

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

Lease Name:

Sundance Kid

Lease Type (Private/State/Federal):

Private

Application for Permit To:

Drill Deepen Re-enter
Oil Gas Other _____

Well Number:

3H

Operator: Prima Exploration, Inc.

Address: 250 Filmore St, Suite 500

City: Denver State: CO Zip: 80206

Telephone Number:

Field Name or Wildcat:

Wildcat Richland

Unit Name (if applicable):

N/A

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Surface Location of Well (quarter-quarter and footage measurements):

SW 1/4 SE 1/4 Sec. 24 T25N R58E 240' FSL 2368' FEL

Objective Formation(s):

Bakken

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Proposed Total Depth and Bottom-hole Location(s) if directional or horizontal well:

TD - 20,790' MD.

BHL - NW 1/4 NE 1/4 Sec. 13 T25N R58E 250' FNL 1950' FEL

Township, Range, and Section:

T25N R58E Section 24

County:

Richland

Elevation (indicate GL or KB):

2198' GL

Size and description of drilling/spacing unit and applicable order, if any:

1280 Acre Section 24/13, MT Order 39-2020

Formation at total depth:

Bakken

Anticipated Spud Date:

9/1/2021

Hole Size	Casing Size	Weight / Foot	Grade (API)	Depth	Sacks of Cement	Type of Cement
13 1/2"	9 5/8"	36#	J-55 LTC	2,200'	605	See Attached
8 3/4"	7"	32#	P110 BTC	10,695'	665	See Attached
6"	4 1/2"	13.5#	P110 BTC	20,790'	560	See Attached

Describe Proposed Operations:

Describe or attach labeled diagram of blowout preventer equipment. Indicate if air drilled or describe mud program.

Please see attached programs.

Prima Exploration, Inc. requests variance to NOT run Open hole logs on the subject well. Offset logs can be found for the Whiting Petroleum Corporation, Hunter #1, Sec. 24 T25N R58E, Richland County, MT.

BOARD USE ONLY *By CMW consulting Inc.*

Approved (date) MAY 17 2021 Permit Fee \$150.⁰⁰
By *[Signature]* Check Number 3574
Title Petroleum Engineer Permit Expires NOV 17 2021
Permit Number 321003

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

Signed (Agent) *[Signature]*

Title Ren Gardner - Agent/Pet Engineer

THIS PERMIT IS SUBJECT TO THE CONDITIONS OF APPROVAL STATED ON THE BACK

API Number: 25 - 083 - 23422

Date 5/3/2021

Telephone Number 406-259-4878

Samples Required: NONE X ALL _____ FROM _____ feet to _____ feet

Core chips to address below, full cores to USGS, Core Laboratory, Arvada, CO. Required samples must be washed, dried and delivered prepaid to:

Montana Board of Oil and Gas Conservation
2535 St. Johns Avenue
Billings, MT 59102

SUPPLEMENTAL INFORMATION

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

1. Attach a survey plat certified by a registered surveyor. The survey plat must show the location of the well with reference to the nearest lines of an established public survey.
2. Attach an 8 1/2 x 11" photocopy of that portion of a topographic map showing the well location, the access route from county or other established roads, residences, and water wells within a 1/2 mile radius of the well.
3. Attach a sketch of the well site showing the dimensions and orientation of the site, the size and location of pits, topsoil stockpile, and the estimated cut/fill at the corners and centerstake. (Note: the diagram need not be done by an engineer or surveyor). Attach a sketch of a top view and two side views of the reserve pit(s), if utilized. The reserve pit sketch must show the length, width, depth, cut and fill, amount of freeboard, area of topsoil stockpile, and the height and width of berms.
4. Describe the type and amount of material or liner, if any, to be used to seal the reserve pit. If a synthetic liner is used, indicate the liner thickness (mils), bursting strength, tensile strength, tear strength, puncture resistance, hydrostatic resistance, or attach the manufacturer's specifications.
5. Describe the proposed plan for the treatment and/or the disposal of reserve pit fluids and solids after the well is drilled. If the operator intends to dispose of or treat the reserve pit contents off-site, specify the location and the method of waste treatment and disposal. (Note: The operator must comply with all applicable federal, state, county, and local laws and regulations with regard to the handling, transportation, treatment, and disposal of solid wastes.)
6. Does construction of the access road or location, or some other aspect of the drilling operation require additional federal, state, or local permits or authorizations? If yes, indicate the type of permit or authorization required:
 - No additional permits needed
 - 310 Permit (apply through county conservation district)
 - Air quality permit (apply through Montana Department of Environmental Quality)
 - Water discharge permit (apply through Montana Department of Environmental Quality)
 - Water use permit (apply through Montana Department of Natural Resources and Conservation)
 - Solid waste disposal permit (apply through Montana Department of Environmental Quality)
 - State lands drilling authorization (apply through Montana Department of Natural Resources and Conservation)
 - Federal drilling permit (specify agency)
 - Other federal, state, county, or local permit or authorization: (specify type) _____

NOTICES:

1. Date and time of spudding must be reported to the Board verbally or in writing within 72 hours after the commencement of drilling operations.
2. The operator must give notice of drilling operations to the surface owner as required by Section 82-10-503, MCA, before the commencement of any surface activity.

BOARD USE ONLY

CONDITIONS OF APPROVAL

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

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

CELLS WITH BLUE BACKGROUND ARE THE ONLY CELLS TO BE EDITED

Fracture Start Date/Time:	
Fracture End Date/Time:	
State:	
County:	
API Number:	
Operator Number:	
Well Name:	
Federal Well:	
Indian Well:	
Longitude:	
Latitude:	
Long/Lat Projection:	
True Vertical Depth (TVD):	
Total Clean Fluid Volume* (gal):	8,344,602



Additive	Specific Gravity	Additive Quantity	Mass (lbs)
Water	8.34	8,344,602	69,593,981
DVA-75	(already reported in lbs)		378
FRP-15	9.17	15,917	146,206
HCL-15	8.95	7,500	67,149
Liberty Clean Out Fluid	6.81	30	136
BioClear 5000	9.34	834	7,798
Surf-Flo 430	8.26	8,326	68,889
Crystalline Silica Quartz / US Silica	(already reported in lbs)	10,164,375	10,164,375
DF-36S	8.76	2	13
ACL-300	8.76	30	263
WA-100	8.92	18	134
IC-50S	10.84	60	658

Ingredients Section:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier	Carrier	7732-18-5	100.00%	69,593,981	86.91819%	
DVA-75	Liberty Oilfield Services	Diverting Agent	MSDS and Non-MSDS Ingredients Listed Below					
FRP-15	Liberty Oilfield Services	Friction reduction	MSDS and Non-MSDS Ingredients Listed Below					
HCL-15	Liberty Oilfield Services	Solvent	MSDS and Non-MSDS Ingredients Listed Below					
Liberty Clean Out Fluid	Liberty Oilfield Services	Cleanup Solution	MSDS and Non-MSDS Ingredients Listed Below					
BioClear 5000	Lubrizol	Biocide	MSDS and Non-MSDS Ingredients Listed Below					
Surf-Flo 430	Innospec	Flowback Additive	MSDS and Non-MSDS Ingredients Listed Below					
Crystalline Silica Quartz / US Silica	Liberty Oilfield Services	Sand	MSDS and Non-MSDS Ingredients Listed Below					
DF-36S	WST	Defoamer	MSDS and Non-MSDS Ingredients Listed Below					
ACL-300	WST	Corrosion Inhibitor	MSDS and Non-MSDS Ingredients Listed Below					
WA-100	WST	Wetting Agent	MSDS and Non-MSDS Ingredients Listed Below					
IC-50S	WST	Iron Control	MSDS and Non-MSDS Ingredients Listed Below					
The trade name(s) of the additive(s) and the supplier(s) and the purpose(s) of the additive(s) are listed above. The ingredient(s) for the above additive(s) are listed below.								
Liberty Oilfield Services	Sand		Crystalline Silica (quartz)	14808-60-7	99.90%	10,154,211	12.68484%	
Liberty Oilfield Services	Sand		Aluminum Oxide	1344-28-1	1.00%	101,644	0.12698%	
Liberty Oilfield Services	Friction reduction		Petroleum distillates, hydrotreated light	64742-47-8	45.00%	65,793	0.08219%	
Innospec	Flowback Additive		Water	7732-18-5	95.00%	65,444	0.08175%	
Liberty Oilfield Services	Solvent		Water	7732-18-5	85.00%	57,069	0.07129%	
Liberty Oilfield Services	Sand		Iron Oxide	1309-37-1	0.10%	18,164	0.02170%	
Liberty Oilfield Services	Sand		Titanium Oxide	13463-67-7	0.10%	18,164	0.02170%	
Liberty Oilfield Services	Solvent		Hydrochloric Acid	7647-01-0	15.50%	18,071	0.02158%	
Innospec	Flowback Additive		Benzene sulfonic Acid, dodecyl-1-ampd, with 2-aminomethyl	26836-07-7	10.00%	6,889	0.00861%	
Innospec	Flowback Additive		Dodecylbenzene sulfonate, triethanolamine salt	27323-41-7	10.00%	6,889	0.00861%	
Liberty Oilfield Services	Friction reduction		Poly(oxy-1,2-ethanediy), a-trilecyl-w-hydroxy-, bran	69011-36-5	3.00%	4,386	0.00548%	
Innospec	Flowback Additive		Sodium Alpha Olefin Sulfonate	68439-57-6	3.00%	3,414	0.00430%	
WST	Iron Control		2-hydroxypropane-1,2,3-tricarboxylic acid	77-92-9	60.00%	390	0.00049%	
Lubrizol	Biocide		2,2-dibromo-1-nitropropanamide	10222-01-2	5.00%	389	0.00049%	
Liberty Oilfield Services	Diverting Agent		Polyvinylidene Resin	9051-89-2	100.00%	378	0.00047%	
Liberty Oilfield Services	Cleanup Solution		Oxygenate and paraffinic stream	876065-86-0	99.10%	135	0.00017%	
WST	Wetting Agent		Dihexylated Decyl Alcohol	78336-20-8	40.00%	54	0.00007%	
WST	Corrosion Inhibitor		2-N-propyl-1-ol compound with methylisovirane	38172-91-7	13.00%	39	0.00005%	
Innospec	Flowback Additive		Triethanolamine	102-71-6	0.01%	6	0.00001%	
Innospec	Flowback Additive		Ethanolamine	141-43-5	0.01%	6	0.00001%	
Liberty Oilfield Services	Cleanup Solution		C.I. Solvent Yellow 33	8003-22-3	1.00%	1	0.00000%	
WST	Defoamer		Polypropylene Glycol	25322-69-4	10.00%	1	0.00000%	
WST	Defoamer		Polydimethylsiloxane	63148-42-9	6.00%	1	0.00000%	

*Total Water Volume sources may include fresh water, produced water, and/or recycled water
 ** Information is based on the maximum potential for concentration and thus the total may be over 100%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.

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