

FORM
2A

Rev
08/13

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:

401189323

Date Received:

01/24/2017

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:

454144

Expiration Date:

02/27/2021

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: 10646
 Name: BISON EXPLORATION LLC
 Address: PO BOX 1168
 City: DENVER State: CO Zip: 80202

Contact Information

Name: Ryan Bruner
 Phone: (720) 354-4596
 Fax: ()
 email: rbruner@extractionog.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20160140 Gas Facility Surety ID: _____
- Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Jamaso Number: 4-65
 County: ARAPAHOE
 Quarter: SWNW Section: 4 Township: 4S Range: 65W Meridian: 6 Ground Elevation: 5585

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: 2428 feet FNL from North or South section line
445 feet FWL from East or West section line

Latitude: 39.733350 Longitude: -104.676722

PDOP Reading: 1.5 Date of Measurement: 12/27/2016

Instrument Operator's Name: Jared Christopher, N.P.

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: Jamaso LLC

Phone:

Address: 4100 E Mississippi Ave

Fax:

Address: Suite 500

Email:

City: Glendale State: CO Zip: 80246

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: No

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

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:	1107 Feet	797 Feet
Building Unit:	1150 Feet	1026 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	289 Feet	896 Feet
Above Ground Utility:	356 Feet	962 Feet
Railroad:	4269 Feet	4056 Feet
Property Line:	180 Feet	20 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, and Designated Outside Activity Area - as defined in 100-Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- Buffer Zone
- Exception Zone
- Urban Mitigation Area

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: _____

- 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.

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: TrC - Truckton loamy sand, 1 to 5 percent slopes

NRCS Map Unit Name: AdC - Adena-Colby silt loams, 1 to 5 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, Chokeycherry)
- 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: _____ 0 Feet

water well: _____ 989 Feet

Estimated depth to ground water at Oil and Gas Location _____ 45 Feet

Basis for depth to groundwater and sensitive area determination:

Closest downgradient surface water feature is existing drainage running through the East side of the pad. Please refer to the attached construction layout to see how we plan to deal with existing drainage.

Basis for depth to groundwater is the nearest water well CDWR Permit #84555.

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 _____

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: There are no building units within 1000' of this location, a Facility Layout drawing and Waste Management Plan are not required.

Only eight APDs are being submitted concurrently with this Form 2A. The other eight APDs will be submitted at a future date.

Operator certifies that the MLVTs will be designed and implemented consistent with the COGCC Policy on the Use of Modular Large Volume Tanks in Colorado. MLVT Design Package, certified and sealed by a licensed professional engineer, is available upon request.

MLVT Information:
Vendor - Complete Energy Services
Manufacturer - MWS Tanks
Number and Size - 1 160' diameter tank
Timeframe on location - approximately 30 days

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

Signed: _____ Date: 01/24/2017 Email: rbruner@extractionog.com

Print Name: Ryan Bruner Title: Regulatory Project Mgr

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved:  Director of COGCC Date: 2/28/2018

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
	A drainage transects the Location. Operator shall use Best Management Practises and engineering controls to not impede channelized flow into First Creek located to the south of the Location.

Best Management Practices

No	BMP/COA Type	Description
1	General Housekeeping	<p>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.</p> <p>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.</p>
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 whenever feasible, and mitigate any erosion problems that arise due to the construction of any pipeline(s).
3	Dust control	Operator shall employ practices for control of fugitive dust caused by their operations. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high- wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers may be used.
4	Construction	Permanent lighting will be installed around the facility to allow both the operator and haulers to conduct safe operations at night. All lights will be directed down toward the location or shielded so no light pollution leaves the facility.
5	Odor mitigation	Oil & gas facilities and equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare. Operator is in the process of implementing a new base fluid for Oil Base Mud systems. The aromatics and BTEX concentrations are much less than that of generic diesel. With these two things being the major contributors to the odor from diesel, this should lead to less odor at the drill site caused by OBM.

6	Drilling/Completion Operations	<p>Operator has 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 has developed 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>
7	Interim Reclamation	<p>Operator shall be responsible for segregating the topsoil, backfilling, re-compacting, reseeded, 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 pre-existing conditions as best as possible with control of all noxious weeds.</p>

Total: 7 comment(s)

Attachment Check List

Att Doc Num	Name
1010383	FACILITY LAYOUT DRAWING
1010384	LOCATION DRAWING
2473089	NRCS MAP UNIT DESC
2473179	MULTI-WELL PLAN
401189323	FORM 2A SUBMITTED
401190177	ACCESS ROAD MAP
401190181	HYDROLOGY MAP
401190183	LOCATION PICTURES
401190189	NRCS MAP UNIT DESC
401193125	SURFACE AGRMT/SURETY

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	IN PROCESS - Operator provided revised multi-well plan (attached). With Operator concurrence, added the comment on the Submit tab that only eight APDs are currently submitted. Final review complete.	02/27/2018
Permit	ON HOLD - Contacted Operator to request another revised multi-well plan that highlights the current in-process wells, not the future planned wells.	02/23/2018
OGLA	ON HOLD pending updated Location Drawing and UMA/Facility Layout Drawings. Received - 02/22/2018 MMH PUSHED Back to IN PROCESS - 02/23/2018 MMH	02/08/2018
OGLA	Uploaded modified Multi-Well Plan. Modified Facilities List. Awaiting updated Location Drawing and UMA/Facility Layout Drawings. Uploaded Modified Location Drawing and Facility Layout Drawing. - 02/23/2018 Per Operator request, modified Facilities List to the following: Wells – 16 Separators – 16 Oil Tanks – 8 Produced Water Tanks -2 Maintenance Tank- 1 LACT- 2 VRU- 2 VOC Combustors – 2 ECD's – 4 Meter Building-1 MLVT's – 2 (these will go on the far eastern side of location)	02/05/2018
Permit	Status PENDING - contacted Operator to request revised Multi-well Plan and updated Facilities inventory.	02/01/2018
Permit	OGLA updated Construction and Interim Reclamation Dates. Final review complete.	02/01/2018
Permit	Final review complete.	01/30/2018
Permit	The ten eastbound well APDs (Jamaso 4-65 4-3-1 through 4-3-10) originally planned as part of this 2A were withdrawn per Operator request on 10/30/2017. Per this adjustment, the following changes were made to this Form 2A: - changed "minerals beneath this location will be developed" from YES to NO. - deleted Related Forms doc #s for withdrawn wells.	12/20/2017
Permit	IN PROCESS - spacing order 535-902 issued in December 2017 hearing.	12/20/2017
OGLA	Hearing complete. OGLA review complete.	10/17/2017
Permit	Spacing application docket #170300142 was withdrawn by Operator. New pending docket #170600405 continued to September hearing.	08/29/2017
OGLA	ON HOLD awaiting June Hearing Jamaso 4-65: Spacing Applications continued to July Hearing - 06/13/2017 Jamaso 4-65: Spacing Applications continued to October Hearing - 09/13/2017	04/20/2017
Permit	Status Active - attached NRCS documentation provided by Operator. Passed initial permitting review.	04/12/2017

OGLA	<p>Removed the following BMPs as they pertain to the APDs and not the Location.</p> <p>"Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling."</p> <p>Removed BMPs that restated Rules.</p>	03/22/2017
OGLA	<p>Production Pits are planned for this Location. Two Form 15s are required for the approval of this Location with two production pits. Preliminary Sensitive Area Determination is being conducted.</p> <p>- Per Operator request, changed 2 Production Pits to 2 Partially Buried Water Vaults.</p> <p>Changed Interim Reclamation date to 04/01/2018 because the Location lies within dry land crop land.</p> <p>Location was designed to lie outside of the UMA. Attached UMA Survey from Operator.</p> <p>Missing NRCS Attachment for Adena-Colby soils.</p> <p>Operator actively engaged with the Bennet Fire Department - 04/15/2017</p>	03/22/2017
Permit	<ul style="list-style-type: none"> Multi-well plan revised. 	02/03/2017
Permit	<ul style="list-style-type: none"> Multi-well plan: Label qtr-qtr appears to be incorrect. 	02/01/2017

Total: 17 comment(s)