FORM NO. 2 R 10/09

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

Submit In Quadruplicate To:

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

RECEIVED
MAY 23 2018
MONTANA BOARD OF OIL & GAS CONSERVATION • BILLINGS

SUNDRY NOTICES AND REPORT OF WELLS

Operator **Denbury Onshore, LLC**

Address **5320 Legacy Drive**

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

Telephone Number **(972) 673-2000** Fax Number ( )

Location of Well (1/4-1/4 section and footage measurements):
NW-NW Sec 8 , 660' FNL & 660' FWL, T9S-R54E

If directionally or horizontally drilled, show both surface and bottom hole locations)

API Number:
25 075 21417
State County Well

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

Lease Name: **Unit**

Lease Type (Private/State/Federal): **Federal**

Well Number: **BCCMU 804**

Unit Agreement Name: **BCCMU**

Field Name or Wildcat: **Bell Creek**

Section, Township, and Range: **8, T9S, R54E**

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 Chemical 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. Treatment report and CAS numbers have been included in the procedure. Sage Grouse notification has been submitted.

BOARD USE ONLY

Approved MAY 23 2018
Date

Accepted for record purposes only

BJ
Name Title

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

5/21/2018
Date

Signed (Agent)

Naomi Johnson - Regulatory Compliance Specialist
Print Name & Title

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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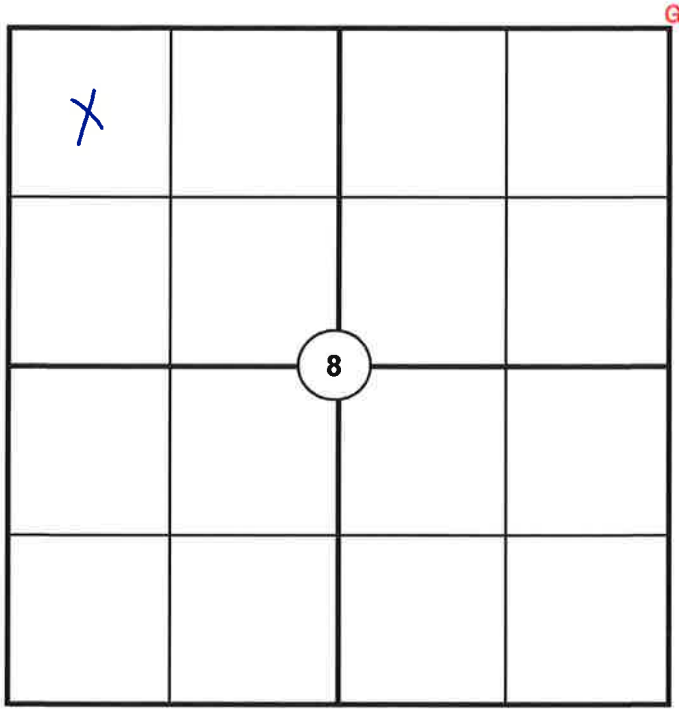
Range **54E**

Township **9S**



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.

07521417

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PROCEDURE To Stimulate Well

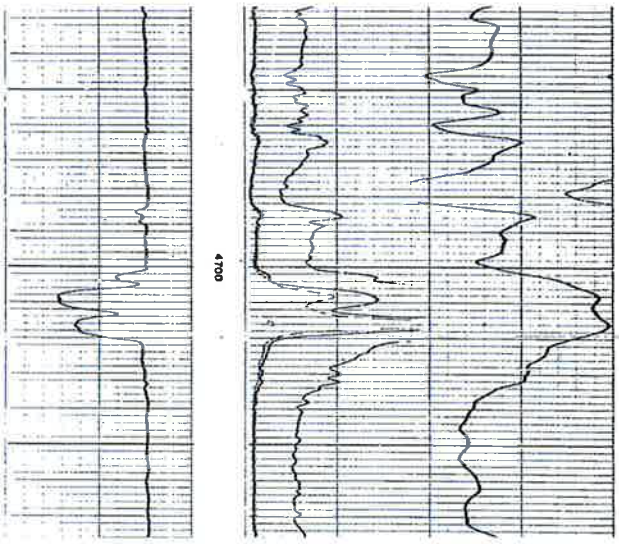
Bell Creek Unit 08-04

Sec 8 – T9S - R54E
API # 25075214170000

Powder River County, MONTANA
This is a BLM well

OBJECTIVE OF OPERATION:

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



4/29/1968

Notes on well

1. Current. PT casing 1500psi. HELD.
2. 2015 coil tubing clean out to PBTD.
3. 2014. Ran production survey.
4. 2014. Ran PNL.
5. 2012. Converted well to CO2. PT casing.
6. 2007. RTP rod repair.
7. 1968. Frac'd during completion.

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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 Capstring Pulling Unit. POOH w/ 38" internal Capstring. RDMO Capstring Pulling Unit.
   a. Spool Capstring and place in yard for further inspection.
4. 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.
5. 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.
6. MIRU SL. PU PX plug. RIH & set in X nipple at the packer. TOOH. RDMO SL.
7. Bleed off pressure and ensure tubing & casing are dead.
8. Install BPV. ND WH. NU BOP. Test as per Denbury Standards. Remove BPV.
9. Install 2-3/8" to 2-7/8" Xover, 6ft 2-7/8" L-80 pup, 2-7/8 to 3" 1502 Xover, & 3" 1502 Plug Valve.
10. 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.**
11. MIRU SL. RIH and retrieve prong & PX plug.
12. PU BHP gauges. RIH and take BHP mid-perf. POOH. RDMO SL.
13. MIRU 400bbl upright tank. Ensure clean – use hot-oiler if necessary.
    a. Fill tank with 400bbls of BIDDLE water.
14. MI Flowback Tank and 1502 iron for Flowback/ Frac Operation Relief if necessary.
15. MIRU Hot-oiler. Roll tank to 80-100degF (depending on the Weather). RDMO Hot-oiler.
16. MIRU Frac Company & Equipment. (Estimated 4-8 hr job -22 minutes to pump time).
    a. Frac Company responsible for 22,000# 20/40 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).**
17. Close 3" Plug Valve. Install 3" Hydraulic valve &test to treating pressure prior to frac.

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a. **Hydraulic valve will be hooked up during frac to accumulator and serve as the remote controlled shut-in device AT THE WELL HEAD.**

18. Perform breaker test with Biddle water from tank/X-linker & Breaker prior to job.
    a. Record, time/strength Xlinked, any visible residuals, and ensure fluid breaks prior to pumping.
19. Establish 8-10bpm injection rate with 20# gel for 30 bbls. Record ISIP.
    a. Note friction pressure of 20# gel.
20. 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 (bpm)	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	15.91	15.91	2.5

21. Record the ISIP @5, 10, & 15 minutes after pumping.
22. RDMO Frac Company & Equipment.
    a. Send pump chart and other necessary data to the Plano office.
23. 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.
24. 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.
25. PU PX plug. RIH and set in X nipple above packer in SA. TOOH. RD SL. Bleed tubing 0psi.
26. Install BPV. RD BOP and associated equipment. NU Wellhead. Test. Remove BPV.
27. MIRU Clean Hot-oiler. Pressure up tubing to SI pressure when prong was set. RDMO Hot-oiler.
28. RU SL. RIH and retrieve PX plug in SA. TOOH. RDMO SL.
29. MIRU CTU if tagged high. Clean out to PBTD. RDMO CTU.
30. Release to operations.

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Currently Selected Schematic

Bell Creek Unit #D 08-04 CO2

Well Name History
Value: Bell Creek Unit #D 08-04
Fault Block:

Sect	Tw...	Tw...	Rng	Rn...
8	009	S	54	E

Surface Legal Location: Section 8 - T9S - R54E

Field Name	API/UWI	State ID#	Well Status	Well Configuration Type	Assoc. TB/TestSite	Latitude	Longitude
Bell Creek CO2	25075214170000		A - Active			45° 4' 30.332" N	105° 8' 14.285" W

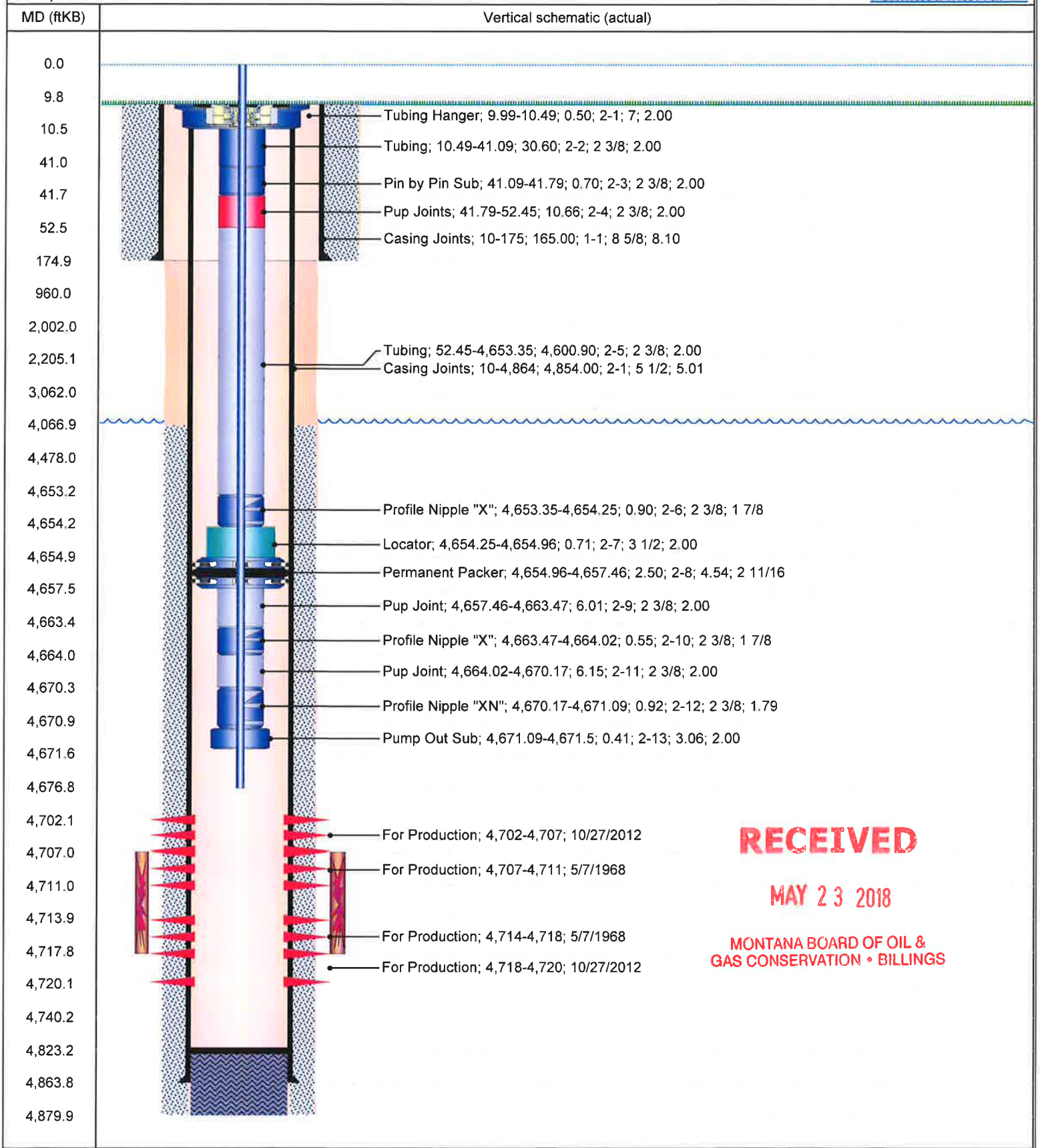
Gr Elev (ft)	Orig KB Elev (ft)	KB-Grd (ft)	Total Depth (All) (ftKB)	Total Depth All (TVD) (ftKB)	PBTD (All) (ftKB)
3,994.00	4,004.00	10.00	Original Hole - 4,880.0		Original Hole - 4,823.0

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
4/26/1968	4/29/1968		5/7/1968	5/19/1968	5/21/1968				

TD: 4,880.00

Original Hole, 5/21/2018 2:23:43 PM

Permitted Interval = -



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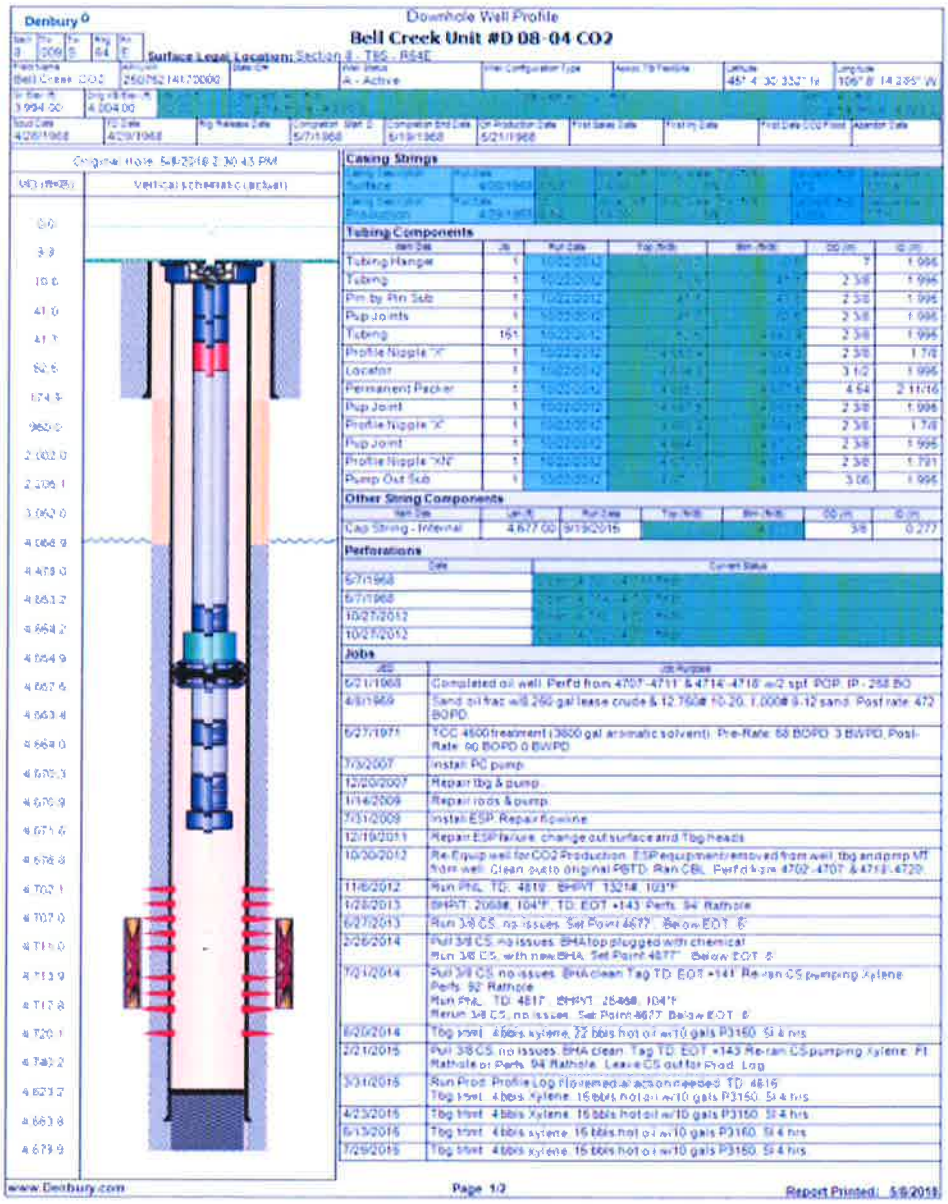
SAME (but without capstring).



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Downhole Well Profile

Bell Creek Unit #D 08-04 CO2

Surface Legal Location: Section 8 - T6S - R64E

Casing Strings

Tubing Components

Item Des	Jts	Top (ftKB)	Btm (ftKB)	OD (in)	ID (in)
Tubing Hanger	1			7	1.995
Tubing	1			2 3/8	1.995
Pin by Pin Sub	1			2 3/8	1.995
Pup Joints	1			2 3/8	1.995
Tubing	151			2 3/8	1.995
Profile Nipple 'X'	1			2 3/8	1.78
Locator	1			3 1/2	1.995
Permanent Packer	1			4.64	2 11/16
Pup Joint	1			2 3/8	1.995
Profile Nipple 'R'	1			2 3/8	1.78
Pup Joint	1			2 3/8	1.995
Profile Nipple 'XN'	1			2 3/8	1.791
Pump Out Sub	1			3.66	1.995

Other String Components

Item Des	Jts	Run Date	Top (ftKB)	Btm (ftKB)	OD (in)	ID (in)
Cap String - Interval	4,677.00	9/19/2015			3/8	0.277

Perforations

Date	Current Status
6/7/1968	
6/7/1968	
10/27/2012	
10/27/2012	

Jobs

JED	Job Purpose
6/21/1968	Completed oil well. Perf'd from 4707'-4711' & 4714'-4718' w/2 spf. POP. IP - 258 BO
6/5/1969	Sand oil frac w/8,250 gal lease crude & 12,750# 10-20, 1,000# 8-12 sand. Post rate: 472 BOPD.
6/27/1971	TCC 4500 treatment (3600 gal aromatic solvent). Pre-Rate: 68 BOPD, 3 BWPD. Post-Rate: 90 BOPD, 0 BWPD.
7/3/2007	Install PC pump.
12/20/2007	Repair tbg & pump.
1/14/2009	Repair rods & pump.
7/31/2009	Install ESP. Repair flowline.
12/19/2011	Repair ESP failure, change out surface and Tbg heads.
10/20/2012	Re-Equip well for CO2 Production. ESP equipment removed from well, tbg and pmp MT from well. Clean out to original PBTD. Run CBL. Perf'd zone 4702'-4707' & 4713'-4720'.
11/8/2012	Run PNL. TD: 4819'. BHPVT: 132#, 103°F.
1/28/2013	BHPVT: 206#, 104°F. TD: EOT +143. Perfs: 94' Rathole.
6/27/2013	Run 3/8 CS, no issues. Set Point 4677'. Below EOT: 6'.
2/26/2014	Pull 3/8 CS, no issues. BHA top plugged with chemical. Run 3/8 CS, with new BHA. Set Point 4677'. Below EOT: 6'.
7/21/2014	Pull 3/8 CS, no issues. BHA clean. Tag TD: EOT +141. Re-run CS pumping Xylene. Perfs: 92' Rathole. Run PNL. TD: 4817'. BHPVT: 2546#, 104°F. Re-run 3/8 CS, no issues. Set Point 4677'. Below EOT: 6'.
8/20/2014	Tbg treat: 4 bbls xylene, 22 bbls hot oil w/10 gals P3150. SI 4 hrs.
2/21/2015	Pull 3/8 CS, no issues. BHA clean. Tag TD: EOT +143. Re-ran CS pumping Xylene. Pt Rathole or Perfs. 94' Rathole. Leave CS out for Prod. Log.
3/31/2015	Run Prod. Profile Log. Flowmeter at acquired. TD: 4816'. Tbg treat: 4 bbls Xylene, 15 bbls hot oil w/10 gals P3150. SI 4 hrs.
4/23/2015	Tbg treat: 4 bbls Xylene, 15 bbls hot oil w/10 gals P3150. SI 4 hrs.
6/15/2015	Tbg treat: 4 bbls xylene, 15 bbls hot oil w/10 gals P3150. SI 4 hrs.
7/29/2015	Tbg treat: 4 bbls xylene, 15 bbls hot oil w/10 gals P3150. SI 4 hrs.

www.Denbury.com Page 1/2 Report Printed: 5/9/2018

PRESSURE PUMPING LLC

Denbury Onshore LLC
Bell Creek

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

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

Writer Version 3.5!

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

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.

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

FLUID DESCRIPTION

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

MATERIAL'S	U.O.M.	LOADING PER/1000 GALLONS									Totals
		Fluid 1 1,910	Fluid 2 10,250	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 Breal	gal		0.30								4
B-1, Oxidizer Breaker (AP)	lb	1.00	1.00								13
KCL-2Sub, KCl Substitute (anionic product toleran	gal	2.00	2.00								25
											0
											0
											0
											0
											0
											0
											0
											0

Fluid and Storage Requirements:

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

QES

Pump Schedule

Perforations: _____

Maximum Pressure (psi):
Est. Treating Pressure (psi):

STG No.	Proppant Lbs./Gal.	Stage Gals.	Fluid Type or Comment	Proppant Type or Stage Description	Stage/lbs. Proppant	Clean Rate (bpm)	Clean Bbls.	Slurry Rate (bpm)	Slurry Bbls.	Stage Time
1		1,260	20# Linear	Pre-Pad		10.0	30	10	30	3.0
2		3,000	20# X-Link	Pad		10.0	71	10	71	7.1
3	1	1,500	20# X-Link	SLF 16/30 White	1,500	9.6	36	10	37	3.7
4	2	1,500	20# X-Link	SLF 16/30 White	3,000	9.2	36	10	39	3.9
5	3	1,500	20# X-Link	SLF 16/30 White	4,500	8.8	36	10	41	4.1
6	4	2,750	20# X-Link	SLF 16/30 White	11,000	8.5	65	10	77	7.7
7		650	20# Linear	Flush		10.0	15	10	15	1.5
	Totals	12,160 gls			20,000 lbs		290 bbl		311 bbl	0.52 hrs

Pump Schedule Comments:

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

PRICE ESTIMATE

Code	Amount	U.O.M.	Chemicals and Equipment Items	Unit Cost	Total
	Materials				
FC5451	61.0	gal	WG-1SLR, Slurried Guar Gel	28.15	$1,717.15
FC5575	25.0	gal	NE-1, Non Emulsifier (Nonionic)	13.20	$330.00
FC5281	3.0	gal	BIO-2L, Liquid Biocide (THPS)	38.75	$116.25
FC5528	2.0	gal	Buffer-4L, High pH (sodium hydroxide)	31.85	$63.70
FC5500	16.0	gal	XLB-1, Self Buffered Borate Crosslinker	19.25	$308.00
FC5478	4.0	gal	B-4LE, High pH/Low Temp. <140°F Enzyme Breaker	76.00	$304.00
FC5475	13.0	lb	B-1, Oxidizer Breaker (AP)	6.50	$84.50
FC5301	25.0	gal	KCL-2Sub, KCl Substitute (anionic product tolerant)	23.00	$575.00
			Chemical Book Total:		$3,498.60
			Chemical Discounted Total:		$1,924.23
	Proppant/Diverter				
FP9026	20,000.0	lb	16/30 Northern White Sand	0.36	$7,200.00
			Proppant/Diverter Book Total:		$7,200.00
			Proppant/Diverter Discounted Total:		$3,960.00
	Equipment				
FE0002	550.00	mile	Equipment Mileage - Heavy Equipment, per unit	7.15	$3,932.50
FE0700	2,200.00	tm	Proppant Delivery	1.65	$3,630.00
FE0670	8.00	hr	Chemical Delivery - Liquid, 6 hour minimum	250.00	$2,000.00
FE0001	180.00	mile	Equipment Mileage - Light Equipment, per unit	3.00	$540.00
FE0150	3.00	ea	Triplex Pump, 1st 4 hours	4,000.00	$12,000.00
FE0325	1.00	ea	0 - 10 bpm Blender, 1st 4 hours	2,500.00	$2,500.00
FE0400	1.00	day	0-50 bpm Hydration Unit	4,500.00	$4,500.00
FE0752	1.00	ea	250K Sand Storage/Delivery Unit	2,500.00	$2,500.00
FE0800	1.00	ea	High Pressure Iron/Crane Unit	6,000.00	$6,000.00
FE0610	1.00	ea	Data Acquisition Unit	2,500.00	$2,500.00
FE0621	1.00	day	Mobile Q/C Lab	500.00	$500.00
FE1077	1.00	day	3" Valve - Left on Location, per day	700.00	$700.00
			Equipment Book Total:		$41,302.50
			Equipment Discounted Total		$22,716.38
	Misc. Equipment				
			Misc. Equipment/Services Book Total:		$0.00
			Misc. Equipment /Service Discounted Price:		$0.00
			CUSTOMERS (30 Day Net Pay) DISCOUNTED TOTAL:		$28,600.61

07521417

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-1SLR, GUAR SLURRY	5.00	1.04	61	530
NE-1, NON EMULSIFIER	0.50	0.95	25	198
BIO-2L, BIOCIDE	0.20	1.00	3	25
BUFFER -4L	1.00	1.22	2	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
				Total Slurry Mass (Lbs)
				122,704

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-1SLR, 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%
B-4LE, ENZYME BREAKER	Water	7732-18-5	90.00%	31	0.02522%
	Sodium Chloride	7647-14-5	15.00%	5	0.00420%
	Mannanase Enzymes	37288-54-3	2.00%	1	0.00056%
BIO-2L, BIOCIDE	Tetrakis(hydroxymethyl) Phosphonium Sulfate	55566-30-8	20.00%	5	0.00408%
	Water	7732-18-5	80.00%	20	0.01632%

100.00%

07521417

QES
PRESSURE PUMPING LLC

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

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 (Hydroxymethal) 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	