

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:

400582680

Date Received:

05/14/2014

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:

437751

Expiration Date:

06/25/2017

☒ 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: Jennifer Grosshans

Phone: (303) 928-7128

Fax: (303) 218-5678

email: regulatory@petro-fs.com

RECLAMATION FINANCIAL ASSURANCE

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

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: TWell Number: 8-I Pad

County: WELD

QuarterQuarter: W2SW4 Section: 8 Township: 6N Range: 67W Meridian: 6 Ground Elevation: 4812

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: 1319 feet FSL from North or South section line

224 feet FWL from East or West section line

Latitude: 40.497563 Longitude: -104.925744

PDOP Reading: 1.9 Date of Measurement: 02/19/2014

Instrument Operator's Name: Owen McKee

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>13</u>	Oil Tanks	<u>30</u>	Condensate Tanks	<u> </u>	Water Tanks	<u>6</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>13</u>	Injection Pumps	<u> </u>	Cavity Pumps	<u> </u>		
Gas or Diesel Motors	<u> </u>	Electric Motors	<u>4</u>	Electric Generators	<u> </u>	Fuel Tanks	<u> </u>	Gas Compressors	<u>4</u>
Dehydrator Units	<u> </u>	Vapor Recovery Unit	<u>4</u>	VOC Combustor	<u> </u>	Flare	<u> </u>	LACT Unit	<u> </u>
								Pigging Station	<u> </u>

OTHER FACILITIES

Other Facility Type

Number

Emissions Control Devices	<u>8</u>
Vapor Recovery Tower	<u>2</u>

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

80 - 3" steel pipe from each wellhead to separators.
40 - 2" steel pipe for oil and water from separators to tanks.

CONSTRUCTION

Date planned to commence construction: 07/01/2014 Size of disturbed area during construction in acres: 9.95
Estimated date that interim reclamation will begin: 01/01/2015 Size of location after interim reclamation in acres: 4.97
Estimated post-construction ground elevation: 4812

DRILLING PROGRAM

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

Is H₂S 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: Other

Other Disposal Description:

Cuttings will be disposed of by land spreading.

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: Win Tac Investments

Phone: _____

Address: 1321 College Avenue

Fax: _____

Address: _____

Email: _____

City: Boulder State: CO Zip: 80302

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: 465 Feet
Building Unit: 616 Feet
High Occupancy Building Unit: 4146 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 223 Feet
Above Ground Utility: 247 Feet
Railroad: 1213 Feet
Property Line: 224 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: 04/01/2014

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 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: 51- Otero Sandy Loam 1 to 3 percent

NRCS Map Unit Name: 50- Otero Sandy Loam, 0 to 1 percent slopes

NRCS Map Unit Name: _____

PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☒

Plant species from: ☐ NRCS or, ☐ field observation Date of observation: _____

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: 178 Feet

water well: 2050 Feet

Estimated depth to ground water at Oil and Gas Location 8 Feet

Basis for depth to groundwater and sensitive area determination:

CWDR Permit #15953-R.
Downgradient surface water feature is a concrete ditch.

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: No

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

Extraction Oil & Gas proposes to drill 13 horizontal wells on the TWell 8-I Pad located in the W2SW4 of Section 8, Township 6 North, Range 67 West in Weld County, Colorado.

Facility Layout attached.

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

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

Signed: _____ Date: 05/14/2014 Email: regulatory@petro-fs.com

Print Name: Jennifer Grosshans Title: Regulatory Technician

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: 6/26/2014

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.

COA Type

Description

	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 irrigation ditches located 178 feet west and 287 feet southwest 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	Multi-well Pads are 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	A meeting with the surface owner will determine the fencing plan.
3	Planning	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.
4	Planning	Closed Loop Drilling Systems- Pit restrictions, not applicable; a closed-loop system will be used for drilling.
5	Planning	Blowout Preventer Equipment ("BOPE"). A double ram will be used during drilling. At least the drilling company shall have a valid well blowout.
6	Planning	BOPE- 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.
7	Planning	Control of fire hazards- All material which is considered fire hazards 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.
8	Planning	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. 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	Planning	Light sources during all phases of operations will be directed downwards and away from occupied structures where possible. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.
10	Pre-Construction	Identification of plugged and abandoned wells will be identified pursuant to 319.a (5)
11	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
12	Traffic control	Traffic will be routed to minimize local interruption.

13	General Housekeeping	Removal of 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.
14	Material Handling and Spill Prevention	Leak Detention 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.
15	Dust control	Fugitive dust will be controlled by speed restrictions on all neighboring roads, regular road maintenance and repair, and avoiding construction activity during high wind days. If technologically and economically feasible, additional management practices may also be required to minimize fugitive dust, as well as to control silica dust while handling sand during frac'ing operations.
16	Construction	Berm Construction- Tanks 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.
17	Noise mitigation	The drilling site will be powered by electricity, mitigating the majority of noise from drilling operations. Sound walls and/or hay bales will be used to surround the well site during drilling operations.
18	Emissions mitigation	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. 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 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 combustions where non-combustible gases are present.
19	Odor mitigation	Operator will regulate odors in accordance with COGCC Rule 805. The production facilities will have VOC Combustors with emission control devices to comply with the Department of Public Health and Environment, Air Quality Control Commission.
20	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.

Total: 20 comment(s)

Attachment Check List

Att Doc Num	Name
1668331	NRCS MAP UNIT DESC
1668332	CORRESPONDENCE
1668358	RULE 306.E. CERTIFICATION
2167782	MINERAL LEASE MAP
2167783	OTHER
400582680	FORM 2A SUBMITTED
400594547	LOCATION DRAWING
400594551	LOCATION PICTURES
400594552	ACCESS ROAD MAP
400594554	HYDROLOGY MAP
400594555	NRCS MAP UNIT DESC
400594556	MULTI-WELL PLAN
400600900	WASTE MANAGEMENT PLAN
400606767	CORRESPONDENCE
400608315	FACILITY LAYOUT DRAWING

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Contacted PFS about Odor mitigation BMP as it referenced Bayswater Exploration not Extraction Oil & Gas. They indicated it was supposed to reference Extraction. I corrected it. Also, the distance to the nearest Building and Building Unit is measured from the nearest edge of the production facility and is therefore closer than the distances listed on the associated Form 2s.	6/26/2014 11:49:53 AM
Permit	Final review complete.	6/24/2014 1:38:43 PM
OGLA	Operator provided the Rule 306.e. Certification letter. OGLA task passed.	6/16/2014 9:02:09 AM
LGD	<p>A rural collector road is planned to follow the south property line. The right-of-way is 120 wide, located on the north side of the property line. See Tacincala Master Plan for details.</p> <p>The applicant shall submit for Conditional Use Grant approval from the Windsor Town Board for this and any other wells drilled within the Town of Windsor prior to initiating any drilling or other related activities. The Town requires the following conditions on the subject oil and gas facilities:</p> <p>CONDITIONS:</p> <p>1. Prior to the commencement of drilling, the applicant shall submit comprehensive "Drilling and Site Improvement Plans" for review and approval by the Town. Such plans shall address initial drilling activities, initial installation of site improvements and details, and on-going perpetual maintenance of the subject site including, but not limited to, the following:</p> <p>a. Site access plan. The Drilling and Site Improvement Plans and supplemental information shall address site access points and haul routes for review and approval.</p> <p>b. Public street clean-up and tracking prevention. The Drilling and Site Improvement Plans and supplemental information shall include a tracking pad for review and approval.</p> <p>c. Site grading. The Drilling and Site Improvement Plans and supplemental information shall address site grading, including any earth berms for emergency containment.</p> <p>d. Site lighting. The Drilling and Site Improvement Plans and supplemental information shall include details regarding site lighting fixtures and locations. Security and other site lighting shall utilize full cutoff light fixtures to mitigate light pollution.</p> <p>e. Temporary screening. The applicant shall install a buffer to screen the initial drilling activities and installation of site improvements from surrounding neighborhoods and streets. The temporary buffer shall include hay bales to enclose the drilling operations to provide noise mitigation.</p> <p>f. Permanent screening. Given the close proximity to residential neighbors, the Drilling and Site Improvement Plans shall depict proposed long-term screening materials including landscaping, earth berms and any other screening methods to mitigate visual impacts.</p> <p>g. Fencing. The Drilling and Site Improvement Plans shall depict fencing of the perimeter of the site. Fencing materials shall be reviewed for approval by the Town based upon the character of the surrounding neighborhood.</p> <p>h. Oil and gas equipment.</p> <p>(1) The applicant shall utilize electric motors in order to mitigate the noise impacts to the neighboring properties.</p>	6/13/2014 9:43:15 AM

	<p>(2)The applicant shall ensure that the wells and tanks are of the minimum size required to satisfy present and future functional requirements to mitigate visual impacts.</p> <p>(3)Low profile tanks shall be utilized and shall be installed in the least visible manner possible.</p> <p>(4)All tanks and equipment shall be painted to blend-in with the surrounding landscape.</p> <p>i.Air quality.</p> <p>(1)The applicant shall participate in any required Environmental Protection Agency (EPA) air quality monitoring and/or testing by allowing EPA to install equipment on site for said monitoring and testing.</p> <p>(2)The applicant shall install and operate an emissions control device (ECD) capable of reducing Volatile Organic Compound (VOC) emissions on the subject oil and gas equipment in accordance with Colorado Oil and Gas Conservation Commission (COGCC) and/or the Colorado Department of Public Health and Environment (CDPHE) rules and regulations.</p> <p>(3)The applicant shall submit to the Town copies of all air emissions reporting as required by the COGCC and/or the CDPHE's Air Pollution Control Division.</p> <p>j.Water quality.</p> <p>(1)The applicant shall ensure that any hydrocarbon discharges from the site comply with all state and federal water quality requirements.</p> <p>(2)The applicant shall provide test results from Groundwater Baseline Sampling and Monitoring required by COGCC Rule 318A.e(4) to the Town. (condition updated 10/28/13 to reflect updated COGCC rule)</p> <p>k.Emergency containment.The secondary containment berm surrounding all storage vessels shall be designed and constructed to contain a minimum of 110% of the volume of the largest vessel located within the containment area or to State of Colorado standards, whichever requirements are more stringent.</p> <p>l.Waste disposal.The applicant shall submit to the Town copies of all waste management reports as required by the COGCC and/or the CDPHE rules and regulations.</p> <p>m.The following certification blocks shall be included on the Drilling and Site Improvement Plans:</p> <p>(1)A signed owner's acknowledgement certification block.</p> <p>(2)A signed drilling operator's acknowledgement certification block.</p> <p>n.The following notes shall be included on the Drilling and Site Improvement Plans:</p> <p>(1)The applicant shall comply with all rules and regulations of the Colorado Oil and Gas Conservation Commission (COGCC).</p> <p>(2)The applicant shall comply with all rules and regulations of the Colorado Department of Public Health and Environment (CDPHE).</p> <p>(3)The applicant shall maintain on-going compliance with all conditions of the Town and Windsor-Severance Fire Rescue.</p> <p>(4)The facilities shall be kept clean and otherwise properly maintained at all times.</p> <p>(5)The existing access may be utilized for oil and gas well activities.This access</p>		
--	--	--	--

	<p>point is temporary and will be required to be removed at such time that permanent access is available in the future.</p> <p>2.The applicant shall address and comply with the conditions of Windsor-Severance Fire Rescue.</p> <p>ACCESS COMMENTS:</p> <p>If access to the site is proposed from a Town of Windsor street, such access point (s) shall require approval from the Town of Windsor Engineering Department and any required access improvements, street clean-up, tracking pads, etc., shall be addressed accordingly.</p>		
Permit	Ready to pass pending public comment 6/4/14.	5/29/2014 4:12:19 PM	
OGLA	IN PROCESS - Operator provided missing NRCS Soil Description, agreed to changing distance to nearest water well and adding COA to protect nearby surface waters. Operator also indicated that they are in contact with Town of Windsor concerning their local requirements. OGLA review complete. Waiting on Public Comment period.	5/27/2014 2:19:37 PM	
OGLA	ON HOLD - Requested missing NRCS Soil Description attachment, change distance to nearest water well, add a COA to protect nearby surface waters, and is operator aware of Town of Windsor comment and local requirements. Due by 6/27/14.	5/27/2014 10:26:52 AM	
Permit	Passed completeness	5/14/2014 2:41:21 PM	

Total: 8 comment(s)