

Submit In Quadruplicate To:

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

RECEIVED

JUL - 8 2019

SUNDRY NOTICES AND REPORT OF WELLS

MONTANA BOARD OF OIL &
GAS CONSERVATION - BILLINGS

Operator White Rock Oil & Gas, LLC		Lease Name: Dyneson	
Address 5810 Tennyson Parkway, Suite 500		Type (Private/State/Federal/Tribal/Allotted): Fee	
City Plano	State TX	Zip Code 75024	Well Number: 4-32H
Telephone 214-981-1400	Fax 214-981-1401		Unit Agreement Name:
Location of well (1/4-1/4 section and footage measurements): NWNW, 613' FNL & 1137' FWL 1137'		Field Name or Wildcat: Elm Coulee	
API Number: 25 083 22692 State County Well		Well Type (oil, gas, injection, other): Oil	
		Township, Range, and Section: 24N, 58E, 32	
		County: Richland	

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


Notice of Intention to Change Plans	<input type="checkbox"/>	Subsequent Report of Mechanical Integrity Test	<input type="checkbox"/>
Notice of Intention to Run Mechanical Integrity Test	<input type="checkbox"/>	Subsequent Report of Stimulation or Treatment	<input type="checkbox"/>
Notice of Intention to Stimulate or to Chemically Treat	<input type="checkbox"/>	Subsequent Report of Perforation or Cementing	<input type="checkbox"/>
Notice of Intention to Perforate or to Cement	<input checked="" type="checkbox"/>	Subsequent Report of Well Abandonment	<input type="checkbox"/>
Notice of Intention to Abandon Well	<input type="checkbox"/>	Subsequent Report of Pulled or Altered Casing	<input type="checkbox"/>
Notice of Intention to Pull or Alter Casing	<input type="checkbox"/>	Subsequent Report of Drilling Waste Disposal	<input type="checkbox"/>
Notice of Intention to Change Well Status	<input type="checkbox"/>	Subsequent Report of Production Waste Disposal	<input type="checkbox"/>
Supplemental Well History	<input type="checkbox"/>	Subsequent Report of Change in Well Status	<input type="checkbox"/>
Other (specify) <u>Refrac</u>	<input checked="" type="checkbox"/>	Subsequent Report of Gas Analysis (ARM 36.22.1222)	<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>

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.

The Dyneson ~~2-31H~~ **4-32H** is planned to be a plug and perf re-entry frac on an open hole lateral to prove the concept in Richland County, MT.

Please see attached supporting documentation.

BOARD USE ONLY	
Approved <u>JUL 17 2019</u>	Date
	Name
<u>Petroleum Engineer</u>	Title

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

07/02/2019	
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.

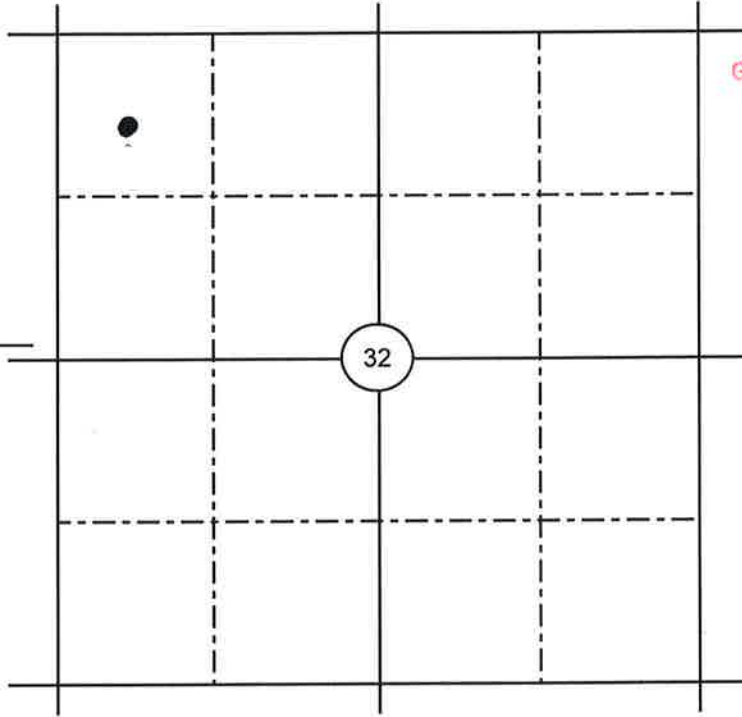
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**MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS**

Range 58E

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.

08322692

Custom Chemical Component Disclosure Report for: HF ad hoc

Start Date	7/2/2019	End Date	7/2/2019
State	Montana		
County	Richland		
API Number	25-083-22692-0000		
Operator Name	White Rock Oil & Gas LLC		
Well Name and Number	Dynneson 4-32H		
Longitude	-104.30934		
Latitude	47.80318		
Long/Lat Projection	NAD27		
Production Type	Oil		
True Vertical Depth (TVD)	10,514		
Total Chemical Mass (lbs)**	17,810,075		
Total Max. Ingredient Mass (lbs)**	17,831,712		
Total Base NonWater Volume (gal)**	1,899,600	Total Product Volume (gal)**	1,992,430

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*** This value will show blank on the screen. Please do not modify. If Hydrocarbon, N2 or CO2 is used as a carrier fluid, enter that volume manually in the XML file (using Notepad) after converting this Excel file.

Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration In Additive (% by mass)**	Maximum Ingredient Weight (pounds)	Maximum Ingredient Concentration In HF Fluid (% by mass)**	Comments
Water	BJ Services	Carrier	Water	7732-18-5	100.000000%	15,638,484.880000	88.822009%	
BIOC11139W	BJ Services	Biocide	MSDS and Non-MSDS Ingredients are listed below the green line.	Listed Below		3,119.074371	0.017492%	
FP-6L	BJ Services	Anifoamer	MSDS and Non-MSDS Ingredients are listed below the green line.	Listed Below		16.400000	0.000092%	
FraCare NE-03	BJ Services	Surfactant	MSDS and Non-MSDS Ingredients are listed below the green line.	Listed Below		15,846.000000	0.088864%	
FraCare SI 720	BJ Services	Scale Inhibitor	MSDS and Non-MSDS Ingredients are listed below the green line.	Listed Below		4,403.071400	0.024692%	
InnoFrac DP NW-TM	BJ Services	Diverter	MSDS and Non-MSDS Ingredients are listed below the green line.	Listed Below		432.180000	0.002424%	
Sand, White	BJ Services	Proppant	MSDS and Non-MSDS Ingredients are listed below the green line.	Listed Below		1,920,000.000000	10.767334%	
ThinFrac MP	BJ Services	Friction Reducer	MSDS and Non-MSDS Ingredients are listed below the green line.	Listed Below		49,410.511292	0.277093%	
MSDS and Non-MSDS Ingredients are listed below the green line.								
			2-propenoic, polymer with sodium phosphinate, sodium salt	71050-62-9	20.000000%	823.004000	0.004615%	
			Acetic acid	127-08-2	1.000000%	288.612800	0.001619%	
			Acetic acid, Potassium Salt	64-19-7	0.100000%	28.861280	0.000162%	
			Acrylamide Modified Acrylic Polymer	38193-60-1	60.000000%	17,316.767976	0.097112%	
			Alcohol ethoxylate	68439-40-3	2.500000%	396.150000	0.002222%	
			Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	30.000000%	693.127638	0.003887%	
			Calcium Chloride	10043-52-4	5.000000%	205.751000	0.001154%	
			Crystalline Silica (Quartz)	14808-60-7	100.000000%	1,920,000.000000	10.767334%	
			Dipropylene glycol monomethyl ether	34590-94-8	5.000000%	792.300000	0.004443%	
			Esterified phenolic polymer	129829-31-5	2.500000%	396.150000	0.002222%	
			Ethanol	64-17-5	5.000000%	115.521273	0.006489%	
			Ethylene glycol	107-21-1	30.000000%	1,927.633638	0.010810%	
			Glutaraldehyde	111-30-8	10.000000%	231.042546	0.001296%	
			Isopropanol	67-63-0	80.000000%	1,386.255276	0.007774%	
			Non-hazardous Ingredients	Trade Secret	100.000000%	16.400000	0.000092%	
			Oxyalkylated Alcohol	78330-21-9	5.000000%	1,443.063998	0.008093%	
			Petroleum distillates	64742-47-8	30.000000%	8,658.383988	0.048566%	
			Poly lactide resin	9051-89-2	98.000000%	432.180000	0.002424%	
			Potassium Chloride	7447-40-7	1.000000%	41.150200	0.000231%	
			Sodium Chloride	7647-14-5	5.000000%	1,484.214198	0.008323%	
			Sorbilan, mono-(9Z)-9octadecenoate	1338-43-8	5.000000%	1,443.063998	0.008093%	
			Sorbilan monooleate ethoxylate	9005-65-6	5.000000%	1,443.063998	0.008093%	
			Tetrasodium EDTA	64-02-8	0.100000%	28.861280	0.000162%	
			Water	7732-18-5	90.000000%	33,635.677976	0.188628%	

* Total Chemical Mass is the total amount of Trade Name volume, supplied to the customer, converted to pounds.
 * Total Max. Ingredient Mass is the summation of all masses listed in the Maximum Ingredient Weight (pounds) column.
 * Total Product Volume is the total amount of Water plus Trade Name chemical volume in gallons supplied by the customer or BJ Services, LLC.
 * Total Base NonWater Volume is the total amount of non-water volume in gallons used on the hydraulic fracture treatment (eg. N2, Co2, Hydrocarbons).
 * Total Base Water Volume is the total amount of water volume in gallons used on the hydraulic fracture treatment.
 ** Information is based on the maximum potential for concentration and thus the total may be over 100%

All component information listed was obtained from the supplier's Safety Data Sheets (SDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the SDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an SDS is subject to 29 CFR 1910.1200(i) and Appendix D.

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 through a fracturing string, it must be strung 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 Form No. 2.