

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

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

Lease Name: **Ed & Paul 17-20 XE RECEIVED**

Lease Type (Private/State/Federal):
 Private **JAN 12 2024**

Application for Permit To:

Drill Deepen Re-enter
 Oil Gas Other _____

Well Number: **1H**

MONTANA BOARD OF OIL & GAS CONSERVATION • BILLINGS

Operator: EMEP Operating, LLC
 Address: 1200 Smith Street, Suite 680
 City: Houston State: TX Zip: 77002
 Telephone Number: 346-261-1474

Field Name or Wildcat:
Wildcat

Unit Name (if applicable):

Surface Location of Well (quarter-quarter and footage measurements):
 312' FSL, 351' FWL, SWSW, SEC 21, T25N, R53E
 LAT 47.897662 LONG -104.891024

Proposed Total Depth and Bottom-hole Location(s) if directional or horizontal well:
 TVD 9,318', MD 19,452'
 200' FNL, 245' FEL, SESE, SEC 17, T25N, R53E
 LAT 47.925275 LONG -104.893478

Objective Formation(s):
~~Horizontal~~ **Middle Bakken**

Township, Range, and Section:
 T25N, R53E, SEC 21

County:
 Richland

Elevation (indicate GL or KB):
 2442.8'

Permit 18-2024 Order 12-2024

Size and description of drilling/spacing unit and applicable order, if any:	Formation at total depth:	Anticipated Spud Date:
2560 Section 16, 17, 20, 21 25N 53E	Lower Bakken	4/1/2024

Hole Size	Casing Size	Weight / Foot	Grade (API)	Depth	Sacks of Cement	Type of Cement
13 1/2	9 5/8	36 PPF	J-55	2,060	693	ASTM III CLASS A
8 3/4	7	32 PPF	P-110	9,805	492	ASTM IL CLASS G
6	4 1/2	11.6 PPF	P-110	19,542	570	ASTM IL CLASS G

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

Please see attached Drilling Program, Directional Drilling Plan and Well Location Plats

BOARD USE ONLY

Approved (date) **FEB 26 2024** Permit Fee **\$15000**
 By Benjamin J Davis Check Number **26995**
 Title **Technical Program Coordinator** Permit Expires **AUG 26 2024**
 Permit Number **32912**

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

API Number: 25 - **083** - **23474**

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

Signed (Agent) [Signature]
 Title **Permitting Department Manager**

Date **1/10/2024**
 Telephone Number **435-789-1017**

Samples Required: NONE 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

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SUPPLEMENTAL INFORMATION

JAN 12 2024

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

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- 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:

SEE ATTACHED CONDITIONS OF APPROVAL

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

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Fracture Date:	MT
State:	Richland
County:	Eagle Mountain
Operator Name:	Ed & Paul 17-20 XE 1H
Operator Number:	-104.8910
Well Name and Number:	47.8977
Longitude:	No
Federal Well:	No
Indian Well:	NAD83
Leq/Lat Projection:	
Fracture End Date:	
True Vertical Depth (TVD):	
Total Water Volume (gal)*:	6,720,000
Well Type:	
Water Source:	

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Comment	Mass of Additive (lbs)
Sand (Proppant)	CWS	Propping Agent					
BioSurf™ GQ123x	CWS	Bioicide					
CalSurf™ 9401	CWS	Surfactant					
CalSurf™ 9421	CWS	Surfactant					
CalVisc™ 6634	CWS	Friction Reducer					
DynaScale™ 3515	CWS	Scale Inhibitor					
			12-hydroxysebacic acid-polyethylene glycol copolymer	70142-34-6	0.70%		415.59
			Acrylamide	79-06-1	0.10%		58.37
			alcohols, C12-14-secondary, ethoxylated	84133-50-6	0.50%		296.85
			Alcohol C10-C16 Ethoxylates	68002-97-1	40.00%		5,110.99
			Alkyl dimethyl benzyl ammonium chloride	89424-85-1	3.00%		458.25
			Aluminum oxide	1344-28-1	4.00%		3,600.00
			Ammonium acrylate	10604-69-0	0.10%		59.37
			ammonium chloride	12125-02-9	1.40%		881.17
			Apatite	84476-39-6	0.10%		5,910.00
			Biotite	1302-27-8	0.10%		53,950.00
			Calcite	471-34-1	1.00%		27,000.00
			Chromite Sand	88072-82-3	30.00%		5,989,550.00
			Crystalline silica (Quartz)	14808-60-7	100.00%		35.62
			Diethylene triaminepentaacetic acid, pentis-sodiumsalt	140-01-2	0.06%		1.78
			Dioxane	123-91-1	0.00%		11,280.20
			Distillates (Petroleum), Hydrotreated Light	64742-47-8	19.00%		7,667.33
			Ethoxylated Alcohols, C10-16	68002-97-1	30.00%		0.18
			Ethylene oxide	75-21-8	0.00%		1,833.01
			Glutaraldehyde	111-30-8	12.00%		5,150.00
			Gonite	1310-14-1	0.10%		515.00
			Ilmenite	98072-94-7	0.10%		118.74
			isopropanol	57-83-0	60.00%		21,844.52
			Methanol	57-86-1	60.00%		4,571.46
			Organic Acid Salt	Proprietary	15.00%	Proprietary CAS	3,600.00
			paraffinic oils	64742-65-0	7.70%		4,571.46
			Phenol-formaldehyde copolymer	9003-35-4	4.00%		1,78
			poly(oxy-1, 2-ethanediyl), alpha-hydro-omega-hydroxy-ether with D-glucitol (2:1), tetra-(6Z)-9-octadecenoate	81723-83-9	0.70%		415.59
			Polyethylene glycol	25322-68-3	0.00%		1.78
			Polymer	26100-47-0	32.00%		18,998.23
			polyoxyethylene monooleate	9004-96-0	2.40%		1,424.87
			Potassium acetate	127-08-2	0.03%		17.83
			Sodium hydrogensulfite	7831-90-5	0.80%		356.22
			Sorbitan oleate	1338-43-8	1.00%		593.69
Water	Operator and CWS	Base Fluid and Mix Water	Water	7732-18-5	100.00%		56,140,533.10

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