

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:

400985285

Date Received:

02/11/2016

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:

448054

Expiration Date:

10/15/2019

☒ 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: 10343

Name: QEP ENERGY COMPANY

Address: 1050 17TH STREET - SUITE 800

City: DENVER State: CO Zip: 80265

Contact Information

Name: Melissa Cunningham

Phone: (307) 367-4012

Fax: ()

email: melissa.cunningham@qepres.com

RECLAMATION FINANCIAL ASSURANCE

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

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: POWDER WASH Number: 19-1

County: MOFFAT

QuarterQuarter: SESE Section: 19 Township: 12N Range: 97W Meridian: 6 Ground Elevation: 6781

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: 1094 feet FSL from North or South section line

1261 feet FEL from East or West section line

Latitude: 40.981498 Longitude: -108.330040

PDOP Reading: 2.7 Date of Measurement: 12/03/2015

Instrument Operator's Name: KIM LITTLE

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

OTHER FACILITIES*

Other Facility Type

Number

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:

Flowlines from the wellhead to the separator and to the condensate and produced water tanks will be 2-inch steel buried approximately 4 feet below grade.
The take away pipeline is carbon steel- 4½ inch O.D., Grade B, 0.188 wall thickness natural gas pipeline; this is the only pipeline planned since there is no oil expected.
Water will be transported by water trucks.

CONSTRUCTION

Date planned to commence construction: 11/05/2016 Size of disturbed area during construction in acres: 6.80
Estimated date that interim reclamation will begin: 05/15/2018 Size of location after interim reclamation in acres: 1.30
Estimated post-construction ground elevation: 6778

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: Recycle/reuse
Cutting Disposal: ONSITE Cuttings Disposal Method: Cuttings trench

Other Disposal Description:

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: BLM

Phone: 970-826-5000

Address: 455 Emerson Street

Fax: _____

Address: _____

Email: _____

City: Craig State: CO Zip: 81625

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 02/02/2016

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:	5280 Feet	5280 Feet
Building Unit:	5280 Feet	5280 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1786 Feet	1847 Feet
Above Ground Utility:	5280 Feet	5280 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	5280 Feet	5280 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.

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: _____

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 (onll 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: 123. Lilsnake-Sandwash complex, 3 to 20 percent slopes

NRCS Map Unit Name: _____

NRCS Map Unit Name: _____

PLANT COMMUNITY:

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

Are noxious weeds present: Yes ☒ No ☐

Plant species from: ☐ NRCS or, ☒ field observation Date of observation: 10/28/2015

List individual species: halogeton and/or cheetgrass

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: 553 Feet

water well: 4833 Feet

Estimated depth to ground water at Oil and Gas Location 400 Feet

Basis for depth to groundwater and sensitive area determination:

Water level is estimated from construction records on nearby Water Well Permit No. 67436-F-Mountain Fuel Supply Company; TD- 830'; perforated interval 700' to 830'. No static water level on record. USGS and attached plat package

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 609

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

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

Signed: _____ Date: 02/11/2016 Email: jennifer.kester@qepres.com

Print Name: JENNIFER KESTER 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: Matthew Lee Director of COGCC Date: 10/16/2016

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.

COA Type

Description

	In addition to the notifications required by COGCC listed in the Northwest Notification Policy (Notice of Intent to construct a new location, Notice of Intent to install a pit liner, Notice of Intent to spud surface casing, and Notice of Intent to commence hydraulic fracturing operations) and Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment; b. Notice of Spud; and c. Notice of Construction or Major Change); operator shall notify the COGCC 48 hours prior to pipeline testing (flowlines from wellheads to separators to tanks) using the Form 42 (as described in Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions). The appropriate COGCC individuals will automatically be email notified.
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	<p>Operator must ensure secondary containment for any volume of fluids contained at the well site during drilling and completion operations (as shown on the Construction Layout Drawing, Location Drawing, and Proposed Stormwater BMPs attachments); including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices [BMPs] associated with fluid containment/control as well as stormwater management for the control of run-on and run-off) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals as required by CDPHE (at least every 14 days and after precipitation events), and maintained in good condition. The design/build of any perimeter berm shall be sized, constructed, and compacted sufficiently to contain fluids during drilling operations, as well as all fluids contained in temporary frac tanks during completion operations.</p> <p>Strategically apply fugitive dust control measures, including encouraging established speed limits on access roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.</p>
	<p>The moisture content of water/bentonite-based mud (WBM) generated cuttings or foam/mist generated cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. The operator has indicated that 'Cuttings Disposal' will be "ONSITE" and that the 'Cuttings Disposal Method' will be "CUTTINGS TRENCH" (as shown in the 'DRILLING WASTE MANAGEMENT PROGRAM SECTION' of the Form 2A. After drilling and completion operations have been completed, any of the WBM drill cuttings that will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), must meet the applicable standards of Table 910-1. Representative cuttings samples (determined by the operator) for material left on location will be analyzed for all Table 910-1 constituents. Any material which does not meet Table 910-1 criteria will either be manifested and disposed offsite at an approved commercial facility, or amended further onsite to comply with Table 910-1. All liners associated with drilling mud or drill cuttings must be disposed of offsite per CDPHE rules and regulations. No liner can be disposed of in place.</p> <p>A closed loop system must be implemented during drilling (as indicated on the Form 2A).</p> <p>Based on information from the operator, fracing of this directional gas well is not planned. However, if during the completion process, the operator decides that portions of the production zone will require fracing and stimulation; all flowback and stimulation fluids must be sent to enclosed tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline storage vessel, or other open top containment located on the well pad; or into tanker trucks for offsite disposal. No open top tanks can be used for initial flowback fluids containment. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material. No additional downgradient berming is required if operator constructs a sufficiently sized perimeter berm.</p> <p>Berms or other containment devices shall be constructed to be sufficiently impervious (preferably corrugated steel with poly liner or equivalent protection) to contain any spilled or released material around condensate and produced water storage tanks.</p>
	<p>Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network, and tested annually, unless agreed to by both parties that the flowlines can be managed under an approved COGCC variance.</p>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2107919	WELL LOCATION PLAT
2107920	ACCES ROAD MAP
2107925	REFERENCE AREA PICTURES
2107929	SURFACE USE AND OPERATIONS PLAN
2107991	CORRESPONDENCE
2107992	SURVEYOR PACKAGE
2107993	CONST. LAYOUT DRAWINGS
2107994	PROPOSED STORMWATER BMPs
2107995	LOCATION DRAWING
2107996	REFERENCE AREA MAP
400985285	FORM 2A SUBMITTED
400988660	NRCS MAP UNIT DESC
400988661	LOCATION PICTURES
400988667	HYDROLOGY MAP

Total Attach: 14 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review of this form and the associated form 2 have been completed. Form is ready to pass.	10/14/2016 7:59:49 AM
OGLA	Initiated/Completed OGLA Form 2A review on 09-21-16 by Dave Kubeczko; requested acknowledgement of notification, fluid containment, spill/release BMPs, dust control, tank berming, flowback to tanks only, cuttings containment, management, diposal, closed loop system, and pipeline testing COAs from operator on 09-21-16; received acknowledgement of COAs from operator on 10-13-16; location was onsite by BLM/CPW/COGCC and operator on 05-04-16; corrected distances from Wellhead to Public Road (BLM 62H) from 5280' to 1786'; from Production Facility to Public Road (BLM 62H) from 5280' to 1847' - based on COGCC's review of the complete Surveyor's Package; passed by CPW on 06-09-16 with BLM COAs and stipulations acceptable; passed OGLA Form 2A review on 10-13-16 by Dave Kubeczko; notification, fluid containment, spill/release BMPs, dust control, tank berming, flowback to tanks only, cuttings containment, management, diposal, closed loop system, and pipeline testing COAs.	8/30/2016 1:31:28 PM
DOW	Operator: QEP ENERGY COMPANY Pad location: POWDER WASH 19-1, T12N, R97W, Section 19 (40.981498, -108.330040) Document #: 400985285 Wildlife concerns: The surface and mineral owner for this oil and gas lease is the Bureau of Land Management. Seasonal timing mitigation that will be applied to this site via BLM's NEPA process will help minimize impacts to big game and Greater sage-grouse. The proposed pad location and access corridor were visited by CPW staff, BLM and the operator on May 4, 2016. BRETT SMITHERS, 05/09/2016	5/9/2016 10:50:19 AM
Permit	Added water sampling rule and notified operator. Corrected that SO has signed and is committed to lease as per operator. Several corrections needed on the form 2. Operator notified and agrees with corrections. Ready to pass pending OGLA approval.	3/7/2016 3:41:52 PM
Permit	Added pipeline description per operator. Passed completeness.	2/16/2016 2:18:00 PM
Permit	Returned to draft. On facilities tab, need description of the oil, gas, and water pipelines. On surface and minerals tab, since right to construct isn't "bond", then surface damage assurance should be "N/A". On construction, drilling and waste tab, what is the estimated post construction ground elevation? Soil and Plant Community tab is not filled out. Missing the following attachments: Location Pictures, Location drawing, Hydrology Map, Access Road Map, NRCS Map Unit Description. All attachments need to be attached as single attachments - not all together.	2/12/2016 12:48:31 PM

Total: 6 comment(s)