

FORM  
2A

Rev  
02/20

# State of Colorado Oil and Gas Conservation Commission

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Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

402402785

Date Received:

08/26/2020

## Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: 316408

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 <https://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

**316408**

Expiration Date:

**12/28/2023**

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: RGU 23-7-297

County: RIO BLANCO

Quarter: LOT 15 Section: 7 Township: 2S Range: 97W Meridian: 6 Ground Elevation: 6602

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: 1791 feet FSL from North or South section line

1387 feet FWL from East or West section line

Latitude: 39.888469    Longitude: -108.328876

GPS Quality Value: 2.8    Type of GPS Quality Value: PDOP

Date of Measurement: 09/10/2019

Instrument Operator's Name: J. KIRKPATRICK

### LOCAL GOVERNMENT INFORMATION

County: RIO BLANCO

Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: County

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below.  Yes  No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location.

The local government siting permit type is: Oil or Gas Well Pad Special Use/Building Permit

The local government siting permit was filed on: 06/16/2020

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

Rio Blanco County approved the Oil or Gas Well Pad Special Use/Building Permit #COGW-0006-20 on 6/18/2020.

### RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

<b>This proposed Oil and Gas Location is:</b>	<b>LOCATION ID #</b>	<b>FORM 2A DOC #</b>
Well Site is served by Production Facilities	<u>335602</u>	<u></u>

### FACILITIES

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

Wells <u>15</u>	Oil Tanks* <u></u>	Condensate Tanks* <u>4</u>	Water Tanks* <u>1</u>	Buried Produced Water Vaults* <u></u>
Drilling Pits <u>1</u>	Production Pits* <u></u>	Special Purpose Pits <u></u>	Multi-Well Pits* <u></u>	Modular Large Volume Tanks <u></u>
Pump Jacks <u></u>	Separators* <u>18</u>	Injection Pumps* <u></u>	Cavity Pumps* <u></u>	Gas Compressors* <u></u>
Gas or Diesel Motors* <u></u>	Electric Motors <u></u>	Electric Generators* <u></u>	Fuel Tanks* <u></u>	LACT Unit* <u></u>
Dehydrator Units* <u></u>	Vapor Recovery Unit* <u></u>	VOC Combustor* <u>3</u>	Flare* <u></u>	Pigging Station* <u></u>

### OTHER FACILITIES\*

<u>Other Facility Type</u>	<u>Number</u>
Meter Shed	1
Chemical Skid	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:

Off location pipeline facilities:  
 1 - 8" steel gas pipeline (approx. 166') will be installed from the proposed meter on pad to the existing 16" gas gathering line adjacent to the pad.  
 1 - 6" Flexsteel water pipeline (approx. 462') from the separators to the existing 6" Flexsteel water pipeline located in the existing pipeline corridor.  
 1 - 8' diameter valve can to be installed at the tie-in point with the existing water pipeline.

On location pipeline installations:  
 15 - (2") Steel Wellhead Flowlines (approximately 130' each)  
 1 - (2") Coated Steel Fuel Gas Flowline (approximately 130')  
 2 - (2") FlexPipe Condensate Dump Lines (approximately 375' each)  
 1 - (2") FlexPipe Produced Water Dump Line (approximately 375')  
 1 - (1") Steel Gas Supply Line (ECD; approximately 275')  
 1 - (4") Aluminum Vent Line (ECD; approximately 80')

## CONSTRUCTION

Date planned to commence construction: 05/01/2021 Size of disturbed area during construction in acres: 5.54  
Estimated date that interim reclamation will begin: 05/01/2023 Size of location after interim reclamation in acres: 1.91  
Estimated post-construction ground elevation: 6603

## DRILLING PROGRAM

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

Is H<sub>2</sub>S 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: Drilling pit

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 Management Phone: 970-878-3800

Address: White River Field Office Fax: \_\_\_\_\_

Address: 220 East Market Street Email: \_\_\_\_\_

City: Meeker State: CO Zip: 81641

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 \_\_\_\_\_

If this Form 2A is associated with Drilling and Spacing Unit applications, list docket number(s): \_\_\_\_\_

## 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:	4459 Feet	4255 Feet
Above Ground Utility:	3669 Feet	3477 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	2351 Feet	2172 Feet
School Facility::	5280 Feet	5280 Feet
School Property Line:	5280 Feet	5280 Feet
Child Care Center:	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, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.  
 -For measurement purposes only, Production Facilities should only include those items with an asterisk(\*) on the Facilities Tab.

## SCHOOL SETBACK INFORMATION

Was Notice required under Rule 305.a.(4)?  Yes  No

## 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 (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: 73—Rentsac channery loam, 5 to 50 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: 05/13/2020

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: 1339 Feet

water well: 5148 Feet

Estimated depth to ground water at Oil and Gas Location 100 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to groundwater was estimated to be deeper than 100 feet bgs based on the closest constructed bedrock livestock water well, located 5148' west-northwest, Permit No. 4830; Colorado Parks and Wildlife; completed in the Uinta Formation; total depth - 95' bgs; screened interval - 80 to 95' bgs; static water level - 50' bgs; pumping rate - 10 gpm. This well is constructed in a similar topographic/geologic setting and targeted groundwater at depths greater than 100 feet.

The vegetative cover in the immediate vicinity of this well pad is dominated by sage, juniper, and bunch grasses typical of the upland xeric environment. No seeps or springs were identified, which would suggest the presence of shallow groundwater. The existing location is built on top of a ridgeline and is constructed in bedrock which is most likely devoid of any groundwater. Location is not a sensitive area.

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

## WILDLIFE

This location is included in a Wildlife Mitigation Plan

This location was subject to a pre-consultation meeting with CPW held on 04/05/2019

## 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 an existing location with 1 producing well. The previous Form 2A #402416486 was submitted (6-19-20) and approved (9-29-20) for the frac support pad only. At the time it was submitted and subsequently reviewed by COGCC, TEP had not finalized the bottomholes for this well pad, so this amended Form 2A #402402785 was submitted (8-31-20) to update the new well and production facility equipment counts, provide the multi-well plan, and submit the 14 associated Form 2 APDs. Since approval of the Federal Environmental Assessment did not occur until late October, TEP has requested and received a timing limitation exception from BLM and CPW to complete construction on the Federal RU 41-18-297 well pad, this Federal RGU 23-7-297 well pad, and all associated pipelines this year in December 2020. The exception includes use of this Federal RGU 23-7-297 well pad next year in April 2021 for frac support at the Federal RG 41-18-297 well pad.

The Federal RG 41-18-297 pad (Loc ID #316591) will be utilized for remote completion operations. All of the produced water from the wells at this Federal RGU 23-7-297 pad cannot be stored in the one produced water tank planned for this location, so most of the water produced will be transferred via pipelines to the produced water storage tanks on the nearby RGU 23-6-297 well pad (Location ID #335602).

Please note: the construction start date for the Federal RGU 23-7-297 Pad (Frac Pad; Form 2A Doc #402416486) is 9/1/2020. However, installation of production facilities for the Federal RGU 23-7-297 Pad (Drilling Visit) will not occur until May 1, 2021.

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

Signed: \_\_\_\_\_ Date: 08/26/2020 Email: vschoeber@terraep.com

Print Name: Vicki Schoeber Title: Regulatory Specialist

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  \_\_\_\_\_ Director of COGCC Date: 12/29/2020

## 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

## Best Management Practices

No	BMP/COA Type	Description
1	Planning	<p>Prior to submittal of the Application for Permit to Drill (BLM-APD/Form 2) and the Oil and Gas Location Assessment (Form 2A), TEP conducted onsite and meetings with the Bureau of Land Management (BLM), Colorado Parks and Wildlife, and the associated private landowners. These onsite and meetings were held to discuss TEP's proposed development plan for the Federal RGU 23-7-297 pad and associated support facilities (RG 41-18-297 Pad, RGU 23-6-297 Pad, Love Ranch Centralize Waste Management Facility). Changes were made to the proposed development plan based on feedback received from all stakeholders and included in the APD/Form 2A.</p> <p>The development plan for the RGU 23-7-297 pad was prepared to minimize surface impacts to the greatest extent possible through the development of multiple wells from one location by utilizing directional drilling technology, collocating roads and utility corridors within the same area, through the transportation of produced water to a centralized storage facility on the RGU 23-6-297 pad, and minimizing the surface area needed to conduct operations on the RGU 23-7-297 pad location.</p>

2	Planning	Prior to commencement of construction activities, TEP will hold a pre-construction meeting with contractors to review proposed site construction and installation of stormwater control measures. The site will be staked for construction prior to the pre-construction meeting. Staking will identify the boundaries of the proposed site to protect existing vegetation in areas that should not be disturbed.
3	General Housekeeping	Storage of material and fluids on location during construction, drilling, completion, and production operations will be conducted in a neat and orderly manner with regards to potential fire hazards on site. The well site and access road will be kept free of trash and debris at all times. Disposal of garbage and trash will occur approximately once per week during drilling and completions operations.
4	Storm Water/Erosion Control	<p>Stormwater BMPs will be in place during all phases of development to control stormwater runoff in a manner that minimizes erosion, transportation of sediment offsite, and site degradation.</p> <p>Stormwater BMPs will include a minimum 1.5-foot compacted earthen perimeter berm along the fill slope edges of the pad (western, northern, and part of the eastern portions of the well pad) and around the cuttings management area in the eastern portion of the expanded well pad. Topsoil will be windrowed along the southern (cut slope portion) of the location while excess spoils material will be placed along the south-eastern portion of the location; both within the disturbed area. There will be a complete system of exterior diversion ditches around the disturbed area. These ditches will be installed with armoring and rocked check dams and will tie into three sediment catchment basins; two along the northern edge of disturbance (fill slope), and one along the southern portion (cut slope) of disturbance area. The existing access road will be rerouted near the eastern end of the pad. The access road segment will be surfaced with approximate six inches (6) of gravel and have rocked check dams. Drive over berms will also be constructed near the pad entrances.</p> <p>Site degradation control measures will include grading, slope stabilization (seeding, mulching, surface roughening of the topsoil and excess soil stockpiles, and fill slopes), and the use of gravel and roadbase materials for surfacing of the well pad.</p> <p>Stormwater controls will be installed with consideration given to worker safety, wildlife, and site access. A post-construction stormwater program will be developed for the facility as required per Rule 1002.f.(3). Stormwater is also addressed under a fieldwide Stormwater Management Plan (CDPHE Certification COR404628). See the 'Construction Layout Drawings' and 'Interim Reclamation and Stormwater Plan' attachments for the planned stormwater BMPs proposed for installation at the location for further details.storage tanks on location.</p>
5	Storm Water/Erosion Control	Operator will conduct regular site visits (bi-weekly) to inspect pad conditions, stormwater control measures (berms, ditches, sediment basins), and the cuttings trench (berms and precipitation buildup). As necessary, cuttings trench precipitation will be pumped out and sent to the produced water storage tanks on location.
6	Dust control	Fugitive dust control measures will be employed during all phases of development to minimize dust pollution. Dust control measures include but are not limited to the application of fresh water via water truck along access road during construction, drilling, and completion operations, speed restrictions, periodic road maintenance, road surfacing (i.e. gravel), and automation of wells to reduce truck traffic. Dust control measures will be employed on an as needed based during all phases of development.
7	Construction	All construction equipment and materials will be contained within the proposed limits of the oil and gas location, access roads, or pipeline corridors. Topsoil will be stripped from the site and segregated from subsoil for reuse during pad reclamation. Fugitive dust control measures will be implemented as described in the dust control section.
8	Drilling/Completion Operations	Water used for completions operations will be transported through existing and proposed pipelines minimizing vehicle traffic on existing roadways. TEP will ensure 110 percent secondary containment for any volume of fluids contained at the well site during completions operations.

9	Drilling/Completion Operations	<p>TEP will pressure test pipelines in accordance with the 1100 Series Rule prior to putting into initial service any temporary surface pipelines and following any reconfiguration of the permanent buried pipeline network.</p> <p>TEP will routinely inspect the entire length of the surface pipelines to ensure integrity. The frac support pad will be manned 24 hours during completion operations. TEP will conduct daily inspections of surface poly pipeline routes for leaks during active transfer of fluids and implement secondary containment for temporary pumps and other necessary equipment. Inspections will be conducted by viewing the length of the pipelines; operator will endeavor to minimize surface disturbance during pipeline monitoring. The operator will maintain records of inspections, findings and repairs, if necessary, for the life of the pipelines. In addition, pump stations along the surface poly or steel pipeline routes will be continuously monitored when operating in order to swiftly respond to such a failure.</p> <p>TEP will utilize all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines.</p> <p>TEP will implement measures to contain any potential release of fluids at all intermittent stream, ditch, and drainage crossings. For these crossings: 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 and/or divert any possible release of fluids and prevent fluids from reaching the stream or drainage; or installing oversized pipe sleeves which extend the length of the crossing and installing shut off valves on either side of crossing instead of catchment basins.</p>
10	Interim Reclamation	<p>Certified weed-free native seed in seed mixes that have been agreed to by BLM and CPW will be used. Soil samples may be taken following site reclamation to analyze soil characteristics and determine if soil amendments should be added to topsoil during reclamation actives to promote vegetation growth. TEP will conduct period monitoring of reclamation success as required by Federal and State regulations.</p>
11	CPW-Wildlife - Minimization-Deer and Elk	<p>If new oil and gas operations must occur within CPW-identified mule deer critical winter range or elk winter concentration areas, the operator agrees to conduct new oil and gas operations outside the time period from December 1 through April 15.</p>
12	CPW-Wildlife - Minimization-Deer and Elk	<p>During post-development production operations, TEP will make best efforts to minimize operations at this location during winter months by maximizing operations when possible between 10:00 am to 3:00 pm when wildlife activity is minimal, during winter season (Dec 1 through April 15) within CPW-identified mule deer critical winter range and elk winter concentration areas.</p>
13	CPW-Wildlife - Minimization-Deer and Elk	<p>TEP will preclude from the use of aggressive CPW-identified non-native grasses and shrubs in mule deer and elk habitat and will reclaim the site using BLM- and CPW identified native shrubs, grasses and forbs appropriate to the ecological site disturbed. Certified weed-free native seed in seed mixes, except for non-native plants that benefit wildlife, will be used. Any seed mix planned for interim reclamation will be approved by BLM and CPW prior to implementation. TEP will use certified, weed free grass hay, straw, hay or other mulch materials used for the reseeding and reclamation of disturbed areas. Soil amendments may be added to topsoil during reclamation actives to promote vegetation growth.</p>
14	CPW-Wildlife - Minimization-Deer and Elk	<p>To minimize the potential for wildlife related traffic accidents, TEP has implemented speed restrictions for all lease roads and requires that all TEP employees and contractors adhere to the posted speed restrictions. Remote telemetry equipment will be installed on location to minimize site visits and truck traffic. TEP will utilize existing water infrastructure to transport water to the frac pad, which minimizes vehicle traffic to the location.</p>
15	CPW-Wildlife - Minimization-RAPTORS	<p>Exclusionary devices will be installed to prevent bird and other wildlife from accessing equipment stacks, vents, and openings.</p>
16	CPW-Wildlife - Minimization-Black Bear	<p>The operator will implement Rule 1204.a.1 by storing all garbage, trash, and debris in enclosed bear proof trash containers and transported to an approved disposal facility once per week during drilling and completions operations. No garbage, trash, and debris will be disposed of on location. The well site and access road will be kept free of trash and debris at all times.</p>

17	CPW-Wildlife - Avoidance- Black Bear	The operator agrees to report bear conflicts immediately to CPW staff.
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Total: 17 comment(s)

### Attachment List

<u>Att Doc Num</u>	<u>Name</u>
2109404	SENSITIVE WILDLIFE HABITAT (SWH) AREA MAPS
2109405	AERIAL PHOTO MAPS
2109406	BIG GAME TIMING LIMITATION EXCEPTION REQUEST, BLM-CPW APPROVALS
2109407	APPROVED FEDERAL APD FOR WELL RG 314-7-297
2109416	OBJECTIVE CRITERIA REVIEW MEMO
402402785	FORM 2A SUBMITTED
402464237	DOW CONSULTATION
402464238	LOCATION PICTURES
402464239	NRCS MAP UNIT DESC
402464241	REFERENCE AREA PICTURES
402464242	SENSITIVE AREA DETERMINATION
402473752	INTERIM RECLAMATION AND STORMWATER-EROSION CONTROL PLAN
402473753	LOCATION DRAWING
402473755	REFERENCE AREA MAP
402473758	HYDROLOGY MAP
402473760	ACCESS ROAD MAP
402473763	MULTI-WELL PLAN
402473765	CONST. LAYOUT DRAWINGS
402473766	PLAN OF DEVELOPMENT SUMMARY AND DRAWING
402473768	FACILITY LAYOUT DRAWING
402473770	WASTE MANAGEMENT PLAN
402473771	OBJECTIVE CRITERIA CHECKLIST

Total Attach: 22 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Final review task passed	12/09/2020
OGLA	12/04/2020 - passed the OGLA task.	12/04/2020
OGLA	12/04/2020 - the Objective Criteria Review Memo (Doc# 2109416) is attached to this Form 2A; following additional analysis arising out of the Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181;	12/04/2020
OGLA	12/04/2020 - director review was completed on 12-03-20; finalized 'Objective Criteria Review Memo'; passed OGLA-181 task;	12/04/2020
OGLA	12/02/2020 - completed 'Objective Criteria Review Memo'; prepared Objective Criteria Review Document (OCRD) with the objective criteria review memo, pertinent maps and attachments (Access Road Map, Aerial Photo Maps, Stormwater Control Drawings, Interim Reclamation Plan, Facility Layout Drawing, Pipeline Map, Wildlife Maps), and portions of the current Form 2A; emailed OCD to the director for Director's Review; passed OGLA-181 task;	12/02/2020
OGLA	12/01/2020 - addressed issues concerning construction, stormwater, completion support operations; revised 'Objective Criteria Review Memo'; received and attached documents to support objective criteria review;	12/01/2020
OGLA	11/04/2020 - received and attached revised drawings and documents based on previously submitted and approved Form 2A #402416486 to support objective criteria review and director review;	11/04/2020

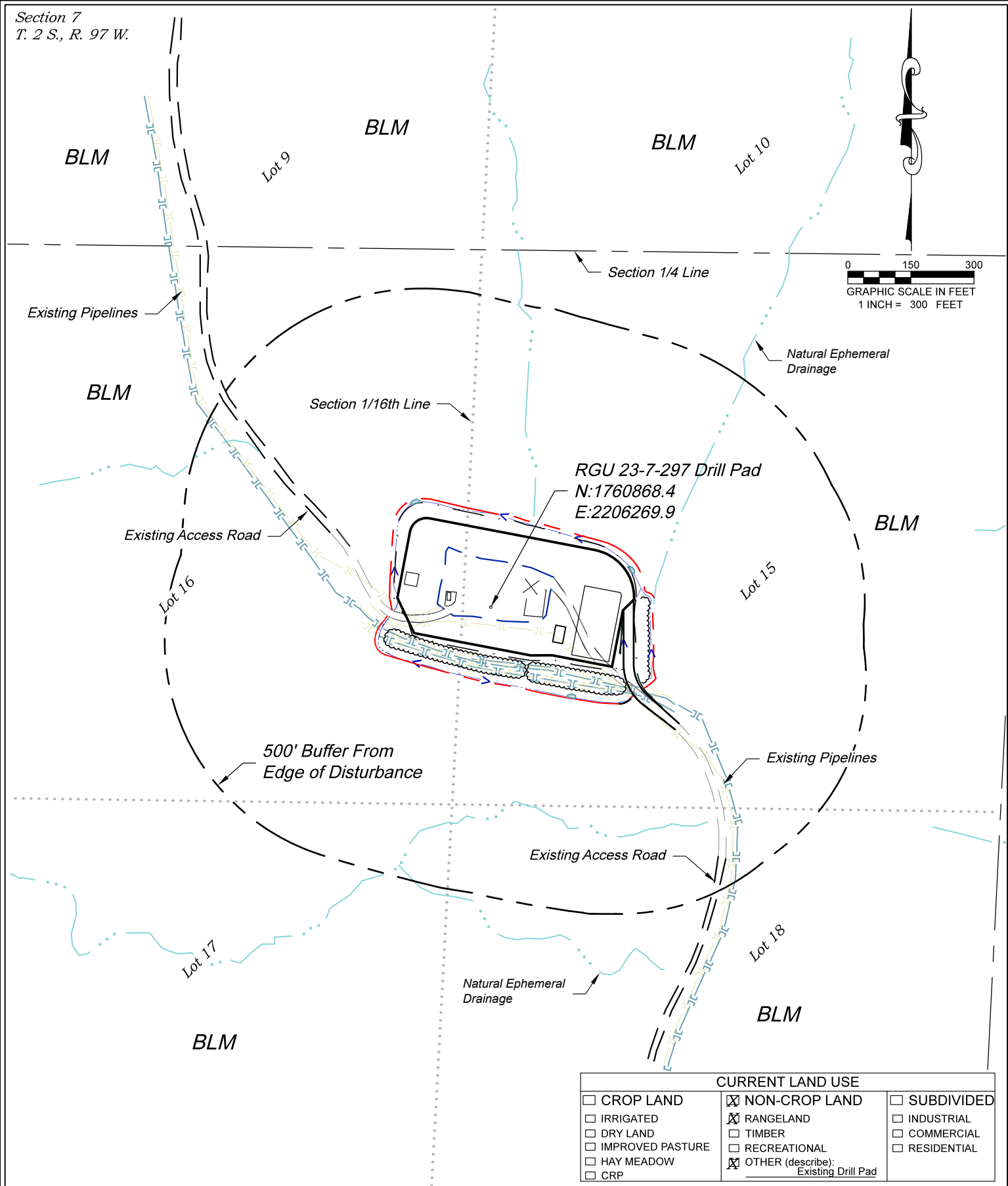
OGLA	11/03/2020 - continued OGLA review; prepared 'Objective Criteria Review Memo' and supporting documentation for director review;	11/03/2020
OGLA	10/23/2020 - initiated OGLA review; requested construction, drilling, and completion time frames; revised operational and wildlife BMPs per TEP; prepared draft 'Objective Criteria Review Memo';	10/23/2020
Permit	Passed Permit review.	10/06/2020
DOW	<p>This Form 2A # 402402785 is being submitted by TEP for 16 wells on the existing Federal RGU 23-7-297 well-pad facility (COGCC Loc ID 316408), which has one existing well developing Federal Lease COC 057285. The operator previously submitted Form 2A # 402416486 for this location to support well completion operations for the sixteen (16) proposed wells on the RG 41-18-297 Pad (COGCC Loc ID 316591). The Federal RGU 23-7-297 pad is located on BLM Federal surface with Federal minerals within Lots 15 and 16 of Section 7, Township 2 South, Range 97 West, 6th P.M. in Rio Blanco County. The pad is accessed along an existing 6.1 mile access road from Rio Blanco County Road 85, entirely on Federal surface.</p> <p>The Federal RGU 23-7-297 pad is currently 3.80-acres, 2.75 acres of which were previously reclaimed. The operator proposes to reconstruct and expand the pad to 5.66-acres, creating 1.86 acres of new disturbance. Proposed infrastructure includes 18 separators, 4 condensate tanks, 3 VOC combustors, 1 water tank, 1 drilling pit, a chemical skid and meter shed. Off-location pipeline facilities include an 8 steel gas pipeline and a 6 Flexsteel water pipeline. Previously proposed infrastructure (Form 2A# 402416486) includes approximately fifty 500bbl frac tanks, 12 diesel frac pumps, and three 4-phase separators, and five temporary surface frac lines between the RGU 23-7-297 pad and the RG 41- 18-297 pad. The proposed pipelines and frac lines would follow existing access roads or pipeline corridors.</p> <p>CPW attended an on-site consultation on July 15, 2019 with TEP and BLM. The Federal RGU 23-7-297 pad falls within Mule Deer Critical Winter Range Sensitive Wildlife Habitat (SWH), and the access road falls within Mule Deer Critical Winter Range (Severe Winter Range and Winter Concentration Area) SWH and and Elk Production Area SWH. Stipulations include a Timing Limitation (TL) for big game critical winter range, and a raptor survey required by BLM. CPW advised the addition of perch deterrents on the poles for the overhead powerlines proposed along BLM Road 1019 from CR 24. CPW requested wildlife-friendly fencing around reclamation areas, if they were to be fenced. Additionally, CPW advised that the project area falls within the Square S cattle grazing allotment (South Ryan pasture), and that the operator would have to give the grazing permittee 72 hours notice before commencing operations and fix any range structures (ie, fence) damaged during the project.</p> <p>On May 14, 2020, the operator contacted CPW for a pre-app review of locations included in the Lower Wagonroad Ridge Master Development Plan (LWRMDP) EA through the BLM White River Field Office. The LWRMDP includes development of 51 natural gas wells on three existing well pads (RG 41-18-297 pad, RGU 23-7-297 pad and RGU 44-1-298 pad), one produced water disposal well (Federal RG 33-22-299) on the existing Federal 299-23-3 pad, installation of additional facilities on the RGU 23-6-297 pad, and construction of a new Centralized Waste Management Facility. The operator proposed to begin construction, if permitting allowed, of the RG 41-18-297 pad and RGU 23-7-297 pad in Oct 2020, in order to complete construction prior to the Dec. 1- April 30 Big Game Winter Range TL for these two locations. The operator expects to begin drilling operations on the RG 41-18-297 pad in late April 2021.</p> <p>The operator will be meeting with CPW and the BLM on Sept 21, 2020 to review any changes to the development schedule and to discuss potential compensatory mitigation measures that may be required. The operator proposed specific planning and operational measures in the LWRMDP to minimize impacts to wildlife. CPW reviewed the LWRMDP, specifically the RG-41-18-297 pad, RGU 23-7-297 and Federal 299-23-3 pads. CPW expressed support for TEP using and expanding existing pad sites in lieu of constructing entirely new pads, and utilizing existing roads, pipeline corridors and infrastructure to the greatest extent possible to minimize new disturbance to wildlife habitat. CPW also expressed support for the planning and operational measures included in the LWRMDP and the proposed Best Management Practices for these sites.</p> <p>Per the current and previous Form 2As for this location, TEP's Operator Proposed Wildlife</p>	09/18/2020

	<p>BMPs for the RGU 23-7-297 pad include:</p> <ol style="list-style-type: none"> <li>1. Black Bear: The operator will implement Rule 1204.a.1 (also see General Operating Recommendations).</li> <li>2. Black Bear: The operator agrees to report bear conflicts immediately to staff.</li> <li>2. 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.</li> <li>3. 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.</li> <li>4. Deer and Elk: TEP will utilize existing water infrastructure to transport water to the frac pad, which minimizes vehicle traffic to the location.</li> <li>5. Deer and Elk: To minimize the potential for wildlife related traffic accidents, TEP has implemented speed restrictions for all lease roads and requires that all TEP employees and contractors adhere to these posted speed restrictions.</li> <li>6. Deer and Elk: During post-development production operations, TEP will make best efforts to minimize operations at this location during winter months by maximizing operations when possible between 10:00am to 3:00pm when wildlife activity is minimal.</li> <li>7. Raptors: Exclusionary devices will be installed to prevent bird and other wildlife from access equipment stacks, vents, and openings.</li> </ol> <p>Additional Operator-Proposed BMPs that will minimize impacts to wildlife include:</p> <p>(1) Planning- The development plan for the RGU 23-7-297 pad was prepared to minimize surface impacts to the greatest extent possible through the development of multiple wells from one location by utilizing directional drilling technology, collocating roads and utility corridors within the same area, through the transportation of produced water to a centralized storage facility on the RGU 23-6-297 pad, and minimizing the surface area needed to conduct operations on the RGU 23-7-297 pad location.</p> <p>(3) General Housekeeping- The well site and access road will be kept free of trash and debris at all time. Disposal of garbage and trash will occur approximately once per week during completions operations.</p> <p>In addition to the Form 2A Operator Proposed BMPs, CPW added the following BMP:</p> <p>1) If new oil and gas operations must occur within CPW-identified mule deer critical winter range or elk winter concentration areas, the operator agrees to conduct new oil and gas operations outside the time period from December 1 through April 30 to the greatest extent possible. If operations must take place during this time period, the operator will coordinate with CPW and BLM to conduct appropriate compensatory mitigation to offset the impacts to wildlife.</p> <p>Due to the fact that the operator will be completing construction activity on this site prior to Dec. 1, in addition to utilizing existing pad sites, roads and pipeline corridors and centralizing fluid management to minimize vehicle traffic and site visitation, CPW does not object to the proposed operations. CPW will consult with the operator and BLM to determine any mitigation measures that may be required if operations occur at this location during the big game winter time period from December 1 through April 30.</p> <p>Elissa Slezak, September 18, 2020</p>	
OGLA	08/31/2020 - COGCC staff conducted its technical review of this Form 2A Oil and Gas Location Assessment within the context of SB 19-181 and the required Objective Criteria. This Form 2A met Objective Criteria #6 and #12.	08/31/2020
OGLA	08/31/2020 - Passed completeness.	08/31/2020
Total: 13 comment(s)		

## **Public Comments**

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

Section 7  
T. 2 S., R. 97 W.



CURRENT LAND USE		
<input type="checkbox"/> CROP LAND	<input checked="" type="checkbox"/> NON-CROP LAND	<input type="checkbox"/> SUBDIVIDED
<input type="checkbox"/> IRRIGATED	<input checked="" type="checkbox"/> RANGELAND	<input type="checkbox"/> INDUSTRIAL
<input type="checkbox"/> DRY LAND	<input type="checkbox"/> TIMBER	<input type="checkbox"/> COMMERCIAL
<input type="checkbox"/> IMPROVED PASTURE	<input type="checkbox"/> RECREATIONAL	<input type="checkbox"/> RESIDENTIAL
<input type="checkbox"/> HAY MEADOW	<input checked="" type="checkbox"/> OTHER (describe): Existing Drill Pad	
<input type="checkbox"/> CRP		

REVISED: 8/21/20

136 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-2720  
Fax (970) 625-2773



SCALE: 1" = 300'  
DATE: 9/10/19  
PLAT: 6 of 7  
PROJECT: TEP Valley  
DFT: cs

Construction Plan Prepared for:



TEP Rocky Mountain LLC

RGU 23-7-297 Pad - Plat 6  
LOCATION DRAWING

*Visible Improvements to Well Head (ft.)*

<i>Description</i>	<i>Building</i>	<i>Building Unit</i>	<i>High Occu. Building</i>	<i>DOAA</i>	<i>Public Road</i>	<i>Above Ground Utility</i>	<i>Railroad</i>	<i>Property Line</i>	<i>School Facility</i>	<i>School Property Line</i>	<i>Child Care Center</i>
Fed. RG 314-7-297	>5280	>5280	>5280	>5280	325° 4461	335° 4176	>5280	296° 2351	>5280	>5280	>5280
Fed. RG 414-7-297	>5280	>5280	>5280	>5280	325° 4466	335° 4153	>5280	296° 2359	>5280	>5280	>5280
Fed. RG 514-7-297	>5280	>5280	>5280	>5280	325° 4471	335° 4173	>5280	296° 2366	>5280	>5280	>5280
Fed. RG 11-18-297	>5280	>5280	>5280	>5280	325° 4477	335° 4197	>5280	296° 2373	>5280	>5280	>5280
Fed. RG 311-18-297	>5280	>5280	>5280	>5280	325° 4482	335° 4192	>5280	296° 2380	>5280	>5280	>5280
Fed. RG 411-18-297	>5280	>5280	>5280	>5280	325° 4488	334° 4188	>5280	296° 2388	>5280	>5280	>5280
Fed. RG 511-18-297	>5280	>5280	>5280	>5280	325° 4493	334° 4191	>5280	296° 2395	>5280	>5280	>5280
Fed. RG 12-18-297	>5280	>5280	>5280	>5280	325° 4498	334° 4199	>5280	296° 2402	>5280	>5280	>5280
Fed. RG 313-7-297	>5280	>5280	>5280	>5280	325° 4459	335° 4155	>5280	296° 2356	>5280	>5280	>5280
Fed. RG 13-7-297	>5280	>5280	>5280	>5280	325° 4465	335° 4193	>5280	296° 2363	>5280	>5280	>5280
Fed. RG 512-7-297	>5280	>5280	>5280	>5280	325° 4470	334° 4166	>5280	295° 2371	>5280	>5280	>5280
Fed. RG 412-7-297	>5280	>5280	>5280	>5280	325° 4475	334° 4181	>5280	295° 2378	>5280	>5280	>5280
Fed. RG 312-7-297	>5280	>5280	>5280	>5280	325° 4481	335° 4199	>5280	295° 2385	>5280	>5280	>5280
Fed. RG 12-7-297	>5280	>5280	>5280	>5280	325° 4486	335° 4191	>5280	295° 2392	>5280	>5280	>5280

*Production Equipment*

Seperators	>5280	>5280	>5280	>5280	325° 4255	335° 4010	>5280	293° 2172	>5280	>5280	>5280
Tanks	>5280	>5280	>5280	>5280	324° 4576	332° 4315	>5280	293° 2560	>5280	>5280	>5280



SCALE: NA  
 DATE: 9/10/19  
 SHEET: 4A of 5  
 PROJECT: TEP Valley  
 DFT: cs

**Construction Plan Prepared for:**



TEP Rocky Mountain LLC

*RGU 23-7-297 Pad - Plat 4A*

*LOCATION TABLE*

6/25/19 10:02:02 AM DRAWING: 000001\_102-107106

## COGCC OBJECTIVE CRITERIA REVIEW

### TEP Rocky Mountain LLC

**LOCATION: RGU 23-7-297**

**LOC ID:**

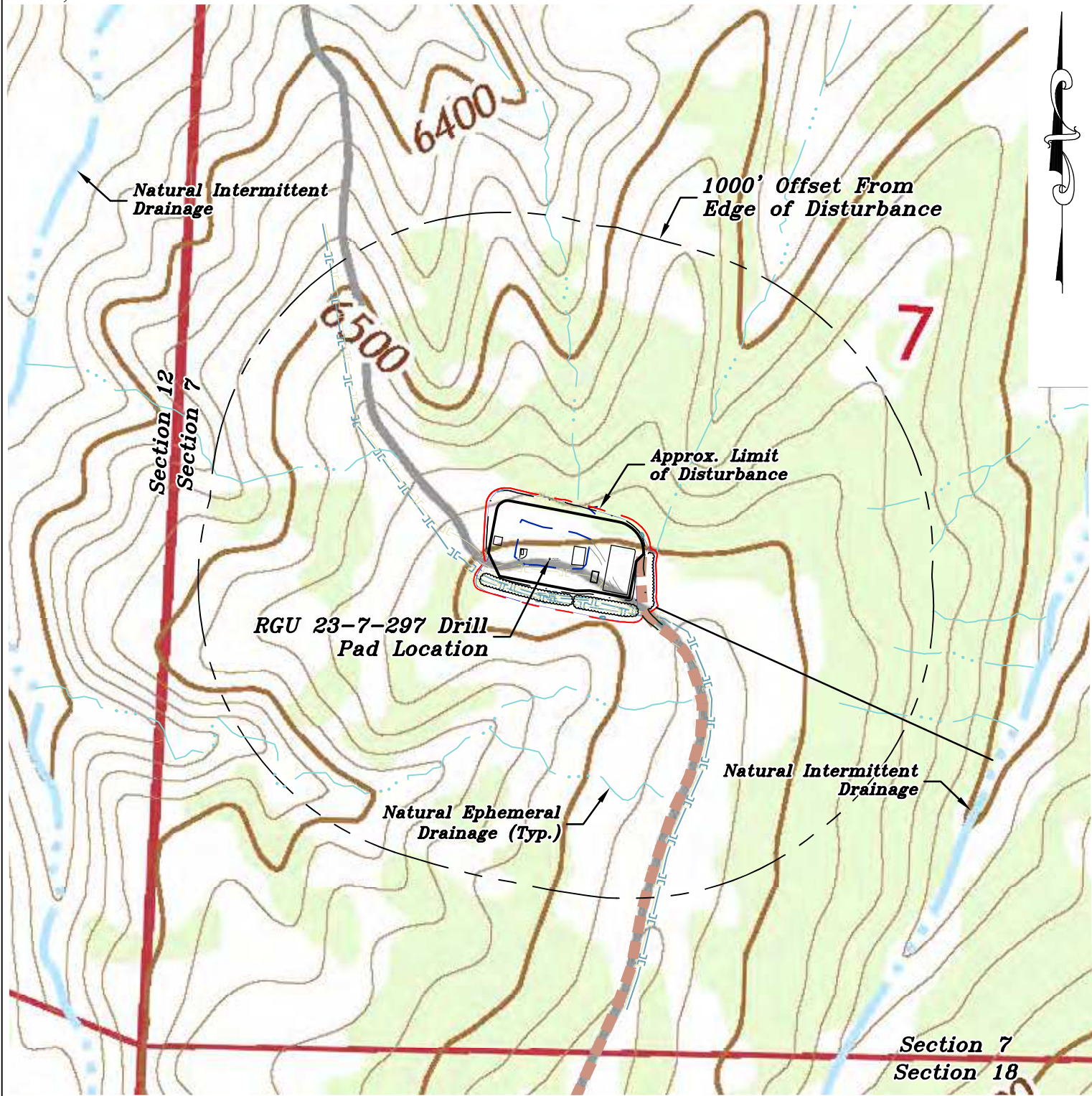
**Location ID #316408; Form 2A Doc #402402785.**

**Fed Surface, Fed Minerals**

**Proposed Wells: RG 12-7-297, RG 312-7-297, RG 412-7-297, RG 512-7-297, RG 13-7-297, RG 313-7-297, RG 314-7-297, RG 414-7-297, RG 514-7-297, RG 11-18-297, RG 311-18-297, RG 411-18-297, RG 511-18-297, RG 12-18-297**

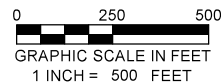
**Existing Wells: RGU 23-7-297**

	COGCC CRITERIA	YES/NO	COMMENTS
1	O & G Location within 2,000' of a Building Unit, High Occupancy Building--including UMA & LUMA locations.	No	Please refer to cultural distance information.
2	O & G Location within a municipality.	No	
3	O & G Location within 2,000' of a municipal boundary, platted subdivision or County boundary.	No	
4	O & G Location within 2000' of a school property line.	No	Please refer to cultural distance information.
5	O & G Location within: a) a Floodplain or a Floodway; b) an identified public drinking water supply area (Rule 317B Buffer Zone); or c) a Sensitive Area for water resources.	No	a) No - Refer to FEMA & County records b) No - Refer to the COGCC GIS mapping data/Public Water System Surface Water Supply Areas c) No - As described in the Sensitive Area Determination, the RGU 23-7-297 is not located within a sensitive area. However, as mentioned in the Sensitive Area Determination, BMPs including a perimeter berm and diversion ditches, will be constructed during facility expansion to ensure containment during a potential release.
6	O & G Location within a CPW mapped RSO or SWH, or locations receiving site or species-specific CPW comments.	Yes	The proposed O&G Location is within Mule Deer Critical Winter Range (SWH) boundary. Prior to Form 2A submittal TEP consulted with BLM and CPW regarding the proposed development on the RGU 23-7-297 pad. The BLM Big Game Winter Range Timing Limitation for this location begins December 1st and ends April 30th annually. TEP will consult with BLM and CPW prior to construction, drilling, or well completion operations planned to occur during this time frame to determine scope of impact to wintering big game and will implement mitigation measures if necessary to offset adverse impacts.
7	O & G Location within 1000' of a Designated Outdoor Activity Area.	No	Please refer to cultural distance information.
8	O & G Location with storage of hydrocarbon or produced water in more than 18 tanks or in excess of 5200 bbls.	No	Please refer to Plan of Development
9	O & G Location where the operator is using a surface owner protection bond pursuant to Rule 703 to access the surface.	No	Right to construct is the Oil and Gas Lease.
10	O & G Location where the Relevant Local Government, or state or federal agency requests additional consultation.	Yes	TEP has received a Special Use/Building Permit from Rio Blanco County, which was approved on June 18, 2020.
11	O & G Location where the operator requests the Director to grant a Rule 502.b Variance for an associated permit application.	No	No variance request is planned at this time.
12	O & G Location with an access road (road constructed from the public road to the O&G location) a) w/in a RSO, SWH b) 317B buffer zone or within 200' of a Building Unit.	Yes	The access road to the O&G Location is within Mule Deer Critical Winter Range (SWH) and Elk Production Area (SWH). Prior to Form 2A submittal TEP consulted with BLM and CPW regarding the proposed development on the RGU 23-7-297 pad. The BLM Big Game Winter Range Timing Limitation for this location begins December 1st and ends April 30th annually. TEP will consult with BLM and CPW prior to construction, drilling, or well completion operations planned to occur during this time frame to determine scope of impact to wintering big game and will implement mitigation measures if necessary to offset adverse impacts. To minimize the potential for wildlife related traffic accidents, TEP has implemented speed restriction for all lease roads and requires that all TEP employees and contractors adhere to these proposed speed restrictions. During post-development production operations, TEP will make best efforts to minimize operations at this location during winter months and maximize operation when possible between 10:00am and 3:00pm when wildlife activity is minimal.
13	A proposed Centralized E&P Waste Management Facility.	NA	NA
14	A request to vent or flare (Form 4) from a location within 1500' of a Building Unit or High Occupancy Unit.	NA	NA
15	An Intent to plug (Form 6) for a well that is associated with a stray gas investigation.	NA	NA
16	O & G location proposed by an Operator who is subject to additional individual or blanket financial assurance requirements pursuant to Rule 702.a.	NA	NA



**LEGEND**

- EXISTING ROAD ————
- EXISTING DRAINAGE ————
- STORMWATER DRAINAGE CHANNEL ————



**NOTE:**

1. Nearest Water Well: 63° - 5148 ft.  
Permit # 68235-F
2. Nearest Drainage: N Az. 114° 1339 ft.

REVISED: 9/15/20

SCALE:	1" = 500'
DATE:	9/03/19
PLAT:	5B of 7
PROJECT:	TEP Valley
DFT:	cs

**Construction Plan Prepared for:**

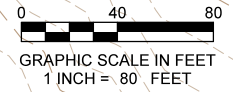
**TERRA** TEP Rocky Mountain LLC

RGU 23-7-297 Pad - Plat 5B  
HYDROLOGY MAP

136 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-2720  
Fax (970) 625-2773



Section 7  
T. 2 S., R. 97 W.  
6th. P.M.



UnReclaimed Area: ±1.91 ac.  
Reclaimed Area: ±3.63 ac.  
Total Site Disturbance: ±5.54 ac.

NOTE:  
Reclaimed Slopes Vary  
as Shown.

**LEGEND**

Reclaimed Area	
UnReclaimed Area	
Seed & Mulch	
Surface Roughening	

1236 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-1333  
Fax (970) 625-2773

**BOOKCLIFF**  
Survey Services, Inc.

REVISED: 8/21/20

SCALE:	1" = 80'
DATE:	9/06/19
SHEET:	5 of 5
PROJECT:	Highlands
DFT:	cs

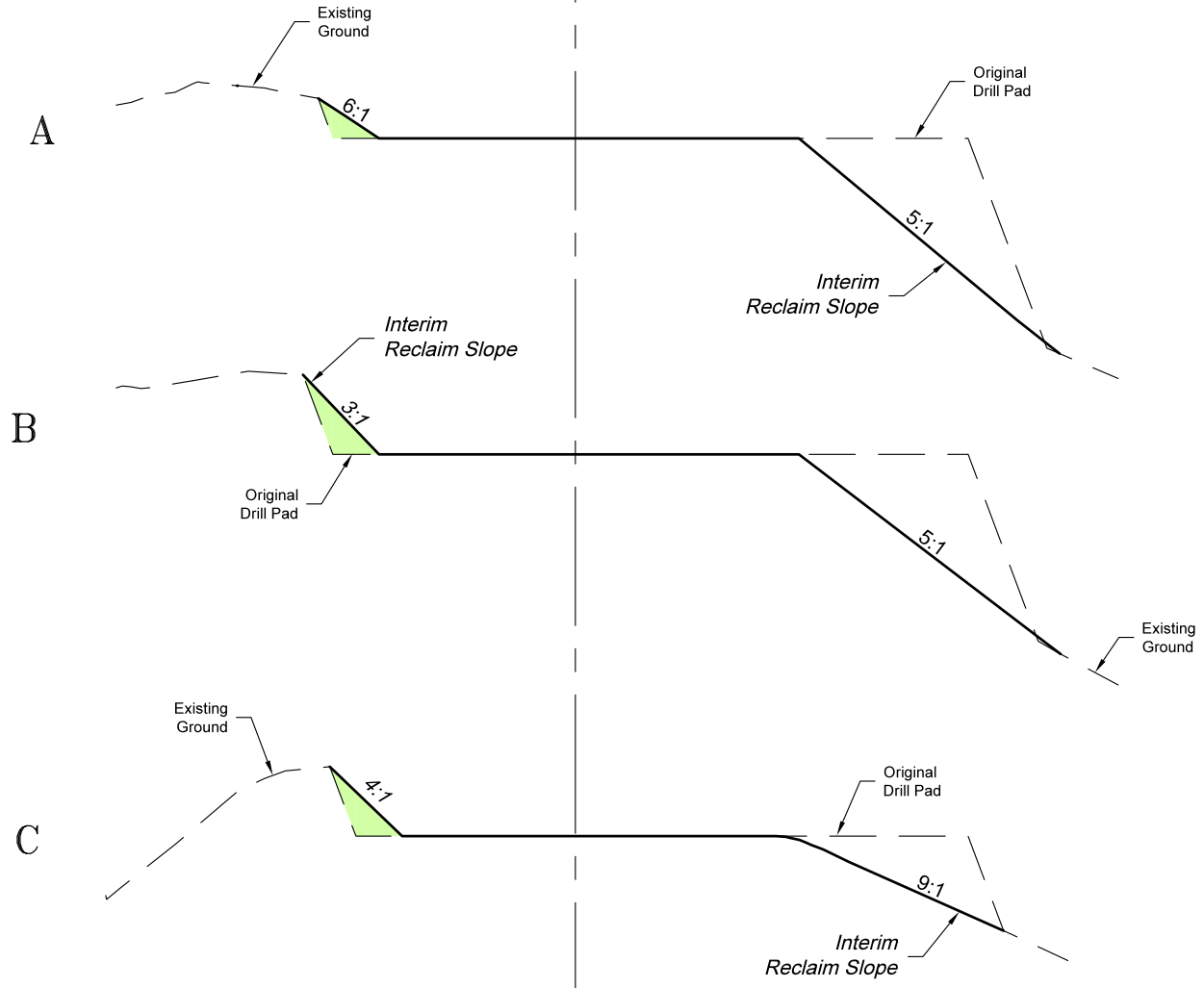
**Construction Plan Prepared for:**

**TERRA** ENERGY PARTNERS  
TEP Rocky Mountain LLC

RGU 23-7-297 Pad - Plat 5  
INTERIM RECLAIM LAYOUT

Section 7  
 T. 2 S., R. 97 W.  
 6th. P.M.

Φ  
 WELLS



\*NOTE:  
 Reclaimed Slopes vary as shown.

SCALE: Horiz.: 1" = 80'  
 Vert. : 1" = 20'

REVISED: 3/12/20

1±36 East Third  
 Street Rifle, Colorado  
 81650 Ph. (970)  
 625-2720 Fax (970)  
 625-277±3



SCALE: As Noted  
 DATE: 9/06/19  
 PLAT: 7a of 7  
 PROJECT: Highlands  
 DFT: cs

Construction Plan Prepared for:

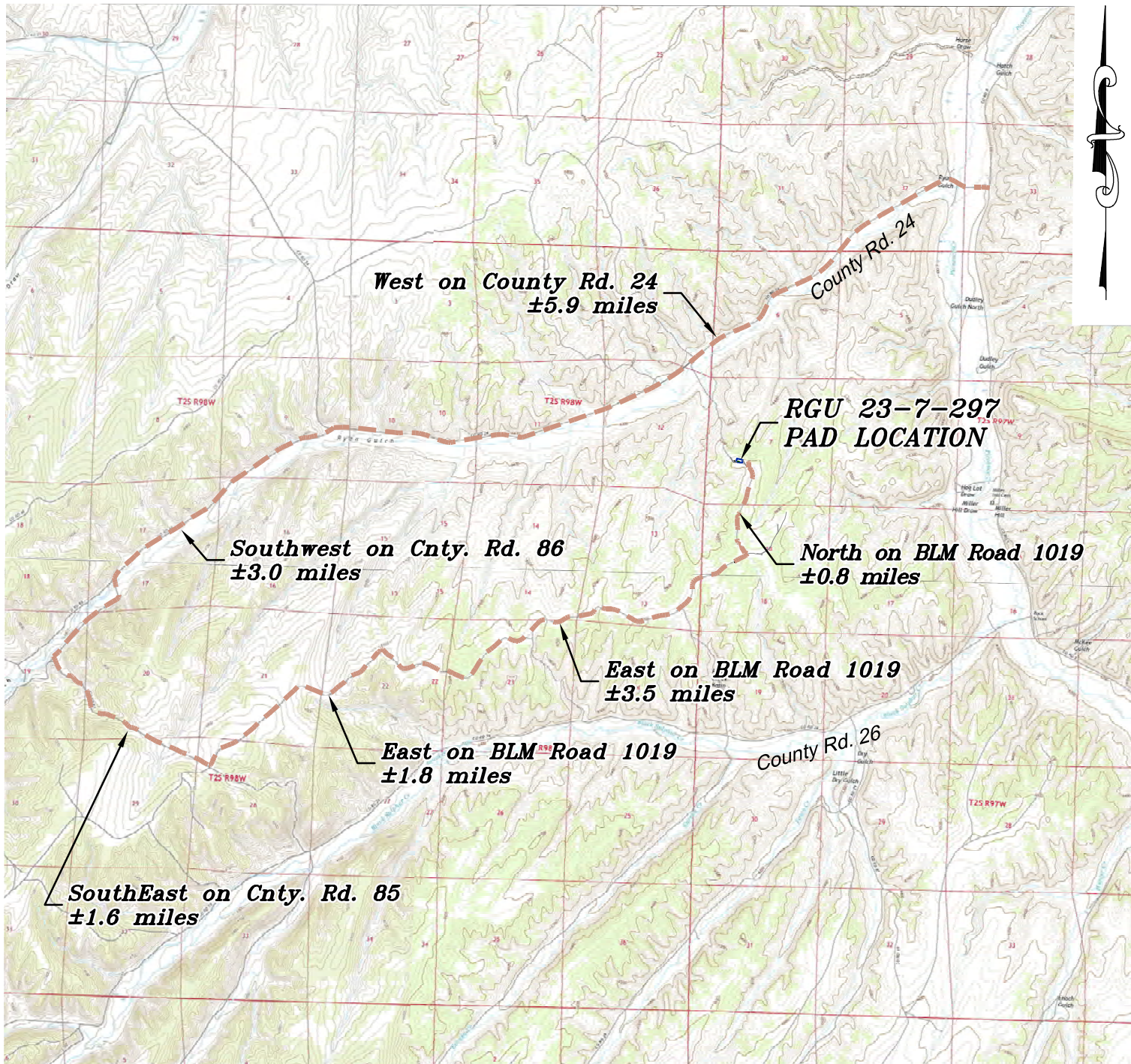


TEP Rocky Mountain LLC

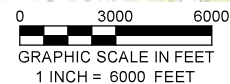
RGU 23-7-297 Drill Pad - Plat 7A  
 INTERIM RECLAIM CROSS SECTIONS



Section 7  
T. 2 S., R. 97 W.



Existing Road - - - - -



**ACCESS DESCRIPTION:**

FROM THE INTERSECTION OF STATE HIGHWAY 64 AND RIO BLANCO COUNTY ROAD 5 PROCEED SOUTHERLY ALONG COUNTY ROAD 5, ±14.5 MILES TO THE INTERSECTION WITH COUNTY ROAD 24 (Mile Marker 26.8), PROCEED WEST ALONG COUNTY ROAD 24, ±5.9 MILES TO THE INTERSECTION WITH COUNTY ROAD 86, PROCEED LEFT IN A SOUTHWEST DIRECTION ±3.0 MILES TO THE INTERSECTION WITH COUNTY ROAD 85, PROCEED LEFT IN A SOUTHEAST DIRECTION ±1.6 MILES TO THE INTERSECTION WITH BLM ROAD 1019, PROCEED LEFT IN AN EASTERLY DIRECTION ±1.8 ON BLM ROAD 1019 TO A THREE-WAY INTERSECTION, KEEP RIGHT IN AN EASTERLY DIRECTION ON BLM ROAD 1019 ±3.5 MILES TO A THREE-WAY INTERSECTION, KEEP LEFT ON BLM ROAD 1019 IN A NORTHERLY DIRECTION ±0.8 MILES TO THE EXISTING RGU 23-7-297 DRILL PAD LOCATION, AS SHOWN HEREON.

REVISED: 4/02/20

SCALE:	1" = 6000'
DATE:	9/10/19
PLAT:	5 of 8
PROJECT:	TEP Valley
DFT:	cs

Construction Plan Prepared for:

**TERRA** TEP Rocky Mountain LLC

RGU 23-7-297 Drill Pad - Plat 5  
ACCESS ROAD & TOPO MAP

136 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-2720  
Fax (970) 625-2773

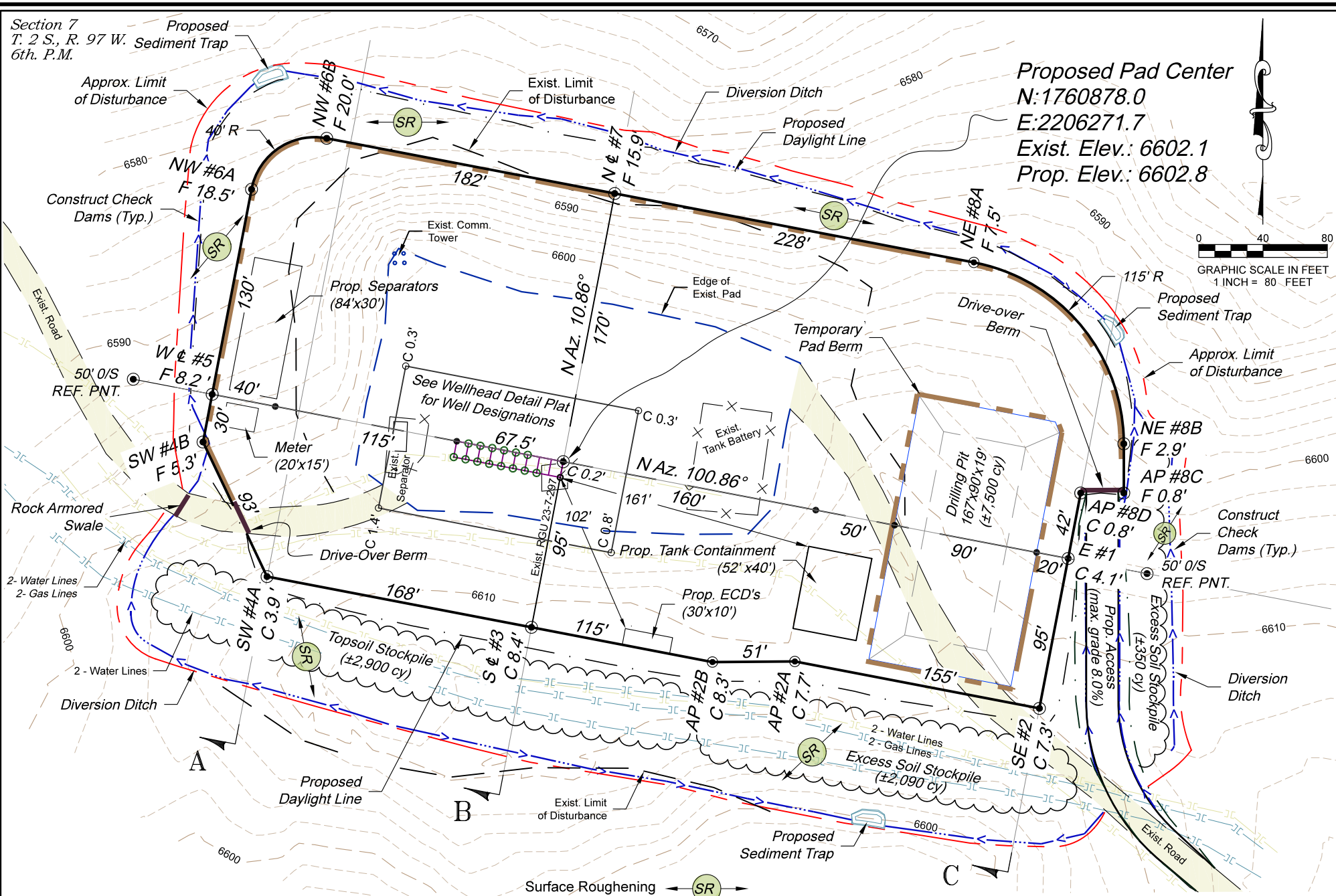




Section 7  
T. 2 S., R. 97 W. Sediment Trap  
6th. P.M.

Proposed Pad Center  
N:1760878.0  
E:2206271.7  
Exist. Elev.: 6602.1  
Prop. Elev.: 6602.8

0 40 80  
GRAPHIC SCALE IN FEET  
1 INCH = 80 FEET



Surface Roughening (SR)

REVISED: 8/24/20

SCALE: 1" = 80'  
DATE: 9/06/19  
SHEET: 2 of 7  
PROJECT: Highlands  
DFT: cs

1236 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-1333  
Fax (970) 625-2773



Construction Plan Prepared for:

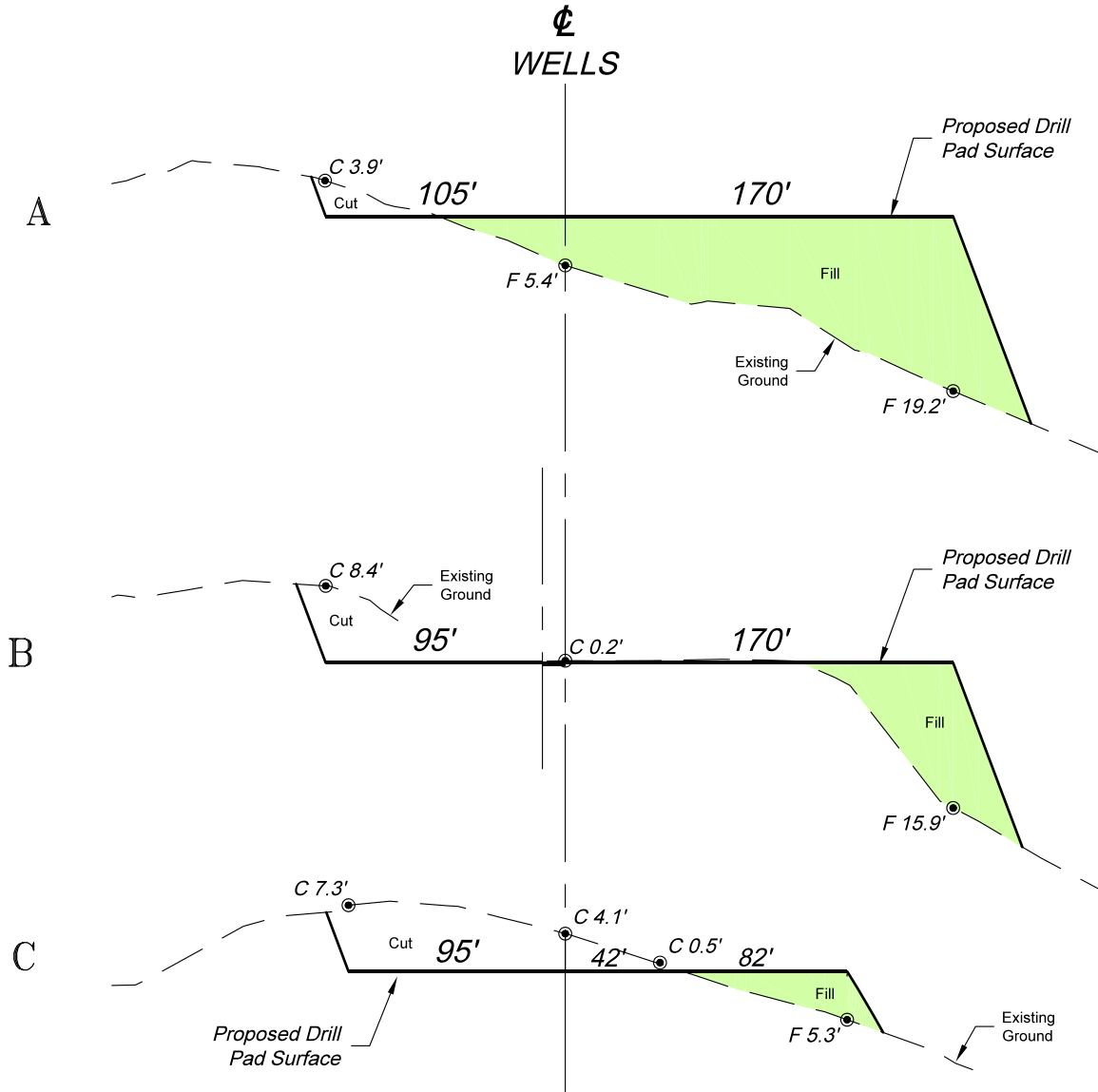


TEP Rocky Mountain LLC

RGU 23-7-297 Pad - Plat 2

CONSTRUCTION LAYOUT

Section 7  
T. 2 S., R. 97 W.  
6th. P.M.



SCALE: Horiz.: 1" = 80'  
Vert.: 1" = 20'

Pad Surface Completion Volumes:  
6" Aggregate Base = ±2360 cy  
6" Shale Base = ±2360 cy

ESTIMATED EARTHWORK QUANTITIES (cy)				
ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	13,710	18,540	2,480	-7,310
PIT	8,930			8,930
ROAD	430	0	0	430
TOTALS	23,070	18,540	2,480	2,050

\*Construction Notes

- 1) Design Cut Slope: 1.5:1  
Design Fill Slope: 1.5:1
- 2) Access Road Cut Slope: 2:1  
Access Road Fill Slope: 2:1 Max. Grade 7.5%
- 3) Topsoil based on 6" Soil Depth.
- 4) 20% Swell Factor Applied to Earthwork Cut Volume.
- 5) Total Pad Disturbance: 5.54 ac.  
Road Disturbance: 0.19 ac.

REVISED: 8/21/20

1±36 East Third  
Street Rifle, Colorado  
81650 Ph. (970)  
625-2720 Fax (970)  
625-277±3



SCALE: As Noted  
DATE: 9/06/19  
PLAT: 2A of 7  
PROJECT: Highlands  
DFT: cs

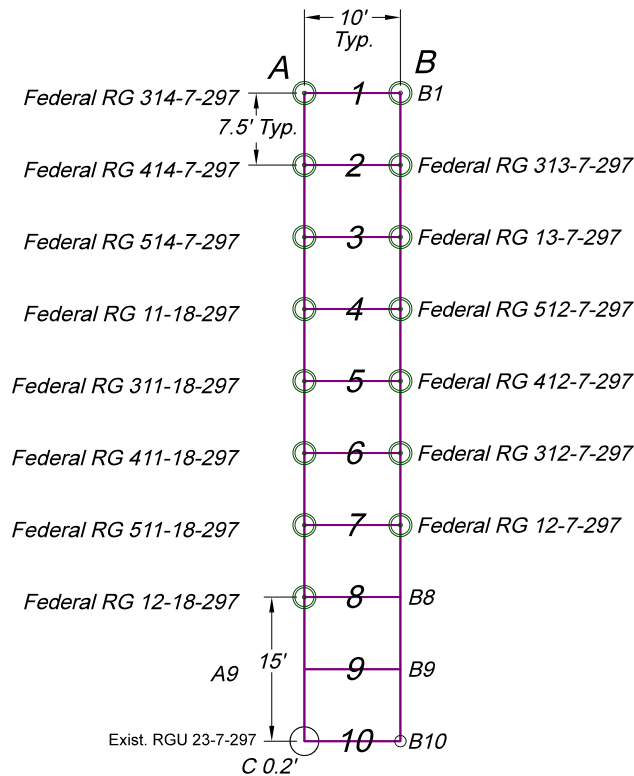
Construction Plan Prepared for:



TEP Rocky Mountain LLC

RGU 23-7-297 Pad - Plat 2A  
CONSTRUCTION LAYOUT  
CROSS SECTIONS

Section 7  
 T. 2 S., R. 97 W.  
 6th. P.M.



**WELLHEAD DETAIL**

REVISED: 8/21/20

1±36 East Third  
 Street Rifle, Colorado  
 81650 Ph. (970)  
 625-2720 Fax (970)  
 625-277±3



SCALE: NA  
 DATE: 3/02/20  
 PLAT: 2B of 7  
 PROJECT: TEP Valley  
 DFT: cs

Construction Plan Prepared for:



TEP Rocky Mountain LLC

RGU 23-7-297 Drill Pad - Plat 2B  
 WELLHEAD DETAIL

**RGU 23-7-297 Pad**  
**Plan of Development Summary**  
**August 24, 2020**

INTRODUCTION

TEP Rocky Mountain LLC is proposing to drill complete and produce fourteen (14) new directional wells from the existing RGU 23-7-297 pad (COGCC Loc ID: 316408) located on Federal surface in Lots 15 and 16 of Section 7, Township 2 South, Range 97 West, 6<sup>th</sup> P.M. and overlays Federal Lease COC-57285. The RGU 23-7-297 currently support production operations for one (1) existing producing natural gas well. The RGU 23-7-297 pad would be slightly expanded to support the development of the proposed wells. All fourteen (14) proposed wells would be directionally drilled into Federal minerals as described below.

Existing Well Count: One (1) – Federal Lease COC-57285  
Proposed Well Count: Fourteen (14) Total  
    Five (5) – Federal Lease COC-003453  
    Ten (9) – Federal Lease COC-057285  
Total Well Count: Fifteen (15) Wells  
Surface Ownership: Federal - Bureau of Land Management (BLM)  
Mineral Ownership: Federal - Bureau of Land Management (BLM)  
Spacing Orders (All Sections): Cause #1 – Order #229; Setback 100’ N/S and 600’ E/W  
High Priority Wildlife Habitat: SB181 CPW Layers  
    Mule Deer Sever Winter Range & Mule Deer Winter Concentration Area

TEP is currently proposing to begin construction activities (pad, road, and pipeline) on the RGU 23-7-297 pad in September 2020 to support remote frac operations for the proposed wells on the RG 41-18-297 pad. Please see the Oil and Gas Location Assessment (Form 2A – Doc # 402416486) submitted for remote frac operations on the RGU 23-7-297 Pad for additional details. Drilling operations are currently scheduled to occur from June 2022 through November 2022. Simultaneous operations (“SIMOPS”) will be employed during development of the proposed wells. Well completions operations would begin approximately thirty (30) days following first spud and would be complete in February 2023. Interim reclamation of the RGU 23-7-297 pad would begin May 2023 and would take approximately four (4) weeks to complete.

SITE ACCESS & CONSTRUCTION

The existing access road for the RGU 23-7-297 pad originates from Rio Blanco County Road 85 and is approximately 6.1 miles in length. Approximately 6.1 miles of the existing access road follows BLM Road 1019. The existing access road will undergo minor maintenance during construction of the pad location, which may include spot graveling and stormwater control maintenance.

The RGU 23-7-297 pad is an existing 2.77-acre well pad that currently supports production of one (1) existing natural gas well. The pad would be expanded to a 5.54-acre footprint to accommodate the development of fourteen (14) proposed wells. Storm water controls including waddles, diversion ditches, sediment traps, and others, will be installed to during construction of the location to effectively control storm water and sediment from the location. Existing storm water control features will be inspected and repaired if required. The expanded pad working surface will be approximately five hundred and forty feet (540’) in length by two hundred and seventy feet (270’) in width. A drilling pit will be excavated along the south side of the existing pad (south of the existing wells) and used for water-based drill cuttings management during drilling operations. The proposed production facilities will be installed south of the

**RGU 23-7-297 Pad**  
**Plan of Development Summary**  
**August 24, 2020**

proposed wells near the existing production equipment. Please see the Construction Layout and Plan of Development Map for further details.

PRODUCTION EQUIPMENT

TEP would install wellhead telemetry and other wellhead specific equipment on the RGU 23-7-297 pad to support production operations for the fourteen (14) proposed wells. TEP would also install production facilities, including separators, tanks, and Emission Control Devices (“ECD”), on the RGU 23-7-297 pad to effectively operate and produced the proposed wells. Proposed separators will be installed along the west side of the pad. The proposed tank battery will be installed on the east end of the pad adjacent to the proposed drilling pit. Production equipment will be installed prior to commencement of drilling operations. The following describes the production facilities planned for use during drilling, completion, and production operations associated with the existing and proposed wells on the RGU 23-7-297 pad:

1. RGU 23-7-297 Well Pad:
  - a. Drilling Equipment:
    - i. Drill Rig Equipment – See Drill Rig Layout
    - ii. Drilling Pit – Drilling cuttings management and disposal
  - b. Completions Equipment
    - i. Three (3) High Pressure Four Phase Separator
    - ii. One (1) Low Pressure P-Tank
    - iii. Three (3) Enclosed Water Tanks
    - iv. One (1) Water Pump
    - v. One (1) Flare Unit (High Pressure)
    - vi. One (1) Combustor (Low Pressure)
  - c. Production Equipment:
    - i. Proposed Separators: Eighteen (18) Separators within 84’ x 30’ area
      1. Four (4) Quad Separators
      2. Two (2) Low Pressure Separators
    - ii. Proposed Tanks: Five (5) Tanks within 52’ x 40’ Lined Steel Containment
      1. Four (4) 500bbl Condensate Tanks
      2. One (1) 500bbl Produced Water Tank
    - iii. Proposed Emissions Control Devices: Three (3) – 48” x 12’
    - iv. Proposed Meter: One (1) Bargath Meter Shed 20’ x 15’ adjacent to separators

Any additional site equipment installed on the location during construction that is not listed above will be documented via sundry following completions of site construction.

PIPELINE FACILITIES

One (1) eight-inch (8”) steel gas pipeline (±166’) would be installed by Bargath from the proposed meter on the RGU 23-7-297 pad to the existing sixteen-inch (16”) Bargath gas gathering line adjacent to the pad location. TEP would install one (1) six-inch (6”) FlexSteel water pipeline (±462’) from the separators on the RGU 23-7-297 pad to the existing six-inch (6”) FlexSteel water pipeline located in the existing pipeline corridor adjacent to the pad. One (1) eight-foot (8’) diameter valve can would in installed at the tie-in point with the existing water pipeline. Produced water will gravity feed to the tank battery on the RGU 23-6-297 pad through the proposed and existing water pipelines.

**RGU 23-7-297 Pad**  
**Plan of Development Summary**  
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The pipeline easement would consist of a twenty-five foot (25') permanent easement with an additional fifteen foot (15') wide temporary workspace. The gas and water pipelines would be collocated in the same trench when possible with approximately eighteen-inch (18") separation between pipes and a minimum of forty-eight-inch (48") cover.

TEP will also install the following on-location pipeline during construction of the RGU 23-7-297:

1. Fifteen (15) two-inch (2") Steel Wellhead Flowlines (approximately 130' each)
2. One (1) two-inch (2") Coated Steel Fuel Gas Flowline (approximately 130')
3. Two (2) two-inch (2") FlexPipe Condensate Dump Lines (approximately 375' each)
4. One (1) two-inch (2") FlexPipe Produced Water Dump Line (approximately 375')
5. One (1) one-inch (1") Steel Gas Supply Line (ECD; approximately 275')
6. One (1) four-inch (4") Aluminum Vent Line (ECD; approximately 80')

Please see the attached Plan of Development Map for a depiction of the proposed off-location pipeline planned for use during production operations at the RGU 23-7-297 pad.

ELECTRICAL

One (1) two-inch (2") electrical conduit will be installed from the thermoelectric generator ("TEG") at the proposed separators to the chemical skid near the proposed wellheads to power the chemical pumps.

DRILL CUTTINGS MANAGEMENT

Drill cuttings will be managed in a drilling pit along the east side of the pad. The drilling pit would be constructed to support storage / disposal of one hundred percent (100%) of the estimated drill cuttings volume. The drilling pit will be contained within a two- and one-half feet (2.5') earthen perimeter berm. The drilling cuttings volume is estimated at five hundred cubic yard (500cy) per well, which totals approximately seven thousand hundred cubic yards (7,000cy). Any excess drill cuttings not manageable within the proposed drilling pit would be hauled to an approved third-party commercial disposal facility.

COMPLETIONS OPERATIONS

Well completions operations will be conducted remotely from the RG 41-18-297 pad. Five (5) four- and one-half inch (4.5") steel temporary surface frac lines ( $\pm 6,387'$ ) will be installed between the RG 23-7-297 pad and the RG 41-18-297 pad following the existing access roads and pipeline corridors. Water will be supplied to the RG 41-18-297 pad via existing water infrastructure, two (2) ten-inch (10") temporary surface poly water pipelines ( $\pm 2,026'$ ) to be installed from Cedar Junction to the RG 41-18-297 pad following the existing access road and pipeline corridor, and one (1) ten-inch (10") temporary surface poly water pipeline ( $\pm 12,233'$ ) to be installed between the Love Ranch CWMF and the RG 41-18-297 pad following existing roads and pipeline corridors. One (1) twelve-inch (12") temporary surface lay-flat fresh-water pipeline ( $\pm 1,393'$ ) would be installed from the XTO Fresh Water Pond to the Love Ranch CWMF.

TEP will install one (1) temporary diesel transfer pump, one (1) temporary diesel charge pump, and two (2) temporary five hundred barrel (500bbl) frac tanks would be staged at the Love Ranch CWMF to support transportation of produced water to the RGU 23-7-297 pad during completions operations. Additionally, one (1) temporary diesel booster pump and two (2) five hundred barrel (500bbl) frac tanks would be staged at the PC 8-1 pad within a sixty foot (60') by sixty foot (60') area supporting transfer of

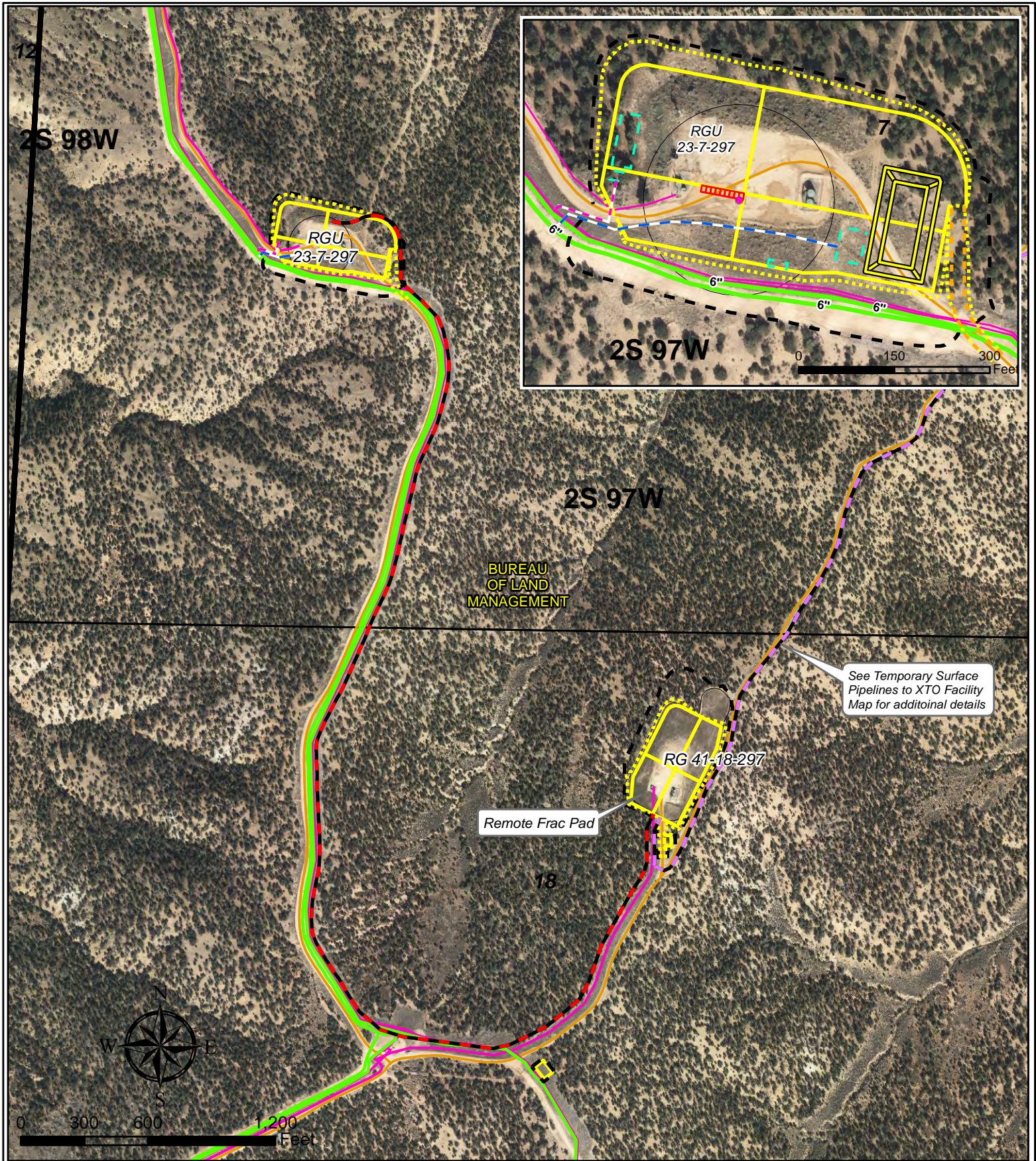
**RGU 23-7-297 Pad**  
**Plan of Development Summary**  
**August 24, 2020**

water to the RG 41-18-297 pad. One (1) temporary diesel transfer pump would also be installed at the XTO Fresh Water Pond if supplemental water is needed during well completion operations.

One (1) twelve-foot (12') diameter valve can would be installed on the existing water pipeline located near Cedar Junction southwest of the RG 41-18-297 pad. The two (2) temporary surface water pipelines mentioned above would tie-in with existing water infrastructure at the proposed valve can and would be used to transport water from TEP existing facilities, including the Mautz Ranch Multi-Well Pit and the NE Ryan Gulch Pit. SIMOPS will be employed during drilling and completions operations on the RGU 23-7-297 pad. Temporary flowback equipment, including four (4) phase separators, will be placed on the RG 41-18-297 pad during flowback operations.

**SITE RECLAMATION**

Within six (6) months following completions of planned operations on the RGU 23-7-297 pad, or during the next growing season, TEP will begin interim reclamation of the pad location. Please see the interim reclamation plat for specifics on interim reclamation activities.



**Legend**

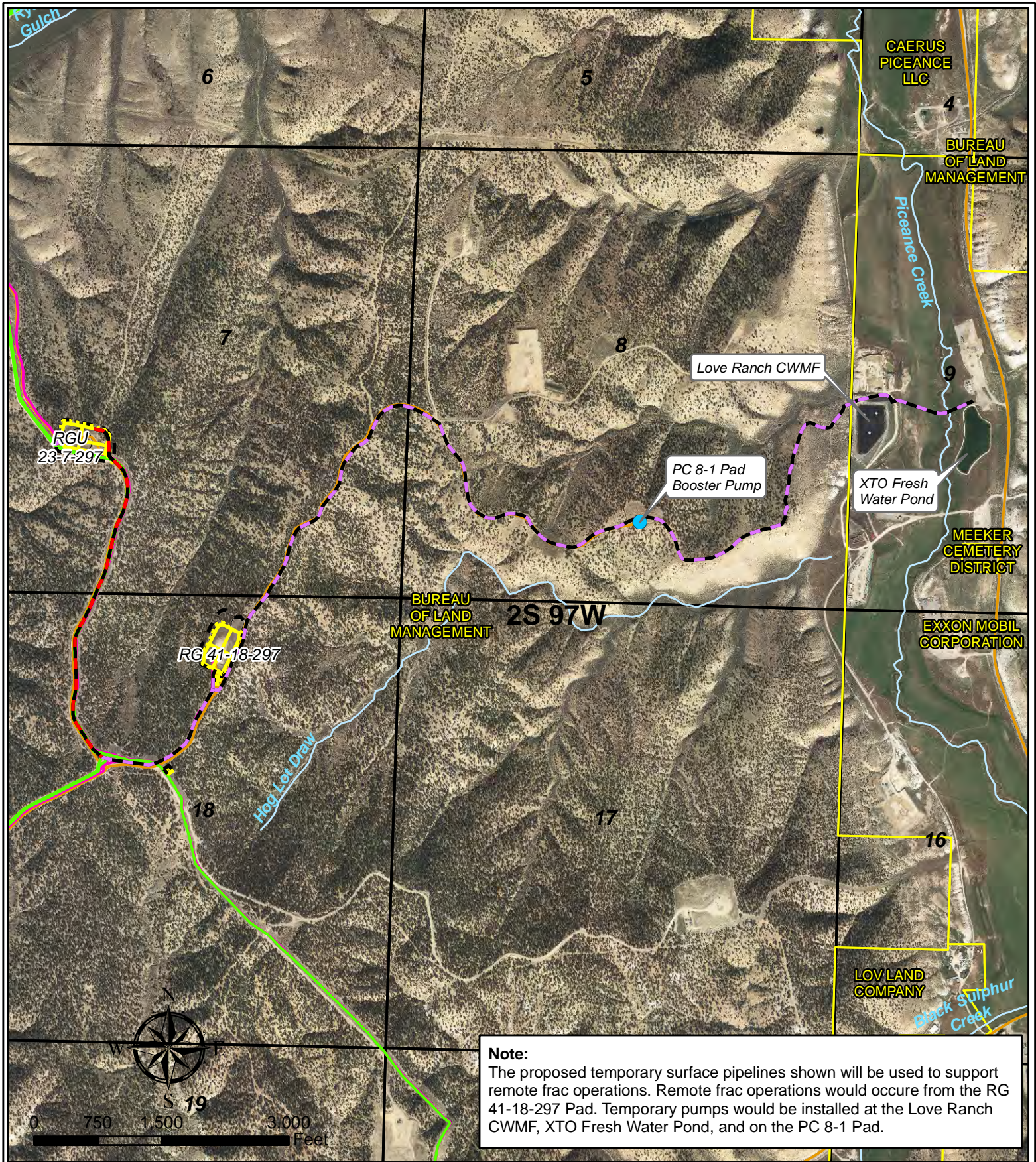
- Existing Well
- - - Proposed Gas Pipeline (8")
- - - Proposed Water Pipeline (6")
- - - Proposed Frac Lines (5-4.5")
- - - Proposed Water Supply Line (10")
- Existing Gas Pipeline
- Existing Williams Pipeline
- Proposed Cellar
- Proposed Pad Edge
- Proposed Drilling Pit
- Proposed Daylight Line
- - - Proposed Limit of Disturbance
- Proposed Production Equipment
- Proposed Road
- Existing Road
- Existing Pad

**TEP Rocky Mountain LLC**

**RGU 23-7-297 Pad  
Plan of Development Map  
T2S R97W, Section 17**

**August 24, 2020**





**Note:**  
 The proposed temporary surface pipelines shown will be used to support remote frac operations. Remote frac operations would occur from the RG 41-18-297 Pad. Temporary pumps would be installed at the Love Ranch CWMF, XTO Fresh Water Pond, and on the PC 8-1 Pad.

- Legend**
- Booster Pump
  - Proposed Frac Lines (5-4.5")
  - Proposed Water Supply Line (10")
  - Temporary Surface Fresh Water Line (1 - 10" Lay Flat)
  - Existing Gas Pipeline
  - Propose Pad Edge
  - Proposed Daylight Line
  - Proposed Limit of Disturbance
  - Existing Williams Pipeline
  - Existing Road
  - Stream
  - Existing Pad
  - Parcel Ownership

**TEP Rocky Mountain LLC**

**Temporary Surface Water Pipelines  
 XTO Facility to RG 41-18-297 Pad**

**August 7, 2020**

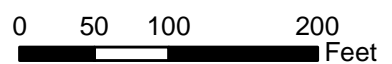




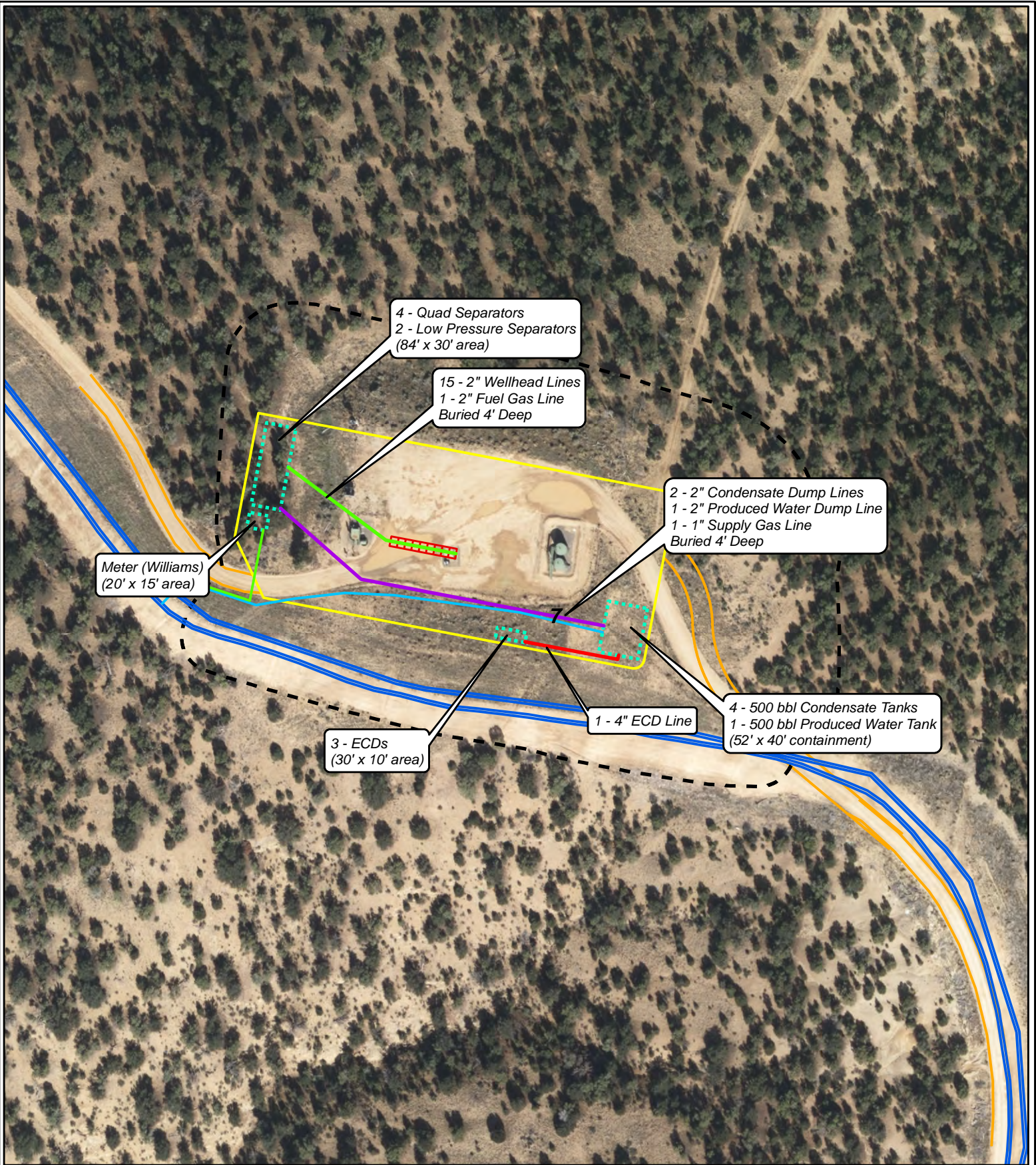
- Legend**
- Proposed Gas Pipeline (1-8")
  - Proposed Water Pipeline (1-4")
  - Process Piping
  - Wellhead Lines
  - Dump Lines
  - Proposed Cellar
  - Proposed Road
  - Proposed Production Equipment Area
  - Proposed Daylight Line
  - Proposed Pad or Pit
  - Existing Road Edge
  - Proposed Limit of Disturbance
  - Existing Water Pipeline

**RGU 23-7-297 Pad**

**Facility Layout Drawing &  
 Equipment Setback Dimensions  
 for Construction**



**August 24, 2020**



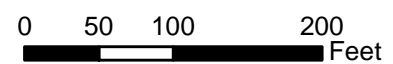
- Legend**
- Proposed Gas Pipeline (1-8")
  - Proposed Water Pipeline (1-4")
  - Existing Water Pipeline
  - Proposed Interim Reclaim Pad
  - Proposed Cellar
  - Proposed Production Equipment Area
  - Proposed Interim Reclaim Road
  - Proposed Limit of Disturbance

- Process Piping
- Wellhead Lines
- Dump Lines

**RGU 23-7-297 Pad**  
**Facility Layout Drawing & Equipment Setback Dimensions for Interim Reclaim**



**August 24, 2020**



**TEP Rocky Mountain LLC**  
**Proposed Waste Management Plan**  
**for the Federal RGU 23-7-297 Pad**  
**August 21, 2020**

INTRODUCTION

TEP Rocky Mountain LLC (“TEP”) is proposing to drill, complete, and operate fourteen (14) new wells from the existing RGU 23-7-297 pad located on BLM surface in Rio Blanco County Colorado. The RGU 23-7-297 pad is an existing well pad with one (1) producing well located on resource / range land in the in the Lots 15 and 16 of Section 7, Township 2 South, Range 97 West, 6<sup>th</sup> P.M. Of the fourteen (14) proposed well, five (5) would be directionally drilled into Federal Lease COC 003453 and nine (9) would be directionally drilled into Federal Lease COC 057285. Development of the RGU 23-7-297 pad is planned to begin in March 2022. The following describes TEP’s Waste Management Plan for the potential wastes generated during construction, drilling, completion, and production operations associated with the development of the proposed wells on the RGU 23-7-297 pad.

DRILL FLUIDS MANAGEMENT

A closed loop drilling system will be utilized to separate liquid and solids during drilling operations on the RGU 23-7-297 pad. Drilling fluids will be re-used throughout the drilling process. Once drilling operations are complete drilling fluids will be stored in tanks and recycled on the next drill pad.

DRILL CUTTINGS MANAGEMENT

Drill cuttings will be managed in a drilling pit along the east side of the pad. The drilling pit would be constructed with a capacity of seven thousand five hundred cubic yard (7,500cy) supporting storage / disposal of more than one hundred percent (100%) of the estimated drill cuttings volume. The drilling pit will be contained within a two- and one-half foot (2.5’) high earthen perimeter berm. Drilling cuttings volume is estimated at five hundred cubic yard (500cy) per well, which totals approximately seven thousand cubic yards (7,000cy). Any excess drill cuttings not manageable within the proposed drilling pit or cuttings management area would be hauled to an approved third-party commercial disposal facility.

The general protocol for managing drill cuttings at this locations is as follows: As drill cuttings are brought to the surface, they will be temporarily placed into a designated storage cell that is close to the rig shaker assembly. Once the temporary storage cell becomes full, a loader will be used to move the cuttings from the temporary storage cell to the drilling pit. The moisture content of the drill cuttings will be kept as low as practicable to prevent accumulation of liquids. Once all drill cuttings are placed into the drilling pit, samples will be taken to determine if the cuttings meet COGCC 910-1 standards. Additional treatment or amendment of the cuttings may be needed to ensure that COGCC 910-1 standards are met prior to reclamation. If needed, clean fill material may be mixed with the cuttings to ensure that cleanup standards are met. Confirmation samples of the blended material will be collected and submitted to an approved analytical laboratory and analyzed for the full COGCC 910-1 list of organic, inorganic, and metal compounds (in soils) to ensure that these materials comply with COGCC cleanup standards. After all drill cuttings have been received and tested for compliance with COGCC 910-1 cleanup standards, the drill cuttings will be covered with approximately three feet (3’) of clean fill material during pad reclamation.

FLOWBACK

Returned stimulation fluids generated during flowback operations will be processed through four (4) phase separators to separate gas, water, condensate, and sand. Water will be reused during future well completion

operations on the RGU 23-7-297 pad or transported via pipelines as described in the Produced Water section below. Spent filter socks generated during the completions / flowback process are collected and stored separately from garbage / trash. The filters have been sampled and profiled for disposal at an approved third-party commercial disposal facility that is permitted and authorized to accept waste filter socks for disposal.

#### SEWAGE

Chemical toilets will be used during construction, drilling, and completions operations on the RGU 23-7-297 pad. Contents will be hauled to and disposed at an approved commercial disposal facility. Disposal of sewage will occur approximately once per week.

#### GARBAGE

All garbage and trash will be stored in enclosed bear proof trash containers. Disposal of garbage and trash will occur approximately once per week during drilling and completions operations. All garbage and trash will be transported to a permitted and controlled landfill within one (1) week following completion of drilling or completions operations. Garbage or trash will not be disposed of on location. The well site and access road will be kept free of trash and debris at all time during long-term production operations.

#### PRODUCED WATER

Produced water, water produced from the wells after the wells are turned over to production, will be transported through existing water infrastructure and the proposed six-inch (6") water pipeline to the existing RGU 23-6-297 pad for temporary storage. Produced water will then be pumped through TEP's existing pipeline infrastructure to the one of TEP existing water management facilities for treatment, reuse, or disposal. Produced water will be treated with biocide at the water management facility. Produced water will also be treated with biocide prior to disposal if necessary.

Produced water is disposed of through: (1) natural evaporation at the evaporation ponds, (2) delivered and injected in to one of the approved TEP operated UIC facilities, (3) re-used in hydraulic fracturing operations, or (4) hauled to an approved third party, commercial disposal facility including: Owl SWD Operating LLC, Harley Dome #1 SWD, Greenleaf Environmental Services, White River Dome, or PBR Disposal.

# RGU 23-7-297

## LOCATION PHOTOS



*PAD LOCATION LOOKING NORTH*



*PAD LOCATION LOOKING SOUTH*



*PAD LOCATION LOOKING WEST*



*PAD LOCATION LOOKING EAST*



*PAD OVERVIEW LOOKING NORTHWESTERLY*



*PAD ACCESS LOOKING EASTERLY*

136 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-2720  
Fax (970) 625-2773



PHOTO DATE: 9/29/19  
 TAKEN BY: AT  
 DRAWN BY: cs  
 SHEET: 1 of 1  
 PROJECT: TEP Valley

**PHOTO SHEET Prepared for:**



TEP Rocky Mountain LLC

*SECTION 7, T. 2 S., R. 97 W. of the 6th. P.M.  
 RIO BLANCO COUNTY, COLORADO*

## Rio Blanco County Area, Colorado

### 73—Rentsac channery loam, 5 to 50 percent slopes

#### Map Unit Setting

*National map unit symbol:* jp64  
*Elevation:* 6,000 to 7,600 feet  
*Mean annual precipitation:* 14 to 18 inches  
*Mean annual air temperature:* 42 to 45 degrees F  
*Frost-free period:* 80 to 105 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Rentsac and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Rentsac

##### Setting

*Landform:* Ridges  
*Landform position (three-dimensional):* Upper third of mountainflank  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear, convex  
*Parent material:* Residuum weathered from calcareous sandstone

##### Typical profile

*H1 - 0 to 5 inches:* channery loam  
*H2 - 5 to 16 inches:* extremely channery loam, extremely gravelly sandy loam, very flaggy loam  
*H2 - 5 to 16 inches:* unweathered bedrock  
*H2 - 5 to 16 inches:*  
*H3 - 16 to 20 inches:*

##### Properties and qualities

*Slope:* 5 to 50 percent  
*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock  
*Natural drainage class:* Well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low (0.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 15 percent  
*Salinity, maximum in profile:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)  
*Available water storage in profile:* Very low (about 2.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7e

*Hydrologic Soil Group:* D

*Ecological site:* Pinyon-Juniper (F048AY909CO)

*Hydric soil rating:* No

**Minor Components**

**Other soils**

*Percent of map unit:* 20 percent

*Hydric soil rating:* No

**Data Source Information**

Soil Survey Area: Rio Blanco County Area, Colorado

Survey Area Data: Version 14, Sep 13, 2019

**Area Reference Photos**  
**Ryan Gulch**  
**RGU 23-7-297 Drilling Pad**  
**August 23, 2019**



**Reference point looking North**



**Reference point looking East**

**Area Reference Photos**  
**Ryan Gulch**  
**RGU 23-7-297 Drilling Pad**  
**August 23, 2019**



**Reference point looking South**



**Reference point looking West**

## Sensitive Area Determination Checklist

TEP Rocky Mountain, LLC		
<b>Person(s) Conducting Field Inspection</b>	None Conducted	
<b>Site Information</b>		
Location:	RG 23-7-297 Drill Pad	Time:
Type of Facility:	Existing Well Pad w/ Proposed Expansion	
<b>Environmental Conditions</b>		
Temperature (°F)		

A sensitive area is an area vulnerable to potential significant adverse groundwater impacts, due to factors such as the presence of shallow groundwater or pathways for communication with deeper groundwater; proximity to surface water, including lakes, rivers, perennial or intermittent streams, creeks, irrigation canals, and wetlands. Additionally, areas classified for domestic use by the Water Quality Control Commission, local (water supply) wellhead protection areas, areas within 1/8 mile of a domestic water well, areas within 1/4 mile of a public water supply well, ground water basins designated by the Colorado Ground Water Commission, and surface water supply areas are sensitive areas.

Has the proposed, new or existing location been designated as a sensitive area?

Yes       No

### **SURFACE WATER**

- Are there any intermittent surface water features or SWSAs adjacent to or within ¼ mile of the proposed/new or existing facility?

Yes       No

If yes, list type of surface water feature(s), i.e. rivers, creeks, streams, seeps, springs, wetlands:

If yes, describe location relative to facility:

- Could a potential release from the facility reach surface water features?

Yes       No

If yes, describe the pathway a release from the facility would likely follow to determine if the potential to impact surface water is high or low

- Is the potential to impact surface water from a facility release high or low?

High       Low

**GROUNDWATER**

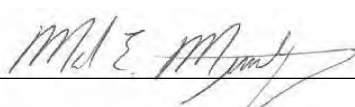
1. Will the proposed/new or existing facility have any pits which will contain hydrocarbons and chlorides or other E&P wastes?  
 Yes       No  
 If yes, List the pit type(s): Drilling pit on the southeastern corner of the existing facility.
  
2. Is the site of the proposed facility underlain by an unconfined aquifer or recharge zone?  
 Yes       No
  
3. Is the hydraulic conductivity of the underlying soil or geologic material  $\leq 1.0 \times 10^{-7}$  cm/sec?  
 Yes       No
  
4. Is the proposed facility located within 1/8 mile of a domestic water well or 1/4 mile of a public water supply well which would use the same aquifer?  
 Yes       No
  
5. Is the proposed facility located within a 100-year floodplain?  
 Yes (*Sensitive Area*)       No (*If no, proceed to question #6.*)
  
6. Is the depth to groundwater known?  
 Yes (*If yes, follow instructions provided in 6(a) of this section.*)  
 No (*If no, follow instructions provided in 6(b) of this section.*)
  - (a) If yes, could a potential release from the proposed facility reach groundwater?  
 Yes       No  
 If yes, explain:
  
  - (b) If no:
    - (i) Evaluate surrounding soils, topography, and vegetation which may suggest the presence of shallow groundwater.
    - (ii) Gather information from surrounding well data in order to determine a depth to groundwater, i.e. State Engineers Office.
  
7. Is the potential to impact ground water from the facility in the event of a release high or low?  
 High       Low

**Additional Comments:**

As stated in the surface water portion of this sensitive area determination, there are no intermittent drainage features located within a ¼ mile of the existing facility. The facility as it is currently proposed to be expanded, limits the direction of a potential release to the northern side. If a potential release were to migrate off the facility on the northern side, flow would be to the north following the natural terrain of the surrounding area. During facility expansion, Best Management Practices (BMP's) should be installed in the form of an earthen perimeter berm along the graded edge of the fill slope sides. If feasible diversion ditches and sediment traps should be constructed along the toe of all fill slope sides. Installation of these BMP's will greatly aid in mitigating any fluid migration off the facility. All installed BMP's should be monitored and maintained to ensure site containment in the event of a potential release.

The State Engineer's Office and USGS records were reviewed and no records were revealed which would provide any additional information pertaining to the depth to groundwater within a ¼ mile of the proposed facility. The closest permitted water well (permit #68235-F) is located 5,148 feet to the northeast and does provide limited information as to the depth to groundwater in the immediate vicinity of the existing facility. Even though the well to the north is some distance away it is permitted in a similar topographic/geologic setting and has targeted groundwater at depths of greater than 500 feet. Therefore, it could be assumed that groundwater, if present, in the immediate vicinity of the existing facility would be in excess of 500 feet. The vegetative cover in the immediate vicinity of the existing facility is dominated by sage, juniper, and bunch grasses typical of the upland xeric environment. No seeps or springs were identified during the desk top review which would suggest the presence of shallow groundwater. In addition, the existing facility is located on top of a ridgeline and is constructed in bedrock which is most likely devoid of any groundwater.

Based on the information collected during the desktop review, the potential for impacts to any intermittent drainages and groundwater would be deemed to be low. Therefore, the facility should be designated as being in a non-sensitive area.

Inspector Signature(s):  Date: 3/20/2020

Mark E. Mumby, *Env. Program Manager/RPG*  
HRL Compliance Solutions, Inc.

## Adam Tankersley

---

**From:** Slezak - DNR, Elissa <elissa.slezak@state.co.us>  
**Sent:** Tuesday, May 26, 2020 7:36 PM  
**To:** Adam Tankersley  
**Cc:** Taylor Elm; Bill Devergie (Bill.Devergie@state.co.us); Jeff Kirtland; Brandon Sagrillo  
**Subject:** Re: Lower Wagonroad Ridge Master Development Plan - CPW Review

Hi Adam,

CPW has reviewed the Lower Wagonroad Ridge Master Development Plan (LWRMDP), specifically the RG-41-18-297 pad, RGU 23-7-297 and Federal 299-23-3 pads.

CPW is supportive of TEP using and expanding existing pad sites in lieu of constructing entirely new pads, and utilizing existing roads, pipeline corridors and infrastructure to the greatest extent possible to minimize new disturbance to wildlife habitat. CPW also supports the planning and operational measures included in the LWRMDP and proposed Best Management Practices for these sites.

Since the RG-41-18-297 pad is scheduled to start drilling in late April during the Big Game Winter Range Timing Limitation of Dec 1-April 30, CWP requests to meet with TEP and the BLM WRFO (as soon as feasible per COVID restrictions) to discuss potential compensatory mitigation measures if the drilling start date can't be moved to after April 30. Additionally, CPW suggests that TEP consider the requirements associated with the new draft rules, including a Wildlife Protection Plan, to include with future Form 2A applications once the new rules are finalized.

Thank you for the opportunity to review these prior to the Form 2A applications. If possible, I'd like to schedule a site visit to familiarize myself with this area (maybe in June?) since I was not at the on-site consultations last July. Also, for some reason I was unable to download the shapefiles from the folder link, any chance you can send those to me in a zipfile so I have them for the Form 2A reviews?

Thanks and let me know if you have any questions,  
Elissa

### Elissa Slezak

Northwest Region Land Use Specialist  
Colorado Parks and Wildlife



P 970-509-9621 | F 970-725-6217 |  
346 County Road 362, PO Box 216, Hot Sulphur Springs, CO 80451  
[elissa.slezak@state.co.us](mailto:elissa.slezak@state.co.us) | [cpw.state.co.us](http://cpw.state.co.us)

On Tue, May 19, 2020 at 8:07 AM Adam Tankersley <[ATankersley@terraep.com](mailto:ATankersley@terraep.com)> wrote:

Good Morning Elissa,

We are planning to submit permits for the RG 41-18-297 pad on Tuesday of next week. If you could provide feedback my noon on Monday the 25<sup>th</sup> that would be greatly appreciated. We are only submitting the RG 41-18-297 pad next

week. The RGU 23-7-297 Pad and Federal 299-23-3 Pad will likely be submitted sometime next month. The other locations will likely be submitted a some point later this year.

Thanks,

**Adam Tankersley** | Planning Lead | TEP Rocky Mountain LLC | 1058 CR215 Parachute, CO 81635

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**From:** Slezak - DNR, Elissa <[elissa.slezak@state.co.us](mailto:elissa.slezak@state.co.us)>

**Sent:** Monday, May 18, 2020 5:14 PM

**To:** Adam Tankersley <[ATankersley@terraep.com](mailto:ATankersley@terraep.com)>

**Cc:** Taylor Elm <[taylor.elm@state.co.us](mailto:taylor.elm@state.co.us)>; Bill Devergie ([Bill.Devergie@state.co.us](mailto:Bill.Devergie@state.co.us)) <[Bill.Devergie@state.co.us](mailto:Bill.Devergie@state.co.us)>; Jeff Kirtland <[JKirtland@terraep.com](mailto:JKirtland@terraep.com)>; Brandon Sagrillo <[BSagrillo@terraep.com](mailto:BSagrillo@terraep.com)>

**Subject:** Re: Lower Wagonroad Ridge Master Development Plan - CPW Review

Hi Adam,

We appreciate the heads up on the upcoming permit applications. We'll review the draft LWRMDP materials and let you know if CPW has any feedback. How soon do you need it?

Elissa

**Elissa Slezak**

**Northwest Region Land Use Specialist**

**Colorado Parks and Wildlife**



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[elissa.slezak@state.co.us](mailto:elissa.slezak@state.co.us) | [cpw.state.co.us](http://cpw.state.co.us)

On Thu, May 14, 2020 at 5:41 PM Adam Tankersley <[ATankersley@terraep.com](mailto:ATankersley@terraep.com)> wrote:

Good Afternoon Elissa,

TEP Rocky Mountain LLC (“TEP”) recently submitted the Lower Wagonroad Ridge Master Development Plan (“LWRMDP”) to the BLM (White River Field Office), which includes development of fifty-one (51) natural gas wells on three (3) existing well pads (RG 41-18-297 pad, RGU 23-7-297 pad and RGU 44-1-298 pad) and one (1) produced water disposal well (Federal RG 33-22-299) on the existing Federal 299-23-3 pad. Additionally, TEP would install additional facilities on the RGU 23-6-297 pad, construct a new Centralized Waste Management Facility (“CWMF”) for management of produced water, and construct a CWMF for drill cuttings disposal. Our development plan is outlined in more detail in the attached LWRMDP.

An onsite, with representatives from the BLM and CPW, was held for the project on July 15<sup>th</sup>, 2019 where the three (3) proposed well pads were reviewed. During initial planning for this project we reviewed the Restricted Surface Occupancy (“RSO”) and Sensitive Wildlife Habitat (“SWH”) layer available at the COGCC to determine what wildlife impacts may be attributed to our proposed development plan. Based on our review there are no proposed activities planned within any RSO boundaries, however there are proposed activities within three (3) SWH boundaries. Those details are provided in the table below. We also reviewed the most current CPW GIS data for the project. The data is generally consistent between the two (2) data sets. However, based on the CPW data, the Federal 299-23-3 pad would not be located within the Greater Sage-Grouse Production Area. This is also consistent with habitat data available from the BLM.

O&G Location	BLM Big Game Winter Range Timing Limitation	Objective Criteria #6 - O&G Location		Objective Criteria #12 - Access Road	
		RSO	SWH	RSO	SWH
RG 41-18-297	December 1 - April 30	NA	Mule Deer Critical Winter Range	NA	Elk Production Area
RG 23-7-297	December 1 - April 30	NA	Mule Deer Critical Winter Range	NA	Elk Production Area
RGU 23-6-297	December 1 - April 30	NA	Mule Deer Critical Winter Range	NA	Mule Deer Critical Winter Range
RGU 44-1-298	December 1 - April 30	NA	Mule Deer Critical Winter Range	NA	Mule Deer Critical Winter Range
Pitchers' Mound Pit	December 1 - April 30	NA	Mule Deer Critical Winter Range	NA	Mule Deer Critical Winter Range
Federal 299-23-3	December 1 - April 30	NA	Elk Production Area	NA	Elk Production Area & Greater Sage-Grouse Production
Wagonroad Ridge CWMF	NA	NA	Elk Production Area	NA	Elk Production Area

TEP is preparing to submit BLM and COGCC permit applications for the RG 41-18-297 pad and RGU 23-6-297 pad within the next two weeks. Assuming TEP receives permit approval late summer/early fall 2020, TEP would likely begin construction of the RG 41-18-297 and RGU 23-7-297 this fall with construction planned to be completed prior to December 1, 2020. The BLM Big Game Winter Range Timing Limitation for these two locations begins December 1 and ends April 30. Drilling operations are expected to begin in late April 2021 on the RG 41-18-297 pad. The project timeline is described in greater detail in the attached LWRMDP.

During the planning process, TEP evaluated planning and operational measures that will be used to minimize impacts to sensitive wildlife. Standard Best Management Practices (“BMP”) are also used field wild to minimize potential impacts to wildlife. These mitigation measures/BMPs are listed below. Once our development schedule is solidified, we plan to meet with CPW and BLM later this year to review any changes to the development schedule and to determine if any additional mitigation measures may be required.

The following planning and operational measures have been included in the development plan to minimize impacts to wildlife:

1. TEP will utilize the existing RGU 23-6-297 pad as a centralized produced water storage facility for produced water from the RG 41-18-297 pad and RGU 23-7-297 pad minimizing truck traffic to the well pads. Pipelines will be installed from the production facilities on the well pads, and produced water will gravity feed into the tank battery on the RGU 23-6-297 pad. Initially, TEP had planned to install permanent pumps, tanks, and additional pipelines on the RG 41-18-297 pad and RGU 23-7-297 pad to manage produced water from the proposed wells. Centralizing water storage minimizes vehicle traffic and pumping operations to a single location.
2. TEP will install temporary surface pipelines and permanent buried pipelines to transport produced water during frac operations minimizing truck traffic. A significant amount of produced water is used for completions operations. Trucking that volume of water would significantly increase vehicle traffic and would increase the potential for wildlife related traffic accidents. Pumping water via pipelines minimizes impacts to wildlife.
3. TEP evaluated multiple sites for drilling operations, and determined that impacts to wildlife habitat would be greatly reduced by utilizing existing well pads to the greatest extent possible. We will further minimize impacts to wildlife habitat by conducting completions operations remotely from a nearby existing pad locations.
4. TEP will install exclusionary devices to prevent wildlife from accessing equipment stakes, vents, and openings.
5. Proposed permanent pipelines will be collocated within existing pipeline corridors or access roads wherever possible to minimize impacts to wildlife habitat.

The following BMP's will be included as operator proposed Wildlife BMP's on all Form 2As associated with this project:

- 1.To minimize the potential for wildlife related traffic accidents, TEP has implemented speed restrictions for all lease roads and requires that all TEP employees and contractors adhere to these posted speed restrictions.
- 2.During post-development production operations, TEP will make best efforts to minimize operations at these locations during winter months by maximizing operations when possible between 10:00am to 3:00pm when wildlife activity is minimal.
- 3.TEP agrees to report any bear conflicts immediately to CPW. TEP will implement COGCC Rule 1204.a.1 by utilizing bear proof dumpsters and trash receptacles for all food related trash. All garbage and trash will be stored in enclosed bear proof trash containers and transported to an approved disposal facility periodically and upon completion of planned operations on the location.
- 4.TEP will preclude from the use of aggressive CPW-identified non-native grasses and shrubs in mule deer habitat and will reclaim the site using CPW-identified native shrubs, grasses, and forbs appropriate to the ecological site disturbed.
- 5.Certified weed-free native seed in seed mixes, except for non-native plants that benefit wildlife, will be used.
- 6.TEP will use certified, weed free grass hay, straw, or other mulch materials used for the reseeding and reclamation of disturbed areas.

Please review the attached LWRMDP and the mitigation measure/BMP's listed above and let me know if you have any questions. I have included a link to the [LWRMDP](#) project folder, which includes the most current project shapefiles and additional project documentation for your review. TEP is committed to the protection of wildlife resources within our development area. We look forward to working with you on this project.

Thanks,

**Adam Tankersley** | Planning Lead | TEP Rocky Mountain LLC | 1058 CR215 Parachute, CO 81635

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