

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:

402472844

(SUBMITTED)

Date Received:

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: 461821

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:

461821

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: Canvasback Number: Pad
 County: WELD
 Quarter: SWNW Section: 32 Township: 9N Range: 60W Meridian: 6 Ground Elevation: 4944

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: 1858 feet FNL from North or South section line
646 feet FWL from East or West section line

Latitude: 40.707774 Longitude: -104.123784

GPS Quality Value: 1.6 Type of GPS Quality Value: PDOP Date of Measurement: 04/26/2018

Instrument Operator's Name: Brian Hopkinson

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: 1041 WOGLA

The local government siting permit was filed on: 12/03/2018

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

Additional explanation of local process:

WOGLA18-0176 submitted 12/3/2018, Approved 1/11/2019. WOGLA Sundry submitted 9/9/2020.

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>8</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>2</u>
Pump Jacks	<u>8</u>	Separators*	<u>10</u>	Injection Pumps*	<u> </u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u>3</u>
Gas or Diesel Motors*	<u>8</u>	Electric Motors	<u>8</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

ECD	4
ECD Knockout Drums	3
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.

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:	5280 Feet	5280 Feet
Building Unit:	5280 Feet	5280 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1794 Feet	1661 Feet
Above Ground Utility:	2336 Feet	2177 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	644 Feet	392 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: 40 - Nunn loam, 0 to 6 percent slopes

NRCS Map Unit Name: 56 - Renohill fine sandy loam, 6 to 9 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: 04/26/2018

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: 1318 Feet

water well: 2147 Feet

Estimated depth to ground water at Oil and Gas Location 73 Feet

Basis for depth to groundwater and sensitive area determination:

Location is not sensitive due to lack of proximate surface water features or domestic water wells.
Depth to groundwater taken from permit #271773.

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 No zone:

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

Manufacturer of MLVT: Hydrologistics
Size and Volume: Up to two (2) 157' diameter/42,000 BBLs
Anticipated time frame on site: 90 days

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

This location is being amended to move north of the currently permitted location to avoid the cultural resources found during the archaeological survey of the original pad. The revised location is within the same parcel.

The CB 2 (API: 05-123-49654), CB 3 (API: 05-123-49659), CB 4 (API: 05-123-49660), CB 5 (API: 05-123-49653), CB 6 (API: 05-123-49652), and CB 7 (API: 05-123-49656) are being abandoned from this location, along with the Golden Cascade Pad (Loc ID 463726) and its associated Golden Cascade 33-1HC (API: 05-123-50064), Golden Cascade 33-2HN (API: 05-123-50058), Golden Cascade 33-3HN (API: 05-123-50061), Golden Cascade 33-4HC (API: 05-123-50053), Golden Cascade 33-5HN (API: 05-123-50056), Golden Cascade 33-6HN (API: 05-123-50052), Golden Cascade 33-7HN (API: 05-123-50051), Golden Cascade 33-8HN (API: 05-123-50054), Golden Cascade Fed 33-9HC (API: 05-123-50059), Golden Cascade Fed 33-10HN (API: 05-123-50060), Golden Cascade Fed 33-11HN (API: 05-123-50062), Golden Cascade Fed 33-12HN (API: 05-123-50063), Golden Cascade Fed 33-13HC (API: 05-123-50057), and Golden Cascade Fed 33-14HN (API: 05-123-50055).

The Form 2 for the GC Fed 1 (Doc #401847397) currently in process will be withdrawn.

The well formerly known as CB 1 (API: 05-123-49661) will move SHL along with being extended and respaced across Sections 32 and 33 as the Canvasback Fed 32-33-1HC.

The laterals for the Canvasback 32-1HC (API: 05-123-49655) – now Canvasback Fed 32-33-2HN, Canvasback 32-2HN (API: 05-123-49657) – now Canvasback Fed 32-33-3HN, Canvasback 32-3HN (API: 05-123-49651) – now Canvasback Fed 32-33-4HN, Canvasback 32-4HN (API: 05-123-49662) – now Canvasback 32-33-5HN, Canvasback 32-5HN (API: 05-123-49658) – now Canvasback 32-33-6HC, Canvasback 32-6HN (API: 05-123-49649) – now Canvasback 32-33-7HN, and Canvasback 32-7HC (API: 05-123-49650) – now Canvasback 32-33-8HN are being extended and respaced across Sections 32 and 33 with revised names, TPZ, and BHL.

There have been no new buildings constructed and no changes to the surrounding land use and mineral lease description. 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, Surface Use Agreements, and letters are also still valid.

Operator consulted with the Pawnee Fire Protection District and the Weld County Office of Emergency Management (OEM) regarding the proposed facility and emergency response for this location. The site-specific Emergency Action Plan was approved by the OEM on December 17, 2018.

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

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 when the trash bin is full.
2	Storm Water/Erosion Control	Implement and maintain BMPs to control storm water runoff in a manner that minimizes erosion, transport of sediment of Operator shall install stormwater controls constructed in a manner that is consistent with good engineering practices, and will include measures including, but not limited to, construction of a berm or diversion dike, site grading, or other comparable measures, sufficient to prevent offsite migration of sediment or contaminant. Stormwater controls shall be installed prior to construction activities. Gas and water gathering lines will be co-located to minimize potential of erosion associated with construction of any pipeline(s).te, and site degradation. Gas and water gathering lines will be co-located to minimize potential of erosion associated with 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	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.
5	Material Handling and Spill Prevention	Pressure testing of the flowlines is conducted on an annual basis.
6	Material Handling and Spill Prevention	Audible, Visual, and Olfactory (AVO) inspections are 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.
7	Material Handling and Spill Prevention	Documented Audible, Visual, and Olfactory (AVO) inspections and optical gas imaging surveys are conducted monthly by a third-party specialist.
8	Material Handling and Spill Prevention	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 and will activate automatic shut-in of the well and facility.
9	Material Handling and Spill Prevention	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.
10	Material Handling and Spill Prevention	Operator will install an engineered containment system around the tank battery. The containment system is constructed of a perimeter of metal walls that are post driven into the ground around a flexible geotextile base. All components are then sprayed with a polyurea liner technology. This liner technology maintains impermeability and is puncture resistance under exposure to UV rays, weather extremes, and chemicals commonly encountered in oil and natural gas production, and provides seamless protection. The liner is then topped with pea gravel. Secondary containment will be installed around separators and treaters consisting of metal berm walls. The separators and treaters will be set on top of compacted road base.
11	Construction	Location will be equipped with remote monitoring capability including tank level alarms.

12	Construction	<p>Operator will have an 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>The 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. It 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.</p> <p>The MLVT will be operated with a minimum of 1 foot of freeboard at all times.</p> <p>Access to the MLVT will be limited to operational personnel and authorized regulatory agency personnel.</p> <p>Operator or contractor will conduct daily visual inspections of the exterior wall and surrounding area for integrity deficiencies.</p> <p>Operator will have a contingency plan/emergency response plan associated with the MLVT and it is 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>
13	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>
14	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: 14 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
402472943	ACCESS ROAD MAP
402472946	LOCATION PICTURES
402472951	REFERENCE AREA PICTURES
402472967	MULTI-WELL PLAN
402472982	NRCS MAP UNIT DESC
402472983	NRCS MAP UNIT DESC
402473424	SURFACE AGRMT/SURETY
402476361	REFERENCE AREA MAP
402484342	LOCATION DRAWING

Total Attach: 9 Files

General Comments

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

Total: 0 comment(s)



Public Comments

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

