

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:

400613743

Date Received:

05/23/2014

Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: \_\_\_\_\_

Submit signed original form. 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:

**438997**

Expiration Date:

**09/19/2017**

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: 1888 SHERMAN ST #200  
City: DENVER    State: CO    Zip: 80203

Contact Information

Name: CLAYTON DOKE  
Phone: (720) 420-5700  
Fax: (720) 420-5800  
email: cdoke@iptenergyservices.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20130028     Gas Facility Surety ID: \_\_\_\_\_  
 Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: DUCK CLUB PAD    Number: \_\_\_\_\_  
County: ADAMS

Quarter: SWSE    Section: 12    Township: 1S    Range: 66W    Meridian: 6    Ground Elevation: 5037

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: 240 feet FSL from North or South section line  
2407 feet FEL from East or West section line

Latitude: 39.973020    Longitude: -104.723150

PDOP Reading: 1.4    Date of Measurement: 04/02/2014

Instrument Operator's Name: BRIAN ROTTINGHAUS

## RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID # FORM 2A DOC #



## FACILITIES

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

Wells	<u>9</u>	Oil Tanks	<u>18</u>	Condensate Tanks	<u>      </u>	Water Tanks	<u>4</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>	Temporary Large Volume Above Ground Tanks	<u>      </u>
Pump Jacks	<u>      </u>	Separators	<u>9</u>	Injection Pumps	<u>      </u>	Cavity Pumps	<u>      </u>		
Gas or Diesel Motors	<u>      </u>	Electric Motors	<u>      </u>	Electric Generators	<u>      </u>	Fuel Tanks	<u>      </u>	Gas Compressors	<u>      </u>
Dehydrator Units	<u>      </u>	Vapor Recovery Unit	<u>      </u>	VOC Combustor	<u>6</u>	Flare	<u>      </u>	LACT Unit	<u>      </u>
								Pigging Station	<u>      </u>

## OTHER FACILITIES

Other Facility Type

Number

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

Buried pipelines between wellhead and separators, and from separators to the tanks. The pipes are generally 3", Schedule 40.

## CONSTRUCTION

Date planned to commence construction: 01/01/2015 Size of disturbed area during construction in acres: 8.00  
Estimated date that interim reclamation will begin: 07/01/2015 Size of location after interim reclamation in acres: 2.20  
Estimated post-construction ground elevation: 5037

## 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? No

## 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:

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Beneficial reuse or land application plan submitted? No

Reuse Facility ID:                    or Document Number:                   

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Mile High Duck Club

Phone:

Address: 1720 S Bellaire St, Suite 300

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

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

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

City: Denver State: CO Zip: 80222

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

Distance to nearest:

Building: 283 Feet  
Building Unit: 724 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 225 Feet  
Above Ground Utility: 266 Feet  
Railroad: 3747 Feet  
Property Line: 70 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.

## 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.

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: 04/22/2014

## 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 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: Lw - Loamy alluvial land, moderately wet  
NRCS Map Unit Name: AsB - Ascalon sandy loam, 1 to 3 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: \_\_\_\_\_  
List individual species: NRCS report does not list any plant species for the soil map units listed above

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: 297 Feet

water well: 300 Feet

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

Basis for depth to groundwater and sensitive area determination:

West of the production facility may fall within wetlands. Extraction O&G LLC shall avoid or minimize impacts to the degree practicalbe.  
Static water level was determined by using the two nearest static water levels from DWR Permit #55519 (SWL = 2') and DWR Permit #13207 (SWL = 21') and topographic elevation change.  
The nearest downgradient surface water feature is a creek located approx. 297' NW.  
Water well, located 300' SW, permit # 16338-F-, is an irrigation 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: \_\_\_\_\_

## 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 Building Unit)
- 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 Distance to property line is from production facility, not wellheads.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.  
 Signed: \_\_\_\_\_ Date: 05/23/2014 Email: ruben.markarian@iptenergyservices.com

Print Name: RUBEN MARKARIAN Title: ENGINEER

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: 9/20/2014

### 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>
	Operator shall submit a Form 42 to the COGCC 48 hours prior to the commencement of construction activities.
	Stormwater BMPs (both engineering and administrative controls) shall be implemented to prevent sediment and/or contaminant migration into the wetland areas located to the north and west of the proposed Location.
	The proposed location is in a sensitive area with shallow water and adjacent wetland areas. Secondary containment areas for tanks shall be constructed of steel rings, designed and installed to prevent leakage and resist degradation from erosion or routine operation and shall be constructed with a synthetic or engineered liner that contains all primary containment vessels and flowlines and is mechanically connected to the steel ring to prevent leakage. In addition, all production equipment shall be sufficiently anchored.

### Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	Multi-well Pads. It is a multi-well pad located in a manner which allows for resource extraction while maintaining the highest distances possible from the offsetting residential areas and complies with the wishes of the surface owner.
2	Planning	Development from existing well pads. These additional wells are located on an already approved location assessment and have been clustered in two lines to minimize surface disturbance area and cut and fill volumes.
3	Planning	Site-specific measures. This location has been designed to mitigate the visual impacts to the surrounding properties.
4	Traffic control	Access roads. The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times.
5	Traffic control	Traffic Plan. Traffic will be routed to minimize local interruption.
6	General Housekeeping	Removal of surface trash. 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.
7	General Housekeeping	Fencing requirements. A meeting with the surface owner will determine fencing plan.
8	Material Handling and Spill Prevention	Leak Detection Plan. Pumper will visit the location daily and visually inspect all tanks and fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR §112.
9	Material Handling and Spill Prevention	Loadlines. All loadlines shall be bullplugged or capped.
10	Material Handling and Spill Prevention	Tank specifications. Tanks will be designed, constructed and maintained in accordance with NFPA Code 30. The tanks are visually inspected once a day for issues, and recorded inspections are conducted once a month.

11	Construction	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 periodically to ensure proper working condition. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. Tertiary containment, such as an earthen berm, will be installed around production facilities.
12	Noise mitigation	Noise. The drilling site is far enough away from the building unit that noise mitigation is not required.
13	Emissions mitigation	Green Completions – Emission Control Systems. Test separators and associated flow lines and sand traps shall be installed on-site to accommodate Green completions techniques pursuant to COGCC Rules. In the anticipated absence of a viable gas sales line, the flowback gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for at least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustion where non-combustible gases are present.
14	Drilling/Completion Operations	Pit level indicators. Not applicable; a closed-loop system will be used and no pits shall be dug.
15	Drilling/Completion Operations	Closed Loop Drilling Systems – Pit Restrictions. Not applicable; a closed-loop system will be used for drilling.
16	Drilling/Completion Operations	Blowout preventer equipment (“BOPE”). A double ram and annular preventer will be used during drilling. At least the drilling company shall have a valid well blowout prevention certifications.
17	Drilling/Completion Operations	BOPE for well servicing operations. Adequate BOP equipment shall be used. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid.
18	Drilling/Completion Operations	Drill stem tests. Not applicable; no Drill Stem tests are planned.
19	Drilling/Completion Operations	Control of fire hazards. All materials which are considered fire hazards shall be a minimum of 25’ from the wellhead tanks or separators. Electrical equipment shall comply with API RP 500 and will comply with the current national electrical code.
20	Drilling/Completion Operations	Guy line anchors. All guy line anchors shall be brightly marked pursuant to Rule 604.c (2)Q.
21	Drilling/Completion Operations	Bradenhead Monitoring BMP: Operator will comply with COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.
22	Drilling/Completion Operations	Anti-Collision BMP: Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed wells. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed wellpath with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottomhole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment. For the proposed well, upon conclusion of drilling operations, an as constructed gyro survey will be submitted to COGCC with the Form 5.
23	Final Reclamation	Well site cleared. Within 90-day subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site
24	Final Reclamation	Identification of plugged and abandoned wells. P&A’d wells shall be identified pursuant to 319.a.(5).

Total: 24 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1009643	305.a.(2) Certification
1009644	NWI Map
1009645	306.e Certification
1009684	ECOLOGICAL RESOURCE SURVEY
400613743	FORM 2A SUBMITTED
400614392	NRCS MAP UNIT DESC
400614394	WASTE MANAGEMENT PLAN
400614395	MULTI-WELL PLAN
400614401	REFERENCE AREA PICTURES
400614402	REFERENCE AREA MAP
400614403	HYDROLOGY MAP A, TOPO
400614404	ACCESS ROAD MAP
400614405	LOCATION PICTURES
400614406	LOCATION DRAWING
400614407	EXCEPTION LOC WAIVERS
400614408	EXCEPTION LOC REQUEST
400614409	OTHER
400614411	FACILITY LAYOUT DRAWING

Total Attach: 18 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review complete.	9/18/2014 3:41:17 PM
OGLA	Changed construction date to 01/01/2015 per Operator verification. Changed Interim Reclamation date to 07/01/2015 based on 1000 Series Rules.	9/18/2014 2:50:18 PM
Permit	Put permit back in process; wetlands delineation study completed and location does not have to move.	9/16/2014 1:59:49 PM
Permit	Oper. requested permit be withdrawn due to wetlands issue.	8/21/2014 8:26:26 PM
OGLA	Proposed Location may be situated within a jurisdictional wetland area. Awaiting wetland delineation and 1) US Army Corps of Engineers 404 permit status OR 2) a revised survey showing the wetland boundaries with the Facility located outside of the boundaries.  Received Wetland Delineation Map prepared by ERO Consulting 09/16/2014 identifying project boundaries outside of the wetland area.	7/16/2014 7:42:20 AM
Agency	Per Operator, all wellheads outside of 150 feet from the surface property line. Cultural Setbacks Property Line Distance of 70 feet is based on measurements from Production Facilities.	7/9/2014 5:09:08 PM
Agency	Changed distance to nearest building to 283 feet per Operator via telephone conversation July 9, 2014. Building is a storage shed per Operator.  Changed Estimated Depth to Groundwater to 10 feet based on surrounding DWR Water Wells and topographic elevation. Changed Basis statement to "Static water level was determined by using the two nearest static water levels from DWR Permit #55519 (SWL = 2') and DWR Permit #13207 (SWL = 21') and topographic elevation change"	7/9/2014 4:49:23 PM
Permit	Corrected county to Adams. Checked box for S.O. is M.O. Corrected right to construct to lease.	5/29/2014 9:56:01 AM
LGD	Access point as shown is acceptable. If any additional access points are required, Adams County will approve all access points into this location. When the access points have been determined and approved, an Oil and Gas Rig Drilling Move Permit Will be required to move the rig both into and out of this location. If it is determined that the site will be placed into production, an On-Site Oil and Gas Production Facilities permit will also be required. Please contact Mr. Mark Russell, 720-523-6821, for information and fees regarding these permits.	5/29/2014 7:36:30 AM
Permit	Passed completeness	5/27/2014 10:17:19 AM

Total: 10 comment(s)