWIC

Qualifiers: **A** = Hydride atomic absorption; **E** = Estimated due to interference; **H** = Exceeded holding time; **J** = Estimated quantity above detection limit but below reporting limit; **K** = Na+K combined; **N** = Spiked sample recovery not within control limits; **P** = Preserved sample; **S** = Method of standard additions; **U** = Undetected quantity below detection limit; ***** = Duplicate analysis not within control limits; ****** = Sum of Dissolved Constituents is the sum of major cations (Na, Ca, K, Mg, Mn, Fe) and anions (HCO_3, CO_3, SO_4, Cl, SiO_2, NO_3, F) in mg/L. Total Dissolved Solids is reported as equivalent weight of evaporation residue.

Exhibit 3: Freshwater Analysis- Fox Hills

ASTRO-CHEM LAB, INC.

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

WATER ANALYSIS REPORT

Sample Number: 24-03145 Date of Analysis: 9/4/2024
Company: White Rock Oil & Gas
City: Plano State: TX
Well Number: Candee 1 WSW
Sample Source: Sampled By: Trevor Vannatta
Date Received: 9/4/2024 Date Sampled: 9/3/2024
Temperature: Pressure:
Formation: Depth:
Location: Section: Twp: Rng: County:
Distribution: Distribution List

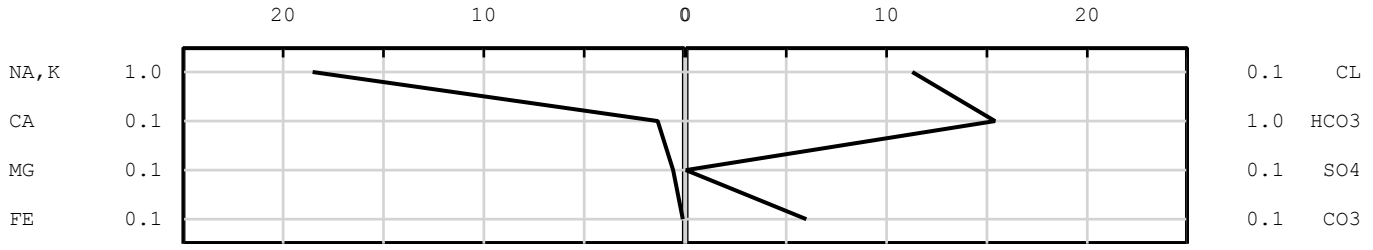
Resistivity @ 77 °F	5.464 Ohm-Meters	pH	8.31
Specific Gravity @ 77 °F	1.000	H_2S	Negative
Total Dissolved Solids (Calculated)	1433 mg/L	1433 ppm	
Sodium Chloride (Calculated)	66 mg/L	66 ppm	

CATION	MEQ/L	mg/L	ANION	MEQ/L	mg/L
CALCIUM	0.1	3	CHLORIDE	1.1	40
MAGNESIUM	0.1	1	CARBONATE	0.6	18
SODIUM	18.5	426	BICARBONATE	15.4	940
IRON	0.0	0.2	SULFATE	0.0	0
CHROMIUM	0.0	0.0	NITRATE	0.0	0
BARIUM	0.0	1.0			
POTASSIUM	0.1	4			
STRONTIUM	0.0	0.1			
ZINC	0.0	0.0			

ADDITIONAL ANALYSIS

Total Iron	1.19 mg/l	Total Manganese	0.10 mg/l
Conductivity	1830 µmhos/cm		

WATER ANALYSIS PATTERN



Remarks: Analyzed By: L. Covarrubias

ASTRO-CHEM LAB, INC.

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

SCALING INDEX

Sample Number: 24-03145 Date of Analysis: 9/4/2024
Company: White Rock Oil & Gas
City: Plano State: TX
Well Number: Candee 1 WSW
Sample Source: Sampled By: Trevor Vannatta
Date Received: 9/4/2024 Date Sampled: 9/3/2024
Temperature: Pressure:
Formation: Depth:
Location: Section: Twp: Rng: County:
Distribution: Distribution List

	KSP	Sat. Index	mg/L PPT
BaSO4	0.0000000004	0.390	0.00
SrSO4	0.0000017494	0.590	0.00
CaSO4	0.0002852253	1.300	0.00
CaCO3	0.0000006886	0.100	3.04

Ionic Strength	0.018 (Molal)	Ionic Strength	0.018 (Molar)
Index Calculated At	70 deg F	And	50 PSI

	KSP	Sat. Index	mg/L PPT
BaSO4	0.0000000004	0.390	0.00
SrSO4	0.0000004622	0.010	0.00
CaSO4	0.0002852253	1.300	0.00
CaCO3	0.0000000186	1.670	7.44

Ionic Strength	0.018 (Molal)	Ionic Strength	0.018 (Molar)
Index Calculated At	250 deg F	And	5000 PSI

Exhibit 4:
Cross Section Analysis

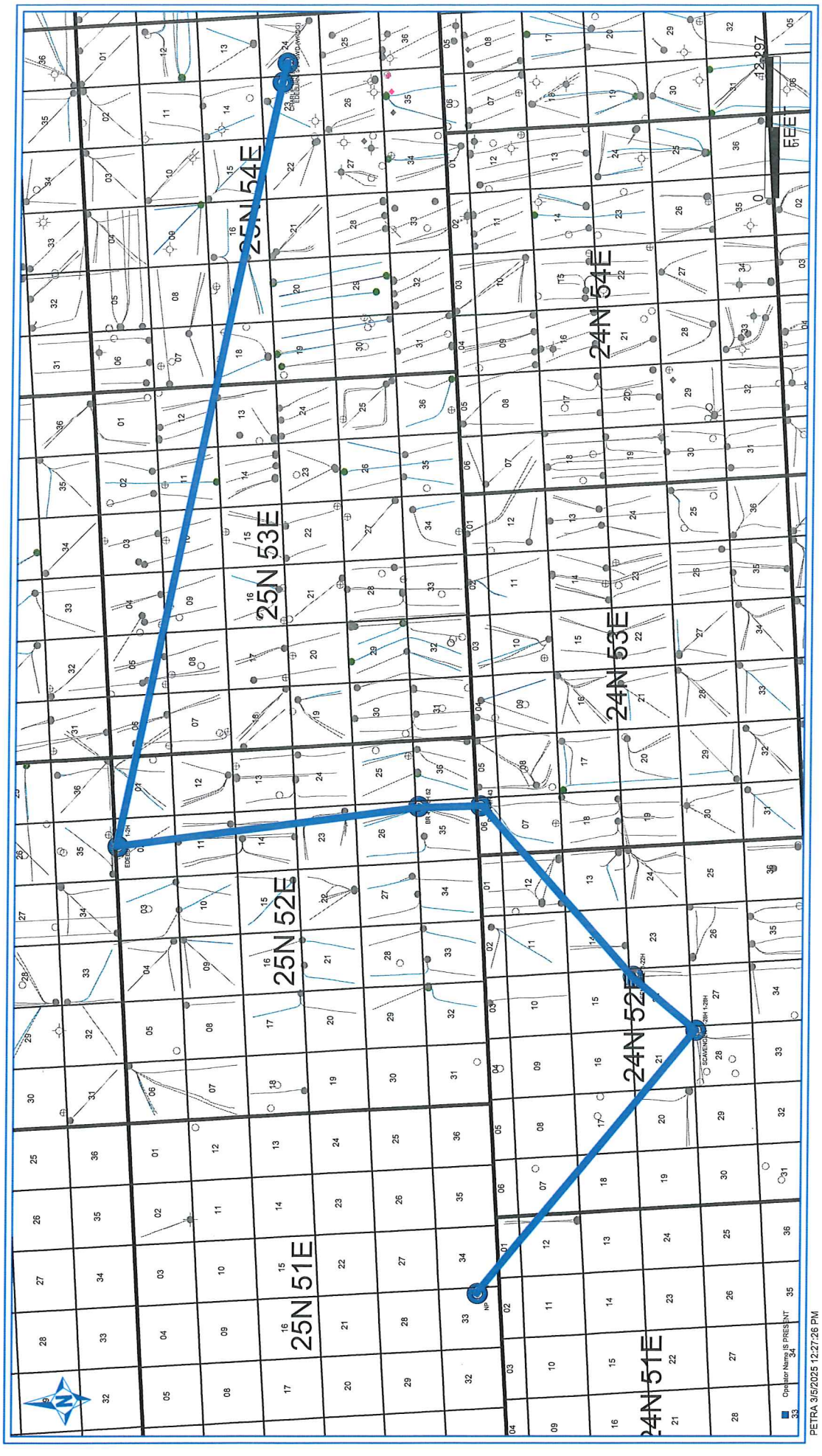


Exhibit 4: Cross Section Analysis

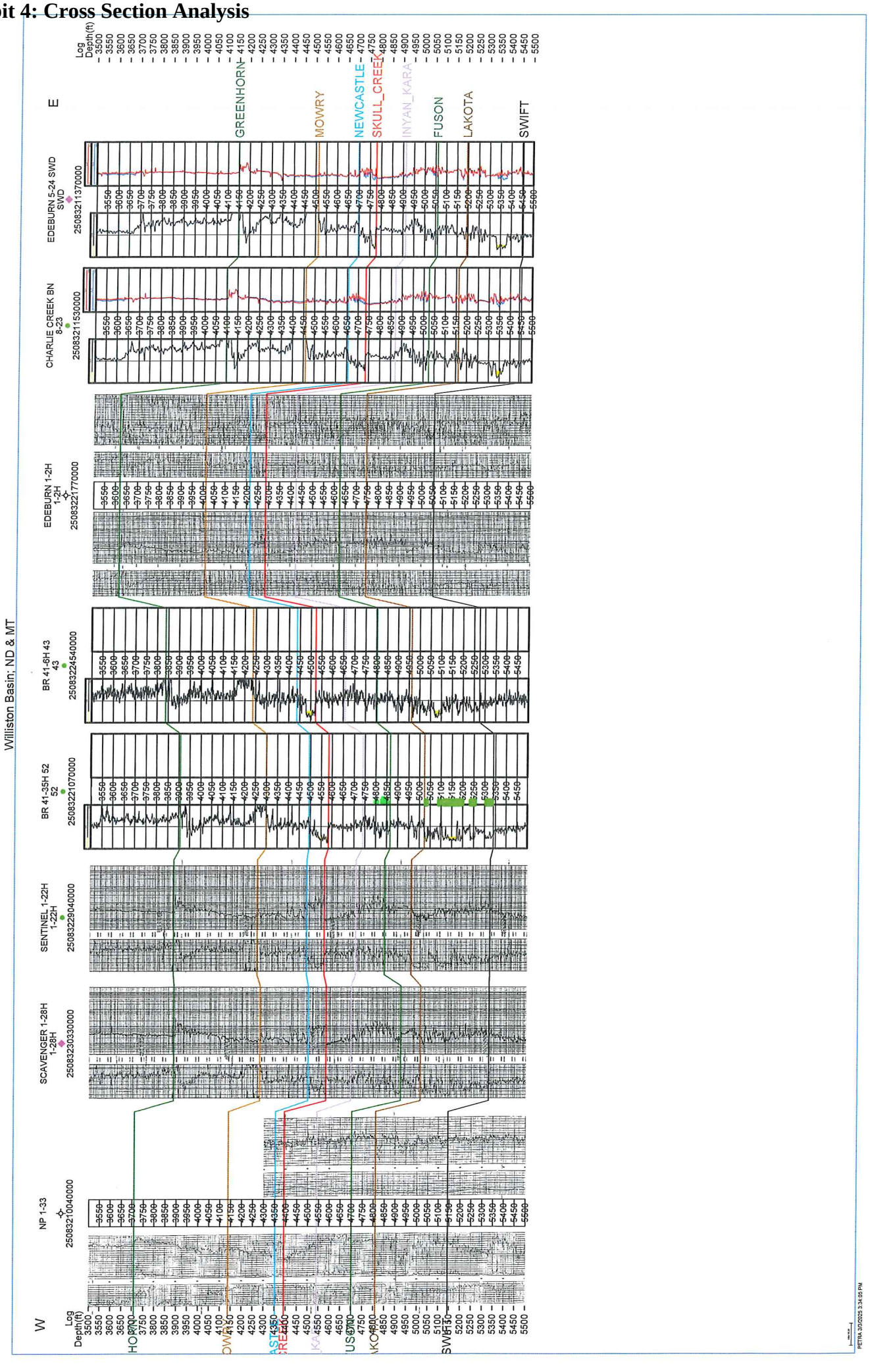
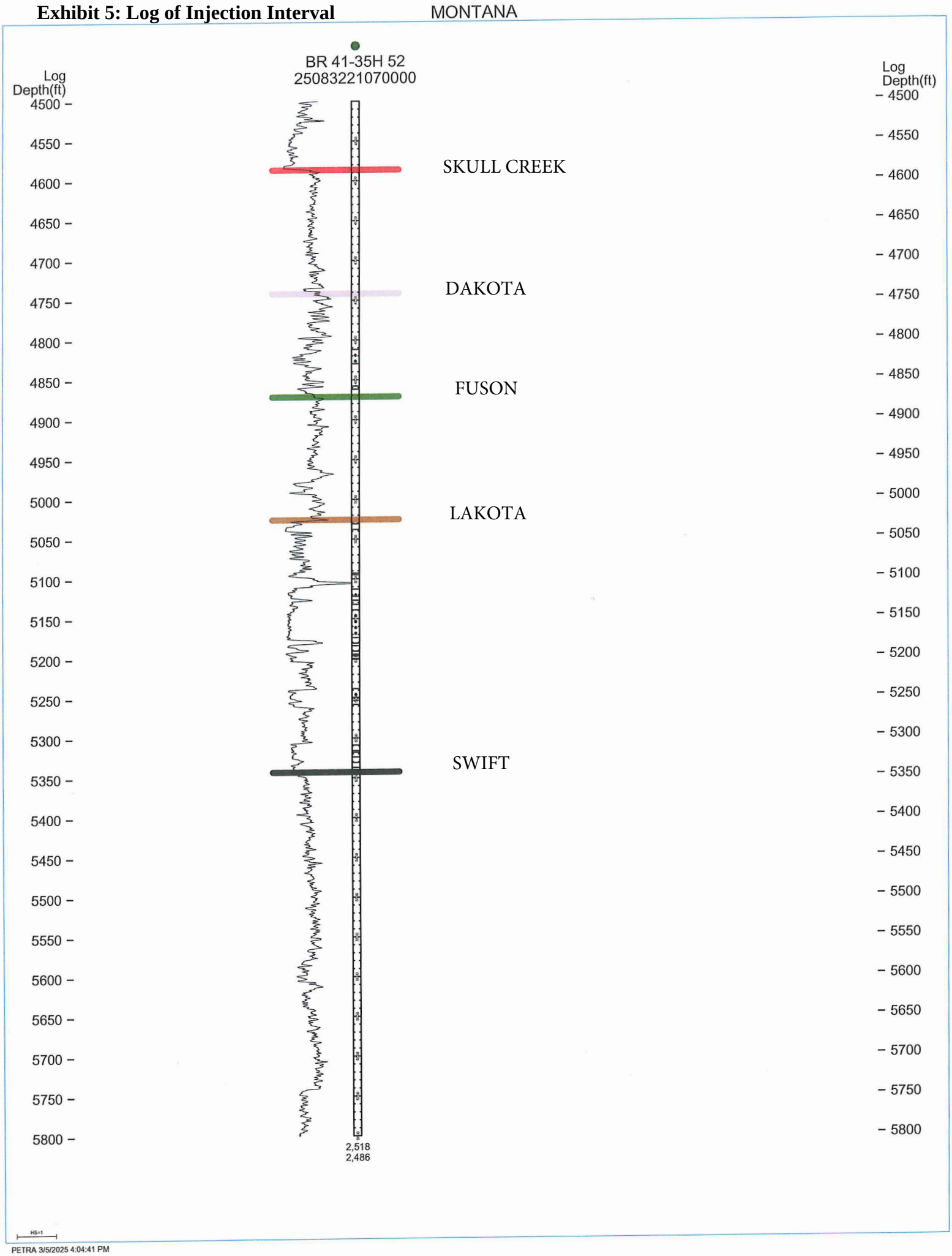


Exhibit 5: Log of Injection Interval



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: White Rock Oil & Gas
Project: Drinking Water Contaminants
Lab ID: B24091147-001
Client Sample ID: Charlie Creek GN 8-23

Report Date: 09/17/24
Collection Date: 09/12/24 10:35
DateReceived: 09/12/24
Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	7.1	s.u.	H	0.1		A4500-H B	09/13/24 11:40 / njp
pH Measurement Temp	16.7	°C		1.0		A4500-H B	09/13/24 11:40 / njp
Conductivity @ 25 C	15200	umhos/cm		5		A2510 B	09/13/24 11:40 / njp
Solids, Total Dissolved TDS @ 180 C	11500	mg/L		200		A2540 C	09/13/24 12:27 / bmm
NUTRIENTS							
Nitrogen, Nitrite as N	0.02	mg/L		0.01		E353.2	09/12/24 17:34 / krt

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
H - Analysis performed past the method holding time
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: White Rock Oil & Gas
Project: Not Indicated
Lab ID: B24082375-001
Client Sample ID: Charlie Creek 8-23-Lakota

Report Date: 08/28/24
Collection Date: 08/18/24
DateReceived: 08/23/24
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	7.7	s.u.	H	0.1		A4500-H B	08/28/24 15:36 / njp
pH Measurement Temp	17.7	°C	H	1.0		A4500-H B	08/28/24 15:36 / njp
Conductivity @ 25 C	18800	umhos/cm		5		A2510 B	08/23/24 13:42 / pmw
Solids, Total Dissolved TDS @ 180 C	11600	mg/L		500		A2540 C	08/23/24 14:10 / bmm

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
H - Analysis performed past the method holding time
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

5300

Exhibit 6: Water Analysis of Injection Interval

ASTRO-CHEM LAB, INC.

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

WATER ANALYSIS REPORT

SAMPLE NUMBER W-12-3802 DATE OF ANALYSIS 5-15-12

COMPANY Slawson

CITY Denver STATE CO

WELL NAME AND/OR NUMBER Verschoot 1-19 SWD

DATE RECEIVED 5-14-12 DST NUMBER

SAMPLE SOURCE Wellhead

LOCATION OF SEC. TWN. RANGE COUNTY Richland

FORMATION Dakota DEPTH

DISTRIBUTION Don Smith
Sam Thome

RESISTIVITY @ 77°F = 0.446 Ohm-Meters pH = 7.13

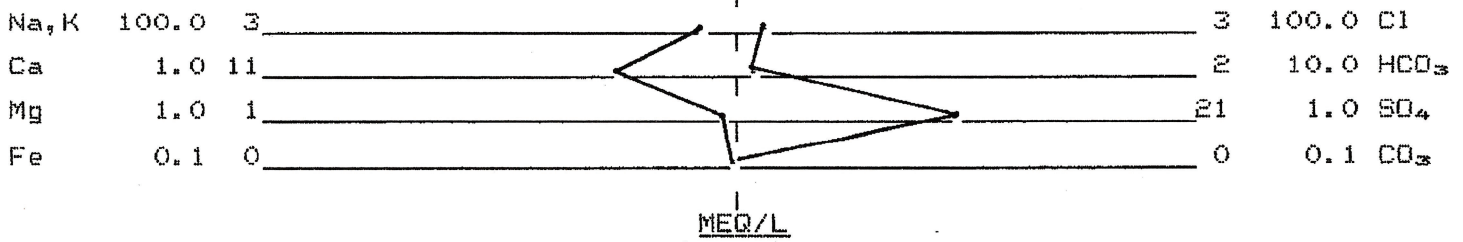
SPECIFIC GRAVITY @ 77°F = 1.010 H_2S = Negative

TOTAL DISSOLVED SOLIDS (CALCULATED) = 20346 mg/L (20144 ppm)

SODIUM CHLORIDE (CALCULATED) = 16837 mg/L (16670 ppm)

CATION	MEQ/L	mg/L	ANION	MEQ/L	mg/L
CALCIUM	11.0	218	CHLORIDE	288.0	10210
MAGNESIUM	1.0	11	CARBONATE	0.0	0
SODIUM	319.7	7350	BICARBONATE	22.2	1355
IRON	0.0	0.6	SULFATE	20.8	999
CHROMIUM	0.0	0.0	NITRATE	0.1	5
BARIUM	0.0	0.0			
POTASSIUM	4.7	182			
STRONTIUM	0.2	9.0			
ZINC	0.2	5.4			

WATER ANALYSIS PATTERN



REMARKS

ANALYZED BY: C. Jungels

Exhibit 6: Water Analysis of Injection Interval

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: White Rock Oil & Gas
Project: Not Indicated
Lab ID: B24082375-001
Client Sample ID: Charlie Creek 8-23-Lakota

Report Date: 08/28/24
Collection Date: 08/18/24
DateReceived: 08/23/24
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	7.7	s.u.	H	0.1		A4500-H B	08/28/24 15:36 / njp
pH Measurement Temp	17.7	°C	H	1.0		A4500-H B	08/28/24 15:36 / njp
Conductivity @ 25 C	18800	umhos/cm		5		A2510 B	08/23/24 13:42 / pmw
Solids, Total Dissolved TDS @ 180 C	11600	mg/L		500		A2540 C	08/23/24 14:10 / bmm

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
H - Analysis performed past the method holding time
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

Exhibit 6: Water Analysis of Injection Interval

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: White Rock Oil & Gas
Project: Drinking Water Contaminants
Lab ID: B24091147-001
Client Sample ID: Charlie Creek GN 8-23

Report Date: 09/17/24
Collection Date: 09/12/24 10:35
DateReceived: 09/12/24
Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	7.1	s.u.	H	0.1		A4500-H B	09/13/24 11:40 / njp
pH Measurement Temp	16.7	°C		1.0		A4500-H B	09/13/24 11:40 / njp
Conductivity @ 25 C	15200	umhos/cm		5		A2510 B	09/13/24 11:40 / njp
Solids, Total Dissolved TDS @ 180 C	11500	mg/L		200		A2540 C	09/13/24 12:27 / bmm
NUTRIENTS							
Nitrogen, Nitrite as N	0.02	mg/L		0.01		E353.2	09/12/24 17:34 / krt

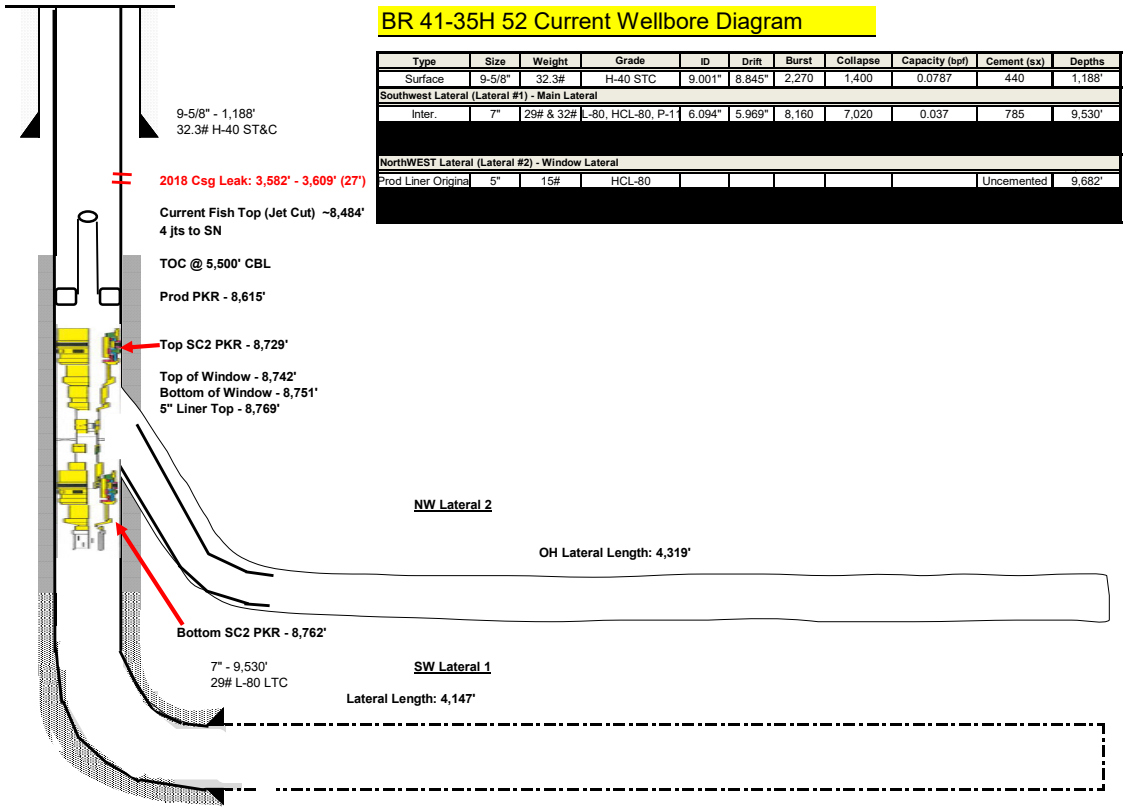
Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
H - Analysis performed past the method holding time
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

Exhibit 7: Current Wellbore Diagram

WHITE ROCK OIL & GAS

BR 41-35H 52 Current Wellbore Diagram

Type	Size	Weight	Grade	ID	Drift	Burst	Collapse	Capacity (bpf)	Cement (sx)	Depths
Surface	9-5/8"	32.3#	H-40 STC	9.001"	8.845"	2,270	1,400	0.0787	440	1,188'
Southwest Lateral (Lateral #1) - Main Lateral										
Inter.	7"	29# & 32#	L-80, HCL-80, P-11	6.094"	5.969"	8,160	7,020	0.037	785	9,530'
NorthWEST Lateral (Lateral #2) - Window Lateral										
Prod Liner Origina	5"	15#	HCL-80						Uncemented	9,682'



Surface Casing & Cement Detail:

Size	Weight	Grade	Threads	Depth, ft
9-5/8"	32.3 #/ft	H-40	STC	0' - 1,187'
9-5/8"	Insert & Guide Shoe		STC	1,187' - 1,188'
Cemented With 440 Sacks				

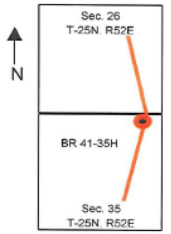
Production Casing & Cement Detail:

Size	Weight	Grade	Threads	Depth, ft
7"	29 #/ft	HCL-80	LTC	0' - 5,970'
7"	32 #/ft	HCL-80	LTC	5,970' - 6,903'
7"	32 #/ft	P-110	LTC	6,903' - 7,914'
7"	29 #/ft	HCL-80	LTC	7,914' - 9,463'
7	Float Collar	N-80	LTC	9,463' - 9,465'
7"	29 #/ft	HCL-80	LTC	9,465' - 9,529'
7"	Guide Shoe	N-80	LTC	9,529' - 9,530'
Cemented With 785 Sacks. CBL TOC = 5,500'				

Production Liner Detail:

Size	Weight	Grade	Threads	Depth
5"	15 #/ft	HCL-80	STL	8,769' - 9,644'
5"	Guide Shoe			9,644' - 9,682'

Aerial View

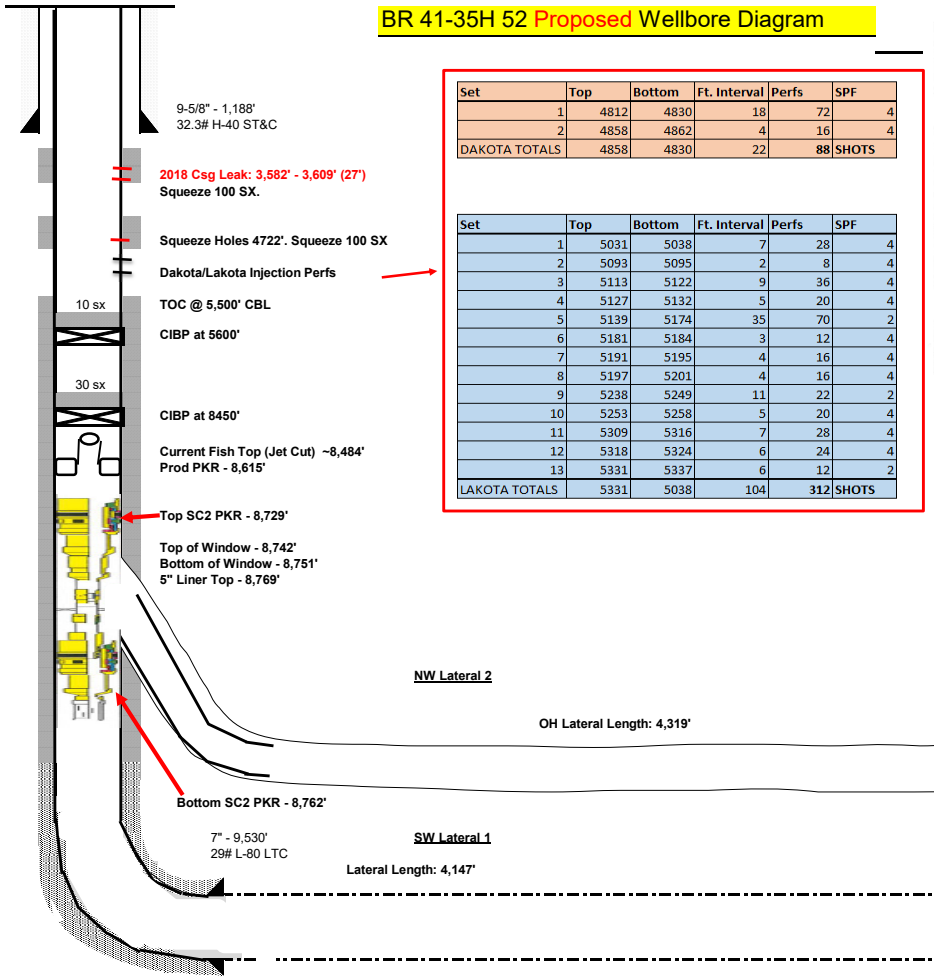


NW Lateral 2 DEPTH:	**14,001' MD**
5" Liner Shoe Depth	**9,682' MD**
Avg. TVD	**9,185' TVD**

SW. Lateral 1 DEPTH:	**13,677" MD**
Avg. TVD	**9,238' TVD**

WHITE ROCK OIL & GAS

BR 41-35H 52 Proposed Wellbore Diagram



Set	Top	Bottom	Ft. Interval	Perfs	SPF
1	4812	4830	18	72	4
2	4858	4862	4	16	4
DAKOTA TOTALS	4858	4830	22	88	SHOTS

Set	Top	Bottom	Ft. Interval	Perfs	SPF
1	5031	5038	7	28	4
2	5093	5095	2	8	4
3	5113	5122	9	36	4
4	5127	5132	5	20	4
5	5139	5174	35	70	2
6	5181	5184	3	12	4
7	5191	5195	4	16	4
8	5197	5201	4	16	4
9	5238	5249	11	22	2
10	5253	5258	5	20	4
11	5309	5316	7	28	4
12	5318	5324	6	24	4
13	5331	5337	6	12	2
LAKOTA TOTALS	5331	5038	104	312	SHOTS

Surface Casing & Cement Detail:

Size	Weight	Grade	Threads	Depth, ft
9-5/8"	32.3 #/ft	H-40	STC	0' - 1,187'
9-5/8"	Insert & Guide Shoe		STC	1,187' - 1,188'
Cemented With 440 Sacks				

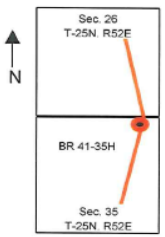
Production Casing & Cement Detail:

Size	Weight	Grade	Threads	Depth, ft
7"	29 #/ft	HCL-80	LTC	0' - 5,970'
7"	32 #/ft	HCL-80	LTC	5,970' - 6,903'
7"	32 #/ft	P-110	LTC	6,903' - 7,914'
7"	29 #/ft	HCL-80	LTC	7,914' - 9,463'
7	Float Collar	N-80	LTC	9,463' - 9,465'
7"	29 #/ft	HCL-80	LTC	9,465' - 9,529'
7"	Guide Shoe	N-80	LTC	9,529' - 9,530'
Cemented With 785 Sacks. CBL TOC = 5,500'				

Production Liner Detail:

Size	Weight	Grade	Threads	Depth
5"	15 #/ft	HCL-80	STL	8,769' - 9,644'
5"	Guide Shoe			9,644' - 9,682'

Aerial View



NW Lateral 2 DEPTH:	**14,001' MD**
5" Liner Shoe Depth	**9,682' MD**
Avg. TVD	**9,185' TVD**

SW. Lateral 1 DEPTH:	**13,677" MD**
Avg. TVD	**9,238' TVD**

Prepared by Tanner Butler
Operations Engineer

Exhibit 9: Bakken Water Analysis

DownHole SAT(tm)

WATER CHEMISTRY

White Rock Oil & Gas

BR 41-33H 52
Treater

Report Date: 10-04-2024
Sample #: 0
Sampled: 09-25-2024 at 0000
Sample ID: 24-03634

CATIONS		ANIONS	
Calcium (as Ca)	3808	Chloride (as Cl)	69984
Magnesium (as Mg)	122.00	Sulfate (as SO_4)	348.00
Barium (as Ba)	11.30	Bromine (as Br)	0.00
Strontium (as Sr)	120.00	Dissolved CO_2 (as CO_2)	875.00
Sodium (as Na)	37500	Bicarbonate (as HCO_3)	195.00
Potassium (as K)	3250	Carbonate (as CO_3)	0.00
Lithium (as Li)	0.00	Oxalic acid (as C_2O_4)	0.00
Ammonia (as NH_3)	0.00	Silica (as SiO_2)	0.00
Aluminum (as Al)	0.00	Phosphate(as PO_4)	0.00
Iron (as Fe)	53.40	H_2S (as H_2S)	0.00
Manganese (as Mn)	3.60	Fluoride (as F)	0.00
Zinc (as Zn)	1.10	Nitrate (as NO_3)	0.00
Lead (as Pb)	0.00	Boron (as B)	0.00

PARAMETERS		BOUND IONS	TOTAL	FREE
Calculated T.D.S.(mg/L)	121721	Calcium	4094	4016
Molar Conductivity(umhos/cm)	135537	Barium	12.15	12.15
Resistivity(megohm-cm)	7.38e-6	Carbonate	1.93	0.0348
Sp.Gr.(g/mL)	1.075	Phosphate	0.00	0.00
Pressure(psia)	14.70	Sulfate	374.10	165.58
pCO_2(atm)	0.0506			
pH_2S(atm)	0.00			
Temperature (^oF)	81.00	**CORROSION RATE PREDICTION**		
pH	6.20	CO_2 - H_2S Rate(mpy)		0.159

FRENCH CREEK SOFTWARE, INC.
1220 VALLEY FORGE ROAD, SUITE 21, VALLEY FORGE, PA 19460

DownHole SAT(tm)

DEPOSITION POTENTIAL INDICATORS

White Rock Oil & Gas | BR 41-33H 52
Treater

Report Date: 10-04-2024 | Sampled: 09-25-2024 at 0000
Sample #: 0 | Sample ID: 24-03634

SATURATION RATIO as IAP/Ksp	
Calcite ($CaCO_3$)	0.70
Aragonite ($CaCO_3$)	0.64
Witherite ($BaCO_3$)	0.00
Strontianite ($SrCO_3$)	0.04
Calcium oxalate (CaC_2O_4)	0.00
Magnesite ($MgCO_3$)	0.02
Anhydrite ($CaSO_4$)	0.15
Gypsum ($CaSO_4*2H_2O$)	0.20
Barite ($BaSO_4$)	19.87
Celestite ($SrSO_4$)	0.18
Fluorite (CaF_2)	0.00
Calcium phosphate	0.00
Hydroxyapatite	0.00
Silica (SiO_2)	0.00
Brucite ($Mg(OH)_2$)	< 0.001
Magnesium silicate	0.00
Iron hydroxide ($Fe(OH)_3$)	13.10
Strengite ($FePO_4*2H_2O$)	0.00
Siderite ($FeCO_3$)	9.35
Halite (NaCl)	0.05
Thenardite ($Na2SO_4$)	0.00
Iron sulfide (FeS)	0.00

FREE ION MOMENTARY EXCESS (ppm)	
Calcite ($CaCO_3$)	-0.0250
Aragonite ($CaCO_3$)	-0.0323
Witherite ($BaCO_3$)	-63.71
Strontianite ($SrCO_3$)	-2.32
Calcium oxalate (CaC_2O_4)	-0.0441
Magnesite ($MgCO_3$)	-1.98
Anhydrite ($CaSO_4$)	-1246
Gypsum ($CaSO_4*2H_2O$)	-965.35
Barite ($BaSO_4$)	19.55
Celestite ($SrSO_4$)	-404.05
Fluorite (CaF_2)	-11.86
Calcium phosphate	>-0.001
Hydroxyapatite	-988.99
Silica (SiO_2)	-103.92
Brucite ($Mg(OH)_2$)	-2.75
Magnesium silicate	-298.88
Iron hydroxide ($Fe(OH)_3$)	< 0.001
Strengite ($FePO_4*2H_2O$)	>-0.001
Siderite ($FeCO_3$)	0.0601
Halite (NaCl)	-395810
Thenardite ($Na2SO_4$)	-225098
Iron sulfide (FeS)	-0.402

SIMPLE INDICES	
Langelier	0.151
Ryznar	5.90
Puckorius	0.00
Larson-Skold Index	613.91
Stiff Davis Index	-0.447
Oddo-Tomson	-0.942

CARBONATE PRECIPITATION POTENTIAL (ppm)	
Calcite ($CaCO_3$)	-81.88
Aragonite ($CaCO_3$)	-137.30
Witherite ($BaCO_3$)	-268.49
Strontianite ($SrCO_3$)	-192.53
Magnesite ($MgCO_3$)	-232.41
Siderite ($FeCO_3$)	13.45

OPERATING CONDITIONS

Temperature (^oF)	81.00
Time(mins)	3.00

FRENCH CREEK SOFTWARE, INC.
1220 VALLEY FORGE ROAD, SUITE 21, VALLEY FORGE, PA 19460

DownHole SAT™ Water Analysis Report

SYSTEM IDENTIFICATION

White Rock Oil & Gas
BR 41-33H 52

Treater

Sample ID#: 0
ID 24-03634

Sample Date: 09-25-2024 at 0000
Report Date: 10-04-2024

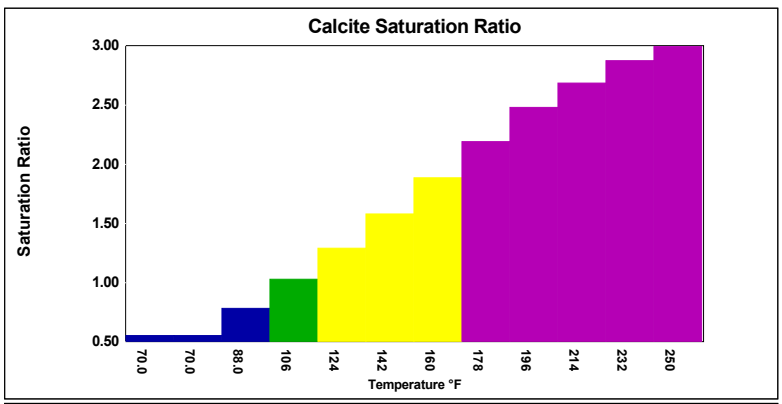
WATER CHEMISTRY

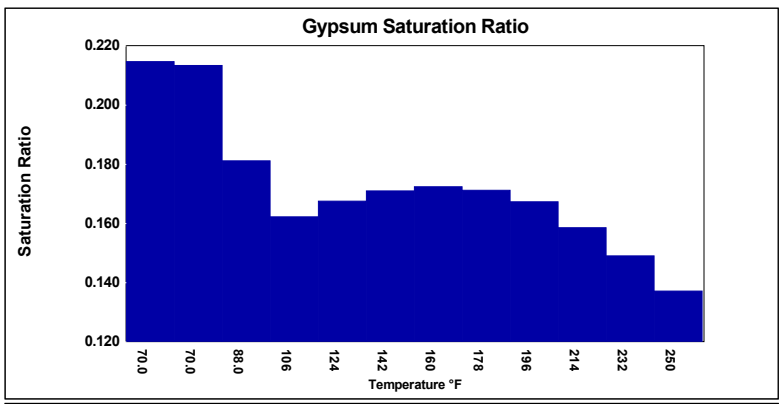
CATIONS(mg/L)		ANIONS(mg/L)	
Calcium(as Ca)	3808	Chloride(as Cl)	69984
Magnesium(as Mg)	122.00	Sulfate(as SO_4)	348.00
Barium(as Ba)	11.30	Bromine(as Br)	0.00
Strontium(as Sr)	120.00	Dissolved CO_2(as CO_2)	875.00
Sodium(as Na)	37500	Bicarbonate(as HCO_3)	195.00
Potassium(as K)	3250	Carbonate(as CO_3)	0.00
Lithium(as Li)	0.00	Silica(as SiO_2)	0.00
Iron(as Fe)	53.40	Phosphate(as PO_4)	0.00
Ammonia(as NH_3)	0.00	H_2S (as H_2S)	0.00
Aluminum(as Al)	0.00	Fluoride(as F)	0.00
Manganese(as Mn)	3.60	Nitrate(as NO_3)	0.00
Zinc(as Zn)	1.10	Boron(as B)	0.00
Lead(as Pb)	0.00		
PARAMETERS			
Temperature(°F)	81.00	Sample pH	6.20
Conductivity(umhos/cm)	135537	Sp.Gr.(g/mL)	1.075
Resistivity(megohm-cm)	7.38e-6	T.D.S.(mg/L)	121721

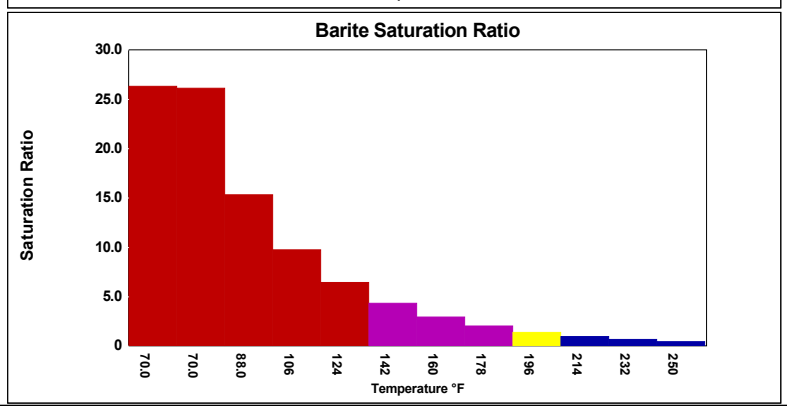
SCALE AND CORROSION POTENTIAL

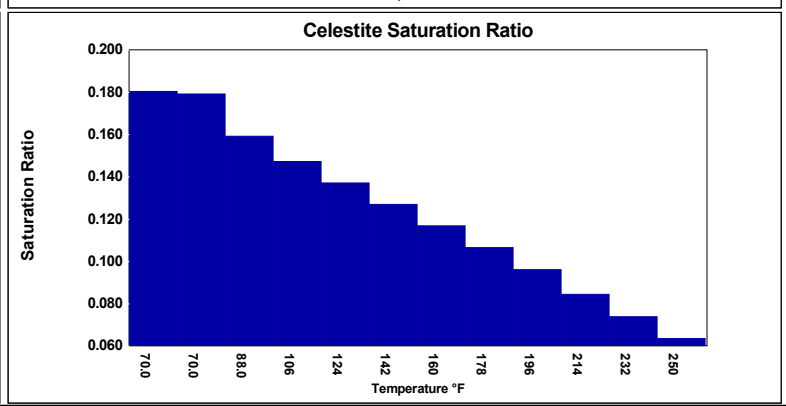
Temp.	Press.	Calcite		Anhydrite		Gypsum		Barite		Celestite		Siderite		Mackinawite	
(°F)	(psia)	$CaCO_3$		$CaSO_4$		$CaSO_4*2H_2O$		$BaSO_4$		$SrSO_4$		$FeCO_3$		FeS	
70.00	14.70	0.554	-0.0401	0.146	-1270	0.215	-924.15	26.29	19.82	0.180	-400.55	6.85	0.0492	0.00	-0.389
70.00	50.00	0.552	-0.0405	0.145	-1278	0.213	-929.80	26.11	19.81	0.179	-402.58	6.85	0.0493	0.00	-0.389
88.00	545.00	0.783	-0.0187	0.134	-1319	0.181	-1068	15.32	19.23	0.159	-432.68	11.45	0.0714	0.00	-0.411
106.00	1040.00	1.03	0.00221	0.133	-1266	0.162	-1151	9.73	18.41	0.147	-449.47	17.51	0.0933	0.00	-0.436
124.00	1535.00	1.29	0.0236	0.140	-1144	0.167	-1062	6.42	17.26	0.137	-464.68	25.46	0.117	0.00	-0.465
142.00	2030.00	1.58	0.0467	0.155	-979.45	0.171	-996.11	4.31	15.62	0.127	-482.79	35.89	0.143	0.00	-0.499
160.00	2525.00	1.88	0.0717	0.180	-799.34	0.172	-951.96	2.93	13.29	0.117	-504.62	49.18	0.173	0.00	-0.538
178.00	3020.00	2.19	0.0987	0.216	-623.21	0.171	-928.22	2.01	10.03	0.107	-531.21	65.60	0.207	0.00	-0.584
196.00	3515.00	2.48	0.128	0.266	-464.03	0.167	-924.78	1.39	5.47	0.0961	-563.77	85.27	0.246	0.00	-0.638
214.00	4010.00	2.68	0.160	0.330	-340.90	0.158	-973.52	0.943	-1.18	0.0844	-615.38	106.31	0.292	0.00	-0.724
232.00	4505.00	2.87	0.194	0.420	-228.06	0.149	-1020	0.648	-10.14	0.0739	-667.16	130.97	0.341	0.00	-0.807
250.00	5000.00	2.99	0.229	0.540	-138.86	0.137	-1095	0.443	-22.56	0.0635	-731.17	156.92	0.396	0.00	-0.910
		xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L

Saturation Ratios (xSAT) are the ratio of ion activity to solubility, e.g. $\{Ca\}\{CO_3\}/K_{sp}$. pCO_2 (atm) is the partial pressure of CO_2 in the gas phase.
mg/L scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.









DownHole SAT™ Water Analysis Report

French Creek Software

SYSTEM IDENTIFICATION

White Rock Oil & Gas
BR 41-33H 52

Treater

Sample ID#: 0
ID 24-03634

Sample Date: 09-25-2024 at 0000
Report Date: 10-04-2024

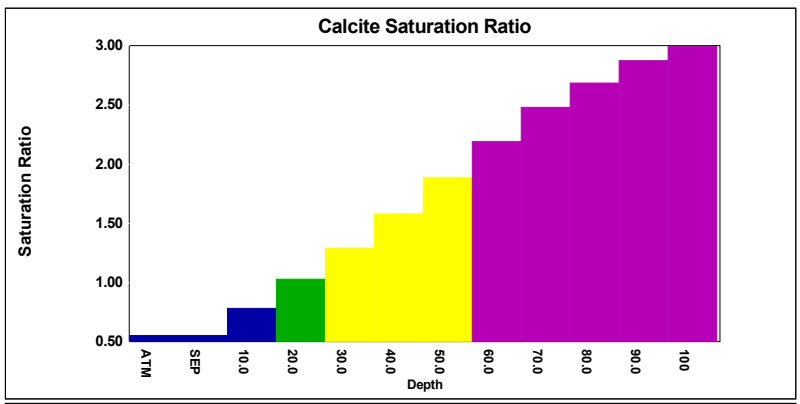
WATER CHEMISTRY

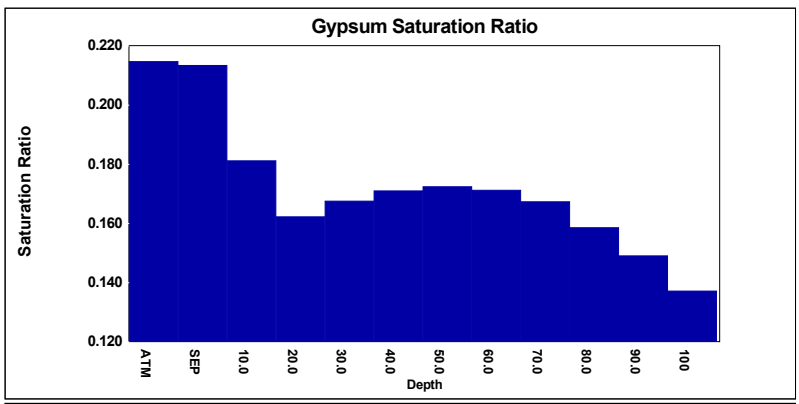
CATIONS(mg/L)		ANIONS(mg/L)	
Calcium(as Ca)	3808	Chloride(as Cl)	69984
Magnesium(as Mg)	122.00	Sulfate(as SO_4)	348.00
Barium(as Ba)	11.30	Bromine(as Br)	0.00
Strontium(as Sr)	120.00	Dissolved CO_2(as CO_2)	875.00
Sodium(as Na)	37500	Bicarbonate(as HCO_3)	195.00
Potassium(as K)	3250	Carbonate(as CO_3)	0.00
Lithium(as Li)	0.00	Silica(as SiO_2)	0.00
Iron(as Fe)	53.40	Phosphate(as PO_4)	0.00
Ammonia(as NH_3)	0.00	H_2S (as H_2S)	0.00
Aluminum(as Al)	0.00	Fluoride(as F)	0.00
Manganese(as Mn)	3.60	Nitrate(as NO_3)	0.00
Zinc(as Zn)	1.10	Boron(as B)	0.00
Lead(as Pb)	0.00		
PARAMETERS			
Temperature(^{0}F)	81.00	Sample pH	6.20
Conductivity(umhos/cm)	135537	Sp.Gr.(g/mL)	1.075
Resistivity(megohm-cm)	7.38e-6	T.D.S.(mg/L)	121721

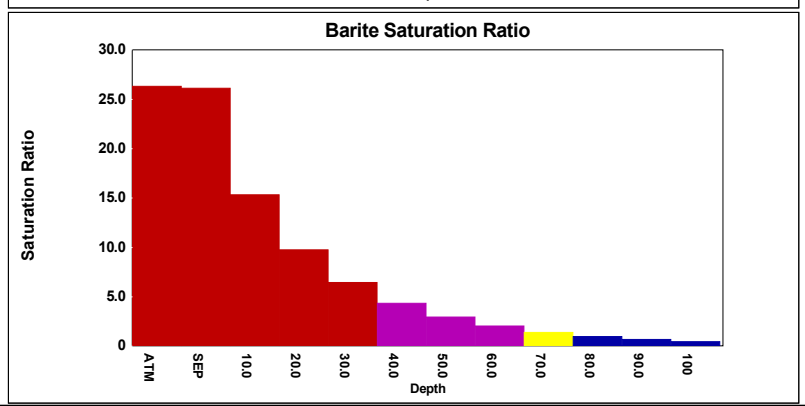
SCALE AND CORROSION POTENTIAL

Depth	Temp. (^{0}F)	Press. (psia)	Calcite $CaCO_3$		Anhydrite $CaSO_4$		Gypsum $CaSO_4*2H_2O$		Barite $BaSO_4$		Celestite $SrSO_4$		Siderite $FeCO_3$		Mackinawite FeS	
After Flash	70.0	14.7	0.554	-0.0401	0.146	-1270	0.215	-924.15	26.29	19.82	0.180	-400.55	6.85	0.0492	0.00	-0.389
At Separator	70.0	50.0	0.552	-0.0405	0.145	-1278	0.213	-929.80	26.11	19.81	0.179	-402.58	6.85	0.0493	0.00	-0.389
10	88.0	545.0	0.783	-0.0187	0.134	-1319	0.181	-1068	15.32	19.23	0.159	-432.68	11.45	0.0714	0.00	-0.411
20	106.0	1040	1.03	0.00221	0.133	-1266	0.162	-1151	9.73	18.41	0.147	-449.47	17.51	0.0933	0.00	-0.436
30	124.0	1535	1.29	0.0236	0.140	-1144	0.167	-1062	6.42	17.26	0.137	-464.68	25.46	0.117	0.00	-0.465
40	142.0	2030	1.58	0.0467	0.155	-979.45	0.171	-996.11	4.31	15.62	0.127	-482.79	35.89	0.143	0.00	-0.499
50	160.0	2525	1.88	0.0717	0.180	-799.34	0.172	-951.96	2.93	13.29	0.117	-504.62	49.18	0.173	0.00	-0.538
60	178.0	3020	2.19	0.0987	0.216	-623.21	0.171	-928.22	2.01	10.03	0.107	-531.21	65.60	0.207	0.00	-0.584
70	196.0	3515	2.48	0.128	0.266	-464.03	0.167	-924.78	1.39	5.47	0.0961	-563.77	85.27	0.246	0.00	-0.638
80	214.0	4010	2.68	0.160	0.330	-340.90	0.158	-973.52	0.943	-1.18	0.0844	-615.38	106.31	0.292	0.00	-0.724
90	232.0	4505	2.87	0.194	0.420	-228.06	0.149	-1020	0.648	-10.14	0.0739	-667.16	130.97	0.341	0.00	-0.807
Bottom Hole	250.0	5000	2.99	0.229	0.540	-138.86	0.137	-1095	0.443	-22.56	0.0635	-731.17	156.92	0.396	0.00	-0.910
			xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L

Saturation Levels (xSAT) are the ratio of ion activity to solubility, e.g. $\{Ca\}\{CO_3\}/K_{sp}$. pCO_2 (atm) is the partial pressure of CO_2 in the gas phase.
mg/L scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.







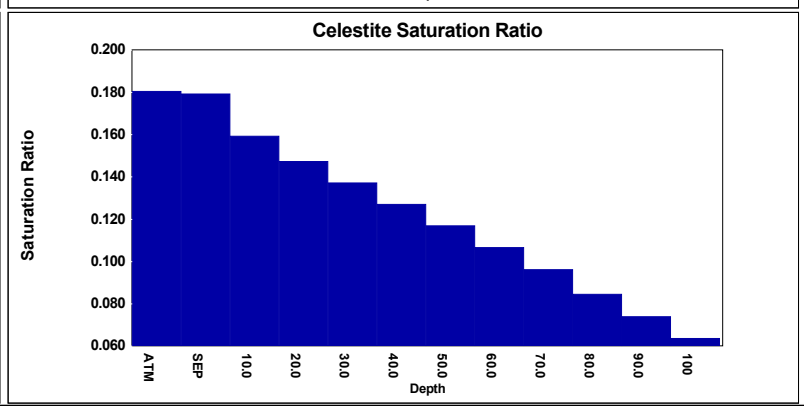


Exhibit 10. Surface Owners, Leased and Unleased Mineral Owners

Surface Owners

Surface Description	Name	Address
S26, T25 N, R52 E, SWNE, S1/2SW, SE1/4, S26, T25 N, R52 E, NWNW	THOMAS COLETTE LIV TR, THOMAS G COLETTE TRUSTEE	208 CHESTNUT AVE GELNDIVE, MONTANA 59330
S35, T25 N, R52 E, ALL	BOYD CANDEE	9119 ALGER COURT INVER GROVE HEIGHTS, MINNESOTA 55077
S25, T25 N, R52 E, ALL	PATTI A MCGINNIS	814 LINCOLN AVE SIDNEY, MONTANA 59270
Unknown	ERVIN GOSS	12947 CR 354 LAMBERT, MT 59243
Unknown	MARVIN GOSS	31427 HWY 201 RICHEY, MT 59259
Unknown	JAMES D GOSS	PO BOX 354 SIDNEY, MT 59270
T25 N, R52 E, N2NE, SENE, NENW, S2NW, N2SW LESS 12.68 AC HWY R/W, S36, T25 N, R52 E, ALLLESS 10.44 AC HWY R/W	STATE OF MONTANA	201 W Main Street Sidney, Montana 59270-4035

Current Operator, Lease owner of nonoperated lease, Mineral owner of nonoperated lease

Name	Address
ELLIOTT FAMILY TRUST	15 BUCCANEER CT FORT WORTH, TX 76179
RALPH MADDOX FAMILY TRUST	250 W NOTTINGHAM #400 SAN ANOTNIO, TX 78209
MADDOX FAMILY TRUST	250 W NOTTINGHAM #400 SAN ANOTNIO, TX 78209
W H CARDWELL FAMILY TRUST	PO BOX 330 MT ENTERPRISE, TX 75681
PETROVAUGHN INC.	315 WASHINGTON AVENUE SAND SPRINGS, OK 74063
DEER SIBLINGS 2005 MINERAL MGMNT TR	PO BOX 3480 OMAHA, NE 68103
DORCHESTER MINERALS OPERATING, LP	3838 OAK LAWN AVE STE 300 DALLAS, TX 75219
ORRION ENERGY LLC	600 17TH STREET STE 2800 SOUTH DENVER, CO 80202
TODD SLAWSON TRUST	245 N WACO STE 400 WICHITA, KS 67202
BURCH HOLDINGS MANAGEMENT CO LLC	PO BOX 3480 OMAHA, NE 68103
BIGSKY OIL & GAS LLC	201 EAST LAS OLAS BLVD STE 1650 FORT LAUDERDALE, FL 33301
BRENDALL ENERGY LLC	8310 S VALLEY HWY STE 350 ENGLEWOOD, CO 80112
White Rock Oil & Gas Partners II LP	5810 Tennyson Parkway, Suite 500 Plano, TX 75024

Name	Address
White Rock Oil & Gas Partners II-B LP	5810 Tennyson Parkway, Suite 500 Plano, TX 75024
White Rock Oil & Gas GP II LLC	5810 Tennyson Parkway, Suite 500 Plano, TX 75024
DENISE B WEST	710 RHAPSODY RD SEDONA, AZ 86336
White Rock Energy LLC	5810 Tennyson Parkway, Suite 500 Plano, TX 75024
DOGWOOD HILL FARMS LLC	1882 KEEZLETOWN RD HARRISONBURG, VA 22802
DOUGLAS S KING	108 WOODLAND HILLS DR ALEDO, TX 76008
JBM OIL & GAS LLC	427 PARK ST CHARLOTTESVILLE, VA 22902
MELBBY GAS LLC	14861 N SCOTTSDALE RD #115 SCOTTSDALE, AZ 85254
MIKE LOGAN OIL PROPERTIES LLC	18952 E BATES AVE AURORA, CO 80013
ROBERT & GAIL M BOGLE TRUST	1736 LA CORONILLA DR SANTA BARBARA, CA 93109
STEVEN C WEST	1636 MORNING STONE DR PRESCOTT, AZ 86305
STUART F CHASE	645 PLANTATION CT CHARLOTTESVILLE, VA 22903
DERWOOD S CHASE JR GRAND TRUST	350 OLD IVY WAY STE 100 CHARLOTTESVILLE, VA 22903
PATRICIA A BRANSON REV TR	350 HIDDEN HILLS LN ORTONVILLE, MI 48462

Name	Address
MORNINGSTAR OPERATING LLC	400 W 7TH STREET FORT WORTH, TX 76102
SLAWSON EXPLORATION COMPANY, INC	245 N WACO STE 400 WICHITA, KS 67202
JOHN BRUCE BRANSON REVOCABLE TRUST	27778 ROAD P DOLORES, CO 81323
ALAMEDA ENERGY INC	245 N WACO STE 400 WICHITA, KS 67202
SHERINGHAM CORPORATION	PO BOX 10 COLLINSVILLE, TX 76233
SLAWSON RESOURCES CO	245 N WACO STE 400 WICHITA, KS 67202
E H GUNTER FAMILY TRUST	8425 KENDALL CT ARVADA, CO 80003

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S25, T25 N, R52 E, ALL	PATTI A MCGINNIS	814 LINCOLN AVE SIDNEY, MT 59270
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S25, T25 N, R52 E, ALL	JAMES D GOSS	PO BOX 354 SIDNEY, MT 59270
T25 N, R52 E, N2NE, SENE, NENW, S2NW, N2SW LESS 12.68 AC HWY R/W, S36, T25 N, R52 E, ALLLESS 10.44 AC HWY R/W	STATE OF MONTANA	201 W Main Street Sidney, MT 59270-4035

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Name	Address
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SLAWSON RESOURCES CO	245 N WACO STE 400 WICHITA, KS 67202
E H GUNTER FAMILY TRUST	8425 KENDALL CT ARVADA, CO 80003

Exhibit 11. Notice to operator, lease owner in nonop lease, mineral owner, surface owners.

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

APPLICATION OF WHITE ROCK OIL AND GAS, LLC. FOR AN UNDERGROUND INJECTION CONTROL (UIC) PERMIT TO CONVERT BR 41-35H 52 WELL, 250' FNL, 500' FEL, NENE, SEC 35 T25N, R52E, TO AN INJECTION WELL FOR THE PURPOSE OF SALTWATER DISPOSAL WITHIN THE ELM COULEE FIELD.	NOTICE OF APPLICATION FOR UIC PERMIT FOR INJECTION WELL

DATE: May 7, 2025

TO: Current Operator, Lease owner of nonoperated lease, Mineral owner of nonoperated lease, and surface owners within the area of review listed in UIC Application

RE Application for Underground Injection Permit

Ladies and Gentlemen,

WHITE ROCK OIL AND GAS, LLC. at 5810 Tennyson Pkwy, Suite 500, Plano, TX 75024, has applied for a permit to convert BR 41-35H 52 well, 250' FNL, 500' FEL, NENE, Sec 35, T25N, R52E, Richland County, MT to a saltwater disposal well. This letter is being sent in accordance with the Montana Board of Oil and Gas Conservation, Underground Injection Control Rules of Montana (ARM), Title 36, Chapter 22. You have been identified as a Current Operator, Lease owner of nonoperated lease, Mineral owner of nonoperated lease, and/or surface owner.

The application will be heard by the Montana Board of Oil and Gas Conservation at its June 12, 2025 hearing beginning at 9:00 AM in the Montana Board of Oil and Gas Hearing Room at 2535 St. John's Avenue, Billings, Montana. A copy of the complete application is on file with the Montana Board of Oil and Gas Conservation, 2535 St. John's Avenue, Billings, MT, 59102. If you have any questions concerning the application, please contact Ms. Shawna Bonini, Operations Engineer, White Rock Oil and Gas, 6602 Wagon Trail, Billings, MT 59106.

Sincerely,

Shawna Bonini, PE
Operations Engineer
White Rock Oil and Gas, LLC.
6602 Wagon Trail
Billings, MT 59106
Cell: 406-690-0068
sbonini@whiterockog.com

Exhibit 12. Affidavit of Notification

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

APPLICATION OF WHITE ROCK OIL AND GAS, LLC. FOR AN UNDERGROUND INJECTION CONTROL (UIC) PERMIT TO CONVERT BR 41-35H 52 WELL, 250' FNL, 500' FEL, NENE, SEC 35 T25N, R52E, TO AN INJECTION WELL FOR THE PURPOSE OF SALTWATER DISPOSAL WITHIN THE ELM COULEE FIELD.	AFFIDAVIT OF NOTIFICATION

DATE: May 7, 2025

STATE OF MONTANA)
) SS.
COUNTY OF YELLOWSTONE)

Shawna Bonini, being duly sworn, deposes, and says:

That Notice advising WHITE ROCK OIL AND GAS, LLC. application for UIC Permit in the captioned matter, in the form attached Exhibit 12 was mailed to the Current Operators, Lease owners of nonoperated lease, Mineral owners of nonoperated lease, and surface owners within the area of review at the addresses show in Exhibit 11 attached, by mailing a true copy thereof this 7h Day of May, 2025, postage prepaid, First Class Mail. This Affidavit is given as evidence of compliance with ARM 36.22.1410.

Shawna Bonini

STATE OF MONTANA)
) SS.
COUNTY OF YELLOWSTONE)

Subscribed and sworn to before me this 7th Day of May 2025.

JUDY THIEL NOTARIAL SEAL STATE OF MONTANA

JUDY THIEL
NOTARY PUBLIC for the
State of Montana
Residing at Billings, Montana
My Commission Expires
September 21, 2026

Judy Thiel
Notary Public
State of Montana
My Commission Expires September 21, 2026