

FORM
2A

Rev
02/20

State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

402372267

(SUBMITTED)

Date Received:

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: 455657

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <https://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

455657

Expiration Date:

This location assessment is included as part of a permit application.

CONSULTATION

- This location is included in a Comprehensive Drilling Plan. CDP # _____
- This location is in a sensitive wildlife habitat area.
- This location is in a wildlife restricted surface occupancy area.
- This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 10670
 Name: MALLARD EXPLORATION LLC
 Address: 1400 16TH STREET SUITE 300
 City: DENVER State: CO Zip: 80202

Contact Information

Name: Erin Mathews
 Phone: (720) 543 7951
 Fax: ()
 email: emathews@mallardexploration.com

FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID (Rule 706): 20170115 Gas Facility Surety ID (Rule 711): _____
- Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: Bashor 9-60 Number: 27B Pad
 County: WELD
 Quarter: NWNE Section: 27 Township: 9N Range: 60W Meridian: 6 Ground Elevation: 4993

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 459 feet FNL from North or South section line
1518 feet FEL from East or West section line

Latitude: 40.727099 Longitude: -104.074229

GPS Quality Value: 1.2 Type of GPS Quality Value: PDOP Date of Measurement: 02/07/2020

Instrument Operator's Name: Greg Weimer

LOCAL GOVERNMENT INFORMATION

County: WELD Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: County

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below. 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 local government siting permit type is: WOGLA

The local government siting permit was filed on: 12/18/2018

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

WOGLA19-0083 submitted 12/18/18, approved 10/3/19

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is: LOCATION ID # FORM 2A DOC #

FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	<u>9</u>	Oil Tanks*	<u>5</u>	Condensate Tanks*	<u> </u>	Water Tanks*	<u>5</u>	Buried Produced Water Vaults*	<u> </u>
Drilling Pits	<u> </u>	Production Pits*	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits*	<u> </u>	Modular Large Volume Tanks	<u>1</u>
Pump Jacks	<u>9</u>	Separators*	<u>11</u>	Injection Pumps*	<u> </u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u>3</u>
Gas or Diesel Motors*	<u>9</u>	Electric Motors	<u>9</u>	Electric Generators*	<u>2</u>	Fuel Tanks*	<u> </u>	LACT Unit*	<u>2</u>
Dehydrator Units*	<u> </u>	Vapor Recovery Unit*	<u> </u>	VOC Combustor*	<u> </u>	Flare*	<u> </u>	Pigging Station*	<u> </u>

OTHER FACILITIES*

Other Facility Type **Number**

Other Facility Type	Number
ECD KO Drums	3
Emission Control Devices	4
Gas Lift Distribution Meter Skid	1
Instrument Air Skid	1
Sales Gas Scrubber	1
Sales Gas Skid	1
Sump	1

Those facilities indicated by an asterisk () shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

3" welded steel flowlines from wellheads to separators carrying oil, gas and water.
3" welded steel gas supply line from compressors to wellheads.

CONSTRUCTION

Date planned to commence construction: 08/01/2020 Size of disturbed area during construction in acres: 11.19
Estimated date that interim reclamation will begin: 02/01/2021 Size of location after interim reclamation in acres: 5.09
Estimated post-construction ground elevation: 4993

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H₂S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

Centralized E&P Waste Management Facility ID, if applicable:

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Clinton Neil Bashor

Phone:

Address: 41455 County Road 106

Fax:

Address:

Email:

City: Briggsdale State: CO Zip: 80611-9510

Surface Owner: Fee State Federal Indian

Check all that apply. The Surface Owner: is the mineral owner

is committed to an oil and Gas Lease

has signed the Oil and Gas Lease

is the applicant

The Mineral Owner beneath this Oil and Gas Location is: Fee State Federal Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: Surface Surety ID:

Date of Rule 306 surface owner consultation

If this Form 2A is associated with Drilling and Spacing Unit applications, list docket number(s) below:

CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP

Non-Crop Land: Rangeland Timber Recreational Other (describe): _____
Subdivided: Industrial Commercial Residential

Future Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP
Non-Crop Land: Rangeland Timber Recreational Other (describe): _____
Subdivided: Industrial Commercial Residential



CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	4570 Feet	4362 Feet
Building Unit:	4570 Feet	4362 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1439 Feet	1327 Feet
Above Ground Utility:	5280 Feet	5280 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	459 Feet	140 Feet
School Facility::	5280 Feet	5280 Feet
School Property Line:	5280 Feet	5280 Feet
Child Care Center:	5280 Feet	5280 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- 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, High Occupancy Building Unit, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

SCHOOL SETBACK INFORMATION

Was Notice required under Rule 305.a.(4)? Yes No

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- Buffer Zone
 Exception Zone
 Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.
- Large UMA Facility – as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on□ or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. (*Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.*)
- By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 31 - Kim-Mitchell complex, 0 to 6 percent slopes

NRCS Map Unit Name: 75 - Wages fine sandy loam, 0 to 6 percent slopes

NRCS Map Unit Name: _____

PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes No

Plant species from: NRCS or, field observation Date of observation: _____

List individual species:

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- Alpine (above timberline)
- Other (describe): _____

WATER RESOURCES

Is this a sensitive area: No Yes

Distance to nearest

downgradient surface water feature: 3025 Feet

water well: 2742 Feet

Estimated depth to ground water at Oil and Gas Location 36 Feet

Basis for depth to groundwater and sensitive area determination:

Closest downgradient surface water feature is a pond/lake.
Basis for depth to groundwater is the nearest water well CDWR #200307.

Distances and depths taken from previously approved Form 2A Doc #401348969

Is the location in a riparian area: No Yes

Was an Army Corps of Engineers Section 404 permit filed No Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer zone: No

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: _____

Is the Location within a Floodplain? No Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other _____

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

WILDLIFE

This location is included in a Wildlife Mitigation Plan

This location was subject to a pre-consultation meeting with CPW held on _____

Operator Proposed Wildlife BMPs

No BMP

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area

Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)

Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)

Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)

Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments

Since this location is not in a buffer zone, a Waste Management Plan and Facility Layout are not included. Since there is no surface water within 1000', a Hydrology Map is not included.

Manufacturer of MLVT: Rockwater Energy Solutions
Size and Volume: One (1) 160' diameter/42,000 BBLs
Anticipated time frame on site: 90 days

The Lease operators also conduct CDPHE Regulation 7 - Audible, Visual, and Olfactory (AVO) inspections, which focus on the tanks and vapor control system. The Regulation 7 AVO is also a documented inspection. In addition, the sites are inspected with optical gas imaging cameras on a routine schedule, annually for compliance purposes with our Spill Prevention Containment and Countermeasures (SPCC) plan, depending on the status of reclamation the sites are also inspected on either a 14-day, 30-day, annual or rain triggered event in accordance with both the COGCC and the CDPHE Stormwater Management Plans (SWMP).

The Bashor 9-60 27B-34-10 (API: 05-123-47214) is being abandoned from this location.

The Bashor Fed 9-60 27A-34-1 (API: 05-123-47206), Bashor Fed 9-60 27A-34-2 (API: 05-123-47221), Bashor Fed 9-60 27A-34-3 (API: 05-123-47207), Bashor Fed 9-60 27A-34-4 (API: 05-123-47210), Bashor Fed 9-60 27A-34-5 (API: 05-123-47218), Bashor Fed 9-60 27A-34-6 (API: 05-123-47205), Bashor Fed 9-60 27A-34-7 (API: 05-123-47212), Bashor Fed 9-60 27A-34-8 (API: 05-123-47209), Bashor Fed 9-60 27A-34-9 (API: 05-123-47216), and Bashor Fed 9-60 27A-34-10 (API: 05-123-47215) are being abandoned along with the Bashor Fed 9-60 27A Location (Loc ID 455666).

The Bashor 9-60 27B-34-1 (API: 05-123-47202) to be known as Bashor Fed 27-34-1HC, Bashor 9-60 27B-34-2 (API: 05-123-47204) to be known as Bashor Fed 27-34-2HN, Bashor 9-60 27B-34-3 (API: 05-123-47208) to be known as Bashor Fed 27-34-3HN, Bashor 9-60 27B-34-4 (API: 05-123-47211) to be known as Bashor Fed 27-34-4HN, Bashor 9-60 27B-34-5 (API: 05-123-47203) to be known as Bashor 27-34-5HC, Bashor 9-60 27B-34-6 (API: 05-123-47213) to be known as Bashor 27-34-6HN, Bashor 9-60 27B-34-7 (API: 05-123-47220) to be known as Bashor 27-34-7HN, Bashor 9-60 27B-34-8 (API: 05-123-47217) to be known as Bashor 27-34-8HN, and Bashor 9-60 27B-34-9 (API: 05-123-47219) to be known as Bashor 27-34-9HC will be renamed and respaced across Sections 27 and 34, with revised TPZ and BHL to meet setbacks in accordance with the spacing application to reduce setbacks, Docket 200100034 for April 2020.

There have been no new buildings constructed and no changes to the surrounding land use.

The well site has not yet been constructed.

This location is not in a buffer or exception zone, so no notices are required under Rule 305. All previously submitted notices and letters are also still valid.

The Local Government Information and Cultural Distances have been updated.

Equipment changes to show a more compact facility design consistent with the revised well count.

Pad reference point location is amended to the Bashor 27-34-6HN well.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: _____ Date: _____ Email: regulatory@ascentgeomatics.com

Print Name: Justin Garrett Title: Regulatory Analyst

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: _____ Director of COGCC Date: _____

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type		Description
Best Management Practices		
No	BMP/COA Type	Description
1	General Housekeeping	804. Visual Impacts: All long term facility structures will be painted a color that enables the facilities to blend in with the natural background color of the landscape, as seen from a viewing distance and location typically used by the public. Maintain appearance with garbage clean-up; a trash bin will be located on site to accumulate waste by the personnel drilling the wells. Site will have unused equipment, trash and junk removed immediately.
2	Storm Water/Erosion Control	Implement and maintain BMPs to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Co-locate gathering lines to mitigate erosion problems that arise due to the construction of any pipeline(s).
3	Storm Water/Erosion Control	A sediment trap will be constructed to capture any sediment prior to leaving the location. The sediment trap has been sized in accordance with good engineering practices. A temporary diversion, consisting of a cut swale and compacted earthen berm, will be constructed along the pad edge and routed to the sediment trap to prevent offsite migration of sediment/contaminant into the nearby surface water features. If necessary, check dams will be constructed within the swale.
4	Material Handling and Spill Prevention	<p>All flowlines are designed/constructed/tested to ASME B31.4 and API 1104 standards. Only materials with Material Test Reports (MTRs) provided by the pipeline supplier are used in the construction of the flowlines.</p> <p>Audible, Visual, and Olfactory (AVO) inspections of the facility are conducted daily by the Operator. Any valve or fitting that is found to be ineffective is either repaired immediately or well shut-in procedures are implemented. Documented AVO inspections and optical gas imaging surveys are conducted monthly by a third-party specialist.</p> <p>The location will utilize a SCADA (remote monitoring) system to monitor facility pressures and flows. Sensors are placed on multiple points throughout the facility and are designed to measure the system for irregularities that would indicate a leak in the system or change in production of oil, water, or gas. The SCADA system is designed with alarms that are triggered by irregularities will activate automatic shut-in of the well and facility.</p> <p>If a leak is discovered or suspected, the well will be shut in and the line will be hydrotested. If a leak is determined, the well remains shut in while the leak is located and repaired. Not until the line has passed hydrotesting, will the well be brought back online.</p>

5	Construction	<p>Operator will have a MLVT Design Package, certified and sealed by a licensed professional engineer, which is on file in their office and available upon request. The site shall be prepared in accordance with the specifications of the design package prior to tank installation; including ensuring that proper compaction requirements have been met.</p> <p>MLVT will be at least 75 feet from a wellhead, fired vessel, heater-treater, or a compressor with a rating of 200 horsepower or more. MLVT will be placed at least 50 feet from a separator, well test unit, or other non-fired equipment.</p> <p>All liner seams will be welded and tested in accordance with applicable ASTM international standards.</p> <p>Operator will be present during initial filling of the MLVT and the contractor will supervise and inspect the MLVT for leaks during filling.</p> <p>Operator will comply with the testing and re-inspection requirements and associated written standard operating procedures (SOP) listed on the design package.</p> <p>Signs will be posted on the MLVT indicating that the contents are freshwater. MLVT will be operated with a minimum of 1 foot of freeboard at all times. Access to MLVT will be limited to operational personnel and authorized regulatory agency personnel. Operator or contractor will conduct daily visual inspections of the exterior wall and surrounding area for integrity deficiencies. Operator will have a contingency plan/emergency response plan associated with MLVT on file at their office.</p> <p>A fabric reinforced liner will be utilized. In the event that a tank breach were to occur, the fabric reinforced liner will prevent a "zippering" failure from occurring. The liner will meet the specifications per the design package.</p> <p>Operator acknowledges and will comply with the Colorado Oil & Gas Conservation Commission Policy on the Use of Modular Large Volume Tanks in Colorado dated June 13, 2014.</p>
6	Emissions mitigation	<p>Operator has contracted with a third party to bring a gas sales lines to the location to send salable quality gas immediately down the sales line. In the event that a sales line connection is not available upon the completion of flowback, operator will follow the policy per the Notice to Operators "Rule 912 Venting or Flaring Produced Natural Gas". All salable quality gas shall be directed to the sales line as soon as practicable or shut in and conserved in accordance with Rule 805.b.(3)B.v.</p>
7	Interim Reclamation	<p>Operator shall be responsible for segregating the topsoil, backfilling, re-compacting any backfill, reseeding, and re-contouring the surface of any disturbed area so as not to interfere with Owner's operations and shall reclaim such area to be returned to preexisting conditions as best as possible with control of all noxious weeds.</p>

Total: 7 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
402372462	NRCS MAP UNIT DESC
402372464	NRCS MAP UNIT DESC
402372465	ACCESS ROAD MAP
402372466	LOCATION DRAWING
402372495	LOCATION PICTURES
402372501	MULTI-WELL PLAN
402372504	REFERENCE AREA MAP
402372506	REFERENCE AREA PICTURES
402383945	SURFACE AGRMT/SURETY

Total Attach: 9 Files

General Comments

User Group

Comment

Comment Date

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Stamp Upon Approval

Total: 0 comment(s)



Public Comments

No public comments were received on this application during the comment period.

