

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:

401396924

Date Received:

09/07/2017

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:

**453075**

Expiration Date:

**11/16/2020**

☒ 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: Alyssa Andrews

Phone: (720) 481-2379

Fax: ( )

email: aandrews@extractionog.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20130028 ☐ Gas Facility Surety ID: \_\_\_\_\_

☐ Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Hergert Number: 35-L Pad

County: WELD

QuarterQuarter: NESE Section: 35 Township: 7N Range: 67W Meridian: 6 Ground Elevation: 4883

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: 2272 feet FSL from North or South section line

703 feet FEL from East or West section line

Latitude: 40.529588 Longitude: -104.853601

PDOP Reading: 1.4 Date of Measurement: 06/29/2017

Instrument Operator's Name: Ross Todd

## 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

426721

## FACILITIES

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

Wells <u>8</u>	Oil Tanks* <u>      </u>	Condensate Tanks* <u>      </u>	Water Tanks* <u>      </u>	Buried Produced Water Vaults* <u>      </u>
Drilling Pits <u>      </u>	Production Pits* <u>      </u>	Special Purpose Pits <u>      </u>	Multi-Well Pits* <u>      </u>	Modular Large Volume Tanks <u>      </u>
Pump Jacks <u>      </u>	Separators* <u>      </u>	Injection Pumps* <u>      </u>	Cavity Pumps* <u>      </u>	Gas Compressors* <u>      </u>
Gas or Diesel Motors* <u>      </u>	Electric Motors <u>      </u>	Electric Generators* <u>      </u>	Fuel Tanks* <u>      </u>	LACT Unit* <u>      </u>
Dehydrator Units* <u>      </u>	Vapor Recovery Unit* <u>      </u>	VOC Combustor* <u>      </u>	Flare* <u>      </u>	Pigging Station* <u>      </u>

## OTHER FACILITIES\*

Other Facility Type

Number

\*Those facilities indicated by an asterisk (\*) shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

3" Schedule 80 Steel pipe from wellhead to separators, 1 line per well.

## CONSTRUCTION

Date planned to commence construction: 11/01/2017 Size of disturbed area during construction in acres: 5.97  
Estimated date that interim reclamation will begin: 05/01/2018 Size of location after interim reclamation in acres: 1.08  
Estimated post-construction ground elevation: 4883

## 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:

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: Hergert Limited Partners Phone:

Address: 4644 W. 21st Street Cir

Fax: \_\_\_\_\_

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

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

City: Greeley State: CO Zip: 80634

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 \_\_\_\_\_

### 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:	491 Feet	Feet
Building Unit:	576 Feet	Feet
High Occupancy Building Unit:	5107 Feet	Feet
Designated Outside Activity Area:	5280 Feet	Feet
Public Road:	523 Feet	Feet
Above Ground Utility:	380 Feet	Feet
Railroad:	5280 Feet	Feet
Property Line:	377 Feet	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: 07/14/2017

## 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.

Refer to approved Form 2A for Location #426721.

## SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 40 - Nunn loam, 1 to 3 percent slopes

NRCS Map Unit Name: 51 - Otero sandy loam, 1 to 3 percent slopes

NRCS Map Unit Name: 52 - Otero sandy loam, 3 to 5 percent slopes

## 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: \_\_\_\_\_ 0 Feet

water well: \_\_\_\_\_ 447 Feet

Estimated depth to ground water at Oil and Gas Location \_\_\_\_\_ 6 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest downgradient surface water feature is a ditch. The irrigation ditch will be relocated. The surface owner is aware of these plans.

Nearest water well is CDWR Permit 12843-F.

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 \_\_\_\_\_

## 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 Letter to Director for COGCC Rule 303b.(3)J.iii. Building Unit Owner Pre-Application Notification receipts, attached as Pre-Application Notification Certification.

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

Signed: \_\_\_\_\_ Date: 09/07/2017 Email: regulatory@ascentgeomatics.com

Print Name: Jeff Annable 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: 11/17/2017

## 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

	Prior to production, operator shall confirm Right to Construct offsite production facilities at Location ID 426721, and establish a SUA if necessary, and if Lease does not grant that right.
	Operator shall provide a scaled drawing showing the as-built layout of all off-location flowlines between this location and any production facilities and between any production facilities and the custody transfer point(s). This drawing shall be submitted via Form 4 Sundry within 30-days of production start.
	Operator shall post a copy of the approved Form 2A Oil & Gas Location Assessment on the location during all construction, drilling, and well completion activities.

## Best Management Practices

No	BMP/COA Type	Description
1	Planning	<p>604.c.(2)M. Fencing: A meeting with the surface owner will determine a fencing plan. The location will be adequately fenced to restrict access by unauthorized persons.</p> <p>604.c.(2)J.i 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.</p> <p>604.c.(2)J.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.</p> <p>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.</p>
2	Planning	<p>Rule 603.h.(1)B. Operational system will be automated to allow remote shut in, remote monitoring, and off-site response to emergencies.</p> <p>Rule 603.h.(2)A. Extraction maintains a current inventory of all existing Wells, Tanks, and separation equipment in a defined Floodplain. Extraction ensures that a list of all such Wells, tanks, and separation equipment is filed with the Director. As part of this inventory, Extraction maintains a current and documented plan describing how Wells within a defined Floodplain will be timely shut-in. This list is available upon request.</p> <p>Rule 603.h.(2)D. Production Pits, Special Purpose Pits (other than Emergency Pits), and flowback pits containing E&amp;P waste will not be on location.</p>
3	Traffic control	<p>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. During construction and through the life of this location, Operator will utilize watering, via water trucks, to control fugitive dust. Additionally, the access road will be constructed with aggregate road base material and vehicle speeds will be limited to ten miles per hour to reduce dust.</p>
4	General Housekeeping	<p>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.</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> <p>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.</p>
5	Storm Water/Erosion Control	<p>Implement and maintain BMPs to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Mitigate any erosion problems that arise due to the construction of any pipeline(s). Location will be covered under Extraction Oil &amp; Gas's field wide permit, permit number COR03M013.</p>
6	Dust control	<p>805.c. 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.</p>

7	Construction	<p>803. Light sources during all phases of operations will be directed downwards and away from occupied structures where possible.</p> <p>604.c.(2).Q. All guy line anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.</p> <p>604.c.(2).E. This will be a multi-well pad, located in a manner which allows for the greatest distances possible from building units.</p>
8	Noise mitigation	<p>During drilling and completions, temporary sound walls will be used along the west, south, east side of the well pad and wrapped around the northeast corner. Additionally, Extraction intends to power the drilling rig off of highline power to further mitigate noise.</p>
9	Emissions mitigation	<p>Operator will bring a new or expand existing gas sales lines, in a timely manner, to send salable quality gas immediately down the sales line.</p> <p>604.c.(2)C.i. Green Completions - Emission Control System. Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules.</p>
10	Odor mitigation	<p>805. Oil &amp; 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.</p>
11	Drilling/Completion Operations	<p>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.</p> <p>604.c.(2)L. Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director.</p> <p>604.c.(2)B.i. Operator will be utilizing a closed loop system.</p>
12	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 pre-existing conditions as best as possible with control of all noxious weeds.</p>
13	Final Reclamation	<p>604.c.(2)T. Within 90 days subsequent to 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)</p> <p>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</p>

Total: 13 comment(s)



## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2478389	NRCS MAP UNIT DESC
2478390	CORRESPONDENCE
2478391	RULE 306.E. CERTIFICATION
401396924	FORM 2A SUBMITTED
401397327	PRE-APPLICATION NOTIFICATION CERTIFICATION
401397328	LOCATION DRAWING
401397329	ACCESS ROAD MAP
401397331	HYDROLOGY MAP
401397355	MULTI-WELL PLAN
401397410	WASTE MANAGEMENT PLAN
401397423	NRCS MAP UNIT DESC
401397426	NRCS MAP UNIT DESC
401397466	LOCATION PICTURES
401397828	FACILITY LAYOUT DRAWING

Total Attach: 14 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	11/13/2017
Permit	Permitting Review Complete.	11/02/2017
OGLA	IN PROCESS - Operator revised the Control of fire hazards BMP, Storm Water/Erosion Control BMP, concurred with removing the Leak Detection BMP, Pit level Indicators BMP, & Loadlines BMP as no production facilities are being proposed, provided a Rule 603.h. Floodplain BMP, provided a missing NRCS Map Unit Description attachment, and provided a comment on their intentions concerning an irrigation ditch that runs through the proposed location.  OGLA review complete and task passed	10/12/2017
OGLA	ON HOLD - Requested operator revise the Control of fire hazards BMP, Storm Water/Erosion Control BMP, concur with removing the Leak Detection BMP, Pit level Indicators BMP, & Loadlines BMP as no production facilities are being proposed, provide a Rule 603.h. Floodplain BMP, provide a missing NRCS Map Unit Description attachment, and provide a comment on their intentions concerning an irrigation ditch that runs through the proposed location. Due by 11/6/17.	10/06/2017
Permit	Passed Completeness.	09/18/2017
OGLA	Passed Buffer Zone completeness review.	09/11/2017
Permit	Referred to OGLA Supervisor for buffer zone review.	09/08/2017

Total: 7 comment(s)