



July 6, 2026

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

Attn: Mr. John Gizicki
UIC Program Manager

RE: Application for UIC Permit and Authorization to Drill a Class II Injection Well
Location of proposed Disposal Well & Facility: Jaws SWD 1
Surface Hole Location: NE1/4 SE1/4, Section 5, Township 22N, Range 59E. P.M.M.
Bottom Hole Location: NW1/4 SE1/4, Section 5, Township 22N, Range 59E. P.M.M.
Richland County, Montana

Dear Mr. Gizicki,

MorningStar Operating, LLC (MorningStar) respectfully requests approval of an Underground Injection Control (UIC) permit for the referenced location and as described in the attached application. MorningStar has submitted an Application for Permit to Drill (APD) for the above reference well.

MorningStar has provided notice to the appropriate parties within ¼ mile area of review of the proposed well location and requests that the application be placed on the docket for the MBOGC hearing scheduled August 13, 2026. A public legal notice has been published in the Helena Independent Record and the Sidney Herald, publication dates July 2, 2026 and July 4, 2026, respectively, and evidence and proof of publication is included in the UIC Application Exhibits.

If you have any questions concerning the enclosed application, please contact Amy Doebele at (435) 789-1017 or to Erin Donovan with MorningStar Operating, LLC at (817) 334-7871.

Sincerely,

Brandon Neely
Vice President – Asset Development
MorningStar Operating LLC
bneely@txopartners.com
(817) 334-7892

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 **MORNINGSTAR OPERATING LLC**Address **400 7TH STREET**City **FORT WORTH** State **TX** Zip Code **76102**Telephone **817-334-7800** Fax

Location of well (1/4-1/4 section and footage measurements):

SHL: 2459' FSL 1845' FEL NESE SECTION 5, T22N, R59E

BHL: 1547' FSL 2128' FEL NWSE SECTION 5, T22N, R59E

Lease Name:

JAWS SWD

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

PRIVATE

Well Number:

1

Unit Agreement Name:

Field Name or Wildcat:

Township, Range, and Section:

T22N, R59E, SECTION 5

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

MORNINGSTAR OPERATING LLC RESPECTFULLY REQUEST APPROVAL TO DRILL & COMPLETE A DISPOSAL WELL AT THE REFERENCED LOCATION FOR INJECTION OF CLASS II E&P WASTE. NOTICES HAS BEEN PROVIDED TO PARTIES WITHIN 1/4 MILE AREA OF REVIEW OF THE PROPOSED WELL. AN APPLICATION FOR HEARING ON THE MONTANA BOARD OF OIL & GAS CONSERVATION DOCKET HAS BEEN REQUESTED FOR AUGUST 13, 2026.

BOARD USE ONLY

Approved _____

Date

Name

Title

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

07/06/2026

Date

Signed (Agent)

Holly Wood, Senior Regulatory Analyst

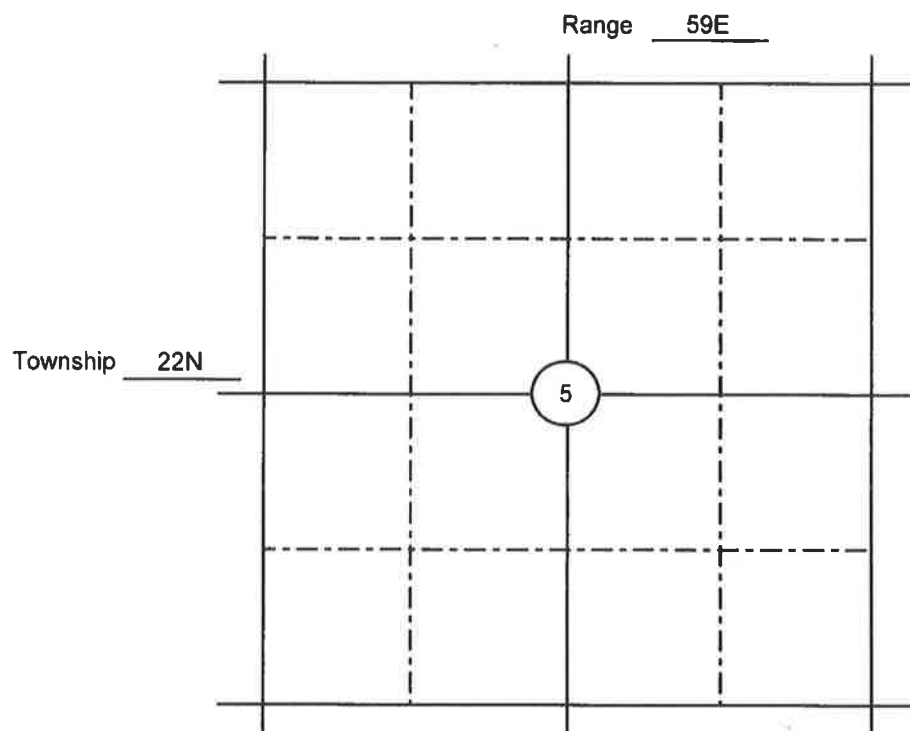
Print Name and Title

Telephone: 817-344-8088

SUPPLEMENTAL INFORMATION

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

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



BOARD USE ONLY

CONDITIONS OF APPROVAL

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

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



MORNINGSTAR
OPERATING

Underground Injection Control Application

Jaws 1 SWD

Section 5 of T22N-R59E

Richland County, Montana

Board of Oil and Gas Conservation

Of the State of Montana

Docket No: TBD

August 13, 2026



Underground Injection Control (UIC) Permit Application

Jaws 1 SWD Injection

The following report and justification are submitted in support of the application by MorningStar Operating, LLC to permit the drilling and completion of the Jaws 1 SWD for the purpose of water injection into the Dakota/Lakota, 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 Jaws 1 SWD well is herein proposed for drilling and completion as a water injection well within the Wildcat, Richland Field in Richland County, Montana as described below. Exhibits 1 and 2 show the surface location and a circle of a quarter (1/4) mile or 1,320 feet radius representing the area of review (AOR) for this well at the SHL, along the wellbore, and the BHL.

Well Name	SHL Footage Calls	Section Calls
Jaws 1 SWD	2459' FSL, 845' FEL	NESE of Sec 5 of T22N R59E

1 (b) Location and Mechanical Condition of Wells within a Quarter Mile (1,320 feet) Area of Review (AOR) which Penetrate Injection Zone:

There are currently no oil wells within the AOR. There are 4 planned horizontal Middle Bakken wells to be drilled from the same pad as the Jaws 1 SWD. The proposed Middle Bakken wells will have 7-inch casing through the proposed disposal zone of the wellbores. Top of cement for the 4 locations will cover the proposed disposal zone, and a CBL will be run to confirm TOC on each.

Well Name	Target	Operator	Distance to Proposed Conversion (ft)
Hammerhead 1H	Middle Bakken	MorningStar	~250
Hammerhead 2H	Middle Bakken	MorningStar	~285
Hammerhead 3H	Middle Bakken	MorningStar	~320
Hammerhead 4H	Middle Bakken	MorningStar	~355

1 (c) Location of all pipelines which will be used to transport fluids to the well:

The Jaws 1 SWD surface facilities will be constructed on the same pad as 4 proposed Middle Bakken horizontal wells. Fluids from the 4 proposed locations will be transfer-lined to the Jaws 1 SWD.

When this occurs, the lines will be flushed with freshwater first and pressure tested prior to use. Meters will be assigned to all associated sites to verify shipment and injection water volumes are aligned. In addition, produced water from other Bakken MorningStar Operating wells may be delivered to the location by truck.



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

The Middle Bakken oil and gas zone is the producing formation within the ¼ mile AOR. The Middle Bakken produces at an approximate depth of 10,120' TVD within the AOR. Although not within the area of review, the closest wells with surface locations within ½ mile of the Jaws 1 SWD are described.

The Simonsen 44X-5 (SESE, Section 5 of T22N R59E), operated by Morningstar Operating, and is a producing well located 2100 feet south of the proposed SWD. The Simonsen 44X-5 was drilled in 2006 as a horizontal development in the Middle Bakken. Surface casing was set at 1562' MD and cemented with 515 sacks.

There is one producing well with a lateral penetrating the ½ mile area at around 10,120' TVD in the Middle Bakken, the Andersen 1-4H (SESE of Sec 4 of T22N R59E), operated by MorningStar Operating, whose surface hole is located 5514 feet to the east of the nearest point of the proposed SWD.

Fresh water well data was obtained from the Ground Water Information Center (MBMG Data Center) website <https://mbmggwic.mtech.edu/>. There are 14 freshwater wells which are active and 1 abandoned water well within the AOR of the proposed injector. See Exhibit 2 for their location.

Well Name	GWIC ID	Location	Use	Distance from Proposed SWD SH (ft)	Total Depth (ft)
H AND W RESTAURANT	35796	Sec 5, T22N, R59E 47.699133, -104.168023	Public Water Supply	1332	38
DAWLAND PROP. INC.	35797	Sec 5, T22N, R59E 47.693579, -104.176174	Domestic	2548	22
RUFFATO QUINTO	35800	Sec 5, T22N, R59E 47.694504, -104.166664	Domestic, Irrigation	430	39
THE DEPOT	35801	Sec 5, T22N, R59E 47.6959, -104.1696	Public Water Supply	934	41
FISHER LAND DEVELOP.	35802	Sec 5, T22N, R59E 47.69543, -104.17074	Unknown	1099	41
YOUNGKIN NICK	35806	Sec 5, T22N, R59E 47.689876, -104.17074	Industrial	2374	1220
PRICE ARLEN	122417	Sec 5, T22N, R59E 47.693116, -104.174137	Domestic	2140	40
ZE HACK JOHN	155725	Sec 5, T22N, R59E 47.690339, -104.174137	Domestic	2735	28.5
THE SUNRISE INN	165556	Sec 5, T22N, R59E 47.6951, -104.1702	Public Water Supply	985	38
TORGERSON RONALD AND ROBERT A	206106	Sec 5, T22N, R59E 47.693579, -104.173457	Domestic	1900	38



SUNRISE MOTEL	254900	Sec 5, T22N, R59E 47.6953, -104.1697	Commercial	847	43
SUNRISE MOTEL	254901	Sec 5, T22N, R59E 47.6947, -104.17	Commercial	971	43
B AND B RENTALS	258730	Sec 5, T22N, R59E 47.694504, -104.172099	Domestic	1487	35.5
B & B RENTALS	259050	Sec 5, T22N, R59E 47.694967, -104.164627	Domestic (abandoned)	485	37
MRS MORRIL	700595	Sec 5, T22N, R59E 47.6908, -104.1658	Domestic	1767	160

There is a very thin Glacial Till near the surface in this area, which normally does not produce much water.

There are Quaternary-aged gravel sediments with water production normally less than 50 feet from the surface. There have been several shallow water wells drilled for stock water, domestic, commercial, industrial, and public water supply use that appear to be in this zone within the ¼ mile AOR. There is a water quality sample taken at the Richland County Conservation District-Sid 1 well (GWIC ID 239138) in section 5 of T22N, R59E. Total dissolved solids for this water well located approximately half a mile NW of the Jaws 1 SWD were 685 ppm (see Exhibit 3 for full analysis).

There is an upper member of the Fort Union, the Tongue River, with water production normally less than 100 feet from the surface. There are no wells that appear to be in this zone within the AOR.

The Hell Creek and Fox Hills zones act as potential sources of freshwater as well. The depth to the Fox Hills-Lower Hell Creek Aquifer is approximately 1200 feet at the Jaws 1 SWD per mapping work by Larry Smith entitled "Depth to the Fox Hills-Lower Hell Creek Aquifer, Lower Yellowstone River Area" published in MBMG's GWAA- Montana Ground-Water Assessment Atlas (1-B-03), 1998. There is one well that produces from a member of the Fox Hills, the Colgate sandstone, within the ¼ AOR.

Any potential Underground Sources of Drinking Water (USDW) are protected from the proposed injection zone by surface casing set in the Jaws 1 SWD to a minimum depth of 1600' MD and cemented to surface. Subsequent intermediate 7-inch casing will also be set and cemented. A CBL will be run to document the TOC depth. 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:

DAKOTA AND LAKOTA SANDSTONE DESCRIPTION

The Jaws 1 SWD will be completed for disposal into the Dakota and Lakota formations. The Dakota/Lakota in this well is comprised of fine to medium grained sandstone deposited in a channel environment as part of the Cretaceous system.



Formation	Lithology	Est. TVD Top (ft)	Est. TVD Base (ft)	Est. TVT Net pay (ft)	Est. Pressure (PSI)	Est. Porosity
Dakota	Sandstone	5004	5440	76	2250	22%
Lakota	Sandstone	5440	5514	16	2400	22%

Depth and net pay for each of the proposed injection zones are estimated from the Cement Bond Log with Gamma Ray ran April 30, 2006, on the Simonsen 44X-5. The porosity is based on sonic log estimates from the Becker 8-4 (1 mile east). The porosity was derived from a sonic log curve calculated using a consolidated sandstone matrix. Formation pressure was estimated using a water gradient of 0.435 psi/ft.

The upper confining formation for the proposed injection zone is the Cretaceous Skull Creek formation. It is comprised of clastic, shallow marine deposits composed of medium-dark gray shales, calcareous, micaceous, and glauconitic in part, interbedded with siltstones. The Skull Creek is 150 feet thick in this area.

The lower confining formation for the proposed injection zone is the Jurassic Morrison, Swift, and Rierdon formations. The aforementioned formations lie unconformably immediately below the Lakota and are primarily made up of transgressive-regressive, clastic, shallow marine deposits composed of dark gray-green shales, slightly calcareous, dark gray-green, waxy shales and is commonly interbedded with glauconitic siltstones and sandstones with occasional carbonate packstones and grainstones. The lower confining interval is approximately 702 feet of impermeable rock facies.

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	Est. TVD Top (ft)	Est. TVD Base (ft)	Thickness (ft)
Skull Creek	Shale	4854	5004	150
Mrsn/Swft/Rrdn	Shale	5514	6216	702

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 zone to any USDW under any reasonable disposal conditions is considered low.

For proposed injection interval see Exhibit 4: Cross Section, Exhibit 5: Log of Injection Interval, and Exhibit 6: Water Analysis of Injection Intervals.

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

Although not within the ¼ mile AOR, the Simonsen 44X-5 is an active Middle Bakken horizontal, operated by MSO, within ½ mile of the proposed SWD. Surface casing was run to 1562' MD and cemented back to surface.



Also, not within the ¼ mile AOR, the Anderson1-4H is an active Middle Bakken horizontal, operated by MSO, with a portion of a lateral within ½ mile of the proposed SWD. Surface casing was run to 1826' MD and cemented back to surface.

1 (g) Open Hole Logs:

The Jaws 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 Jaws 1 SWD will be supplied to the MBOGC.

1 (h) Description of the Wellbore Construction:

MorningStar's proposed configuration of the wellbore is as indicated on Exhibit 7. The proposal will have surface casing run to +/- 1700' MD and cemented back to surface. This will be followed by a 7" intermediate casing run approximately 100 feet into the Dakota formation at +/- 5093' TVD/5094' MD in the curve and cemented to surface. Then an approximate 2,100-foot lateral will be drilled, and an uncemented 4.5" slotted liner will be run to TD at +/- 5450' TVD/7220' MD with a liner top at +/-5074' MD. Pressure testing of the wellbore will be conducted. Nickel plated packer and lined injection tubing will be utilized to mitigate corrosion and set within 100' of the Dakota top. Packer fluid will be circulated behind the injection string in the 4.5"x7" annulus to also protect from corrosion. A water sample will be collected for reservoir analysis.

The primary interval proposed for disposal will be the Dakota/Lakota. This interval will likely be treated with a 15% HCL stimulation with rock salt diverter. A water sample will be collected for reservoir analysis.

See Exhibit 8 for the proposed directional plan.

1 (i) Description of Injection Fluid:

The fluid to be injected will consist entirely of water produced from the Bakken formation from the shared-pad MorningStar wells. The anticipated injection volumes will be in the range of 3,000 to 10,000 BWPD. Actual injection rates may vary. Volumes will be determined by the injection capacity tested during the Step-Rate test. Exhibit 9 is a representative analysis of Bakken formation water chemistry. No incompatibilities are expected.

Surface injection pressures will not be allowed to exceed a maximum set by MBOGC. Using the EPA accepted fracture gradient of 0.733 psi/ft and the following equation, an estimated maximum injection pressure is as follows:

$$IP_{max} = (FG) \cdot (D_{top}) - (SG) \cdot (0.433) \cdot (D_{top})$$

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 = 1.17

Dtop = Depth at top of perforated interval of injection zone (ft) = 5004

The computed maximum injection pressure would be:

$$= (0.733) * (5004) - (1.17) * (0.433) * (5004) = \mathbf{1133 \text{ psi} = IP_{max}}$$

The computed maximum injection pressure for the Dakota/Lakota sand is 1133 psi. An injection step-rate test will be performed to determine the final injection pressures and volumes to ensure the formation parting pressure (i.e. fracture pressure) is not reached during injection operations.

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 lease hold and surface owners within the area of review for the proposed injection well are listed in Exhibit 10.

MorningStar Operating, 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 of Surface and Mineral Owners along with an example of the mailed notice is attached in Exhibit 11.

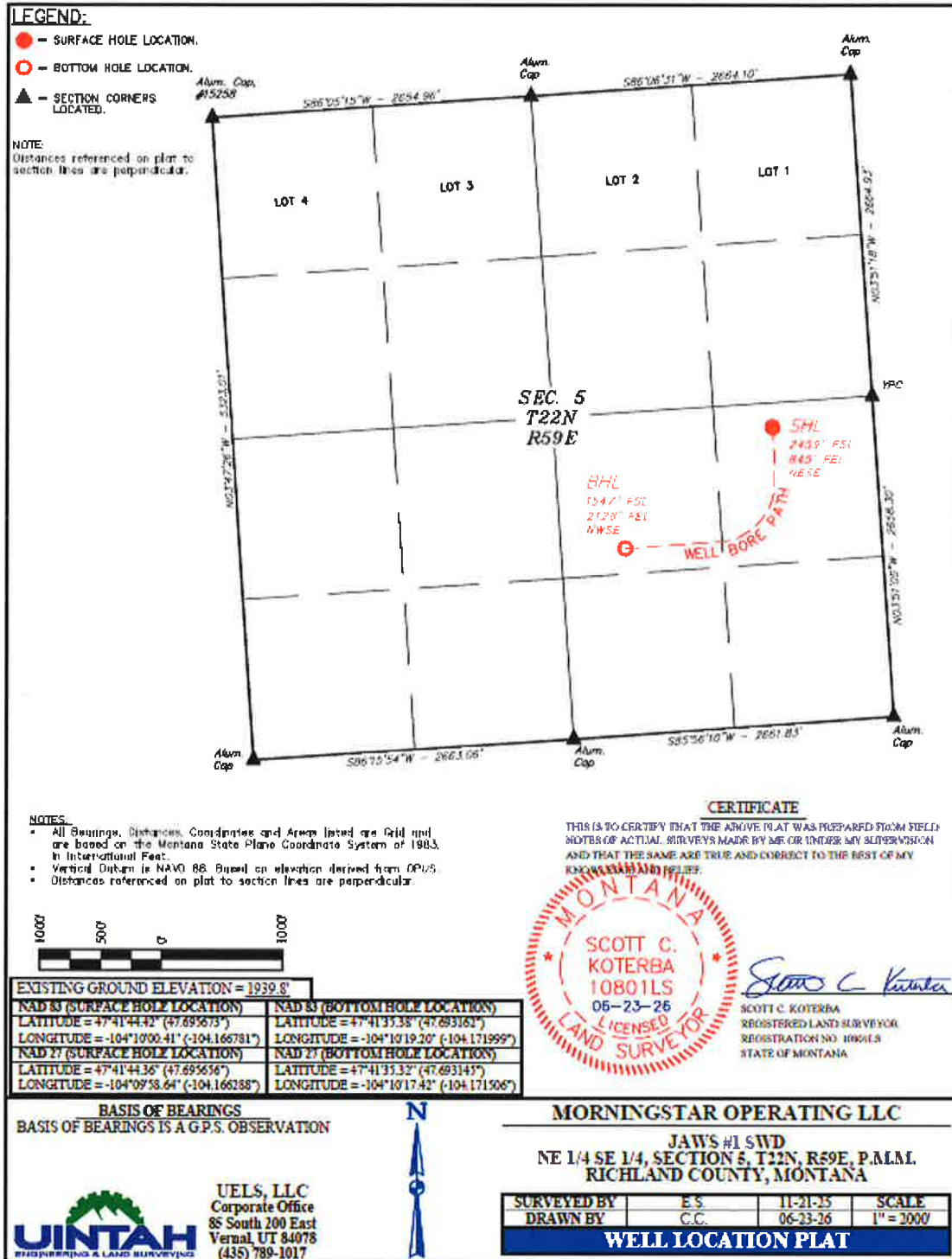


List of All Exhibits

- | | |
|-------------------|--|
| Exhibit 1 | Map of General Area |
| Exhibit 2 | Map of Fresh Water Wells within Area of Review (AOR) |
| Exhibit 3 | Fresh Water Sample Analysis |
| Exhibit 4 | Geologic Cross Section of the Proposed Injection and Confining Intervals |
| Exhibit 5 | Log of Injection Interval |
| Exhibit 6 | Water Analysis of Injection Interval |
| Exhibit 7 | Proposed Wellbore Diagram |
| Exhibit 8 | Directional Plan |
| Exhibit 9 | Bakken Water Analysis |
| Exhibit 10 | Surface and Mineral Owner List |
| Exhibit 11 | Affidavit of Notification to Surface and Mineral Owners |



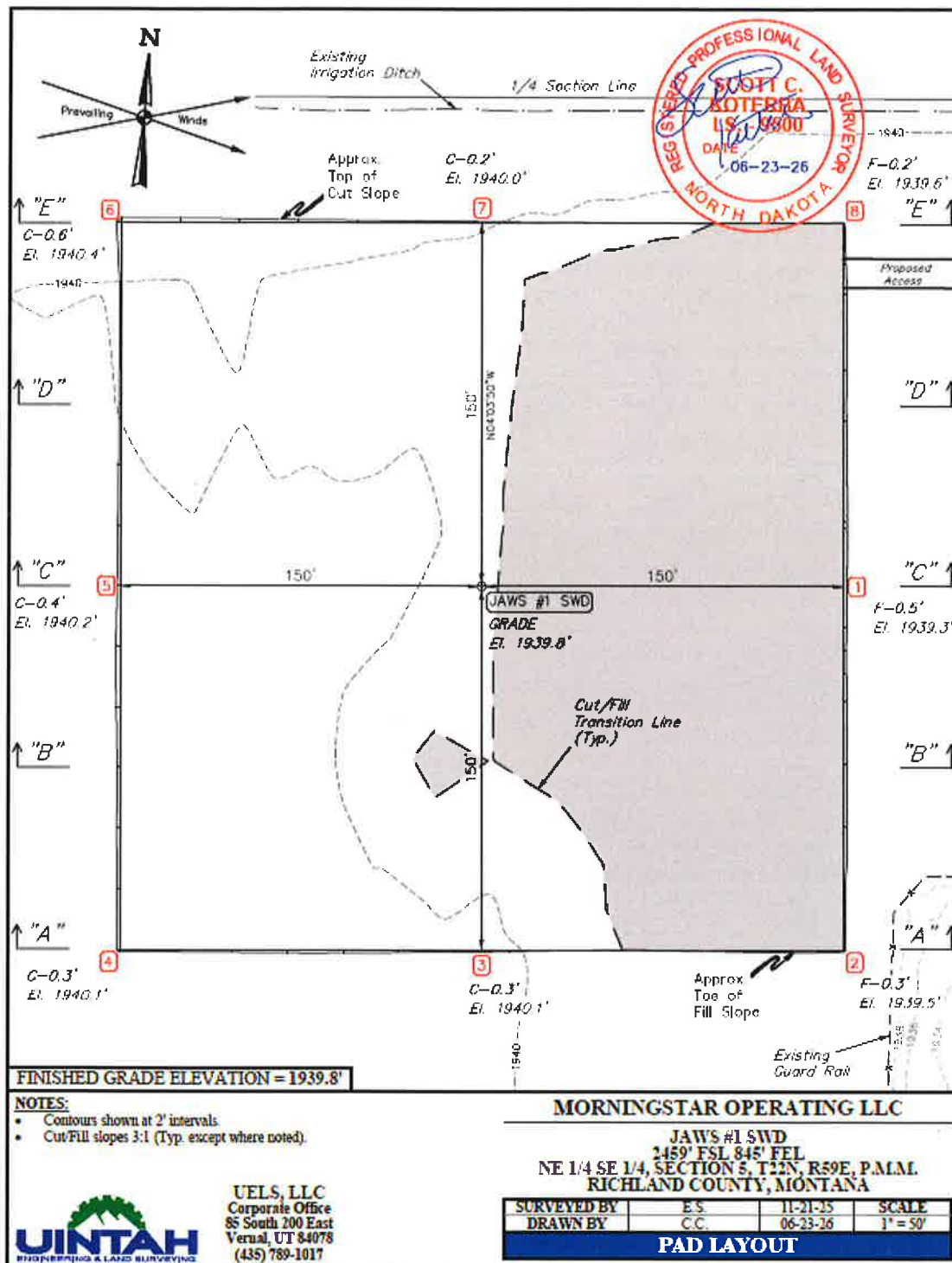
MORNINGSTAR
OPERATING



Map of General Area
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana



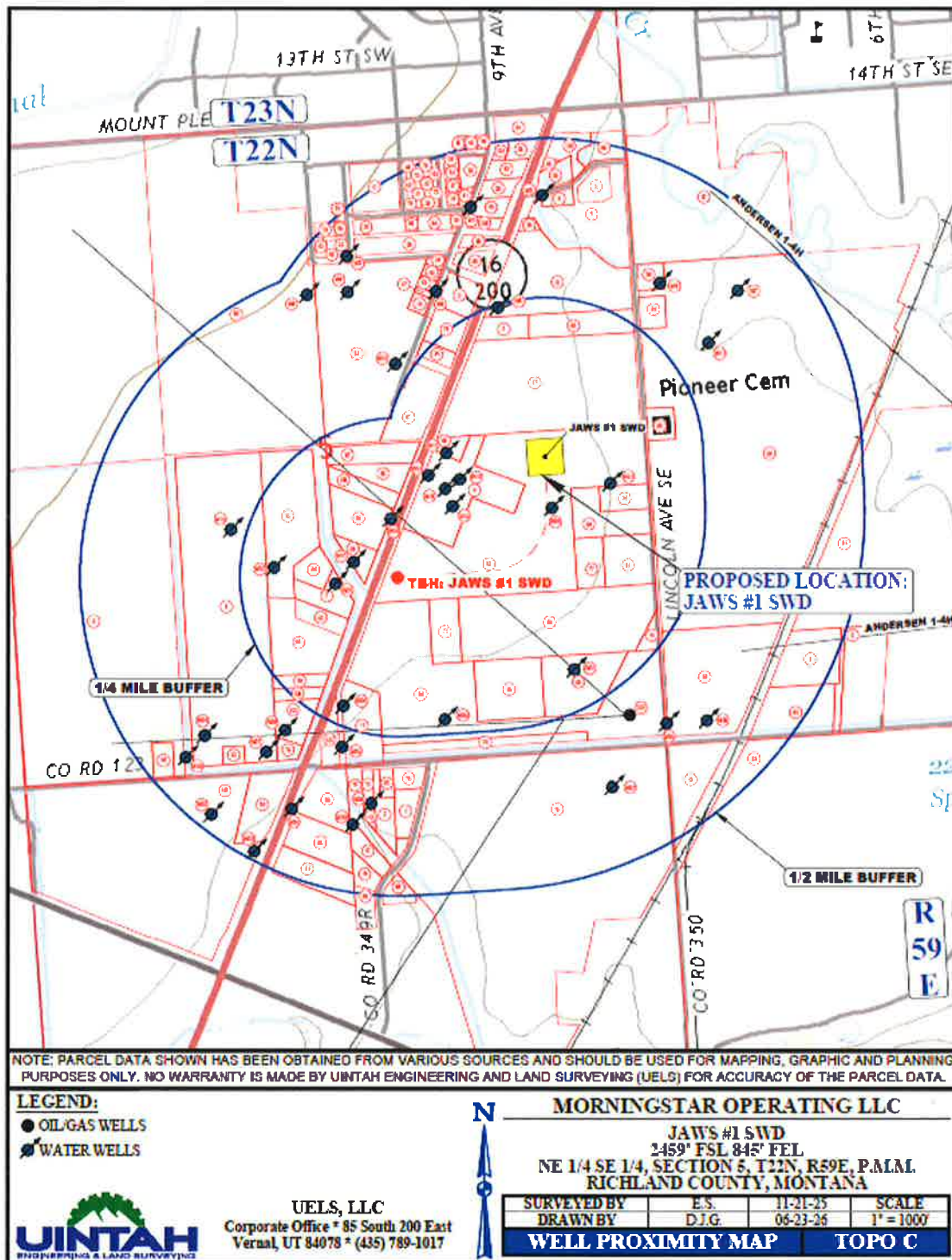
MORNINGSTAR
OPERATING



Map of Pad Layout
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana



MORNINGSTAR
OPERATING



Map of 1/4 mile AOR and Freshwater Wells
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana



EXISTING WELL TABLE					
#	EXISTING WELL	#	EXISTING WELL	#	EXISTING WELL
GG1	184050 DEPTH 35	W14	35802 DEPTH 41	W28	155728 DEPTH 28.5
W1	184050 DEPTH 35	W15	262172 DEPTH 75	W29	143650 DEPTH 36
W2	708281 DEPTH 46	W16	169266 DEPTH 38	W30	35808 DEPTH 120
W3	276136 DEPTH 37	W17	258106 DEPTH 38	W31	700846 DEPTH 387
W4	150833 DEPTH 47	W18	254920 DEPTH 35.9	W32	142676 DEPTH 48
W5	35704 DEPTH 38	W19	254821 DEPTH 47	W33	35840 DEPTH 1247
W6	308037 DEPTH 37	W20	35804 DEPTH 38	W34	25844 DEPTH 32
W7	35780 DEPTH 46	W21	258050 DEPTH 37	W35	211036 DEPTH 28.5
W8	258475 DEPTH 180	W22	35780 DEPTH 37	W36	25809 DEPTH 47
W9	262185 DEPTH 182	W23	122417 DEPTH 40	W37	35807 DEPTH 37
W10	100482 DEPTH 15	W24	35788 DEPTH 46	W38	35780 DEPTH 42
W11	352566 DEPTH 8	W25	35788 DEPTH 18	W39	35781 DEPTH 38
W12	35801 DEPTH 47	W26	258027 DEPTH 97		
W13	254060 DEPTH 45	W27	185526 DEPTH 37		

Map of ¼ mile AOR and Freshwater Wells
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana



MORNINGSTAR
OPERATING

Freshwater Sample Analysis

Jaws 1 SWD

Richland County, MT

12/16/25, 4:59 PM

Montana's Ground-Water Information Center (GWIC) | Analysis Report | V.12.2025

Ground-Water Information Center Water Quality Report
Report Date: 12/16/2025

Site Name: RICHLAND COUNTY CONSERVATION DISTRICT-SID 1
[Compare to Water Quality Standards](#)

Location Information

Sample Id/Site Id: 2008Q0369 / 239138
Location (TRS): 22N 59E 05 ABCC
Latitude/Longitude: 47° 42' 1" N 104° 10' 22" W
Datum: NAD83
Altitude: 1949.4
County/State: RICHLAND / MT
Site Type: WELL
Geology: 110SNGR
USGS 7.5' Quad:
PWS Id:
Project: LYBC

Sample Date: 3/12/2008 11:30:00 AM
Agency/Sampler: MBMG / JCR
Field Number: 239138
Lab Date: 4/1/2008
Lab/Analyst: MBMG / WO
Sample Method/Handling: PUMPED / 3210
Procedure Type: DISSOLVED
Total Depth (ft): 38
SWL-MP (ft): 16.04
Depth Water Enters (ft): 38

Major Ion Results

	mg/L	meq/L		mg/L	meq/L
Calcium (Ca)	71.900	3.588	Bicarbonate (HCO ₃)	409.500	6.712
Magnesium (Mg)	59.600	4.904	Carbonate (CO ₃)	0.000	0.000
Sodium (Na)	69.600	3.028	Chloride (Cl)	28.200	0.796
Potassium (K)	6.530	0.167	Sulfate (SO ₄)	226.000	4.708
Iron (Fe)	0.005	0.000	Nitrate (as N)	0.283	0.020
Manganese (Mn)	0.120	0.004	Fluoride (F)	0.226	0.012
Silica (SiO ₂)	20.800		Orthophosphate (as P)	<0.05	0.000
Total Cations	11.741		Total Anions	12.247	

Trace Element Results (µg/L)

Aluminum (Al):	<2.0	Cesium (Cs):	<0.1	Molybdenum (Mo):	<10.0	Strontium (Sr):	1,043.000
Antimony (Sb):	<0.1	Chromium (Cr):	1.700	Nickel (Ni):	<2.0	Thallium (Tl):	NR
Arsenic (As):	4.580	Cobalt (Co):	1.030	Niobium (Nb):	14.200	Thorium (Th):	<0.05
Barium (Ba):	39.200	Copper (Cu):	1.620	Neodymium (Nd):	<0.1	Tin (Sn):	<0.1
Beryllium (Be):	<0.1	Gallium (Ga):	0.340	Palladium (Pd):	<0.2	Titanium (Ti):	<1.0
Boron (B):	280.000	Lanthanum (La):	<0.1	Praseodymium (Pr):	<0.1	Tungsten (W):	<0.5
Bromide (Br):	<100	Lead (Pb):	<0.2	Rubidium (Rb):	12.300	Uranium (U):	7.740
Cadmium (Cd):	<0.1	Lithium (Li):	29.000	Silver (Ag):	<0.05	Vanadium (V):	2.550
Cerium (Ce):	<0.1	Mercury (Hg):	NR	Selenium (Se):	3.300	Zinc (Zn):	3.860
						Zirconium (Zr):	1.080

Field Chemistry and Other Analytical Results

**Total Dissolved Solids (mg/L):	685.48	Field Hardness as CaCO ₃ (mg/L):	NR	Ammonia (mg/L):	NR
**Sum of Diss. Constituents (mg/L):	893.51	Hardness as CaCO ₃ :	424.85	T.P. Hydrocarbons (µg/L):	NR
Field Conductivity (µmhos):	966	Field Alkalinity as CaCO ₃ (mg/L):	NR	PCP (µg/L):	NR
Lab Conductivity (µmhos):	1061	Alkalinity as CaCO ₃ (mg/L):	336.27	Phosphorus, TD (mg/L):	<0.05
Field pH:	7.57	Ryznar Stability Index:	6.773	Field Nitrate (mg/L):	NR
Lab pH:	7.46	Sodium Adsorption Ratio:	1.4777	Field Dissolved O ₂ (mg/L):	0.400
Water Temp (°C):	9.4	Langlier Saturation Index:	0.343	Field Chloride (mg/L):	NR
Air Temp (°C):	9	Nitrite (mg/L as N):	<0.05	Field Redox (mV):	30.7
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 CaCO ₃):	NR	Acidity to 8.3 (mg/L CaCO ₃):	NR
As(III) (µg/L):	NR	As(V) (µg/L):	NR	Total Susp Solids (mg/L):	NR

Sample Condition: CLEAR. WELL PRODUCED A LOT OF SAND.

Field Remarks:

Lab Remarks:

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

Qualifiers: J = Estimated quantity above detection limit but below reporting limit; 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 (HCO₃, CO₃, SO₄, Cl, SiO₂, NO₃, F) in mg/L. Total Dissolved Solids is reported as equivalent weight of evaporation residue.

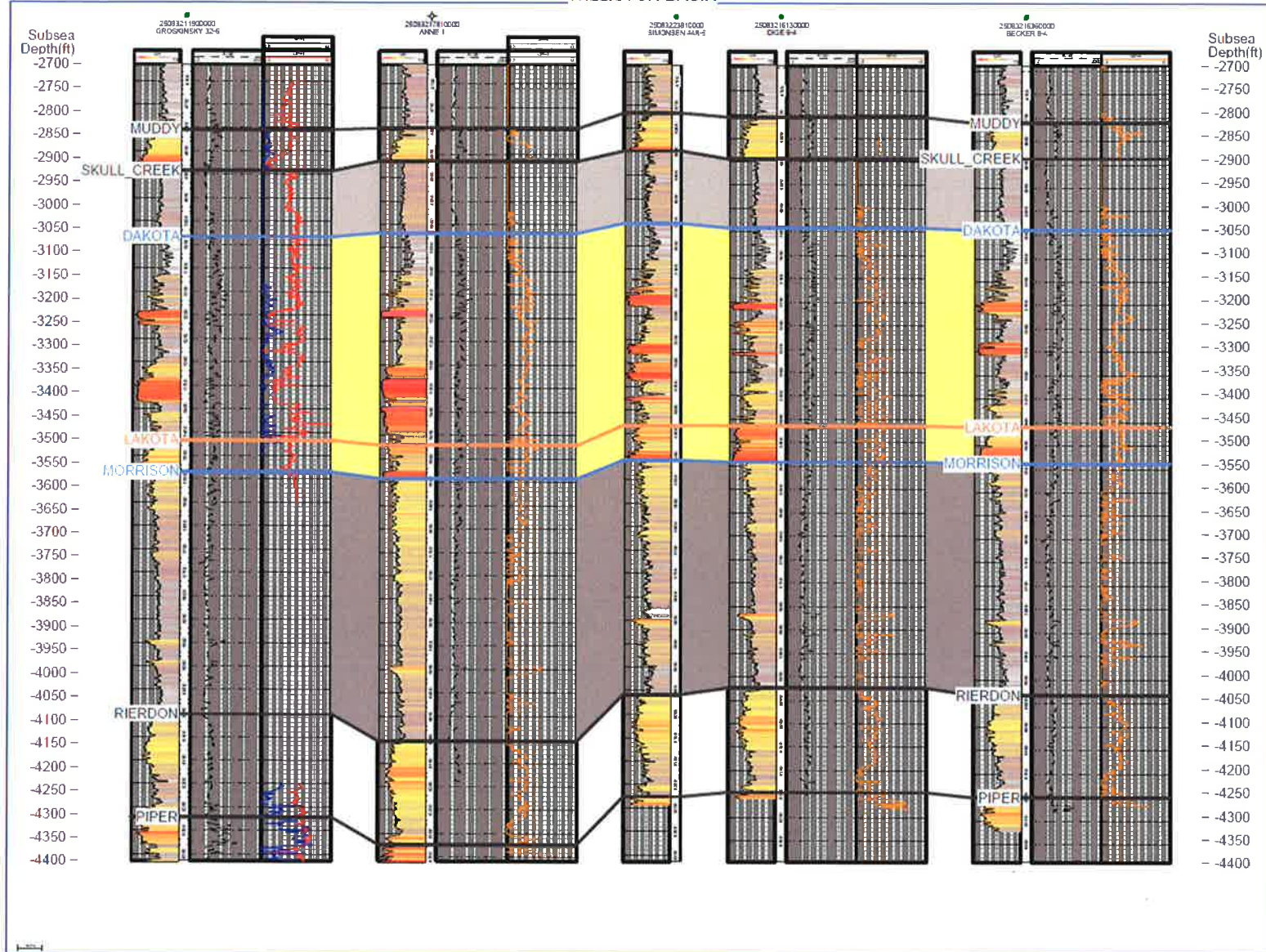
Disclaimer

These data represent the contents of the GWIC databases at the Montana Bureau of Mines and Geology at the time and date of the retrieval. The information is considered unpublished and is subject to correction and review on a daily basis. The Bureau warrants the accurate transmission of the data to the original end user. Retransmission of the data to other users is discouraged and the Bureau claims no responsibility if the material is retransmitted.



MORNINGSTAR
OPERATING

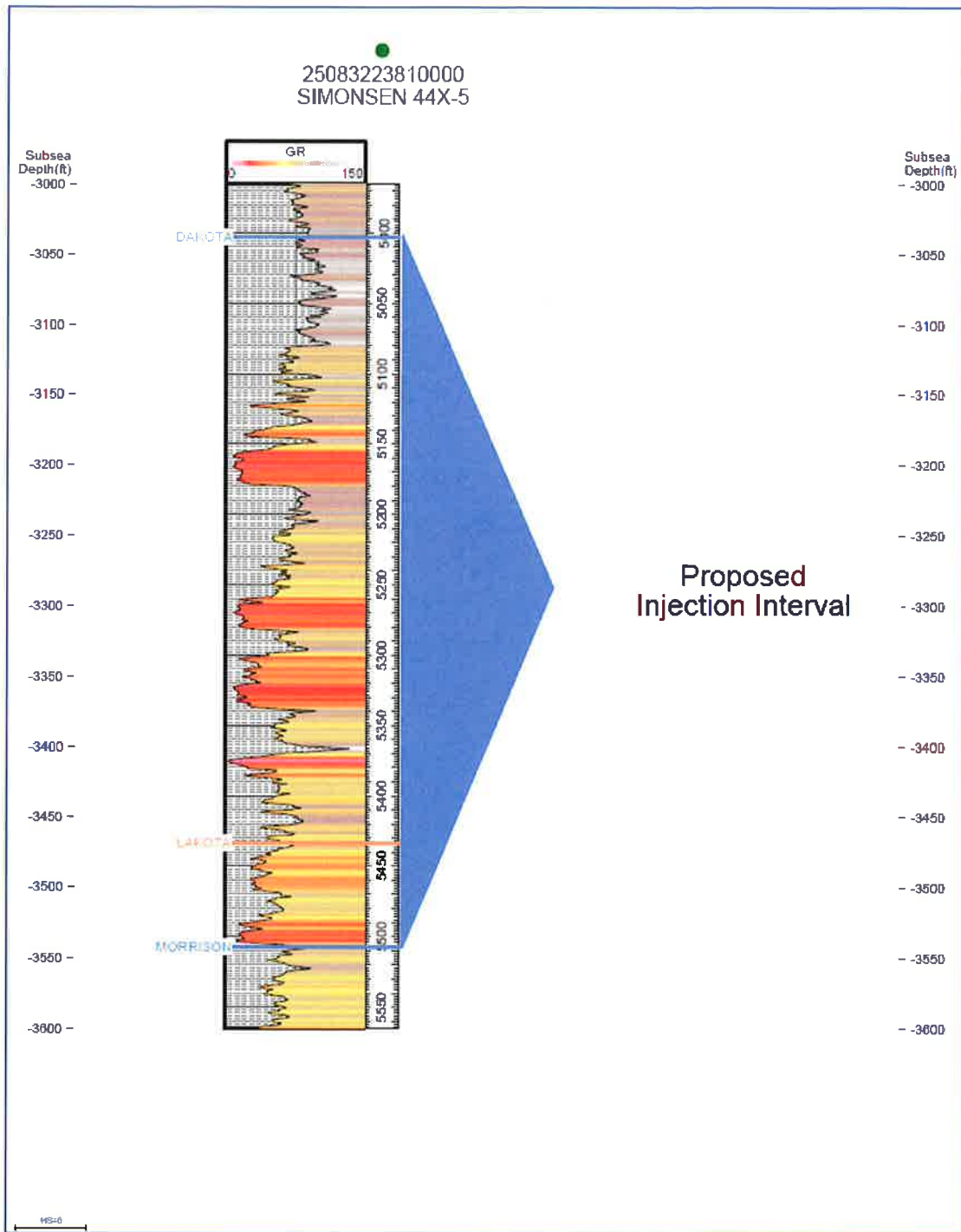
WILLISTON BASIN



Cross Section
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana



MORNINGSTAR
OPERATING



Log of Injection Interval
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana



MORNINGSTAR
OPERATING

Water Analysis of Injection Interval- Lower Dakota Jaws 1 SWD Richland County, MT

SATHE ANALYTICAL LABORATORY, INC.

301 W. 2ND STREET

P.O. BOX 1597
WILLISTON, ND. 58801

701 572-3672

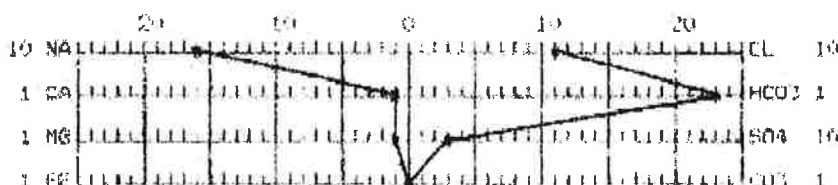
WATER ANALYSIS REPORT

OPERATOR:	ENERFUS RESOURCES L.P.	DATE:	4/7/07
WELL NO.	LONE TREE EDNA 1-12	LAB NO.:	W-07-1694
FIELD:	not listed	FORMATION:	Lower Dakota
COUNTY:	Richland	INTERVAL:	9844 - 9864'
STATE:	MT	DEP #:	
LDC:	not listed	SAMPLE	11TH SWAB RUN-TOTAL 105 BBLs

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM	3580.0	155.1	CHLORIDE	3766.1	106.2
CALCIUM	29.8	1.5	CARBONATE	0.0	0.0
MAGNESIUM	11.4	0.9	BICARBONATE	1415.7	33.2
IRON	0.7	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	HAZL (Calc.)	6210.7
TOTAL DISSOLVED SOLIDS (Calc.) MG/L	10500.5	HYDROGEN SULFIDE	NEG

WATER ANALYSIS PATTERN - MEQ/L



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

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



MORNINGSTAR
OPERATING

Water Analysis of Injection Interval- Upper Dakota
Jaws 1 SWD
Richland County, MT

SATHE ANALYTICAL LABORATORY, INC.

301 W. 2ND STREET

P.O. BOX 1507
WILLISTON, ND. 58801

701-572-3632

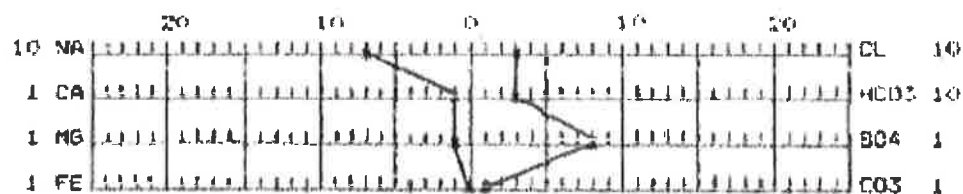
WATER ANALYSIS REPORT

OPERATOR: ENERPLUS L.P. DATE: 4/8/09
WELL NO. LONE TREE EDNA 1-12 LAB NO.: W-09-1705
FIELD: not listed FORMATION: Upper Dakota
COUNTY: Richland INTERVAL: 5388-5608
STATE: MT DST #:
LOG: not listed SAMPLE RUN #16-SAMPLE 130 DBLS BACK

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM	1680.0	73.1	CHLORIDE	1114.7	31.4
CALCIUM	14.0	0.7	CARBONATE	31.5	1.1
MAGNESIUM	7.6	0.7	BICARBONATE	1922.1	31.5
IRON	1.2	0.1	SULFATE	591.2	5.1
POTASSIUM	2.9	0.3	NITRATE	0.0	0.0
BARIUM	0.0	0.0			
CHROMIUM	0.0	0.0			

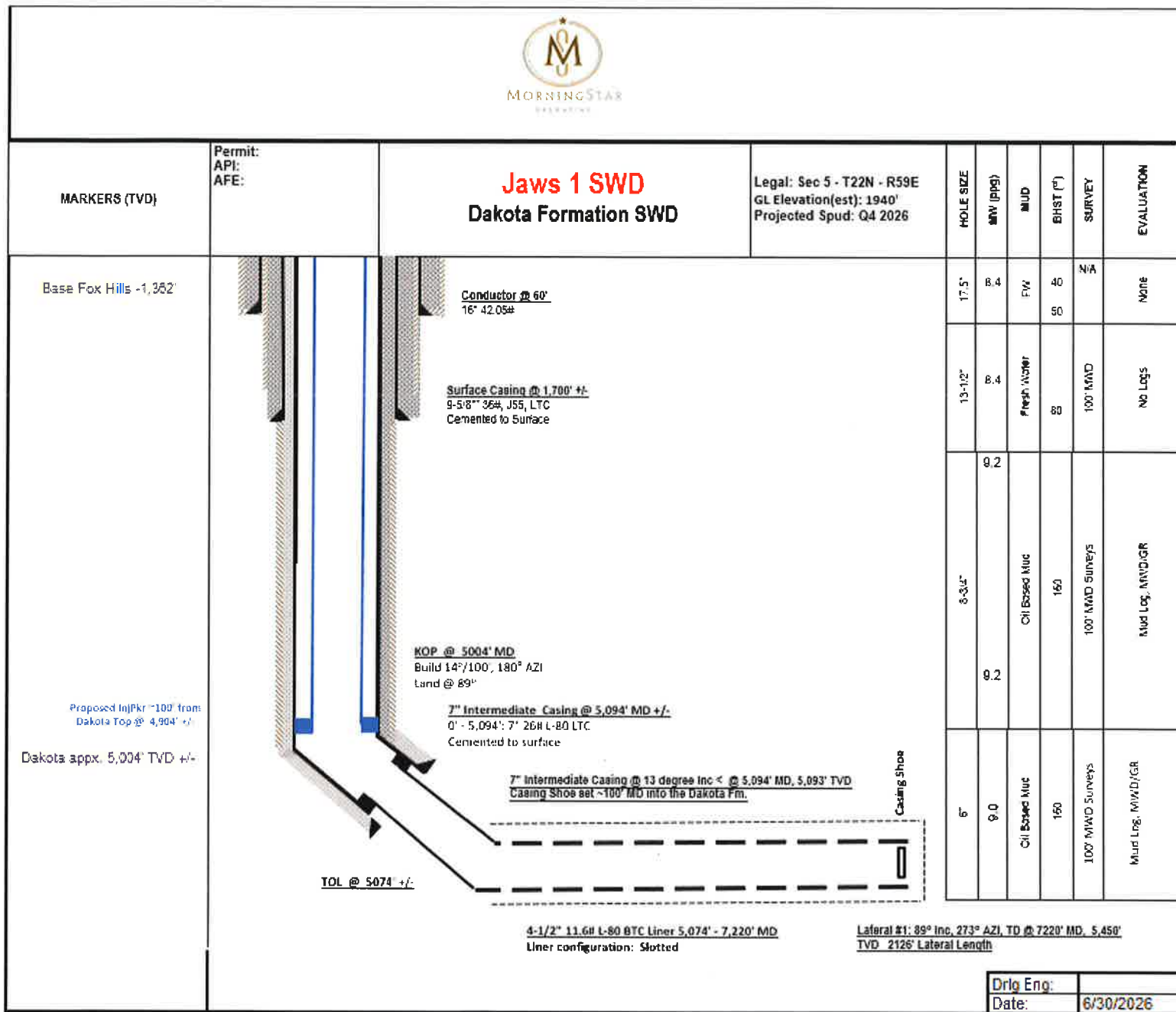
SPECIFIC GRAVITY @ 77°F 1.000 PH 7.85
RESISTIVITY @ 77°F, cm-meters 1.569 NOCL (Calc.) 1838.1
TOTAL DISSOLVED SOLIDS (Calc.) MG/L 5173.0 HYDROGEN SULFIDE NEG

WATER ANALYSIS FACTORIAL MEQ/L



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

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



Proposed Wellbore Diagram
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana



MORNINGSTAR
OPERATING



MorningStar Operating
Site: Sec 5 T22N-R59E (HAMMERHEAD)
Well: JAWS #1 SWD
Wellbore: OH
Design: Prelim A
Rig:

PROJECT DETAILS: Richland County, MT, (MAD 88)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Montana



Atenuate to True North
Magnetic North: 7.53°
Magnetic Field
Strength: 54933.5nT
Dip Angle: 72.05°
Date: 8/24/2028
Model: NO-0902028

BHL

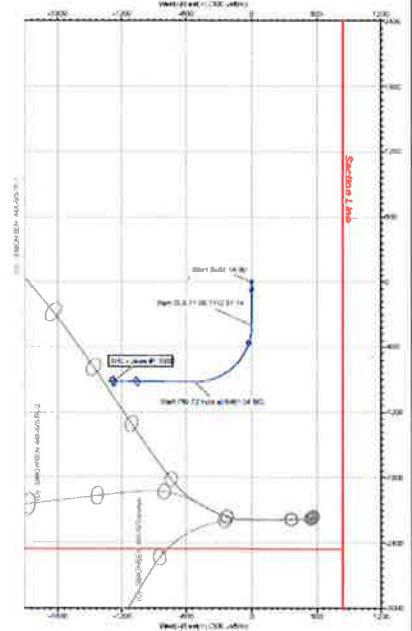
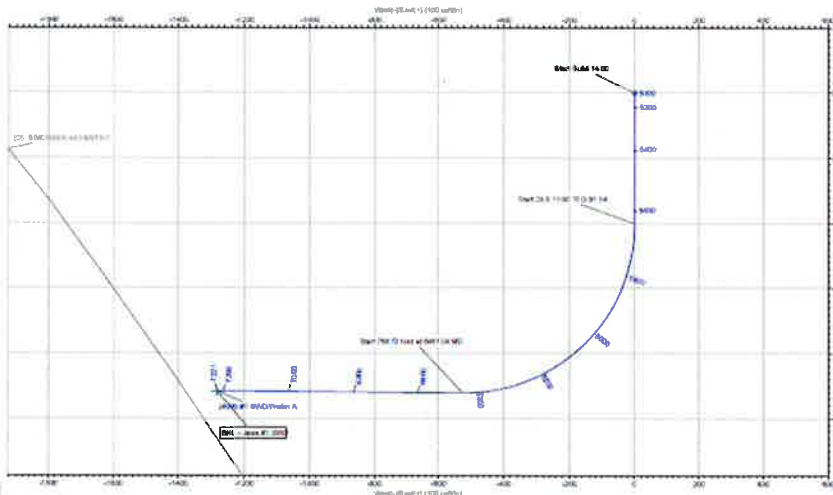
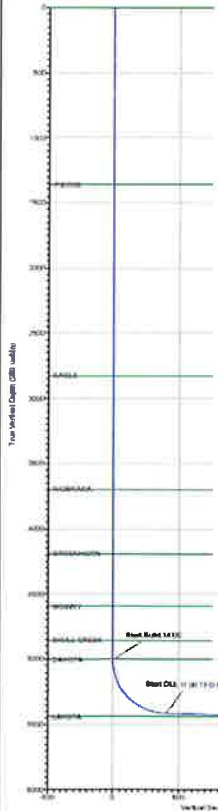
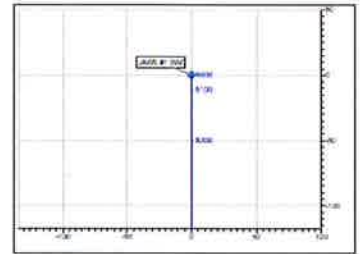
BHL Elevation: 1941' OL = 20' HB @ 1946.00m						
W-1-B	W-1-W	W-1-N	W-1-E	W-1-S	W-1-O	W-1-T
8.50	0.00	130824.48	328182.22	47.896675	-94.108781	5105

WELLBORE TARGET DETAILS

Name	TYD	W-1-B	W-1-W	W-1-N	W-1-E	W-1-S	W-1-O
BHL - Jaws #1 SWD	6449.00	-016.42	-5284.41	130823.00	327879.10	47.893182	-194.171809

SECTION DETAILS

WD	In	As	TYD	W-1-B	W-1-W	W-1-N	W-1-E	W-1-S	W-1-O
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6084.88	0.00	0.00	6084.88	0.00	0.00	0.00	0.00	0.00	0.00
6085.75	88.87	138.00	6475.18	-891.15	0.00	14.00	130.00	481.15	0.00
6481.84	88.87	278.47	6481.84	-821.70	-524.67	11.88	01.14	821.70	0.00
7329.74	88.87	278.47	6481.84	-821.70	-524.67	11.88	01.14	821.70	0.00



Proposed Directional Plan
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana

MorningStar Operating

Richland County, MT. (NAD 83)
Sec 5 T22N--R59E (HAMMERHEAD)
JAWS #1 SWD

OH

Plan: Prelim A



Standard Plan Report

25 June, 2026

Total Report Version 1.90

COMPASS 5000.16 Build 97

ATTENTION

All annotation callouts related to distances are uncertified and are approximated footages using available software and measurement tools. They should not be mistaken as an official record, which can only be obtained via a certified land surveyor.



MORNINGSTAR OPERATING

Total Directional Services Planned Survey Report

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT. (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N-R56E (HAMMERHEAD)	MO Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Database:	Total Directional Production DB

Project	Richland County, MT. (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Montana		

Site	Sec 5 T22N-R56E (HAMMERHEAD)		
Site Position:		Northing:	1,300,734.32 usft
From:	Lat/Long	Easting:	3,279,935.22 usft
Position Uncertainty:	2.00 usft	Site Radius:	13-3/16 "
		Latitude:	47.695474
		Longitude:	-104.167548

Well	JAWS #1 SWD		
Well Position	+N-S	0.00 usft	Northing: 1,300,824.56 usft
	+E-W	0.00 usft	Easting: 3,280,192.31 usft
Position Uncertainty	2.00 usft	Wellhead Elevation:	usft
Grid Convergence:	3.90 °	Ground Level:	1,941.00 usft
		Latitude:	47.695673
		Longitude:	-104.166781

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM2026	6/24/2026	7.83
		Dip Angle (°)	72.00
		Field Strength (nT)	54,832.30000000

Design	Prelim A		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)
	0.00	0.00	0.00
		Direction (°)	150.00

Survey Tool Program	Date 6/25/2026		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
0.00	7,220.64	Prelim A (OH)	MWD+HRGM
			Description
			OWSG MWD + HRGM

Plan Summary										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (°/100usft)	Bulk Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,004.00	0.00	0.00	5,004.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,838.75	88.87	180.00	5,413.18	-401.15	0.00	14.00	14.00	0.00	150.00	
6,461.04	88.87	270.47	5,433.98	-821.70	-524.87	11.00	0.00	11.00	91.14	
7,220.75	88.87	270.47	5,449.00	-915.42	-1,284.41	0.00	0.00	0.00	0.00	BHL - Jaws #1 SWD



MORNINGSTAR
OPERATING

Total Directional Services
Planned Survey Report

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT. (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N--R59E (HAMMERHEAD)	MD Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Databases:	Total Directional Production DB

Planned Survey													
Measured Depth (usft)	MNC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
G-GRAVEL													
100.00	0.00	0.00	100.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,362.00	0.00	0.00	1,362.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
PIERRE													
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
2,825.00	0.00	0.00	2,825.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
EAGLE													
2,900.00	0.00	0.00	2,900.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	1,300,824.56	3,280,192.30	47.695673	-104.166781	0.00	0.00	0.00	0.00



MORNINGSTAR
OPERATING

Total Directional Services
Planned Survey Report

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT. (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N--R50E (HAMMERHEAD)	MD Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Database:	Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,300.00	0.00	0.00	3,300.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
3,698.00	0.00	0.00	3,698.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
NIOBRARA													
3,700.00	0.00	0.00	3,700.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,190.00	0.00	0.00	4,190.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
GREENHORN													
4,200.00	0.00	0.00	4,200.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,596.00	0.00	0.00	4,596.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
MOWRY													
4,600.00	0.00	0.00	4,600.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
4,854.00	0.00	0.00	4,854.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
SKULL CREEK													
4,900.00	0.00	0.00	4,900.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
5,004.00	0.00	0.00	5,004.00	0.00	0.00	1,300,824.56	3,280,122.30	47.606673	-104.166781	0.00	0.00	0.00	0.00
DAKOTA													
5,025.00	2.94	180.00	5,024.99	-0.54	0.00	1,300,824.03	3,280,122.34	47.606672	-104.166781	0.54	14.00	14.00	0.00
5,050.00	8.44	180.00	5,049.90	-2.58	0.00	1,300,821.99	3,280,122.48	47.606668	-104.166781	2.58	14.00	14.00	0.00
5,075.00	9.94	180.00	5,074.64	-6.14	0.00	1,300,818.44	3,280,122.72	47.606656	-104.166781	6.14	14.00	14.00	0.00
5,100.00	13.44	180.00	5,099.12	-11.21	0.00	1,300,813.38	3,280,123.07	47.606642	-104.166781	11.21	14.00	14.00	0.00
5,125.00	16.94	180.00	5,123.24	-17.76	0.00	1,300,806.85	3,280,123.51	47.606624	-104.166781	17.76	14.00	14.00	0.00
5,150.00	20.44	180.00	5,146.92	-25.77	0.00	1,300,799.88	3,280,124.06	47.606602	-104.166781	25.77	14.00	14.00	0.00
5,175.00	23.94	180.00	5,170.07	-35.21	0.00	1,300,789.44	3,280,124.70	47.606577	-104.166781	35.21	14.00	14.00	0.00
5,200.00	27.44	180.00	5,192.59	-46.04	0.00	1,300,778.63	3,280,125.44	47.606547	-104.166781	46.04	14.00	14.00	0.00
5,225.00	30.94	180.00	5,214.41	-58.23	0.00	1,300,766.46	3,280,126.27	47.606513	-104.166781	58.23	14.00	14.00	0.00
5,250.00	34.44	180.00	5,235.45	-71.73	0.00	1,300,753.00	3,280,127.18	47.606476	-104.166781	71.73	14.00	14.00	0.00
5,275.00	37.94	180.00	5,255.63	-86.49	0.00	1,300,739.27	3,280,128.19	47.606436	-104.166781	86.49	14.00	14.00	0.00



MORNINGSTAR OPERATING

Total Directional Services Planned Survey Report

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT. (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N--R59E (HAMMERHEAD)	MD Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Database:	Total Directional Production DB

Planned Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N-S (usft)	+E-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	41.44	180.00	5,274.86	-102.46	0.00	1,300,722.34	3,280,199.28	47.605392	-104.166781	102.46	14.00	14.00	0.00
5,325.00	44.94	180.00	5,293.03	-119.57	0.00	1,300,705.28	3,280,200.44	47.605345	-104.166781	119.57	14.00	14.00	0.00
5,350.00	48.44	180.00	5,310.23	-137.75	0.00	1,300,687.13	3,280,201.68	47.605295	-104.166781	137.75	14.00	14.00	0.00
5,375.00	51.94	180.00	5,326.23	-156.96	0.00	1,300,667.97	3,280,202.98	47.605243	-104.166781	156.96	14.00	14.00	0.00
5,400.00	55.44	180.00	5,341.04	-177.10	0.00	1,300,647.68	3,280,204.35	47.605187	-104.166781	177.10	14.00	14.00	0.00
5,425.00	58.94	180.00	5,354.58	-198.11	0.00	1,300,626.92	3,280,205.78	47.605130	-104.166781	198.11	14.00	14.00	0.00
5,450.00	62.44	180.00	5,366.82	-219.60	0.00	1,300,605.17	3,280,207.27	47.605076	-104.166781	219.60	14.00	14.00	0.00
5,475.00	65.94	180.00	5,377.70	-242.40	0.00	1,300,582.72	3,280,208.80	47.605008	-104.166781	242.40	14.00	14.00	0.00
5,500.00	69.44	180.00	5,387.19	-265.53	0.00	1,300,559.65	3,280,210.37	47.604945	-104.166781	265.53	14.00	14.00	0.00
5,525.00	72.94	180.00	5,395.25	-289.19	0.00	1,300,536.04	3,280,211.98	47.604880	-104.166781	289.19	14.00	14.00	0.00
5,550.00	76.44	180.00	5,401.85	-313.30	0.00	1,300,511.69	3,280,213.62	47.604814	-104.166781	313.30	14.00	14.00	0.00
5,575.00	79.94	180.00	5,406.96	-337.77	0.00	1,300,487.58	3,280,215.29	47.604747	-104.166781	337.77	14.00	14.00	0.00
5,600.00	83.44	180.00	5,410.58	-362.50	0.00	1,300,462.90	3,280,216.97	47.604679	-104.166781	362.50	14.00	14.00	0.00
5,625.00	86.94	180.00	5,412.67	-387.41	0.00	1,300,438.05	3,280,218.66	47.604610	-104.166781	387.41	14.00	14.00	0.00
5,638.75	88.67	180.00	5,413.15	-401.15	0.00	1,300,424.34	3,280,219.60	47.604573	-104.166781	401.15	14.00	14.00	0.00
5,650.00	88.84	181.24	5,413.40	-412.40	-0.12	1,300,413.12	3,280,220.24	47.604542	-104.166782	412.40	11.00	-0.22	11.00
5,700.00	88.74	186.74	5,414.46	-462.24	-3.60	1,300,363.15	3,280,220.17	47.604406	-104.166796	462.24	11.00	-0.20	11.00
5,750.00	88.65	192.24	5,415.60	-511.53	-11.83	1,300,313.42	3,280,215.30	47.604270	-104.166829	511.53	11.00	-0.18	11.00
5,800.00	88.57	197.74	5,416.81	-559.79	-24.75	1,300,264.38	3,280,205.69	47.604138	-104.166862	559.79	11.00	-0.16	11.00
5,850.00	88.51	203.24	5,418.09	-606.80	-42.24	1,300,216.50	3,280,191.43	47.604009	-104.166923	606.80	11.00	-0.13	11.00
5,900.00	88.46	208.74	5,419.41	-651.51	-64.14	1,300,170.20	3,280,172.64	47.603886	-104.167042	651.51	11.00	-0.10	11.00
5,950.00	88.42	214.24	5,420.78	-694.11	-90.24	1,300,125.62	3,280,149.50	47.603769	-104.167146	694.11	11.00	-0.07	11.00
6,000.00	88.40	219.75	5,422.17	-734.01	-120.30	1,300,084.07	3,280,122.22	47.603660	-104.167270	734.01	11.00	-0.04	11.00
6,050.00	88.39	225.25	5,423.57	-770.85	-154.06	1,300,045.02	3,280,091.05	47.603550	-104.167407	770.85	11.00	-0.01	11.00
6,100.00	88.40	230.75	5,424.98	-804.28	-191.16	1,300,009.14	3,280,056.28	47.603467	-104.167558	804.28	11.00	0.01	11.00
6,150.00	88.42	236.25	5,426.37	-834.00	-231.35	1,299,978.78	3,280,018.24	47.603396	-104.167721	834.00	11.00	0.04	11.00
6,200.00	88.46	241.75	5,427.73	-859.73	-274.17	1,299,948.17	3,279,977.26	47.603315	-104.167895	859.73	11.00	0.07	11.00
6,250.00	88.51	247.26	5,429.06	-881.23	-319.27	1,299,923.65	3,279,933.73	47.603256	-104.168078	881.23	11.00	0.10	11.00
6,300.00	88.57	252.76	5,430.33	-898.32	-366.23	1,299,903.41	3,279,888.05	47.603209	-104.168269	898.32	11.00	0.13	11.00
6,350.00	88.65	258.26	5,431.55	-910.82	-414.60	1,299,887.65	3,279,840.63	47.603175	-104.168466	910.82	11.00	0.16	11.00
6,400.00	88.74	263.76	5,432.69	-918.63	-463.96	1,299,876.50	3,279,791.92	47.603153	-104.168666	918.63	11.00	0.18	11.00
6,450.00	88.84	269.26	5,433.74	-921.67	-513.83	1,299,870.07	3,279,742.37	47.603145	-104.168869	921.67	11.00	0.20	11.00
6,461.04	88.87	270.47	5,433.96	-921.70	-524.87	1,299,869.29	3,279,731.36	47.603145	-104.168914	921.70	11.00	0.22	11.00
6,500.00	88.87	270.47	5,434.73	-921.38	-563.82	1,299,866.96	3,279,682.48	47.603146	-104.169072	921.38	0.00	0.00	0.00
6,600.00	88.87	270.47	5,436.71	-920.55	-663.80	1,299,860.89	3,279,562.68	47.603148	-104.169478	920.55	0.00	0.00	0.00
6,700.00	88.87	270.47	5,438.69	-919.72	-763.78	1,299,855.01	3,279,482.87	47.603150	-104.169884	919.72	0.00	0.00	0.00
6,766.08	88.87	270.47	5,440.00	-919.18	-829.84	1,299,851.08	3,279,426.92	47.603152	-104.170153	919.18	0.00	0.00	0.00

LAKOTA



MORNINGSTAR OPERATING

Total Directional Services Planned Survey Report

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT. (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N--R59E (HAMMERHEAD)	MD Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Database:	Total Directional Production DB

Planned Survey

Measured Depth (usft)	BVC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,800.00	88.87	270.47	5,440.67	-918.90	-863.75	1,299,849.03	3,279,393.07	47.893153	-104.170290	918.90	0.00	0.00	0.00
6,900.00	88.87	270.47	5,442.65	-918.07	-963.73	1,299,843.05	3,279,293.27	47.893156	-104.170696	918.07	0.00	0.00	0.00
7,000.00	88.87	270.47	5,444.63	-917.24	-1,063.71	1,299,837.08	3,279,193.47	47.893157	-104.171103	917.24	0.00	0.00	0.00
7,100.00	88.87	270.47	5,446.61	-916.42	-1,163.68	1,299,831.10	3,279,093.67	47.893159	-104.171509	916.42	0.00	0.00	0.00
7,200.00	88.87	270.47	5,448.59	-915.59	-1,263.66	1,299,825.12	3,278,993.87	47.893162	-104.171915	915.59	0.00	0.00	0.00
7,220.75	88.87	270.47	5,449.00	-915.42	-1,284.41	1,299,823.88	3,278,973.16	47.893162	-104.171999	915.42	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL - Jaws #1 SWD - plan hits target center - Point	0.00	0.00	5,449.00	-915.42	-1,284.41	1,299,823.88	3,278,973.16	47.893162	-104.171999

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
0.00	0.00	Q-GRAVEL			
1,362.00	1,362.00	PIERRE		0.00	
2,825.00	2,825.00	EAGLE		0.00	
3,698.00	3,698.00	NIOBRARA		0.00	
4,190.00	4,190.00	GREENHORN		0.00	
4,596.00	4,596.00	MOWRY		0.00	
4,854.00	4,854.00	SKULL CREEK		0.00	
5,004.00	5,004.00	DAKOTA		0.00	
6,766.08	5,440.00	LAKOTA		0.00	

Checked By: _____	Approved By: _____	Date: _____
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MORNINGSTAR
OPERATING

Bakken Water Analysis

Jaws 1 SWD



JACAM LABORATORIES

DownHole R_x
WATER CHEMISTRY

ENERPLUS RESOURCES
KARSON KOSTELECKY
RICHLAND MT

PEABODY-BAHLS 2-16H
TREATER

Report Date: 01-14-2015 Sampled: 12-31-2014
Sample #: 2548 at 0000
Sample ID: 88871

CATIONS

Calcium (as Ca)	13340
Magnesium (as Mg)	1235
Barium (as Ba)	12.79
Strontium (as Sr)	839.30
Sodium (as Na)	68441
Potassium (as K)	5068
Lithium (as Li)	50.41
Ammonia (as NH ₃)	0.00
Aluminum (as Al)	2.14
Iron (as Fe)	262.50
Manganese (as Mn)	7.98
Zinc (as Zn)	3.14
Lead (as Pb)	0.00

ANIONS

Chloride (as Cl)	156800
Sulfate (as SO ₄)	75.00
Bromine (as Br)	0.00
Dissolved CO ₂ (as CO ₂)	100.00
Bicarbonate (as HCO ₃)	73.20
Carbonate (as CO ₃)	0.00
Oxalic acid (as C ₂ O ₄)	0.00
Silica (as SiO ₂)	0.00
Phosphate (as PO ₄)	0.00
H ₂ S (as H ₂ S)	0.00
Fluoride (as F)	0.00
Nitrate (as NO ₃)	0.00
Boron (as B)	404.70

PARAMETERS

Calculated T.D.S.	236875
Molar Conductivity	408969
Resistivity	2.45
Sp.Gr.(g/mL)	1.16
Pressure(atm)	1.00
pCO ₂ (atm)	0.0220
pH ₂ S(atm)	0.00
Temperature (°F)	82.90
pH	5.94

COMMENTS

RICHLAND MT

JACAM LABORATORIES

205 S. Broadway • P.O. Box 96 • Sterling, KS 67579-0096



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

Surface Owners within AOR:

Agri-Med Llc
100 Belle Creek Rd
Belgrade, MT 59714-8775

Amc Development Llc
109 12th Ave Sw
Sidney, MT 59270-3613

Avad Properties Llc
Po Box 787
Sidney, MT 59270-0787

Byer Industrial Park Llc
108 2nd St Ne
Sidney, MT 59270-4105

Geraldine Entzel
2333 South Central Ave.
Sidney, MT 59270

Ie Properties Llc
Po Box 2035
Jamestown, ND 58402-2035

Jeremy And Kelsie Reese
1600 Lincoln Ave Se
Sidney, MT 59270

L & L Holdings Llc
712 9th St Sw
Sidney, MT 59270-4815

Matt Josephson
35325 County Road 129
Sidney, MT 59270-4256

L Y Irrigation Project
Brd Of Control
2327 Lincoln Ave Se
Sidney, MT 59270-8800

Oneok Rockies Midstream Llc
Po Box 871
Tulsa, OK 74102-0871

Albin Robert D & Sheree A
33791 County Road 131
Sidney, MT 59270

Amunrud Tyler
2656 S Central Ave
Sidney, MT 59270-5539

Barneyard Holdings Llc
2650 S Central Ave
Sidney, MT 59270-5539

Byer Industrial Park Phase ii
Property Owners Association Llc
108 2nd St Ne
Sidney, MT 59270-4105

Gilbert Robert Allen Iii & Jessica
314 7th Ave Sw
Sidney, MT 59270-3817

Jada Llc
Po Box 787
Sidney, MT 59270-0787

John L. & Jennifer L. Roth
1709 9th Ave Sw
Sidney, MT 59270-5501

Lake Fredric M Etal
3773 Patriot Dr Apt 203
Abilene, TX 79606-1844

Mont Conv Of 7th Day Adventist
2475 S Central Ave
Sidney, MT 59270-5534

Pioneer Cemetery Association
Attn: Nancy Hedegaard
2901 6th St Nw
Sidney, MT 59270

Oneok Rockies Midstream Llc
896 25th St Se
Sidney, MT 59270

Als Mini Storage Inc
315 Main St
Roundup, MT 59072-2737

Ashcraft Ina F
34935 County Road 123
Sidney, MT 59270-6348

Brandon Mueller
1807 9th Ave Sw
Sidney, MT 59270-5516

City Of Sidney
115 2nd St Se
Sidney, MT 59270-4103

Glacier Peak Midstream Llc
840 W Sam Houston Pkwy N Ste
300
Houston, TX 77024-4612

Jeanetta Cooley
Rr1 Box 182-A7
Sidney, MT 59270

Kringen Family Ulp
917 14th St Se
Sidney, MT 59270-8822

Lake Ira W
1801 9th Ave Sw
Sidney, MT 59270-5516

Morningstar Operating Llc
400 W 7th Street
Fort Worth, TX 76102

Price Arlen H & Lonnie
2397 S Central Ave
Sidney, MT 59270-5534

Price Todd J & Jessica M
2383 S Central Ave
Sidney, MT 59270-5513



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

Real Trucking Inc
813 N Central Ave
Sidney, MT 59270

Reed Phillip J & Linda B
998 Aster Ct
Sidney, MT 59270

Richland Rentals Llc
1807 S Central Ave
Sidney, MT 59270-5510

Rlb Properties Llc
2711 Niehenke Dr
Sidney, MT 59270-5853

Robert Dige
202 E. Hunter Road
Sand Coulee, MT 59472

S & S Rental Properties Llc
108 2nd St Ne
Sidney, MT 59270-4105

S/L Services Inc
2265 S Central Ave
Sidney, MT 59270-5515

Sabr Depot Inc.
Attn: Shadd M. Cullinan
P.O. Box 822
Culbertson, MT 59218

Sabr Depot Re Llc
Po Box 822
Culbertson, MT 59218-0822

Schmart Solutions Llc
1315 22nd Ave Nw
Sidney, MT 59270-5775

Shandy Lester W Jr & Sonda
Trustees
2441 S Central Ave
Sidney, MT 59270-5534

Sharon Leone Sturgis, Trustee
440 Richards Lake Rd
Fort Collins, CO 80524-1633

Wct Rentals Llc
Po Box 1389
Sidney, MT 59270-1389

Sidney Storage Llc
811 5th St Se
Sidney, MT 59270-5116

Tusind Tak, Llc
11153 Highway 16
Savage, MT 59262

Norby Rocky L
35246 County Road 126
Sidney, MT 59270

White Rock Oil & Gas Gp I Llc
2179 Central Ave
Sidney, MT 59270

White Rock Energy Llc Mail To Ke
Andrews And Company
2424 Ridge Rd
Rockwall, TX 75087

Sidney 25 Development Llc
C/O Lora Romney
10421 S Jordan Gtwy,
Gateway Suite 600
Layton, UT 84040-7892



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

Mineral Interest Owners within AOR:

Amanda Skogen
1108 Cedar Avenue SW
Sidney, MT 59270

Charles H. Buxbaum
12079 County Road 349R
Sidney, MT 59270

Cooley Jeanetta
Po Box 176
Sidney, MT 59270-0176

Darcie Linde Conquergood
8211 Northern Lights Drive
Helena, MT 59602

Doris Simonsen
104 Riverview B
Great Falls, MT 59404

Estate of Deo T. Degn
ATTN: Michael A. Degn
PO Box 556
Sidney, MT 59270

Eric Belanger
6908 N. Fox Wood Court
Spokane, WA 99208

Estate of Carl Herman
ATTN: Beval Moerkerke
14550 N. Frank Lloyd Wright, Blvd.
#100
Scottsdale, AZ 85260

Estate of Wayne Blanke
ATTN: Dickie A. Dreiling
3201 N Lakecrest St.
Wichita, KS 67205-1922

Estate of Harry F. Kreis
33120 Xenon Dr. NW
Princeton, MN 55371

Brenda L. Filler and Clinton A. Filler
923 North Central Avenue
Sidney, MT 59270

Charles Turner
16167 W. Vista North Dr.
Sun City West, AZ 85375

Clara Joan Dige Trust, dated
8/17/2013, Clara Joan Dige, Trustee
13272 Beach Terrace
Garden Grove, CA 92844

County of Richland
201 West Main St.
Sidney, MT 59270

Diane Cherry
2220 Willamette View Ct
West Linn, OR 97068-2634

Edward Kerbel
7102 Golf Course Ln.
San Jose, CA 95139

Erik Kerbel
15415 S. Airport Way, Apt. 2
Manteca, CA 95336

Estate of Clifford F. Jones
ATTN: Marcella R. Jones
34975 Highway 23
Sidney, MT 59270

Estate of Donald R. Townsend
ATTN: Phyllis Townsend
1919 Alameda Delas Pulgas, #73
San Mako, CA 94403

Estate of Nick Youngkin
ATTN: Carla Youngkin
PO Box 222
Alberton, MT 59820

Carol Bohrsen
261 Willow Creek Road
Phillipsburg, MT 59858

Chris Nelson
1746 Sattler Dr.
Concord, CA 94519

Clifford F. Jones and
Marcella R. Jones
34975 Highway 23
Sidney, MT 59270

Dale Petersen
261 Willow Creek Road
Phillipsburg, MT 59858

Donald W. Beardsley
3656 Old Arcata Rd Spc 14
Eureka, CA 95503-9420

EMEP Acquisitions, LLC
Two Allen Center
1200 Smith Street, Suite 680
Houston, TX 77002

Estate of Bryan A. Dige
ATTN: Mary J. Dige
2315 Beaver Creek Rd.
Gallatin Gateway, MT 59730

Estate of Daniel Peterson
ATTN: Sheila Peterson
202 17th St. W.
Billings, MT 59102

Estate of Freddie C. Buxbaum
ATTN: Mona Joy Buxbaum
P.O. Box 1313
Sidney, MT 59270

Geraldine Entzel
2333 South Central Ave.
Sidney, MT 59270



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

Forel Group, LLC
1803 9th Ave. SW
Sidney, MT 59270

Georgiann Williamson
PO Box 1865
Bozeman, MT 59771

Gregory Buxbaum
12063 County Road 349R
Sidney, MT 59270

Hunt Oil Company
1445 Ross at Field
Dallas, TX 75202-2785

Jana Turner
1220 B. Spruce Circle
Lynden, WA 98264

Jeanetta Cooley
RR1 Box 182-A7
Sidney, MT 59270

Jeff S. Votaw and Sarah D. Votaw
2611 Virginia Lane
Billings, MT 59102

Jim D. Sandell
P.O. Box 316
Ingram, TX 78025-0317

Karen Degn Krum
3111 Parkhill Dr.
Billings, MT 59102

Kathleen A. Bates
8385 East Freemont Court
Centennial, CO 80112

Keith R. Buxbaum
5140 Coneflower Ave.
Billings, MT 59106

Kelvin C. Buxbaum
12281 County Road 349R
Sidney, MT 59270

Kevin Buxbaum
8530 Holloway Drive, Apt. 315
West Hollywood, CA 90069

Kevin Kerbel
PO Box 371696
Montara, CA 94037

Kirk R. Dige
PO Box 160472
Big Sky, MT 59716

Kirsten Degn
500 Bittersweet Avenue
Germantown Hills, IL 61548

Koch Exploration Company
20 East Greenway Plaza, 6th Floor
Houston, TX 77046

Kraken Oil & Gas, LLC
945 Bunker Hill Rd., Suite 1200
Houston, TX 77024

Lori A. Norby
35244 County Road 126
Sidney, MT 59270

Marlene Dige Halim
45701 Classic Way
Temecula, CA 92592

Melanie D. Fahrenbruch
1143 W. Sea Fog Dr.
Gilbert, AZ 85233

Michael A. Degn and Jill W. Degn
PO Box 556
Sidney, MT 59270

Michael P. Hein
1002 W. Coast Dr.
Gilbert, AZ 85233

Michelle C. Wimett
17711 Hillboro Place
Canyon Country, CA 91387

Mona Joy Buxbaum
P.O. Box 1313
Sidney, MT 59270

Nancy Kerbel
7102 Golf Course Ln.
San Jose, CA 95139

Natalie J. Bell
30 Pitcher Road
Belfast, ME 4915

Nels Degn
12462 S. Compass Avenue
Plainfield, IL 60585

NHPP II Fortuna Rockies, LLC
1106 Witte Road, Suite 400
Houston, TX 77055

NHPP V Fortuna Rockies, LLC
1106 Witte Road, Suite 400
Houston, TX 77055

OXY USA, Inc.
5 Greenway Plaza, Suite 110
Houston, TX 77046-0521

Paula Spraggins Sandell
16619 Sunlight Way
Houston, TX 77058-2243

Peter C. Sheehan and
Nancy J. Sheehan
442 Indian Trail
Billings, MT 59105

Pioneer Cemetery Association
ATTN: Nancy Hedegaard
2901 6th St NW
Sidney, MT 59270

QCC Holdings Inc
7883 Edgar Industrial Way
Red Deer, AB T4P 3R2

Rhonda Degn Roberts
1805 Patricia Lane
Billings, MT 59102



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

Richland County
201 West Main St.
Sidney, MT 59270

Robert Dige
202 E. Hunter Road
Sand Coulee, MT 59472

Ricky Nelson
1746 Sattler Dr.
Concord, CA 94519

Roseann L. McFarland
410 3rd Ave. SW, Apt 118
Sidney, MT 59270

Sasha Bannister
440 Richard & Lake Road
Fort Collins, CO 80524

Shadd M. Cullinan
10 5th St. W
Culbertson, MT 59218

Sheree Albin
33791 County Road 131
Sidney, MT 59270

Stalking Horse Energy, LLC
5066 South Cherry Creek Drive
Denver, CO 80246

Stephen Turner
2612 Via Arroyo
Bullhead City, AZ 86442

Thiel Service Co. LLC
1807 S. Central Ave.
Sidney, MT 59270

Thomas Turner
1800 140th Ave. NE
Ham Lake, MN 55304

Tumbleweed Ventures, Inc.
PO Box 50653
Billings, MT 59105

Tusind Tak, LLC
11153 Highway 16
Savage, MT, 59262

United States of America,
Bureau of Land Management
5001 Southgate Drive
Billings, MT 59101

VR4-Elm, LP
5949 Sherry Lane, Suite 1600
Dallas, TX 75225

The Margaret Johnson Barr Revocable
Living Trust under Agreement dated
October 14, 2009
33120 Xenon Dr. NW
Princeton, MN 55371

R. G. and Betty M. Choleswinski
Family Trust, dated 9/12/1991, Betty
May Choleswinski, Trustee
8248 N Rainbow Vis.
Prescott Valley, AZ 86315-3554

Margaret Johnson Barr,
as Trustee of the Margaret Johnson
Barr Revocable Living Trust under
Agreement dated October 14, 2009
33120 Xenon Dr. NW
Princeton, MN 55371

John Bradford Cone and Jeffery D.
Cone, successor Co-Trustees of The
Jesse Donald Cone, M.D., II and
Patricia Jane Cone Revocable Trust
(dated June 24, 1992 and amended
July 31, 2008)
417 Colina Lane
Odessa, TX 79765



MORNINGSTAR
OPERATING

Affidavit of Notification to Surface & Mineral Owners
Jaws 1 SWD
Richland County. MT

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

IN THE MATTER OF THE APPLICATION FOR
MORNINGSTAR OPERATING LLC FOR THE HEARING
OF ITS REQUEST FOR A UIC PERMIT FOR THE JAWS #1
SWD WELL, 2459' FSL 845' FEL, SECTION 5, T22N,
R59E, P.M.M. RICHLAND COUNTY, MONTANA, FOR
THE PURPOSE OF WATER INJECTION

AFFIDAVIT OF NOTIFICATION

Date: July 6, 2026

State of Utah
County of Uintah

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

That Notice of advising of MorningStar 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 lease owner within the area of review at the addresses shown in the exhibit attached to the Notice, by mailing a true copy thereof this 6th day of July, 2026, postage prepaid, First Class USPS Mail. This affidavit is given as evidence of compliance with A.R.M. 36.22.1410.

Amy Doebele
Authorized Agent

Subscribed and sworn before me on this 6th day of July, 2026.

Notary Public of the State of Utah
My Commission Expires: May 19, 2030





July 6, 2026

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

RE: Proposed Saltwater Disposal Well

Location of proposed Disposal Well & Facility: Jaws #1 SWD

Surface Hole Location: NE 1/4 SE 1/4, Section 5, Township 22N, Range 59E. P.M.M.

Bottom Hole Location: NW 1/4 SE 1/4, Section 5, Township 22N, Range 59E. P.M.M.

Richland County, Montana

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

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

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

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

Please direct any and all of your communication regarding this proposed project, including more information about the upcoming hearing, to Mr. John Gizicki with the MBOGC at (406) 656-0040 or to Dave Harford with MorningStar Operating LLC at (817) 334-7800.

Sincerely,

A handwritten signature in blue ink that reads 'Amy Doebele'.

Amy Doebele
Authorized Agent for MorningStar Operating LLC



July 6, 2026

To: Surface Owner within ¼ Mile of the proposed saltwater disposal well

RE: Proposed Saltwater Disposal Well

Location of proposed Disposal Well & Facility: Jaws #1 SWD

Surface Hole Location: NE 1/4 SE 1/4, Section 5, Township 22N, Range 59E. P.M.M.

Bottom Hole Location: NW 1/4 SE 1/4, Section 5, Township 22N, Range 59E. P.M.M.

Richland County, Montana

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Montana Board of Oil & Gas Conservation
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Billings, MT 59102

Please direct any and all of your communication regarding this proposed project, including more information about the upcoming hearing, to Mr. John Gizicki with the MBOGC at (406) 656-0040 or to Dave Harford with MorningStar Operating LLC at (817) 334-7800.

Sincerely,

Amy Doebele

Authorized Agent for MorningStar Operating LLC



MORNINGSTAR
OPERATING

Affidavit of Public Notification
Helena Independent Record
Jaws 1 SWD
Richland County, MT

Independent Record
AFFIDAVIT OF PUBLICATION

Helena Independent Record
2222 N. Washington St
Helena, Montana 59602
(123) 456-7890

State of New Jersey, County of Camden, ss:

Anjana Bhadoriya, being first duly sworn, deposes and says: That (s)he is a duly authorized signatory of Column Software, PBC, duly authorized agent of Helena Independent Record, a newspaper of general circulation published that is a "legal newspaper" as that is published daily in the City of Helena, in the County of Lewis and Clark, State of Montana, and has charge of the Advertisements thereof.

If this certification is for the State of Montana, I hereby certify that I have read sec. 18-7-204 and 18-7-205 MCA, and subsequent revisions, and declare that the price or rate charged the State of Montana for the publication for which claim is made in printed copy in the amount of \$170.20 is not in excess of the minimum rate charged any other advertiser for publication of advertisement, set in the same size type and published for the same number of insertions, further certify that this claim is correct and just in all respects, and that payment or credit has not been received.

PUBLICATION DATES: July 2 2026

NOTICE ID: VRUBTFPhweRV3UM5Bdl0

PUBLISHER ID: COL-MT-202955

NOTICE NAME: Jaws #1 SWD

Publication Fee: \$170.20

Anjana Bhadoriya

(Signed)

SHARONN E THOMAS-POPE
NOTARY PUBLIC
STATE OF NEW JERSEY
My Commission Expires January 23, 2027

VERIFICATION

State of New Jersey
County of Camden

Subscribed in my presence and sworn to before me on this: 07/02/2026

Sharon E. Thomas-Pope

Notary Public

Notarized remotely online using communication technology via Proof.

Jaws #1 SWD
BEFORE THE BOARD OF OIL AND GAS CONSERVATION
OF THE STATE OF MONTANA

In the Matter of the application of
MorningStar Operating LLC
for a Class II Injection well permit.

NOTICE OF INTENTION TO APPLY FOR A CLASS II
INJECTION WELL PERMIT

1. Name and address of Applicant:

MorningStar Operating LLC
400 W 7 th Street
Fort Worth, TX 76102

2. Legal Description including County and Approximate
Footages of Surface Location of Proposed Oil and Gas Well:
(and projected bottom-hole location, if a directional or horizontal
well)

Jaws #1 SWD
Surface Hole: 2450' FSL 845' FEL
NESE Section 5, Township 22 North, Range 59 East
Bottom Hole: 1647' FSL 2128' FEL
NW6E Section 5, Township 22 North, Range 59 East
Richland County, MT

3. Source of fluids to be injected

Produced water from Three Forks (Bakkan) wells

4. Zone or formation into which injection will occur, including
depth

Dakota from 5,004' - 7,220' MD, 5,004' - 5,514' TVD

5. An aquifer exemption will be requested as part of the
application since the proposed injection zone contains water
with less than 10,000 ppm total dissolved solids.
Pursuant to Rules 38.22.1409, Administrative Rules of
Montana, the Montana Board of Oil and Gas Conservation
will hold a public meeting upon the application of MorningStar
Operating LLC for a Class II underground injection permit for
the well or project set forth above. Said hearing will be held
at the Montana Board of Oil & Gas Hearing Room at 2535
St. John's Ave. Billings, Montana, beginning at 8:00 am on
Thursday, August 13, 2026.

July 2, 2026 COL-MT-202955 MNAXLP



MORNINGSTAR
OPERATING

Affidavit of Public Notification
Sidney Herald
Jaws 1 SWD
Richland County, MT

**SIDNEY
HERALD**

AFFIDAVIT OF PUBLICATION

Sidney Herald
310 2nd Ave NE
(406) 433-2403

I, Anjana Bhadoriya, of lawful age, being duly sworn upon oath depose and say that I am an agent of Column Software, PBC, duly appointed and authorized agent of the Publisher of Sidney Herald, a publication that is a "legal newspaper" as that phrase is defined for the city of Sidney, for the County of Richland, in the state of Montana, that this affidavit is Page 1 of 1 with the full text of the sworn-to notice set forth on the pages that follow, and that the attachment hereto contains the correct copy of what was published in said legal newspaper in consecutive issues on the following dates:

PUBLICATION DATES:
Jul. 4, 2026

Notice ID: zeGnE6wCbNsRy5IWqKLa
Publisher ID: SHM000914
Notice Name: Jaws #1 SWD

PUBLICATION FEE: \$106.67

Request of
Alesha Jones

I declare under penalty of perjury and under the laws of the state of Montana that the foregoing is true and correct.

Anjana Bhadoriya

Agent

VERIFICATION

State of New Jersey
County of Camden

Signed or attested before me on this: 07/06/2026

Sharon E. Thomas-Pope

Notary Public
Notarized remotely online using communication technology via Proof.

SHARONN E THOMAS-POPE
NOTARY PUBLIC
STATE OF NEW JERSEY
My Commission Expires January 23, 2027

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

In the Matter of the application
of
MorningStar Operating LLC
for a Class II Injection well per-
mit

**NOTICE OF INTENTION TO
APPLY FOR A CLASS II INJE-
CTION WELL PERMIT**

1. Name and address of Appli-
cant
MorningStar Operating LLC
400 W 7th Street
Fort Worth, TX 76162

2. Legal Description including
County and Approximate Foot-
ages of Surface Location of Pro-
posed Oil and Gas Well:
(and projected bottom-hole loca-
tion, if a directional or hori-
zontal well)
Jaws #1 SWD
Surface Hole: 2459' FSL 845'
FEL
NESE Section 5, Township 22
North, Range 59 East
Bottom Hole: 1547' FSL 2128'
FEL
NWSE Section 6, Township 22
North, Range 59 East
Richland County, MT

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

4. Zone or formation into which
injection will occur, including
depth
Dakota from 5,004' - 7,220'
MD, 5,004' - 5,614' TVD

5. An aquifer exemption will be
requested as part of the applica-
tion since the proposed injection
zone contains water with less
than 10,000 ppm total dissolved
solids.
Pursuant to Rules 36.22.1409,
Administrative Rules of Mon-
tana, the Montana Board of Oil
and Gas Conservation will hold
a public meeting upon the appli-
cation of MorningStar Operating
LLC for a Class II underground
injection permit for the well or
project set forth above. Said
hearing will be held at the Mon-
tana Board of Oil & Gas Hearing
Room at 2535 St. John's Ave.
Billings, Montana, beginning at
9:00 am on Thursday, August
13, 2026.
Date: July 4, 2026
SHM000914



RECEIVED

JUL 09 2026

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

July 10, 2026

Mr. 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 Aquifer Exemption
Jaws 1 SWD located in Section 5 of T22N R59E
Richland County, Montana

Dear Mr. John Gizicki,

Please accept the Aquifer Exemption request to supplement the MorningStar Operating, LLC's Jaws 1 SWD Disposal Application for the August 13, 2026 Montana Board of Oil and Gas hearing.

The Dakota/Lakota are being evaluated for injection. There is water data available on the Dakota/Lakota. The assumption is that an aquifer exemption will be required unless water quality data from the Jaws 1 SWD indicates water from the injection zone is 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).

Swab analysis from the Lakota Formation (noted as Lower Dakota in the water analysis report in Exhibit 6A) outside the area of review indicates the TDS is greater than 10,000 ppm. There is swab analysis from the Dakota Formation (noted as Upper Dakota in the water analysis report in Exhibit 6A) outside the area of review that indicates the TDS is less than 10,000 ppm but greater than 3,000 ppm. The TDS of the Dakota and Lakota will be confirmed with swab results upon completion. In addition to swab results, cost analysis data indicates that a Dakota/Lakota freshwater supply well in this area is unlikely. The basis of the exemption is that the Dakota/Lakota does not currently serve as a source of drinking water because the Dakota/Lakota is situated at a depth 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 within the Tertiary Fort Union sandstone aquifer and the Cretaceous Fox Hills Hell Creek sandstone aquifer. Neither of these would be affected by injection into the proposed location. There are 14 water wells that are active and 1 abandoned within the ¼ mile area of review (AOR). There are no water supply wells penetrating the Dakota/Lakota formation within ½ mile of the Jaws SWD 1, 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



MORNINGSTAR
OPERATING

JUL 09 2026

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

logs that run through the Fox Hills formations due to this formation being isolated behind casing and cement. To supplement information on the depth of possible freshwater zones, MorningStar references Montana Bureau of Mines and Geology reports on groundwater for the area, namely, the mapping work by Larry Smith entitled "Depth to the Fox Hills-Lower Hell Creek Aquifer, Lower Yellowstone River Area" published in MBMG's GWAA- Montana Ground-Water Assessment Atlas (1-B-03), 1998, which estimates the base of the Fox Hills at approximately 1200 feet of depth in the Jaws 1 SWD area. Underground sources of drinking water (USDW) TDS reports to the base of the Fox Hills are available in the area and show values less than 1200 mg/L.

The Dakota/Lakota are not used for USDW in this area due to the existence of shallower freshwater aquifers. Based on recent drilling estimates using a water well rig, the cost to drill a 1,200-foot water well with rathole through the Fox Hills including the pump is approximately \$569,000. The cost to drill and complete a 5000-foot Dakota/Lakota water well would require a full drilling rig and cost approximately \$1,499,000. There would also be additional costs to treat the Dakota/Lakota water, greatly exceeding the costs to treat the Fox Hills water. See Exhibit 7A.

The Environmental Protection Agency (EPA), in UIC guidance 34, states that the minimum data set needed for aquifer exemptions will include at least:

1. *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 of any existing wellhead protection areas, and the locations of all relevant water samples.*
 - a. Water wells located within ¼ mile of the proposed Jaws 1 SWD are listed below:

Well Name	GWIC ID	Location	Use	Distance from Proposed SWD SH (ft)	Total Depth (ft)
H AND W RESTAURANT	35796	Sec 5, T22N, R59E 47.699133, -104.168023	Public Water Supply	1332	38
DAWLAND PROP. INC.	35797	Sec 5, T22N, R59E 47.693579, -104.176174	Domestic	2548	22
RUFFATO QUINTO	35800	Sec 5, T22N, R59E 47.694504, -104.166664	Domestic, Irrigation	430	39
THE DEPOT	35801	Sec 5, T22N, R59E 47.6959, -104.1696	Public Water Supply	934	41
FISHER LAND DEVELOP.	35802	Sec 5, T22N, R59E 47.69543, -104.17074	Unknown	1099	41
YOUNGKIN NICK	35806	Sec 5, T22N, R59E 47.689876, -104.17074	Industrial	2374	1220
PRICE ARLEN	122417	Sec 5, T22N, R59E 47.693116, -104.174137	Domestic	2140	40
ZE HACK JOHN	155725	Sec 5, T22N, R59E 47.690339, -104.174137	Domestic	2735	28.5
THE SUNRISE INN	165556	Sec 5, T22N, R59E 47.6951, -104.1702	Public Water Supply	985	38



MORNINGSTAR
OPERATING

JUL 09 2026

MONTANA BOARD OF OIL &
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TORGERSON RONALD AND ROBERT A	206106	Sec 5, T22N, R59E 47.693579, -104.173457	Domestic	1900	38
SUNRISE MOTEL	254900	Sec 5, T22N, R59E 47.6953, -104.1697	Commercial	847	43
SUNRISE MOTEL	254901	Sec 5, T22N, R59E 47.6947, -104.17	Commercial	971	43
B AND B RENTALS	258730	Sec 5, T22N, R59E 47.694504, -104.172099	Domestic	1487	35.5
B & B RENTALS	259050	Sec 5, T22N, R59E 47.694967, -104.164627	Domestic (abandoned)	485	37
MRS MORRIL	700595	Sec 5, T22N, R59E 47.6908, -104.1658	Domestic	1767	160

- b. There are no water samples available from wells within the ¼ mile AOR. There is 1 water well sample from the Richland County Conservation District-Sid 1 well (GWIC ID 239138) available within the ½ mile area. See Exhibit 5A for sample analysis and Exhibit 2A for location of water well.
- c. Water samples for the Dakota/Lakota formations are shown in Exhibit 6A.
- d. There are no Dakota/Lakota oil producing wells within the ¼ mile or ½ mile area. See Exhibit 1A.
- e. All water wells and producing wells within a ¼ mile and ½ mile area are shown on Exhibit 2A.

There are currently no oil wells within the ¼ mile AOR. There are 4 planned horizontal Middle Bakken wells to be drilled from the same pad as the Jaws SWD 1. The proposed Middle Bakken wells will have 7-inch casing through the proposed disposal zone of the wellbores. Top of cement for the 4 locations will cover the proposed disposal zone, and a CBL will be run to confirm TOC on each.

Not within the ¼ mile area but within the ½ mile area, the Simonsen 44X-5 (SESE, Section 5 of T22N R59E) is a producing well located 2100 feet south of the proposed SWD. The Simonsen 44X-5 was drilled in 2006 as a horizontal development in the Middle Bakken. Surface casing was set at 1562' MD and cemented with 515 sacks. There is one producing well with a lateral penetrating the ½ mile area at around 10,120' TVD in the Middle Bakken, the Andersen 1-4H (SESE of Sec 4 of T22N R59E), operated by MorningStar Operating, whose surface hole is located 4042 feet to the east of the nearest point of the proposed SWD.

2. *Narrative description of the proposed exempted aquifer listing formation name, approximate depth or elevation, confining zone, as well as geological definition of the exempted area. Include adequate wireline logs to demonstrate vertical confinement from sources of drinking water.*
 - a. The Jaws 1 SWD may be completed into the Dakota and Lakota. See Exhibit 3A for a cross section of wireline logs showing the vertical confinement of the Dakota/Lakota formation and Exhibit 4A for available wireline logs of the injection interval.

JUL 09 2026

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

- b. Water quality information for the proposed disposal zone in the immediate area of the Jaws 1 SWD is not available. However, a water sample from the Dakota/Lakota in the RR Lonetree Edna 1-13 SWD located 15 miles west of the proposed disposal site had total dissolved solids between 5,173 to 10,352 mg/L, and water in the Jaws 1 SWD is expected to be similar. The samples from the Lonetree Edna 1-13 were acquired by swab testing the interval and measuring the TDS for the interval. See Exhibit 6A. The Dakota (identified as Upper Dakota on the report) TDS lies between the 3,000 ppm and 10,000 ppm cutoff and required an aquifer exemption in that well.
- c. Proposed injection zones for the Jaws 1 SWD are as follows and can be viewed in the wellbore diagram in Exhibit 8A. Depths are shown below:

Formation	Lithology	Est. TVD Top (ft)	Est. TVD Base (ft)	Est. TVT Net pay (ft)	Pressure (PSI)	Porosity
Dakota	Sandstone	5004	5440	76	2250	22%
Lakota	Sandstone	5440	5514	16	2400	22%

Depth and net pay for each of the proposed injection zones are estimated from the Cement Bond Log with Gamma Ray ran April 30, 2006, on the Simonsen 44X-5. The porosity is based on sonic log estimates from the Becker 8-4 (1 mile east). The porosity was derived from a sonic log curve calculated using a consolidated sandstone matrix. Formation pressure was estimated using a water gradient of 0.435 psi/ft.

- d. The upper confining formation for the proposed injection zone is the Cretaceous Skull Creek formation. It is comprised of clastic, shallow marine deposits composed of medium-dark gray shales, calcareous, micaceous, and glauconitic in part, interbedded with siltstones. The Skull Creek is 150 feet thick in this area.

The lower confining formation for the proposed injection zone is the Jurassic Morrison, Swift, and Rierdon formations. The Swift lies immediately below the Lakota and is primarily made up of transgressive-regressive, clastic, shallow marine deposits composed of dark gray-green shales, slightly calcareous, dark gray-green, waxy shales, and is commonly interbedded with glauconitic siltstones and sandstones with occasional carbonate packstones and grainstones. The lower confining interval is approximately 702 feet of impermeable rock facies.

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	Est. TVD Top (ft)	Est. TVD Base (ft)	Thickness (ft)
Skull Creek	Shale	4854	5004	150
Mrsn/Swft/Rrdn	Shale	5514	6216	702



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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 zone 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 volume 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 within the exempted area, the UIC permit will terminate when the cumulative injected volume reaches 5.0 million barrels of saltwater).*

$$\text{Pore Volume (barrels)} = ((\pi * r^2 + 2 * r * l) * h * f) / 5.63$$

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

l = lateral length, in feet

The computed pore volume would be:

$$\text{Dakota: } ((\pi * 1320^2 + 2 * 1320 * 1672) * 76 * 0.22) / 5.63 = 29,365,401 \text{ barrels}$$

$$\text{Lakota: } ((\pi * 1320^2 + 2 * 1320 * 454) * 16 * 0.22) / 5.63 = 4,171,776 \text{ barrels}$$

$$\text{Radius of Emplacement Fluid} = (Q * t / (\pi * l * \text{porosity}))^{0.5}$$

Where: t = time, in days

Q = injection rate, cubic feet per day

Assuming:	Minimum Water Injection Rate	0	BWPD	or	0	FT ³ /DAY
	Median Water Injection Rate	3000	BWPD	or	16844	FT ³ /DAY
	Maximum Water Injection Rate	10000	BPWD	or	56146	FT ³ /DAY
	Injection Period	100	YEARS	or	36500	DAYS
	Net Length (Thickness)	2126	FEET			
	Average Porosity	22%				



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The computed radius of emplacement would be:

$$(16844 \times 36500 / (\pi \times 2126 \times 0.22))^{0.5} = 647 \text{ FT} = 0.12 \text{ miles}$$

4. *Water quality analysis of the aquifer for exemption. How was water quality determined?*
- a. Water samples from the RR Lonetree Edna 1-13, located 15 miles west of the Jaws 1 SWD were used. See Exhibit 6A for swab results of the water samples.

In addition to the technical data, the affidavits of notification to all concerned parties are attached as Exhibit 9A and 10A. Please contact us if there are any questions regarding this submission.

Sincerely,

A handwritten signature in blue ink, appearing to read 'B. Savage'.

Brodie Savage

Vice President- Operations Engineering

817-334-7745

bsavage@txopartners.com

A handwritten signature in blue ink, appearing to read 'E. Donovan'.

Erin Donovan

Manager- Geology

817-334-7871

edonovan@txopartners.com



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List of Exhibits

- | | |
|-------------|---|
| Exhibit 1A | Map of General Area |
| Exhibit 2A | Map of Freshwater Wells within Area of Review (AOR) |
| Exhibit 3A | Geologic Cross Section of the Dakota/Lakota |
| Exhibit 4A | Log of Injection Interval |
| Exhibit 5A | Water Well Sample Analysis |
| Exhibit 6A | Water Analysis of Injection Interval |
| Exhibit 7A | Estimated Cost of Drilling deep USDW |
| Exhibit 8A | Proposed Wellbore Diagram and Directional Plan |
| Exhibit 9A | Surface and Mineral Owner List |
| Exhibit 10A | Affidavit of Notification to Surface and Mineral Owners |
| Exhibit 11A | Affidavit of Publication in Helena Independent Record & Sidney Herald |

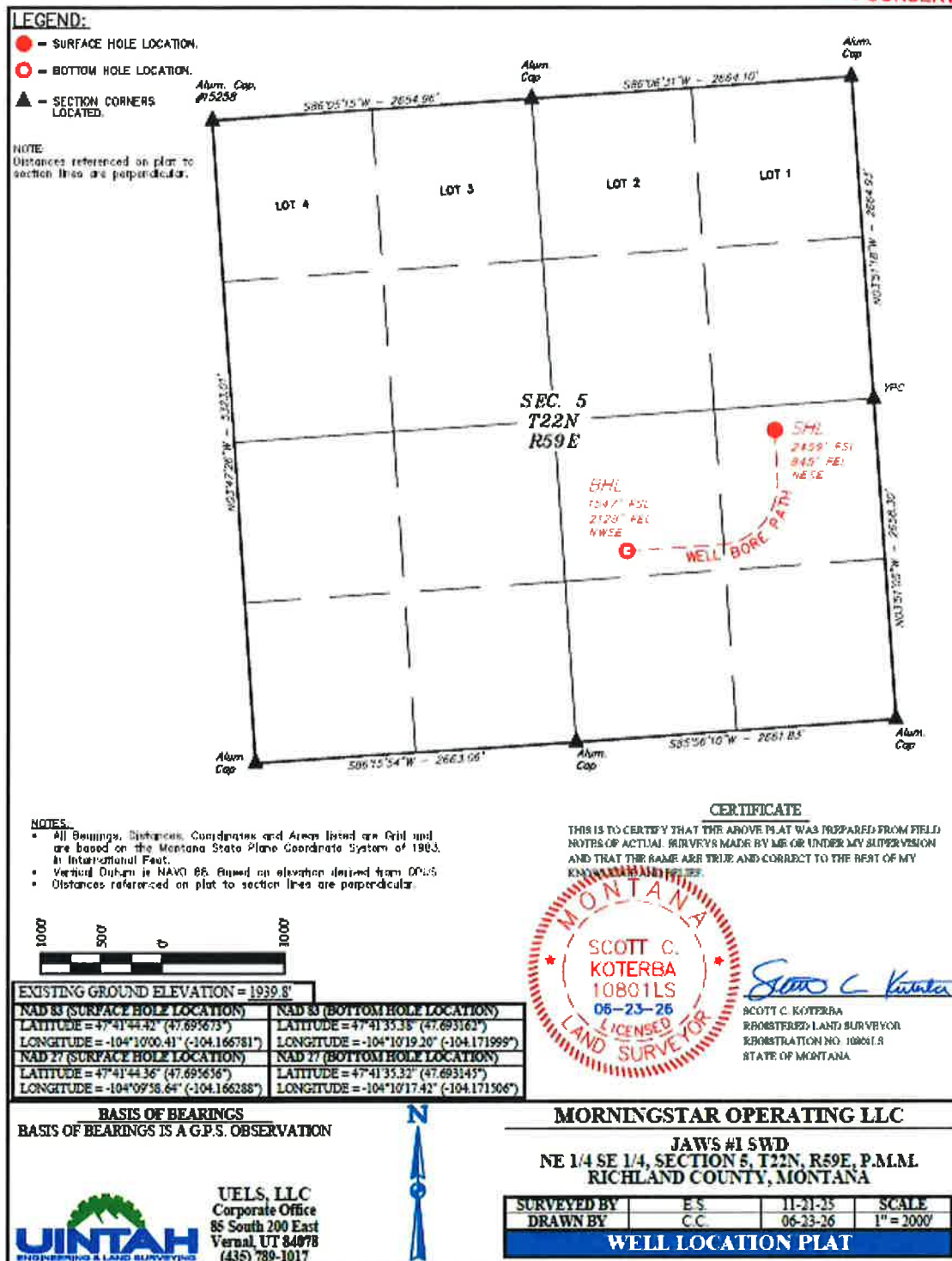


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Map of General Area
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana

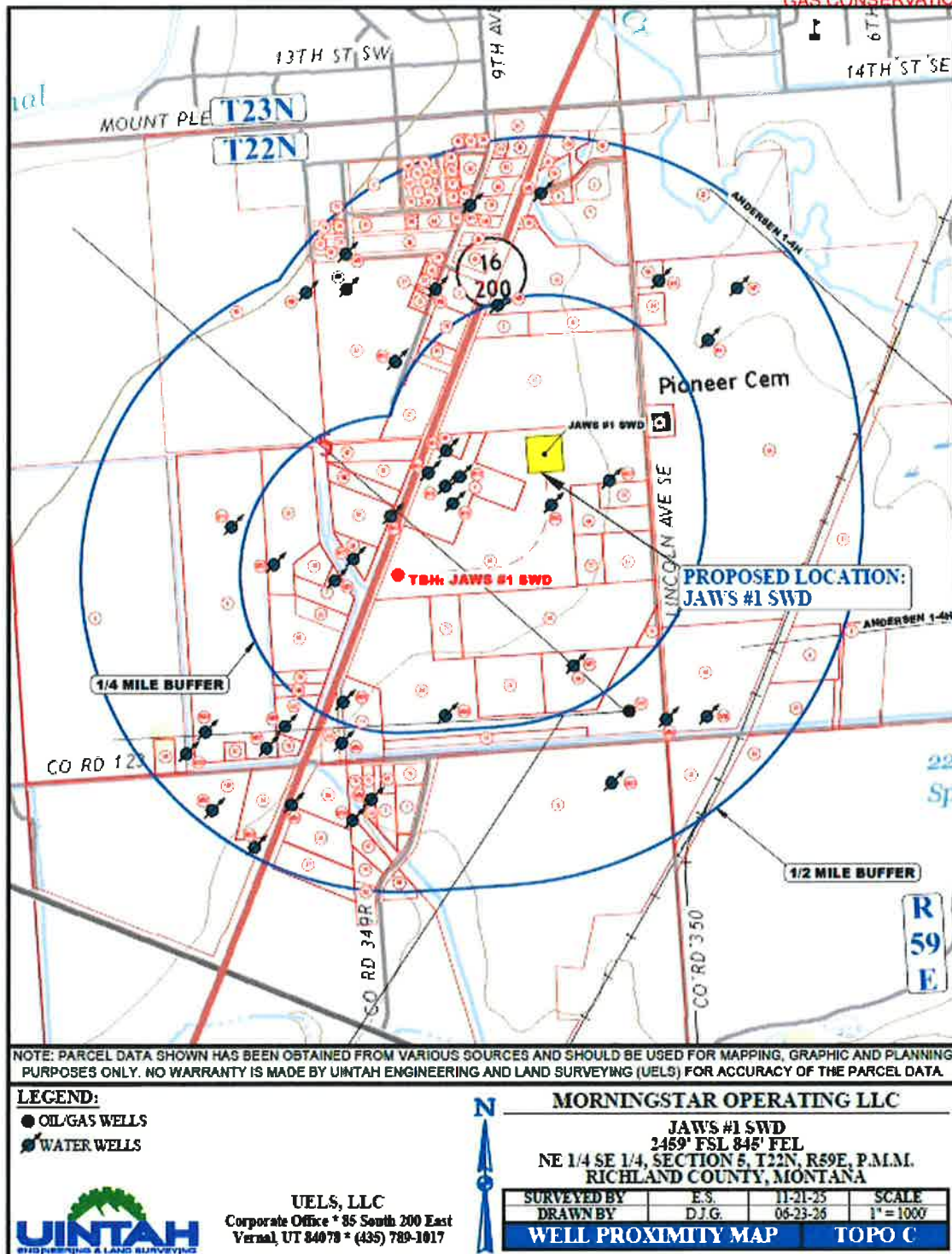


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Map of 1/4 mile AOR and Freshwater Wells

Jaws 1 SWD

Section 5 of T22N-R59E

Richland County, Montana

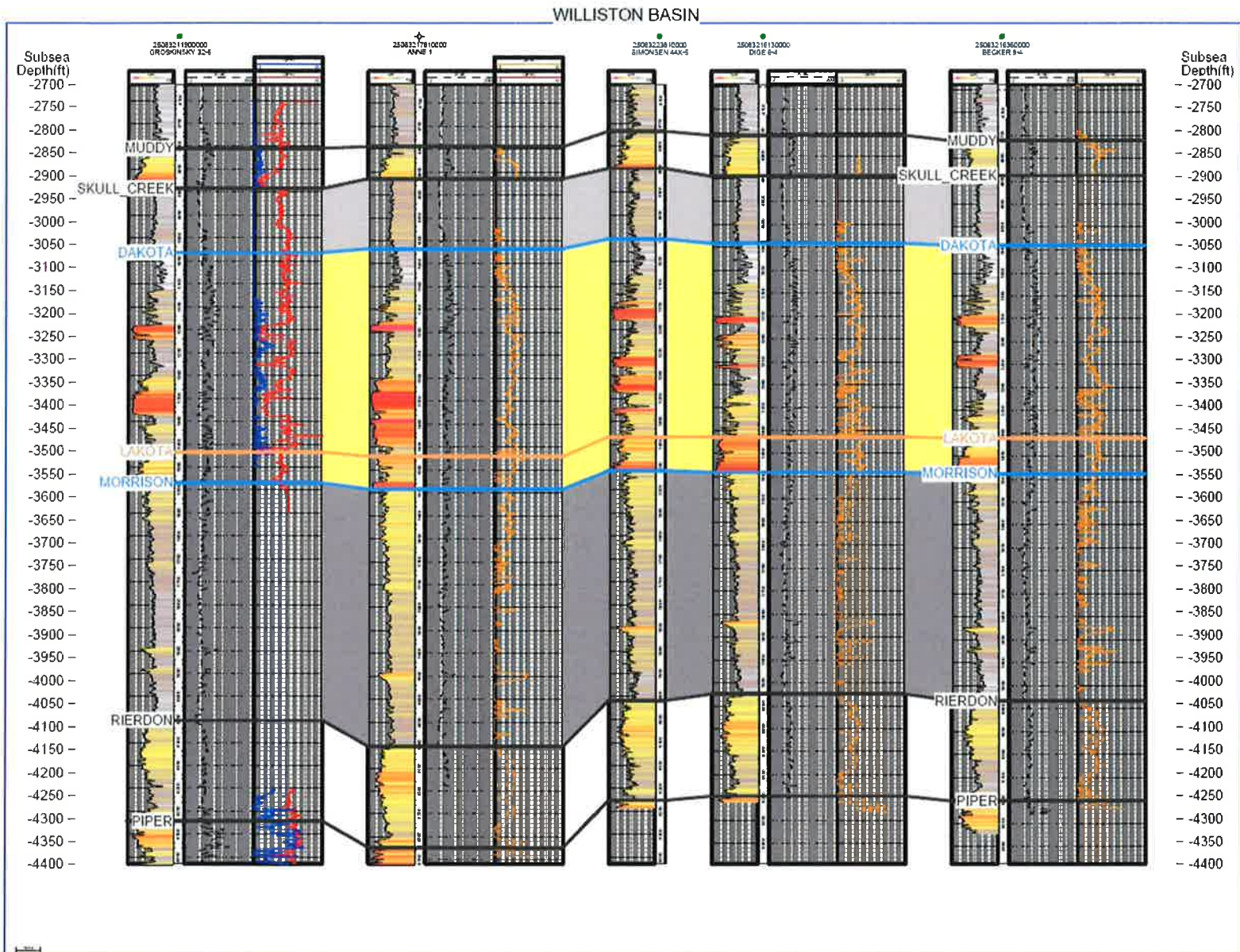


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Cross Section
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana

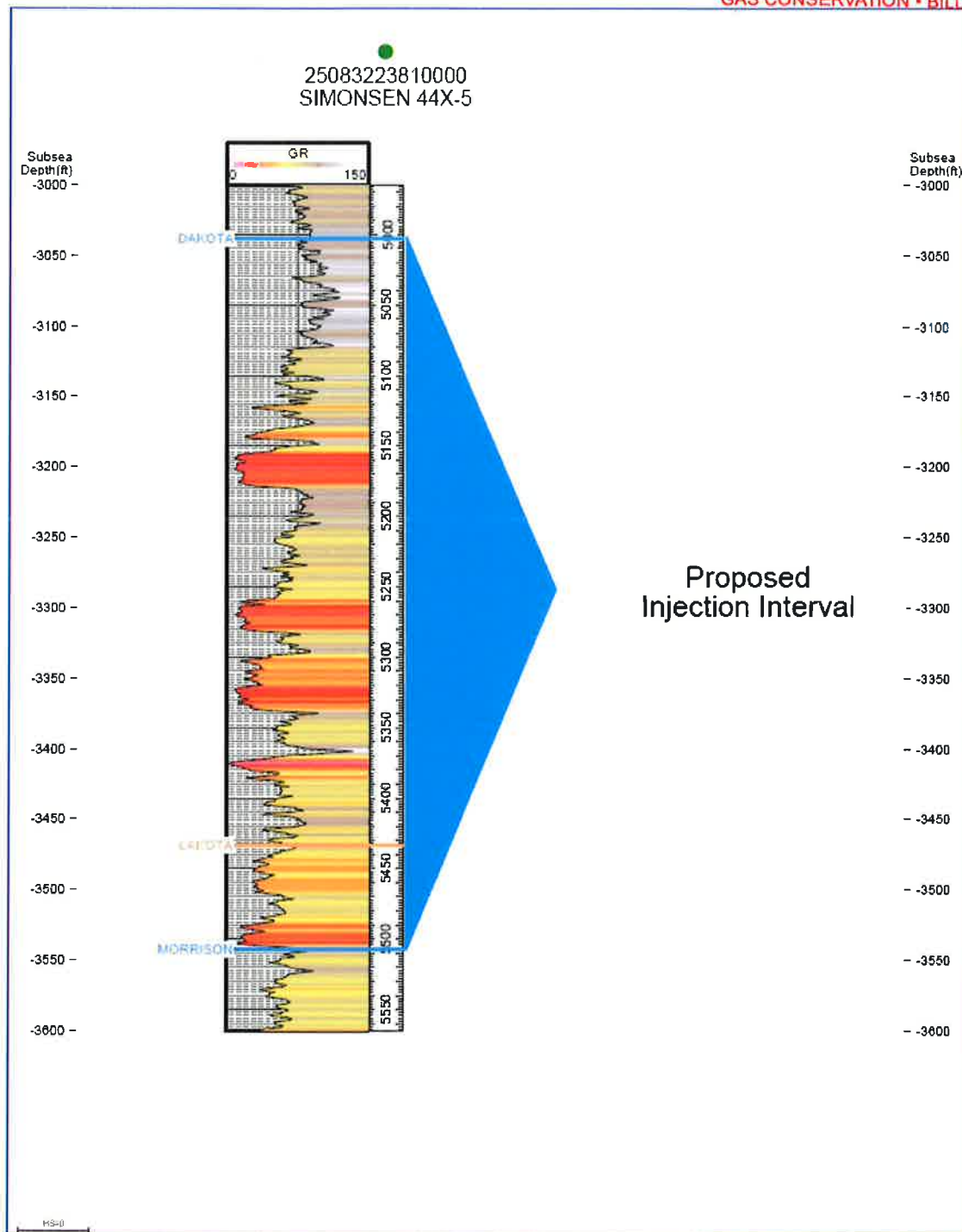


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Log of Injection Interval
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana



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Freshwater Sample Analysis

Jaws 1 SWD

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12/16/25, 4:59 PM

Montana's Ground-Water Information Center (GWIC) | Analysis Report | V.12.2025

Ground-Water Information Center Water Quality Report

Report Date: 12/16/2025

Site Name: RICHLAND COUNTY CONSERVATION DISTRICT-SID 1

[Compare to Water Quality Standards](#)

Location Information

Sample Id/Site Id: 2008Q0369 / 239138
Location (TRS): 22N 59E 05 ABCC
Latitude/Longitude: 47° 42' 1" N 104° 10' 22" W
Datum: NAD83
Altitude: 1949.4
County/State: RICHLAND / MT
Site Type: WELL
Geology: 1105NGR
USGS 7.5' Quad:
PWS Id:
Project: LYBC

Sample Date: 3/12/2008 11:30:00 AM
Agency/Sampler: MBMG / JCR
Field Number: 239138
Lab Date: 4/1/2008
Lab/Analyst: MBMG / WO
Sample Method/Handling: PUMPED / 3210
Procedure Type: DISSOLVED
Total Depth (ft): 38
SWL-MP (ft): 16.04
Depth Water Enters (ft): 38

Major Ion Results

mg/L	meq/L	mg/L	meq/L
Calcium (Ca)	71.900	3.588	
Magnesium (Mg)	59.600	4.904	
Sodium (Na)	69.600	3.028	
Potassium (K)	6.530	0.167	
Iron (Fe)	0.005	0.000	
Manganese (Mn)	0.120	0.004	
Silica (SiO ₂)	20.800		
Total Cations	11.741		
		Bicarbonate (HCO ₃)	409.500
		Carbonate (CO ₃)	0.000
		Chloride (Cl)	28.200
		Sulfate (SO ₄)	226.000
		Nitrate (as N)	0.283
		Fluoride (F)	0.226
		Orthophosphate (as P)	<0.05
		Total Anions	12.247

Trace Element Results (µg/L)

Aluminum (Al):	<2.0	Cesium (Cs):	<0.1	Molybdenum (Mo):	<10.0	Strontium (Sr):	1,043.000
Antimony (Sb):	<0.1	Chromium (Cr):	1.700	Nickel (Ni):	<2.0	Thallium (Tl):	NR
Arsenic (As):	4.580	Cobalt (Co):	1.030	Niobium (Nb):	14.200	Thorium (Th):	<0.05
Barium (Ba):	39.200	Copper (Cu):	1.620	Neodymium (Nd):	<0.1	Tin (Sn):	<0.1
Beryllium (Be):	<0.1	Gallium (Ga):	0.340	Palladium (Pd):	<0.2	Titanium (Ti):	<1.0
Boron (B):	280.000	Lanthanum (La):	<0.1	Praseodymium (Pr):	<0.1	Tungsten (W):	<0.5
Bromide (Br):	<100	Lead (Pb):	<0.2	Rubidium (Rb):	12.300	Uranium (U):	7.740
Cadmium (Cd):	<0.1	Lithium (Li):	29.000	Silver (Ag):	<0.05	Vanadium (V):	2.550
Cerium (Ce):	<0.1	Mercury (Hg):	NR	Selenium (Se):	3.300	Zinc (Zn):	3.860
						Zirconium (Zr):	1.080

Field Chemistry and Other Analytical Results

**Total Dissolved Solids (mg/L):	685.48	Field Hardness as CaCO ₃ (mg/L):	NR	Ammonia (mg/L):	NR
**Sum of Diss. Constituents (mg/L):	893.51	Hardness as CaCO ₃ :	424.85	T.P. Hydrocarbons (µg/L):	NR
Field Conductivity (µmhos):	966	Field Alkalinity as CaCO ₃ (mg/L):	NR	PCP (µg/L):	NR
Lab Conductivity (µmhos):	1061	Alkalinity as CaCO ₃ (mg/L):	336.27	Phosphorus, TD (mg/L):	<0.05
Field pH:	7.57	Ryznar Stability Index:	6.773	Field Nitrate (mg/L):	NR
Lab pH:	7.46	Sodium Adsorption Ratio:	1.4777	Field Dissolved O ₂ (mg/L):	0.400
Water Temp (°C):	9.4	Langlier Saturation Index:	0.343	Field Chloride (mg/L):	NR
Air Temp (°C):	9	Nitrite (mg/L as N):	<0.05	Field Redox (mV):	30.7
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 CaCO ₃):	NR	Acidity to 8.3 (mg/L CaCO ₃):	NR
As(III) (ug/L):	NR	As(V) (ug/L):	NR	Total Susp Solids (mg/L):	NR

Sample Condition: CLEAR, WELL PRODUCED A LOT OF SAND.

Field Remarks:

Lab Remarks:

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

Qualifiers: J = Estimated quantity above detection limit but below reporting limit; 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 (HCO₃, CO₃, SO₄, Cl, SO₂, NO₃, F) in mg/L. Total Dissolved Solids is reported as equivalent weight of evaporation residue.

Disclaimer

These data represent the contents of the GWIC databases at the Montana Bureau of Mines and Geology at the time and date of the retrieval. The information is considered unpublished and is subject to correction and review on a daily basis. The Bureau warrants the accurate transmission of the data to the original end user. Retransmission of the data to other users is discouraged and the Bureau claims no responsibility if the material is retransmitted.



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Water Analysis of Injection Interval- Lower Dakota

Jaws 1 SWD

Richland County, MT

SATHE ANALYTICAL LABORATORY, INC.

301 W. 2ND STREET

P.O. BOX 1507
WILLISTON, ND. 58801

701 572-3612

WATER ANALYSIS REPORT

OPERATOR: ENERPLUS RESOURCES L.P. DATE: 4/7/09
WELL NO.: LONE TREE EDNA 1-12 LAB NO.: W-09-1694
FIELD: not listed FORMATION: Lower Dakota
COUNTY: Richland INTERVAL: 3844 - 3864'
STATE: MT DSI #:
LOC: not listed SAMPLE 11TH SWAB RUN-TOTAL 105 BBLs

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM	3580.0	155.7	CHLORIDE	3766.1	106.2
CALCIUM	29.6	1.2	CARBONATE	0.0	0.0
MAGNESIUM	11.4	0.9	BICARBONATE	1415.7	33.2
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 MREL (Calc.) 6210.2
TOTAL DISSOLVED SOLIDS (Calc.) MREL 10350.5 HYDROGEN SULFIDE NEG

WATER ANALYSIS PATTERN - MEQ/L



REMARKS - 11th RUN SWAB - TOTAL 105 BBL 4/6/09.
Received 4/7/09.

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



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Water Analysis of Injection Interval- Upper Dakota
Jaws 1 SWD
Richland County, MT

SATHE ANALYTICAL LABORATORY, INC.,

101 W. 2ND STREET

P.O. BOX 1597
WILLISTON, ND 58851

701-572-3630

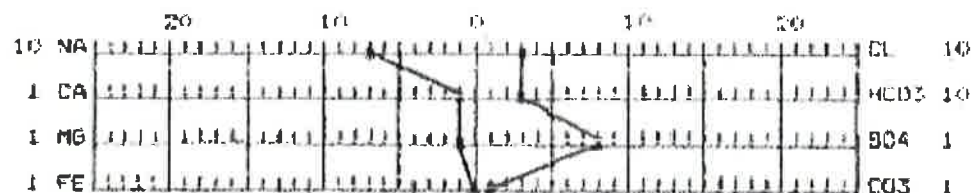
WATER ANALYSIS REPORT

OPERATOR: ENERPLUS L.P. DATE: 4/8/09
WELL NO. LONE TREE EDNA 1-12 LAB NO.: W-09-1705
FIELD: not listed FORMATION: Upper Dakota
COUNTY: Richland INTERVAL: 5388-5408
STATE: MT DST #:
LOG: not listed SAMPLE RUN #16--SAMPLE 130 DBLS BACK

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM	1680.0	73.1	CHLORIDE	1114.7	31.4
CALCIUM	14.0	0.7	CARBONATE	31.5	1.1
MAGNESIUM	7.6	0.7	BICARBONATE	1929.1	31.3
IRON	1.2	0.1	SULFATE	791.2	6.1
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 FACTORS IN MEQ/L



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

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



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AUTHORITY FOR EXPENDITURE - D&C			
Company	MorningStar Operating, LLC	AFE #	CC#
Lease Name	Elm Coulee Water Well	Well #	1
S-T-R		Surv/Abs	
County	Richland	State	Montana
Project	Drill and Complete a water well to 1,500'		
Proj Form		Proj TD	1500
2250		INTANGIBLE	TOTAL
1000	LOCATION / ROADS / PITS	\$150,000	\$150,000
1002	LAND DAMAGES / LEGAL WORK / SURVEYING	\$25,000	\$25,000
1100	DRILLING - FISHING TOOLS & SERVICE		\$0
1301	DRILLING - RENTAL TOOLS & EQUIPMENT - SURFACE	\$20,000	\$20,000
1302	DRILLING - RENTAL TOOLS & EQUIPMENT - SUBSURFACE	\$4,000	\$4,000
1500	MUD / CHEMICALS	\$15,000	\$15,000
1600	DRILLING - ENGINEERING / SUPERVISION	\$15,000	\$15,000
1601	DRILLING - CONTRACT LABOR		\$0
2000	DRILLING RIG	\$125,000	\$125,000
2003	DRILLING - TRUCKING / HOT SHOT (TANGIBLES ONLY)		\$0
2004	DIRECTIONAL TOOLS & SERVICE		\$0
2007	RIG MOB / DEMOB		\$0
2102	DRILLING - FLUID DISPOSAL / SOLIDS CONTROL		\$0
2201	OPEN HOLE LOGS / CORES / FORMATION EVALUATION		\$0
3000	DRILL BITS		\$0
3100	OVERHEAD		\$0
3900	DRILLING - WATER & WATERLINES	\$15,000	\$15,000
3901	DRILLING - POWER & FUEL	\$10,000	\$10,000
4001	SURFACE / INTERMEDIATE - CASING CREWS, TOOLS & TONGS		\$0
4002	SURFACE / INTERMEDIATE - CEMENT & CEMENTING SERVICES		\$0
8000	MUD LOGGING UNIT		\$0
2260		TANGIBLE	TOTAL
1201	CONDUCTOR PIPE		\$0
1101	SURFACE CASING		\$0
1102	INTERMEDIATE CASING		\$0
1300	CASING HEAD	\$7,500	\$7,500
TOTAL COST IF DRY HOLE		\$379,000	\$7,500
2250		INTANGIBLE	TOTAL
1101	COMPLETION - FISHING TOOLS & SERVICES		\$0
1303	COMPLETION - RENTAL TOOLS & EQUIPMENT - SUBSURFACE		\$0
1304	COMPLETION - RENTAL TOOLS & EQUIPMENT - SURFACE		\$0
1501	COMPLETION - WATER / COMPLETION FLUIDS / CHEMICALS / TRACERS		\$0
1602	COMPLETION - ENGINEERING / SUPERVISION		\$0
1603	COMPLETION - CONTRACT LABOR		\$0
2100	COMPLETION UNIT		\$0
2101	COMPLETION - TRUCKING / HOT SHOT		\$0
2200	CASED HOLE WIRELINE SERVICES		\$0
2400	STIMULATION SERVICES		\$0
2401	COMPLETION - FLUID DISPOSAL		\$0
2402	COMPLETION - FRAC TANK RENTALS		\$0
2403	FLOWBACK		\$0
3301	PUMP TRUCKS & SERVICES		\$0
4003	PRODUCTION - CEMENT & CEMENTING SERVICES	\$30,000	\$30,000
4004	PRODUCTION - CASING CREWS, TOOLS & TONGS	\$7,500	\$7,500
4200	WELL TESTING		\$0
9000	FILL PITS & DRESS LOCATION		\$0
2260		TANGIBLE	TOTAL
1103	PRODUCTION CASING / LINER	\$50,000	\$50,000
1200	TUBING	\$10,000	\$10,000
1301	TUBING HEAD / X-MAS TREE	\$10,000	\$10,000
1401	SUBSURFACE EQUIPMENT / PACKER		\$0
1501	ARTIFICIAL LIFT EQUIPMENT / SUBPUMP / PUMPING UNIT	\$50,000	\$50,000
1502	TANKS / WALKS / STAIRWAYS		\$0
1503	SEPARATION EQUIPMENT / GAUGES - PROD FACILITY		\$0
1601	ELECTRICAL	\$25,000	\$25,000
1700	MEASUREMENT EQUIPMENT		\$0
1701	AUTOMATION EQUIPMENT		\$0
8000	FLOWLINES & FITTINGS		\$0
TOTAL COST TO COMPLETE & EQUIP		\$37,500	\$145,000
TOTAL WELL COST		\$416,500	\$152,500



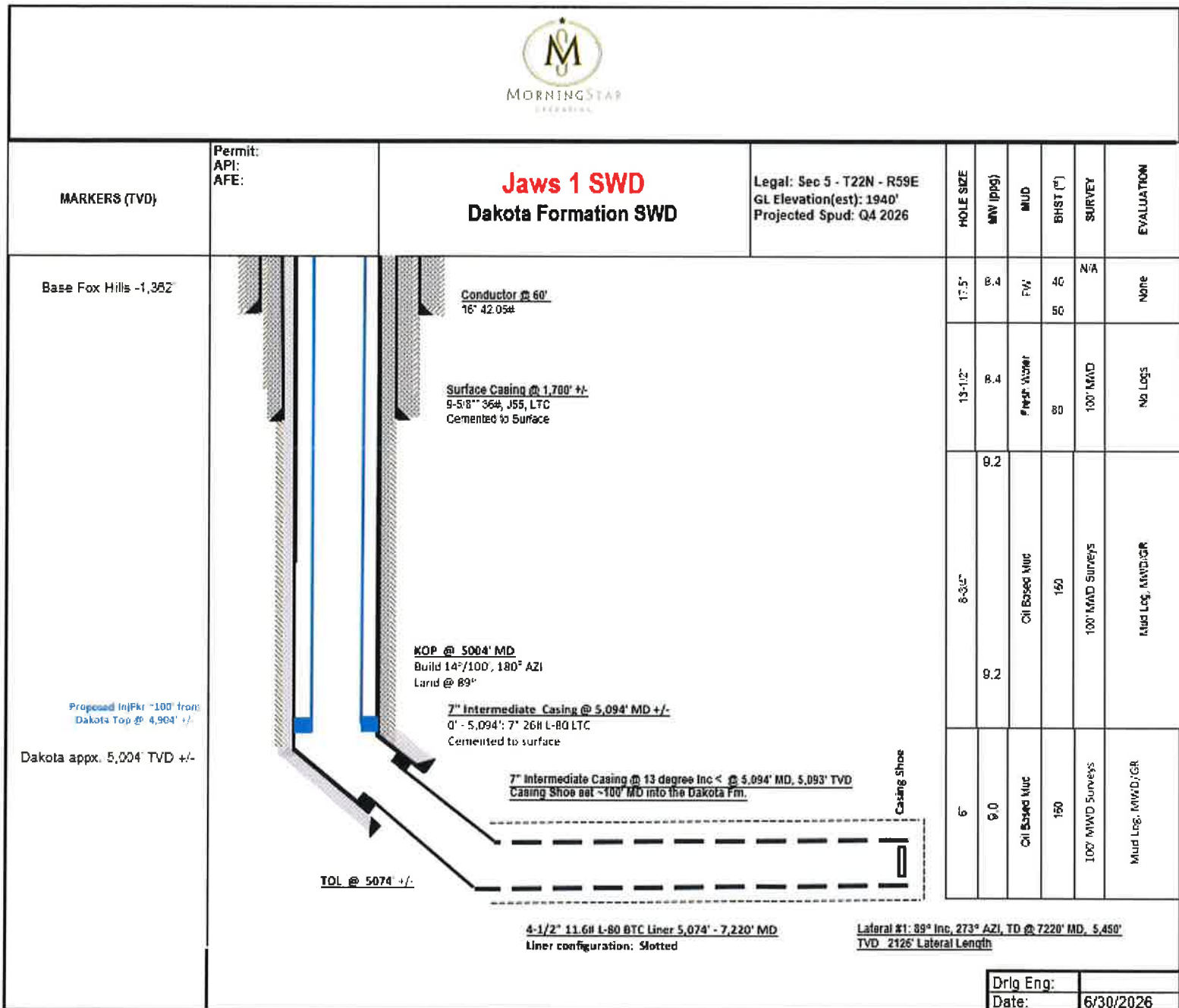
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AUTHORITY FOR EXPENDITURE - D&C			
Company	MorningStar Operating, LLC	AFE #	CC#
Lease Name	Elm Coulee Water Well	Well #	1
S-T-R		Surv/Abs	
County	Richland	State	Montana
Project	Drill and Complete a water well to 5,900'		
Proj Form		Proj TD	5,900'
2250		INTANGIBLE	TOTAL
1000	LOCATION / ROADS / PITS	\$250,000	\$250,000
1002	LAND DAMAGES / LEGAL WORK / SURVEYING	\$25,000	\$25,000
1100	DRILLING - FISHING TOOLS & SERVICE		\$0
1301	DRILLING - RENTAL TOOLS & EQUIPMENT - SURFACE	\$50,000	\$50,000
1302	DRILLING - RENTAL TOOLS & EQUIPMENT - SUBSURFACE	\$20,000	\$20,000
1500	MUD / CHEMICALS		\$0
1600	DRILLING - ENGINEERING / SUPERVISION	\$30,000	\$30,000
1601	DRILLING - CONTRACT LABOR		\$0
2000	DRILLING RIG	\$300,000	\$300,000
2003	DRILLING - TRUCKING / HOT SHOT (TANGIBLES ONLY)		\$0
2004	DIRECTIONAL TOOLS & SERVICE		\$0
2007	RIG MOB / DEMOB		\$0
2102	DRILLING - FLUID DISPOSAL / SOLIDS CONTROL	\$40,000	\$40,000
2201	OPEN HOLE LOGS / CORES / FORMATION EVALUATION		\$0
3000	DRILL BITS		\$0
3100	OVERHEAD		\$0
3900	DRILLING - WATER & WATERLINES	\$25,000	\$25,000
3901	DRILLING - POWER & FUEL	\$25,000	\$25,000
4001	SURFACE / INTERMEDIATE - CASING CREWS, TOOLS & TONGS	\$7,500	\$7,500
4002	SURFACE / INTERMEDIATE - CEMENT & CEMENTING SERVICES	\$30,000	\$30,000
8000	MUD LOGGING UNIT		\$0
2260		TANGIBLE	TOTAL
1201	CONDUCTOR PIPE		\$0
1101	SURFACE CASING	\$83,000	\$83,000
1102	INTERMEDIATE CASING		\$0
1300	CASING HEAD	\$7,500	\$7,500
TOTAL COST IF DRY HOLE		\$802,500	\$90,500
2250		INTANGIBLE	TOTAL
1101	COMPLETION - FISHING TOOLS & SERVICES		\$0
1303	COMPLETION - RENTAL TOOLS & EQUIPMENT - SUBSURFACE		\$0
1304	COMPLETION - RENTAL TOOLS & EQUIPMENT - SURFACE		\$0
1501	COMPLETION - WATER / COMPLETION FLUIDS / CHEMICALS / TRACERS		\$0
1602	COMPLETION - ENGINEERING / SUPERVISION		\$0
1603	COMPLETION - CONTRACT LABOR		\$0
2100	COMPLETION UNIT		\$0
2101	COMPLETION - TRUCKING / HOT SHOT		\$0
2200	CASED HOLE WIRELINE SERVICES	\$20,000	\$20,000
2400	STIMULATION SERVICES		\$0
2401	COMPLETION - FLUID DISPOSAL		\$0
2402	COMPLETION - FRAC TANK RENTALS		\$0
2403	FLOWBACK		\$0
3301	PUMP TRUCKS & SERVICES		\$0
4003	PRODUCTION - CEMENT & CEMENTING SERVICES	\$40,000	\$40,000
4004	PRODUCTION - CASING CREWS, TOOLS & TONGS	\$12,500	\$12,500
4200	WELL TESTING		\$0
9000	FILL PITS & DRESS LOCATION		\$0
2260		TANGIBLE	TOTAL
1103	PRODUCTION CASING / LINER	\$304,000	\$304,000
1200	TUBING	\$42,000	\$42,000
1301	TUBING HEAD / X-MAS TREE	\$12,500	\$12,500
1401	SUBSURFACE EQUIPMENT / PACKER		\$0
1501	ARTIFICIAL LIFT EQUIPMENT / SUBPUMP / PUMPING UNIT	\$150,000	\$150,000
1502	TANKS / WALKS / STAIRWAYS		\$0
1503	SEPARATION EQUIPMENT / GAUGES - PROD FACILITY		\$0
1601	ELECTRICAL	\$25,000	\$25,000
1700	MEASUREMENT EQUIPMENT		\$0
1701	AUTOMATION EQUIPMENT		\$0
8000	FLOWLINES & FITTINGS		\$0
TOTAL COST TO COMPLETE & EQUIP		\$72,500	\$533,500
TOTAL WELL COST		\$875,000	\$624,000



Proposed Wellbore Diagram

Jaws 1 SWD

Section 5 of T22N-R59E

Richland County, Montana



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MorningStar Operating
Site: Sec 5 T22N-R59E (HAMMERHEAD)
Well: JAWS #1 SWD
Wellbore: OH
Design: Prelim A
Rig:

PROJECT DETAILS: Richland County, MT. (H4D 48)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Montana



Asterisks to True North
Magnetic North: 7.86°
Magnetic Field
Jawmelt: 54832.50T
Dip Angle: 73.94°
Date: 02/03/2026
Model: HD082026

BHL

R.R. Elevation: 1047' OL = 25' R.R. @ 1968.00us

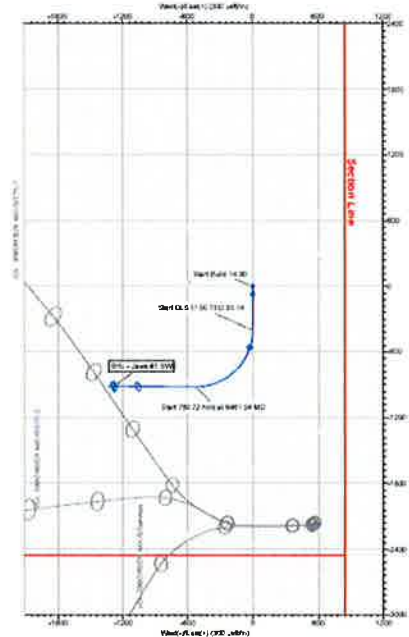
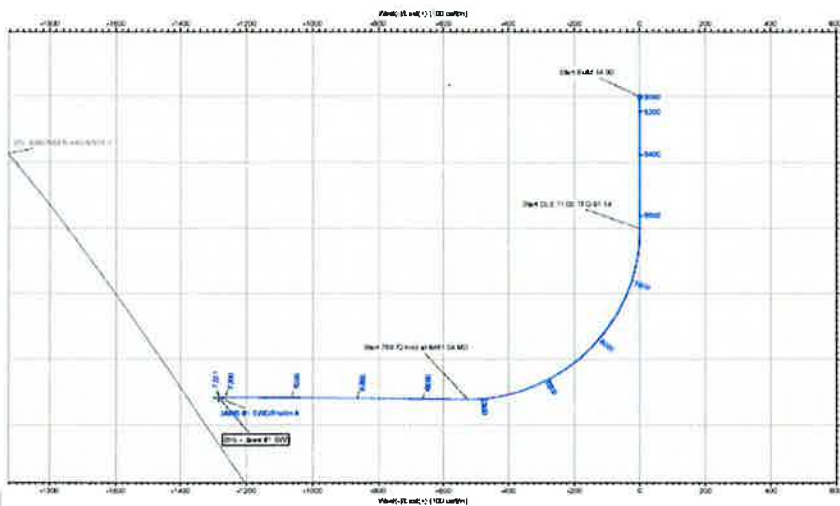
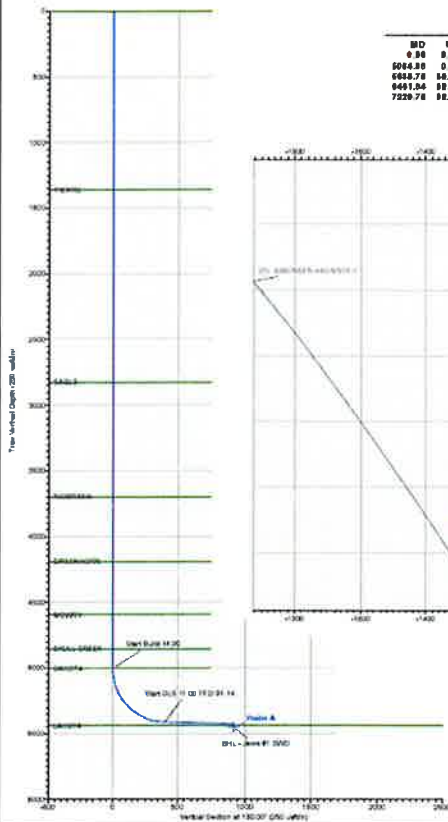
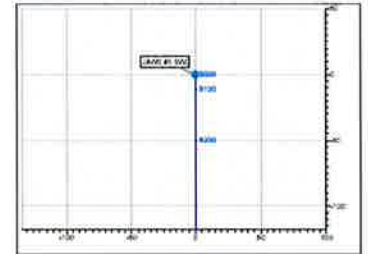
+NLS	+E-W	Northing	Eastng	Latitude	Longitude	EtoI
0.00	0.00	1040026.00	526102.00	47.89575	-104.10771	

WELLS TARGET DETAILS

Name	TVD	+NLS	+E-W	Northing	Eastng	Latitude	Longitude
BHL - Jaws #1 SWD	6440.00	-010.42	-1294.41	1290020.80	5270070.10	47.900102	-104.173509

SECTION DETAILS

MD	iso	Azi	TVD	+NLS	+E-W	Dip	TPace	Vsnet	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5004.80	0.00	0.00	5004.80	0.00	0.00	0.00	0.00	0.00	
5004.78	30.87	180.89	5016.15	-001.16	0.00	16.00	180.89	481.16	
5005.34	30.87	270.47	5005.34	-021.79	-004.37	11.00	91.14	823.70	
7220.78	30.87	270.47	5440.00	-010.42	-1294.41	0.00	0.00	616.42	BHL - Jaws #1 SWD



Proposed Directional Plan
Jaws 1 SWD
Section 5 of T22N-R59E
Richland County, Montana



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GAS CONSERVATION • BILLINGS

MorningStar Operating

Richland County, MT. (NAD 83)

Sec 5 T22N--R59E (HAMMERHEAD)

JAWS #1 SWD

OH

Plan: Prelim A



Standard Plan Report

25 June, 2026

Total Report Version 1.90

COMPASS 5000.16 Build 97

ATTENTION

All annotation callouts related to distances are uncertified and are approximated footages using available software and measurement tools. They should not be mistaken as an official record, which can only be obtained via a certified land surveyor.



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OPERATING

Total Directional Services
Planned Survey Report

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**MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS**

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT. (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N-R59E (HAMMERHEAD)	MD Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Databases:	.Total Directional Production DB

Project	Richland County, MT. (NAD 83)	System Datum:	Mean Sea Level
Map System:	US State Plane 1983		
Geo Datum:	North American Datum 1983		
Map Zone:	Montana		

Site	Sec 5 T22N-R59E (HAMMERHEAD)		
Site Position:		Northing:	1,300,734.32 usft
From:	Lat/Long	Easting:	3,279,935.22 usft
Position Uncertainty:	2.00 usft	Slot Radius:	13-3/16 "
		Latitude:	47.695474
		Longitude:	-104.167848

Well	JAWS #1 SWD					
Well Position	+N-S	0.00 usft	Northing:	1,300,824.56 usft	Latitude:	47.695673
	+E-W	0.00 usft	Easting:	3,280,192.31 usft	Longitude:	-104.166781
Position Uncertainty		2.00 usft	Wellhead Elevation:	usft	Ground Level:	1,941.00 usft
Grid Convergence:		3.90 °				

Wellbore	OH					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength	
	HJGM2026	6/24/2026	(°)	(°)	(nT)	
			7.83	72.00	54,832.30000000	

Design	Prelim A					
Audit Notes:						
Version:		Phase:	PLAN	Tie On Depth:		0.00
Vertical Section:		Depth From (TVD)		+N-S	+E-W	Direction
		(usft)		(usft)	(usft)	(°)
		0.00	0.00	0.00		180.00

Survey Tool Program	Date	6/25/2026			
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
0.00	7,220.64	Prelim A (OH)	MWD+HRGM	OWSG MWD + HRGM	

Plan Summary										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,004.00	0.00	0.00	5,004.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,639.75	88.87	180.00	5,413.18	-401.15	0.00	14.00	14.00	0.00	180.00	
6,461.04	88.87	270.47	5,433.96	-921.70	-524.87	11.00	0.00	11.00	91.14	
7,220.75	88.87	270.47	5,449.00	-915.42	-1,284.41	0.00	0.00	0.00	0.00	0.00 BHL - Jaws #1 SWD



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OPERATING

Total Directional Services
Planned Survey Report

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**MONTANA BOARD OF OIL &
GAS CONSERVATION - BILLINGS**

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT, (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N--R59E (HAMMERHEAD)	MD Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Databases:	.Total Directional Production DB

Planned Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Geo Coordinates		Vertical Section (usft)	Dogleg Rate (1/100usft)	Build Rate (1/100usft)	Turn Rate (1/100usft)
				+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude (°)	Longitude (°)				
0.00	0.00	0.00	0.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
Q-GRAVEL													
100.00	0.00	0.00	100.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,362.00	0.00	0.00	1,362.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
PIERRE													
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
2,825.00	0.00	0.00	2,825.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
EAGLE													
2,900.00	0.00	0.00	2,900.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00



MORNINGSTAR
OPERATING

Total Directional Services
Planned Survey Report

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MONTANA BOARD OF OIL & GAS CONSERVATION • BILLINGS

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT. (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N-R50E (HAMMERHEAD)	MD Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Database:	Total Directional Production DB

Planned Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)		Map Coordinates Northing Easting (usft)		Geo Coordinates Latitude Longitude (°)		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,300.00	0.00	0.00	3,300.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
3,698.00	0.00	0.00	3,698.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
NIOBRARA													
3,700.00	0.00	0.00	3,700.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,190.00	0.00	0.00	4,190.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
GREENHORN													
4,200.00	0.00	0.00	4,200.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,596.00	0.00	0.00	4,596.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
MOWRY													
4,600.00	0.00	0.00	4,600.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
4,854.00	0.00	0.00	4,854.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
SKULL CREEK													
4,900.00	0.00	0.00	4,900.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
5,004.00	0.00	0.00	5,004.00	0.00	0.00	1,300,824.56	3,280,192.30	47.605673	-104.166781	0.00	0.00	0.00	0.00
DAKOTA													
5,025.00	2.94	180.00	5,024.99	-0.54	0.00	1,300,824.03	3,280,192.34	47.605672	-104.166781	0.54	14.00	14.00	0.00
5,050.00	6.44	180.00	5,049.90	-2.58	0.00	1,300,821.99	3,280,192.48	47.605666	-104.166781	2.58	14.00	14.00	0.00
5,075.00	9.94	180.00	5,074.64	-6.14	0.00	1,300,819.44	3,280,192.72	47.605656	-104.166781	6.14	14.00	14.00	0.00
5,100.00	13.44	180.00	5,099.12	-11.21	0.00	1,300,813.38	3,280,193.07	47.605642	-104.166781	11.21	14.00	14.00	0.00
5,125.00	16.94	180.00	5,123.24	-17.76	0.00	1,300,806.85	3,280,193.51	47.605624	-104.166781	17.76	14.00	14.00	0.00
5,150.00	20.44	180.00	5,146.82	-25.77	0.00	1,300,798.86	3,280,194.06	47.605602	-104.166781	25.77	14.00	14.00	0.00
5,175.00	23.94	180.00	5,170.07	-35.21	0.00	1,300,789.44	3,280,194.70	47.605577	-104.166781	35.21	14.00	14.00	0.00
5,200.00	27.44	180.00	5,192.59	-46.04	0.00	1,300,778.63	3,280,195.44	47.605547	-104.166781	46.04	14.00	14.00	0.00
5,225.00	30.94	180.00	5,214.41	-58.23	0.00	1,300,766.46	3,280,196.27	47.605513	-104.166781	58.23	14.00	14.00	0.00
5,250.00	34.44	180.00	5,235.45	-71.73	0.00	1,300,753.00	3,280,197.18	47.605476	-104.166781	71.73	14.00	14.00	0.00
5,275.00	37.94	180.00	5,255.63	-86.49	0.00	1,300,739.27	3,280,198.19	47.605436	-104.166781	86.49	14.00	14.00	0.00



MORNINGSTAR
OPERATING

Total Directional Services
Planned Survey Report

RECEIVED

JUL 09 2026

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT. (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N-R59E (HAMMERHEAD)	MD Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Database:	Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	41.44	180.00	5,274.66	-102.46	0.00	1,300,722.34	3,280,199.28	47.606392	-104.166781	102.46	14.00	14.00	0.00
5,325.00	44.94	180.00	5,293.06	-119.57	0.00	1,300,705.28	3,280,200.44	47.606345	-104.166781	119.57	14.00	14.00	0.00
5,350.00	48.44	180.00	5,310.23	-137.75	0.00	1,300,687.13	3,280,201.68	47.606295	-104.166781	137.75	14.00	14.00	0.00
5,375.00	51.94	180.00	5,326.23	-156.96	0.00	1,300,667.97	3,280,202.98	47.606243	-104.166781	156.96	14.00	14.00	0.00
5,400.00	55.44	180.00	5,341.04	-177.10	0.00	1,300,647.88	3,280,204.35	47.606187	-104.166781	177.10	14.00	14.00	0.00
5,425.00	58.94	180.00	5,354.58	-198.11	0.00	1,300,626.92	3,280,205.78	47.606130	-104.166781	198.11	14.00	14.00	0.00
5,450.00	62.44	180.00	5,366.62	-219.90	0.00	1,300,605.17	3,280,207.27	47.606070	-104.166781	219.90	14.00	14.00	0.00
5,475.00	65.94	180.00	5,377.70	-242.40	0.00	1,300,582.72	3,280,208.80	47.606008	-104.166781	242.40	14.00	14.00	0.00
5,500.00	69.44	180.00	5,387.19	-265.53	0.00	1,300,559.65	3,280,210.37	47.604945	-104.166781	265.53	14.00	14.00	0.00
5,525.00	72.94	180.00	5,395.25	-289.19	0.00	1,300,536.04	3,280,211.98	47.604880	-104.166781	289.19	14.00	14.00	0.00
5,550.00	76.44	180.00	5,401.85	-313.30	0.00	1,300,511.99	3,280,213.62	47.604814	-104.166781	313.30	14.00	14.00	0.00
5,575.00	79.94	180.00	5,406.96	-337.77	0.00	1,300,487.58	3,280,215.29	47.604747	-104.166781	337.77	14.00	14.00	0.00
5,600.00	83.44	180.00	5,410.58	-362.50	0.00	1,300,462.90	3,280,216.97	47.604679	-104.166781	362.50	14.00	14.00	0.00
5,625.00	86.94	180.00	5,412.67	-387.41	0.00	1,300,438.05	3,280,218.66	47.604610	-104.166781	387.41	14.00	14.00	0.00
5,638.75	88.87	180.00	5,413.18	-401.15	0.00	1,300,424.34	3,280,219.60	47.604573	-104.166781	401.15	14.00	14.00	0.00
5,650.00	88.84	181.24	5,413.40	-412.40	-0.12	1,300,413.12	3,280,220.24	47.604542	-104.166782	412.40	11.00	-0.22	11.00
5,700.00	88.74	186.74	5,414.46	-462.24	-3.80	1,300,363.15	3,280,220.17	47.604405	-104.166796	462.24	11.00	-0.20	11.00
5,750.00	88.65	192.24	5,415.60	-511.53	-11.83	1,300,313.42	3,280,215.30	47.604270	-104.166829	511.53	11.00	-0.18	11.00
5,800.00	88.57	197.74	5,416.61	-559.79	-24.75	1,300,264.38	3,280,205.69	47.604138	-104.166862	559.79	11.00	-0.16	11.00
5,850.00	88.51	203.24	5,418.09	-606.60	-42.24	1,300,216.50	3,280,191.43	47.604009	-104.166893	606.60	11.00	-0.13	11.00
5,900.00	88.46	208.74	5,419.41	-651.51	-64.14	1,300,170.20	3,280,172.64	47.603886	-104.167042	651.51	11.00	-0.10	11.00
5,950.00	88.42	214.24	5,420.78	-694.11	-90.24	1,300,125.92	3,280,149.50	47.603760	-104.167148	694.11	11.00	-0.07	11.00
6,000.00	88.40	219.75	5,422.17	-734.01	-120.30	1,300,084.07	3,280,122.22	47.603660	-104.167270	734.01	11.00	-0.04	11.00
6,050.00	88.39	225.25	5,423.57	-770.85	-154.06	1,300,045.02	3,280,091.05	47.603559	-104.167407	770.85	11.00	-0.01	11.00
6,100.00	88.40	230.75	5,424.98	-804.28	-191.18	1,300,009.14	3,280,056.28	47.603467	-104.167558	804.28	11.00	0.01	11.00
6,150.00	88.42	236.25	5,426.37	-834.00	-231.35	1,299,976.78	3,280,018.24	47.603386	-104.167721	834.00	11.00	0.04	11.00
6,200.00	88.46	241.75	5,427.73	-859.73	-274.17	1,299,948.17	3,279,977.26	47.603315	-104.167896	859.73	11.00	0.07	11.00
6,250.00	88.51	247.26	5,429.06	-881.23	-319.27	1,299,923.65	3,279,933.73	47.603256	-104.168078	881.23	11.00	0.10	11.00
6,300.00	88.57	252.76	5,430.33	-898.32	-366.23	1,299,903.41	3,279,888.05	47.603200	-104.168269	898.32	11.00	0.13	11.00
6,350.00	88.65	258.26	5,431.55	-910.82	-414.60	1,299,887.65	3,279,840.63	47.603175	-104.168466	910.82	11.00	0.16	11.00
6,400.00	88.74	263.76	5,432.69	-918.63	-463.96	1,299,876.50	3,279,791.92	47.603153	-104.168666	918.63	11.00	0.18	11.00
6,450.00	88.84	269.26	5,433.74	-921.67	-513.83	1,299,870.07	3,279,742.37	47.603145	-104.168869	921.67	11.00	0.20	11.00
6,481.04	88.87	270.47	5,433.96	-921.70	-524.87	1,299,869.29	3,279,731.36	47.603145	-104.168914	921.70	11.00	0.22	11.00
6,500.00	88.87	270.47	5,434.73	-921.38	-563.82	1,299,866.96	3,279,692.48	47.603146	-104.169072	921.38	0.00	0.00	0.00
6,600.00	88.87	270.47	5,436.71	-920.55	-863.80	1,299,860.99	3,279,592.68	47.603148	-104.169478	920.55	0.00	0.00	0.00
6,700.00	88.87	270.47	5,438.69	-919.72	-763.78	1,299,855.01	3,279,492.87	47.603150	-104.169884	919.72	0.00	0.00	0.00
6,786.08	88.87	270.47	5,440.00	-919.18	-829.84	1,299,851.06	3,279,426.92	47.603152	-104.170153	919.18	0.00	0.00	0.00

LAKOTA



MORNINGSTAR
OPERATING

Total Directional Services
Planned Survey Report

RECEIVED

JUL 09 2026

**MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS**

Company:	MorningStar Operating	Local Co-ordinate Reference:	Well JAWS #1 SWD
Project:	Richland County, MT. (NAD 83)	TVD Reference:	1941' GL + 25' KB @ 1966.00usft
Site:	Sec 5 T22N-R59E (HAMMERHEAD)	MD Reference:	1941' GL + 25' KB @ 1966.00usft
Well:	JAWS #1 SWD	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim A	Databases:	Total Directional Production DB

Planned Survey													
Measured Depth (usft)	INC (")	AZI (")	Vertical Depth (usft)	Local Coordinates +N-S (usft)	+E-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (")	Longitude (")	Vertical Section (usft)	Dogleg Rate (1/100usft)	Buid Rate (1/100usft)	Turn Rate (1/100usft)
6,800.00	88.87	270.47	5,440.67	-918.90	-863.75	1,299,849.03	3,279,393.07	47.893153	-104.170200	918.90	0.00	0.00	0.00
6,900.00	88.87	270.47	5,442.65	-918.07	-863.73	1,299,843.05	3,279,293.27	47.893155	-104.170606	918.07	0.00	0.00	0.00
7,000.00	88.87	270.47	5,444.63	-917.24	-1,063.71	1,299,837.08	3,279,193.47	47.893157	-104.171103	917.24	0.00	0.00	0.00
7,100.00	88.87	270.47	5,446.61	-916.42	-1,163.68	1,299,831.10	3,279,093.67	47.893159	-104.171509	916.42	0.00	0.00	0.00
7,200.00	88.87	270.47	5,448.59	-915.59	-1,263.66	1,299,825.12	3,278,993.87	47.893162	-104.171915	915.59	0.00	0.00	0.00
7,220.75	88.87	270.47	5,449.00	-915.42	-1,284.41	1,299,823.88	3,278,973.16	47.893162	-104.171909	915.42	0.00	0.00	0.00

Design Targets										
Target Name	Dip Angle (")	Dip Dir. (")	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- Minimum target										
- Shape										
BHL - Jaws #1 SWD	0.00	0.00	5,449.00	-915.42	-1,284.41	1,299,823.88	3,278,973.16	47.893162	-104.171909	
- plan hits target center										
- Point										

Formations							
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")		
0.00	0.00	Q-GRAVEL					
1,362.00	1,362.00	PIERRE		0.00			
2,825.00	2,825.00	EAGLE		0.00			
3,698.00	3,698.00	NIobrara		0.00			
4,190.00	4,190.00	GREENHORN		0.00			
4,596.00	4,596.00	MOWRY		0.00			
4,854.00	4,854.00	SKULL CREEK		0.00			
5,004.00	5,004.00	DAKOTA		0.00			
6,766.08	5,440.00	LAKOTA		0.00			

Checked By: _____	Approved By: _____	Date: _____
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MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

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JUL 09 2026

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Surface Owners within AOR:

Agri-Med Llc
100 Belle Creek Rd
Belgrade, MT 59714-8775

Amc Development Llc
109 12th Ave Sw
Sidney, MT 59270-3613

Avad Properties Llc
Po Box 787
Sidney, MT 59270-0787

Byer Industrial Park Llc
108 2nd St Ne
Sidney, MT 59270-4105

Geraldine Entzel
2333 South Central Ave.
Sidney, MT 59270

Ie Properties Llc
Po Box 2035
Jamestown, ND 58402-2035

Jeremy And Kelsie Reese
1600 Lincoln Ave Se
Sidney, MT 59270

L & L Holdings Llc
712 9th St Sw
Sidney, MT 59270-4815

Matt Josephson
35325 County Road 129
Sidney, MT 59270-4256

LY Irrigation Project
Brd Of Control
2327 Lincoln Ave Se
Sidney, MT 59270-8800

Oneok Rockies Midstream Llc
Po Box 871
Tulsa, OK 74102-0871

Albin Robert D & Sheree A
33791 County Road 131
Sidney, MT 59270

Amunrud Tyler
2656 S Central Ave
Sidney, MT 59270-5539

Barnyard Holdings Llc
2650 S Central Ave
Sidney, MT 59270-5539

Byer Industrial Park Phase II
Property Owners Association Llc
108 2nd St Ne
Sidney, MT 59270-4105

Gilbert Robert Allen III & Jessica
314 7th Ave Sw
Sidney, MT 59270-3817

Jada Llc
Po Box 787
Sidney, MT 59270-0787

John L. & Jennifer L. Roth
1709 9th Ave Sw
Sidney, MT 59270-5501

Lake Fredric M Etal
3773 Patriot Dr Apt 203
Abilene, TX 79606-1844

Mont Conv Of 7th Day Adventist
2475 S Central Ave
Sidney, MT 59270-5534

Pioneer Cemetery Association
Attn: Nancy Hedegaard
2901 6th St Nw
Sidney, MT 59270

Oneok Rockies Midstream Llc
896 25th St Se
Sidney, MT 59270

Als Mini Storage Inc
315 Main St
Roundup, MT 59072-2737

Ashcraft Ina F
34935 County Road 123
Sidney, MT 59270-6348

Brandon Mueller
1807 9th Ave Sw
Sidney, MT 59270-5516

City Of Sidney
115 2nd St Se
Sidney, MT 59270-4103

Glacier Peak Midstream Llc
840 W Sam Houston Pkwy N Ste
300
Houston, TX 77024-4612

Jeanetta Cooley
Rr1 Box 182-A7
Sidney, MT 59270

Kringen Family Llp
917 14th St Se
Sidney, MT 59270-8822

Lake Ira W
1801 9th Ave Sw
Sidney, MT 59270-5516

Morningstar Operating Llc
400 W 7th Street
Fort Worth, TX 76102

Price Arlen H & Lonnie
2397 S Central Ave
Sidney, MT 59270-5534

Price Todd J & Jessica M
2383 S Central Ave
Sidney, MT 59270-5513



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

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MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Surface Owners within AOR:

Agri-Med Llc
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Sidney, MT 59270-3613

Avad Properties Llc
Po Box 787
Sidney, MT 59270-0787

Byer Industrial Park Llc
108 2nd St Ne
Sidney, MT 59270-4105

Geraldine Entzel
2333 South Central Ave.
Sidney, MT 59270

Ie Properties Llc
Po Box 2035
Jamestown, ND 58402-2035

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1600 Lincoln Ave Se
Sidney, MT 59270

L & L Holdings Llc
712 9th St Sw
Sidney, MT 59270-4815

Matt Josephson
35325 County Road 129
Sidney, MT 59270-4256

L Y Irrigation Project
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Sidney, MT 59270-8800

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Tulsa, OK 74102-0871

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Sidney, MT 59270

Amunrud Tyler
2656 S Central Ave
Sidney, MT 59270-5539

Barnyard Holdings Llc
2650 S Central Ave
Sidney, MT 59270-5539

Byer Industrial Park Phase Ii
Property Owners Association Llc
108 2nd St Ne
Sidney, MT 59270-4105

Gilbert Robert Allen Iii & Jessica
314 7th Ave Sw
Sidney, MT 59270-3817

Jada Llc
Po Box 787
Sidney, MT 59270-0787

John L. & Jennifer L. Roth
1709 9th Ave Sw
Sidney, MT 59270-5501

Lake Fredric M Etal
3773 Patriot Dr Apt 203
Abilene, TX 79606-1844

Mont Conv Of 7th Day Adventist
2475 S Central Ave
Sidney, MT 59270-5534

Pioneer Cemetery Association
Attn: Nancy Hedegaard
2901 6th St Nw
Sidney, MT 59270

Oneok Rockies Midstream Llc
896 25th St Se
Sidney, MT 59270

Als Mini Storage Inc
315 Main St
Roundup, MT 59072-2737

Ashcraft Ina F
34935 County Road 123
Sidney, MT 59270-6348

Brandon Mueller
1807 9th Ave Sw
Sidney, MT 59270-5516

City Of Sidney
115 2nd St Se
Sidney, MT 59270-4103

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840 W Sam Houston Pkwy N Ste
300
Houston, TX 77024-4612

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Sidney, MT 59270

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917 14th St Se
Sidney, MT 59270-8822

Lake Ira W
1801 9th Ave Sw
Sidney, MT 59270-5516

Morningstar Operating Llc
400 W 7th Street
Fort Worth, TX 76102

Price Arlen H & Lonnie
2397 S Central Ave
Sidney, MT 59270-5534

Price Todd J & Jessica M
2383 S Central Ave
Sidney, MT 59270-5513



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

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MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Real Trucking Inc
813 N Central Ave
Sidney, MT 59270

Reed Phillip J & Linda B
998 Aster Ct
Sidney, MT 59270

Richland Rentals Llc
1807 S Central Ave
Sidney, MT 59270-5510

Rlb Properties Llc
2711 Niehenke Dr
Sidney, MT 59270-5853

Robert Dige
202 E. Hunter Road
Sand Coulee, MT 59472

S & S Rental Properties Llc
108 2nd St Ne
Sidney, MT 59270-4105

S/L Services Inc
2265 S Central Ave
Sidney, MT 59270-5515

Sabr Depot Inc.
Attn: Shadd M. Cullinan
P.O. Box 822
Culbertson, MT 59218

Sabr Depot Re Llc
Po Box 822
Culbertson, MT 59218-0822

Schmart Solutions Llc
1315 22nd Ave Nw
Sidney, MT 59270-5775

Shandy Lester W Jr & Sonda
Trustees
2441 S Central Ave
Sidney, MT 59270-5534

Sharon Leone Sturgis, Trustee
440 Richards Lake Rd
Fort Collins, CO 80524-1633

Wct Rentals Llc
Po Box 1389
Sidney, MT 59270-1389

Sidney Storage Llc
811 5th St Se
Sidney, MT 59270-5116

Tusind Tak, Llc
11153 Highway 16
Savage, MT 59262

Norby Rocky L
35246 County Road 126
Sidney, MT 59270

White Rock Oil & Gas Gp I Llc
2179 Central Ave
Sidney, MT 59270

White Rock Energy Llc Mail To Ke
Andrews And Company
2424 Ridge Rd
Rockwall, TX 75087

Sidney 25 Development Llc
C/O Lora Romney
10421 S Jordan Gtwy,
Gateway Suite 600
Layton, UT 84040-7892



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

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JUL 09 2026

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Mineral Interest Owners within AOR:

Amanda Skogen
1108 Cedar Avenue SW
Sidney, MT 59270

Charles H. Buxbaum
12079 County Road 349R
Sidney, MT 59270

Cooley Jeanetta
Po Box 176
Sidney, MT 59270-0176

Darcie Linde Conquergood
8211 Northern Lights Drive
Helena, MT 59602

Doris Simonsen
104 Riverview B
Great Falls, MT 59404

Estate of Deo T. Degn
ATTN: Michael A. Degn
PO Box 556
Sidney, MT 59270

Eric Belanger
6908 N. Fox Wood Court
Spokane, WA 99208

Estate of Carl Herman
ATTN: Beval Moerkerke
14550 N. Frank Lloyd Wright, Blvd.
#100
Scottsdale, AZ 85260

Estate of Wayne Blanke
ATTN: Dickie A. Dreiling
3201 N Lakecrest St.
Wichita, KS 67205-1922

Estate of Harry F. Kreis
33120 Xenon Dr. NW
Princeton, MN 55371

Brenda L. Filler and Clinton A. Filler
923 North Central Avenue
Sidney, MT 59270

Charles Turner
16167 W. Vista North Dr.
Sun City West, AZ 85375

Clara Joan Dige Trust, dated
8/17/2013, Clara Joan Dige, Trustee
13272 Beach Terrace
Garden Grove, CA 92844

County of Richland
201 West Main St.
Sidney, MT 59270

Diane Cherry
2220 Willamette View Ct
West Linn, OR 97068-2634

Edward Kerbel
7102 Golf Course Ln.
San Jose, CA 95139

Erik Kerbel
15415 S. Airport Way, Apt. 2
Manteca, CA 95336

Estate of Clifford F. Jones
ATTN: Marcella R. Jones
34975 Highway 23
Sidney, MT 59270

Estate of Donald R. Townsend
ATTN: Phyllis Townsend
1919 Alameda Delas Pulgas, #73
San Mako, CA 94403

Estate of Nick Youngkin
ATTN: Carla Youngkin
PO Box 222
Alberston, MT 59820

Carol Bohrsen
261 Willow Creek Road
Phillipsburg, MT 59858

Chris Nelson
1746 Sattler Dr.
Concord, CA 94519

Clifford F. Jones and
Marcella R. Jones
34975 Highway 23
Sidney, MT 59270

Dale Petersen
261 Willow Creek Road
Phillipsburg, MT 59858

Donald W. Beardsley
3656 Old Arcata Rd Spc 14
Eureka, CA 95503-9420

EMEP Acquisitions, LLC
Two Allen Center
1200 Smith Street, Suite 680
Houston, TX 77002

Estate of Bryan A. Dige
ATTN: Mary J. Dige
2315 Beaver Creek Rd.
Gallatin Gateway, MT 59730

Estate of Daniel Peterson
ATTN: Sheila Peterson
202 17th St. W.
Billings, MT 59102

Estate of Freddie C. Buxbaum
ATTN: Mona Joy Buxbaum
P.O. Box 1313
Sidney, MT 59270

Geraldine Entzel
2333 South Central Ave.
Sidney, MT 59270



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

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MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Forel Group, LLC
1803 9th Ave. SW
Sidney, MT 59270

Georgiann Williamson
PO Box 1865
Bozeman, MT 59771

Gregory Buxbaum
12063 County Road 349R
Sidney, MT 59270

Hunt Oil Company
1445 Ross at Field
Dallas, TX 75202-2785

Jana Turner
1220 B. Spruce Circle
Lynden, WA 98264

Jeanetta Cooley
RR1 Box 182-A7
Sidney, MT 59270

Jeff S. Votaw and Sarah D. Votaw
2611 Virginia Lane
Billings, MT 59102

Jim D. Sandell
P.O. Box 316
Ingram, TX 78025-0317

Karen Degn Krum
3111 Parkhill Dr.
Billings, MT 59102

Kathleen A. Bates
8385 East Freemont Court
Centennial, CO 80112

Keith R. Buxbaum
5140 Coneflower Ave.
Billings, MT 59106

Kelvin C. Buxbaum
12281 County Road 349R
Sidney, MT 59270

Kevin Buxbaum
8530 Holloway Drive, Apt. 315
West Hollywood, CA 90069

Kevin Kerbel
PO Box 371696
Montara, CA, 94037

Kirk R. Dige
PO Box 160472
Big Sky, MT 59716

Kirsten Degn
500 Bittersweet Avenue
Germantown Hills, IL 61548

Koch Exploration Company
20 East Greenway Plaza, 6th Floor
Houston, TX 77046

Kraken Oil & Gas, LLC
945 Bunker Hill Rd., Suite 1200
Houston, TX 77024

Lori A. Norby
35244 County Road 126
Sidney, MT 59270

Marlene Dige Halim
45701 Classic Way
Temecula, CA 92592

Melanie D. Fahrenbruch
1143 W. Sea Fog Dr.
Gilbert, AZ 85233

Michael A. Degn and Jill W. Degn
PO Box 556
Sidney, MT 59270

Michael P. Hein
1002 W. Coast Dr.
Gilbert, AZ 85233

Michelle C. Wimet
17711 Hillboro Place
Canyon Country, CA 91387

Mona Joy Buxbaum
P.O. Box 1313
Sidney, MT 59270

Nancy Kerbel
7102 Golf Course Ln.
San Jose, CA 95139

Natalie J. Bell
30 Pitcher Road
Belfast, ME 4915

Nels Degn
12462 S. Compass Avenue
Plainfield, IL 60585

NHPP II Fortuna Rockies, LLC
1106 Witte Road, Suite 400
Houston, TX 77055

NHPP V Fortuna Rockies, LLC
1106 Witte Road, Suite 400
Houston, TX 77055

OXY USA, Inc.
5 Greenway Plaza, Suite 110
Houston, TX 77046-0521

Paula Spraggins Sandell
16619 Sunlight Way
Houston, TX 77058-2243

Peter C. Sheehan and
Nancy J. Sheehan
442 Indian Trail
Billings, MT 59105

Pioneer Cemetery Association
ATTN: Nancy Hedegaard
2901 6th St NW
Sidney, MT 59270

QCC Holdings Inc
7883 Edgar Industrial Way
Red Deer, AB T4P 3R2

Rhonda Degn Roberts
1805 Patricia Lane
Billings, MT 59102



MORNINGSTAR
OPERATING

Surface and Mineral Owner List
Jaws 1 SWD
Richland County, MT

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**MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS**

Richland County
201 West Main St.
Sidney, MT 59270

Robert Dige
202 E. Hunter Road
Sand Coulee, MT 59472

Ricky Nelson
1746 Sattler Dr.
Concord, CA 94519

Roseann L. McFarland
410 3rd Ave. SW, Apt 118
Sidney, MT 59270

Sasha Bannister
440 Richard & Lake Road
Fort Collins, CO 80524

Shadd M. Cullinan
10 5th St. W
Culbertson, MT 59218

Sheree Albin
33791 County Road 131
Sidney, MT 59270

Stalking Horse Energy, LLC
5066 South Cherry Creek Drive
Denver, CO 80246

Stephen Turner
2612 Via Arroyo
Bullhead City, AZ 86442

Thiel Service Co. LLC
1807 S. Central Ave.
Sidney, MT 59270

Thomas Turner
1800 140th Ave. NE
Ham Lake, MN 55304

Tumbleweed Ventures, Inc.
PO Box 50653
Billings, MT 59105

Tusind Tak, LLC
11153 Highway 16
Savage, MT, 59262

United States of America,
Bureau of Land Management
5001 Southgate Drive
Billings, MT 59101

VR4-Elm, LP
5949 Sherry Lane, Suite 1600
Dallas, TX 75225

The Margaret Johnson Barr Revocable
Living Trust under Agreement dated
October 14, 2009
33120 Xenon Dr. NW
Princeton, MN 55371

R. G. and Betty M. Choleswinski
Family Trust, dated 9/12/1991, Betty
May Choleswinski, Trustee
8248 N Rainbow Vis.
Prescott Valley, AZ 86315-3554

Margaret Johnson Barr,
as Trustee of the Margaret Johnson
Barr Revocable Living Trust under
Agreement dated October 14, 2009
33120 Xenon Dr. NW
Princeton, MN 55371

John Bradford Cone and Jeffery D.
Cone, successor Co-Trustees of The
Jesse Donald Cone, M.D., II and
Patricia Jane Cone Revocable Trust
(dated June 24, 1992 and amended
July 31, 2008)
417 Colina Lane
Odessa, TX 79765



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MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Affidavit of Notification to Surface and Mineral Owners

Jaws 1 SWD

Richland County, MT

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

IN THE MATTER OF THE APPLICATION FOR
MORNINGSTAR OPERATING LLC FOR THE HEARING
OF ITS REQUEST FOR A UIC PERMIT FOR THE JAWS #1
SWD WELL, 2459' FSL 845' FEL, SECTION 5, T22N,
R59E, P.M.M. RICHLAND COUNTY, MONTANA, FOR
THE PURPOSE OF WATER INJECTION

AFFIDAVIT OF NOTIFICATION

Date: July 6, 2026

State of Utah
County of Uintah

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

That Notice of advising of MorningStar Operating LLC' application for UIC permit in the captioned matter, in the form attached as "Exhibit A", was mailed to each current operator, surface owner and lease owner within the area of review at the addresses shown in the exhibit attached to the Notice, by mailing a true copy thereof this 6th day of July, 2026, postage prepaid, First Class USPS Mail. This affidavit is given as evidence of compliance with A.R.M. 36.22.1410.


Amy Doebele
Authorized Agent

Subscribed and sworn before me on this 6th day of July, 2026.


Notary Public of the State of Utah
My Commission Expires: May 19, 2030





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JUL 09 2026

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

July 6, 2026

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

RE: Proposed Saltwater Disposal Well

Location of proposed Disposal Well & Facility: Jaws #1 SWD

Surface Hole Location: NE 1/4 SE 1/4, Section 5, Township 22N, Range 59E. P.M.M.

Bottom Hole Location: NW 1/4 SE 1/4, Section 5, Township 22N, Range 59E. P.M.M.

Richland County, Montana

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

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

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

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

Please direct any and all of your communication regarding this proposed project, including more information about the upcoming hearing, to Mr. John Gizicki with the MBOGC at (406) 656-0040 or to Dave Harford with MorningStar Operating LLC at (817) 334-7800.

Sincerely,

Amy Doebele
Authorized Agent for MorningStar Operating LLC



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JUL 09 2026

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

July 6, 2026

To: Surface Owner within ¼ Mile of the proposed saltwater disposal well

RE: Proposed Saltwater Disposal Well

Location of proposed Disposal Well & Facility: Jaws #1 SWD

Surface Hole Location: NE 1/4 SE 1/4, Section 5, Township 22N, Range 59E. P.M.M.

Bottom Hole Location: NW 1/4 SE 1/4, Section 5, Township 22N, Range 59E. P.M.M.

Richland County, Montana

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

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

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Sincerely,

Amy Doebele

Authorized Agent for MorningStar Operating LLC



MORNINGSTAR
OPERATING

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JUL 09 2026

**Affidavit of Public Notification
Helena Independent Record**

Jaws 1 SWD
Richland County, MT

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

Independent Record

AFFIDAVIT OF PUBLICATION

Helena Independent Record
2222 N. Washington St
Helena, Montana 59602
(123) 456-7890

State of New Jersey, County of Camden, ss:

Anjana Bhadoriya, being first duly sworn, deposes and says: That (s)he is a duly authorized signatory of Column Software, PBC, duly authorized agent of Helena Independent Record, a newspaper of general circulation published that is a "legal newspaper" as that is published daily in the City of Helena, in the County of Lewis and Clark, State of Montana, and has charge of the Advertisements thereof.

If this certification is for the State of Montana, I hereby certify that I have read sec. 18-7-204 and 18-7-205 MCA, and subsequent revisions, and declare that the price or rate charged the State of Montana for the publication for which claim is made in printed copy in the amount of \$170.20 is not in excess of the minimum rate charged any other advertiser for publication of advertisement, set in the same size type and published for the same number of insertions, further certify that this claim is correct and just in all respects, and that payment or credit has not been received.

PUBLICATION DATES: July, 2 2026

NOTICE ID: VRUBTFPhweRV3UM5Bdl0

PUBLISHER ID: COL-MT-202955

NOTICE NAME: Jaws #1 SWD

Publication Fee: \$170.20

Anjana Bhadoriya

(Signed)

SHARONN E THOMAS-POPE

NOTARY PUBLIC

STATE OF NEW JERSEY

My Commission Expires January 23, 2027

VERIFICATION

State of New Jersey
County of Camden

Subscribed in my presence and sworn to before me on this: 07/02/2026

Sharon E. Thomas-Pope

Notary Public

Notarized remotely online using communication technology via Proof.

**Jaws #1 SWD
BEFORE THE BOARD OF OIL AND GAS CONSERVATION
OF THE STATE OF MONTANA**

In the Matter of the application of
MorningStar Operating LLC
for a Class II Injection well permit.

**NOTICE OF INTENTION TO APPLY FOR A CLASS II
INJECTION WELL PERMIT**

1. Name and address of Applicant:

MorningStar Operating LLC
400 W 7 th Street
Fort Worth, TX 76102

**2. Legal Description including County and Approximate
Footages of Surface Location of Proposed Oil and Gas Well:
(and projected bottom-hole location, if a directional or horizontal
well)**

Jaws #1 SWD

Surface Hole: 2459' FSL 845' FEL

NESE Section 5, Township 22 North, Range 59 East

Bottom Hole: 1547' FSL 2128' FEL

NW9E Section 5, Township 22 North, Range 59 East
Richland County, MT

3. Source of fluids to be injected

Produced water from Three Forks (Bakken) wells

**4. Zone or formation into which injection will occur, including
depth**

Dakota from 5,004' – 7,220' MD, 5,004' – 5,514' TVD

5. An aquifer exemption will be requested as part of the application since the proposed injection zone contains water with less than 10,000 ppm total dissolved solids. Pursuant to Rules 38.22.1409, Administrative Rules of Montana, the Montana Board of Oil and Gas Conservation will hold a public meeting upon the application of MorningStar Operating LLC for a Class II underground injection permit for the well or project set forth above. Said hearing will be held at the Montana Board of Oil & Gas Hearing Room at 2535 St. John's Ave. Billings, Montana, beginning at 9:00 am on Thursday, August 13, 2026.

July 2, 2026 COL-MT-202955 MNAXLP



MORNINGSTAR
OPERATING

Affidavit of Public Notification

Sidney Herald

Jaws 1 SWD

Richland County, MT

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MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

**SIDNEY
HERALD**

AFFIDAVIT OF PUBLICATION

Sidney Herald
310 2nd Ave NE
(406) 433-2403

I, Anjana Bhadoriya, of lawful age, being duly sworn upon oath depose and say that I am an agent of Column Software, PBC, duly appointed and authorized agent of the Publisher of Sidney Herald, a publication that is a "legal newspaper" as that phrase is defined for the city of Sidney, for the County of Richland, in the state of Montana, that this affidavit is Page 1 of 1 with the full text of the sworn-to notice set forth on the pages that follow, and that the attachment hereto contains the correct copy of what was published in said legal newspaper in consecutive issues on the following dates:

PUBLICATION DATES:
Jul. 4, 2026

Notice ID: zeGnE8wCbNsRy5IWqKLa
Publisher ID: SHM000914
Notice Name: Jaws #1 SWD

PUBLICATION FEE: \$106.67

Request of
Alesha Jones

I declare under penalty of perjury and under the laws of the state of Montana that the foregoing is true and correct.

Anjana Bhadoriya

Agent

VERIFICATION

State of New Jersey
County of Camden

Signed or attested before me on this: 07/06/2026

Sharon E. Thomas-Pope

Notary Public
Notarized remotely online using communication technology via Proof.

SHARONN E THOMAS-POPE
NOTARY PUBLIC
STATE OF NEW JERSEY
My Commission Expires January 23, 2027

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

In the Matter of the application
of
MorningStar Operating LLC
for a Class II Injection well per-
mit:

NOTICE OF INTENTION TO
APPLY FOR A CLASS II INJE-
CTION WELL PERMIT

1. Name and address of Appli-
cant:
MorningStar Operating LLC
400 W 7th Street
Fort Worth, TX 76102

2. Legal Description including
County and Approximate Foot-
ages of Surface Location of Pro-
posed Oil and Gas Well,
(and proposed bottom-hole lo-
cation, if a directional or hori-
zontal well)
Jaws #1 SWD
Surface Hole: 2459' FSL 849'
FEL
FIESE Section 5, Township 22
North, Range 59 East
Bottom Hole: 1547' FSL 2128'
FEL
NWSE Section 5, Township 22
North, Range 59 East
Richland County, MT

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

4. Zone or formation into which
injection will occur, including
depth
Dakota: from 5,004' - 7,220'
MD, 5,004' - 5,814' TVD

5. An aquifer exemption will be
requested as part of the applica-
tion since the proposed injection
zone contains water with less
than 10,000 ppb total dissolved
solids.

Pursuant to Rules 36.22.1409,
Administrative Rules of Mon-
tana, the Montana Board of Oil
and Gas Conservation will hold
a public meeting upon the appli-
cation of MorningStar Operating
LLC for a Class II underground
injection permit for the well or
project set forth above. Said
hearing will be held at the Mon-
tana Board of Oil & Gas Hearing
Room at 2535 St. John's Ave,
Billings, Montana, beginning at
9:00 am on Thursday, August
13, 2026.
Date: July 4, 2026
SHM000914