FORM NO. 22 R 10/09 | SUBMIT IN QUADRUPLICATE TO: | ARM 36.22.307 ARM 36.22.601

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

Application for Permit To:

Drill [X] Deepen [ ] Re-enter [ ]
Oil [X] Gas [ ] Other _____ [ ]

Operator: PHOENIX OPERATING LLC
Address: 4643 SOUTH ULSTER STREET, SUITE 1510
City: DENVER State: CO Zip: 80237
Telephone Number: 303-548-1953

Surface Location of Well (quarter-quarter and footage measurements):
SENE Section 6, T28N, R57E, 2352' FNL & 379' FEL

Proposed Total Depth and Bottom-hole Location(s) if directional or horizontal well:
26197' MD, 10096' TVD
SESE Section 3, T28N, R57E, 550' FSL & 240' FEL

Lease Name: KATANA
Lease Type (Private/State/Federal): Private
Well Number: 5-4-3 4H
Field Name or Wildcat: Elm Coulee NE
Unit Name (if applicable): N/A
Objective Formation(s): Middle Bakken
Township, Range, and Section: T28N, R57E, Section 6
County: Roosevelt
Elevation (indicate GL or KB): 2268' GL (Graded)

RECEIVED
FEB 04 2026
MONTANA BOARD OF OIL & GAS CONSERVATION - BILLINGS

Size and description of drilling/spacing unit and applicable order, if any:	Formation at total depth:	Anticipated Spud Date:
1920 acre spacing unit per Board Order	Middle Bakken	5/1/2026

Hole Size	Casing Size	Weight / Foot	Grade (API)	Depth	Sacks of Cement	Type of Cement
13 1/2"	9 5/8"	36#	J-55	2176	896	See Attached
8 ¾"	7"	32#	P-110	10843	795	See Attached
6"	4½"	13.5#	P-110	26197	765	See Attached

Describe Proposed Operations:
Describe or attach labeled diagram of blowout preventer equipment. Indicate if air drilled or describe mud program.
See attachments for details.

Phoenix requests a variance from running open hole logs on the subject well. Offset logs can be found for the Leonard 1-13 (API#25085211790000).

BOARD USE ONLY

Approved (date) MAR 04 2026
By Benjamin L Davis
Title Technical Program Coordinator

Permit Fee $150.00
Check Number 001588
Permit Expires SEP 04 2026
Permit Number 33142

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

API Number: 25 - 085 - 22130

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

Signed (Agent) _____
Title Regulatory Specialist
Date 1/29/2026
Telephone Number 720-250-8737

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

08522130

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:

- [x] 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:

SEE ATTACHED
CONDITIONS OF APPROVAL

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

Phoenix Operating LLC Propose Well Stimulation

Estimated Fluids: 340,000 bbls
Max Anticipated Treating Pressure: 9600 psi

Hydralic Fracturing Fluid Components Information Disclosure

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
Produced Brine Water	Operator	Carrier	Produced Brine Water	7732-18-5	100.0000%	*9,400*	*0.00760%*
Water	Operator	Carrier	Water	7732-18-5	100.0000%	*107,586,000*	*87.35530%*
FRP-1S	Liberty Energy	Friction reduction	MSDS and Non-MSDS Ingredients Listed Below				
Crystalline Silica Quartz	Liberty Energy	Proppant	MSDS and Non-MSDS Ingredients Listed Below				
IC-50S	WST	Iron Control	MSDS and Non-MSDS Ingredients Listed Below				
C-SI 148	Creedence Energy Service	Surfactant	MSDS and Non-MSDS Ingredients Listed Below				
C-STIM 1010S	Creedence Energy Service	Biosurfactant	MSDS and Non-MSDS Ingredients Listed Below				
Liberty Clean Out Fluid	Liberty Energy	Cleanup Solution	MSDS and Non-MSDS Ingredients Listed Below				
K-BAC 50510	Italmatch Chemicals	Biocide	MSDS and Non-MSDS Ingredients Listed Below				
FRS-HV8200	Liberty Energy	Friction reduction	MSDS and Non-MSDS Ingredients Listed Below				
WA-100	WST	Wetting Agent	MSDS and Non-MSDS Ingredients Listed Below				
K-BAC 50510W	Italmatch Chemicals	Biocide	MSDS and Non-MSDS Ingredients Listed Below				
Soda Ash	Liberty Energy	Buffer	MSDS and Non-MSDS Ingredients Listed Below				
FRP-2F	Liberty Energy	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below				
FRP-132V	Liberty Energy	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below				
DF-36S	WST	Defoamer	MSDS and Non-MSDS Ingredients Listed Below				
FRP-HVT60	Liberty Energy	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below				
FRP-1K	Liberty Energy	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below				
HCL-28	Liberty Energy	Solvent	MSDS and Non-MSDS Ingredients Listed Below				
The trade name(s) of the additive(s) used, supplier(s), and the purpose(s) of the additive(s) are listed above. The ingredient(s) for the above additive(s) are listed below.							
			Crystalline Silica in the form of Quartz	14808-60-7	98.5693%	*15,341,000*	*12.45630%*
			Water	7732-18-5	0.2626%	*40,866*	*0.03320%*
			Water	7732-18-5	0.2240%	*34,859*	*0.02830%*

			Distillates (petroleum), hydrotreated light	64742-47-8	0.1577%	*24,546*	*0.01990%*
			Methanol	67-56-1	0.1125%	*17,514*	*0.01420%*
			Water	7732-18-5	0.0439%	*6,840*	*0.00560%*
			Phosphonic acid, [[[2-[(2-hydroxyethyl)(phosphonome	129828-36-0	0.0249%	*3,873*	*0.00310%*
			Polyamino Polyether Methylene Phosphonate	130668-24-5	0.0249%	*3,873*	*0.00310%*
			Alcohols	68551-12-2	0.0188%	*2,919*	*0.00240%*
			Arylsulfonic Acid	68584-22-5	0.0188%	*2,919*	*0.00240%*
			Glycolipid	2768394-42-7	0.0188%	*2,919*	*0.00240%*
			Hydrochloric Acid	7647-01-0	0.0171%	*2,660*	*0.00220%*
			Alcohols, C12-16, ethoxylated	68551-12-2	0.0130%	*2,018*	*0.00160%*
			Water	7732-18-5	0.0045%	*707*	*0.00060%*
			Oxygenate and paraffinic stream	876065-86-0	0.0043%	*674*	*0.00060%*
			Water	7732-18-5	0.0033%	*506*	*0.00040%*
			Petroleum distillates, hydrotreated light	64742-47-8	0.0027%	*413*	*0.00030%*
			Distillate (petroleum), hydrotreated light	64742-47-8	0.0025%	*383*	*0.00030%*
			Distillates (petroleum), hydrotreated light	64742-47-8	0.0019%	*300*	*0.00020%*
			Distillates, petroleum, hydrotreated light	64742-47-8	0.0014%	*220*	*0.00020%*
			Methanol	67-56-1	0.0014%	*219*	*0.00020%*
			Distillates (petroleum), hydrotreated light	64742-47-8	0.0013%	*202*	*0.00020%*
			Quaternary ammonium compounds,benzyl-C12-16-alk	68424-85-1	0.0006%	*93*	*0.00010%*
			Quaternary ammonium compounds, benzyl-C12-16-alk	68424-85-1	0.0006%	*89*	*0.00010%*
			Alcohols, C12-16, ethoxylated, liquids	68551-12-2	0.0003%	*50*	*0.00000%*
			Sodium Carbonate	497-19-8	0.0003%	*50*	*0.00000%*
			Glutaraldehyde	111-30-8	0.0003%	*46*	*0.00000%*
			Glutaraldehyde	111-30-8	0.0003%	*44*	*0.00000%*
			Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branc	69011-36-5	0.0002%	*28*	*0.00000%*
			Ethyl alcohol	64-17-5	0.0002%	*27*	*0.00000%*
			Ethyl alcohol	64-17-5	0.0002%	*25*	*0.00000%*
			Alcohols, C10-16	68002-97-1	0.0001%	*21*	*0.00000%*
			Alcohols, C12-14	68439-50-9	0.0001%	*21*	*0.00000%*
			Alcohols, C12-16	68551-12-2	0.0001%	*21*	*0.00000%*
			Poly(oxy-1,2-ethandiyl), a-(carboxymethyl)-w-[(9Z)-9-	57635-48-0	0.0001%	*17*	*0.00000%*
			Ammonium chloride	12125-02-9	0.0001%	*13*	*0.00000%*
			Water	7732-18-5	0.0000%	*7*	*0.00000%*
			2-hydroxypropane-1,2,3-tricarboxylic acid	77-92-9	0.0000%	*7*	*0.00000%*
			Ethoxylated Decyl Alcohol	78330-20-8	0.0000%	*4*	*0.00000%*

RECEIVED
FEB 04 2026
MONTANA BOARD OF OIL & GAS CONSERVATION - BILLINGS
08522130

			Tridecyl Alcohol	9043-30-5	0.0000%	*1*	***0.00000%***
			Methanol	67-56-1	0.0000%	*1*	***0.00000%***
			Polypropylene Glycol	25322-69-4	0.0000%	*1*	***0.00000%***