

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:

401098081

(SUBMITTED)

Date Received:

09/06/2016

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 433139

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:

433139

Expiration Date:

☐ 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: Jeff Annable

Phone: (303) 928-7128

Fax: (303) 218-5678

email: regulatory@petro-fs.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20130034

☐ Gas Facility Surety ID: _____

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Pavistma South

Number: Pad

County: WELD

QuarterQuarter: NWSW Section: 32 Township: 6N Range: 67W Meridian: 6 Ground Elevation: 4953

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: 1665 feet FSL from North or South section line

200 feet FWL from East or West section line

Latitude: 40.440530 Longitude: -104.924790

PDOP Reading: 1.7 Date of Measurement: 02/21/2013

Instrument Operator's Name: Wyatt Hall

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 #

Production Facilities Location serves Well(s)

427262

FACILITIES

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

Wells	6	Oil Tanks*	26	Condensate Tanks*		Water Tanks*	3	Buried Produced Water Vaults*	1
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	1
Pump Jacks		Separators*	6	Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*		Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*	2	VOC Combustor*		Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type

Number

Emission Control Device	6
Flowmeter	1
Knockout	1
Vapor Recovery Tower	2

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

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

3" Schedule 80 Steel pipe from wellhead to separators, 1 line per well.
2" Schedule 40 Steel pipe for oil and water from separators to tanks.

CONSTRUCTION

Date planned to commence construction: 10/01/2016

Size of disturbed area during construction in acres: 5.69

Estimated date that interim reclamation will begin: 04/01/2017

Size of location after interim reclamation in acres: 4.30

Estimated post-construction ground elevation: 4953

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? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE

Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE

Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: VIMA Partners LLC

Phone:

Address: 1625 Pelican Lakes Pt

Fax:

Address: STE 201

Email:

City: Windsor State: CO Zip: 80550

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: Surface Use Agreement

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:	<u>1275</u> Feet	<u>904</u> Feet
Building Unit:	<u>1275</u> Feet	<u>904</u> 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

High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1567 Feet	1184 Feet
Above Ground Utility:	1649 Feet	1265 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	155 Feet	33 Feet

nearest Building is a Building Unit, enter same distance for both.
 - Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.
 -For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- ☒ Buffer Zone
☐ Exception Zone
☐ Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.
 - Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
 - Urban Mitigation Area - as defined in 100-Series Rules.
 - Large UMA Facility - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 07/29/2016

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.

The facilities on this location were permitted prior to the setbacks being in place. There are not any additional facilities that are planned on this location.

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: 32 - Kim loam, 1 to 3 percent slopes

NRCS Map Unit Name: 79 - Weld 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:

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: 1162 Feet

water well: 1414 Feet

Estimated depth to ground water at Oil and Gas Location 63 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest downgradient surface water feature is a concrete ditch.

Nearest water well is CDWR Permit 262798, however nearest water well with a recorded static water level is CDWR Permit 63272 at 4076' NE.

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 zone: No

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 The operator would like to request a Rule 604.b.(1)A Exception, as the original location was approved on 10/5/12.

Letter to Director for Rule 604.b.(1)A: Exception Request, attached as Exception Loc Request.

Since the operator is requesting an exception from pre-application notifications on this location, a Rule 305.a.(2) date that is 30 days prior to submittal was used.

This Amended Form 2A is being submitted to clean up the existing Disturbance Area and to expand the Disturbance Area to accommodate a MLVT.

A Hydrology Map is not required since there are no surface water features within 1000' of the location. Since the location has been built all surface water features within 1000' have been abandoned.

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

Signed: _____ Date: 09/06/2016 Email: regulatory@petro-fs.com

Print Name: Jeff Annable Title: Regulatory Analyst

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: _____ Director of COGCC Date: _____

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

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Best Management Practices

No BMP/COA Type

Description

1	Planning	A meeting with the surface owner will determine the fencing plan. 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.
2	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. Traffic will be routed to minimize local interruption.

3	General Housekeeping	<p>Visual Impacts: Equipment, regardless of construction date, which are observable from any public highway shall be painted with uniform, non-contrasting, non-reflective color tones (similar to the Munsell Soil Color Coding System), and with colors matched to, but slightly darker than, the surrounding landscape.</p> <p>Maintain appearance with garbage clean-up. Site will have unused equipment, trash and junk removed immediately. Operator shall keep the Surface Use Area as well as any roads or other areas used by Operator safe and in good order, including control of noxious weeds litter and debris.</p>
4	Material Handling and Spill Prevention	<p>604.c.(2)F. & 604.c(4)B.ii. 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. As part of Extraction's Leak Detection and Repair (LDAR) program, all facilities including above ground flowlines and piping will be inspected monthly with an infa-red camera. This frequency may be reduced as production declines in accordance to Colorado Department of Health and Environment - Regulation 7 Section XVII. Additionally inspections will be completed monthly, if not more frequently, as part of Extraction's internal Audio, Visual, and Olfactory (AVO) Monitoring Program. Records of the AVO inspections will be maintained through Extraction's field data capture software. In the event that a leak is identified, reporting and repair will be initiated through Extraction's internal process. Additionally annual SPCC inspections will be conducted by a third party 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.</p> <p>Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the tanks or separators. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code.</p> <p>Operator shall comply with state and federal laws, rules and regulations governing the presence of any petroleum products, toxic or hazardous chemicals or wastes on the Subject lands.</p>
5	Dust control	<p>Operator shall employ practices for control of fugitive dust caused by their operations. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high- wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers may be used.</p>
6	Construction	<p>Guy line anchors: All guy line anchors shall be brightly marked pursuant to Rule 604.c. (2)Q.</p> <p>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.</p> <p>Lighting: Site lighting will be directed downward and inward and shielded to avoid glare on public roads and Building Units within one thousand (1000) feet. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.</p>

7	Construction	<ul style="list-style-type: none"> • 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 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. • All liner seams will be welded and tested in accordance with applicable ASTM International standards. • Operator will be present during initial filling of the MLVT and the contractor will supervise and inspect the MLVT for leaks during filling. • Operator will comply with the testing and reinspection requirements and associated written standard operating procedures (SOP) listed on the design package. • Signs will be posted on the MLVT indicating that the contents are freshwater. • The MLVT will be operated with a minimum of 1 foot of freeboard at all times. • Access to the MLVT will be limited to operational personnel and authorized regulatory agency personnel. • Operator or contractor will conduct daily visual inspections of the exterior wall and surrounding area for integrity deficiencies. • Operator has developed a contingency plan/emergency response plan associated with the MLVT and it is on file at their office. • Construction: 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.
8	Construction	The partially buried produced water vaults will be coated using a spray on polyurethane material and felt liner. The spray-on liner and coating technology provides durable seamless protection for the vault eliminating risks of leaks.
9	Noise mitigation	The existing 20-30 foot tall earthen berm will provide noise mitigation along the east, south east, and north east side of the location. Sound walls and/or hay bales will be installed along the north end of the location, west of the existing facilities. Sound walls and/or hay bales will be installed along the south end of the location, south of the existing equipment and west of the end of the earthen berm.
10	Emissions mitigation	<p>Green Completions - Emission Control System: Test separators and associated flow lines and sand traps shall be installed to accommodate green completions techniques pursuant to COGCC Rules. Operator is working with midstream operators in the area. Operator will connect to a gas sales line prior to flowback and immediately direct salable quality gas down 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.</p> <p>Extraction will tie into a gas sales line after flowback.</p>
11	Odor mitigation	<p>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. 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.</p> <p>Operator is in the process of implementing a new base fluid for Oil Base Mud systems. The aromatics and BTEX concentrations are much less than that of generic diesel. With these two things being the major contributors to the odor from diesel, this should lead to less odor at the drill site caused by OBM.</p>

Total: 11 comment(s)

Attachment Check List

Att Doc Num**Name**

401098081	FORM 2A SUBMITTED
401104243	FACILITY LAYOUT DRAWING
401104244	LOCATION DRAWING
401104245	LOCATION PICTURES
401104246	MULTI-WELL PLAN
401104255	EXCEPTION LOC REQUEST
401109608	WASTE MANAGEMENT PLAN

Total Attach: 7 Files

General Comments

User Group**Comment****Comment Date**

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Total: 0 comment(s)

Public Comments

No public comments were received on this application during the comment period.

