State of Montana
Board of Oil and Gas Conservation

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Docket No: TBD
Underground Injection Control Application

Union Mortgage 1-29
58 (56)
32N – 38E – 29 NESE
1373 FSL and 900 FEL
25-091-21525

RIM Operating, Inc
Hearing Date: December 10, 2026

October 2026

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Mr. John Gizicki – UIC Director
Montana Board of Oil & Gas Conservation
2535 St. Johns Ave
Billings MT 59102

RE: Request for Injection Permit – Union Mortgage 1-29
32N 58E 29 NESE
Sheridan County Montana

Dear Mr. John Gizicki

Please find the enclosed Underground Injection Control, "UIC," application by RIM Operating, Inc ("RIM") may need an aquifer exemption for the Morrison Formations in the above referenced well located in the Katy Lake Field of Sheridan County. This well has been temporarily abandoned and plugged back for future use as a water disposal well.

I certify the information contained in this application is, to the best of my knowledge and ability, true and correct, and the work proposed will be performed by RIM in conformity with this application and the terms and conditions under which it will be approved.

RIM is requesting the application be placed on the docket for the Montana Board of Oil and Gas Conservation December 10, 2026, hearing date.

If you have any questions concerning the application, then please contact Sarah Nowak, Senior Operations Technician at (720) 221-1675 or snowak@rimop.com

Sincerely

Sarah Nowak
Senior Operations Technician
RIM Operating, Inc.

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FORM NO. 2 R 10/09

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

Submit In Quadruplicate To:

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

SUNDRY NOTICES AND REPORT OF WELLS

Operator **RIM Operating Inc**

Address **5 Inverness Drive E**

City **Englewood** State **CO** Zip Code **80112**

Telephone 303-799-9828 Fax

Lease Name: **Union Mortgage**

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

Well Number: **1-29**

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

NESE 1373 FSL and 993 FEL

Unit Agreement Name:

Field Name or Wildcat: **Katy Lake**

Township, Range, and Section: **32N 58E and 29**

API Number: **25 | 091 | 21525**
State County Well

Well Type (oil, gas, injection, other): **Oil but plan for Injection**

County: **Sheridan**

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

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

RIM Operating Inc plans to convert the Union Mortgage 1-29 from an Oil well to an UIC Injection well. Perforations for the injection are between 4,856' to 4,914' - Morrison Formation w/ in the Lower Cretaceous Dakota Sandstone Formation. Upper isolation zone is the Inyan Kra Group (4,522' - 4,810' - top of Morrison is 4,810') Lower isolation zone as Jurasic Swift Shale. Lower CIBP will be set @ 5,020' with 20' cmt on top to isolate the lower underlying zones; additionally, two cement balance plugs of 100' each will be placed at 9,100' to 9,000' and 7,100' to 7,000'; all cmt will be Class G; a CIBP was set @ 11,338' with 35 sx cmt on top during preparation for conversion to SWD Please refer to the attached application letter & exhibits for further detailed information

BOARD USE ONLY

Approved _____
Date

Name Title

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

11-05-26
Date

Signed (Agent)

Sarah Nowak - Sr Eng Tech
Print Name and Title

Telephone: 303-799-9828

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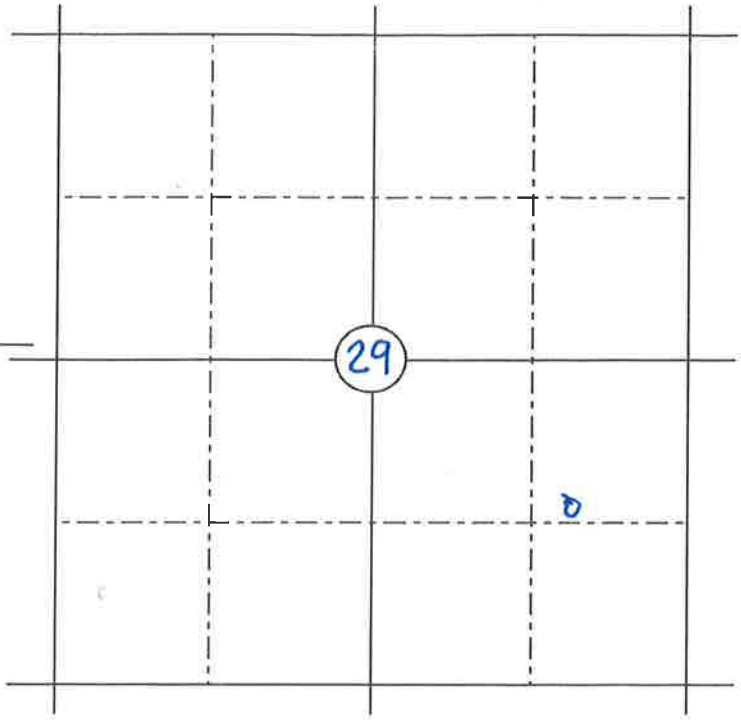
SUPPLEMENTAL INFORMATION

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

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

Range 58E

Township 32N



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.

Exhibit 6(a) - Union Mortgage 1-29 Proposed Wellbore Diagram

RIM Operating LLC

WELL:	Union Mortgage 1-29	COUNTY:	Sheridan	API #:	250-91-21525		
FIELD:	Katy Lake	STATE:	MT	SPUD:	1/12/84		
FORMATION:	Red River "C"	LOCATION:	NESE Sec 29, T32N, R58E (1373'FSL/990'FEL)				
TD:	11680	PBTD:	11523	GL:	1992	KB:	2012

SURFACE CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
9-5/8"	36.0#	J-55	LT&C	Surface	2,904	70	12-1/4"	800 LT, 300 G	Surface

PRODUCTION CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
5-1/2"	17.0#	L80	LT&C	Surface	2528	Csg Patch	8-3/4"		
5-1/2"	17.0#	C-75	LT&C	2528	3428		8-3/4"		2,858'
5-1/2"	17.0#	K-55	LT&C	3428	6903		8-3/4"		
5-1/2"	20.0#	C-75	LT&C	6903	7816		8-3/4"		Unknown
5-1/2"	17.0#	C-75	LT&C	7816	10004		8-3/4"	100sx Poz,	
5-1/2"	23.0#	C-75	LT&C	10004	10493		8-3/4"	2450sx LT	
5-1/2"	20.0#	C-75	LT&C	10493	11678		8-3/4"	225sx G	
					7912	DV Tool			

9-5/8" @ at 2904'

PROPOSED INJECTION INTERVALS

TOP	BOTTOM	ZONE	
4,856'	4,914'	Morrison	Formation

Top of isolation formation is approx. 4,522' - Inyan Kara Group

4,856' to 4,914' is the planned injection zone - Morrison Formation

X X X 5,020' CIBP w/ 20' Cmt

Bottom of isolating formation is approx 5,530' - Swift Formation

7,000' - 7,100' Cmt Balance Plug

DV Tool 7,912'

9,000' - 9,100' Cmt Balance Plug

35 sx cmt above CIBP

X X X 11,338' CIBP

11,334' KOP

X X X

Lateral squeeze and isolation w/ 900g sodium silicate

Liner: 2-7/8" 7.9# P110 PH6 11,287' to 11,479'

11,500' TD of Sidetrack Wellbore

11,509' top of CIBP fish

X X X

Squeezed and isolated perferations in vertical wellbore: 11,489' - 11,508'
Squeezed and isolated perferations in vertical wellbore: 11,529' - 11,574'

PBTD @ 11,523'

5-1/2"@ 11,678'

TD: 11,680'

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Underground Injection Control (UIC) Permit Application
Union Mortgage 1-29

The following report and justification are submitted in support of the application by RIM Operating, Inc ("RIM") to permit the conversion of the Union Mortgage 1-29, which was temporarily abandoned for the purpose of a water injector into the Morrison, 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 the Injection Well** (Lat: 48.49444 & Long: -104.19911):
The Union Mortgage 1-29 was originally drilled vertically to a total depth of 11,680' to produce from Red River D. However, it was plugged back to11,338' for a sidetrack with a completion zone of Red River C. The KOP is at 11,224' and deviated to a MD of 11,502', 40' from SHL at a 16-degree azimuth (a directional survey has been submitted; however, it is also attached to this application). The well has been temporarily abandoned in preparation for injection. A cement plug was tagged at 10,720' in November 2023. There are no known casing integrity issues in the wellbore. Exhibit 1 – "Map of General Area" shows the surface location and a circle of a quarter (1/4) mile or 1,320' radius representing the area of review (AOR).

Union Mortgage 1-29	NESE 32N – 58E – 29	SHL: 1373 FSL & 990 FEL
	NESE 32N – 58E – 29	BHL: 1446 FSL & 970 FEL

1(b) **Location and Mechanical condition of wells within a Quarter Mile (1,320') AOR which penetrate injection zone:**

Brethren 43-29 – wellbore diagram found in Exhibit 2; additionally, the Brethren 32-29 wellbore diagram is included in Exhibit 2 as 2(a)

1(c) **Location of all pipelines which will be used to transport fluids to the well:**
Produced water from RIMs nearby wells will be delivered to the location by truck and/or pipeline. There are no commercial pipelines within the AOR. If pipeline installation could be justified economically, then RIM may opt to install transfer lines to minimize the truck traffic. If this occurs, then the line would be flushed with freshwater first and pressure tested prior to use. Meters would be installed to determine proper injection volumes. Currently, RIM has oil, gas, water flowlines from wellhead to common tank batteries, and RIM would plan to install a pipeline between the Brethren 32-29 and the Brethren 43-29 per Exhibit 3 to transfer produced water

1(d) **Area Producing Formations, Freshwater Aquifers, and Water Well Information:**
There is one producing well within the ¼ mile AOR from an oil and gas zone. There is a water well within the AOR.

Brethren 43-29 – actively producing from Red River A – 11,393' – 11,396,' Red River C1 – 11,504' – 11,508,' and Red River C2 – 11,516' – 11,522' as shown in Exhibit 2, Brethren 43-29 wellbore diagram.

Henke 1 – approved plugged and abandoned wellbore – penetrated Dakota formation top at 4,527' and Piper Formation at 5,338' – well was plugged as a dry-hole October 10, 1970.

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Henke Loren – water well – depth 93' – refer to Exhibit 4: "Map of Freshwater Wells" and Exhibit 5 for further detail on water quality

The Union Mortgage 1-29 surface casing, 9-5/8," is set at 2,904' and cemented to the surface – Exhibit 6 has detailed wellbore diagram

1(e) **Name and Geologic Description of the Injection Zone:**
Additional information about the geology can be found in Exhibit 12 – Detailed Geological Description of Morrison and Confining Zones.
The total injected daily maximum rate into the Morrison Formation will be 1,000 bbls/day

MORRISON FORMATION (4,810' – 4,914')
Description: Upper Jurassic sandstone bodies consisting of mudstone and claystone intervals, medium grained to course grained sandstone interbedded with mud and claystones, primarily nonmarine

- Planned Perforation Interval: 4,856' to 4,910'
- Estimated Pressure: 2800 psi using a 0.524 psi/ft pressure gradient
- Estimated Fracture Gradient: 0.75 psi/ft
- Maximum, planned injection pressure: 1100psi or 0.733 psi/ft maximum gradient
- **Confining formations:**
  - Overlying Inyan Kara Group – Cretaceous Lakota sandstone, mudstone and shale from floodplain and swamp deposits, impermeable mudstone and shale; 4,522' to 4,810', approx. 288' thick.
  - Underlying Jurassic Swift Formation – Jurassic sedimentary formation is composed primarily of sandstone, siltstone, shale, and locally occurring limestone and glauconitic sandstone, 4,916' to approx. 5,530', approx. 614'

Water Testing will be performed on the Morrison Formation during the perforation process

1(f) **Additional Information on Producing Wells within the AOR:**
The only well within the AOR is the Brethren 43-29, and a completion report has been submitted to the Montana Board of Oil and Gas Conservation ("MBOGC"). The Brethren 43-29 has surface casing, 9-5/8", set at 3,030' with cement circulated to the surface, Exhibit 2. A Cement Bond Log has been submitted to MBOGC.

1(g) **Open Hole Logs:**
Logs and geological information for the Union Mortgage 1-29 are currently on file with the MBOGC. A cement bond log is also on file with the MBOGC. The production casing, 5-1/2," cement top is at 2,858.' The ¼ mile and ½ mile AOR wells, Brethren 43-29 and Brethren 32-29, both have logs on file with the MBOGC.

1(h) **Description of Wellbore Construction:**
The current wellbore configuration of the Union Mortgage can be found in Exhibit 6. The well was temporarily abandoned in August 2023 with plans to convert the well into a saltwater disposal well.

In addition to the current wellbore schematic in Exhibit 6, Exhibit 6(a) shows the depths of the planned injection zone(s) and the planned cast-iron bridge plug depths with at least 20' cement, Class G, on top.

1(i) **Description of Injection Fluid:**
The Brethren 1-29 (currently being drilled), Brethren 32-29 (active producer), and the Brethren 43-29 will send their produced water to the Union Mortgage 1-29 for injection. Water analysis reports for the Brethren 32-29 and Brethren 43-29 are found in Exhibit 7(a) and 7(b). Once the Brethren 1-29 is completed and swabbed, the water will be sent in for an analysis prior to injection.

Additionally, in Exhibit 11 Water Injection: Reservoir Pressure Response, a material-balance calculation was used for reservoir pressure changes when water is injected into a known connected pore volume.

1(j) **Names and addresses of the leasehold owners, including each current operator and surface owner(s) within the AOR:**
The names and addresses of the leasehold owner(s), current operator(s), and surface owner(s) are listed in Exhibit 8.

RIM has notified these owners and operator(s) in accordance with 36.22.1410(1) notification requirements for an underground injection permit. An example of the mailed notice can be found in Exhibit 9 and 10.

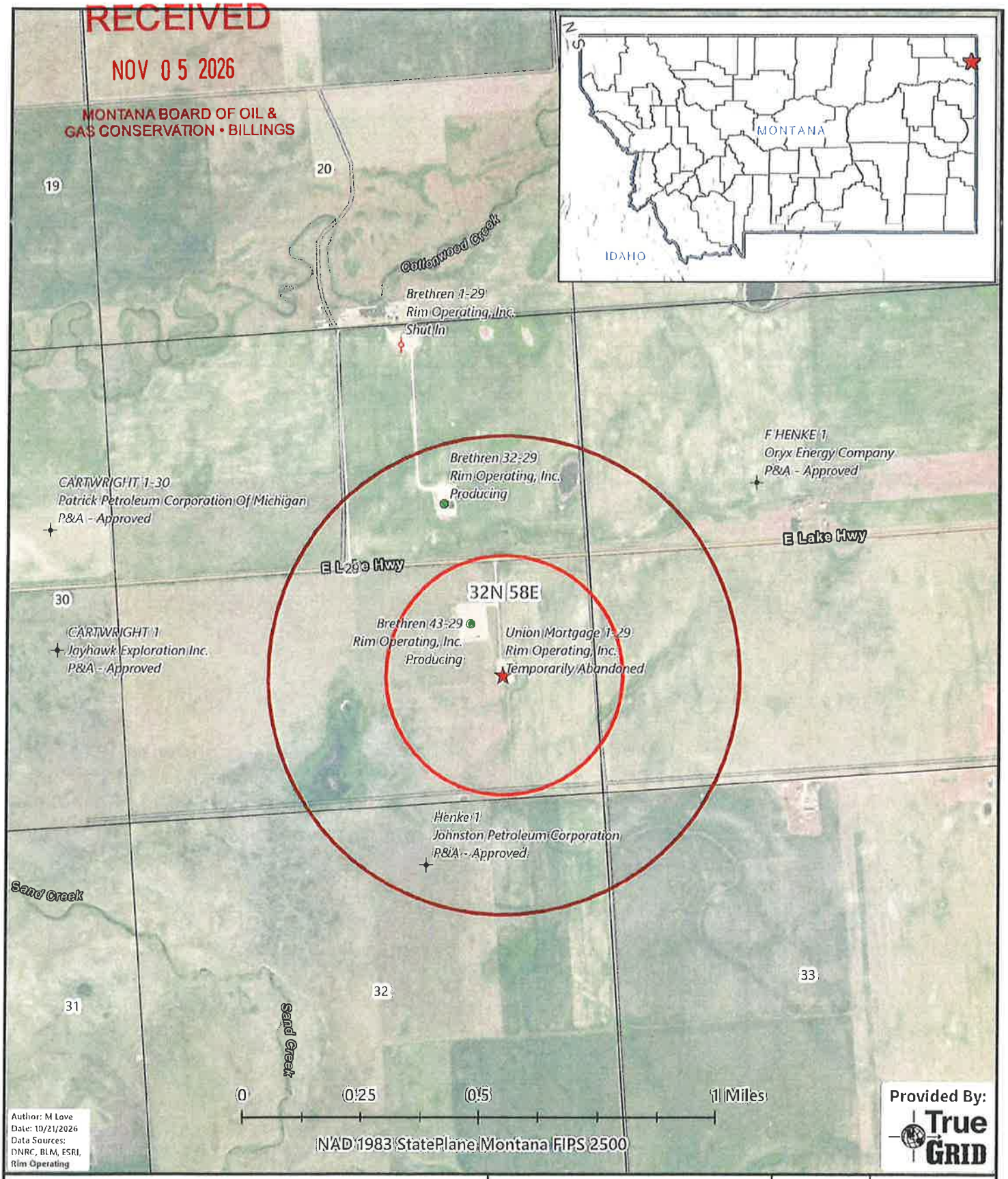
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LIST OF ALL EXHIBITS

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Exhibit 1	Map of General Area
Exhibit 2	Brethren 43-29 Wellbore Diagram
Exhibit 2(a)	Brethren 32-29 Wellbore Diagram
Exhibit 3	Brethren Road and Pipeline Map
Exhibit 4	Map of Freshwater Wells
Exhibit 5	Henke Loren Water Well Proposed Use Information
Exhibit 6	Union Mortgage 1-29 Wellbore Diagram
Exhibit 6(a)	Union Mortgage 1-29 Proposed Wellbore Diagram
Exhibit 7(a)	Brethren 32-29 Water Analysis
Exhibit 7(b)	Brethren 43-29 Water Analysis
Exhibit 8	Surface Owner List
Exhibit 9	Certificate of Mailing
Exhibit 10	Notice of Application Letter to Surface Owners
Exhibit 11	Water Injection: Reservoir Pressure Response
Exhibit 12	Detailed Geological Description of Morrison and Confining Zones

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★ Union Mortgage 1-29
✦ P&A - Approved
● Producing
Shut In
Quarter Mile Radius
Half Mile Radius

RIM Operating, Inc
Exhibit 1: Map of General Area
Union Mortgage 1-29
API: 25-091-21525
Location: T32N-R58E, Section 29 (NESE)
Lat: 48.49444
Long: -104.19911
Sheridan County, Montana

N
W E
S

RIM

Exhibit 2 - Brethren 43-29 Wellbore Diagram

RIM OPERATING, INC

WELL:	Brethren 43-29	COUNTY:	Sheridan	API #:	25-091-21946
FIELD:	Katy Lake	STATE:	MT	SPUD:	
FORMATION:	Red River "C"	LOCATION:	1656' FSL & 1314' FEL NESE Sec 29, T32N, R58E		
TD:	11,740'	PBTD:	11690	GL:	1995 KB:

SURFACE CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
9-5/8"	36.0#	J-55	ST&C	Surface	3,030	72	13-1/2"	636 sx lead	Surface
								201 sx tail	

PRODUCTION CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
5-1/2"	23.0#	HCP-110	LT&C	Surface	41	1	8-3/4"	Stg #2	
5-1/2"	20.0#	L-80	LT&C	41	6845	166	8-3/4"	514 sx Lead	2,500'
5-1/2"	23.0#	HCP-110	LT&C	6845	7900	26	8-3/4"	416 Sx Tail	
5-1/2"	DV Tool		LT&C	7900	7905	1	8-3/4"	Stg #1	
5-1/2"	20.0#	L-80	LT&C	7905	9213	32	8-3/4"		
5-1/2"	MARKER	L-80	LT&C	9213	9233	1	8-3/4"	174 sx Lead	
5-1/2"	23.0#	HCP-110	LT&C	9233	10472	30	8-3/4"	504 sx Tail	TOC = DV
5-1/2"	20.0#	L-80	LT&C	10472	11330	21	8-3/4"		
5-1/2"	MARKER	L-80	LT&C	11330	11350	1	8-3/4"		
5-1/2"	20.0#	L-80	LT&C	11350	11636	7	8-3/4"		
5-1/2"	20.0#	L-80	LT&C	11636	11717	2	8-3/4"		Shoe

TUBING

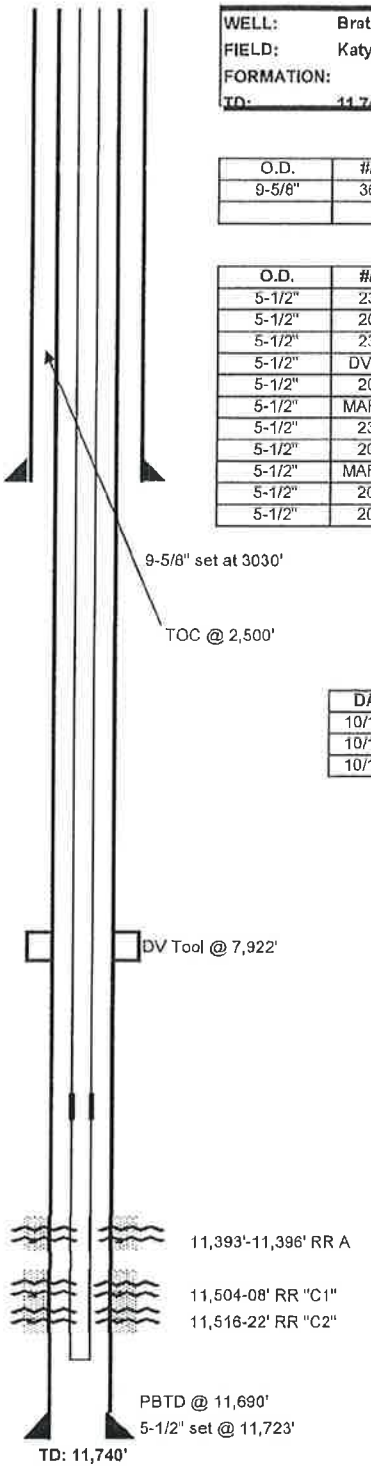
O.D.	WT./FT.	GRADE	THD	TOP	BTM
2-7/8"	6.5#	L-80	8 rd	Surface	11,700'

PERFORATION RECORD

DATE	TOP	BOTTOM	SPF	ZONE	STATUS	DETAIL
10/12/23	11516'	11522'	6	Red Rvr C2	Open	4" gun, 0.42" EUD, 63"pen, 39 gm, 60deg
10/12/23	11504'	11508'	6	Red Rvr C1	Open	4" gun, 0.42" EUD, 63"pen, 39 gm, 60deg
10/12/23	11,393'	11,396'	6	Red Rvr A	Open	4" gun, 0.42" EUD, 63"pen, 39 gm, 60deg

Formations

7,024' Charles
7,686' Ratcliffe
7,838' Midale
7,891' Mission Canyon
8,596' Lodgepole
9,052' Bakken
9,257' Nisku
9,351' Duperow
10,187' Prairie Evap.
10,424' Winnipegosis
10,615' Interlake
11,264' Gunton
11,358' Red River
11,393-96' RR "A"



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Exhibit 2(a) - Brethren 32-29 Wellbore Diagram

RIM OPERATING, INC

WELL:	Brethren 32-29	COUNTY:	Sheridan	API #:	25-091-21942
FIELD:	Katy Lake	STATE:	MT	SPUD:	7/11/14
FORMATION:	Red River "C"			LOCATION:	NWNE Sec 29, T32N, R58E
TD:	11,713'	PBTD:	11,648'	GL:	1993 KB: 2012

SURFACE CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
9-5/8"	36.0#	J-55	ST&C	Surface	3,030	72	13-1/2"	645 sx lead	Surface
								265 sx tail	

PRODUCTION CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
5-1/2"	20.0#	L-80	LT&C	Surface	6909	164	8-3/4"	221 lead	
5-1/2"	23.0#	HCL-80	LT&C	6909	7870	25	8-3/4"	362 tail	
5-1/2"	20.0#	L-80	LT&C	7870	9204	32	8-3/4"		Marker jt
5-1/2"	23.0#	HCL-80	LT&C	9204	9596	10	8-3/4"		
5-1/2"	20.0#	L-80	LT&C	9596	10063	11	8-3/4"	352 lead	2,010'
5-1/2"	23.0#	HCL-80	LT&C	10063	10645	15	8-3/4"	533 tail	
5-1/2"	20.0#	L-80	LT&C	10645	11695	25	8-3/4"		Marker Jt

DV Tool @ 7,870'

LINER

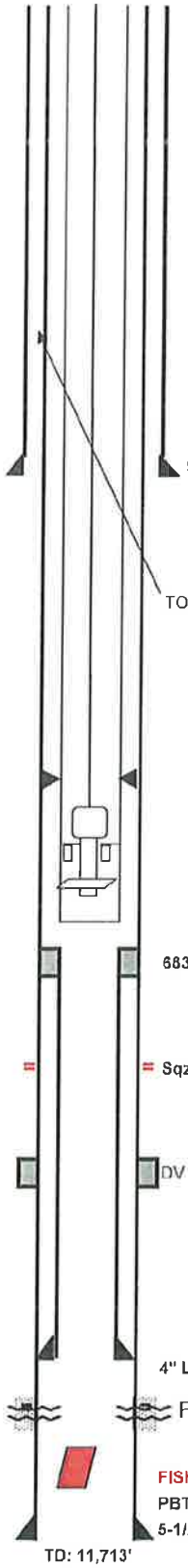
O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
4"	11.6#	P-110	FL4S	6835	11497	150	3.303"	100	6,835'

TUBING

O.D.	WT./FT.	GRADE	THD	TOP	BTM
2-7/8"	6.5#	L-80	8 rd	Surface	6,828'

PERFORATION RECORD

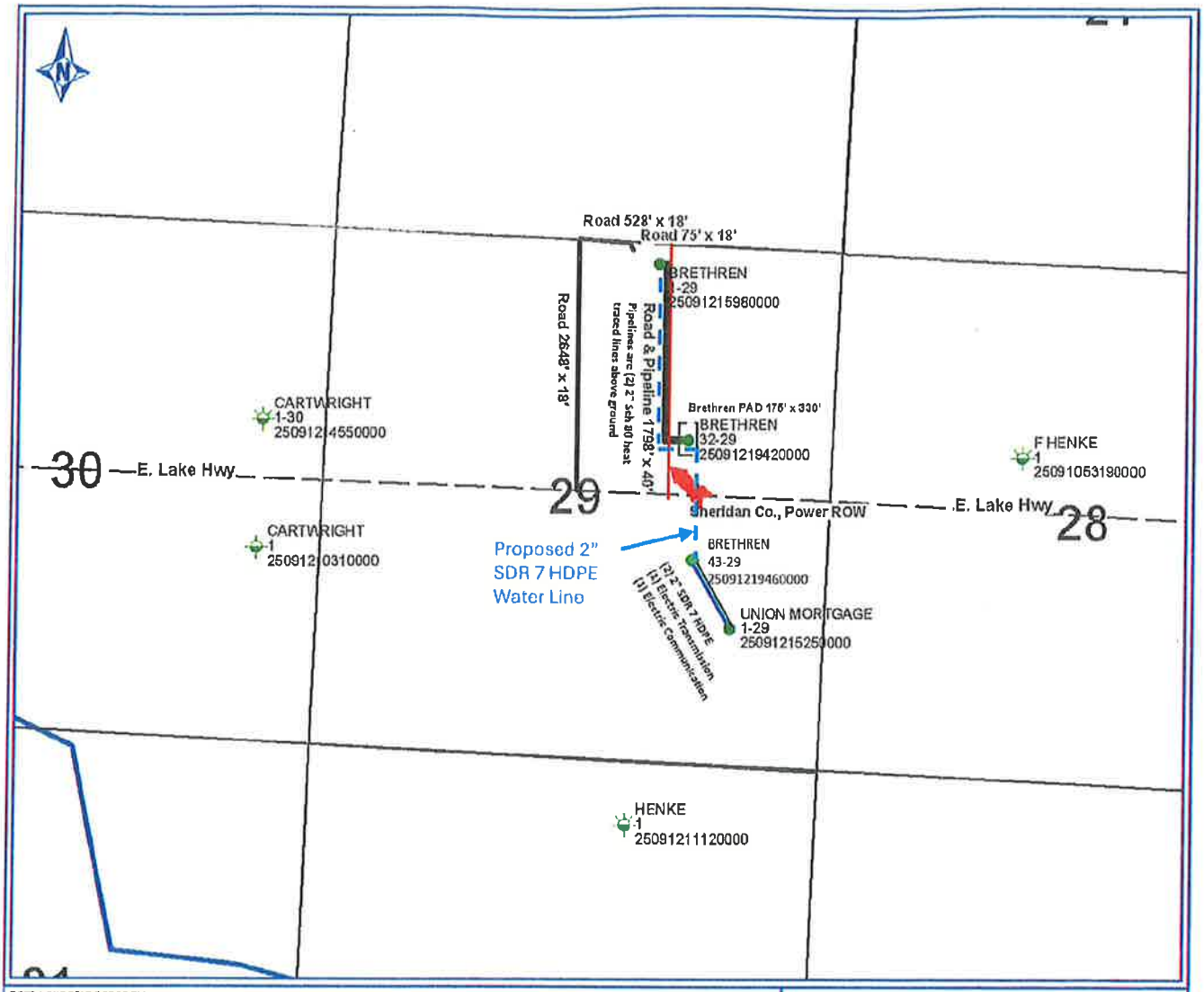
DATE	TOP	BOTTOM	SPF	ZONE	STATUS	DETAIL
11/4/14	11554'	11560'	6	Red Rvr C	Open	4" scallop gun. 0.42"EUD, 39gm, 60d



Formation Tops	Cement
7,015' Charles Salt	Class G
7,686' Ratcliffe	Silica Flour
7,844' Midale	Premium Lite
7,964 Mission Canyon	12# & 15.6#
8,607' Lodgepole	
9,056' Bakken	
9,264' NiskuDuperow	
9,356' Duperow	
10,196' Prairie Evap.	
10,438' Collapse	
10,443' Winnipegosis	
10,631' Interlake	
11,296' Gunton	
11,394' Red River	

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Exhibit 3 – Brethren Road and Pipeline Map



PETRA 6/12/2017 5:06:08 PM

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RIM OPERATING INC.

MONTANA & NORTH DAKOTA

BRETHREN ROAD AND PIPELINE

SEC 29 TWP 32N RGE 58E, P.M.M.

SHERIDAN CO., MT

Ratio Scale = 1 : 19,200

0 1,600 3,200

FEET

POSTED WELL DATA

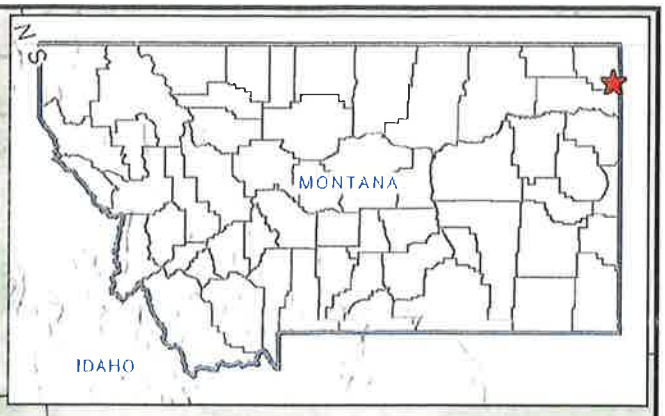
Well Name
Well Number
UWI

WELL SYMBOLS

Oil Well
Dry Hole, With Show of Oil
Dry Hole, With Show of Oil & Gas

BY: Kendall Read
October 22, 2026

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CHRISTENSEN
JORGEN
Depth - 58ft

Brethren 1-29
Rim Operating, Inc.
Shut In

F HENKE 1
Oryx Energy Company
P&A - Approved

Brethren 32-29
Rim Operating, Inc.
Producing

CLINT
CARTWRIGHT CORP
Depth - 52ft

Brethren 43-29
Rim Operating, Inc.
Producing

32N 58E

Union Mortgage 1-29
Rim Operating, Inc.
Temporarily Abandoned

912.58ft

HENKE LOREN
Depth - 93ft

Henke 1
Johnston Petroleum Corporation
P&A - Approved

19 20 29 30 31 32 33

0 0.25 0.5 1 Miles

NAD 1983 StatePlane Montana FIPS 2500

Author: M Love
Date: 10/21/2026
Data Sources:
DNRC, BLM, ESRI,
GWIC, Rim Operating

Provided By: True GRID

★ Union Mortgage 1-29

Status
- P&A - Approved
- Producing
- Shut In
- GWIC Wells
- Quarter Mile Radius
- Half Mile Radius

RIM Operating, Inc
Exhibit 4 Map of Freshwater Wells
Union Mortgage 1-29
API: 25-091-21525
Location: T32N-R58E, Section 29 (NESE)
Lat: 48.49444
Long: -104.19911
Sheridan County, Montana

N W E S

RIM

Exhibit 5 – Henke Loren Water Well Proposed Use Information

Site Name: HENKE LOREN
GWIC Id: 164377
DNRC Water Right: 102754

Section 1: Well Owner(s)
1) HENKE, LOREN (MAIL)
1022 S DAGMAR
DAGMAR MT 59219 [12/07/1988]

Section 2: Location

Township	Range	Section	Quarter Sections
32N	58E	29	SW¼ SE¼ SE¼

County: SHERIDAN
Geocode:
Parcel:

Latitude	Longitude	Geomethod	Datum
48.491932	-104.199202	TRS-SEC	NAD83

Ground Surface Altitude:
Ground Surface Method:
Datum:
Date:

Addition:
Block:
Lot:

Section 3: Proposed Use of Water
STOCKWATER (1)

Section 4: Type of Work
Drilling Method: FORWARD ROTARY
Status: NEW WELL

Section 5: Well Completion Date
Date well completed: Wednesday, December 7, 1988

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	93	9.875

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
0	20	5				STEEL
0	93	5				PLASTIC

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
73	93	5			SLOTS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	20	NEET	

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Section 7: Well Test Data

Total Depth: 93
Static Water Level: 20
Closed-in Pressure: 10 psi
Water Temperature:

Air Test *

20 gpm with drill stem set at _ feet for 1 hours
Time of recovery _ hours
Recovery water level _ feet
Pumping water level _ feet

* During the well test the discharge rate shall be as uniform as possible. This rate r

Section 8: Remarks

Section 9: Well Log
Geologic Source
Unassigned

From	To	Description
0	1	TOPSOIL
1	80	CLAY
80	93	SAND & GRAVEL

Driller Certification
All work performed and reported in this well log is in compliance with the Montana

Name:
Company: JAHA DRILLING
License No: WWC-442
Date Completed: 12/7/1988

Exhibit 6 - Union Mortgage 1-29 Wellbore Diagram

RIM Operating LLC

WELL:	Union Mortgage 1-29	COUNTY:	Sheridan	API #:	250-91-21525		
FIELD:	Katy Lake	STATE:	MT	SPUD:	1/12/84		
FORMATION:	Red River "C"	LOCATION:	NESE Sec 29, T32N, R58E (1373'FSL/990'FEL)				
TD:	11680	PBTD:	11523	GL:	1992	KB:	2012

SURFACE CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
9-5/8"	36.0#	J-55	LT&C	Surface	2,904	70	12-1/4"	800 LT, 300 G	Surface

PRODUCTION CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
5-1/2"	17.0#	L80	LT&C	Surface	2528	Csg Patch	8-3/4"		
5-1/2"	17.0#	C-75	LT&C	2528	3428		8-3/4"		2,858'
5-1/2"	17.0#	K-55	LT&C	3428	6903		8-3/4"		
5-1/2"	20.0#	C-75	LT&C	6903	7816		8-3/4"		Unknown
5-1/2"	17.0#	C-75	LT&C	7816	10004		8-3/4"	100sx Poz,	
5-1/2"	23.0#	C-75	LT&C	10004	10493		8-3/4"	2450sx LT	
5-1/2"	20.0#	C-75	LT&C	10493	11678		8-3/4"	225sx G	
					7912	DV Tool			

9-5/8" @ at 2904'

DV Tool 7,912'

PERFORATION RECORD

TOP	BOTTOM	SPF	ZONE	STATUS	DETAIL
11,548'	11,574'	2	Red Rvr D	Sqz	11548-51,54-60,62,65-74 =41 holes
11,529'	11,537'	2	Red Rvr D	Sqz	11529-37 = 17 holes
11,516'	11,521'	2	Red Rvr C	Sqz	11516-21 = 11 holes
11,502'	11,508'	2	Red Rvr C	Sqz	13 holes 10/22 Caliper, no holes above 11506
11,495'	11,497'	2	Red Rvr C	Sqz	5 holes Not on 10/22 Caliper
11,490'	11,493'	2	Red Rvr C	Sqz	7 holes Not on 10/22 Caliper
11,502'	11,508'	4	Red Rvr C	Sqz	25 x39gm; .45" hole; 65" penetration
11,495'	11,497'	4	Red Rvr C	Sqz	9 x39gm; .45"; 65" penetration
11,489'	11,493'	4	Red Rvr C	Sqz	17 x39gm; .45"; 65" penetration

FORMATIONS

7,049'	Charles
7,744'	Ratcliffe
7,942'	Mission Canyon
9,045'	Bakken
10,178'	Prairie Evaporite
11,245'	Gunton
11,315'	Stoney Mtn
11,343'	Red River

35 sx cmt above CIBP

X X X

11,338' CIBP

11,334' KOP

X X X

Lateral squeeze and isolation w/ 900g sodium silicate

Liner: 2-7/8" 7.9# P110 PH6 11,287' to 11,479'

11,500' TD of Sidetrack Wellbore

11,509' top of CIBP fish

X X X

Squeezed and isolated perferations in vertical wellbore: 11,489' - 11,508'
Squeezed and isolated perferations in vertical wellbore: 11,529' - 11,574'

PBTD @ 11,523'

5-1/2"@ 11,678'

TD: 11,680'

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Exhibit 6(a) - Union Mortgage 1-29 Proposed Wellbore Diagram

RIM Operating LLC

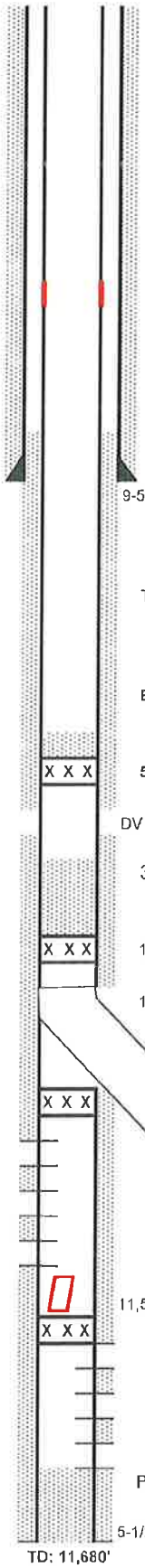
WELL:	Union Mortgage 1-29	COUNTY:	Sheridan	API #:	250-91-21525		
FIELD:	Katy Lake	STATE:	MT	SPUD:	1/12/84		
FORMATION:	Red River "C"	LOCATION:	NESE Sec 29, T32N, R58E (1373'FSL/990'FEL)				
TD:	11680	PBTD:	11523	GL:	1992	KB:	2012

SURFACE CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
9-5/8"	36.0#	J-55	LT&C	Surface	2,904	70	12-1/4"	800 LT, 300 G	Surface

PRODUCTION CASING

O.D.	#/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
5-1/2"	17.0#	L80	LT&C	Surface	2528	Csg Patch	8-3/4"		
5-1/2"	17.0#	C-75	LT&C	2528	3428		8-3/4"		2,858'
5-1/2"	17.0#	K-55	LT&C	3428	6903		8-3/4"		
5-1/2"	20.0#	C-75	LT&C	6903	7816		8-3/4"		Unknown
5-1/2"	17.0#	C-75	LT&C	7816	10004		8-3/4"	100sx Poz,	
5-1/2"	23.0#	C-75	LT&C	10004	10493		8-3/4"	2450sx LT	
5-1/2"	20.0#	C-75	LT&C	10493	11678		8-3/4"	225sx G	
					7912	DV Tool			



PROPOSED INJECTION INTERVALS

TOP	BOTTOM	ZONE	
4,856'	4,914'	Morrison	Formation

Top of isolation formation is approx. 4,522' - Inyan Kara Group

4,856' to 4,914' is the planned injection zone - Morrison Formation

Bottom of isolating formation is approx 5,530' - Swift Formation

5,550' CIBP w/ 20' Cmt

35 sx cmt above CIBP

11,338' CIBP

11,334' KOP

Lateral squeeze and isolation w/ 900g sodium silicate

Liner: 2-7/8" 7.9# P110 PH6 11,287' to 11,479'

11,500' TD of Sidetrack Wellbore

Squeezed and isolated perferations in vertical wellbore: 11,489' - 11,508'
Squeezed and isolated perferations in vertical wellbore: 11,529' - 11,574'

PBTD @ 11,523'

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Exhibit 7(a) – Brethren 32-29 Water Analysis

JACAM LABORATORIES

DownHole R_X

WATER CHEMISTRY

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RIM OPERATING
GRANT SCHILKE
SHERIDAN MT

BRETHREN 32-29
TREATER

Report Date: 12-28-2015
Sample #: 3098

Sampled: 11-17-2015
at 0000

Sample ID: 115590

CATIONS		ANIONS	
Calcium (as Ca)	47180	Chloride (as Cl)	204000
Magnesium (as Mg)	4481	Sulfate (as SO_4)	275.00
Barium (as Ba)	110.50	Bromine (as Br)	0.00
Strontium (as Sr)	1880	Dissolved CO_2 (as CO_2)	1000
Sodium (as Na)	51440	Bicarbonate (as HCO_3)	244.00
Potassium (as K)	5644	Carbonate (as CO_3)	0.00
Lithium (as Li)	67.76	Oxalic acid (as C_2O_4)	0.00
Ammonia (as NH_3)	0.00	Silica (as SiO_2)	0.00
Aluminum (as Al)	276.90	Phosphate(as PO_4)	0.00
Iron (as Fe)	773.00	H_2S (as H_2S)	0.00
Manganese (as Mn)	6.88	Fluoride (as F)	0.00
Zinc (as Zn)	18.41	Nitrate (as NO_3)	0.00
Lead (as Pb)	0.00	Boron (as B)	173.10

PARAMETERS

Calculated T.D.S.	300648
Molar Conductivity	781529
Resistivity	1.28
Sp.Gr.(g/mL)	1.21
Pressure(atm)	1.00
pCO_2(atm)	0.0983
pH_2S(atm)	0.00
Temperature (^OF)	70.10
pH	5.53

COMMENTS

SHERIDAN MT

JACAM LABORATORIES
205 S. Broadway · P.O. Box 96 · Sterling, KS 67579-0096

Exhibit 7(b) – Brethren 43-29 Water Analysis

JACAM CATALYST

DownHole R_X
WATER CHEMISTRY

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RIM OPERATING
KYLE GRAY
SHERIDAN MT

BRETHREN 43-29
TREATER

Report Date: 07-21-2024
Sample #: 3098

Sampled: 06-28-2024 at 0000
Sample ID: 376976

CATIONS		ANIONS	
Calcium (as Ca)	28730	Chloride (as Cl)	217200
Magnesium (as Mg)	2300	Sulfate (as SO_4)	50.00
Barium (as Ba)	32.92	Bromine (as Br)	0.00
Strontium (as Sr)	1211	Dissolved CO_2 (as CO_2)	120.00
Sodium (as Na)	98030	Bicarbonate (as HCO_3)	12.00
Potassium (as K)	4938	Carbonate (as CO_3)	0.00
Lithium (as Li)	62.15	Oxalic acid (as C_2O_4)	0.00
Ammonia (as NH_3)	0.00	Silica (as SiO_2)	0.00
Aluminum (as Al)	2.57	Phosphate(as PO_4)	0.00
Iron (as Fe)	95.34	H_2S (as H_2S)	0.00
Manganese (as Mn)	3.74	Fluoride (as F)	0.00
Zinc (as Zn)	5.27	Nitrate (as NO_3)	0.00
Lead (as Pb)	0.00	Boron (as B)	116.13

PARAMETERS	
Calculated T.D.S.	363660
Molar Conductivity	428450
Resistivity	2.33
Sp.Gr.(g/mL)	1.222
Pressure(atm)	1.00
pCO_2(atm)	0.00573
pH_2S(atm)	0.00
Temperature (^oF)	72.00
pH	5.68

BOUND IONS	TOTAL	FREE
Calcium	35108	35083
Barium	40.23	40.23
Carbonate	0.265	< 0.001
Phosphate	0.00	0.00
Sulfate	61.10	1.66

CORROSION RATE PREDICTION

CO_2 - H_2S Rate(mpy) 0.0981

COMMENTS

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Exhibit 8 - Surface Owner List

Attached to and made a part of that certain Certificate of Mailing dated October 26, 2026

Entity Name	Address Line 1	City	State Code	Zip
BOEDECKER RESOURCES	PO BOX 1007	LEWISTON	MT	59457
BLACKBEAR OIL & GAS LLC	PO BOX 216	LARKSPUR	CO	80118
BLACKLAND PETROLEUM, LLC	5 INVERNESS DRIVE EAST	ENGLEWOOD	CO	80112
CRAIG A SLAWSON 2014 REVOCABLE TRUST	245 N. WACO STE 400	WICHITA	KS	67202
DAVID G MAJEWSKI	6230 KINNEY CREEK RD	EVERGREEN	CO	80439
DEE BENTLEY INC.	2021 DRAGOON CT	CASTLE ROCK	CO	80109
KAREN S MAJEWSKI	6230 KINNEY CREEK RD	EVERGREEN	CO	80439
KENNETH J KUNDRIK	1540 40TH AVENUE COURT	GREELEY	CO	80634
MARILYN JOY MARTIN TRUST	3953 NW BOXWOOD DRIVE	CORVALLIS	OR	97330
MARKS OIL INC.	1775 SHERMAN ST STE 2015	DENVER	CO	80203
MORIN FAMILY LLLP	5 INVERNESS DRIVE EAST	ENGLEWOOD	CO	80112
RADO CAPITAL LLLP	5 INVERNESS DRIVE EAST	ENGLEWOOD	CO	80112
RECTOR FAMILY LLLP	5 INVERNESS DRIVE EAST	ENGLEWOOD	CO	80112
RIM LLLP	5 INVERNESS DRIVE EAST	ENGLEWOOD	CO	80112
RIVA ISAACS LLC	5 INVERNESS DRIVE EAST	ENGLEWOOD	CO	80112
VESCO FAMILY LLLP	5 INVERNESS DRIVE EAST	ENGLEWOOD	CO	80112
STATE OF MONTANA FBO STATE HWY COMM	PO BOX 201001	HELENA	MT	59620-1001
LOREN C & LILLIAN V HENKE	1022 S DAGMAR RD	DAGMAR	MT	59219
CARTWRIGHT CORPORATION	3434 GRAY FOX CT	RAPID CITY	SD	57201
INVICO ENERGY USA INC	530 - 8TH AVE SW STE 710	CALGARY	AB	T2P 3S8
JLL ENERGY LLC	131 SOUTH LAVASIDE ROAD	BLACKFOOT	ID	83221

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Exhibit 9 - Certificate of Mailing

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

IN THE MATTER OF THE APPLICATION OF RIM OPERATING, INC. FOR AN UNDERGROUND INJECTION PERMIT AND APPROVAL OF CONVERSION OF THE EXISTING UNION MORTGAGE 1-29 WELL (API: 25-091-21525) TO SALTWATER DISPOSAL. WELL LOCATION: NE1/4SE1/4 OF SECTION 29, TOWNSHIP 32 NORTH, RANGE 58 EAST, MPM, SHERIDAN COUNTY. MT.

****

CERTIFICATE OF MAILING

State of Colorado)
: ss.
County of Arapahoe)

Nathan C. Koeniger, being first duly sworn, hereby certifies that he served a copy of the attached Notice of Application upon the interest owners set forth in Exhibit "A" attached to and made a part hereof, at the address indicated for each locatable owner, which is the address for each owner as indicated by the records of the County Clerk and Recorder at the time the notice is given (or a more current address provided by such owner), by mailing a true and correct copy thereof this 26th day of October, 2026, postage prepaid, First Class Mail. This Certificate is given as evidence of compliance with MCA Section 82-11-111.

Subscribed and sworn to before me this 26th day of October, 2026.

(SEAL)

JANICE C HAWKINS
Notary Public
State of Colorado
Notary ID # 19924012386
My Commission Expires 12-03-2028

Notary Public for the State of Colorado
Residing at ELBERT, CO
My Commission expires _____

Exhibit 10 - Notice of Application Letter to Surface Owners

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RIM LLLP
5 Inverness Drive East
Englewood, Colorado 80112
303-799-9828

October 26, 2026

TO: INTEREST OWNERS

RE: **Notice of Application for Underground Injection Permit**
Conversion of Union Mortgage 1-29 Well (API: 25-091-21525) to Saltwater Disposal
Well Location: NE¼SE¼ of Section 29, Township 32 North, Range 58 East, MPM
Sheridan County, MT

Ladies and Gentlemen:

Please be advised that RIM Operating, Inc. ("RIM") plans to submit an application to the Montana Board of Oil and Gas Conservation ("MBOGC") for an underground injection permit in order to convert the existing Union Mortgage 1-29 Well to saltwater disposal. RIM's application is eligible for administrative approval by the program director, unless objections are received within twenty (20) days of receipt of the application by the program director.

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

Respectfully,
RIM Operating, Inc.

Nathan C. Koeniger
Land Manager

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Exhibit 11

Water Injection: Reservoir Pressure Response

A material-balance calculation can estimate how average reservoir pressure changes when water is injected into a known connected pore volume. The simplest case assumes a closed, fully water-saturated reservoir with no production or leakage.

1. Closed-reservoir material balance

Approximate pressure increase: $\Delta P = V_{inj} / (V_p \times c_t)$

Parameter	Meaning / units
ΔP	Increase in average reservoir pressure (psi)
V_{inj}	Net injected water at reservoir conditions (reservoir bbl)
V_p	Connected pore volume (reservoir bbl)
c_t	Effective total compressibility (psi^{-1})

For a fully water-saturated formation, a common approximation is $\mathbf{c_t = c_w + c_f}$, where c_w is water compressibility and c_f is pore-volume compressibility.

2. Worked example

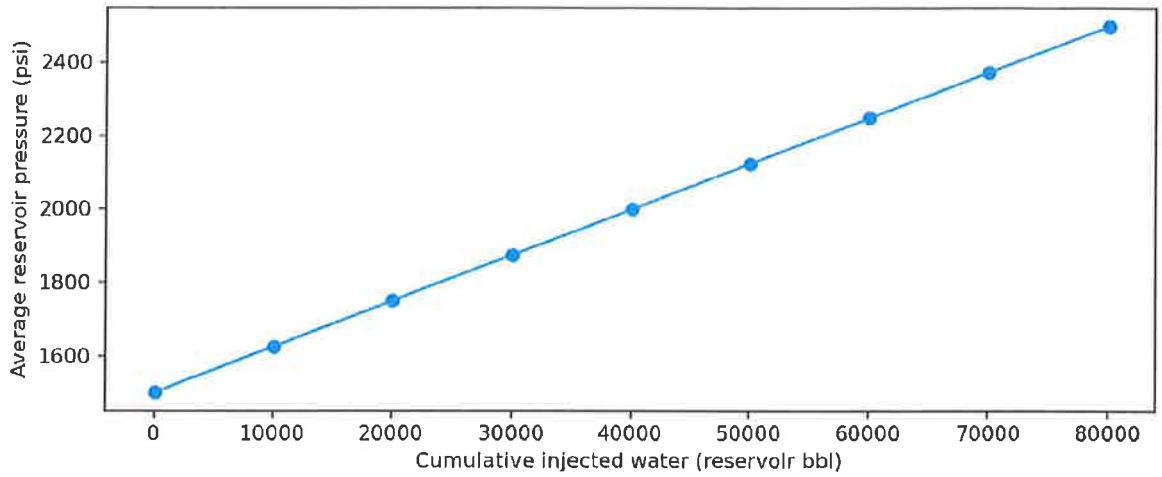
Input	Assumed value
Connected pore volume	10,000,000 reservoir bbl
Initial reservoir pressure	1,500 psi
Water compressibility	3×10^{-6} psi^{-1}
Formation compressibility	5×10^{-6} psi^{-1}
Effective total compressibility	8×10^{-6} psi^{-1}

For 10,000 reservoir barrels injected: $\Delta P = 10{,}000 / (10{,}000{,}000 \times 0.000008) =$ **125 psi**.

This constant-compressibility example predicts a 1,000 psi increase after 80,000 reservoir barrels of net injection.

3. Pressure versus cumulative injection

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Illustrative closed-reservoir calculation; assumes constant compressibility and no fluid production, leakage, or connected aquifer support.

4. Considerations for a real injection well

Reservoir boundaries: A connected aquifer or larger reservoir reduces pressure buildup. **Permeability and injection rate:** These control the additional pressure required to push water away from the wellbore. **Production:** Fluid withdrawals offset net injection. **Multiphase flow:** Oil and gas saturation affect fluid compressibility and flow behavior.

Important: Average reservoir pressure is not the same as injection-well bottomhole pressure or surface injection pressure. Estimating wellhead pressure requires injectivity, depth, fluid density, friction, and other well-specific information.

5. Inputs for a well-specific estimate

Connected pore volume (or area, net pay, and porosity); initial and current reservoir pressure; water saturation; cumulative net injected volume; compressibility; and permeability/injection history if wellbore pressure is the target.

Exhibit 12 – Detailed Geological Description of Morrison and Confining Zones

Stratigraphic sequence of the proposed injection formation in the Union Mortgage #1-29 including bounding layers above and below the proposed injection into the Morrison Formation

Above Morrison

Inyan Kara Group of the Lower Cretaceous includes, but is not limited to, the Lakota & Dakota

Morrison Formation – Upper Jurassic - Proposed injection formation

Below the Morrison

Swift Formation -Upper Jurassic sandstone and shale

Rierdon Formation - Jurassic dominated by calcareous shale and limestone

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The Morrison Formation

Upper Jurassic, predominantly nonmarine sedimentary sequence consisting of interbedded sandstone, mudstone, claystone, siltstone, and minor limestone.

The Morrison contains two very different types of rock:

- Sandstone bodies that may have sufficient porosity and permeability to serve as injection reservoirs.
- Mudstone and claystone intervals that may provide relatively impermeable barriers.

The sandstones are generally associated with fluvial channels and channel-margin deposits. The Morrison net sand interval is 54' thick in the Union Mortgage #1-29. The mudstones and claystones represent floodplains, abandoned channels, and other low-energy depositional environments. These intervals represent 15 net feet interbedded. Top of the Morrison can be found at 4810' in the Union Mortgage #1-29. The injection interval is proposed from 4856' - 4914' on the Union Mortgage #1-29 Dual Laterolog dated February 21, 1984.

Porosity of the actual Morrison Formation in the Union Mortgage #1-29 is unknown. Porosity logs were not run above the Charles Salt. The nearest porosity log is from the Cartwright #1-30 located 980' FNL & 660' FEL Section 30-T32N-R58E. The sonic log on that well shows an average porosity of approximately 25% in the Morrison sandstone from 4808'-4850'.

ABOVE THE MORRISON

Inyan Kara Group

The Morrison is overlain by Cretaceous Lakota sandstone of the Inyan Kara Group. The Lakota consists of sandstone and conglomerate sandstone deposited from fluvial channels along with mudstone and shale from floodplain and swamp deposits. The impermeable mudstone and shale provide sufficient barrier to prevent upward migration of injected fluids.

Above the Lakota sits the Dakota sandstone. This Lower Cretaceous formation consists of fine to medium grain sandstone, siltstone and interbedded shale to carbonaceous shale. The Inyan Kara Group in the Union Mortgage #1-29 exists from 4522' – to the top of the Morrison at 4810'.

BELOW THE MORRISON

Formation	Dominant lithology	Potential disposal characteristics
Swift	Shale, siltstone, sandstone	Potential sandstone reservoir
Rierdon	Calcareous shale, limestone	Generally low permeability

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The Swift Formation

Jurassic sedimentary formation is composed primarily of sandstone, siltstone, shale, and locally occurring limestone and glauconitic sandstone. The Swift contains sandstone intervals that can have meaningful porosity and permeability. It lies directly beneath the Morrison with a top of 4916'.

1. Geologic composition

Rock type	Description
Sandstone	Fine- to medium-grained, commonly quartz-rich
Glauconitic sandstone	Greenish sandstone containing the mineral glauconite
Siltstone	Fine-grained sedimentary rock, commonly interbedded with sandstone
Shale	Gray to greenish-gray marine shale
Calcareous sandstone	Sandstone containing calcium carbonate cement
Limestone	Local thin carbonate beds and fossil-bearing intervals

2. Depositional environment

The Swift was deposited during the Late Jurassic in a shallow marine seaway.

Its depositional environments included:

- Offshore marine mud deposition.
- Shoreface sandstone accumulation.
- Marine sand bars.
- Nearshore and estuarine environments.

3. Thickness

- Total formation thickness 614'.
- Total sandstone thickness is less than 100'.

The Rierdon Formation

Marine sedimentary formation consisting of calcareous shale, gray mudstone, and thin-bedded limestone. It was deposited in a shallow marine environment during the Jurassic Period. The top of the Rierdon is located at 5530' in the Union Mortgage #1-29.

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1. Geologic composition

The principal rock types are:

Rock type	Description
Calcareous shale	Gray to dark-gray shale containing calcium carbonate
Mudstone	Fine-grained marine sediment, generally gray or greenish-gray
Limestone	Dense, gray to brown, commonly thin-bedded
Argillaceous limestone	Limestone containing significant clay
Calcareous siltstone	Locally present, particularly in transitional intervals
Oolitic limestone	Locally present, consisting of small rounded carbonate grains

The USGS describes the formation as predominantly calcareous gray shale with shaly to thin-bedded limestone. Shale generally exceeds limestone in abundance.

2. Depositional environment

The Rierdon was deposited in a Jurassic marine environment. Characteristics include:

- Fine-grained marine mud deposited in relatively quiet water.
- Carbonate accumulation producing limestone beds and nodules.
- Variations in water depth, circulation, and sediment supply.