

FORM
2A

Rev
08/19

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:

402165402

Date Received:

09/10/2019

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: _____

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 <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

469100

Expiration Date:

11/10/2022

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: Goldeneye Center Number: Pad

County: WELD

Quarter: SENE Section: 21 Township: 8N Range: 60W Meridian: 6 Ground Elevation: 4935

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: 2365 feet FNL from North or South section line

2216 feet FWL from East or West section line

Latitude: 40.648590 Longitude: -104.098121

PDOP Reading: 1.4 Date of Measurement: 08/22/2019

Instrument Operator's Name: Alan Hnizdo

LOCAL GOVERNMENT INFORMATION

County: WELD Municipality: N/A

CONSTRUCTION

Date planned to commence construction: 01/01/2020 Size of disturbed area during construction in acres: 18.00
Estimated date that interim reclamation will begin: 06/01/2020 Size of location after interim reclamation in acres: 9.70
Estimated post-construction ground elevation: 4935

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: Bob R Offutt

Phone:

Address: 9010 County Road E

Fax:

Address: Apt 96

Email:

City: Olney Springs State: CO Zip: 81062-9710

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:	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:	2917 Feet	2762 Feet
Above Ground Utility:	2366 Feet	1817 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	271 Feet	124 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 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: 61 - Stoneham 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: 08/22/2019

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: 19 Feet

water well: 4228 Feet

Estimated depth to ground water at Oil and Gas Location 19 Feet

Basis for depth to groundwater and sensitive area determination:

Location is sensitive due to depth to groundwater and proximity to low area.
Depth to groundwater taken from water well permit #23213

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 _____

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 were not included.

This location is being permitted as an alternate to the in process Goldeneye East, Goldeneye West, and Duclair Locations, per consultation with COGCC staff 8/8/19.

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

Signed: _____ Date: 09/10/2019 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: 11/11/2019

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.

<u>COA Type</u>	<u>Description</u>
Planning	This Form 2A has been approved prior to commission approval of the DSU (Docket #191100661). If the final agency action is denial of the DSU then the operator shall abandon this Oil and Gas Location by submitting a Form 4 Sundry within 45 days of the agency denial; however, if location construction has commenced, then the location will be immediately subject to final reclamation.
Construction	Operator must implement site-specific best management practices in accordance with good engineering practices, including, but not limited to, construction of a berm or diversion dike, site grading, or other comparable measures, sufficient to protect mapped freshwater emergent wetland located approximately 19 feet northwest of the oil and gas location from a release of drilling, completion, produced fluids, and chemical products.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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 gas and water gathering lines, and mitigate any erosion problems that arise due to the construction of any pipeline(s).

3	Material Handling and Spill Prevention	<p>1. Integrity testing of flowlines connecting wellheads to the separators: CONSTRUCTION PHASE: The flowlines that Operator uses 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. Construction is tested with 100% x-ray and is hydrotested per the applicable ASME Code. OPERATIONS PHASE: Pressure testing of the flowlines is conducted on an annual basis. Additionally, Operator is already in compliance with 1104.i. Continuous Pressure Monitoring Requirements of the 1100 Series Flowline Regulations. Operator utilizes a series of standard operating procedures to define our flowline integrity testing program.</p> <p>2. Frequency on valve and fitting inspections: Operator's Lease Operators inspect all equipment on their locations at a minimum of once every 48 hours, but most sites are inspected every 24 hours. Valves and fittings inspections are part of the daily job duties of the lease operators. Any valve or fitting that is found to be leaking is either repaired immediately by the lease operator or shut-in procedures are implemented as described below. Additionally, lease operators conduct a documented monthly inspection of the facility and this includes inspection of all valves and fittings.</p> <p>3. Description of Lease Operator Inspections, Monthly Documented Inspections & Environmental Inspections: The Operator lease operator inspections are done as a routine part of the lease operators job. The lease operator would typically visit each of their assigned locations daily. They conduct a visual inspection of the facility which includes all valves, fittings, wellhead, tanks, vapor control systems and all connections. The lease operator also checks our Scada automation system for system pressures and flows. Pressure and flow sensors are placed on multiple points throughout the system and are specifically 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 also set-up with alarms that are triggered by anomalous pressure or flows. Low pressure warnings can activate automatic shut-in of the well and system. Lease operator inspections would note any leaks of either gas or fluids which triggers an immediate repair or shut-in. 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).</p> <p>4. Measures for when leaks are discovered: If we suspect a leak we shut in the well and hydrotest the line. If it passes, then the well is brought back into production. If there is an actual leak, the well is kept shut in while the leak is found and fixed. Not until the line has passed hydrotesting, would the well be brought back online.</p>	
4	Material Handling and Spill Prevention	Location will be equipped with remote monitoring capability including tank level alarms.	

5	Material Handling and Spill Prevention	<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 develop a contingency plan/emergency response plan associated with the MLVT and it is on file at their office.</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	Construction	<p>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.</p>
7	Construction	<p>As part of pad construction, a sediment trap and a temporary diversion consisting of a cut swale and compacted earthen berm will be constructed around the perimeter of the pad. The cut swale will be routed to the sediment trap. Both the sediment trap and the swale will be designed in accordance with good engineering practices. The combination of these BMPs will prevent offsite mitigation or sediment/contaminant into nearby surface waters. Additionally, the pad area around the wells will be plated with 6 inches of road base compacted to 4 inches.</p>
8	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. 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>
9	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: 9 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2158201	CORRESPONDENCE
2158202	CORRESPONDENCE
2479297	CORRESPONDENCE
2479298	OBJECTIVE CRITERIA REVIEW MEMO
402165402	FORM 2A SUBMITTED
402169481	HYDROLOGY MAP
402169482	LOCATION DRAWING
402169483	LOCATION PICTURES
402169484	REFERENCE AREA MAP
402169485	REFERENCE AREA PICTURES
402169486	NRCS MAP UNIT DESC
402169487	NRCS MAP UNIT DESC
402169488	SURFACE AGRMT/SURETY
402171764	MULTI-WELL PLAN
402179489	ACCESS ROAD MAP

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	With operator concurrence: added BMP for MLVT, and attached correspondence regarding extensive location acreage (Doc# 2158202).	11/06/2019
OGLA	Operator has confirmed they are waiting for the approval of a DSU for 1280-acres (Secs 16 & 21, docket# 191100661, pending Dec 2019 hearing) for this location. If DSU is approved timely, Operator intends to submit the 10 APDs proposed for this location and commence construction of this approved location immediately to begin development of the Federal lease in Section 21 prior to the lease's expiration date (2/29/2020). Operator will withdraw all pending APDs and abandon via Sundry all approved APDs and Form 2As for the Goldeneye East Location (ID# 468699) and Duclair Location (ID# 464461). Operator acknowledges COGCC will not allow construction of all three permitted locations (Goldeneye Center, Goldeneye East, & Duclair) to develop the minerals in Sections 16 & 21. Correspondence attached (doc# 2158201).	11/05/2019
Permit	Multi-Well Plan evaluated. Permit Review Complete.	10/31/2019
OGLA	The Objective Criteria Review Memo (Doc #2479298) is attached to this Form 2A. Following additional analysis arising out of the Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181.	10/31/2019
OGLA	Operator revised their secondary containment BMP to specify where secondary containment berms will be constructed and provided a spill protection BMP for the drilling operations. No Public Comments. OGLA review completed and task passed.	10/25/2019
OGLA	Requested operator revise their secondary containment BMP to specify where secondary containment berms will be constructed and provide a spill protection BMP for the drilling operations. Due by November 8, 2019.	10/25/2019
OGLA	COGCC staff conducted its technical review of this Form 2A Oil and Gas Location Assessment within the context of SB 19-181 and the required Objective Criteria. This Form 2A met Objective Criteria #5c.	10/24/2019
OGLA	Passed Completeness.	09/26/2019
Permit	Returned to draft per operators request.	09/16/2019

Total: 9 comment(s)