

FORM
2A

Rev
04/18

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:

401522763

Date Received:

08/01/2018

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:

457469

Expiration Date:

09/19/2021

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: 96850
 Name: TEP ROCKY MOUNTAIN LLC
 Address: PO BOX 370
 City: PARACHUTE State: CO Zip: 81635

Contact Information

Name: Vicki Schoeber
 Phone: (970) 263-2721
 Fax: ()
 email: vschoeber@terraep.com

FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID (Rule 706): _____
- Gas Facility Surety ID (Rule 711): _____
- Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: FEDERAL Number: PA 44-13
 County: GARFIELD
 Quarter: SESE Section: 13 Township: 6S Range: 95W Meridian: 6 Ground Elevation: 6567

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: 1138 feet FSL from North or South section line
1021 feet FEL from East or West section line

Latitude: 39.520735 Longitude: -107.941851

PDOP Reading: 2.8 Date of Measurement: 06/08/2017

Instrument Operator's Name: J. KIRKPATRICK

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 #**

Well Site is served by Production Facilities

401619384

FACILITIES

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

| | | | | | | | | | |
|-----------------------|-------|----------------------|-------|----------------------|-------|------------------|-------|-------------------------------|-------|
| Wells | 20 | Oil Tanks* | _____ | Condensate Tanks* | _____ | Water Tanks* | _____ | Buried Produced Water Vaults* | _____ |
| Drilling Pits | _____ | Production Pits* | _____ | Special Purpose Pits | _____ | Multi-Well Pits* | _____ | Modular Large Volume Tanks | _____ |
| Pump Jacks | _____ | Separators* | 21 | Injection Pumps* | _____ | Cavity Pumps* | _____ | Gas Compressors* | _____ |
| Gas or Diesel Motors* | _____ | Electric Motors | _____ | Electric Generators* | _____ | Fuel Tanks* | _____ | LACT Unit* | _____ |
| Dehydrator Units* | _____ | Vapor Recovery Unit* | _____ | VOC Combustor* | _____ | Flare* | _____ | Pigging Station* | _____ |

OTHER FACILITIES*

Other Facility Type

Number

300 BBL BLOWDOWN TANK

1

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:

3-4.5" surface steel frac lines ($\pm 6,548'$ each) will be installed between the PA 44-13 Pad and the RWF 23-19 Pad. Also, 2-10" temporary surface water supply lines ($\pm 50'$) will be installed from the proposed valve can adjacent to the RWF 23-19 Frac Pad to the frac pad.

A 10" steel gas pipeline, 4" flexpipe water pipeline and 2" flexpipe condensate pipeline ($\pm 15,210'$ each) will be installed from the separators on the PA 44-13 pad to the RWF 12-20 Tank Pad following proposed and existing access roads.

Other on pad installations include: 20-2" steel flow lines and 1-2" dump line from the blowdown tank to the separators.

CONSTRUCTION

Date planned to commence construction: 09/24/2018 Size of disturbed area during construction in acres: 4.13

Estimated date that interim reclamation will begin: 11/01/2019 Size of location after interim reclamation in acres: 1.02

Estimated post-construction ground elevation: 6571

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: OFFSITE Cuttings Disposal Method: Commercial Disposal

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: Bureau of Land Mgmt-CRVO Phone: 970-876-9000

Address: 2300 River Frontage Rd Fax: _____

Address: _____ Email: _____

City: Silt State: CO Zip: 81652

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: | 1898 Feet | 1612 Feet |
| Building Unit: | 1898 Feet | 1612 Feet |
| High Occupancy Building Unit: | 5280 Feet | 5280 Feet |
| Designated Outside Activity Area: | 5280 Feet | 5280 Feet |
| Public Road: | 5280 Feet | 5280 Feet |
| Above Ground Utility: | 1423 Feet | 1166 Feet |
| Railroad: | 5280 Feet | 5280 Feet |
| Property Line: | 3135 Feet | 3062 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: _____

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 (onl 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 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: 35-Ildefonso-Lazear complex, 6 to 65 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: 08/15/2017

List individual species: n/a

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: 1138 Feet

water well: 7228 Feet

Estimated depth to ground water at Oil and Gas Location 150 Feet

Basis for depth to groundwater and sensitive area determination:

Per attached Sensitive area determination, "Based on the topographic setting of the proposed facility it could be assumed that the depth to groundwater, if present, would be in excess of 150 feet if not greater.

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 609

WILDLIFE

This location is included in a Wildlife Mitigation Plan

This location was subject to a pre-consultation meeting with CPW held on 08/02/2017

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: This is a new location with 1 proposed well at this time. Future development will include an additional 19 wells. Produced water and condensate from this location will be piped to the proposed RWF 12-20 Tank Pad (Form 2A Doc #401619384).

Completions will frac the well(s) at this location from the RWF 23-19 pad (Loc ID #335433).

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

Signed: _____ Date: 08/01/2018 Email: vschoeber@terraep.com

Print Name: Vicki Schoeber Title: Regulatory Specialist

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: 9/20/2018

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 |
|----------|--|
| | <p>Construction: The following conditions of approval (COAs) will apply:</p> <p>COA 23 - For purposes of safety (steep / high fill slopes) and environmental protection, operator must ensure secondary containment for any volume of fluids contained at the well site during drilling and completion operations; 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. Fill slopes will need to be compacted to industry standards to prevent any slope subsidence or movement to ensure slope stability.</p> <p>COA 24 - The design/build of any perimeter berm or fluid management structures shall be sized, constructed, and compacted sufficiently to contain and/or manage potential fluid releases during operations in a manner that prevents or controls potential sedimentation and scouring on adjacent lands and drainages. Such design/build of perimeter berms or fluid management structures may include, but are not limited to the following: on location berms; diversion ditches; enhanced vegetation; or other design features necessary to achieve the goal of protecting adjacent lands and drainages from potential sedimentation and scouring.</p> <p>COA 28 - The location is in an area of moderate to high run-on/run-off potential; therefore standard stormwater BMPs must be implemented; prior to, during, and after well pad location construction (as well as during drilling, completion, and production operations) at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater run-off.</p> <p>COA 44 - The access road will be constructed maintained as to not allow sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.</p> <p>COA 76 - Strategically apply fugitive dust control measures to access roads and well pad to reduce fugitive dust and coating of vegetation and deposition in water sources. 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> |

Best Management Practices

| No | BMP/COA Type | Description |
|-----------|--|---|
| 1 | Planning | <ul style="list-style-type: none"> - Maximize the utility of surface facilities by developing multiple wells from a single pad (directional drilling), and by collocating multipurpose facilities (for example, well pads and compressors) to avoid unnecessary habitat fragmentation and disturbance of additional geographic areas. - Combine and share roads to minimize habitat loss/fragmentation - Avoid constructing any road segment in the channel of an intermittent or perennial stream - Avoid new surface disturbance and placing new facilities in key wildlife habitats in consultation with CDOW. - Minimize the number, length, and footprint of oil and gas development roads - Use existing roads where possible - Combine utility infrastructure (gas, electric, and water) planning with roadway planning to avoid separate utility corridors - Where possible, consolidate pipeline and existing roadways, or roadways that are planned for development - Maximize the use of directional drilling to minimize habitat loss/fragmentation - Maximize use of long-term centralized tank batteries to minimize traffic - Maximize use of remote completion/frac operations to minimize traffic - Maximize use of remote telemetry for well monitoring to minimize traffic |
| 2 | Drilling/Completion Operations | <ul style="list-style-type: none"> - Use centralized hydraulic fracturing operations. - TEP will ensure 110 percent secondary containment for any volume of fluids contained at the well site during drilling and completions operations. - TEP will implement best management practices to contain any unintentional release of fluids. |
| 3 | Interim Reclamation | <ul style="list-style-type: none"> - Utilize staked soil retention blankets for erosion control and reclamation of large surface areas with 1.5:1 or steeper slopes. Avoid use of plastic blanket materials. - Use only certified weed-free native seed in seed mixes, except for non-native plants that benefit wildlife - TEP will use certified, weed free grass hay, straw, hay or other mulch materials used for the reseeding and reclamation of disturbed areas. - Reduce visits to well-sites through remote monitoring (i.e. SCADA) and the use of multi-function contractors. |
| 4 | CPW-Wildlife - Minimization-Black Bear | The operator will implement Rule 1204.a.1 (also see General Operating Recommendations). |
| 5 | CPW-Wildlife - Avoidance-Black Bear | The operator agrees to report bear conflicts immediately to CPW staff. |
| 6 | CPW-Wildlife - Mitigation-Deer and Elk | Operator agrees to treating cheatgrass and reseeding area with CPW approved, wildlife benefiting seed mix. |

Total: 6 comment(s)

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|-------------------------|
| 401522763 | FORM 2A SUBMITTED |
| 401704426 | SENSITIVE AREA DATA |
| 401704427 | NRCS MAP UNIT DESC |
| 401716005 | REFERENCE AREA PICTURES |
| 401716010 | ACCESS ROAD MAP |
| 401716013 | HYDROLOGY MAP |
| 401716022 | REFERENCE AREA MAP |
| 401716033 | LOCATION PICTURES |
| 401720903 | CONST. LAYOUT DRAWINGS |
| 401720905 | FACILITY LAYOUT DRAWING |
| 401720907 | LOCATION DRAWING |
| 401720908 | MULTI-WELL PLAN |
| 401720909 | OTHER |

Total Attach: 13 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Permit | Final review complete. | 09/19/2018 |
| OGLA | <p>08/15/2017 - onsite by COGCC, TEP, and BLM;</p> <p>09/18/2018 - location does not fall within 'sensitive wildlife habitat' (SWH) or 'restricted Surface Occupancy' (RSO) areas, therefore no CPW Wildlife Consult is required; however the location was onsited by BLM, COGCC, and operator; there will be BMPs being required by the BLM;</p> <p>09/19/2018 - initiated OGLA review by Dave Kubeczko; made the following corrections / revisions to the Form 2A per operator request on 09-05-18:</p> <ul style="list-style-type: none"> •Under "Related Remote Locations" remove the following locations: Loc ID # 335569, Doc #401706067 (RWF 21-18 Cuttings Trench), Loc ID #335348, Doc #401706074 (RWF 334-18 Cuttings Trench) and Loc ID #335433, (RWF 23-19 Frac Pad) and keep Doc #401619384, RWF 12-20 Tank Pad. •Change Construction date from 9/1/18 to 9/24/18; •Under "Drilling Waste Management Program" change cuttings disposal to: Commercial Disposal; •Delete the comment under "Other Disposal Description" that references the RWF 21-18 and RWF 334-18; •Under "Future Land Use" uncheck "Other" and delete "Well Pad"; •Under "Plant Community" check "Field observation" with an observation date of 8/15/17; <p>09/19/2018 - revised distance to nearest cultural features: Well to Building from 1970' to 1898', Well to Building Unit from 1970' to 1898', Well to Above Ground Utility from 1491' to 1423', and Well to Property Line from 3157' to 3135' based on the submitted Location Drawing attachment's surveyor distance spreadsheet (received operator's verbal concurrence on 09-19-18);</p> <p>09/19/2018 - completed OGLA review by Dave Kubeczko, added containment spill release, perimeter berm design / build, preconstruction BMPs, sediment and dust control access road and pad COAs to the Form 2A; operator's other attachments and proposed BMPs are sufficient for other aspects of the operation;</p> <p>09/19/2018 - passed OGLA Form 2A review by Dave Kubeczko with construction-related COAs and operator's attachments and proposed BMPs being sufficient for other aspects of the operation.</p> | 09/19/2018 |
| Permit | Preliminary review complete. | 09/13/2018 |
| Permit | Passed Completeness. | 08/20/2018 |

Total: 4 comment(s)