

FORM  
2A

Rev  
04/18

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:

401704822

(SUBMITTED)

Date Received:

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:

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: 10459  
 Name: EXTRACTION OIL & GAS INC  
 Address: 370 17TH STREET SUITE 5300  
 City: DENVER      State: CO      Zip: 80202

Contact Information

Name: Kelsi Welch  
 Phone: (720) 354-4607  
 Fax: ( )  
 email: kwelch@extractionog.com

FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID (Rule 706): 20130028     Gas Facility Surety ID (Rule 711): \_\_\_\_\_
- Waste Management Surety ID (Rule 704): \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Blue Paintbrush      Number: Pad  
 County: WELD  
 Quarter: S2SW    Section: 18    Township: 2N    Range: 68W    Meridian: 6    Ground Elevation: 4986

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: 238 feet FSL from North or South section line  
1163 feet FWL from East or West section line

Latitude: 40.131808      Longitude: -105.051204

PDOP Reading: 1.4      Date of Measurement: 05/15/2018

Instrument Operator's Name: Travis Winnicki

## 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 #**

Well Site is served by Production Facilities

401704857

## FACILITIES

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

Wells	<u>32</u>	Oil Tanks*	_____	Condensate Tanks*	_____	Water Tanks*	_____	Buried Produced Water Vaults*	_____
Drilling Pits	_____	Production Pits*	_____	Special Purpose Pits	_____	Multi-Well Pits*	_____	Modular Large Volume Tanks	_____
Pump Jacks	_____	Separators*	_____	Injection Pumps*	_____	Cavity Pumps*	_____	Gas Compressors*	_____
Gas or Diesel Motors*	_____	Electric Motors	_____	Electric Generators*	_____	Fuel Tanks*	_____	LACT Unit*	_____
Dehydrator Units*	_____	Vapor Recovery Unit*	_____	VOC Combustor*	_____	Flare*	_____	Pigging Station*	_____

## OTHER FACILITIES\*

**Other Facility Type**

**Number**

Gas Lift Meter Building

2

\*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:

Pipeline Comment: Extraction will trench flowlines in one piping corridor that runs between the drill pad and the separator pad and be placed at 12" centers. These lines will most likely be 2" or 3" fusion bonded SCH160 steel pipe and have proper cathodic protection throughout the run. Extraction will then sweep up with a long radius that will tie off each line to the appropriate separator. All welds on these are 100% x-ray and hydro tested to the API and Manufactures specs for a class 1500 series flange. Also meets ASME code B31.4.

## CONSTRUCTION

Date planned to commence construction: 01/01/2019

Size of disturbed area during construction in acres: 12.67

Estimated date that interim reclamation will begin: 07/01/2019

Size of location after interim reclamation in acres: 4.33

Estimated post-construction ground elevation: 4986

## DRILLING PROGRAM

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

Is H<sub>2</sub>S 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:

Water-based drilling fluids will be disposed of via land application & water-based drill cuttings will be disposed of via beneficial reuse. Oil-based cuttings will be disposed of via commercial disposal. Please see complete waste management plan attached.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 449314 or Document Number: \_\_\_\_\_

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Rinn Valley Farms LLC Phone: \_\_\_\_\_

Address: 1266 County Road 20 1/2 Fax: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

City: Longmont State: CO Zip: 80504

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: oil and gas lease

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

Date of Rule 306 surface owner consultation 06/19/2018

## 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:	712 Feet	762 Feet
Building Unit:	952 Feet	947 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	929 Feet	833 Feet
Above Ground Utility:	917 Feet	824 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	228 Feet	247 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

- 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: 07/03/2018

## 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.

Extraction has considered all possible locations within the confines of the SUA for this well pad. The sole production facilities onsite are 2 Gas Lift Meter Buildings and they are 947' SE of the nearest BU. The proposed location for the Gas Lift Meter Buildings was chosen based on accessibility in relation to the proposed wellheads and the access road, surface owner preference, topography and to best preserve agricultural land per Weld County regulations. Moving the Gas Lift Meter Buildings to the N, E or S sides of the wellheads would unnecessarily expand the surface disturbance, make them less accessible in relation to the proposed wellheads, pipelines, production facilities and access road and place the Gas Lift Meter Buildings closer to other BU's to either the N or the SE. Lastly, the topography of the S2 of the SW of the section is less variable which minimizes the cut/fill and size of disturbance required to prep the surface for operations.

## 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: 15—Colby loam, 1 to 3 percent slopes

NRCS Map Unit Name: 41—Nunn clay loam, 0 to 1 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: 01/09/2018

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: 0 Feet

water well: 937 Feet

Estimated depth to ground water at Oil and Gas Location 240 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest downgradient water feature: Ditch, 0' S.  
Nearest water well measured from the edge of disturbance: 937' S; Receipt #0237878, Permit #132539--.  
Basis for depth to groundwater: Depth of nearest water well.

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 318A

## 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

The proposed Blue Bonnet 24W-20-9N (Doc #401743070) well was used as the reference point for footages and lat/long location.

The ditch located on the location will be removed or rerouted according to the surface owner's preference at the time construction is commenced.

Anticipated temporary flowback equipment to be on location for approximately 90 days (per well):

- 1 high pressure separator
- 1 low pressure separator
- 2 sealed water tank
- 1 sealed oil tank
- 2 Cimarron style burner
- 10 Q-5000 combustors (total)

The following Form 2s will be submitted at a later date pending confirmation of the 30-Day PSU Notices: Blue Bonnet 24W-20-14N (doc #401743096), Blue Bonnet 24W-20-15N (doc #401743102), Blue Bonnet 24W-20-16C (doc #401743114), Paintbrush 13W-20-1C (doc #401743152) & Paintbrush 13W-20-2N (doc #401743154).

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

Signed: \_\_\_\_\_ Date: \_\_\_\_\_ Email: kwelch@extractionog.com

Print Name: Kelsi Welch Title: Regulatory Analyst

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: \_\_\_\_\_

## 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	Planning	604.c.(2).K. Pit level Indicators shall be used on location for flowback tanks.
2	Planning	604.c(2)M. The location will be adequately fenced to restrict access by unauthorized persons after drill and completions are complete.
3	Planning	604.c.(2)N. Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the wellhead tanks or separators. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code. Flammable liquids shall not be stored within fifty (50) feet of the wellbore, except for the fuel in the tanks of operating equipment or supply for injection pumps. Where terrain and location configuration do not permit maintaining this distance, equivalent safety measures should be taken.
4	Planning	This location is subject to a Weld County Oil and Gas Location Assessment. Extraction is currently working through the WOGLA process with Weld County staff.
5	Planning	604.c.(2).E. This location will be a multi-well pad, located in a manner which allows for the greatest distances possible from building units.

6	Planning	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
7	Traffic control	604.c.(2)S. Access Roads: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Traffic will be routed to minimize local interruption. The access road will be constructed with aggregate road base material and vehicle speeds will be limited to reduce dust. During construction and through the life of this location, Operator may use methods described in the "Dust Control" BMP included on this application to control fugitive dust along the access road.
8	Traffic control	604.c.(2)D: If required by the local government, a traffic plan shall be coordinated with the local jurisdiction prior to commencement of move in and rig up. Any subsequent modification to the traffic plan must be coordinated with the local jurisdiction.
9	General Housekeeping	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 in a timely manner.
10	General Housekeeping	604.c.(2)P. Trash Removal: All trash, debris and material not intrinsic to the operation of the oil and gas facility shall be removed and legally disposed of as applicable.
11	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 flowlines and/or gathering lines whenever feasible and mitigate any erosion problems that arise due to the construction of any pipeline(s). Location will be covered under Extraction Oil & Gas's field wide permit, permit number COR03M013. Typical stormwater BMPs installed include but are not limited to a diversion ditch and berm with sediment traps, installation of wattles where necessary, and swales around the perimeter of location with use of a sediment base where necessary.
12	Storm Water/Erosion Control	604.c.(2)F. Leak Detention Plan: Extraction will monitor production facilities weekly at a minimum to a maximum of daily to identify fluid leaks, including, but not limited to, visually inspecting all wellheads, tanks and fittings. Additionally, annual SPCC inspections will be conducted and documented. Annual flowline testing will also occur according to COGCC Rules 1101 and 1102. Inspection and record retention of flowline testing will be in accordance per COGCC regulation. All records will be made available to the COGCC upon request.
13	Dust control	805.c. Operator shall employ practices for control of fugitive dust caused by their operations. Such practices may 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.
14	Construction	803. Permanent lighting will be installed around the facility to allow both the operator and haulers to conduct safe operations at night. All light sources during all phases of operations will be directed downwards and away from occupied structures where possible.
15	Construction	604.c.(2).Q. Based beams will be used instead of guy line anchors.
16	Noise mitigation	Noise levels will be assessed as necessary and mitigation measures such as, but not limited to, sound walls and haybales, will be implemented to maintain compliance with Rule 802. and 604.c.(2).A.
17	Emissions mitigation	604.c.(2)C.i. Green Completions - Emission Control System. Test separators, associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules. During flowback, production will be sent through a high-pressure separator and into separate sealed oil and water tanks. The tanks will have a dedicated VOC line to capture any vapors. VOC lines are routed a minimum of 75' away from the tanks to a combustor to burn. Any sales gas from the separator will be routed a minimum of 75' away to an enclosed combustor to burn. This is only until the well cleans up to the point that it can go down the flowline to the production facility. The flowback tanks are anticipated to be on location for ~90 days.

18	Emissions mitigation	Operator will bring a new or expand existing gas sales lines, prior to first gas sales, in a timely manner, to send salable quality gas immediately down the sales line. 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.
19	Odor mitigation	805. Oil & gas facilities and equipment shall be operated in such a manner that odors do not constitute a nuisance or hazard to public welfare. Operator will utilize advanced oil-based mud systems which target the reduction of aromatics.
20	Drilling/Completion Operations	604.c.(2)B.i. Operator will be utilizing a closed loop system.
21	Drilling/Completion Operations	604.c.(2)J.i & ii. Backup stabbing valves will be required on well servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.
22	Drilling/Completion Operations	604.c.(2).H. Blowout Prevention Equipment ("BOPE"): A double ram and annular preventer will be used during drilling. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high-pressure fluid.
23	Drilling/Completion Operations	604.c.(2).I. BOPE testing for drilling operations. Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable.
24	Drilling/Completion Operations	604.c.(2)L. Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director. No drill stem tests are planned for this location.
25	Drilling/Completion Operations	604.c.(2).O. All load lines shall be bull plugged or capped.
26	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.
27	Final Reclamation	604.c.(2)T. Within 90 days after the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site. Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5)
28	Final Reclamation	604.c.(2).U. The operator shall identify the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). The operator shall also inscribe or imbed the well number and date of plugging upon the permanent monument

Total: 28 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401705183	ACCESS ROAD MAP
401705185	HYDROLOGY MAP
401705188	LOCATION PICTURES
401705190	NRCS MAP UNIT DESC
401705191	NRCS MAP UNIT DESC
401705192	WASTE MANAGEMENT PLAN
401705193	SURFACE AGRMT/SURETY
401753926	PRE-APPLICATION NOTIFICATION CERTIFICATION
401753927	FACILITY LAYOUT DRAWING
401753928	LOCATION DRAWING
401753930	MULTI-WELL PLAN

Total Attach: 11 Files

## General Comments

User Group

Comment

Comment Date

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Stamp Upon Approval
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Total: 0 comment(s)



**Public Comments**

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

