

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:

401096865

Date Received:

09/23/2016

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:

448534

Expiration Date:

11/29/2019

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 LLC
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: Kiteley Number: 21-I
County: WELD
Quarter: NWSW Section: 21 Township: 3N Range: 68W Meridian: 6 Ground Elevation: 4990

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: 1429 feet FSL from North or South section line
591 feet FWL from East or West section line

Latitude: 40.207903 Longitude: -105.015189

PDOP Reading: 1.6 Date of Measurement: 07/27/2016

Instrument Operator's Name: O. MCKEE

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: Kiteley Farms LTD

Phone:

Address: 13844 COUNTY ROAD 7

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

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:	902 Feet	899 Feet
Building Unit:	902 Feet	1007 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	502 Feet	783 Feet
Above Ground Utility:	488 Feet	769 Feet
Railroad:	1744 Feet	1352 Feet
Property Line:	515 Feet	795 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: 08/17/2016

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: 16—Colby loam, 3 to 5 percent slopes ; 4—Aquolls and Aquepts, flooded
NRCS Map Unit Name: 65—Thedalund loam, 3 to 9 percent slopes
NRCS Map Unit Name: 82—Wiley-Colby complex, 1 to 3 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, Chokeycherry)
- Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- Alpine (above timberline)
- Other (describe): _____

WATER RESOURCES

Is this a sensitive area: No Yes

Distance to nearest

downgradient surface water feature: _____ 5 Feet

water well: _____ 968 Feet

Estimated depth to ground water at Oil and Gas Location _____ 26 Feet

Basis for depth to groundwater and sensitive area determination:

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

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 well for Location Identification: Kiteley #6
 MLVT will be on-site for approximately 3 months, with a capacity of 50,000 bbl, and manufacture is HydroLogistics.

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

Signed: _____ Date: 09/23/2016 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: 11/30/2016

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.

<u>COA Type</u>	<u>Description</u>
	Once drilling and construction are complete, the Operator will submit a survey drawing via Form 4 Sundry with distances from the nearest well and production equipment to the nearest building unit to show all wells and production are no less than the distances on the Form 2A.
	The approved Form 2A shall be posted at the location during the construction, drilling, and completions of the location.
	Operator shall provide location pictures in all four cardinal directions to see the location as required by Rule 303.b.(3)B.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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.
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. Operator will obtain access permits from Weld County for WCR 5.
6	Traffic control	604.c.(2)D: No traffic plan required.
7	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
8	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.
9	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.
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 gas and water 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: Operator 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 to 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 to 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	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.
15	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.
16	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.
17	Noise mitigation	604.c.(2)A. Sound walls and/or hay bales will be used during drilling and completion operations. Sound walls and/or hay bales will be installed on three-quarters of the pad perimeter. The noise mitigation will be on the NW side, SW side, and SE side of the pad.

18	Emissions mitigation	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.
19	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.
20	Odor mitigation	805. Oil & gas facilities and equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare. Operator is in the process of implementing a new base fluid for Oil Base Mud systems. The aromatics and BTEX concentrations are much less than that of generic diesel. With these two things being the major contributors to the odor from diesel, this should lead to less odor at the drill site caused by OBM.
21	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.
22	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.
23	Drilling/Completion Operations	604.c.(2).K. Pit level Indicators shall be used for tanks on location.
24	Drilling/Completion Operations	604.c.(2).O. All loadlines shall be bull plugged or capped.
25	Drilling/Completion Operations	604.c.(2)B.i. Operator will be utilizing a closed loop system.
26	Drilling/Completion Operations	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)
27	Drilling/Completion Operations	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
28	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.
29	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
30	Drilling/Completion Operations	All liner seams will be welded and tested in accordance with applicable ASTM International standards.
31	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.
32	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.
33	Drilling/Completion Operations	Signs will be posted on the MLVT indicating that the contents are freshwater.
34	Drilling/Completion Operations	The MLVT will be operated with a minimum of 1 foot of freeboard at all times.
35	Drilling/Completion Operations	Access to the MLVT will be limited to operational personnel and authorized regulatory agency personnel.
36	Drilling/Completion Operations	Operator or contractor will conduct daily visual inspections of the exterior wall and surrounding area for integrity deficiencies.
37	Drilling/Completion Operations	Operator has developed a contingency plan/emergency response plan associated with the MLVT and it is on file at their office.

38	Drilling/Completion Operations	Tanks will be filled using a local water source through temporary waterlines. No water will be trucked to location.
39	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.
40	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.
41	Interim Reclamation	Operator shall be responsible for segregating the topsoil, backfilling, re-compacting, reseeded, and re-contouring the surface of any disturbed area so as not to interfere with Owner's operations and shall reclaim such area to be returned to pre-existing conditions as best as possible with control of all noxious weeds.

Total: 41 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2316008	OTHER
2316012	RULE 306.E. CERTIFICATION
401096865	FORM 2A SUBMITTED
401096874	OTHER
401096875	HYDROLOGY MAP
401096877	LOCATION DRAWING
401096878	LOCATION PICTURES
401096879	MULTI-WELL PLAN
401096880	ACCESS ROAD MAP
401096889	SURFACE AGRMT/SURETY
401096986	NRCS MAP UNIT DESC
401096987	NRCS MAP UNIT DESC
401096988	NRCS MAP UNIT DESC
401096989	NRCS MAP UNIT DESC
401117800	OTHER
401117813	OTHER
401118610	FACILITY LAYOUT DRAWING
401122885	WASTE MANAGEMENT PLAN

Total Attach: 18 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Removed Bradenhead, Anti-Collision & Open Hole Logging BMP's. Final Review Completed.	11/30/2016
Permit	Permitting Review Complete.	11/21/2016
OGLA	Operator received 2 comments from 305a letters and addressed the concerns. No comments were received by COGCC or the county LGD. Location is within the Town of Mead. Town LGD did not comment. Location has the wells within the buffer, but not the production OGLA technical review complete and task passed.	11/09/2016
OGLA	Attached 306e certification and send summary for supervisor review.	11/02/2016
OGLA	Public comment period has ended, contact the Operator regarding 306e certification and information provided by the Weld Co LGD in the comments section of the 2A.	10/26/2016
OGLA	Operator provided MLVT capacity information - added to Operator comments section.	10/25/2016
LGD	This proposed oil and gas facility is located in unincorporated Weld County. The proposed access is off a Town of Mead maintained section of WCR 5. The operator should contact the Town of Mead regarding access. As of today's date, October 24, 2016, the Weld County Oil and Gas Liaison/LGD has not been contacted by any nearby resident(s) or governmental jurisdiction(s) regarding this proposed location. The County will respond to legitimate concerns or issues regarding a proposed location and attempt to facilitate a solution with the operator. Oil and Gas Exploration and Production activities are currently considered a Use by Right in the Agricultural Zoned District and no land use permitting is required by the County. A building permit is required for the production facilities (tank battery, separators, pump jacks, generators, compressors, etc.) from the Department of Planning Services. The use of a County right-of-way requires a Right-Of-Way Permit from the Department of Public Works. Troy Swain, Weld Oil Gas Liaison (970) 400-3579.	10/24/2016
OGLA	Operator responded via email to questions - added knockout unit to facility list, updated distance to water well to be from the edge of disturbance and not reference point, updated BMPs, and added MLVT information to comments section. Also attached MLVT info as other.	10/14/2016
OGLA	Change Rule 305.a.(3) evidence to "Other" for 305.a (2) certificate of compliance.	10/05/2016
Permit	Passed completeness.	10/04/2016
OGLA	Operator contacted surveyor and reported back to COGCC that corn is currently too high for new photos. - to be addressed during technical review. Passed Buffer Zone completeness review.	10/04/2016
OGLA	Buffer Zone completeness review - Location pictures only show well stakes and corn stalks - surrounding area not shown- contacted Operator and returned to DRAFT.	10/04/2016
Permit	Ready to pass completeness pending OGLA buffer zone review.	10/03/2016
Permit	Noted corrections to attachments.	10/03/2016
Permit	Returned to draft: -- missing required Waste Management Plan -- relabel 305.A attachments as "30 Day Notice"	10/03/2016
Permit	Returned to draft per Operator request.	09/26/2016
Permit	Referred to OGLA Supervisor for buffer zone review.	09/26/2016

Total: 17 comment(s)