

RECEIVED**JUL 08 2026****MONTANA BOARD OF OIL &
GAS CONSERVATION - BILLINGS**

Submit In Quadruplicate To:

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

Operator MorningStar Operating LLC

Address 400 W. 7th Street

City Fort Worth State TX Zip Code 76102

Telephone 817-334-8096 Fax

Location of well (1/4-1/4 section and footage measurements):

460' FNL & 2145' FWL (Sec. 5-T23N-R55E)

Lease Name:

Chinook

Type (Private/State/Federal/Tribal/Allotted):

Private

Well Number:

5-17-1H

Unit Agreement Name:

Field Name or Wildcat:

Elm Coulee

Township, Range, and Section:

Section 5: T23N-R55E

API Number:

25 | 083 | 23532

State County Well

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

Oil

County:

Richland County

Indicate below with an X the nature of this notice, report, or other data:

Notice of Intention to Change Plans ☐Notice of Intention to Run Mechanical Integrity Test ☐Notice of Intention to Stimulate or to Chemically Treat ☒Notice of Intention to Perforate or to Cement ☐Notice of Intention to Abandon Well ☐Notice of Intention to Pull or Alter Casing ☐Notice of Intention to Change Well Status ☐Supplemental Well History ☐Other (specify) Updated Chemical Disclosure ☐Subsequent Report of Mechanical Integrity Test ☐Subsequent Report of Stimulation or Treatment ☐Subsequent Report of Perforation or Cementing ☐Subsequent Report of Well Abandonment ☐Subsequent Report of Pulled or Altered Casing ☐Subsequent Report of Drilling Waste Disposal ☐Subsequent Report of Production Waste Disposal ☐Subsequent Report of Change in Well Status ☐Subsequent Report of Gas Analysis (ARM 36.22.1222) ☐Subsequent Report of Refrac Operations ☐**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.

Please see the updated chemical disclosure attached.

- Total volume = 22 MM gallons

- Maximum anticipated treating pressure is 9,500 psi down 7" 32# P-110 casing (12,460 psi Internal Yield) and 4.5" 13.5# P-110 liner (12,410 psi Internal Yield).

BOARD USE ONLY

Approved

JUL 14 2026

Date


Name
Title

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

7/1/2026

Date



Signed (Agent)

Holly Wood, Regulatory Analyst

Print Name and Title

Telephone: 817-334-8088

SUPPLEMENTAL INFORMATION

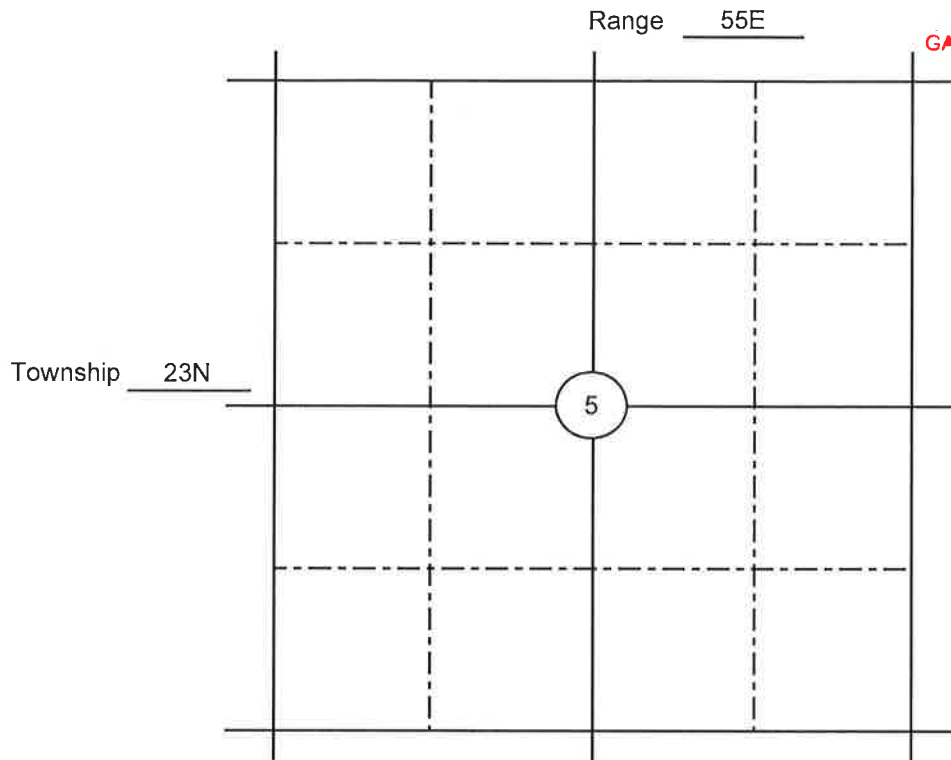
RECEIVED

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.

JUL 08 2026

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS



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.

08323532

Fracture Start Date/Time:	
Fracture End Date/Time:	
State:	Montana
County:	Richland
API Number:	25-093-23532
Operator Number:	
Well Name:	Chinook S-17-1H
Federal Well:	
Indian Well:	
Longitude:	-104.699519
Latitude:	47.761633
Long/Lat Projection:	NAD83
True Vertical Depth (TVD):	
Total Clean Fluid Volume* (gal):	21,947,841



Additive	Specific Gravity	Additive Quantity	Mass (lbs)
ACI-410	8.88	100.00	888
BEZ-58	8.92	100.00	892
Crystalline Silica Quartz	(already reported in lbs)	12,271,500.00	12,271,500
DF-36S	8.76	100.00	876
Enviro-Syn HCR-7000-WL	9.22	100.00	922
FRP-10S	9.60	100.00	960
FRP-1S	9.17	16,461.00	151,013
FRS-HV8100	12.51	100.00	1,251
FRS-HV8200	8.50	100.00	850
HCL-10	8.74	100.00	874
HCL-15	8.95	100.00	895
HCL-20	9.16	100.00	916
HCL-28	9.50	100.00	950
HCL-36	9.84	100.00	984
HCL-7.5	8.64	100.00	864
IC-50S	10.33	100.00	1,033
K-BAC 50510	8.84	5,487.00	48,505
K-BAC 50510W	8.43	100.00	843
Liberty Clean Out Fluid	8.16	100.00	816
Resin Coated Sand / Santrol	(already reported in lbs)	3,591,000.00	3,591,000
SCI-78	8.93	5,219.00	46,616
SCI-78NDW	9.38	100.00	938
SCI-78W	9.06	100.00	906
SCI-78XW	9.21	100.00	921
SFT-592	8.43	2,714.00	22,876
SFT-NE45B	8.23	100.00	823
SFT-NE45BIO	8.72	100.00	872
Soda Ash	(already reported in lbs)	100.00	100
WA-100	8.92	100.00	892
Water	8.34	21,947,841.23	183,044,996

Total Slurry Mass (Lbs)
199,196,772

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	Water	7732-18-5	100.0000%	183,044,996	91.89155%	
SCI-78W	Liberty Energy	Scale Inhibitor	MSDS and Non-MSDS Ingredients Listed Below					
Resin Coated Sand / Santrol	Liberty Energy	Proppant	MSDS and Non-MSDS Ingredients Listed Below					
FRS-HV8100	Liberty Energy	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below					
HCL-15	Liberty Energy	Acid	MSDS and Non-MSDS Ingredients Listed Below					
DF-36S	Italmatch Chemicals	Defoamer	MSDS and Non-MSDS Ingredients Listed Below					
BEZ-58	Liberty Energy	Breaker	MSDS and Non-MSDS Ingredients Listed Below					
K-BAC 50510W	Italmatch Chemicals	Biocide	MSDS and Non-MSDS Ingredients Listed Below					
IC-50S	Italmatch Chemicals	Iron Control	MSDS and Non-MSDS Ingredients Listed Below					
FRS-HV8200	Liberty Energy	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below					
SFT-NE45BIO	Liberty Energy	Surfactant	MSDS and Non-MSDS Ingredients Listed Below					
HCL-10	Liberty Energy	Acid	MSDS and Non-MSDS Ingredients Listed Below					
FRP-10S	Liberty Energy	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below					
HCL-28	Liberty Energy	Acid	MSDS and Non-MSDS Ingredients Listed Below					
ACI-410	Italmatch Chemicals	Corrosion Inhibitor	MSDS and Non-MSDS Ingredients Listed Below					
HCL-20	Liberty Energy	Acid	MSDS and Non-MSDS Ingredients Listed Below					
SFT-592	Liberty Energy	Surfactant	MSDS and Non-MSDS Ingredients Listed Below					
HCL-36	Liberty Energy	Acid	MSDS and Non-MSDS Ingredients Listed Below					
HCL-7.5	Liberty Energy	Acid	MSDS and Non-MSDS Ingredients Listed Below					
SCI-78NDW	Liberty Energy	Scale Inhibitor	MSDS and Non-MSDS Ingredients Listed Below					
Liberty Clean Out Fluid	Liberty Energy	Cleanout Solution	MSDS and Non-MSDS Ingredients Listed Below					
Crystalline Silica Quartz	Liberty Energy	Proppant	MSDS and Non-MSDS Ingredients Listed Below					
Enviro-Syn HCR-7000-WL	Fluid Energy Group	Solvent	MSDS and Non-MSDS Ingredients Listed Below					
SCI-78	Liberty Energy	Scale Inhibitor	MSDS and Non-MSDS Ingredients Listed Below					
WA-100	Italmatch Chemicals	Wetting Agent	MSDS and Non-MSDS Ingredients Listed Below					
Soda Ash	Liberty Energy	Buffer	MSDS and Non-MSDS Ingredients Listed Below					
SFT-NE45B	Liberty Energy	Surfactant	MSDS and Non-MSDS Ingredients Listed Below					
SCI-78XW	Liberty Energy	Scale Inhibitor	MSDS and Non-MSDS Ingredients Listed Below					
K-BAC 50510	Italmatch Chemicals	Biocide	MSDS and Non-MSDS Ingredients Listed Below					
FRP-1S	Liberty Energy	Friction Reducer	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	75.9762%	12,271,500	6.16049%	
			Crystalline Silica (quartz)	14808-60-7	22.1217%	3,573,045	1.79373%	
			Phenol-Formaldehyde Resin	9003-35-4	1.1116%	179,550	0.09014%	
			Water	7732-18-5	0.3740%	69,405	0.03032%	
			2-Propenoic acid, polymer with 2-propenamide, sodium salt	25987-30-8	0.2898%	46,814	0.02350%	
			Water	7732-18-5	0.2857%	46,150	0.02317%	
			Distillates (petroleum), hydrotreated light	64742-47-8	0.2805%	45,304	0.02274%	
			Water	7732-18-5	0.2402%	38,804	0.01948%	
			Dodecylbenzenesulfonic acid, monoethanolamine salt	26836-07-7	0.0567%	9,151	0.00459%	
			Water	7732-18-5	0.0496%	8,007	0.00402%	
			Alcohols, C12-16, ethoxylated	68551-12-2	0.0467%	7,551	0.00379%	
			Methanol	67-56-1	0.0425%	6,863	0.00345%	
			Quaternary ammonium compounds, benzyl-C12-16-alkyl	68424-85-1	0.0315%	5,093	0.00256%	
			Phosphonic acid, [11(2-(2-hydroxyethyl))phosphono]o	129828-36-0	0.0289%	4,662	0.00234%	

		Sorbitan monooleate	1338-43-8	0.0280%	4,530	0.000272%	
		Glutaraldehyde	111-30-8	0.0158%	2,547	0.00128%	
		Urea	57-13-6	0.0093%	1,510	0.00076%	
		Ethyl alcohol	64-17-5	0.0090%	1,455	0.00073%	
		Sodium C14-16 olefin sulfonate	68439-57-6	0.0071%	1,144	0.00057%	
		Water	7732-18-5	0.0050%	815	0.00041%	
		Water	7732-18-5	0.0049%	799	0.00040%	
		Water	7732-18-5	0.0049%	787	0.00040%	
		Water	7732-18-5	0.0047%	761	0.00038%	
		Water	7732-18-5	0.0045%	733	0.00037%	
		polyacrylamide	9003-05-8	0.0043%	688	0.00035%	
		Water	7732-18-5	0.0042%	684	0.00034%	
		Oxygenate and paraffinic stream	876065-86-0	0.0042%	674	0.00034%	
		2-hydroxypropane-1,2,3-tricarboxylic acid	77-92-9	0.0040%	650	0.00033%	
		Water	7732-18-5	0.0040%	644	0.00032%	
		Water	7732-18-5	0.0039%	629	0.00032%	
		Water	7732-18-5	0.0035%	566	0.00028%	
		Water	7732-18-5	0.0035%	563	0.00028%	
		hydrotreated distillate, light	64742-47-8	0.0035%	563	0.00028%	
		Water	7732-18-5	0.0033%	535	0.00027%	
		Water	7732-18-5	0.0033%	533	0.00027%	
		Water	7732-18-5	0.0031%	506	0.00025%	
		Ethylene Glycol	107-21-1	0.0029%	469	0.00024%	
		Water	7732-18-5	0.0027%	432	0.00022%	
		Polyacrylamide	9003-05-8	0.0026%	425	0.00021%	
		Hydro-treated distillate, light	64742-47-8	0.0026%	425	0.00021%	
		Ethylene Glycol	107-21-1	0.0023%	368	0.00018%	
		Ethoxylated Decyl Alcohol	78330-20-8	0.0022%	357	0.00018%	
		Hydrochloric Acid	7647-01-0	0.0022%	354	0.00018%	
		2-Propenoic acid, polymer with 2-propenamide, sodium salt	25987-30-8	0.0018%	298	0.00015%	
		Hydrochloric Acid	7647-01-0	0.0017%	276	0.00014%	
		Propylene Glycol	57-55-6	0.0017%	268	0.00013%	
		Pyridinium, 1-(phenylmethyl)-, ethyl methyl deriv., cation	68909-18-2	0.0016%	266	0.00013%	
		Hydrochloric Acid	7647-01-0	0.0016%	266	0.00013%	
		Ethylene Glycol	107-21-1	0.0015%	241	0.00012%	
		Distillates (petroleum), hydrotreated light	64742-47-8	0.0015%	240	0.00012%	
		Water	7732-18-5	0.0014%	223	0.00011%	
		Methanol	67-56-1	0.0014%	219	0.00011%	
		Hydrochloric Acid	7647-01-0	0.0011%	183	0.00009%	
		Methanol	67-56-1	0.0011%	174	0.00009%	
		Methanol	67-56-1	0.0010%	165	0.00008%	
		Hemicellulase	9025-56-3	0.0010%	161	0.00008%	
		Cellulase Enzyme	9012-54-8	0.0010%	161	0.00008%	
		Acrylamide	79-06-1	0.0009%	151	0.00008%	
		Ethylene Glycol	107-21-1	0.0008%	136	0.00007%	
		Hydrochloric Acid	7647-01-0	0.0008%	134	0.00007%	
		Nonylphenol ethoxylated	127087-87-0	0.0008%	133	0.00007%	
		Sucrose	57-50-1	0.0007%	107	0.00005%	
		Sodium Carbonate	497-19-8	0.0006%	99	0.00005%	
		Phosphonic acid, [[12-(2-hydroxyethyl)](phosphonomethoxy)]	129828-36-0	0.0006%	94	0.00005%	
Enviro-Syn HCR-7000-WL		Proprietary Ingredient	Proprietary	0.0006%	92	0.00005%	
		Phosphonic acid, [[12-(2-hydroxyethyl)](phosphonomethoxy)]	129828-36-0	0.0006%	92	0.00005%	
		Phosphonic acid, [[12-(2-hydroxyethyl)](phosphonomethoxy)]	129828-36-0	0.0006%	91	0.00005%	
		Methanol	67-56-1	0.0005%	89	0.00004%	
		Quaternary ammonium compounds, benzyl-C12-16-alkyl	68424-85-1	0.0005%	89	0.00004%	
		Polypropylene Glycol	25322-69-4	0.0005%	88	0.00004%	
		Hydrochloric Acid	7647-01-0	0.0005%	87	0.00004%	
		Aliphatic Aryl Acid	121-65-3	0.0005%	87	0.00004%	
		Aliphatic Aryl Acid	121-65-3	0.0005%	82	0.00004%	
		Surfactant	68439-46-3	0.0005%	82	0.00004%	
		Hydrochloric Acid	7647-01-0	0.0004%	65	0.00003%	
		Polydimethylsiloxane	63148-62-9	0.0003%	53	0.00001%	
		Glutaraldehyde	111-30-8	0.0003%	44	0.00002%	
		Surfactant	209-406-4	0.0003%	44	0.00002%	
		Alkoxy alcohol	111-7-2	0.0003%	44	0.00002%	
		Surfactant	209-406-4	0.0003%	41	0.00002%	
		Alkoxy Alcohol	111-76-2	0.0003%	41	0.00002%	
		Styrene-Ethylene/Propylene-(Styrene) (SEP(S))	68648-89-5	0.0002%	26	0.00001%	
		Ethyl alcohol	64-17-5	0.0002%	25	0.00001%	
		Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	0.0001%	24	0.00001%	
		Urea	57-13-6	0.0001%	24	0.00001%	
		Amides, tall-oil fatty, N,N-bis(hydroxyethyl)	68155-20-4	0.0001%	19	0.00001%	
		Sorbitan Monooleate	1338-43-8	0.0001%	10	0.00000%	
		Maltodextrin, Dodecanoate	512180-33-5	0.0001%	9	0.00000%	
		Maltodextrin, Tetradecanoate	2736504-00-8	0.0001%	9	0.00000%	
		Cocamide DIPA	68855-69-6	0.0001%	9	0.00000%	
		Sodium Sulfate	7757-82-6	0.0000%	3	0.00000%	
		C.I. Solvent Yellow 33	8003-22-3	0.0000%	0	0.00000%	

MONTANA BOARD OF OIL AND GAS ATTACHMENT TO FORM 2 "CONDITIONS OF APPROVAL"

A. Field Inspector must be notified at least **24 hours** in advance of the start of fracture stimulation operation.

B. 36.22.1106 SAFETY AND WELL CONTROL REQUIREMENTS – HYDRAULIC FRACTURING

(1) New and existing wells which will be stimulated by hydraulic fracturing must demonstrate suitable and safe mechanical configuration for the stimulation treatment proposed.

(2) Prior to initiation of fracture stimulation, the operator must evaluate the well. If the operator proposes hydraulic fracturing through production casing or through intermediate casing, **the casing must be tested to the maximum anticipated treating pressure**. If the casing fails the pressure test it must be repaired or the operator must use a temporary casing string (fracturing string).

(a) **If the operator proposes hydraulic fracturing through a fracturing string, it must be strung into a liner or run on a packer set not less than 100 feet below the cement top of the production or intermediate casing and must be tested to not less than maximum anticipated treating pressure minus the annulus pressure applied between the fracturing string and the production or immediate casing.**

(3) A casing pressure test will be considered successful if the pressure applied has been held for 30 minutes with no more than ten percent pressure loss.

(4) A **pressure relief valve(s)** must be installed on the treating lines between pumps and wellhead to limit the line pressure to the test pressure determined above; the well **must be equipped with a remotely controlled shut-in device** unless waived by the board administrator should the factual situation warrant.

(5) **The surface casing valve must remain open** while hydraulic fracturing operations are in progress; the annular space between the fracturing string and the intermediate or production casing must be monitored and may be pressurized to a pressure not to exceed the pressure rating of the lowest rated component that would be exposed to pressure should the fracturing string fail.

History: 82-11-111, MCA; IMP, 82-11-111, MCA; NEW, 2011 MAR p. 1686, Eff. 8/26/11.