George

FORM NO. 2 R 10/09

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

RECEIVED
JUN - 5 2019
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 **Denbury Onshore, LLC**

Address **5320 Legacy Dr**

City **Plano** State **TX** Zip Code **75024**

Telephone 972-673-2000 Fax

Lease Name: **Unit**

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

Well Number: **3503**

Location of well (1/4-1/4 section and footage measurements):
NENW 660' FNL & 1980' FWL

Unit Agreement Name: **BCCMU**

Field Name or Wildcat: **Bell Creek**

Township, Range, and Section: **T8S - R54E Sec. 35**

API Number: **25** State | **075** County | **21390** Well

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

County: **Powder River**

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) **Fracture Stimulate**	☒	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.

Denbury requests approval to fracture stimulate the subject well. Please see attached procedure and wellbore diagram for additional information. A treatment schedule has been provided along with the necessary CAS numbers. Sage Grouse letter has also been attached.

SEE SAGE GROUSE STIPULATIONS

BOARD USE ONLY

Approved JUN 06 2019
Date

Name Petroleum Engineer
Title

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

06/04/2019
Date

Signed (Agent)

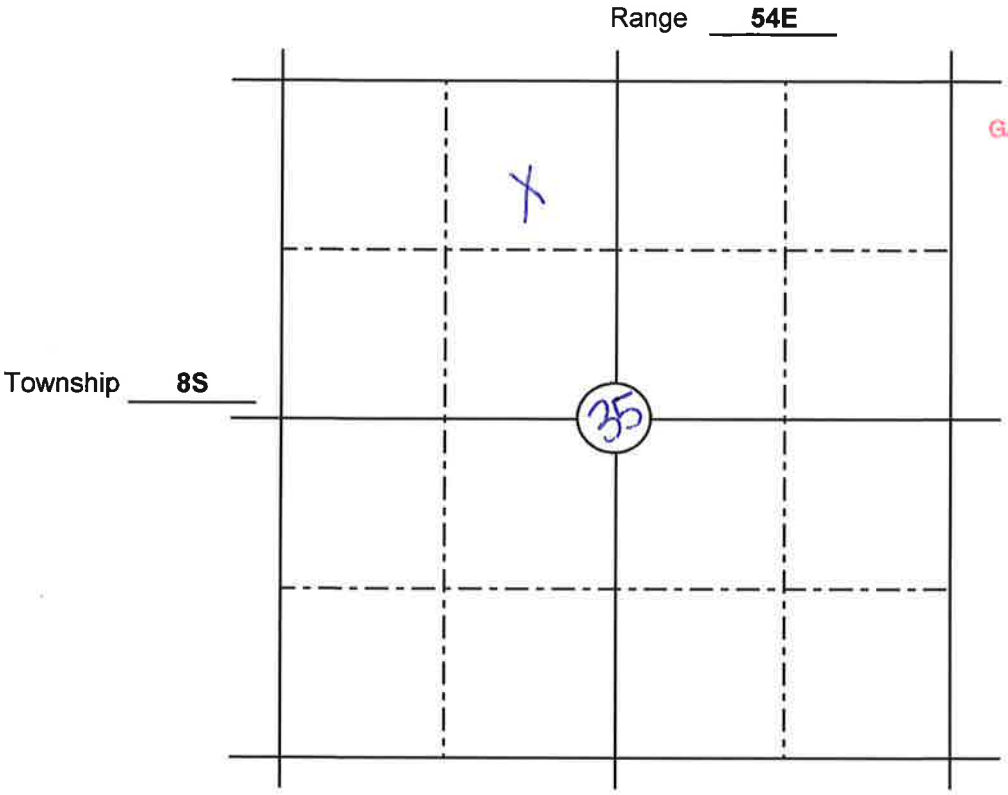
Naomi Johnson - Regulatory Compliance Specialist
Print Name and Title

Telephone: 972-673-2552

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.

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PROCEDURE To Stimulate Well

Bell Creek Unit 35-03

Well Status: Active Producer

Sec 35 – T8S - R54E
API # 25075213900000
Lat: 45°6'14.437"N
Long: 105°4'18.031"W

Powder River County, MONTANA
This is a FEE well

OBJECTIVE OF OPERATION:

Test production tubing to max treating pressure – Perform small hydraulic fracture stimulation on the Muddy– Flow back well - Release to Production

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1. **NOTE: Check local Well File before beginning job.**
2. **Pre-Job: Confirm Sundry approval. Secure Wellhead, Flowline, and Electrical. Notify BLM/State as required.**
3. MIRU SL. RIH with 1-1/4" bailer and tag bottom. Record depth. TOOH. RDMO SL.
   a. Notify Plano if tag high for path forward. Jar for sample if high.
4. MIRU Hot-oiler. PT Production Casing as directed below. RDMO Hot-oiler.
   a. **Test to a maximum anticipated PCP of 1500psi for 15 min. Chart it – no more than 10% pressure loss.**
      i. If casing fails – contact Plano for procedure moving forward.
5. MIRU SL. PU PX plug. RIH & set in X nipple at the packer. TOOH. RDMO SL.
6. Bleed off pressure and ensure tubing & casing are dead.
7. Install BPV. ND WH. NU BOP. Test as per Denbury Standards. Remove BPV.
8. Install 2-3/8" to 2-7/8" Xover, 6ft x 2-7/8" L-80 pup, 2-7/8 to 3" 1502 Xover, & 3" 1502 Plug Valve.
   a. **Ensure all hammer union connection are whip-checked / secured in the case of an uncontrolled release of pressure.**
9. Close Pipe Rams. MIRU Clean Hot-oiler. PT tubing as directed below. RDMO Hot-oiler.
   a. **Test tubing to maximum anticipated treating pressure @5000# for 15 minutes. Chart it - no more than 10% pressure loss. Hold 1000# on the backside (As anticipated for job).**
      i. If tubing fails – contact Plano for procedure moving forward.
   b. Bleed off casing to 0psi and **tubing to SI pressure when prong was set.**
10. MIRU SL. RIH and retrieve prong & PX plug.
11. MIRU 400bbl upright tank. Ensure clean – use hot-oiler if necessary.
    a. Fill tank with 400bbls of BIDDLE water.
12. MI Flowback Tank and 1502 iron for Flowback/ Frac Operation Relief if necessary.
13. MIRU clean Hot-oiler. Roll tank to 80-100degF (depending on the Weather). RDMO Hot-oiler.
14. MIRU Frac Company & Equipment. (Estimated 4-8 hr job -less than 30 minutes of pump time).
    a. Frac Company responsible for 20,000# 16/30 sand, frac fluid additives, and all frac equipment.

Frac Additives				
Materials	U.O.M.	LOADING PER/1000 GALLONS		
		Fluid 1 1,910	Fluid 2 10,250	Totals
WG-1SLR, Slurried Guar Gel	**gal**	5	5	61
NE-1, Non Emulsifier (Nonionic)	**gal**	2	2	25
BIO-2L, Liquid Biocide (THPS)	**gal**	0	0.2	3
Buffer-4L, High pH (sodium hydroxide)	**gal**	0	0.1	2
XLB-1, Self Buffered Borate Crosslinker	**gal**	0	1.5	16
B-4LE, High pH/Low Temp. <140°F Enzyme Break	**gal**	0	0.3	4
B-1, Oxidizer Breaker (AP)	**gal**	1	1	13
KCL-2Sub, KCl Substitute (anionic product toleran	**gal**	2	2	25

   b. **2 pressure relief valves will be installed on treating lines between pumps and wellhead to limit the line pressure to max anticipated treating pressure.**
   c. **Pressure the Production Casing to 800-1000psi prior to job. Hold & monitor with gauge. Set pop-off at 1400psi (100psi less than PT).**
15. Close 3" Plug Valve. Install 3" Hydraulic valve &test to treating pressure prior to frac.
    a. **Hydraulic valve will be hooked up during frac to accumulator and serve as the remote controlled shut-in device AT THE WELL HEAD.**

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16. Perform breaker test with Biddle water from tank/X-linker & Breaker prior to job.
    a. Record vortex closure time, crown time, and lip time of Xlinked fluid, and ensure fluid breaks prior to pumping (note any visible residue) and the time it takes to break @ 80-100°F
17. Establish 8-10bpm injection rate with 20# gel for 30 bbls. Record ISIP.
    a. Note friction pressure of 20# gel at various rates
18. Pump the program recommended and attached. Hook up Frac equipment to pull off of 400bbl upright. Hook up diverter line to the flowback equipment.
    a. Note additional friction pressure from X-linker. (inject X-liner directly into the blender discharge pump if possible)
    b. Subject to additional pumping depending on pressures.
    c. Prior to Flush - Drop tub level and bypass tub
    d. Call flush once the proppant concentration at the inline densometer drops below 3.5ppg
        i. Confirm with Frac company about bypassing or dropping tub level prior to flush.
    e. End flush 1bbl prior to perforations. **Do NOT over flush.** This will allow for a cleaner interface downhole between the 4ppg proppant stage and the flush volume.
        i. Talk with Frac company about washing out gel and proppant in blender tub through the prime up / bleed off line

Frac Schedule

STG No.	Proppant Lbs./Gal.	Stage Gals.	Fluid Type or Comment	Proppant Type or Stage Description	Stage/lbs. Proppant	Clean Rate	Clean Bbls.	Slurry Bbls.	Stage Time.
1	0	1260	20# Linear	Pre-Pad	-	10	30	10	3
2	0	3000	20# X-Link	Pad	-	10	71	71	7.1
3	1	1500	20# X-Link	SLF 16/30 White	1,500	9.6	36	37	3.7
4	2	1500	20# X-Link	SLF 16/30 White	3,000	9.2	36	39	3.9
5	3	1500	20# X-Link	SLF 16/30 White	4,500	8.8	36	41	4.1
6	4	1500	20# X-Link	SLF 16/30 White	11,000	8.5	65	77	4.2
7	0	500	20# Linear	Flush	-	10	16.46	16.46	2.5

19. Record the ISIP @5, 10, & 15 minutes after pumping.
20. RDMO Frac Company & Equipment.
    a. Send pump chart and other necessary data to the Plano office.
21. RU 1502 iron & manifold to Gas Buster. Flowback the well as directed by Plano.
    a. **Flowback 1.5x tubing volume no greater than 1bpm during the initial flowback**. Once the tubing volume has been recovered, continue to flowback the well **no greater than 2 bpm** until either the returns are proppant free and a suffucient amount of load volume has been recovered (greater than 100% of the clean volume pumped), the flow back tank has reached its capacity, or the well or is unable to flow under its own pressure anymore. Record total volume recovered.
22. MIRU slickline. RIH w/ 1-1/4" bailer and tag TD. Record depth. TOOH.
    a. Notify Plano if tag high before moving forward. Jar for sample if high.
23. PU PX plug. RIH and set in X nipple above packer in SA. TOOH. RD SL. Bleed tubing 0psi.
24. Install BPV. RD BOP and associated equipment. NU Wellhead. Test. Remove BPV.
25. MIRU Clean Hot-oiler. Pressure up tubing to SI pressure when prong was set. RDMO Hot-oiler.
26. RU SL. RIH and retrieve PX plug in SA. TOOH. RDMO SL.
27. Release to operations.

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Currently Selected Schematic

Bell Creek Unit #A 35-03

Sect	Twn...	Twn...	Range	Rng...
35	008	S	54	E

Surface Legal Location: 330 FNL & 1980 FWLNE-NW

Fault Block:

Field Name	API/UWI	State ID#	Well Status	Well Configuration Type	Assoc.TB/TestSite	Latitude	Longitude
Bell Creek	25075213900000		A - Active			45° 6' 14.437" N	105° 4' 18.031" W

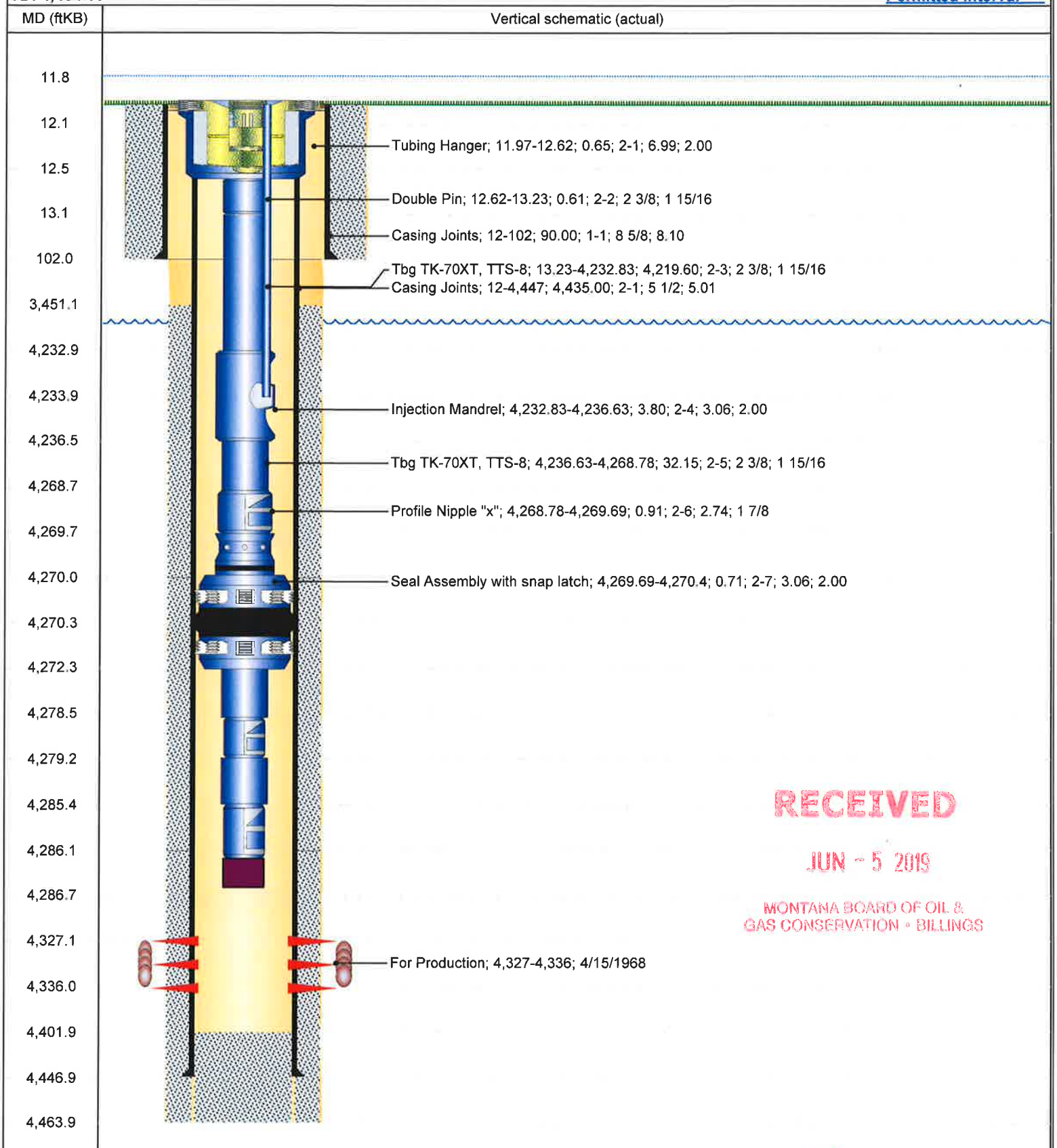
Gr Elev (ft)	Orig KB Elev (ft)	KB-Grd (ft)	Total Depth (All) (ftKB)	Total Depth All (TVD) (ftKB)	PBTD (All) (ftKB)
3,749.00	3,761.00	12.00	Original Hole - 4,464.0		

Spud Date	TD Date	Rig Release Date	Completion Start D...	Completion End Date	On Production Date	First Sales Date	First Inj Date	First Date CO2 Flood	Abandon Date

TD: 4,464.00

Original Hole, 6/4/2019 1:38:08 PM

Permitted Interval = -



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Report Printed: 6/4/2019

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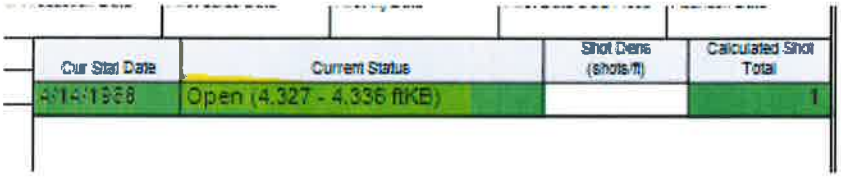
5.5" 10.8 ppf N-80				
Burst (psi)	Collapse (psi)	Tensile (kips)	I.D. (inches)	Drift (inches)
9170	8800	246	3.476	3.351

2-3/8" 4.7 ppf J-55 TK-70XT TTS8				
Burst (psi)	Collapse (psi)	Tensile (kips)	I.D. (inches)	Drift (inches)
6770	7190	72	1.93	1.836



Cur Stat Date	Current Status	Shot Dens (shots/ft)	Calculated Shot Total
4/14/1968	Open (4,327 - 4,336 ftKB)		1

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QES
PRESSURE PUMPING LLC

CAS INFORMATION:

Additive	Max Loading / 1000 Gal	Specific Gravity	Additive Quantity	Mass (lbs)
Water (Customer Supplied)	1,000.00	1.00	12,160	101,475
WG-15LR, GUAR SLURRY	5.00	1.04	61	530
BIO-2L, BIOCIDE	0.30	1.00	4	33
NE/S-1 NON EMULSIFIER/SURFACTANT	2.00	0.95	25	198
XLB-1, CROSSLINKER	1.50	1.35	16	186
B-1, BREAKER	2.00	2.55	25	25
B-4LE, ENZYME BREAKER	0.30	1.03	4	34.4
KCl-2SUB, KCl SUBSTITUTE	2.00	1.08	25	226
NORTHERN WHITE SAND	4,000.00	2.65	20,000	20,000
				Total Slurry Mass (Lbs)
				122,703

Name	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Total Component Mass in HF Fluid (lbs)	Maximum Ingredient Concentration in HF Fluid (% by mass)**
Water (Customer Supplied)	Water	7732-18-5	100.00%	101,475	82.70081%
NORTHERN WHITE SAND	Silica Quartz	14808-60-7	100.00%	20,000	16.29955%
WG-15LR, GUAR SLURRY	Solvent Naptha (pet.) heavy aliphatic	64742-47-8	60.00%	318	0.25937%
	Guar Gum	9000-30-0	50.00%	265	0.21614%
NE/S-1 NON EMULSIFIER/SURFACTANT	Methanol	67-56-1	30.00%	60	0.04891%
KCl-2SUB, KCl SUBSTITUTE	Choline Chloride	67-48-1	70.00%	158.0	0.12878%
	Water	7732-18-5	30.00%	67.7	0.05519%
XLB-1, CROSSLINKER	Water	7732-18-5	60.00%	108.3	0.08831%
	Potassium Hydroxide	1310-58-3	30.00%	54.1	0.04407%
	Boric Acid	10043-35-3	30.00%	54.1	0.04407%
B-1, BREAKER	Ammonium persulfate	7727-54-0	100.00%	25.0	0.02037%
B-4LE, ENZYME BREAKER	Water	7732-18-5	90.00%	30.9	0.02522%
	Sodium Chloride	7647-14-5	15.00%	5.1	0.00420%
	Mannanase Enzymes	37288-54-3	2.00%	0.7	0.00056%
BIO-2L, BIOCIDE	Tetrakis(hydroxymethyl) Phosphonium Sulfate	55566-30-8	20.00%	6.7	0.00545%
	Water	7732-18-5	80.00%	26.7	0.02176%

100.00%

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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 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.