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

Oil and Gas Location Assessment

Document Number: 401568821

Date Received: 06/14/2018

☒ 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: **457543**

Expiration Date: **09/20/2021**

☒ 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: SG 11-22

County: GARFIELD

QuarterQuarter: NWNW Section: 22 Township: 7S Range: 96W Meridian: 6 Ground Elevation: 6089

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: 930 feet FNL from North or South section line

482 feet FWL from East or West section line

Latitude: 39.427767 Longitude: -108.103985

PDOP Reading: 1.4 Date of Measurement: 02/16/2018

Instrument Operator's Name: BART HUNTING

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	334730	401538786

FACILITIES

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

Wells	20	Oil Tanks*		Condensate Tanks*	2	Water Tanks*	1	Buried Produced Water Vaults*	
Drilling Pits	1	Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks		Separators*	22	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*	1	Flare*		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:

New 8” steel gas line (±3088’) will be installed from the production equipment to the proposed 10” gas line at the SG 23-22 Pad (Loc ID #435460). A 4” flexpipe water line (±3573’) will be installed from the tanks to the SG 23-22 Pad following the proposed gas line. Flowlines (20-2” steel) will be installed 48” below grade from the well heads to the units. Dump lines (2-2” condensate/1-2” water) will be installed 48” below grade from the units to the tanks. 1-4” surface line will be installed from the tanks to the ECD.

Completions will frac from the GV 33-22 pad (Loc ID #334730). 2-10" temporary surface poly pipelines (±760’) will be installed from a waterline valve set southeast of the GV 33-22 to the frac pad. 3-4.5” temporary steel frac lines (±6002’) will be installed from the GV 33-22 pad cross country to the SG 11-22 Pad.

Produced water will be piped to the GV 33-22 tank battery, which will be upgraded with a new tank containment and six new tanks (6-400 bbl LP water).

CONSTRUCTION

Date planned to commence construction: 09/24/2018 Size of disturbed area during construction in acres: 4.64

Estimated date that interim reclamation will begin: 09/15/2019 Size of location after interim reclamation in acres: 1.36

Estimated post-construction ground elevation: 6091

DRILLING PROGRAM

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

Is H_2S 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: 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:	400 Feet	436 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:	5180 Feet	5221 Feet
Above Ground Utility:	282 Feet	122 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	913 Feet	891 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 FACILTIES 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: 62 - Rock outcrop-Torriorthents complex, very steep.

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: 11/07/2017

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: 0 Feet

water well: 6701 Feet

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

Basis for depth to groundwater and sensitive area determination:

The closest permitted water well is located 6,701 feet (1.3 miles) to the southeast and would not provide accurate information on the depth to groundwater. Based on aerial photography review, the vegetation in the immediate vicinity of the proposed facility is dominated by juniper, sage, and bunch grasses and does not suggest the presence of shallow groundwater. The depth to bedrock (Wasatch or L. Green River Formations) is most likely quite shallow. Based on the topographic setting of the proposed facility 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
- [x] This location was subject to a pre-consultation meeting with CPW held on 11/07/2017

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

Produced water from the SG 11-22 pad will be piped to the tank battery on the GV 33-22 pad (Loc ID #334730, Amended Form 2A Doc #401538786).

TEP and BLM Siting Evaluation:
This is a new location with 20 proposed wells. This pad has been sited in adherence with COGCC Rule 1002, especially given that the access road improvements are basically following and using the existing roadway. There is an abandoned microwave tower / repeater station, constructed in early 1970's, located on BLM surface less than 500 feet from the proposed Federal SG 11-22 pad. This tower is the reason for the existing road access. TEP / BLM have taken advantage of this road access and relatively flat terrain at the well site where the surrounding topography is otherwise very challenging.
The staked location represents the optimal siting for this pad with 20 planned Federal directional wells, particularly given the rough topography that exists in the Kelly Gulch watershed. While it is true the pad is staked at the very headwaters of a small dry drainage that feeds off the ridge to the north, the small watershed area feeding down onto the flat mesa where the pad is sited can be readily diverted around the pad and controlled with storm water structures.

Site Hydrogeology and Cuttings Management:
The site hydrology was reviewed and ground-truthed by BLM. The proposed pad is situated near the base of the Roan Plateau, along a ridgeline, approximately 1.3 air-miles northwest of the Colorado River. The USGS 24K topo map delineates unnamed intermittent drainages (blue dotted lines) more than 850 feet to the east and about 250 feet to the west of the proposed pad. While the proposed pad would drain to the unnamed intermittent drainages, the proposed pad is situated between the defined drainage channels. Defined drainage channels (with a consistent ordinary high water mark) do not intersect the proposed well or the cuttings trench. Surface run-on would be negligible given that the land upgradient almost entirely contributes to the unnamed intermittent drainages. The proposed site is effectively at the head of a micro-watershed of the Colorado River. Diversion ditches would route the limited surface run-on around the proposed pad.
BLM is not concerned about cuttings and groundwater, since drill core data from other wells in the area (to be obtained prior to drilling of the SG 11-22 pad) would provide insight as to the depth of groundwater relative to the surface.
In addition, per COGCC requirements, cuttings are required to meet Table 910-1 standards and would be sampled and tested for verification. Any liquids in the cuttings would be mitigated prior to burial.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
Signed: _____ Date: 06/14/2018 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: 9/21/2018

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
	Construction and Drilling/Completions: The following COA will apply: COA 13 - If groundwater is encountered during construction of the dry cuttings pit, the pit will not be deepened and the bottom will be a minimum of two (2) above the depth that groundwater was encountered. The dry cuttings pit will be monitored during drilling and completions to ensure no groundwater enters the pit. After the cuttings to be left onsite have been sampled and/or amended to meet the levels in Table 910-1, they will be placed in the dry cuttings pit for final disposal.
	Drilling/Completions: The following COAs will apply: COA 11 - 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. 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. COA 25 - 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 into tanker trucks for offsite disposal. No open top tanks can be used for 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.
	Material Handling and Spill Prevention: The following COAs will apply to this Form 2A Permit if any temporary surface (COAs 45, 49, 54, and 55) or buried permanent (COA 45) flowlines and/or offsite pipelines (poly or steel) are used during operations at this oil and gas location: COA 45 - Operator shall pressure test pipelines (flowlines from wellheads to separators to blowdown tank; 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. COA 49 - 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 54 - 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 55 - 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	- Maximize the utility of surface facilities by developing multiple wells from a single pad (directional drilling), and by co-locating 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. - 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. - Minimize the duration of development and avoid repeated or chronic disturbance of developed areas. Complete all anticipated drilling within a phased, concentrated, development area during a single, uninterrupted time period.
2	Drilling/Completion Operations	- Use centralized hydraulic fracturing operations. - Conduct well completions with drilling operations to limit the number of rig moves and traffic. - 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. - Either a lined drilling pit or closed loop system will be implemented.
3	Interim Reclamation	- 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. - Install and use locked gates or other means to prevent unauthorized vehicular travel on roads and facility rights-of-way. - Close and reclaim roads not necessary for development, including removing all bridges and culverts and recontouring/reclaiming all stream crossings.
4	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.
5	CPW-Wildlife - Minimization-Black Bear	The operator will implement Rule 1204.a.1 (also see General Operating Recommendations).
6	CPW-Wildlife - Avoidance-Black Bear	The operator agrees to report bear conflicts immediately to CPW staff.

Total: 6 comment(s)

Attachment Check List

Att Doc Num	Name
2108491	NRCS MAP UNIT DESC
2108492	ACCESS ROAD MAP
2108545	CONST. LAYOUT DRAWINGS
2108546	REFERENCE AREA MAP
2108547	REFERENCE AREA PICTURES
2108549	PLAN OF DEVELOPMENT DRAWING
2108550	BLM ENVIRONMENTAL ASSESSMENT, SG 11-22 PROJECT
2108551	CORRESPONDENCE
2108563	HYDROLOGY MAP
2108564	LOCATION DRAWING
2108565	SENSITIVE AREA DETERMINATION
2108566	CORRESPONDENCE
401568821	FORM 2A SUBMITTED
401612770	FACILITY LAYOUT DRAWING
401612801	MULTI-WELL PLAN
401612810	LOCATION PICTURES

Total Attach: 16 Files

General Comments

User Group	Comment	Comment Date
OGLA	09/06/2018 - received updated iattachments, additional information, and requested changes to the Form 2A from operator; the following statements from BLM was provided as part of the additional information, along with the full Environmental Assessment (which has been attached to this Form 2A) for this location (which responds to concerns previously identified by COGCC): "This pad has been sited to fully satisfy COGCC Rule 1002 especially given that the access road improvements are basically following and using the existing roadway. There is an abandoned microwave tower / repeater station, constructed in early 1970's, located on BLM surface less than 500 feet from the proposed Federal SG 11-22 pad. This tower is the reason for the existing road access. TEP / BLM have taken advantage of this road access and relatively flat terrain at the well site where the surrounding topography is otherwise very challenging. The staked location represents the optimal siting for this pad with 20 planned Federal directional wells, particularly given the rough topography that exists in the Kelly Gulch watershed. While it is true the pad is staked at the very headwaters of a small dry drainage that feeds off the ridge to the north, the small watershed area feeding down onto the flat mesa where the pad is sited can be readily diverted around the pad and controlled with storm water structures." 09/06/2018 - replaced the following attachments and made the following corrections to information on the Form 2A: •Revised Hydrology Map attached •Revised Construction Layout & Cross Sections attached •Revised Location Drawing attached •Under “Related Remote Locations” there was a question about the remote location 334730 (GV 33-22), which is where water will be stored and should be included as a production facility. An updated POD is attached to reflect this clarification. •Under “Facilities” place a number “1” next to Drilling Pits. •Under “Other Facilities” under Rule 303.b.(3)C. description, at the end of the comment add “Produced water will be piped to the GV 33-22 tank battery, which will be upgraded with anew tank containment and six new tanks (6-400bbl LP water).” •Under “Construction”, change construction date from 8/1/18 to 9/15/18. •Under “Future Land Use” uncheck “Other” and delete “Well Pad”. •Under “Cultural Distance Information” the “Above Ground Utility” distance should be changed from 145’ to 122’ under PRODUCTION FACILITY. •Under “Plant Community” check “Field observation” and include the date of	09/06/2018

observation as 11-7-17.
•Under “Water Resources” change the “downgradient surface water feature” from 2144 to 0. Also, there was a concern about drainage from the cut slope into the cuttings trench and hydrology section. As shown on the Construction Plat, the appropriate BMPs to divert drainage have been noted. Further, the site hydrology was reviewed by BLM, please refer to attached information provided by Jim Beyers and Carmia Wooley from BLM.
•Revised Sensitive Area Determination is attached.
•Revised Reference Area Map and Reference Area Photos are attached.
•Under “Operator Comments and Submittal” delete “Excess cuttings from the SG 23 -22 pad (Loc ID #435460, Amended Form 2A Doc #401572378) will be hauled to this location if needed.” TEP will submit a Form 4 Sundry for the SG 23-22 changing cutting management to “Commercial Disposal”.;
•The distance to nearest surface water feature has been updated from 299' to 0' (ephemral drainages located along the eastern portion of the well pad that lead to an intermittent stream located to east based on COGCC and BLM site visits, COGCC's review of COGCC's Online GIS, the 2015 Aerial Map and USGS Topo Map layer, and operator's Revised Hydrology Map);
•Per operator request; COGCC has added the following statement extracted from the 'Sensitive Area Determination' attachment to the 'Water Resources' section of the Form 2A: "The closest permitted water well is located 6,701 feet (1.3 miles) to the southeast and would not provide accurate information on the depth to groundwater. Based on aerial photography review, the vegetation in the immediate vicinity of the proposed facility is dominated by juniper, sage, and bunch grasses and does not suggest the presence of shallow groundwater. The depth to bedrock (Wasatch or L. Green River Formations) is most likely quite shallow. Based on the topographic setting of the proposed facility the depth to groundwater, if present, would be in excess of 150 feet if not greater."
•Per operator request; COGCC has added the following statement extracted from the BLM's hydrogeologist to the 'Operator's Comment' section of the Form 2A: "The site hydrology was reviewed and ground-truthed by BLM. The proposed pad is situated near the base of the Roan Plateau, along a ridgeline, approximately 1.3 air-miles northwest of the Colorado River. The USGS 24K topo map delineates unnamed intermittent drainages (blue dotted lines) more than 850 feet to the east and about 250 feet to the west of the proposed pad. While the proposed pad would drain to the unnamed intermittent drainages, the proposed pad is situated between the defined drainage channels. Defined drainage channels (with a consistent ordinary high water mark) do not intersect the proposed well or the cuttings trench. Surface run-on would be negligible given that the land upgradient almost entirely contributes to the unnamed intermittent drainages. The proposed site is effectively at the head of a micro-watershed of the Colorado River. Diversion ditches would route the limited surface run-on around the proposed pad.
BLM is not concerned about cuttings and groundwater, since drill core data from other wells in the area (to be obtained prior to drilling of the SG 11-22 pad) would provide insight as to the depth of groundwater relative to the surface.
In addition, per COGCC requirements, cuttings are required to meet Table 910-1 standards and would be sampled and tested for verification. Any liquids in the cuttings would be mitigated prior to burial."
09/10/2018 - COGCC and BLM conducted a third site visit to the proposed location to review onsite drainages (ephemeral drainages based on presence of terrestrial vegetation and lack of evidence [sedimentation] of surface water flow) and nearby offsite intermittent streams;
09/11/2018 - requested revised Hydrology Map and Location Drawing attachments from operator;
09/21/2018 - per operator email on 09-21-18, made the following revisions to the Form 2A:
•updated the planned construction date (again) from 09/15/2018 to 09/24/2018.
•attached revised hydrology map
•attached updated Sensitive Area Determination; changed the distance to nearest downgradient surface water feature from 299' to 0’
•attach updated Location Drawing and Cultural distance table. The following Cultural Distances were revised; a.changed distance from well to public road from 5280' to 5180’, and from well to property line from 1683' to 913’; b.changed distance from production facility to public road from 5280' to 5221’, and from production facility to property line from 1568' to 891’;

	•added Federal (FEMA) as source for floodplain information; 09/21/2018 - took Form 2A off of "ON HOLD" and placed back into "IN PROCESS" for final review and approval;	
Final Review	Form placed ON HOLD during Final Approval review Inconsistencies in hydro map, location drawing, facilities list, cuttings management, related remote locations, reference area, future land use, hydrology section, operator comments, BMPs & COAs.	08/10/2018
Permit	Final review complete.	08/03/2018
Permit	Added operator comment regarding building. Preliminary review complete.	07/04/2018
LGD	Pass KHW	07/02/2018
OGLA	11/07/2017 - locations falls within 'sensitive wildlife habitat' area, therefore a CPW Wildlife Consult is required; onsited by CPW, BLM, COGCC, and operator; 06/26/2018 - passed by CPW with operator submitted BMPs acceptable (co-locating pipelines with the access road to minimize disturbance, utilizing a remote frac pad located near the interstate to reduce truck traffic through wildlife habitats, conducting completions during drilling, and timely and effective interim reclamation); 06/29/2018 - initiated / completed OGLA Form 2A review by Dave Kubeczko, placed flowback to tanks, cuttings low moisture content and management, and pipeline COAs on Form 2A; based on COGCC's review of the 2015 Aerial Map and Topograghic Map, the distance to nearest surface water feature has been updated from 2144' to 299' (intermittent stream located to west tbased on review of the COGCC Online GIS Map, USGS Topo Map layer, and operator's Hydrology Map); due to close proximity to surface water, this location has been determined to be a 'sensitive area' by COGCC (concurred by operator on 06-29-18); 07/10/2018 - corrected soil description in 'Soil & Plant Community' section from "66 - Torriorthents-Camborthids-Rock outcrop complex, steep." to "62 - Rock outcrop-Torriorthents complex, very steep." based on review of COGCC Online GIS Soil Map Layer; updated the NRCS MAP UNIT DESC attachment and replaced the ACCESS ROAD MAP attachment to include a second access road map to go along with the one submitted (concurred by operator on 09-06-18); 07/10/2018 - passed OGLA Form 2A review by Dave Kubeczko with flowback to tanks, cuttings low moisture content and management, and pipeline COAs; 08/10/2018 - final approver placed Form 2A "ON HOLD" due to inconsistencies in hydro map, location drawing, facilities list, cuttings management, related remote locations, reference area, future land use, hydrology section, operator comments, BMPs & COAs	06/29/2018
DOW	CPW attended an onsite review of this location with the operator and the Bureau of Land Management on November 7, 2017. The lease stipulations and COAs being applied by the BLM are sufficient to address wildlife concerns. Additionally, CPW is working with the operator and BLM to develop compensatory mitigation projects for year-round construction and drilling operations within mule deer winter range habitats. Taylor Elm, June 22, 2018, 10:59 am	06/22/2018
Permit	Passed Completeness.	06/19/2018

Total: 8 comment(s)