

Submit In Quadruplicate To:

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

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**FEB 16 2018**

**SUNDRY NOTICES AND REPORT OF WELLS**

MONTANA BOARD OF OIL & GAS CONSERVATION • BILLINGS

Operator <b>Denbury Onshore, LLC</b>		Lease Name: <b>Unit</b>
Address <b>5320 Legacy Drive</b>		Type (Private/State/Federal/Tribal/Allotted): <b>Fee</b>
City <b>Plano</b> State <b>TX</b> Zip Code <b>75024</b>	Well Number: <b>27-07</b>	
Telephone <b>972-673-2000</b> Fax	Unit Agreement Name: <b>BCCMU</b>	
Location of well (1/4-1/4 section and footage measurements): <b>SWNE Sec. 27, 1980' FNL &amp; 1980' FEL</b>		Field Name or Wildcat: <b>Bell Creek</b>
API Number: <b>25   075   21020</b>		Township, Range, and Section: <b>T8S-R54E, Sec. 27</b>
State County Well	Well Type (oil, gas, injection, other): <b>Oil</b>	County: <b>Powder River</b>

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) <u>Fracture Stimulate</u>	<input checked="" 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.

**Denbury requests approval to fracture stimulate the subject well. Please see attached procedure and wellbore diagram for additional information. A treatment report has been included in the procedure along with the necessary CAS numbers. Sage Grouse notification has been submitted.**

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

02/15/2018

Date

*Naomi Johnson*  
Signed (Agent)

Naomi Johnson - Regulatory Compliance Specialist

Print Name and Title

Telephone: 972-673-2000

**BOARD USE ONLY**

Approved

**FEB 21 2018**

Date

*[Signature]* **Petroleum Engineer**  
Name Title

**SUPPLEMENTAL INFORMATION**

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

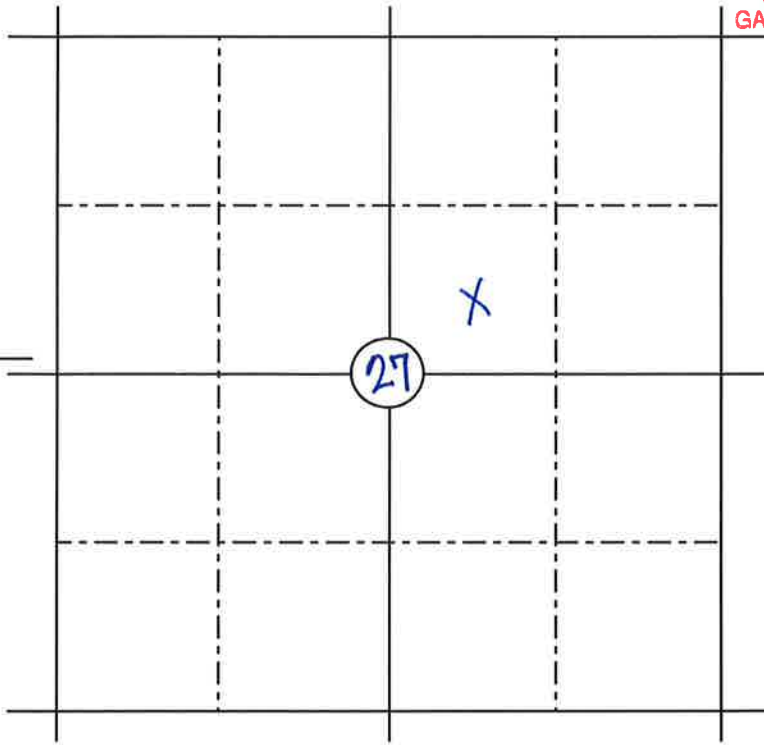
Plot the location of the well or site that is the subject of this notice or report.

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Range 54E

Township 8S



**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.

**07521020**

**PROCEDURE To Stimulate Well**

**Bell Creek Unit 27-07**

1980 FNL 1980 FEL, Sec 27 – T8S - R54E  
API # 25075210200000

Powder River County, MONTANA  
This is a FEE well

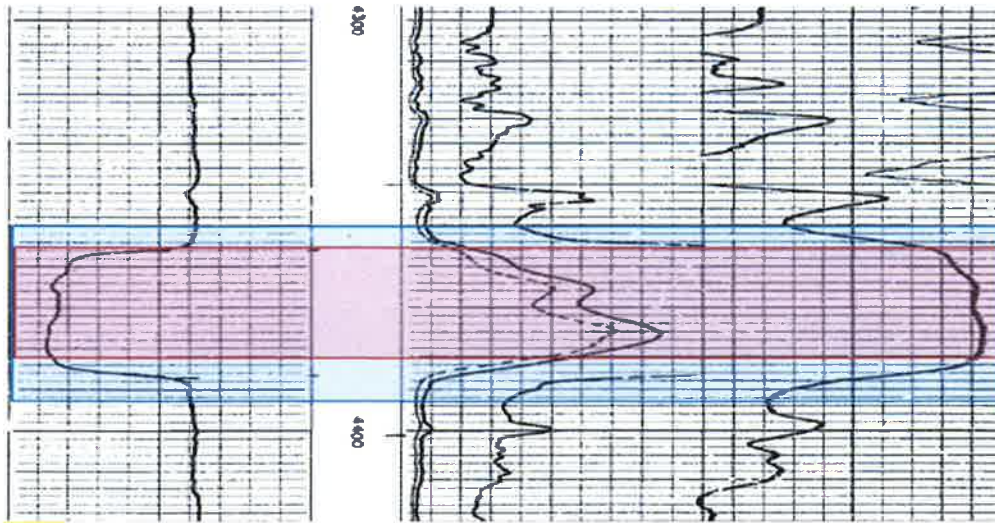
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**OBJECTIVE OF OPERATION:**

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



Notes about this well

1. 6/7/2017 Tested 2000psi w/ 8.34ppg fluid. Tested 1500psi after packer set with 10ppg.
2. 6/7/2017 40' of ratehole made. No significant fill that was cleaned out. Tubing tested 2500psi.
3. 6/7/2017 ran stacked log on the well. CBL/CCL/ODT/Caliper.
4. 1989 TA – held 1000psi. circulated 4371' w/o swivel.
5. 1980 Prior set packer at 4204 with 4385' tag.
6. 1967 Drilled & Completed. Ran CBL and perf'd 4355-4382'.

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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 with procedure moving forward.
5. MIRU SL. PU PX plug. RIH & set in XN nipple below the packer. TOOH. RDMO SL.
6. Bleed off pressure and ensure tubing & casing are dead.
7. Install BPV. RD tree to adaptor flange. RU 2 10K 3" Plug Valve & TIW.
8. Retrieve BPV. MIRU Tubing Testers. PT tubing as directed below. RDMO tubing testers.
  - 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 with procedure moving forward.
  - b. Bleed off casing to 0psi and **tubing to SI pressure when prong was set.**
9. MIRU SL. RIH and retrieve prong & PX plug.
10. PU BHP gauges. RIH and take BHP mid-perf. POOH. RDMO SL.
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 Hot-oiler. Roll tank to 80-100degF (depending on the Weather). RDMO Hot-oiler.
14. MIRU Frac Company & Equipment. (Estimated 4-8 hr job -22 minutes to 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
<b>WG-1SLR, Slurried Guar Gel</b>	<b>gal</b>	5	5	61
<b>NE-1, Non Emulsifier (Nonionic)</b>	<b>gal</b>	2	2	25
<b>BIO-2L, Liquid Biocide (THPS)</b>	<b>gal</b>	0	0.2	3
<b>Buffer-4L, High pH (sodium hydroxide)</b>	<b>gal</b>	0	0.1	2
<b>XLB-1, Self Buffered Borate Crosslinker</b>	<b>gal</b>	0	1.5	16
<b>B-4LE, High pH/Low Temp. &lt;140°F Enzyme Break</b>	<b>gal</b>	0	0.3	4
<b>B-1, Oxidizer Breaker (AP)</b>	<b>gal</b>	1	1	13
<b>KCL-2Sub, KCl Substitute (anionic product toleran</b>	<b>gal</b>	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.**
16. Perform breaker test with Biddle water from tank/X-linker & Breaker prior to job.

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- a. Record, time/strength Xlinked, any visible residuals, and ensure fluid breaks prior to pumping.
- 17. Establish 8-10bpm injection rate with 20# gel for 30 bbls. Record ISIP.
  - a. Note friction pressure of 20# gel.
- 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.
  - b. Subject to additional pumping depending on pressures.
  - c. Prior to Flush - Drop tub level and bypass tub @4ppg CONCENTRATION
  - d. Call flush based on densometer. 3.5 or greater if decide higher concentration.
    - i. Talk to Frac company about bypassing or dropping tub level prior to flush.
  - e. End flush 1bbl prior to perforations. **Do NOT over flush. (BH concentration 4ppg).**

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	24.5	24.5	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. Start 9ck. Maximum 1bpm. Expect sand bottoms up. Monitor sand returns for following 40 bbls. (fill 5 gal bucket 8 seconds)
  - b. Flowback 110% volume pumped. Do NOT flow back greater than 2BPM.
- 22. MIRU slickline. RIH w/ 1-1/4" bailer and tag TD. Record depth. TOO H.
  - 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. TOO H. RD SL. Bleed tubing 0psi.
- 24. Install BPV. RD both 3" Plug Valves. NU Wellhead. Test. Remove BPV.
- 25. MIRU 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. TOO H. RDMO SL.
- 27. MIRU CTU if tagged high. Clean out to PBTD. RDMO CTU.
- 28. Release to operations.

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**07521020**

**Bell Creek Unit #A 27-07 CO2**

Value:

Surface Legal Location: 1980 FNL & 1980 FEL SWNE

Fault Block:

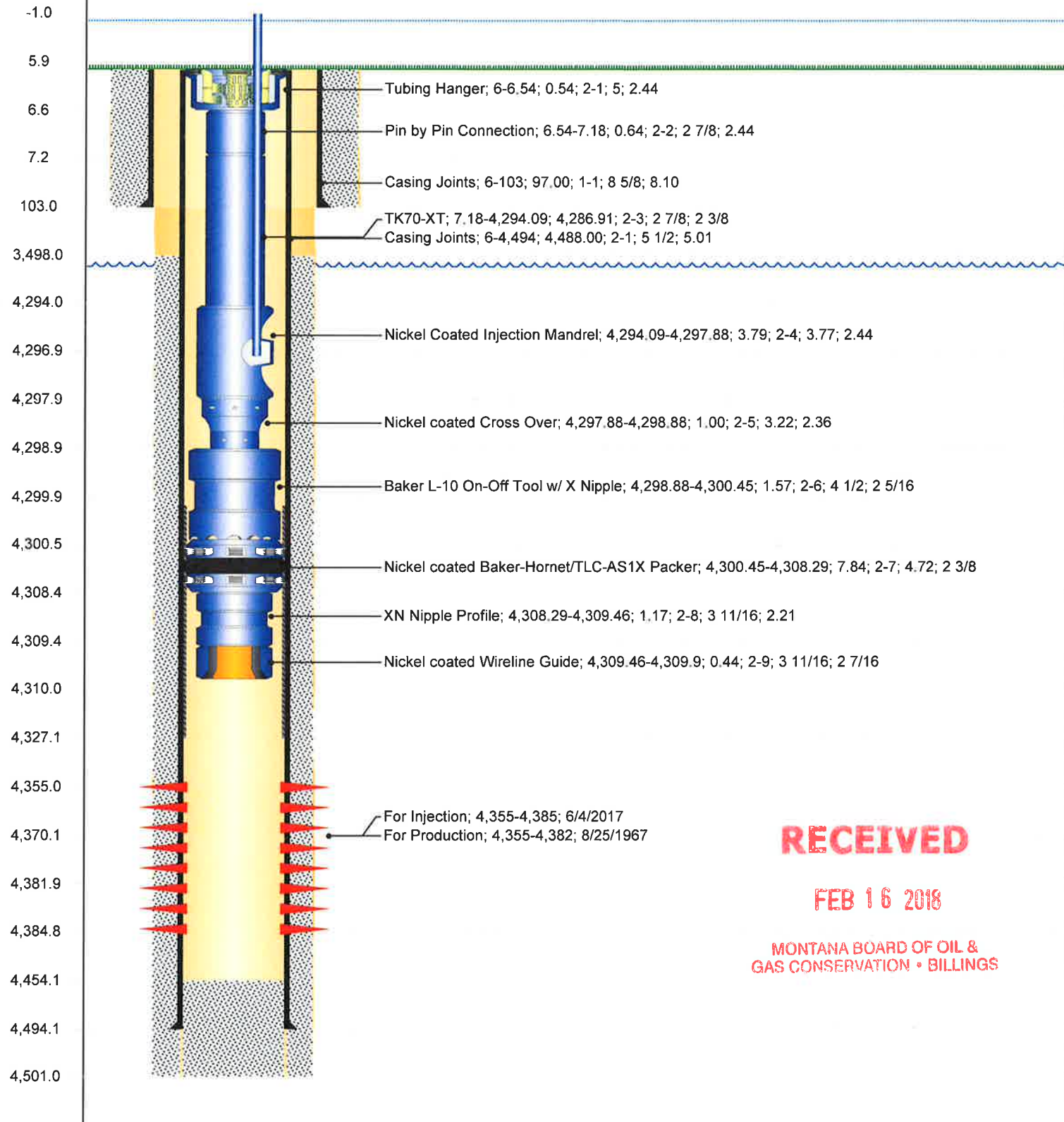
Sect 27	Tw 008	Rng S	Rn 54	E	API/UMI 25075210200000	Slate ID#	Well Status A - Active	Well Configuration Type	Assoc.TB/TestSite	Latitude 45° 6' 52.457" N	Longitude 105° 5' 12.638" W
Field Name Bell Creek CO2		Gr Elev (ft) 3,688.00		Orig KB Elev (ft) 3,694.00	KB-Grd (%) 6.00	Total Depth (All) (ftKB) Original Hole - 4,501.0		Total Depth All (TVD) (ftKB)		PBD (All) (ftKB)	
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: 4,501.00

Original Hole, 2/15/2018 9:26:55 AM

MD (ftKB)

Vertical schematic (actual)

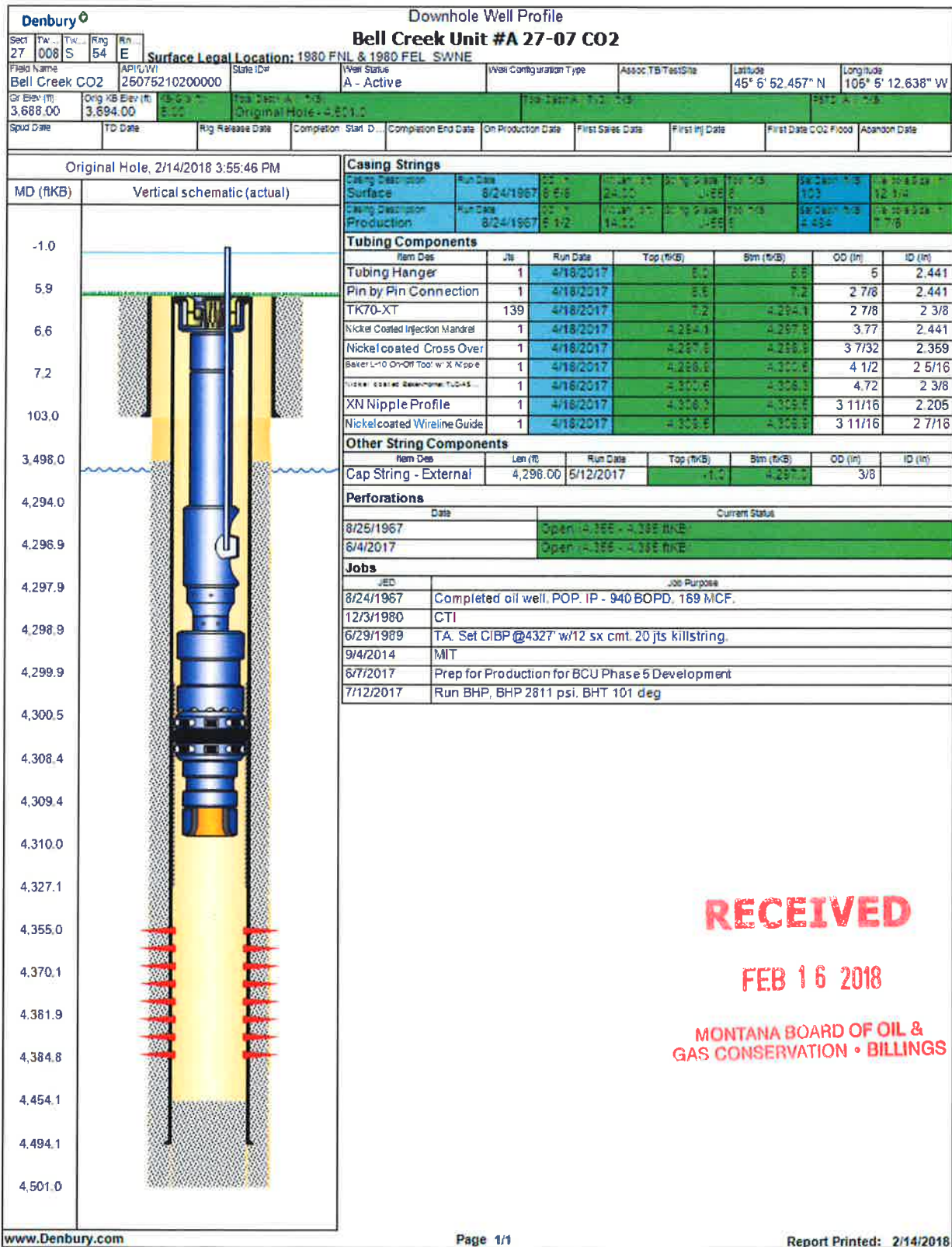


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Proposed Schematic (SAME as CURRENT)



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PRESSURE PUMPING LLC

# Denbury Onshore LLC

## Bell Creek

**Broadus, MT**  
**BCU Vertical Fracs**  
**Sand Frac**  
**Per Well, 2 Wells/day**

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**Prepared for : Mr. Charlie Hagan**  
**Denbury Onshore LLC**  
**972-673-2172**  
**charlie.hagan@denbury.com**

**Prepared by: Rick Boyce**  
**QES PRESSURE PUMPING LLC**  
**(307) 388-4331**

**February 8, 2018**

**Service Point: Gillette, WY: (307) 686-4914**

**Account Manager: Rick Boyce**  
**(307) 388-4331**

**DISCLAIMER NOTICE**

This technical data is presented in good faith and QES Pressure Pumping LLC assumes no liability for recommendations or advice made concerning results to be obtained from the use of any products or service. The prices quoted are only estimates and may vary depending on equipment, materials used, hours and the work actually performed. Pricing does not include federal, state & local taxes that may apply. This quotation will remain in effect for 45 days from the date on proposal unless otherwise stated.

Writer Version 3.5!

Cover

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 Bell Creek  
 BCU Vertical Fracs  
 Broadus, MT  
 8-Feb-18



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**JOB DATA**

Purpose Of Treatment: Enhance Production  
 Job Type: Sand Frac  
 Treating Conductor:  
 Est. Average Pump Rate (bpm): 10  
 Est. Average Treating PSI:  
 Max. Pressure (psi):

Fluid Requirements:	Fluid Description	Volume	U.O.M.
	20# Linear	1,910	Gallons
	20# Xlink	10,250	Gallons

Proppant/Divert Requirements:	Proppant/Divert Description	Volume	U.O.M.
	16/30 Northern White Sand	20,000	lb

Well/Job Data:	Well/Job Data Description

**Information/Directions/Comments:**  
 QES Pressure Pumping LLC may incorporate the daily use of Knight Fire Suppression Systems (Fire Suppressant System/Certified Firefighter/EMT Personnel) on all fracturing jobs for the safety of "ALL" personnel & equipment on the well site during the pressure pumping operation.

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**FLUID DESCRIPTION**

Fluid 1: 20# Linear  
 Fluid 2: 20# Xlink

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MATERIAL'S	U.O.M.	LOADING PER/1000 GALLONS									Totals
		Fluid 1 1.00	Fluid 2 10.350	Fluid 3	Fluid 4	Fluid 5	Fluid 6	Fluid 7	Fluid 8	Fluid 9	
WG-1SLR, Slurried Guar Gel	gal	5.00	5.00								61
NE-1, Non Emulsifier (Nonionic)	gal	2.00	2.00								25
BIO-2L, Liquid Biocide (THPS)	gal	0.20	0.20								3
Buffer-4L, High pH (sodium hydroxide)	gal		0.10								2
XLB-1, Self Buffered Borate Crosslinker	gal		1.50								16
B-4LE, High pH/Low Temp. <140°F Enzyme Breaker	gal		0.30								4
B-1, Oxidizer Breaker (AP)	lb	1.00	1.00								13
KCL-2Sub, KCl Substitute (anionic product tolerant)	gal	2.00	2.00								25
											0
											0
											0
											0
											0
											0
											0
											0
											0
<b>Fluid and Storage Requirements:</b>											





PRESSURE PUMPING LLC

CAS INFORMATION:

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Additive	Max Loading* 1000 Gal	Specific Gravity	Additive Quantity	Mass (lbs)
WATER (Customer Supplied)	1,000.00	1.00	12,160	101,475
WG-ISLR, GUAR SLURRY	5.00	1.04	61	530
NE-1, NON EMULSIFIER	0.50	0.95	25	198
BIO-2L, BIOCID	0.20	1.00	1	25
BUFFER -4L	1.00	1.22	1	20
XLB-1, CROSSLINKER	1.00	1.36	16	181
B-4LE, ENZYME BREAKER	2.00	1.03	4	34
B-1, BREAKER	1.00	2.55	13	13
KCl-2SUB, KCl SUBSTITUTE	0.50	1.08	25	226
NORTHERN WHITE SAND	4.00	2.65	20,000	20,000
				<b>Total Slurry Mass (Lbs)</b>
				<b>122,704</b>

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	82.69918%
NORTHERN WHITE SAND	Silica Quartz	14808-60-7	100.00%	20,000	16.29939%
WG-ISLR, 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-1, NON EMULSIFIER	Methanol	67-56-1	30.00%	60	0.04851%
KCl-2SUB, KCl SUBSTITUTE	Choline Chloride	67-48-1	70.00%	158	0.12878%
	Water	7732-18-5	30.00%	68	0.05519%
BUFFER -4L	Sodium Hydroxide	1310-73-2	30.00%	6	0.00498%
	Water	7732-18-5	70.00%	14	0.01162%
XLB-1, CROSSLINKER	Sodium Tetraborate Decahydrate	1303-96-4	30.00%	54	0.04436%
	Alkyl Alcohol C10-C16	67762-41-8	30.00%	54	0.04436%
	Sodium Hydroxide	1310-73-2	30.00%	54	0.04436%
B-1, BREAKER	Ammonium persulfate	7727-54-0	100.00%	13	0.01059%
	Water	7732-18-5	90.00%	31	0.02522%
B-4LE, ENZYME BREAKER	Sodium Chloride	7647-14-5	15.00%	5	0.00420%
	Mannanase Enzymes	37288-54-3	2.00%	1	0.00056%
BIO-2L, BIOCID	Tetrakis(hydroxymethyl) Phosphonium Sulfate	55566-30-8	20.00%	5	0.00408%
	Water	7732-18-5	80.00%	20	0.01632%

100.00%

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## PRODUCT DESCRIPTION

### WG-1SLR, Slurried Guar Gel

FC5451  
**General Information** WG-1SLR, Slurried Guar Gel is a preslurried form of a high-yield guar gum for preparing fracturing fluids. It provides exceptionally fast, "fisheye"-free hydration even in cold water.

**Uses & Applications** WG-1SLR, Slurried Guar Gel can be used wherever conventional guar is used. The slurry is 4 pounds of guar per gallon of slurry. The rapid hydration allows "on the fly" mixing with fairly low-volume hydration tank in line to the blender.

**Density in Sp.Gr.** 1.019

**Specs** Tan/yellowish slurry liquid-Water soluble

### NE-1, Non Emulsifier (Nonionic)

FC5575  
**General Information** NE-1 is a highly effective inexpensive nonionic nonemulsifier for oilfield acid and fracs.

**Uses & Applications** NE-1 typically is used at 1 to 4 gpt.

**Density in Sp.Gr.** 0.898

**Specs** Pale yellow liquid-Water soluble

### BIO-2L, Liquid Biocide (THPS)

FC5281  
**General Information** BIO-2L, Liquid is a liquid biocide based on Tetrakis (Hydroxymethyl) Phosphonium Sulfate (THPS), for use in oilfield water applications such as fracturing fluids. Used as directed, it is a highly effective and economical in controlling most sulfate-reducing and acid-producing bacteria as well as algae and fungi. Biocide, Liquid penetrates biofilms and works synergistically with chlorine- and bromine- based biocides.

**Uses & Applications** BIO-2L, Liquid is best added to frac or flush water as water is transferred. Loadings as low as .1 gpt have been shown to be effective in relatively clean water. Dosages as high as 1 gpt may be required in badly contaminated waters.

**Density in Sp.Gr.** 0.95

**Specs** Clear colorless liquid-Water soluble

### Buffer-4L, High pH (sodium hydroxide)

FC5528  
**General Information** Buffer-4L, liquid caustic is used in water base fluid to increase the pH.

**Uses & Applications** Buffer-4L, liquid caustic are used as increase pH in cleanup and stimulation fluids when required.

**Density in Sp.Gr.** 1.53

**Specs** Clear liquid-Water soluble

### XLB-1, Self Buffered Borate Crosslinker

FC5500  
**General Information** XLB-1 is a self buffering, highly concentrated borate crosslinker for fracturing fluids. It requires no pH control additive.

**Uses & Applications** Normal loadings for XLB-1 range from .6 to 1.4 gpt when used in 30 to 35 ppt guar based gel. Higher loadings may be needed in cold weather or with "on the fly" liquid gelling agents where incomplete hydration of the guar may be occurring. It can be broken with oxidizing breakers or high pH enzyme breakers.

**Density in Sp.Gr.** 1.303

**Specs** Clear colorless liquid-Water soluble

### B-4LE, High pH/Low Temp. <140°F Enzyme Breaker

FC5478  
**General Information** B-4L is a liquid enzyme breaker designed specifically for borate crosslinked fluid with pH of up to 10.

**Uses & Applications** B-4L is typically loaded at .2 to 2 gpt. B-4L has a shelf life of 90 days.

**Density in Sp.Gr.** 1.12

**Specs** Light brown liquid-Water soluble

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## PRODUCT DESCRIPTION

### B-1, Oxidizer Breaker (AP)

FC5475

**General Information** B-1, APS is an oxidative breaker for fracturing fluids at low to moderate temperatures.

**Uses & Applications** B-1, APS is typically used in fracturing treatments at loadings of .2 to 2 ppt of fluid. Fluid temperatures most appropriate for Ammonium persulfate are from around 80° F to 190° F.

**Density in Sp.Gr.** 1.98

**Specs** White granules-Water soluble

### KCL-2Sub, KCl Substitute (anionic product tolerant)

FC5301

**General Information** KCL-2Sub is a slightly cationic highly concentrated liquid potassium chloride substitute for oilfield use. Unlike many other KCl substitutes, KCL Substitute is very low in toxicity and contains no surfactants. KCL-2Sub is a 70% Choline Chloride base clay protection product. KCL-2Sub can be used with an Anionic Friction Reducer with little to no effect on the efficiency of the anionic friction reducer.

**Uses & Applications** KCL-2Sub can be used in any application where the stabilization of formation clays are required. KCL Substitute typical loadings of .5 to 1 gpt will give the base fluid the equivalent clay stabilization of 2% dry potassium chloride in most formations.

**Density in Sp.Gr.** 1.13

**Specs** Clear liquid-Water soluble

**General Information**

**Uses & Applications**  
**Density in Sp.Gr.**

**Specs**

**General Information**

**Uses & Applications**  
**Density in Sp.Gr.**

**Specs**

**General Information**

**Uses & Applications**  
**Density in Sp.Gr.**

**Specs**

**General Information**

**Uses & Applications**  
**Density in Sp.Gr.**

**Specs**

MONTANA SAGE GROUSE  
HABITAT CONSERVATION PROGRAM



STEVE BULLOCK, GOVERNOR

1539 ELEVENTH AVENUE

STATE OF MONTANA

PHONE: (406) 444-0554  
FAX: (406) 444-6721

PO BOX 201601  
HELENA, MONTANA 59620-1601

Project 2813  
Governor's Executive Orders 12-2015 and 21-2015  
2813\_BCU 27-07 - Fracture Stimulate  
API# 25-075-21020

Naomi Johnson  
5320 Legacy Drive  
Plano, TX, 75024

February 20, 2018

Dear Ms. Johnson,

The Montana Sage Grouse Habitat Conservation Program received a request for consultation and review of your project or proposed activity on February 15, 2018. Based on the information provided, all or a portion of this project is located within General Habitat for sage grouse.

Executive Orders 12-2015 and 21-2015 set forth Montana's Sage Grouse Conservation Strategy. Montana's goal is to maintain viable sage grouse populations and conserve habitat so that Montana maintains flexibility to manage our own lands, our wildlife, and our economy and a listing under the federal Endangered Species Act is not warranted in the future.

The program has completed its review, including:

**Project Description:**

**Project Type:** Energy - Oil/Gas

**Project Disturbance:** 0.2 Acres

**Construction Timeframes:** February, 2018 to February, 2018, Temporary (< 1 Year)

**Disturbance Timeframes:** February, 2018 to February, 2018, Temporary (< 1 Year)

**Project Location:**

**Legal:** Township 8 South, Range 54 East, Section 27

**County:** Powder River

**Ownership:** Private

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GAS CONSERVATION • BILLING



Hosted by the Montana Department of Natural Resources and Conservation  
Director's Office: (406) 444-2074



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**Executive Orders 12-2015 and 21-2015 Consistency:**

The project proposes to conduct well work in designated General Habitat for sage grouse.

Denbury Inc. will be using a workover rig to perform well work on an existing well with an existing wellsite. There will be no new ground disturbance. Well work will only take a few days to complete. Based on the information you provided, your project is not within two miles of an active sage grouse lek.

**Recommendations:**

- These stipulations are designed to maintain existing levels of suitable sage grouse habitat by managing uses and activities in sage grouse habitat to ensure the maintenance of sage grouse abundance and distribution in Montana. Development should be designed and managed to maintain populations and sage grouse habitats.
  - Weed management is required within General Habitat for sage grouse. Reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicus*).

Your activities are consistent with the Montana Sage Grouse Conservation Strategy. Your proposed project or activity may need to obtain additional permits or authorization from other Montana state agencies or possibly federal agencies. They are very likely to request a copy of this consultation letter, so please retain it for your records.

Please be aware that if the location or boundaries of your proposed project or activity change in the future, or if new activities are proposed within one of the designated sage grouse habitat areas, please visit <http://www.mt.gov/projects/> and submit the new information.

Thanks for your interest in sage grouse and your commitment to taking the steps necessary to ensure Montana's Sage Grouse Conservation Strategy is successful.

Sincerely,



Carolyn S. Smith

Montana Sage Grouse Habitat Conservation Program Manager





## 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.