

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:

401058467

Date Received:

07/17/2017

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:

**452011**

Expiration Date:

**08/30/2020**

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

RECLAMATION FINANCIAL ASSURANCE

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

LOCATION IDENTIFICATION

Name: FEDERAL    Number: RU 31-17  
 County: GARFIELD  
 Quarter: NWNE    Section: 17    Township: 7S    Range: 93W    Meridian: 6    Ground Elevation: 7864

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: 1065 feet FNL from North or South section line  
2138 feet FEL from East or West section line

Latitude: 39.449865    Longitude: -107.795693

PDOP Reading: 2.5    Date of Measurement: 01/14/2014

Instrument Operator's Name: J. Kirkpatrick



## 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: 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:	5207 Feet	5244 Feet
Building Unit:	5207 Feet	5244 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	3670 Feet	3785 Feet
Above Ground Utility:	4088 Feet	4104 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	1055 Feet	915 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

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: \_\_\_\_\_

- 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.

## 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.

## 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: 45 - Morval-Tridell complex, 6 to 25 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: 06/10/2016

List individual species: Juniper, sage, oak, wheatgrass,

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: 946 Feet

water well: 4340 Feet

Estimated depth to ground water at Oil and Gas Location 88 Feet

Basis for depth to groundwater and sensitive area determination:

Attached sensitive area determination.

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 \_\_\_\_\_

**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 New location with 18 proposed new wells and 15 future well locations.

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

Signed: \_\_\_\_\_ Date: 07/17/2017 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: 8/31/2017

**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 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 and c. Notice of Construction or Major Change); operator shall notify the COGCC 48 hours prior to onsite flowline/pipeline testing (flowlines from wellheads to separators to onsite blowdown tank; take away pipelines to nearby well pad and tank battery; and/or any temporary surface lines used for hydraulic stimulation and/or flowback operations) 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. In addition, operator will adhere to the Roan Rim notification requirements.
--	---

	<p>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.</p> <p>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 re-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>The access road will be constructed and 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>Strategically apply fugitive dust control measures to reduce fugitive dust and coating of vegetation and deposition in water sources.</p> <p>Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel [or equivalent] with an impervious liner) to contain any spilled or released material around temporary or permanent condensate and produced water storage tanks.</p> <p>Since condensate and produced water storage tanks are not planned to be constructed on this well pad location, operator shall submit a scaled as-built drawing (plan view with distances) of this well pad location (showing wellheads, pumping jacks or gas lift pumps [if installed], onsite flowlines, offsite pipelines, and production facilities [separators, etc.]) and the nearby production facility location to which the condensate and produced water will be sent to via underground pipelines (showing wellheads [if present], onsite flowlines, offsite pipelines, pumping jacks or gas lift pumps [if installed], condensate and produced water storage tanks, and other production facilities) within 30 calendar days of construction of the production equipment on either or both locations.</p>
	<p>The moisture content of water/bentonite based mud (WBM) generated drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. Operator has indicated that the cuttings will be disposed of 'OFFSITE' to one of three previously approved oil and gas locations. No 'ONSITE' disposal of cuttings will be allowed without prior approval of a Waste Management Plan (submitted via a Form 4 Sundry Notice) specifying 'ONSITE' disposal and where the cuttings will be placed on the location. After drilling and completion operations have been completed, if any of the WBM drill cuttings will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), they must be sampled and meet the applicable standards of Table 910-1. No liners (if used) are allowed to be disposed of with the drill cuttings. After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. No offsite disposal of cuttings to another oil and gas location (TEP's permitted Cuttings Trench locations or nearby locations) shall occur without prior approval of a Form 4 Sundry Notice specifying disposal location and waste characterization method. Commercial disposal of drill cuttings will also require notification to COGCC via a Form 4 Sundry Notice.</p> <p>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>Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.</p>

The following COAs will apply to this Form 2A Permit if any temporary surface (COAs 1, 2, 3, and 4) or buried permanent (COA 1) flowlines and/or offsite pipelines (poly or steel) are used during operations at this oil and gas location as well as nearby well pad locations:

COA 1 - Operator shall pressure test pipelines (flowlines from wellheads to separators to tanks; pipelines from onsite separators to offsite storage tanks, and any temporary surface lines used for hydraulic stimulation and/or flowback operations) 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.

COA 2 - Operator must routinely inspect the entire length of the surface pipeline to ensure integrity. Operator shall conduct daily inspections of surface poly pipeline routes for leaks during active transfer of fluids and implement best management practices to contain any unintentional release of fluids along all portions of the surface pipeline route where temporary pumps and other necessary equipment are located. Inspections shall be conducted by viewing the length of the pipeline; operator will endeavor to minimize surface disturbance during pipeline monitoring. In addition, pump stations along the surface poly or steel pipeline route will be continuously monitored when operating in order to swiftly respond to such a failure.

COA 3 - Operator will implement BMPs necessary to mitigate a potential for a release of fluids to impact streams, intermittent streams, ditches, and drainage crossings. For these crossings: if poly pipe is used on the surface, operator will ensure appropriate containment by either installing over-sized pipe "sleeves" which extend the length of the crossing and beyond to a distance deemed adequate to capture (catchment basins) and/or divert any possible release of fluids and prevent fluids from reaching the stream or drainage; installing over-sized pipe "sleeves" which extend the length of the crossing and installing shut off valves on either side of crossing instead of catchment basins; or develop an alternative means for containment. For all other pipeline materials, operator will implement BMPs necessary to mitigate a potential for E&P fluids not to reach groundwater or flowing surface water.

COA 4 - Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the temporary surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.

## Best Management Practices

No	BMP/COA Type	Description
1	Planning	<ul style="list-style-type: none"> <li>* 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.</li> <li>* Combine utility infrastructure (gas, electric, and water) planning with roadway planning to avoid separate utility corridors.</li> <li>* Combine and share roads to minimize habitat fragmentation</li> <li>* Where possible, consolidate pipeline and existing roadways, or roadways that are planned for development</li> <li>* Maximize the use of directional drilling to minimize habitat loss/fragmentation</li> <li>* Maximize use of remote completion/frac operations to minimize traffic</li> <li>* Maximize use of remote telemetry for well monitoring to minimize traffic.</li> </ul>
2	Drilling/Completion Operations	<ul style="list-style-type: none"> <li>* Use centralized hydraulic fracturing operations.</li> <li>* Install and maintain adequate measures to exclude all types of wildlife (e.g., big game, birds, and small rodents) from all fluid pits (e.g., fencing, netting, and other appropriate exclusion measures).</li> <li>* Conduct well completions with drilling operations to limit the number of rig moves and traffic.</li> <li>* TEP will ensure 110 percent secondary containment for any volume of fluids contained at the well site during drilling and completions operations.</li> <li>* TEP will implement best management practices to contain any unintentional release of fluids.</li> <li>* Either a lined drilling pit or closed loop system will be implemented.</li> </ul>
3	Interim Reclamation	<ul style="list-style-type: none"> <li>* Remove well pad and road surface materials that are incompatible with post-production land use and re-vegetation requirements.</li> <li>* Use only certified weed-free native seed in seed mixes, except for non-native plants that benefit wildlife</li> <li>* TEP will use certified, weed free grass hay, straw, hay or other mulch materials used for the reseeded and reclamation of disturbed areas.</li> <li>* Install exclusionary devices to prevent bird and other wildlife access to equipment stacks, vents and openings.</li> <li>* Reduce visits to well-sites through remote monitoring (i.e. SCADA) and the use of multi-function contractors.</li> </ul>
4	CPW-Wildlife - Minimization-Deer and Elk	The operator agrees to reclaim mule deer and elk habitats with CPW-identified native shrubs, grasses, and forbs appropriate to the ecological site disturbed.
5	CPW-Wildlife - Minimization-Deer and Elk	The operator agrees to preclude the use of aggressive CPW-identified non-native grasses and shrubs in mule deer and elk habitat restoration.
6	CPW-Wildlife - Minimization-Black Bear	The operator will implement Rule 1204.a.1 (also see General Operating Recommendations).
7	CPW-Wildlife - Avoidance-Black Bear	The operator agrees to report bear conflicts immediately to CPW staff.

Total: 7 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2108204	CORRESPONDENCE
401058467	FORM 2A SUBMITTED
401086359	SENSITIVE AREA DATA
401086360	NRCS MAP UNIT DESC
401332449	LOCATION PICTURES
401332454	REFERENCE AREA PICTURES
401332475	OTHER
401332477	FACILITY LAYOUT DRAWING
401332484	ACCESS ROAD MAP
401332488	CONST. LAYOUT DRAWINGS
401332493	HYDROLOGY MAP
401332495	LOCATION DRAWING
401332497	MULTI-WELL PLAN
401332498	REFERENCE AREA MAP

Total Attach: 14 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	08/31/2017
OGLA	06/10/16 - location onsite by COGCC, CPW, BLM, and operator; 08/30/17 - location does not fall within Sensitive Wildlife Habitat (SWH) or Restricted Surface Occupancy (RSO) areas based on COGCC's Online GIS map, therefore, no CPW consultation is required; location does fall within a CPW / Terra Wildlife Management Plan area; 08/30/17 - Initiated / Completed OGLA Form 2A review by Dave Kubeczko; 08/30/17 - sent email to operator indicating that the following COAs will be placed on the Form 2A - notification, fluid containment and spill/release BMPs, construction BMPs, sediment and dust control access road, cuttings containment and management, odor control, flowback to tanks only, as-built drawing, temporary pipeline placement/inspection/containment, and pipeline testing; revised: Date planned to commence construction: from 09/01/2017 to 09/04/2017 and Estimated date that interim reclamation will begin: from 06/01/2019 to 06/04/2019; 08/30/17 - passed OGLA Form 2A review by Dave Kubeczko with notification, fluid containment and spill/release BMPs, construction BMPs, sediment and dust control access road, cuttings containment and management, odor control, flowback to tanks only, as-built drawing, temporary pipeline placement/inspection/containment, and pipeline testing COAs.	08/30/2017
Permit	Preliminary review complete.	08/10/2017
LGD	Pass, KHW	07/31/2017
Permit	Passed Completeness.	07/25/2017

Total: 5 comment(s)