FORM NO. 2 R 10/09

ARM 36.22.307, 601, 605, 1003, 1004, 1011, 1013, 1103, 1222, 1240, 1301, 1306, 1309, and 1447

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MONTANA BOARD OF OIL & GAS CONSERVATION • BILLINGS

Submit In Quadruplicate To:

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

SUNDRY NOTICES AND REPORT OF WELLS

Operator White Rock Oil & Gas, LLC

Address 5810 Tennyson Parkway, Suite 500

City Plano State TX Zip Code 75024

Telephone 214-981-1400 Fax

Location of well (1/4-1/4 section and footage measurements):
700 FEL 500 FNL NENE

Lease Name: Gladowski

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

Well Number: 41X-18

Unit Agreement Name:

Field Name or Wildcat: Elm Coulee

Township, Range, and Section: 18-24N-56E

County: Richland

API Number: 25 | 083 | 21960
State County Well

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

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) Chemical disclosure	✓	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.

White Rock is submitting this chemical disclosure for frac approval.

SEE ATTACHED CONDITIONS OF APPROVAL

BOARD USE ONLY

Approved JUN 07 2023
Date

Name Admin/Ast. Engineer
Title

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

05/03/2023 Eric Linthicum
Date Signed (Agent)

Eric Linthicum, Regulatory Manager
Print Name and Title

Telephone: 214-666-4826

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.

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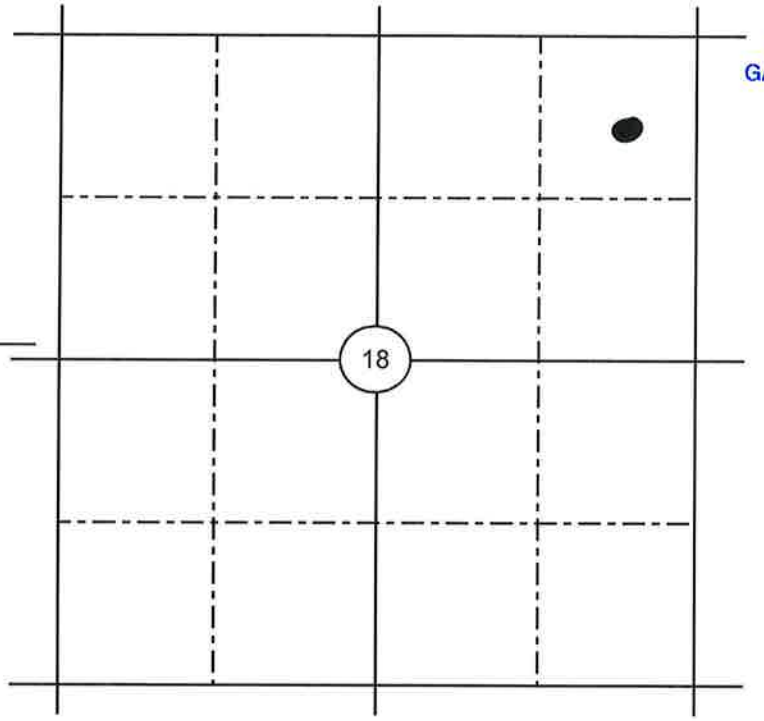
Range 56E

Township 24N



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.

08321960

Fracture Start Date/Time:	
Fracture End Date/Time:	
State:	Montana
County:	Richland County
API Number:	
Operator Number:	
Well Name:	15 Stage
Federal Well:	No
Tribal Well:	No
Longitude:	
Latitude:	
Long/Lat Projection:	
True Vertical Depth (TVD):	8,500'
Total Clean Fluid Volume* (gal):	2,442,600

Frac Focus
Chemical Disclosure Registry

Additive	Specific Gravity	Additive Quantity	Mass (lbs)
Water	1.00	2,442,600	20,383,497
Sand (100 Mesh Proppant)	2.65	498,000	498,000
Sand (40/70 White Proppant)	2.65	1,992,000	44,051,586
22 DEGREE BAUME Hydrochloric Acid (36%)	1.180	1.543	23,177
Acid Pack Pro LT	3.10	33	303
ProSlick 974	1.08	3,180	28,687
ProSurf 170	0.92	2,443	20,122
BioSuite GQ123x	1.02	366	3,128
ProCheck 170	1.02	244	2,077
	#N/A		
	#N/A		
	#N/A		
	#N/A		
-	#N/A		
-	#N/A		
-	#N/A		
-	#N/A		
-	#N/A		
-	#N/A		
			Total Slurry Mass (Lbs) 65,010,576

Ingredients Section:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass)**
Water	Operator	Carrier/Base Fluid	Water	7732-18-5	100.00%	20,383,497	31.35412%
Sand (100 Mesh Proppant)	ProFrac	Proppant	Crystalline Silica (quartz)	14808-60-7	100.00%	498,000	0.76603%
Sand (40/70 White Proppant)	ProFrac	Proppant	Crystalline Silica (quartz)	14808-60-7	100.00%	44,051,586	67.76065%
22 DEGREE BAUME Hydrochloric Acid (36%)	DynaChem	Acidizing	Hydrochloric Acid	7647-01-0	50.00%	11,589	0.01783%
Acid Pack Pro LT	Cooper Natural	Acid Inhibitor	Tetradecanol, ethoxylated	9043-36-5	1.74%	5	0.00007%
			Alcohols, C12-14 secondary, ethoxylated	84133-50-6	8.00%	24	0.00004%
			Methyl 9-Decenoate	25601-41-6	1.00%	3	0.00000%
			Methyl 9-dodecenoate	39202-17-0	1.00%	3	0.00000%
			Sodium xylene sulfonate	1300-72-7	0.35%	1	0.00000%
			Citric acid	77-92-9	10.00%	30	0.00005%
			Pyridinium, 1-(phenylmethyl)-, Et Me derivs., chloride	68909-18-2	25.00%	76	0.00012%
			Ethylene glycol	107-21-1	42.00%	127	0.00020%
			Water	7732-18-5	5.00%	15	0.00002%
			2-Propenal, 3-phenyl	104-55-2	4.00%	12	0.00002%
			Methanol	67-56-1	2.00%	6	0.00001%
ProSlick 974	ProFrac	Friction Reducer	Petroleum distillates hydrotreated light	64742-47-8	30.00%	8,606	0.01324%
			Ethoxylated Alcohol	68551-12-2	1.50%	430	0.00066%
ProSurf 170	ProFrac	Surfactant	Isopropyl alcohol	67-63-0	7.00%	1,409	0.00217%
			Methyl alcohol	67-56-1	10.00%	2,012	0.00310%
			Ethoxylated Nonylphenol	127087-87-0	10.00%	2,012	0.00310%
			Ethyl alcohol	64-17-5	7.00%	1,409	0.00217%
BioSuite GQ123x	BioSuite	Biocide	Glutaraldehyde	111-30-8	15.00%	469	0.00072%
			Alkyl dimethylbenzyl ammonium chloride (C12-16)	68424-85-1	5.00%	156	0.00024%
ProCheck 170	ProFrac	Scale Inhibitor	Methanol	67-56-1	5.00%	104	0.00016%

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083219600

MONTANA BOARD OF OIL AND GAS ATTACHMENT TO FORM 2 "CONDITIONS OF APPROVAL"

A. Field Inspector must be notified at least **24 hours** in advance of the start of fracture stimulation operation.

B. 36.22.1106 SAFETY AND WELL CONTROL REQUIREMENTS – HYDRAULIC FRACTURING

(1) New and existing wells which will be stimulated by hydraulic fracturing must demonstrate suitable and safe mechanical configuration for the stimulation treatment proposed.

(2) Prior to initiation of fracture stimulation, the operator must evaluate the well. If the operator proposes hydraulic fracturing through production casing or through intermediate casing, **the casing must be tested to the maximum anticipated treating pressure**. If the casing fails the pressure test it must be repaired or the operator must use a temporary casing string (fracturing string).

> (a) **If the operator proposes hydraulic fracturing though a fracturing string, it must be stung into a liner or run on a packer set not less than 100 feet below the cement top of the production or intermediate casing and must be tested to not less than maximum anticipated treating pressure minus the annulus pressure applied between the fracturing string and the production or immediate casing.**

(3) A casing pressure test will be considered successful if the pressure applied has been held for 30 minutes with no more than ten percent pressure loss.

(4) A **pressure relief valve(s)** must be installed on the treating lines between pumps and wellhead to limit the line pressure to the test pressure determined above; the well **must be equipped with a remotely controlled shut-in device** unless waived by the board administrator should the factual situation warrant.

(5) **The surface casing valve must remain open** while hydraulic fracturing operations are in progress; the annular space between the fracturing string and the intermediate or production casing must be monitored and may be pressurized to a pressure not to exceed the pressure rating of the lowest rated component that would be exposed to pressure should the fracturing string fail.

History: 82-11-111, MCA; IMP, 82-11-111, MCA; NEW, 2011 MAR p. 1686, Eff. 8/26/11.

C. 36.22.1010 WORK-OVER, RECOMPLETION, WELL STIMULATION – NOTICE AND APPROVAL

(1) Within 30 days following completion of the well work, a subsequent report of the actual work performed must be submitted on From No. 2.