



## 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
  - Stream crossing 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

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**SEP 25 2023**

MONTANA BOARD OF OIL &  
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**WARNING: Failure to comply with conditions of approval may void this permit.**

**Kraken Operating, LLC Proposed Well Stimulation**

Total Clean Fluid – 235,000 bbls

Maximum Anticipated Treating Pressure – 9,800 psi

**Hydraulic Fracturing Fluid Components Information Disclosure:**

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive <sup>1,2</sup> (%)	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass) <sup>1,2</sup>
Water	Operator	Carrier	Carrier	7732-18-5	100.00%	82,315,800.00	84.96572%
Surf-Flu 430	Innospec	Flowback Additive	MSDS and Non-MSDS Ingredients Listed Below			7,435.80	0.007294%
FRP-1S	Liberty Oilfield Services	Friction reduction	MSDS and Non-MSDS Ingredients Listed Below			252,853.79	0.25833%
DVA-75	Liberty Oilfield Services	Diverting Agent	MSDS and Non-MSDS Ingredients Listed Below			469.00	0.00048%
Backbar 3000	Lubrizol	Biocide	MSDS and Non-MSDS Ingredients Listed Below			8,387.32	0.00857%
ScaleCease 7103	Innospec	Scale Inhibitor	MSDS and Non-MSDS Ingredients Listed Below			15,830.17	0.01619%
HCL-15	Liberty Oilfield Services	Solvent	MSDS and Non-MSDS Ingredients Listed Below			17,295.26	0.01766%
ACI-300	WST	Corrosion Inhibitor	MSDS and Non-MSDS Ingredients Listed Below			67.43	0.00007%
WA-100	WST	Wetting Agent	MSDS and Non-MSDS Ingredients Listed Below			34.79	0.00004%
IC-50S	WST	Iron Control	MSDS and Non-MSDS Ingredients Listed Below			125.74	0.00013%
Liberty Clean Out	Liberty Oilfield Services	Cleanup Solution	MSDS and Non-MSDS Ingredients Listed Below			74.86	0.00008%
Crystalline Silica	Liberty Oilfield Services	Sand	MSDS and Non-MSDS Ingredients Listed Below			15,300,000.00	15.62576%
The trade names of the additives used, suppliers, and the purposes of the additives for the above additive(s) are listed below							
	Liberty Oilfield Services	Sand	Crystalline Silica (quartz)	14808-60-7	99.90%	15,284,700.00	15.60963%
	Liberty Oilfield Services	Sand	Aluminum Oxide	1344-28-1	1.00%	153,000.00	0.15625%
	Liberty Oilfield Services	Friction reduction	Petroleum distillates, hydro treated light	64742-47-8	43.00%	113,784.30	0.11620%
	Liberty Oilfield Services	Sand	Iron Oxide	1349-57-1	0.10%	15,300.00	0.01563%
	Liberty Oilfield Services	Sand	Titanium Oxide	13463-67-7	0.10%	15,300.00	0.01563%
	Innospec	Scale Inhibitor	Water	7732-18-5	95.00%	15,057.66	0.01538%
	Liberty Oilfield Services	Solvent	Water	7732-18-5	83.00%	14,700.97	0.01501%
	Liberty Oilfield Services	Friction reduction	Poly(oxy-1,2-ethanediyl, 4-iodocyclohexyl-hydroxy-, branched)	69011-36-5	3.00%	7,585.61	0.00775%
	Innospec	Flowback Additive	Water	7732-18-5	95.00%	7,064.01	0.00721%
	Lubrizol	Biocide	Hydrochloric Acid	7647-01-0	15.00%	2,594.39	0.00265%
	Innospec	Scale Inhibitor	2,2-dithiono-3-nitropropionamide	10222-01-2	10.00%	838.73	0.00086%
	Innospec	Scale Inhibitor	BHMT Phosphonate	Proprietary	5.00%	792.51	0.00081%
	Innospec	Scale Inhibitor	Proprietary Ingredient	Proprietary	5.00%	792.51	0.00081%
	Innospec	Flowback Additive	Benzene/sulfonic Acid, dodecyl-empd, with 2-aminoethanol	26836-07-7	10.00%	743.58	0.00076%
	Liberty Oilfield Services	Flowback Additive	Dodecylbenzene sulfonate, triethanolamine salt	27223-41-7	10.00%	743.58	0.00076%
	Innospec	Diverting Agent	Polybutadiene Resin	9051-89-2	100.00%	469.00	0.00048%
	WST	Flowback Additive	Sodium Alpha Olefin Sulfonate	68839-37-6	5.00%	371.79	0.00038%
	Liberty Oilfield Services	Iron Control	2-hydroxypropane-1,2,3-tricarboxylic acid	77-92-9	50.00%	75.45	0.00008%
	Liberty Oilfield Services	Cleanup Solution	Oxysulfate and paraffinic stream	87605-86-0	99.00%	74.11	0.00008%
	WST	Wetting Agent	Ethoxylated Decyl Alcohol	78330-20-8	40.00%	13.92	0.0001%
	WST	Corrosion Inhibitor	2-Propeno-1-ol compound with methyloxirane	38172-91-7	15.00%	10.11	0.0001%
	Liberty Oilfield Services	Cleanup Solution	C.I. Solvent Yellow 33	8003-22-3	1.00%	0.75	0.00000%
	Innospec	Flowback Additive	Triethanolamine	103-71-6	0.01%	0.67	0.00000%
	Innospec	Flowback Additive	Ethanolamine	141-43-5	0.01%	0.67	0.00000%

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