

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:

401722041

Date Received:

08/04/2018

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:

471055

Expiration Date:

01/30/2023

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: 10661
 Name: BISON OIL & GAS II LLC
 Address: 518 17TH STREET #1800
 City: DENVER State: CO Zip: 80202

Contact Information

Name: Abigail Wenk
 Phone: (720) 644-6997
 Fax: ()
 email: awenk@bisonog.com

FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID (Rule 706): 20190035 Gas Facility Surety ID (Rule 711): _____
 Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: Miller 7-61 Number: 13A
 County: WELD
 Quarter: NWNW Section: 13 Township: 7N Range: 61W Meridian: 6 Ground Elevation: 4965

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: 1170 feet FNL from North or South section line
303 feet FWL from East or West section line
 Latitude: 40.579049 Longitude: -104.163894

PDOP Reading: 1.2 Date of Measurement: 07/03/2018

Instrument Operator's Name: Matthew Miller

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: 08/02/2019

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

Additional explanation of local process:

WELD COUNTY HAS WAIVED THE RIGHT TO PRECEDE COGCC IN SITING.
Operator has approved siting permit (WOGLA) for Miller 7-61 13A location.
WOGLA was approved on 10/30/2019- WOGLA19-0200

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>10</u>	Oil Tanks*	<u>20</u>	Condensate Tanks*	_____	Water Tanks*	<u>10</u>	Buried Produced Water Vaults*	_____
Drilling Pits	_____	Production Pits*	_____	Special Purpose Pits	_____	Multi-Well Pits*	_____	Modular Large Volume Tanks	<u>2</u>
Pump Jacks	<u>10</u>	Separators*	<u>10</u>	Injection Pumps*	_____	Cavity Pumps*	_____	Gas Compressors*	<u>5</u>
Gas or Diesel Motors*	_____	Electric Motors	<u>10</u>	Electric Generators*	<u>1</u>	Fuel Tanks*	_____	LACT Unit*	<u>1</u>
Dehydrator Units*	_____	Vapor Recovery Unit*	<u>5</u>	VOC Combustor*	<u>10</u>	Flare*	_____	Pigging Station*	_____

OTHER FACILITIES*

Other Facility Type	Number
Instrument Air Compressors	2
Vapor Recovery Towers	10

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:

2" Schedule 80 line steel pipe welded from the wellhead to the separator, one line per well.
6" Schedule 80 line steel pipe for combined Gas sales.
2" Schedule 40 line steel pipe will be set downstream of the separator for gas, oil and water.

CONSTRUCTION

Date planned to commence construction: 04/01/2020 Size of disturbed area during construction in acres: 13.30
Estimated date that interim reclamation will begin: 07/01/2020 Size of location after interim reclamation in acres: 6.50
Estimated post-construction ground elevation: 4967

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: Joyce Julia Miller Phone: _____

Address: 38463 County Road 95 Fax: _____

Address: _____ Email: _____

City: Briggsdale State: CO Zip: 80611

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): _____

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:	3948 Feet	3858 Feet
Above Ground Utility:	3949 Feet	3910 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	303 Feet	407 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: 44—Olney fine sandy loam, 0 to 6 percent slopes

NRCS Map Unit Name: _____

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: 1965 Feet

water well: 5560 Feet

Estimated depth to ground water at Oil and Gas Location 200 Feet

Basis for depth to groundwater and sensitive area determination:

Closest downgradient surface water feature is a lake/pond.

Nearest water well is CDWR Permit #17702--A. The basis for depth to ground water is CDWR Permit #173788--A, which is 10,425 NE.

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 318A

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 surface water features within 1000' of this Location, a Hydrology Map is not required.

There are no building units within 1000' of this location, a Facility Layout drawing is not required.

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 - 2 160' 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: 08/04/2018 Email: awenk@bisonog.com

Print Name: Abigail Wenk Title: Regulatory Manager

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: 1/31/2020

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

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	General Housekeeping	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	Material Handling and Spill Prevention	Operator shall use a Supervisory Control and Data Acquisition (SCADA) system in conjunction with tank level indicators which have the ability to automatically shut in wells during an upset condition.
3	Material Handling and Spill Prevention	Tank berms shall be constructed of steel walls with an engineered synthetic liner and designed to contain 100% of the capacity of the largest tank (or manifolded tanks) with the addition of rain water from a 25-year 24-hour storm event and 5% additional freeboard to account for any small piping or equipment that may be in containment. The engineered secondary containment system will be constructed of a perimeter of walls that are post driven into the ground around a flexible geotextile base. All components will then be sprayed with a polyurea liner technology. This liner technology maintains impermeability and puncture resistance under exposure to UV rays, weather extremes, and chemicals commonly encountered in oil and natural gas production, and provides seamless protection. All berms will be visually checked weekly at a minimum to a maximum of daily to ensure proper working condition.
4	Material Handling and Spill Prevention	AVO inspections will occur weekly, and LDAR inspections are performed quarterly. All records will be kept readily available.

5	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.
6	Construction	Light sources during all phases of operations will be directed downwards and away from occupied structures and public roads. Permanent lighting shall be mounted at compressor stations on a pole or building and directed downward to illuminate key areas within the facility, while minimizing the amount of light projected outside the facility.
7	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. Drilling rig and completion equipment engine exhaust will be directed away from occupied buildings to assist in mitigating potential odors. Sealed tanks with pressure relief valves and emissions controls will be utilized for the production phase. Bison Oil & Gas II will use an invert-based drilling fluid with diesel or a similar fluid for the base oil. If odor complaints are received and it is determined that they are caused by the invert drilling fluid, then an odor neutralizing agent or similar product will be added to the mud system to eliminate the odor. Cuttings are removed daily, with the exception being conductor hole cuttings which remain on location to be used as dry mix for the wet cuttings.
8	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>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>

9	Drilling/Completion Operations	Green Completions -Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate green completions techniques. When commercial quantities of salable quality gas are achieved at each well, the gas shall be immediately directed to a sales line or shut in and conserved. If a sales line is unavailable or other conditions prevent placing the gas into a sales line, the operator shall not produce the wells without an approved variance per Rule 805.b. (3)C.
10	Interim Reclamation	Operator shall be responsible for segregating the topsoil, backfilling, re-compacting, 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 pre-existing conditions as best as possible with control of all noxious weeds.

Total: 10 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1347738	OBJECTIVE CRITERIA REVIEW MEMO
2479358	LOCATION DRAWING
401722041	FORM 2A SUBMITTED
401722083	ACCESS ROAD MAP
401722085	LOCATION PICTURES
401722086	NRCS MAP UNIT DESC
401723951	SURFACE AGRMT/SURETY
401724670	MULTI-WELL PLAN
401728159	EXCEPTION LOC REQUEST
401728160	WASTE MANAGEMENT PLAN

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Final Review Complete	01/27/2020
OGLA	Operator has provided an updated Location Drawing and revised Odor mitigation BMP.	01/24/2020
OGLA	Final Review: MLVTs are not on the Location Drawing, check with permitting on Multi-well plan.	01/20/2020
Permit	Passed the permit review of the multi-well plan	12/11/2019
OGLA	The Objective Criteria Review Memo (Doc# 1347738) 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.	12/09/2019
OGLA	The following changes were made with Operator concurrence: - corrected P&A Bond ID to "20190035". - Entered the Local Government Information provided by the operator. - Entered the School Setback Distances provided by the operator. - updated BMPs for: lighting, Green Completions, leak detection, remote monitoring, and linded containment	12/04/2019
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 #8.	12/04/2019
OGLA	PENDING – waiting on Operator for questions/corrections regarding: - “Consultation & Contact Info” tab: the listed P&A Bond ID is "20170074", but the newest one on file is "20190035". - “Location Identification” tab: what is the local government information for this location? - “Cultural Setbacks” tab: missing school and childcare center distances.	12/04/2019
OGLA	No Public Comments. OGLA review completed and task passed.	09/04/2018
Permit	Passed Completeness.	08/13/2018
Permit	Returned to draft per operator request.	08/08/2018

Total: 11 comment(s)