

FORM
2

Rev
05/22

State of Colorado Oil and Gas Conservation Commission

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Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

403316521

(SUBMITTED)

Date Received:

02/09/2023

APPLICATION FOR PERMIT TO

Drill Deepen Re-enter Recomplete and Operate

Amend

TYPE OF WELL OIL GAS COALBED OTHER: _____

Refile

ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES

Sidetrack

Well Name: Vulcan 6-64 10-8 Well Number: 8HN
 Name of Operator: GMT EXPLORATION COMPANY LLC COGCC Operator Number: 10243
 Address: 4949 S NIAGARA ST SUITE 250
 City: DENVER State: CO Zip: 80237
 Contact Name: Maxwell Blair Maxwell Blair Phone: (720)8624503 Fax: ()
 Email: mblair@gmtexploration.com

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

COGCC Financial Assurance

The Operator has provided or will provide Financial Assurance to the COGCC for this Well.

Surety ID Number (if applicable): 20170102

Federal Financial Assurance

In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for this Well. (Per Rule702.a.)

Amount of Federal Financial Assurance \$ _____

WELL LOCATION INFORMATION

Surface Location

QtrQtr: SENW Sec: 10 Twp: 6S Rng: 64W Meridian: 6

Footage at Surface: 1740 Feet FNL 2260 Feet FWL

Latitude: 39.545236 Longitude: -104.542233

GPS Data: GPS Quality Value: 2.2 Type of GPS Quality Value: PDOP Date of Measurement: 09/28/2018

Ground Elevation: 6073

Field Name: WILDCAT Field Number: 99999

Well Plan: is Directional Horizontal (highly deviated) Vertical

If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

Subsurface Locations

Top of Productive Zone (TPZ)

Sec: 10 Twp: 6S Rng: 64W Footage at TPZ: 1514 FSL 1981 FWL
Measured Depth of TPZ: 8471 True Vertical Depth of TPZ: 7780 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 8 Twp: 6S Rng: 64W Footage at BPZ: 1539 FSL 600 FWL
Measured Depth of BPZ: 20518 True Vertical Depth of BPZ: 7780 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 8 Twp: 6S Rng: 64W Footage at BHL: 1539 FSL 550 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: ELBERT Municipality: N/A

Is the Surface Location of this Well in an area designated as one of State interest and subject to the requirements of § 24-65.1-108 C.R.S.? No

Per § 34-60-106(1)(f)(I)(A) C.R.S., the following questions pertain to the Relevant Local Government approval of the siting of the proposed Oil and Gas Location.

SB 19-181 provides that when "applying for a permit to drill," operators must include proof that they sought a local government siting permit and the disposition of that permit application, or that the local government does not have siting regulations. § 34-60-106(1)(f)(I)(A) C.R.S.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location? Yes No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location.

The disposition of the application filed with the Relevant Local Government is: Approved Date of Final Disposition: 03/30/2021

Comments: Elbert County does not regulate the siting of an Oil and Gas Location. The County does have a permitting process for construction and drilling. The well pad was approved by Elbert County on 3/30/2021. The Vulcan 8HN Well was approved by Elbert County on 01/26/2023. The well pad is constructed and currently has one producing well, the Vulcan 6-64 10-8 1HN.

SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION

Surface Owner of the land at this Well's Oil and Gas Location: Fee State Federal Indian

Mineral Owner beneath this Well's Oil and Gas Location: Fee State Federal Indian

Surface Owner Protection Bond (if applicable): Surety ID Number (if applicable):

MINERALS DEVELOPED BY WELL

The ownership of all the minerals that will be developed by this Well is (check all that apply):

- Fee
State
Federal
Indian
N/A

LEASE INFORMATION

Using standard QtrQtr, Section, Township, Range format describe one entire mineral lease as follows:

* If this Well is within a unit, describe a lease that will be developed by the Well.

* If this Well is not subject to a unit, describe the lease that will be produced by the Well.

(Attach a Lease Map or Lease Description or Lease if necessary.)

Please see the lease map in the COGIS file.

Total Acres in Described Lease: 719 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 2621 Feet
Building Unit: 4211 Feet
Public Road: 3528 Feet
Above Ground Utility: 1186 Feet
Railroad: 5280 Feet
Property Line: 927 Feet

INSTRUCTIONS:

- Specify all distances per Rule 308.b.(1).
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit – as defined in 100 Series Rules.

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR	535-1130	1600	8 & 9: All; 10: W/2

Federal or State Unit Name (if appl): _____ Unit Number: _____

SUBSURFACE MINERAL SETBACKS

Enter 5280 for distance greater than 1 mile.

Is this Well within a unit? Yes

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: 600 Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well within the same unit permitted or completed in the same formation: 453 Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: _____ Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well producing from the same lease and permitted or completed in the same formation: _____ Feet

Exception Location

If this Well requires the approval of a Rule 401.c Exception Location, enter the Rule or spacing order number and attach the Exception Location Request and Waivers. _____

SPACING & FORMATIONS COMMENTS

Approved Order 535-1130

DRILLING PROGRAMProposed Total Measured Depth: 20518 FeetTVD at Proposed Total Measured Depth 7780 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 349 Feet No well belonging to another operator within 1,500 feetWill a closed-loop drilling system be used? YesIs H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If yes, attach an H₂S Drilling Plan unless a plan was already submitted with the Form 2A per Rule 304.c.(10).Will there be hydraulic fracture treatment at a depth less than 2,000 feet in this well? NoWill salt sections be encountered during drilling? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? YesBOP Equipment Type: Annular Preventor Double Ram Rotating Head None

Beneficial reuse or land application plan submitted? _____

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

<u>Casing Type</u>	<u>Size of Hole</u>	<u>Size of Casing</u>	<u>Grade</u>	<u>Wt/Ft</u>	<u>Csg/Liner Top</u>	<u>Setting Depth</u>	<u>Sacks Cmt</u>	<u>Cmt Btm</u>	<u>Cmt Top</u>
CONDUCTOR	24	16	H40	42	0	80	100	80	0
SURF	13+1/2	9+5/8	J55LTC	36	0	2210	590	2210	0
1ST	8+1/2	5+1/2	HCP110	20	0	20518	3080	20518	

 Conductor Casing is NOT planned**POTENTIAL FLOW AND CONFINING FORMATIONS**

<u>Zone Type</u>	<u>Formation /Hazard</u>	<u>Top M.D.</u>	<u>Top T.V.D.</u>	<u>Bottom M.D.</u>	<u>Bottom T.V.D.</u>	<u>TDS (mg/L)</u>	<u>Data Source</u>	<u>Comment</u>
Groundwater	Denver	1021	1018	1584	1558	0-500	DWR	
Groundwater	Upper Arapahoe	1584	1558	1985	1933	0-500	DWR	
Groundwater	Fox Hills	1985	1933	2250	2180	0-500	DWR	
Confining Layer	Pierre Shale	2250	2180	5671	5374		Electric Log Calculation	
Hydrocarbon	Sussex Sandstone	5671	5374	7955	7563		Electric Log Calculation	
Subsurface Hazard	Sharon Springs	7955	7563	8032	7620		Electric Log Calculation	
Hydrocarbon	Niobrara	8032	7620	20518	7780		Electric Log Calculation	

OPERATOR COMMENTS AND SUBMITTAL

Comments

Best Management Practices

No	BMP/COA Type	Description
1	Drilling/Completion Operations	GMT filed a Form 42 MIRU for this well on 2/7/23 (Doc#403314566) . GMT will file a new Form 42 at least 48-hours prior to MIRU to update the schedule once this re-filed Form 2 is approved and drill schedule is established.
2	Drilling/Completion Operations	Operator acknowledges the proximity of the following non-operated listed wells: 039-06383 Coggins Et Al 1-10 039-06443 Running Creek State 1 039-06480 Running Creek 15-3 039-06453 Nordman Estate 9-16 Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 OFFSET MITIGATION COMPLETED for the remediated wells, referencing the API number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.
3	Drilling/Completion Operations	Operator has already mitigated the following offset wells: 039-06396 Lycas 4-13 039-06478 Nordman Estate 10-4 039-06477 Nordman Estate 10-7
4	Drilling/Completion Operations	Per COGCC Order 1-232, Bradenhead tests shall be performed according to the following schedule and Form 17 submitted within 10 days of each test: 1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 2) If a delayed completion, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
5	Drilling/Completion Operations	COGCC COA: Operator will insure the wellbore beyond the unit boundary setback is physically isolated and is not completed. In the Operator Comments on the Form 5A the operator will (1) report the footages from the section lines of the bottom of the completed interval (2) describe how the wellbore beyond the unit boundary setback is physically isolated and (3) certify that none of the wellbore beyond the setback was completed.
6	Drilling/Completion Operations	Prior to drilling operations, operator will perform an anti-collision scan of existing wells that have the potential of being within close proximity of the proposed well. This anticollision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed well path with its respective error of uncertainty. If current surveys do not exist for the offset wells, operator may have gyro surveys conducted to verify bottom hole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment.
7	Drilling/Completion Operations	Alternative Logging Program: The first well drilled on this pad, the Vulcan 6-64 10-8 #1HN, was logged with an open-hole Resistivity Log and Gamma Ray Log from the kick-off point into the surface casing. The Vulcan 6-64 10-8 #10HN will also be logged with an open-hole Resistivity Log and Gamma Ray Log from the kick-off point into the surface casing. All wells on the pad will have a Cement Bond Log with Gamma-Ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measured while-drilling gammaray log. The Form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open hole logs shall clearly state Alternative Logging Program - No open-hole logs were run and shall clearly identify the type of log and the well (by API#) in which open-hole logs were run.

Total: 7 comment(s)

Attachment List

<u>Att Doc Num</u>	<u>Name</u>
403317115	OffsetWellEvaluations Data

Total Attach: 1 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

