

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:

401539833

Date Received:

02/09/2018

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:

458152

Expiration Date:

10/17/2021

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: 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: Lind Number: 26-D
 County: WELD
 Quarter: NENE Section: 26 Township: 7N Range: 67W Meridian: 6 Ground Elevation: 4948

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: 393 feet FNL from North or South section line
737 feet FEL from East or West section line

Latitude: 40.551295 Longitude: -104.853536

PDOP Reading: 1.6 Date of Measurement: 10/09/2017

Instrument Operator's Name: I. Carabajal

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: LIND FARMS LLC

Phone:

Address: 38241 WCR 23

Fax:

Address:

Email:

City: EATON State: CO Zip: 80615

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:	611 Feet	390 Feet
Building Unit:	809 Feet	588 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	672 Feet	527 Feet
Above Ground Utility:	708 Feet	563 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	265 Feet	140 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: 11/30/2017

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.

This surface location allows wells to be drilled both east and west from one central surface location. Other surface locations were looked at but not available. The Lind 26-D was chosen because it is adjacent to an existing oil and gas location on the same property and the surface owner wished to keep the facilities consolidated. The proposed production facilities cannot be moved further north because the surface owner wishes to preserve the acreage for farming. This is consistent with Weld County's requirement that oil and gas facilities are planned and sited to preserve as much agricultural ground as possible. Also, moving the location too much further north would put the location in a LUMA. The proposed production facilities cannot be moved any further west because there is a ditch that borders the west side of the pad- it would pose a risk of putting buried flowlines too close to shallow ground water, which in turn would create a greater risk of corrosion.

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: 32—Kim loam, 1 to 3 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: 2 Feet

water well: 1767 Feet

Estimated depth to ground water at Oil and Gas Location 10 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest surface water feature: Wetland 2' west
Nearest water well: Permit 1997-1A 1767' SE

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 Reference surface location: Lind 25E-10-2N

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
 Signed: _____ Date: 02/09/2018 Email: aandrews@extractionog.com

Print Name: Alyssa Andrews 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: 10/18/2018

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**

	Operator shall conduct a post construction survey of the Oil & Gas Location in order to prepare an As-built drawing. This As-built Drawing shall also depict the number of Building Units within 1,000 feet of the edge of the disturbance area in order to confirm whether or not it is within an Urban Mitigation Area. This As-built drawing shall be submitted via a Form 4 Sundry within 30 days of construction activities being completed.
	Operator shall post an approved copy of this Form 2A on the location during all construction, drilling, and well completion activities.
	Operator must implement site-specific best management practices in accordance with good engineering practices, including, but not limited to, construction of a berm or diversion dike, site grading, or other comparable measures, sufficient to protect the mapped wetlands and Eaton Canal located 2 feet west of the oil and gas location from a release of drilling, completion, produced fluids, and chemical products.

Best Management Practices**No BMP/COA Type****Description**

1	Planning	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.
2	Planning	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.
3	Planning	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.
4	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.

5	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. 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.
6	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. An access permit will be obtained with the town of Severance.
7	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.
8	General Housekeeping	804. Visual Impacts: All long term facility structures will be painted a color that enables the facilities to blend in with the natural background color of the landscape, as seen from a viewing distance and location typically used by the public
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 immediately
10	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 a diversion ditch and berm with sediment traps and installation of wattles where necessary.
11	Material Handling and Spill Prevention	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.
12	Material Handling and Spill Prevention	604.c.(2)R Tank Specifications: Tanks will be designed, constructed and maintained in accordance with NFPA Code 30 (2008 version). All tanks are visually inspected by the operator weekly at a minimum to a maximum of daily and annual SPCC inspections will be conducted and documented. Inspection and record retention of tank inspections will be in accordance per SPCC 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 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.
14	Construction	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.
15	Construction	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.
16	Construction	604.c.(2).G. Berm construction. Tank berms shall be constructed of steel rings with a synthetic or engineered liner and designed to contain 150% of the capacity of the largest tank. All berms will be visually checked weekly at a minimum to a maximum of daily to ensure proper working condition. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. No potential ignition sources shall be installed inside the secondary containment area unless the containment area encloses a fired vessel.

17	Construction	803. 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.
18	Noise mitigation	604.c.(2)A. Sound walls will be used during drilling and completion operations. Sound walls will be installed on east and south edges of the pad.
19	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.
20	Emissions mitigation	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.
21	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.
22	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.
23	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. None planned for this well.
24	Drilling/Completion Operations	604.c.(2).K. Pit level Indicators shall be used for tanks on location.
25	Drilling/Completion Operations	604.c.(2).O. All loadlines shall be bull plugged or capped.
26	Drilling/Completion Operations	604.c.(2)B.i. Operator will be utilizing a closed loop system.
27	Drilling/Completion Operations	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.
28	Drilling/Completion Operations	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.
29	Drilling/Completion Operations	All liner seams will be welded and tested in accordance with applicable ASTM International standards.
30	Drilling/Completion Operations	Operator will be present during initial filling of the MLVT and the contractor will supervise and inspect the MLVT for leaks during filling.
31	Drilling/Completion Operations	Operator will comply with the testing and re-inspection requirements and associated written standard operating procedures (SOP) listed on the design package.
32	Drilling/Completion Operations	Signs will be posted on the MLVT indicating that the contents are freshwater.
33	Drilling/Completion Operations	The MLVT will be operated with a minimum of 1 foot of freeboard at all times.
34	Drilling/Completion Operations	Access to the MLVT will be limited to operational personnel and authorized regulatory agency personnel.
35	Drilling/Completion Operations	Operator or contractor will conduct daily visual inspections of the exterior wall and surrounding area for integrity deficiencies.
36	Drilling/Completion Operations	Operator has developed a contingency plan/emergency response plan associated with the MLVT and it is on file at their office.

37	Drilling/Completion Operations	Tanks will be filled using a local water source through temporary waterlines. No water will be trucked to location.
38	Drilling/Completion Operations	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.
39	Drilling/Completion Operations	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.
40	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.
41	Final Reclamation	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)
42	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: 42 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2478596	RULE 306.E. CERTIFICATION
2478597	CORRESPONDENCE
401539833	FORM 2A SUBMITTED
401539902	NRCS MAP UNIT DESC
401541741	WASTE MANAGEMENT PLAN
401541789	PRE-APPLICATION NOTIFICATION CERTIFICATION
401541813	PRE-APPLICATION NOTIFICATION CERTIFICATION
401542040	LOCATION PICTURES
401542041	OTHER
401542045	HYDROLOGY MAP
401549996	MULTI-WELL PLAN
401549997	ACCESS ROAD MAP
401550000	LOCATION DRAWING
401550001	FACILITY LAYOUT DRAWING

Total Attach: 14 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Building Unit southeast of the proposed location is the closest Building Unit to a production facility. This Building Unit is owned by the Surface Owner.	10/17/2018
Permit	Final review complete.	10/09/2018
Permit	Status Active: - updated construction/reclamation dates per operator. - operator changed cultural distances on associated APDs. No changes needed on this 2A. Permitting review complete.	10/09/2018
Permit	Status Pending - contacted operator: - need updated construction/reclamation dates. - cultural well distances to nearest public road and property line do not match any of the associated APDs.	10/08/2018
OGLA	Siting Rationale review completed and OGLA task passed.	05/23/2018
OGLA	IN PROCESS - Operator updated the date planned to commence construction, changed Sensitive Area question to indicate YES due to shallow groundwater and proximity of surface water features, revised the Emissions mitigation BMP to be more specific, & provided the Rule 306.e. Certification letter. OGLA review completed. Waiting on Siting Rationale review by OGLA Supervisor.	04/18/2018
OGLA	ON HOLD - Requested operator update the date planned to commence construction, change Sensitive Area question to indicate YES due to shallow groundwater and proximity of surface water features, revise the Emissions mitigation BMP to be more specific, & provide the Rule 306.e. Certification letter. Due by 4/26/18.	03/26/2018
Permit	Passed Completeness.	02/21/2018
Permit	Returned to draft for: - missing attachment "MULTI-WELL PLAN"	02/20/2018
OGLA	Passed Buffer Zone completeness review	02/16/2018
Permit	Referred to OGLA Supervisor for buffer zone review.	02/12/2018

Total: 11 comment(s)