

**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 **Kraken Operating, LLC**  
Address **9821 Katy Freeway, Suite 460**  
City **Houston** State **TX** Zip Code **77024**  
Telephone **713-360-7705** Fax

Lease Name:  
**Gehringer**  
Type (Private/State/Federal/Tribal/Allotted):  
**Private**  
Well Number:  
**1-13H**

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Location of well (1/4-1/4 section and footage measurements):  
**245' FNL & 2180' FWL of NENW Sec. 27-13-T28N-R58E**

Unit Agreement Name:  
**N/A**  
Field Name or Wildcat:  
**Wildcat**  
Township, Range, and Section:  
**T28N, R58E, Section 27-13**

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API Number:  
**25 | 085 | 21918**  
State County Well

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

County:  
**Roosevelt**

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 checked="" type="checkbox"/> | Subsequent Report of Perforation or Cementing      | <input type="checkbox"/> |
| Notice of Intention to Perforate or to Cement           | <input 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) _____                                   | <input type="checkbox"/>            | Subsequent Report of Gas Analysis (ARM 36.22.1222) | <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.

Kraken Operating, LLC intends to restimulate the Gehringer 1-13H. We plan to install a 4.5" 15.5# P-110 frac string for restimulation. Maximum anticipated treating pressure is 9,000 psi. We are planning to pump 95,000 bbls of fluid and 2,000,000 lbs of proppant. See attached chemical disclosure for further details on the planned composition of the fracturing fluid slurry. The intended start date is 08/22/2018

**BOARD USE ONLY**

Approved     **AUG 08 2018**      
Date

    *Ray Noah*         **Petroleum Engineer**      
Name Title

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

07/31/2018

*Ray Noah*  
Signed (Agent)

Date

Ray Noah - Senior Regulatory Analyst

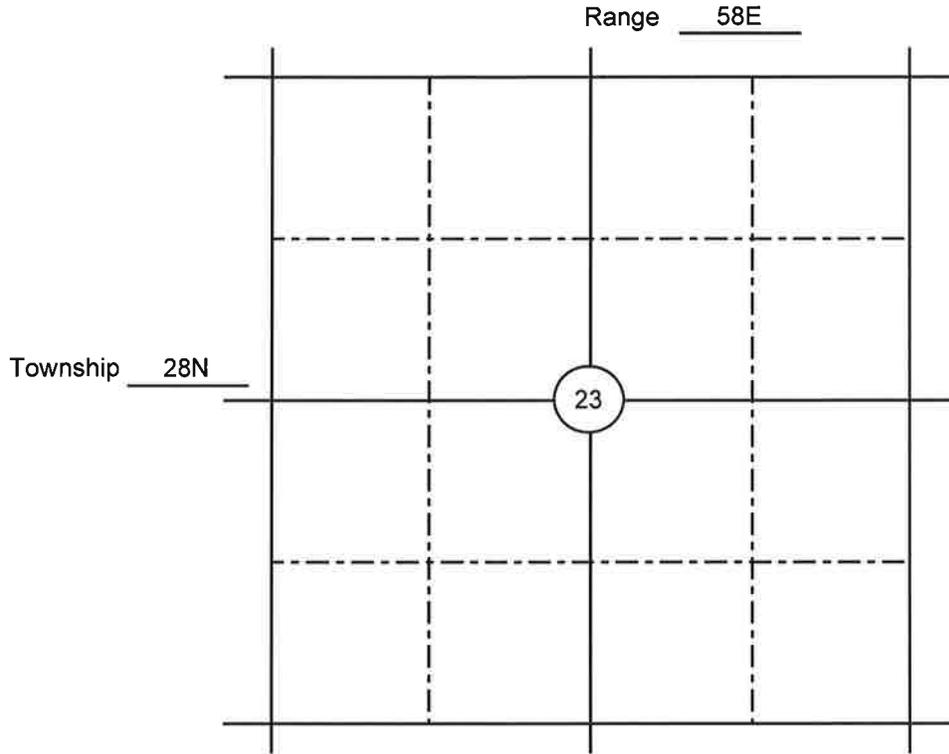
Print Name and Title

Telephone:     713-360-7705

**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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**CONDITIONS OF APPROVAL**

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

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

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier	Water	7732-18-5	100.00%	94.04378%	
SurfFlo 420	Innospec	Non Emulsifier	Water Ethoxylated Alcohols	7732-18-5 Proprietary	86.00% 10.00%	0.03979% 0.00463%	
			Methanol	67-56-1	4.99%	0.00231%	
			D-Limonene	5989-27-5	4.99%	0.00231%	
			Dipentene	68956-56-9	4.99%	0.00231%	
			Ethylene oxide/Propylene Oxide Co-polymer	9003-11-6	1.00%	0.00046%	
			Proprietary Ingredient	Proprietary	1.00%	0.00046%	
			Proprietary Ingredient	Proprietary	1.00%	0.00046%	
FRP-1S	Liberty	Friction reduction	Petroleum distillates, hydro-treated light	64742-47-8	45.00%	0.09199%	
			Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched	89011-36-5	3.00%	0.00613%	
Bioclear 5000	Lubrizol	Biocide	2,2-dibromo-3-nitropropionamide	10222-01-2	10.00%	0.00108%	
ScaleCease 7103	Innospec	Scale Inhibitor	Water	7732-18-5	95.00%	0.01845%	
			BHMT Phosphonate	Proprietary	5.00%	0.00097%	
			Proprietary Ingredient	Proprietary	5.00%	0.00097%	
			Oxygenate and paraffinic stream	876065-86-0	99.00%	0.00086%	
Liberty Clean Out	Liberty	Cleanup Solution	C.I. Solvent Yellow 33	8003-22-3	1.00%	0.00001%	
			Crystalline Silica (quartz)	14808-60-7	99.90%	5.66878%	
Crystalline Silica	Liberty	Sand	Aluminum Oxide	1344-28-1	1.00%	0.05674%	
			Iron Oxide	1309-37-1	0.10%	0.00567%	
			Titanium Oxide	13463-67-7	0.10%	0.00567%	

Trade Name	Supplier	Purpose	Additive Quantity
Water	Operator	Carrier	3975019 gal
SurfFlo 420	Innospec	Non Emulsifier	1970 gal
FRP-1S	Liberty Oilfield Services	Friction reduction	7855 gal
Bioclear 5000	Lubrizol	Biocide	407 gal
ScaleCease 7103	Innospec	Scale Inhibitor	782 gal
Liberty Clean Out Fluid	Liberty Oilfield Services	Cleanup Solution	45 gal
Crystalline Silica Quartz / US Silica	Liberty Oilfield Services	Sand	2000320 lbs

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## 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 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 Form No. 2.