

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

JAN 29 2020

Submit In Quadruplicate To:

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

MONTANA BOARD OF OIL &  
GAS CONSERVATION • BILLINGS

**SUNDRY NOTICES AND REPORT OF WELLS**

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>26-11</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>NE-SW Sec. 26, 1980' FSL &amp; 1980' FWL</b>		Field Name or Wildcat: <b>Bell Creek</b>
API Number: <b>25   075   21229</b>		Township, Range, and Section: <b>T8S-R54E, Sec. 26</b>
State County Well	Well Type (oil, gas, injection, other): <b>Injection</b>	County: <b>Powder River</b>

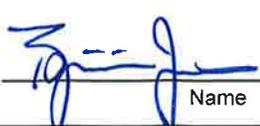
Indicate below with an X the nature of this notice, report, or other data:

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 schedule has been included from the service company along with the necessary CAS numbers.**

BOARD USE ONLY	
Approved <u>JAN 30 2020</u>	Date
	Name
<u>Petroleum Engineer</u>	Title

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

<u>01/28/2020</u>	Date
	Signed (Agent)
<u>Naomi Johnson - Regulatory Compliance Specialist</u>	
Print Name and Title	
Telephone: <u>972-673-2000</u>	

**SUPPLEMENTAL INFORMATION**

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

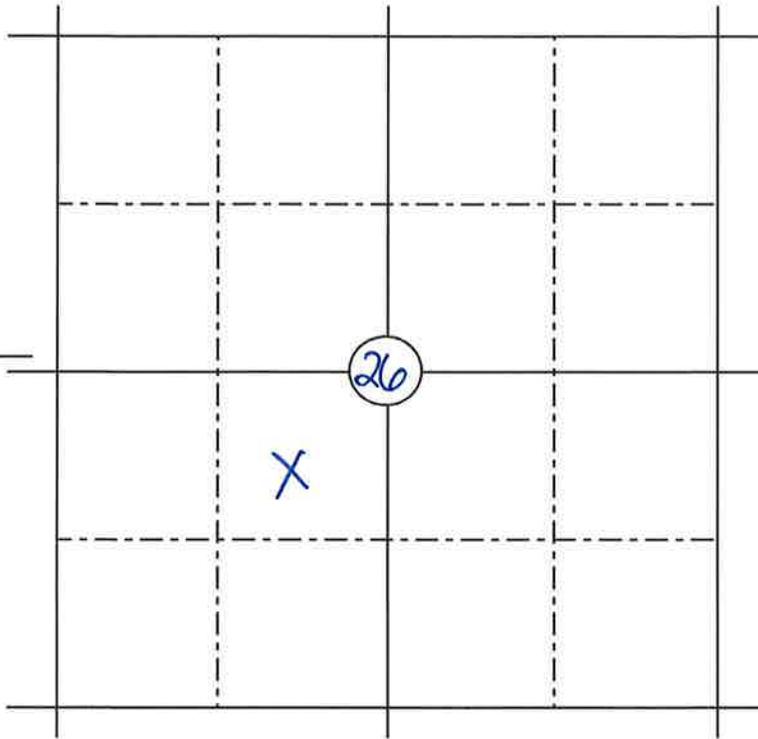
**JAN 29 2020**

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

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

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.

**07521229**



**PROCEDURE to Stimulate Well**

**Bell Creek Unit 26-11**

Well Status: Active Injector

Sec 26 – T8S - R54E

API # 25075212290000

Lat: 45°6'40.433"N

Long: 105°4'19.55"W

Powder River County, MONTANA

This is a fee well

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**OBJECTIVE OF OPERATION:**

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

**07521229**

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 Opsi 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 400bbbls 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.

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MONTANA BOARD OF OIL & GAS CONSERVATION - BILLINGS

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

\*\*preliminary design - final job volumes to be submitted in post job report\*\*

- 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.**

07521229

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	-	30	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

\*\*preliminary design - final job volumes to be submitted in post job report\*\*

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 sufficient 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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07521229

Current/Proposed Schematic

MONTANA BOARD OF OIL & GAS CONSERVATION • BILLINGS

Denbury		Downhole Well Profile																																																																																																																																																																																																
Sect: 26	Town: 008	Range: S	Block: 64	Eng: E	<b>Bell Creek Unit #A 26-11 WIW</b>						Surface Legal Location: 1980 FSL & 1980 FWL NESW																																																																																																																																																																																							
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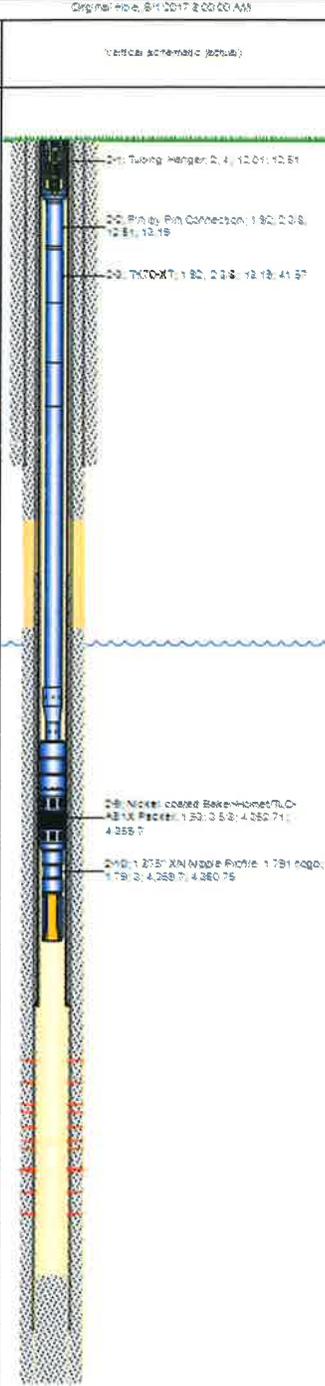
**Tbg - Perfs**

**Bell Creek Unit #A 26-11 WIW**

Surface Legal Location: 1980 FSL & 1980 FWL NESW

Sect: 26	Twp: 008 S	Range: 54 E	Sec: 15	State ID#	Well Status: A - Active	Well Configuration Type	Assoc TBTestSite	Latitude: 45° 6' 40.433" N	Longitude: 105° 4' 19.55" W
Well Name: Bell Creek		API/UVI: 25075212290000	Original Hole: 4-590-0	Original Hole: 4-590-0	Original Hole: 4-590-0	Original Hole: 4-590-0	Original Hole: 4-590-0	Original Hole: 4-590-0	Original Hole: 4-590-0
Gr Elev (ft): 3,809.00	Orig HS Elev (ft): 3,821.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Spud Date	TD Date	Rig Release Date	Completion Start Date	Completion End Date	On Production Date	First Sales Date	First Inj Date	First Date CO2 Flood	Abandon Date

Original Hole: 8/11/2017 2:00:00 AM



Vertical schematic (depth)

2- Tubing Hanger: 2, 4, 12.01, 12.81

2- Pinkey Pin Connection: 1.80, 2.08, 12.81, 12.18

2- TK70XT: 1.80, 2.08, 12.18, 41.57

2- Nickel coated Baker-Homes/TLO-48 1X Packer: 1.20, 3.5/8, 4.252 71, 4.255 7

2- 1.215" XN Nipple Packer: 1.781 140.0, 1.781 2, 4.258 7, 4.260 75

Tubing Description		Set Depth (ftB)	Run Date	Perf Date						
Tubing - Production		4,361.4	6/1/2017							
JB	Item Desc	Com	OD (in)	ID (in)	WT (lb/ft)	Grade	Top Thread	Len (ft)	Cond Run	Top (ftCB)
1	Tubing Hanger		4	2				0.50		12.5
	Pinkey Pin Connection		2 3/8	1.921				0.68		12.8
	TK70-XT		2 3/8	1.921	4.70	J-55		28.38		13.3
1	TK70XT pup j		2 3/8	1.921	4.70	J-55		7.72		41.8
	TK70XT pup j		2 3/8	1.921	4.70	J-55		0.60		45.3
152	TK70-XT		2 3/8	1.921	6.50	J-55	TTS8-CI	4,300.10		60.1
1	Nickel coated Baker-		2 11/16	1 15/16				1.01		4,350.2
1	Baker-Homes/TLO-48 1X		3 3/4	1 7/8		chrome		1.51		4,351.2
1	Nickel coated Baker-		3 5/8	1.93				8.99		4,352.7
1	1.215" XN Nipple Packer		3	1.791				1.05		4,353.7
1	Nickel coated Baker-		3	2				0.66		4,350.8

Perforation Statuses				
Date	Top (ftCB)	Bot (ftCB)	Status	Linked Zone
1/9/1968	4,434	4,448	Open	
5/23/2017	4,432	4,450	Open	



PRESSURE PUMPING LLC

CAS INFORMATION:

Additive	Max Loading/1000 Gal.	Specific Gravity	Additive Quantity	Mass (lbs)
Water (Customer Supplied)	1,000.00	1.00	13,160	131,475
WG-1SLR GUAR SLURRY	5.00	1.04	41	530
BIO-2L BIOCIDE	0.30	1.00	4	39
NE S-1 NON EMULSIFIER SURFACTANT	2.00	0.95	16	199
NLB-1 CROSSLINKER	1.50	1.35	16	160
B-1 BREAKER	2.00	1.55	16	25
B-4LE ENZYME BREAKER	0.30	1.03	4	34.4
KCl-2SUB. KCl SUBSTITUTE	2.00	1.68	16	116
NORTHERN WHITE SAND	4,000.00	1.65	20,000	78,000

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%	131,475	82.70001%
NORTHERN WHITE SAND	Silica Quartz	14808-60-7	100.00%	20,000	16.29933%
WG-1SLR GUAR SLURRY	Solvent Naphtha (pet.) heavy aliphatic Guar Gum	64742-47-8 9003-50-0	60.00% 50.00%	318 263	0.23937% 0.21614%
NE S-1 NON EMULSIFIER SURFACTANT	Methanol	67-58-1	30.00%	69	0.04821%
KCl-2SUB. KCl SUBSTITUTE	Choline Chloride	67-48-1	70.00%	118.0	0.12878%
NLB-1 CROSSLINKER	Water	7732-18-5	30.00%	67.7	0.05319%
	Potassium Hydroxide	1310-58-3	30.00%	168.2	0.08814%
B-1 BREAKER	Formic Acid	10043-35-3	30.00%	54.1	0.04407%
	Ammonium persulfate	7727-54-0	100.00%	25.0	0.02037%
B-4LE ENZYME BREAKER	Water	7732-18-5	40.00%	38.9	0.02522%
	Sodium Chloride	7647-14-5	15.00%	5.2	0.00420%
BIO-2L BIOCIDE	Nonoxone Enzymes	37288-54-3	2.00%	0.7	0.00566%
	Tetrakis(hydroxymethyl) Phosphonium Sulfate	55566-30-8	20.00%	6.7	0.00544%
	Water	7732-18-5	80.00%	26.7	0.02176%

100.00%