

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No. <b>COC075070</b>
2. Name of Operator <b>TEP ROCKY MOUNTAIN LLC</b>		6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. <b>FEDERAL</b> <b>WMC 312-20 (24-17)</b>
3a. Address <b>1058 County Road 215, Parachute, CO 81635</b>	3b. Phone No. (include area code) <b>(970) 285-9377</b>	9. API Well No. 10. Field and Pool, or Exploratory <b>RULISON</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>SESW / 243 FSL / 1799 FWL / LAT 39.439061 / LONG -107.799561</b> At proposed prod. zone <b>SWNW / 1800 FNL / 607 FWL / LAT 39.433475 / LONG -107.803806</b>		11. Sec., T. R. M. or Blk. and Survey or Area <b>SEC 17/T7S/R93W/6PM</b>
14. Distance in miles and direction from nearest town or post office* <b>5 miles</b>		12. County or Parish <b>GARFIELD</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>1077 feet</b>		13. State <b>CO</b>
16. No of acres in lease 17. Spacing Unit dedicated to this well <b>10.0</b>		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>330 feet</b>
19. Proposed Depth <b>10962 feet / 11369 feet</b>		20. BLM/BIA Bond No. in file <b>FED: COB000480</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>8869 feet</b>		22. Approximate date work will start* <b>02/01/2022</b>
		23. Estimated duration <b>10 days</b>

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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| 1. Well plat certified by a registered surveyor.<br>2. A Drilling Plan.<br>3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).<br>5. Operator certification.<br>6. Such other site specific information and/or plans as may be requested by the BLM. |
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25. Signature (Electronic Submission)	Name (Printed/Typed) <b>VICKI SCHOEBER / Ph: (970) 285-9377</b>	Date <b>10/30/2020</b>
Title <b>Regulatory Specialist</b>		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) <b>Larry Sandoval / Ph: (970) 876-9004</b>	Date <b>01/14/2021</b>
Title <b>Field Manager</b>		
Office <b>Colorado River Valley Field Office</b>		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



## INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48( d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM connects this information to an evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## **Additional Operator Remarks**

### **Location of Well**

0. SHL: SESW / 243 FSL / 1799 FWL / TWSP: 7S / RANGE: 93W / SECTION: 17 / LAT: 39.439061 / LONG: -107.799561 ( TVD: 0 feet, MD: 0 feet )

PPP: SWNW / 1800 FNL / 607 FWL / TWSP: 7S / RANGE: 93W / SECTION: 20 / LAT: 39.433475 / LONG: -107.803806 ( TVD: 7440 feet, MD: 7847 feet )

BHL: SWNW / 1800 FNL / 607 FWL / TWSP: 7S / RANGE: 93W / SECTION: 20 / LAT: 39.433475 / LONG: -107.803806 ( TVD: 10962 feet, MD: 11369 feet )

### **BLM Point of Contact**

Name: Shannon Noah

Title: Adjudicator

Phone: (970) 876-9063

Email: snoah@blm.gov

**Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

## **SURFACE-USE CONDITIONS OF APPROVAL**

### **WMC 24-17 Project**

### **DOI-BLM-CO-G020-2021-0001-EA**

#### **GENERAL SURFACE-USE COAS APPLICABLE TO ALL ACTIVITIES ASSOCIATED WITH THE WMC 24-17 PROJECT**

The following surface-use COAs shall be implemented, where applicable and feasible, to reduce impacts from project activities. These COAs are in addition to all stipulations attached to the respective Federal leases and to any site-specific COAs, which are presented following these general COAs.

Note: The following Conditions of Approval (COAs) would also be used as Resource Protection Stipulations, where applicable, for the BLM rights-of-way related to this project: WMC 24-17 well pad, the WMC 24-17 access road, natural gas pipeline, and produced water pipeline, as well as the temporary use permit for temporary surface frac lines.

1. Administrative Notification. The operator shall notify the BLM representative at least 48 hours prior to initiation of construction. If requested by the BLM representative, the operator shall schedule a pre-construction meeting, including key operator and contractor personnel, to ensure that any unresolved issues are fully addressed prior to initiation of surface-disturbing activities or placement of production facilities.
2. Road Construction and Maintenance. Roads shall be crowned, ditched, surfaced, drained with culverts and/or water dips, constructed, and maintained to road standards submitted with APDs and described in BLM's *Gold Book*. Initial gravel application shall be a minimum of 6 inches. The operator shall provide timely year-round road maintenance and cleanup on the access roads. A regular schedule for maintenance shall include, but not be limited to, blading, ditch and culvert cleaning, road surface replacement, and dust abatement. When rutting within the traveled way becomes greater than 6 inches, blading and/or gravelling shall be conducted as approved by the BLM. (*Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition—Revised 2007, BLM/WO/ST-06/021+3071/REV 07*)
3. Drill Cuttings Management. Cuttings generated from the numerous planned well bores shall be worked through a shaker system on the drill rig, mixed with a drying agent, and deposited in the on-site drilling pit (cuttings trench). The cuttings shall be remediated prior to earthwork reshaping related to well pad interim reclamation.
4. Dust Abatement. The operator shall implement dust abatement measures as needed to prevent fugitive dust from vehicular traffic, equipment operations, or wind events. The BLM may direct the operator to change the level and type of treatment (watering or application of various dust agents, surfactants, and road surfacing material) if dust abatement measures are observed to be insufficient to prevent fugitive dust.
5. Drainage Crossings and Culverts. Construction activities at intermittent and ephemeral drainage crossings (e.g., burying pipelines, installing culverts) shall be timed to avoid high flow conditions. Construction that disturbs any flowing stream shall utilize either a piped stream diversion or a cofferdam and pump to divert flow around the disturbed area.

Culverts at drainage crossings shall be designed and installed to pass a 25-year or greater storm event. On perennial and intermittent streams, culverts shall be designed to allow for passage of aquatic biota. The minimum culvert diameter in any installation for a drainage crossing or road drainage shall be 24 inches. Crossings of drainages deemed jurisdictional Waters of the U.S. pursuant to Section 404 of

the Clean Water Act may require additional culvert design capacity. Due to the flashy nature of area drainages and anticipated culvert maintenance, the U.S. Army Corps of Engineers (USACE) recommends designing drainage crossings for the 100-year event. Contact the USACE Colorado West Regulatory Branch at 970-243-1199.

Pipelines installed beneath stream crossings shall be buried at a minimum depth of 4 feet below the channel substrate to avoid exposure by channel scour and degradation. Following burial, the channel grade and substrate composition shall be returned to pre-construction conditions.

6. Jurisdictional Waters of the U.S. The operator shall obtain appropriate permits from the USACE prior to discharging fill material into Waters of the U.S. in accordance with Section 404 of the Clean Water Act. Waters of the U.S. (WOTUS) are defined in 33 CFR Section 328.3 and may include wetlands as well as streams. Permanent impacts to jurisdictional waters may require measures specified by USACE to offset these impacts. Contact the USACE Colorado West Regulatory Branch at 970-243-1199 to determine jurisdiction and obtain applicable permits. If the locations are deemed jurisdictional by the USACE, TEP would be required to comply with any avoidance or other measures specified by the USACE under Nationwide Permit 12 and submit a pre-construction notification to the USACE. Small ephemeral drainages would be crossed perpendicularly using narrowed disturbances with adequate armoring BMPs installed to protect the backfilled trenches from potential stream flows. Soil would not be stockpiled in ephemeral channels and dry washes. Stormwater controls would also include straw wattles or bales on the downhill side of disturbed areas and around all soil stockpiles, berms, diversion ditches, and sediment traps. Additional stormwater controls may be required depending on site conditions within the drainage basin (size, slope steepness, type of substrate, type, and density of plant cover, etc.).

7. Reclamation Practices for the WMC 24-17 Project.

*The following reclamation measures shall apply specifically to the reclamation of the BLM WMC 24-17 pad and access road and pipeline ROWs/TUPs.* For fee/fee pad and ancillary road and pipeline upgrades on private land, the same measures shall apply unless the private landowner desires otherwise.

Regardless of surface ownership, the operator shall be responsible for achieving temporary stabilization and interim reclamation that minimizes erosion and transport of soils from disturbed surfaces and soil stockpiles and minimizes the potential for infestations of State-listed noxious weeds or other invasive non-native plant species.

- a. Reclamation Plans. In areas that have low reclamation potential or are especially challenging to restore, reclamation plans will be required prior to APD approval. The plan shall contain the following components: detailed reclamation plans, which include contours and indicate irregular rather than smooth contours as appropriate for visual and ecological benefit; timeline for interim and final reclamation earthwork, and seeding; soil test results and/or a soil profile description; amendments to be used; soil treatment techniques such as roughening, pocking, and terracing; erosion control techniques such as hydromulch, blankets/matting, and wattles; and visual impact reduction measures in a sensitive VRM area.
- b. Deadline for Reclamation Earthwork and Seeding. Interim reclamation of the road cuts and fills and final reclamation of the buried pipelines shall be completed within 30 days following completion of construction. Any such area on which construction is completed prior to December 1 shall be seeded during the remainder of the early winter season instead of during the following spring unless BLM approves otherwise based on weather. If road or pipeline construction occurs discontinuously (e.g., new segments installed as new pad is built) or continuously but with a total duration greater than 30 days, reclamation, including seeding, shall be phased such that no portion of the temporarily disturbed area remains in an unreclaimed condition for longer than 30 days. BLM may authorize deviation from this requirement based on

the season and the amount of work remaining on the entirety of the road or pipeline when the 30-day period has expired.

If requested by the project lead NRS for a specific pad or group of pads, the operator shall contact the NRS by telephone or email approximately 72 hours before reclamation and reseeding begins. This will allow the NRS to schedule a pre-reclamation field visit if needed to ensure that the parties are in agreement and provide time for adjustments to the plan before work is initiated.

The deadlines for seeding described above are subject to extension upon approval of the BLM based on season, timing limitations, or other constraints on a case-by-case basis. If the BLM approves an extension for seeding, the operator may be required to stabilize the reclaimed surfaces using hydromulch, erosion matting, or other method until seeding is implemented.

- c. Topsoil Stripping, Storage, and Replacement. All topsoil shall be stripped following removal of vegetation during construction of pipelines and roads. In areas of thin soil, a minimum of the upper 6 inches of surficial material shall be stripped. The BLM may specify a stripping depth during the pre-work meeting or based on subsequent information regarding soil thickness and suitability. The stripped topsoil shall be stored separately from subsoil or other excavated material and replaced prior to final seedbed preparation.
- d. Seedbed Preparation. For cut-and-fill slopes of the access road and/or buried pipelines, initial seedbed preparation shall consist of backfilling and recontouring to achieve the configuration specified in the reclamation plan. Following slope recontouring, the backfilled or ripped surfaces shall be covered evenly with topsoil.

If directed by the BLM, the operator shall implement measures following seedbed preparation (when broadcast-seeding or hydroseeding is to be used) to create small depressions to enhance capture of moisture and establishment of seeded species. Depressions (pocking) shall be no deeper than 1 to 2 inches and shall not result in piles or mounds of displaced soil. Excavated depressions shall not be used unless approved by the BLM for the purpose of erosion control on slopes. Where excavated depressions are approved by the BLM, the excavated soil shall be placed only on the downslope side of the depression.

If directed by the BLM, the operator shall conduct soil testing prior to reseeding to identify if and what type of soil amendments may be required to enhance revegetation success. At a minimum, the soil tests shall include texture, pH, organic matter, sodium adsorption ratio (SAR), cation exchange capacity (CEC), alkalinity/salinity, and basic nutrients (nitrogen, phosphorus, potassium [NPK]). Depending on the outcome of the soil testing, the BLM may require the operator to submit a plan for soil amendment. Any requests to use soil amendments not directed by the BLM shall be submitted to the CRVFO for approval.

- e. Seed Mixes. A seed mix consistent with BLM standards in terms of species and seeding rate for the specific habitat type shall be used on all BLM lands affected by the project (see Attachment 1 of the letter provided to operators dated September 9, 2014).

The seed shall contain no prohibited or restricted noxious weed seeds and shall contain no more than 0.5 percent by weight of other weed seeds. Seed may contain up to 2.0 percent of "other crop" seed by weight, including the seed of other agronomic crops and native plants; however, a lower percentage of other crop seed is recommended. Seed tags or other official documentation shall be submitted to BLM at least 14 days before the date of proposed seeding for acceptance. Seed that does not meet the above criteria shall not be applied to public lands.

- f. Seeding Procedures. Seeding shall be conducted no more than 24 hours following completion of final seedbed preparation.

Where practicable, seed shall be installed by drill-seeding to a depth of 0.25 to 0.5 inch. Where drill-seeding is impracticable, seed may be installed by broadcast-seeding at twice the drill-seeding rate, followed by raking or harrowing to provide 0.25 to 0.5 inch of soil cover or by hydroseeding and hydromulching. Hydroseeding and hydromulching shall be conducted in two separate applications to ensure adequate contact of seeds with the soil.

An exception to these seeding requirements shall be made for seeding of sagebrush. Sagebrush seeding shall occur prior to winter snowfall, or on top of snow. Sagebrush may be sown either by broadcast seeding, or, if not on snowpack, by placing the seed in the fluffy seed box of a seed drill, with the drop tube left open to allow seed to fall out on the ground surface.

If interim revegetation is unsuccessful, the operator shall implement subsequent reseeding until interim reclamation standards are met.

- g. Mulch. Mulch shall be applied within 24 hours following completion of seeding in project areas within pinyon-juniper, sagebrush shrubland, and/or salt-desert shrub habitat types. Mulch may consist of either hydromulch or of certified weed-free straw or certified weed-free native grass hay crimped into the soil. Mulch shall not be used within mountain shrub or spruce-fir forest habitat types, unless requested or approved by the BLM.

NOTE: Mulch is not required in areas where erosion potential mandates use of a biodegradable erosion-control blanket (straw matting).

- h. Erosion Control. Cut-and-fill slopes shall be protected against erosion with the use of water bars, lateral furrows, or other BMPs approved by the BLM. Additional BMPs such as biodegradable wattles, weed-free straw bales, or silt fences shall be employed as necessary to reduce transport of sediments into the drainages. The BLM may require use of hydromulch or biodegradable blankets or matting in areas with high erosion potential to ensure adequate protection from slope erosion and offsite transport of sediments and to improve reclamation success. Stormwater controls such as wattles or straw bales would also be required on the downhill side of all disturbed areas including berms, diversion ditches, sediment traps, and around all soil stockpiles.
- i. Monitoring. The operator shall conduct annual monitoring surveys of BLM sites categorized as “operator reclamation in progress” and shall submit an annual monitoring report of the BLM sites, including a description of the monitoring methods used, to the BLM by **December 31** of each year. The annual monitoring report shall document whether attainment of reclamation objectives appears likely. If one or more objectives appear unlikely to be achieved, the report shall identify appropriate corrective actions. Upon review and approval of the report by the BLM, the operator shall be responsible for implementing the corrective actions or other measures specified by the BLM.
8. Weed Control. The operator shall regularly monitor and promptly control noxious weeds or other undesirable plant species as set forth in the Glenwood Springs Field Office *Noxious and Invasive Weed Management Plan for Oil and Gas Operators*, dated March 2007. A Pesticide Use Proposal (PUP) must be approved by the BLM prior to the use of herbicides. Annual weed monitoring reports and Pesticide Application Records (PARs), including GPS data in accordance with the February 27, 2014, letter to operators, shall be submitted to the BLM by **December 1**.
9. Big Game Winter Range Timing Limitation. To minimize impacts to wintering big game, no use of the BLM road or pipeline rights-of-way for construction, drilling, or completion activities shall occur during a Timing Limitation (TL) period from **December 1 to April 15 annually**.
10. Bald and Golden Eagles. It shall be the responsibility of the operator to comply with the Bald and Golden Eagle Protection Act (Eagle Act) with respect to “take” of either eagle species. Under the

Eagle Act, “take” includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, and disturb. “Disturb” means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle; (2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior. Avoidance of eagle nest sites, particularly during the nesting season, is the primary and preferred method to avoid a take. Any oil or gas construction, drilling, or completion activities planned within 0.5 mile of a bald or golden eagle nest, or other associated activities greater than 0.5 miles from a nest that could disturb eagles, shall be coordinated with the BLM project lead, BLM wildlife biologist, and the USFWS representative to the BLM Field Office at 970-243-2778 x28.

11. Raptor Nesting. To protect nesting raptors, a survey shall be conducted prior to construction, drilling, or completion activities that are to begin during the raptor nesting season (**February 1 to August 15**). The survey shall include all potential nesting habitat within 0.25 mile of a well pad, access road, pipeline, or other surface facility. Results of the survey shall be submitted to the BLM. If a raptor nest is located within the buffer widths specified above, a 60-day raptor nesting TL will be applied by the BLM to preclude initiation of construction, drilling, and completion activities during the appropriate nesting season. The operator is responsible for complying with the Migratory Bird Treaty Act (MBTA), which prohibits the “take” of birds or of active nests (those containing eggs or young), including nest failure caused by human activity (see COA for Migratory Birds below).
12. Migratory Birds – Nesting Habitat. Pursuant to BLM Instruction Memorandum 2008-050, all vegetation removal or surface disturbance in previously undisturbed lands providing potential nesting habitat for migratory birds is prohibited from **May 15 to July 15**. An exception to this TL may be granted if nesting surveys conducted no more than one week prior to surface-disturbing activities indicate that no migratory bird species are nesting within 30 meters (100 feet) of the area to be disturbed. Nesting shall be deemed to be occurring if a territorial (singing) male is present within the distance specified above. Nesting surveys shall include an audial survey for diagnostic vocalizations in conjunction with a visual survey for adults and nests. Surveys shall be conducted by a qualified breeding bird surveyor between sunrise and 10:00 AM under favorable conditions for detecting and identifying migratory birds. This provision does not apply to ongoing construction, drilling, or completion activities that are initiated prior to May 15 and continue into the 60-day period at the same location.
13. Migratory Birds – General. It shall be the responsibility of the operator to comply with the Migratory Bird Treaty Act (MBTA) with respect to “take” of migratory bird species, which includes injury and direct mortality resulting from human actions not intended to have such result. To minimize the potential for the take of a migratory bird, the operator shall take reasonable steps to prevent use by birds of fluid-containing pits associated with oil or gas operations, including but not limited to reserve pits, produced-water pits, hydraulic fracturing flowback pits, evaporation pits, and cuttings trenches. Liquids in these pits—whether placed or accumulating from precipitation—may pose a risk to birds as a result of ingestion, absorption through the skin, or interference with buoyancy and temperature regulation.

Based on low effectiveness of brightly colored flagging or spheres suspended over a pit, the operator shall install netting with a mesh size of 1 to 1.5 inches, and suspended at least 4 feet above the fluid surface, on all pits into which fluids are placed, except for storage of fresh water in a pit that contains no other material. The netting shall be installed within 24 hours of placement of fluids into a pit. The requirement for netting does not apply to pits during periods of continuous, intensive human activity at the pad, such as drilling and hydraulic fracturing phases or, as pertains to cuttings trenches, during

periods of active manipulation for cuttings management, remediation of contaminated materials, or other purposes.

In addition to netting of pits, oil slicks and oil sheens shall be promptly skimmed off the fluid surface. The requirement for prompt skimming of oil slicks and oil sheens also applies to cuttings trenches in which precipitation has accumulated. All mortality or injury to birds shall be reported immediately to the BLM project lead and to the USFWS representative to the BLM Field Office at 970-243-2778 x28 and visit <http://www.fws.gov/mountain-prairie/contaminants/oilpits.htm>.

14. Range Management. Range improvements (fences, gates, reservoirs, pipelines, etc.) shall be avoided during development of natural gas resources to the maximum extent possible. If range improvements are damaged during exploration and development, the operator shall be responsible for repairing or replacing the damaged range improvements. If a new or improved access road bisects an existing livestock fence, steel frame gate(s) or a cattleguard with associated bypass gate shall be installed across the roadway to control grazing livestock.
15. Paleontological Resources. All persons associated with operations under this authorization shall be informed that any objects or sites of paleontological or scientific value, such as vertebrate or scientifically important invertebrate fossils, shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with operations under this authorization any of the above resources are encountered the operator shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM of the findings. The discovery shall be protected until notified to proceed by the BLM.
16. Cultural Education/Discovery. All persons in the area who are associated with this project shall be informed that if anyone is found disturbing historic, archaeological, or scientific resources, including collecting artifacts, the person or persons would be subject to prosecution.

If subsurface cultural values are uncovered during operations, all work in proximity to the resource shall cease and the Authorized Officer with the BLM notified immediately. The operator shall take any additional measures requested by the BLM to protect discoveries until they can be adequately evaluated by the permitted archaeologist. Within 48 hours of the discovery, the SHPO and consulting parties shall be notified of the discovery and consultation shall begin to determine an appropriate response. The BLM, in cooperation with the operator, shall ensure that the discovery is protected from further disturbance until an appropriate response is implemented. Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer.

Pursuant to 43 CFR 10.4(g), the holder shall notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony on Federal land. Further, pursuant to 43 CFR 10.4 (c) and (d), the holder shall stop activities in proximity to the discovery that could adversely affect the discovery. The holder shall make a reasonable effort to protect the human remains, funerary items, sacred objects, or objects of cultural patrimony for a period of thirty days after written notice is provided to the authorized officer, or until the authorized officer has issued a written notice to proceed, whichever occurs first.

Antiquities, historic ruins, prehistoric ruins, and other cultural or paleontological objects of scientific interest that are outside the authorization boundaries but potentially affected, either directly or indirectly, by the Proposed Action shall also be included in this evaluation. Impacts that occur to such resources as a result of the authorized activities shall be addressed at the operator's cost, including the cost of consultation with Native American groups.

Any person who, without a permit, injures, destroys, excavates, appropriates, or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural

item, or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361).

17. Visual Resources. Production facilities shall be placed away from the fill slope near the interior of the pad or along the cut slope as indicated on the plats attached to the APD, unless an alternative placement is approved by the BLM, to avoid or minimize visibility from travel corridors, residential areas, and other sensitive observation points—unless directed otherwise by the BLM due to other resource concerns—and shall be placed to maximize reshaping of cut-and-fill slopes and interim reclamation of the pad.

To the extent practicable, existing vegetation shall be preserved when clearing and grading for pads, roads, and pipelines. The BLM may direct that cleared trees and rocks be salvaged and redistributed over reshaped cut-and-fill slopes or along linear features.

Aboveground facilities shall be painted **Shadow Gray** selected to minimize contrast with adjacent vegetation or rock outcrops.

18. Escape Ramps (Open Pits and Cellars, Tanks, and Trenches). The operator shall construct and maintain pits, cellars, open-top tanks, and trenches to exclude livestock, wildlife, and humans (except authorized personnel) and, in the event of inadvertent entry, to escape from these below-grade areas. At a minimum, the operator shall construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape from each pit, cellar, open-top tank, and trench. Ramps shall be secured and properly positioned to allow wildlife to escape.

19. Noise Abatement for Compressors, Generators, and Pumps. Any production equipment operated for extended periods on a Federal oil and gas lease and/or BLM-administered public land shall adhere to the Residential/Agricultural/Rural Zone standard established in Colorado Oil and Gas Conservation Commission (COGCC) Regulation No. 802, Noise Abatement. Under this provision, the noise level shall not exceed 50 A-weighted decibels (dBA) between 7:00 p.m. and 7:00 a.m. (nighttime) and 55 dBA between 7:00 a.m. and 7:00 p.m. (daytime) at a distance of 350 feet from the noise source. This standard shall apply even in remote locations where the COGCC would consider the Light Industrial to be sufficient (i.e., no residences in proximity to the noise source). BLM's objective for noise abatement is to reduce noise impacts to the existing solitude that is typical on BLM-leased lands, and particularly to reduce impacts that could have an adverse impact on wildlife.

Noise control techniques to be considered for such production-related equipment shall include, but not be limited to, enclosure within a sound-insulated structure, installation of an improved muffler system, some combination of these, or potentially the use of electrical power. Methods for safe ventilation of sound-insulated buildings shall be a key consideration in building design to avoid open doors or windows that defeat the intended noise controls. Any noise-abating structure shall use the same BLM-approved color as used on other production facilities on the pad.

If the BLM determines that the required Residential/Agricultural/Rural noise standard is not being met under normal conditions, the operator may be required to suspend use of the compressor or implement additional noise abatement measures.

#### **SITE-SPECIFIC SURFACE-USE COAS FOR THE WMC 24-17 PROJECT**

##### ***Resource Survey Requirements Prior to Surface Disturbance.***

Prior to any surface-disturbing activities related to the new construction aspects of the WMC 24-17 project, TEP shall obtain a special status plant survey for Harrington's penstemon during the May-June 2021 flowering period to determine the presence or extent of sensitive plant species in proximity to the proposed road, WMC 24-17 pad and/or buried pipelines. TEP shall also obtain and appropriate avian

survey prior to any construction, drilling, or completion work that would occur during the raptor nesting season or the BOCC-nesting season to ensure protections of nesting birds.

#### ***Cutthroat Trout Habitat.***

To address CPW consultation on regarding the presence of Green Lineage cutthroat trout:

1. The road crossing structure at Beaver Creek will not require additional work, since the WRNF has recently improved it. TEP shall make no additional to the road crossing at Beaver Creek without prior written approval by the BLM.
2. TEP shall stage a spill response kit at the RU 31-12V pad along Beaver Creek Road containing supplies needed to ensure immediate and effective response in the event of a spill in the Beaver Creek watershed.
3. If feasible, dust suppression in proximity to Beaver Creek shall utilize potable water from a nearby source instead of raw water to avoid the spread of disease organisms and aquatic nuisance species.

TEP has implemented and shall continue to maintain stormwater control measures (i.e., sediment traps, culvert head gates, etc.) along the existing access roads to minimize potential adverse impacts to Designated Cutthroat Trout Habitat.

#### ***Boulder/Rock Wall for Pad Construction.***

The northeastern corner of the pad (corner #7) shall be constructed with a 3- to 4-foot-high rock wall to preserve the stand of Gambel oak trees located near this corner. The rock wall shall be keyed in during construction of the fill slope. Given the amount of basalt boulders to be unearthed during road and pad construction, such boulders shall be placed in a wall-like fashion along the open cut slopes of the pad and new access road.

#### ***Visual Resource Impact Reduction for Buried Pipelines.***

The removal of vegetation to create a “feathered” edge along the buried pipeline alignment, either using a hydroaxe or by felling (chain sawing) individual and/or patches of trees, shall be conducted by TEP contractor(s) under direction of a BLM representative as an adaptive BMP. Such removal of vegetation shall not specifically disturb the surface and shall not involve more than 2 acres of additional vegetation impacts to develop the visual BMP. Feathering of the linear edge of the pipeline shall be reviewed from the KOPs by the Authorized Officer to ensure compliance with VRM Class III.

#### ***Production Unit Placements.***

If practicable, production tanks planned for the pad shall be downsized to low profile tanks once the pad is built depending on the appearance of the well pad in the visual landscape.

#### ***Gate Installation.***

A steel frame gate shall be installed at the intersection of the proposed access road and the existing range fence along the eastern edge of TEP’s property boundary located in Section 18, Township 7 South, Range 93 West, 6th P.M. The gate shall be fitted with a steel chain and pad lock to control access and ensure containment of cattle grazing within the associated grazing allotments.

#### ***Clearing and Grubbing.***

- (a) In general, the WMC 24-17 pad, road and pipeline alignment shall be hydroaxed to eliminate the fuel loading from brush and trees to be cleared.

- (b) Where practicable on sideslopes greater than 25%, the cleared tree stems shall be placed cross-slope at the toe of the staked fill slope to contain the excavated fill from erosional impacts and provide increased stability of the roadbed.

***Specific Vegetation Clearing, Topsoil Salvage and Handling, and Seeding.***

During removal of topsoil following the clearing and hydroaxing of coarse woody vegetation, an initial shallow stripping depth (not to exceed 12 inches) shall be used to preserve as much of the root biomass of herbaceous and small woody plants as feasible. If necessary to salvage all soil material suitable for use in reclamation, a second stripping depth shall extend through the topsoil or usable subsoil. The shallow (surficial) material shall be used as a topdressing on the recontoured surface before seeding. In addition, the mixed mountain shrubland native seed mix specified by BLM shall be modified to include seeds of commercially available native shrubs present in or near the site (e.g., serviceberry, mountain-mahogany, snowberry, and bitterbrush).

When clearing large woody material during feathering and scalloping of the pipeline corridor edge, the debris of hydroaxed or felled trees and tall shrubs shall be salvaged and stockpiled for spreading lightly across the reseeded surface. The purpose of these measures is to soften both the linearity and contrast in color and texture of the smooth surface of the pipeline corridor. Progress of this impact reduction work shall be reviewed by the visual resource contractor from the KOPs during implementation to ensure compliance with VRM Class III objectives (see the **Appendix**).

***Topsoil Placement and Storage for Access Road.***

Where practicable, topsoil along the access road shall be windrowed along the uphill and/or downhill side(s) of the disturbance corridor, depending on the amount of tree cover and its importance in the visual landscape. Defining the topsoil windrowing areas shall be closely coordinated with the dirt work contractor.

***Road Construction Width.***

The access road shall be constructed with a driving surface of approximately 20 feet in width, where practicable. The road shall be constructed with 2.5 feet on either side of the proposed driving surface for stormwater control features such as bar ditches, berms, and culvert inlets and outlets. The access road shall have grades at or below 12%.

***Culvert Installations.***

Culverts shall be installed where needed along the proposed access road to direct stormwater away from the road. Culverts shall be fitted with rock at the inlet and outlet of each culvert. Culvert installation shall be further evaluated during construction to determine if additional culverts are needed. The access road shall be surfaced with a minimum of six (6) inches of 3/4-inch gravel or other surfacing materials approved by the BLM or private surface landowner.

***Rock Armoring on Road and/or Pad Fill Slopes.***

Excess rock or boulders exposed during excavation of the pad and/or access road location shall be placed or stacked along the exposed cut slope of the proposed pad and/or proposed road where appropriate. Specific locations of stacked or placed boulders shall be reviewed with the BLM prior to placement.

### ***Surface Frac Lines.***

The installation of welded steel 4.5-inch surface lines shall use the edges of existing roads and/or pipeline corridors wherever feasible. Surface frac lines installed across a drainage shall be accomplished in a manner that does not inhibit the natural flow of the drainage.

The surface lines shall be welded together on existing pads and pulled/placed alongside roads while keeping ditches clear for maintenance. A pre-work meeting shall be held by TEP with BLM and TEP contractor representatives (including the contractor hired for the surface line installations) to outline in detail the location and method of installation for the cross-country segments.

Generally, welded steel surface lines shall be pushed and directed from the edge of WMC 24-17 pad downhill to the RU 23-17 pad along the proposed buried pipeline corridor. From the RU 23-17 pad to the RU 44-17 frac pad, a front-end loader shall pull and lay out the lines along the edge of the existing RU 23-17 access road. The lines shall be tested initially after installation and periodically during each frac stage to ensure they have suitable integrity to deliver fluids without failure or spill. The steel lines shall be anchored along the alignment as needed to maintain the lines in place during their installation and operation. During removal, the frac lines shall be pulled onto existing pad locations, cut into 40-foot sections, loaded on trailers, and hauled to a pipe yard for inspection and reuse.

### ***Field Adjustments for Pipeline Connections at RU 23-17 Pad.***

The proposed 30-foot by 30-foot pipeline equipment area to be used for metering and a pig launcher on the western side of the RU 23-17 pad near the road entrance shall be designed and constructed to allow continued drainage flow from the existing French drain outlet. A drainage culvert shall be installed under the nearby access road to allow water from the French drain to pass through the culvert and to avoid soil saturation conditions that can occur in the vicinity of the drain outlet. Based on BLM/TEP field review prior to construction, the RU 23-17 Equipment Area shall be shifted from its location shown on the APD plats to allow for proper drainage at the outlet of the French drain.

## BUREAU OF LAND MANAGEMENT

Colorado River Valley Field Office  
2300 River Frontage Road  
Silt, CO 81652

### **Drilling Conditions of Approval Applications for Permit to Drill**

Operator: TEP Rocky Mountain, LLC  
Lease Numbers: COC75070 (bottomholes)  
Pad: WMC 24-17  
Surface Location: Garfield County, Section 17, T7S, R93W

1. Forty-eight hours *prior* to (a) spudding, (b) conducting BOPE tests, (c) cementing/running casing strings, and (d) within 24 hours *after* spudding please leave message on the following contact number: 970-876-9064.

The BLM CRVFO inspectors are Ed Fancher, Greg Rios, Alex Provstgaard, Brandon Jamison, and Mitch Schierland. Please contact one of the following petroleum engineer(s) with emergency, drilling or completion issues: Stephen Garcia at (970) 456-2138, [sbgarcia@blm.gov](mailto:sbgarcia@blm.gov).

2. A CRVFO petroleum engineer shall be contacted for a verbal approval prior to commencing remedial work, sidetracking operations, plugging operations on newly drilled boreholes, changes within the drilling plan, changes to the well design, changes or variances to the BOPE, deviating from conditions of approval, and conducting other operations not specified within the APD. Contact the petroleum engineer for verbal approvals (contact information above).
3. If a well control issue or failed test (e.g., kick, blowout, water flow, casing failure, or a bradenhead pressure increase) arises during drilling or completions operations, the petroleum engineer shall be notified within 24 hours from the time of the event. IADC/Driller's Logs and Pason Logs (mud logs) shall be forwarded to CRVFO – Petroleum Engineer, 2300 River Frontage Road, Silt, CO 81652 within 24 hours of a well control event.
4. The BOPE shall be tested and conform to Onshore Order No. 2 for a 3M system and recorded in the IADC/Driller's log.
5. Air and/or mist drilling requires BLM petroleum engineer's notification and approval.
6. Flexible choke lines shall meet or exceed the API SPEC 16C requirements. Flexible choke lines shall have flanged connections and configured to the manufacturer's specifications. The flexible choke lines shall be anchored in a safe and workmanlike manner. At minimum, all connections shall be effectively anchored in place for safety of the personal on location. Manufacturer specifications shall be kept with the drilling rig at all times and immediately supplied to the Authorized Officer or inspector upon request. Specifications at a minimum shall include acceptable bend radius, heat range, anchoring, and the working pressure. All flexible choke lines shall be free of gouges, deformations, and as straight/short as possible.
7. Chronologic drilling progress reports must be emailed directly to the BLM Colorado River Valley Field Office petroleum engineers on a daily basis. Reports shall include daily mud reports, details of casing that has been run and its cementing, water flows, lost circulation zones, hydrocarbon shows and other information that describes drilling conditions.

8. An electrical/mechanical mud monitoring equipment shall be function tested prior to drilling out the surface casing shoe. As a minimum, this equipment shall include a pit volume totalizer, stroke counter, and flow sensor.
9. A gas buster shall be functional and all flare lines effectively anchored in place, prior to drilling out the surface casing shoe. The discharge of the flare lines shall be a minimum of 100 feet from the wellhead and targeted at bends. The panic line shall be a separate line (not open inside the buffer tank) and effectively anchored. All lines shall be downwind of the prevailing wind direction and directed into a flare pit, which cannot be the reserve pit. The flare system shall use an automatic ignition. Where noncombustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and maintain a continuous flare.
10. On the first well drilled on this pad, a triple combo open-hole log shall be run from the base of the surface borehole to surface and from TD to bottom of surface casing shoe. This log shall be submitted within 48 hours in .las and .pdf format to: CRVFO – Petroleum Engineer, 2300 River Frontage Road, Silt, CO 81652. Contact 970-876-9000 for clarification.
11. Submit the (a) mud/drilling log (e.g., Pason disc), (b) driller's event log/operations summary report, (c) production test volumes, (d) directional survey, and (e) Pressure Integrity Test results within 30 days of completed operations (i.e., landing tubing) per 43 CRF 3160-9 (a).
12. Notify the BLM Petroleum Engineer two weeks prior to commencing completion operations.
13. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. In accordance with 43-CFR 3162.4(b) submit a complete set of electrical/mechanical logs in .LAS format with standard Form 3160-4, Well Completion or Recompletion Report and Log.
14. Not later than the 5th business day after any well either begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed. If the well is completed for production, the Authorized Officer shall be notified when the well is placed in a producing status. Such notification may be sent by telegram or other written communication, not later than five (5) days following the date on which the well is placed on production.
15. A schematic facilities diagram as required by 43 CFR 3162.7-5 (b.9. d.) and shall be submitted to the appropriate District Office within sixty (60) days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks shall be effectively sealed in accordance with 43 CFR 3162.7-5 (b. 4).
16. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will require prior written approval from the Authorized Officer.
17. "Sundry Notice and Report on Wells" (Form 3160-5) shall be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.
18. **Water Use.** The purpose of this COA is to assist the BLM in ensuring that water depletions associated with Federal oil and gas development activities are adequately covered by the USFWS Programmatic Biological Opinion for the four endangered Colorado River fishes. The Operator shall provide the volumes of fresh water and reused/recycled water used during project development using the following table. The volumes per well shall be identified by each development phase

(construction, drilling, and completion) and by activity (e.g., dust abatement, pipeline hydrostatic testing, drilling, and completion operations). The water volumes shall be identified in an attachment to the BLM Form 3160-4, "Well Completion or Recompletion Report and Log" (completion report) submitted to the BLM Field Office. All volumes are to be reported in barrels per well.

The Operator shall report total volume of water used during pad construction with the first well completion report of the pad. Water volumes used for subsequent activities (drilling and completing an additional well on the pad, dust abatement) shall be included in subsequent completion reports.

<b>Well Name/No.:</b>		<b>API No.:</b>			
<b>County:</b>		<b>Well Pad:</b>			
<b>Operator:</b>					
<b>Activity</b>	<b>Water Use (barrels)</b>				
	<b>Construction</b>	<b>Drilling</b>		<b>Completion</b>	
	<b>Fresh</b>	<b>Fresh</b>	<b>Reused/ Recycled</b>	<b>Fresh</b>	<b>Reused/ Recycled</b>
Road/Pipeline/Pad Dust Abatement					
Pipeline Hydrostatic Testing					
Cementing					
Mud					
Acid Wash/ Hydraulic Fracturing					

<b>List of Wells</b>		
<i>Proposed Pad</i>	<i>Proposed Wells</i>	<i>Surface Locations</i>
WMC 24-17	Federal WMC 11-20	T7S R93W Sec 17
	Federal WMC 12-20	T7S R93W Sec 17
	Federal WMC 13-20	T7S R93W Sec 17
	Federal WMC 32-20	T7S R93W Sec 17
	Federal WMC 33-20	T7S R93W Sec 17
	Federal WMC 311-20	T7S R93W Sec 17
	Federal WMC 312-20	T7S R93W Sec 17
	Federal WMC 331-20	T7S R93W Sec 17
	Federal WMC 332-20	T7S R93W Sec 17
	Federal WMC 411-20	T7S R93W Sec 17
	Federal WMC 412-20	T7S R93W Sec 17
	Federal WMC 431-20	T7S R93W Sec 17
	Federal WMC 432-20	T7S R93W Sec 17
	Federal WMC 511-20	T7S R93W Sec 17
	Federal WMC 512-20	T7S R93W Sec 17
	Federal WMC 531-20	T7S R93W Sec 17
Federal WMC 532-20	T7S R93W Sec 17	



## Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** VICKI SCHOEBER

**Signed on:** 10/30/2020

**Title:** Regulatory Specialist

**Street Address:** 1058 County Road 215

**City:** Parachute

**State:** CO

**Zip:** 81635

**Phone:** (970)263-2721

**Email address:** VSCHOEBER@TERRAEP.COM

## Field Representative

**Representative Name:** Lynn Cass

**Street Address:** 1058 County Road 215

**City:** Parachute

**State:** CO

**Zip:** 81635

**Phone:** (970)755-0083

**Email address:** lcass@terraep.com



APD ID: 10400064314

Submission Date: 10/30/2020

Highlighted data reflects the most recent changes

Operator Name: TEP ROCKY MOUNTAIN LLC

Well Name: FEDERAL

Well Number: WMC 312-20 (24-17)

[Show Final Text](#)

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

## Section 1 - General

APD ID: 10400064314

Tie to previous NOS? N

Submission Date: 10/30/2020

BLM Office: COLORADO RIVER VALLEY (GLENWOOD)  
Federal/Indian APD: FED

User: VICKI SCHOEBER

Title: Regulatory Specialist

Is the first lease penetrated for production Federal or Indian? FED

Lease number: COC075070

Lease Acres:

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? N

Permitting Agent? NO

APD Operator: TEP ROCKY MOUNTAIN LLC

Operator letter of designation:

## Operator Info

Operator Organization Name: TEP ROCKY MOUNTAIN LLC

Operator Address: 1058 County Road 215

Zip: 81635

Operator PO Box: PO Box 370

Operator City: Parachute

State: CO

Operator Phone: (970)285-9377

Operator Internet Address: jkirtland@terraep.com

## Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: FEDERAL

Well Number: WMC 312-20 (24-17) Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: RULISON

Pool Name:

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Is the proposed well in an area containing other mineral resources?** NATURAL GAS

**Is the proposed well in a Helium production area?** N    **Use Existing Well Pad?** N    **New surface disturbance?**

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:**

**Number:** WMC 24-17

**Well Class:** DIRECTIONAL

FEDERAL

**Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** CONVENTIONAL GAS WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:** 5 Miles

**Distance to nearest well:** 330 FT

**Distance to lease line:** 1077 FT

**Reservoir well spacing assigned acres Measurement:** 10 Acres

**Well plat:** WMC\_312\_20\_Well\_Location\_Plat\_9\_25\_20\_3\_20201026122403.pdf

**Well work start Date:** 02/01/2022

**Duration:** 10 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:**

**Reference Datum:** GRADED

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	243	FSL	1799	FWL	7S	93W	17	Aliquot SESW	39.439061	-107.799561	GARFIELD	COLORADO	SIXTH PRIN	F	COC050944	8869	0	0	N
KOP Leg #1	243	FSL	1799	FWL	7S	93W	17	Aliquot SESW	39.439061	-107.799561	GARFIELD	COLORADO	SIXTH PRIN	F	COC050944	8749	120	120	N
PPP Leg #1-1	1800	FNL	607	FWL	7S	93W	20	Aliquot SWNW	39.433475	-107.803806	GARFIELD	COLORADO	SIXTH PRIN	F	COC075070	1429	787	7440	Y

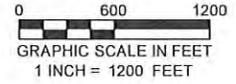
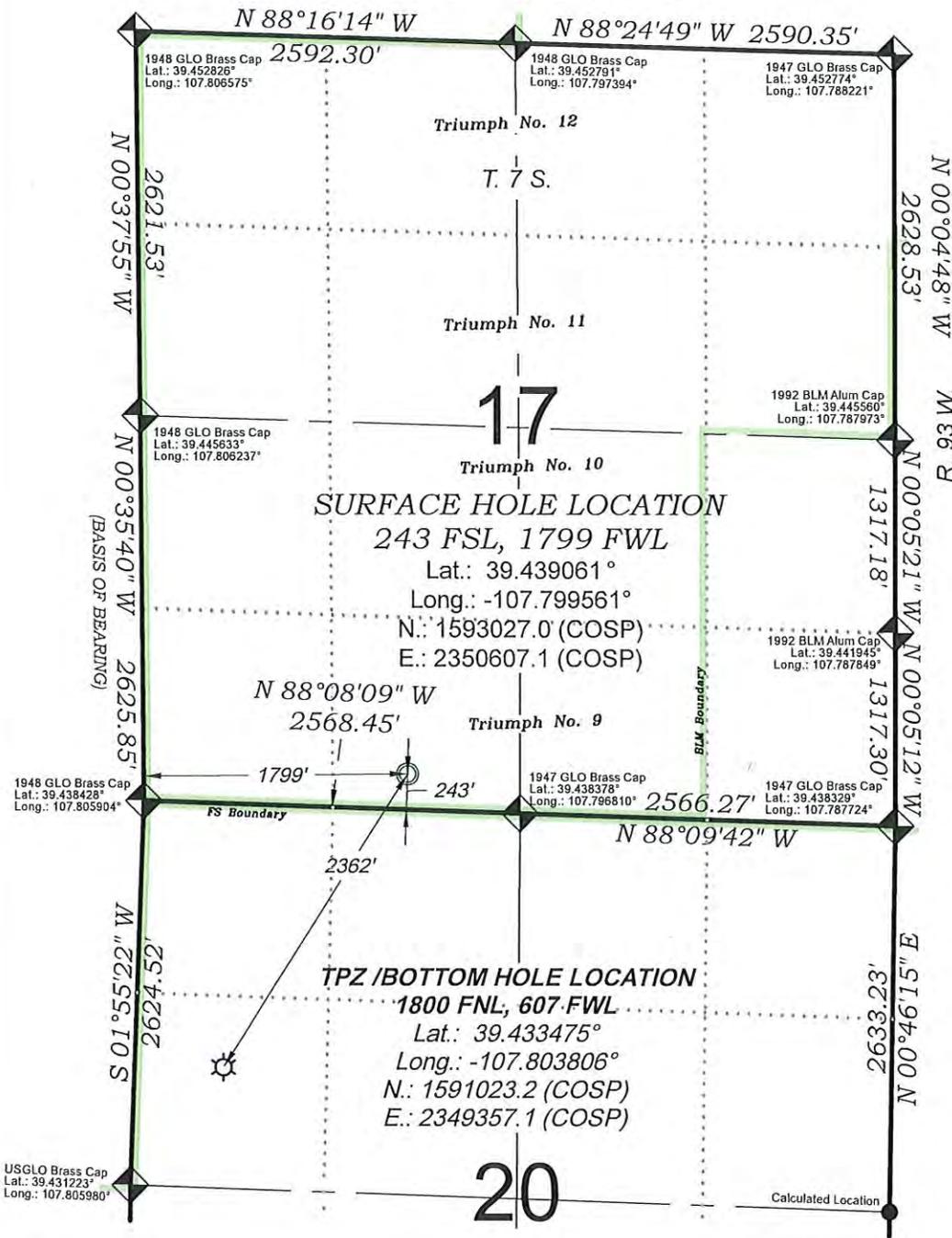
**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
EXIT Leg #1	1800	FNL	607	FWL	7S	93W	20	Aliquot SWNW	39.433475	-107.803806	GARFIELD	COLORADO	SIXTH PRIN	F	COC075070	-2093	11369	10962	Y
BHL Leg #1	1800	FNL	607	FWL	7S	93W	20	Aliquot SWNW	39.433475	-107.803806	GARFIELD	COLORADO	SIXTH PRIN	F	COC075070	-2093	11369	10962	Y

# Federal WMC 312-20



EXISTING GROUND ELEV.: 8865.2  
PROPOSED PAD ELEV.: 8868.5

THERE ARE NO VISIBLE  
IMPROVEMENTS WITHIN 500'  
OF THIS LOCATION

## - LEGEND -

- FIELD LOCATED SECTION MONUMENTS AS DESCRIBED
- FIELD SURVEYED WELL LOCATION
- CALCULATED BOTTOM HOLE LOCATION
- CALCULATED SECTION CORNER LOCATION

### SURVEYORS STATEMENT

I, MICHAEL J. LANGHORNE, A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO DO HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON WAS PREPARED UNDER MY DIRECT SUPERVISION AND HAS BEEN STAKED ON THE GROUND AS SHOWN ON THE PLAT AND CHECKING THAT THIS MAP IS A TRUE REPRESENTATION THEREOF.

*Michael J. Langhorne*

MICHAEL J. LANGHORNE, COLORADO REGISTRATION NO. 36572  
FOR AND ON BEHALF OF  
BOOKCLIFF SURVEY SERVICES, INC.

REVISED: 9/24/20

SURVEY DATE: 7/28/20  
MAP DATE: 9/18/20  
SCALE: 1" = 1200'  
PLAT: 1 of 7  
PROJECT: TEP Valley

### REFERENCES

- 1) RE-SURVEY T. 7 S., R. 93 W., 6th P.M (BLM PLAT)
- 2) U.S.G.S. QUAD: North Mamm Peak, CO

### NOTES

- 1) ELEVATIONS BASED ON N.A.V.D. 1988 PUBLISHED COORDINATES.
- 2) LATITUDES AND LONGITUDES ARE BASE ON NAD 83, PUBLISHED COORDINATES
- 3) STATE PLANE COORDINATES ARE BASED ON COLORADO CENTRAL ZONE, U.S. SURVEY FEET.
- 4) ELEVATION MASK SET TO 15"
- 5) GPS OPERATOR J. KIRKPATRICK, OBSERVED A PDOP 2.6 ON SURVEY POINT NUMBER 388.
- 6) SURFACE AND BOTTOM HOLE LOCATIONS ARE MEASURED 90° FROM SECTION LINES.

### WELL LOCATION PLAT Prepared for:



TEP Rocky Mountain LLC

SE1/4 SW1/4, SECTION 17  
T. 7 S., R. 93 W. of the 6th. P.M.  
GARFIELD COUNTY, COLORADO

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



**APD ID:** 10400064314

**Submission Date:** 10/30/2020

Highlighted data reflects the most recent changes

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

[Show Final Text](#)

**Well Type:** CONVENTIONAL GAS WELL

**Well Work Type:** Drill

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1110242	WASATCH	8869	0	0	MUDSTONE, SILTSTONE	OTHER : Potentially Useable Quality Water	N
1110244	WILLIAMS FORK	1577	7292	7699	COAL, MUDSTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OTHER : Limited Use Quality Water	Y
1110243	ILES	-1943	10812	11219	SANDSTONE, SHALE	NATURAL GAS, OTHER : Limited Use Quality Water	N

## Section 2 - Blowout Prevention

**Pressure Rating (PSI):** 3M

**Rating Depth:** 13000

**Equipment:** BOP EQUIPMENT SHALL CONSIST OF A HYDRAULICALLY OPERATED DOUBLE GATE BOP, WITH PIPE AND BLIND RAMS OR TWO SINGLE RAM TYPE PREVENTERS, ONE EQUIPPED WITH PIPE RAMS, THE OTHER EQUIPPED WITH BLIND RAMS, ANNULAR PREVENTOR, A REMOTE OPERATED HYDRAULIC CHOKE LINE VALVE WITH MUD CROSS, KILL LINE AND CHOKE LINE.

**Requesting Variance?** YES

**Variance request:** See Master APD Appendix 6 on file.

**Testing Procedure:** 11" – 3,000-psi ram type BOP's 3,000 psi. 11" – 3,000-psi annular BOP's 1,500 psi. Ancillary equipment and choke manifold 3,000 psi. Surface casing test to 1500 psi equivalent at the surface casing shoe. Pressure tests will be conducted after installation of equipment and prior to drilling out casing float equipment and every 30 days thereafter. A certified tester will perform pressure testing and charts will be made available from TEP upon request. BOP and choke manifold equipment and installation will be consistent with 43 CFR Part 3160 and onshore order 2 Well Control Requirements as it pertains to 3,000-psi systems. The accumulator will have sufficient capacity to close all rams and annular preventer, and to open the hydraulically controlled valve. Two sets of hydraulic controls will be utilized with one set on the rig floor and one set in the accumulator house. A casing head rated to 3,000 psi or greater shall be utilized.

**Choke Diagram Attachment:**

APD\_Attachment\_Updated\_Choke\_03302020\_20201026092855.pdf

**BOP Diagram Attachment:**

APD\_Attachment\_BOP\_UPDATED\_6\_9\_2020\_20201026092926.pdf

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	CONDUCTOR	30	20.0	NEW	API	N	0	84	0	84	8869	8785	84	OTHER	78.67	OTHER - welded						
2	SURFACE	13.5	9.625	NEW	API	N	0	1100	0	1067	8869	7802	1100	J-55	36	LT&C	1.125	1.1	BUOY	1.5	BUOY	1.5
3	PRODUCTION	8.75	4.5	NEW	API	N	0	11369	0	10962	5467	-2093	11369	P-110	11.6	OTHER - BTC	1.125	1.1	BUOY	1.5	BUOY	1.5

#### Casing Attachments

**Casing ID:** 1      **String Type:** CONDUCTOR

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

**Casing ID:** 2      **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Casing\_Drilling\_Prog\_WMC\_312\_20\_Rev00\_20201026123010.pdf

Operator Name: TEP ROCKY MOUNTAIN LLC

Well Name: FEDERAL

Well Number: WMC 312-20 (24-17)

### Casing Attachments

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

### Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
CONDUCTOR	Lead		0	84	199	0	0	0		Ready Mix	NA

SURFACE	Lead		0	500	121	2.34	12.3	283	16	Class G	0.25lb/sk Poly-E-Flake
SURFACE	Tail		500	1100	164	2.08	12.8	340	16	Class G	0.25lb/sk Poly-E-Flake
PRODUCTION	Lead		6747	9019	444	1.98	12.7	878	45	Class G	0.25lb/sk Poly-E-Flake
PRODUCTION	Tail		9019	11369	572	1.83	13.5	1047	45	Class G	0.25lb/sk Poly-E-Flake

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

### Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** Surface well control equipment rated to 3,000 psi working pressure. Flare tank. Gas buster.

**Describe the mud monitoring system utilized:** Pason PVT system

### Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1067	1096 2	LOW SOLIDS NON- DISPERSED (LSND)	9.5	12.5							
0	1067	WATER-BASED MUD	8.5	9.5							

### Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

Surface BOP test, IBOP, Surface Safety Valves, Mud Lines, Choke Manifold.

Test to 3,000 psi for BOP, Hydril 1500 psi high.

Surface casing test, production casing test, FIT test after drilling out surface casing.

**List of open and cased hole logs run in the well:**

CEMENT BOND LOG, DIRECTIONAL SURVEY, GAMMA RAY LOG, MEASUREMENT WHILE DRILLING, MUD LOG/GEOLOGIC LITHOLOGY LOG,

**Coring operation description for the well:**

None

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 5043

**Anticipated Surface Pressure:** 2631

**Anticipated Bottom Hole Temperature(F):** 203

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** NO

**Hydrogen sulfide drilling operations plan:**

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

WMC\_312\_20\_Plan1\_20201026123247.pdf

**Other proposed operations facets description:**

Any source water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected.

Water wells used for domestic, livestock, and irrigation supply within the Grand Valley, Parachute, and Rulison development areas produce water primarily from the stream and floodplain alluvial deposits that overlie the Wasatch Formation; the depth range for these wells is 110 feet to 290 feet. Two irrigation wells have been reported to produce water from the Wasatch Formation. Further details on groundwater aquifers and usage are available in the Wheeler to Webster GAP Environmental Assessment, Section 3.9.3, July 2002, U.S. Department of the Interior, Bureau of Land Management. Any and all historically proven domestic, livestock, and irrigation groundwater sources will be isolated with surface casing/cement during drilling

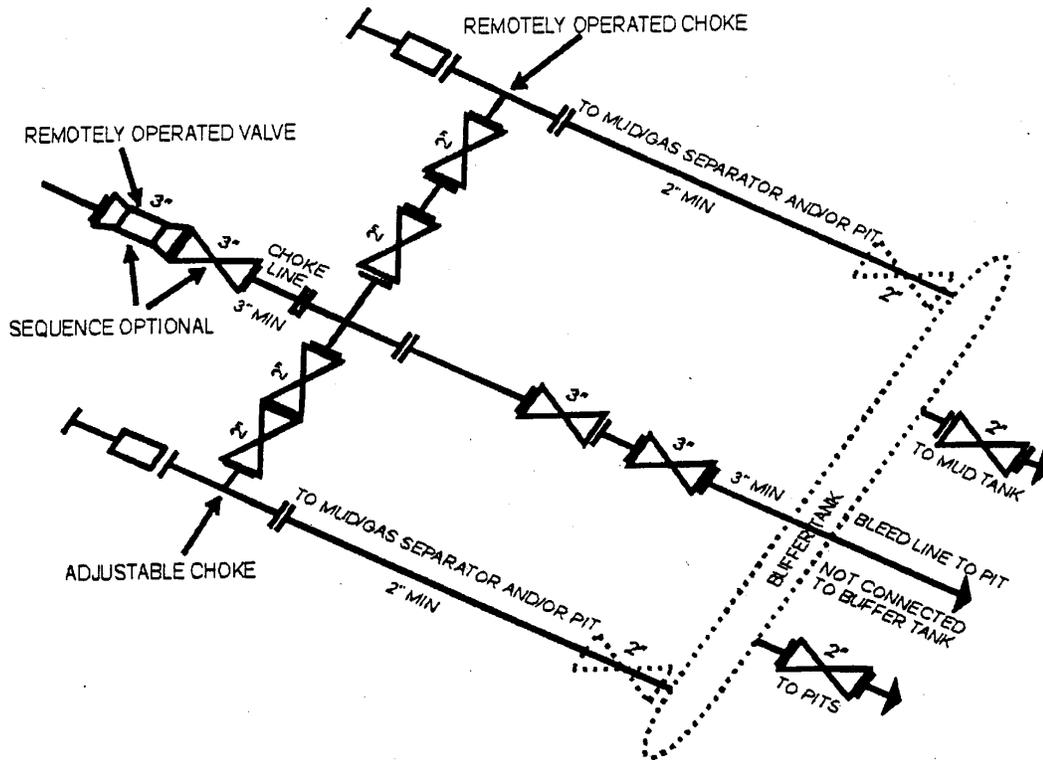
**Other proposed operations facets attachment:**

RESOURCES\_Drilling\_Prog\_WMC\_312\_20\_Rev00\_20201026123309.pdf

Drilling\_Prog\_WMC\_312\_20\_Rev00\_20201026123319.pdf

**Other Variance attachment:**





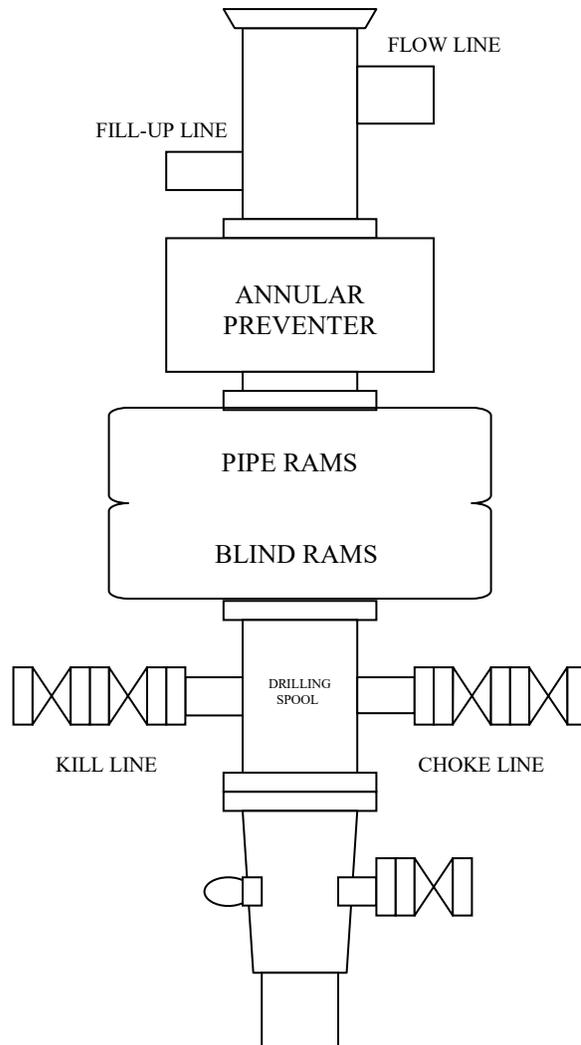
5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Sept. 27, 1989]

## BOP AND PRESSURE CONTAINMENT DATA

1. BOP EQUIPMENT SHALL CONSIST OF A DOUBLE GATE, HYDRAULICALLY OPERATED ANNULAR PREVENTER WITH PIPE & BLIND RAMS OR TWO SINGLE RAM TYPE PREVENTERS, ONE EQUIPPED WITH PIPE RAMS, THE OTHER EQUIPPED WITH BLIND RAMS.
2. BOP'S ARE TO BE WELL BRACED WITH HAND CONTROLS EXTENDED CLEAR OF THE SUBSTRUCTURE.
3. ACCUMULATOR TO PROVIDE CLOSING PRESSURE IN EXCESS OF THAT REQUIRED WITH SUFFICIENT VOLUME TO OPERATE ALL COMPONENTS.
4. AUXILIARY EQUIPMENT: LOWER KELLY COCK, FULL OPENING STABBING VALVE, 3 1/8" CHOKE MANIFOLD.
5. ALL BOP EQUIPMENT, AUXILIARY EQUIPMENT, STAND PIPE, VALVES, & ROTARY HOSE TO BE TESTED TO THE RATE PRESSURE OF THE BOP'S AT THE TIME OF INSTALLAION & EVERY 30 DAYS THERAFTER. BOP'S TO BE MECHANICALLY CHECKED DAILY.
6. MODIFICATION OF HOOK-UP OR TESTING PROCEDURE MUST BE APPROVED IN WRITING ON TOUR REPORTS BY WELLSITE REPRESENTATIVE.



**CASING DESIGN**

Well Name & Number: WMC 312-20

Casing Design Calculations											
Type of Casing	Size of Hole (inches)	Size of Casing (inches)	Weight per Foot (lbs/ft)	Grade	Thread	Interval (ft - ft)	Length (feet)	Setting Depth (TVD)	Collapse (psi)	Burst (psi)	Tension (lbs)
Surface	13.50	9.625	36.0	J-55	LTC	0-1100	1,100	1,067	2,020	3,520	453,000
Production	8.75	4.500	11.6	P-110	BTC	0-11369	11,369	10,962	7,560	10,690	367,000

Surface Casing Shoe	Production Casing Shoe
Max MW = 9.5 ppg	Max MW = 9.5 ppg
HP = 527 psi	HP = 5,415 psi

True Vertical Depth = 10,962 ft  
 Bottom Hole Pressure = 5,043 psi  
 Pore Pressure Gradient = 0.460 psi/ft  
 Max. Sur. Pressure = 2,631 psi  
 BOP Required = 3M System  
 5M system will be used as per Master APD

Casing Safety Factors			
Surface Casing - 36#	Pb = 1.34	Min = 1.100	Pass
	Pc = 3.83	Min = 1.125	Pass
	Sj = 11.44	Min = 1.500	Pass
Production Casing	Pb = 4.06	Min = 1.100	Pass
	Pc = 1.40	Min = 1.125	Pass
	Sj = 2.78	Min = 1.500	Pass

Bottom Hole Temperature = 203 degrees Fahrenheit

Casing Design Detailed Calculations	
<b>Surface Casing</b>	<p>grad(P<sub>porc</sub>) = Maximum Gradient Pore Pressure of Production Interval</p> <p>Internal pressure while drilling production hole:  <math display="block">P_{internal} = [grad(P_{porc}) - grad(P_{gs})] * TVD_{prod\ hole}</math> <math display="block">= [ 0.46 - 0.22 ] * 10962</math> <math display="block">= 2,631\ psi</math></p> <p>External pressure on surface casing while drilling production hole:  <math display="block">P_{external} = 0.052 * MW_{max\ on\ surf\ sect} * TVD_{surf\ shoe}</math> <math display="block">= 0.052 * 9.5 * 1067</math> <math display="block">= 527\ psi</math></p> <p><b>Collapse:</b>  <math display="block">P_{collapse} = P_{external} - P_{internal}</math> <math display="block">= 527.098 - 0</math> <math display="block">= 527\ psi\ w/evacuated\ csg</math>                       Rating<sub>collapse</sub> = 2,020 psi  <math display="block">P_c = Rating_{collapse} / P_{collapse}</math> <math display="block">= 2020 / 527.098</math> <math display="block">= 3.83</math>   <math display="block">P_c \geq 1.125\ safety\ factor</math> <math display="block">3.83 \geq 1.125</math></p> <p><b>Burst:</b>  <math display="block">P_{burst} = P_{internal} - P_{external}</math> <math display="block">= 2630.88 - 0</math> <math display="block">= 2,631\ psi\ w/evacuated\ ann</math>                       Rating<sub>burst</sub> = 3,520 psi  <math display="block">P_b = Rating_{burst} / P_{burst}</math> <math display="block">= 3520 / 2630.88</math> <math display="block">= 1.34</math>   <math display="block">P_b \geq 1.100\ safety\ factor</math> <math display="block">1.34 \geq 1.100</math></p> <p><b>Tensile:</b>  <math display="block">S_{tensile} = Casing\ Weight\ per\ Foot * Length</math> <math display="block">= 36 * 1100</math> <math display="block">= 39,600\ lbs</math>                       Rating<sub>tension</sub> = 453,000 lbs  <math display="block">S_j = Rating_{tension} / S_{tensile}</math> <math display="block">= 453000 / 39600</math> <math display="block">= 11.44</math>   <math display="block">S_j \geq 1.500\ safety\ factor</math> <math display="block">11.44 \geq 1.500</math></p>
<b>Production Casing</b>	<p>grad(P<sub>porc</sub>) = Maximum Gradient Pore Pressure of Production Interval</p> <p>Internal pressure with gas kick:  <math display="block">P_{internal} = [TVD_{prod\ hole} * grad(P_{porc})] - [TVD_{prod\ hole} * grad(P_{gs})]</math> <math display="block">= [ 10962 * 0.46 ] - [ 10962 * 0.22 ]</math> <math display="block">= 2,631\ psi</math></p> <p>External pressure on production casing:  <math display="block">P_{external} = 0.052 * MW_{max\ on\ prod\ sect} * TVD_{prod\ shoe}</math> <math display="block">= 0.052 * 9.5 * 10962</math> <math display="block">= 5,415\ psi</math></p> <p><b>Collapse:</b>  <math display="block">P_{collapse} = P_{external} - P_{internal}</math> <math display="block">= 5415.228 - 0</math> <math display="block">= 5,415\ psi\ w/evacuated\ csg</math>                       Rating<sub>collapse</sub> = 7,560 psi  <math display="block">P_c = Rating_{collapse} / P_{collapse}</math> <math display="block">= 7560 / 5415.228</math> <math display="block">= 1.40</math>   <math display="block">P_c \geq 1.125\ safety\ factor</math> <math display="block">1.40 \geq 1.125</math></p> <p><b>Burst:</b>  <math display="block">P_{burst} = P_{internal} - P_{external}</math> <math display="block">= 5042.52 - 2411.64</math> <math display="block">= 2,631\ psi\ w/evacuated\ ann</math>                       Rating<sub>burst</sub> = 10,690 psi  <math display="block">P_b = Rating_{burst} / P_{burst}</math> <math display="block">= 10690 / 2630.88</math> <math display="block">= 4.06</math>   <math display="block">P_b \geq 1.100\ safety\ factor</math> <math display="block">4.06 \geq 1.100</math></p> <p><b>Tensile:</b>  <math display="block">S_{tensile} = Casing\ Weight\ per\ Foot * Length</math> <math display="block">= 11.6 * 11369</math> <math display="block">= 131,880\ lbs</math>                       Rating<sub>tension</sub> = 367,000 lbs  <math display="block">S_j = Rating_{tension} / S_{tensile}</math> <math display="block">= 367000 / 131880.4</math> <math display="block">= 2.78</math>   <math display="block">S_j \geq 1.500\ safety\ factor</math> <math display="block">2.78 \geq 1.500</math></p>



# **TEP Rocky Mountain LLC**

**Garfield Co., CO (NAD83)**

**WMC 24-17 Pad**

**WMC 312-20 - Slot WMC 312-20**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**07 October, 2020**





Project: Garfield Co., CO (NAD83)  
 Site: WMC 24-17 Pad  
 Well: WMC 312-20  
 Wellbore: OH  
 Design: Plan #1  
 Lat: 39.439061  
 Long: -107.799561  
 GL: 8868.00  
 KB: KB=24' @ 8892.00usft



WELL DETAILS: WMC 312-20

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	WMC 312-20
0.00	0.00	1593027.00	2350607.10	39.439061	-107.799561	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
WMC 312-20 KMV	8812.00	-2034.80	-1198.88	1591023.20	2349357.10	Circle (Radius: 50.00)
WMC 312-20 PBHL	10962.00	-2034.80	-1198.88	1591023.20	2349357.10	Point

SECTION DETAILS

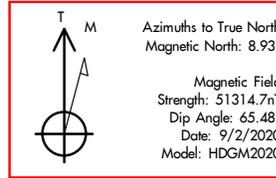
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
807.20	20.62	210.51	792.47	-105.37	-62.09	3.00	210.51	122.30	Start 5665.41 hold at 807.20 MD
6472.60	20.62	210.51	6095.07	-1824.05	-1074.71	0.00	0.00	2117.11	Start Drop -1.50
7847.00	0.00	0.00	7440.00	-2034.80	-1198.88	1.50	180.00	2361.72	Start 3522.00 hold at 7847.00 MD
11369.00	0.00	0.00	10962.00	-2034.80	-1198.88	0.00	0.00	2361.72	TD at 11369.00

CASING DETAILS

TVD	MD	Name	Size
1066.52	1100.00	9 5/8"	9-5/8

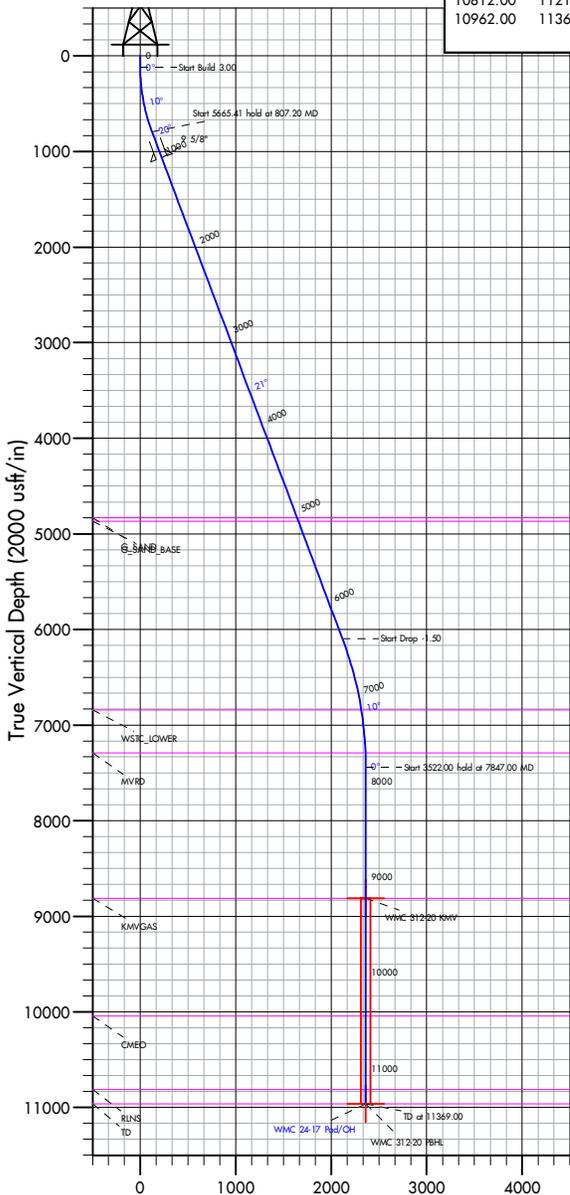
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4832.00	5123.12	G_SAND
4868.00	5161.58	G_SAND_BASE
6842.00	7246.53	WSTC_LOWER
7292.00	7698.97	MVRD
8812.00	9219.00	KMVGAS
10042.00	10449.00	CMEQ
10812.00	11219.00	RLNS
10962.00	11369.00	TD

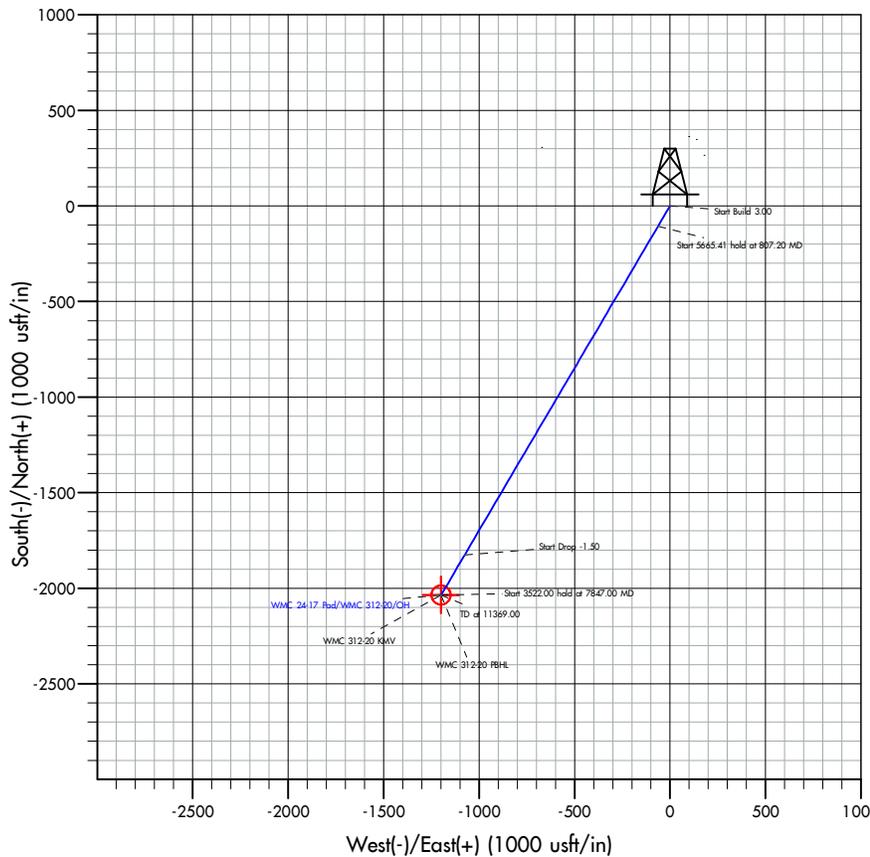


SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
WMC 11-20	14.74	-10.48	1593042.00	2350597.00
WMC 12-20	9.39	3.56	1593036.30	2350610.90
WMC 13-20	4.05	17.60	1593030.60	2350624.80
WMC 311-20	5.35	-14.04	1593032.70	2350593.20
WMC 312-20	0.00	0.00	1593027.00	2350607.10
WMC 32-20	1.42	24.57	1593027.80	2350631.70
WMC 331-20	-6.55	45.68	1593019.30	2350652.60
WMC 33-20	-5.25	14.04	1593021.40	2350621.00
WMC 332-20	-13.22	35.05	1593012.90	2350641.80
WMC 411-20	12.02	-3.41	1593039.10	2350604.00
WMC 412-20	6.77	10.53	1593033.50	2350617.80
WMC 431-20	-3.92	38.61	1593022.10	2350645.60
WMC 432-20	-10.59	28.08	1593015.70	2350634.90
WMC 511-20	2.72	-6.97	1593029.90	2350600.20
WMC 512-20	-2.62	7.07	1593024.20	2350614.10
WMC 531-20	-1.20	31.64	1593025.00	2350638.70
WMC 532-20	-7.97	21.11	1593018.50	2350628.00



Vertical Section at 210.51° (2000 usft/in)





# Altitude Energy Partners

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WMC 312-20 - Slot WMC 312-20
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	KB=24' @ 8892.00usft
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>MD Reference:</b>	KB=24' @ 8892.00usft
<b>Site:</b>	WMC 24-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	WMC 312-20	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Garfield Co., CO (NAD83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

<b>Site</b>	WMC 24-17 Pad				
<b>Site Position:</b>		<b>Northing:</b>	1,593,032.70 usft	<b>Latitude:</b>	39.439076
<b>From:</b>	Map	<b>Easting:</b>	2,350,593.20 usft	<b>Longitude:</b>	-107.799611
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	WMC 312-20 - Slot WMC 312-20					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,593,027.00 usft	<b>Latitude:</b>	39.439061
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,350,607.10 usft	<b>Longitude:</b>	-107.799562
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	8,868.00 usft
<b>Grid Convergence:</b>	-1.45 °					

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM2020	9/2/2020	8.93	65.48	51,314.70000000

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	210.51

<b>Plan Survey Tool Program</b>	<b>Date</b>	10/7/2020			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	11,369.00 Plan #1 (OH)	MWD+ HGDM		
			OWSG MWD + HGDM		

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
807.20	20.62	210.51	792.47	-105.37	-62.09	3.00	3.00	0.00	210.51	
6,472.60	20.62	210.51	6,095.07	-1,824.05	-1,074.71	0.00	0.00	0.00	0.00	
7,847.00	0.00	0.00	7,440.00	-2,034.80	-1,198.88	1.50	-1.50	0.00	180.00	
11,369.00	0.00	0.00	10,962.00	-2,034.80	-1,198.88	0.00	0.00	0.00	0.00	WMC 312-20 PBHL



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WMC 312-20 - Slot WMC 312-20
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	KB=24' @ 8892.00usft
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>MD Reference:</b>	KB=24' @ 8892.00usft
<b>Site:</b>	WMC 24-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	WMC 312-20	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 3.00</b>									
200.00	2.40	210.51	199.98	-1.44	-0.85	1.68	3.00	3.00	0.00
300.00	5.40	210.51	299.73	-7.30	-4.30	8.48	3.00	3.00	0.00
400.00	8.40	210.51	399.00	-17.65	-10.40	20.49	3.00	3.00	0.00
500.00	11.40	210.51	497.50	-32.46	-19.13	37.68	3.00	3.00	0.00
600.00	14.40	210.51	594.96	-51.70	-30.46	60.00	3.00	3.00	0.00
700.00	17.40	210.51	691.13	-75.30	-44.36	87.39	3.00	3.00	0.00
807.20	20.62	210.51	792.47	-105.37	-62.09	122.30	3.00	3.00	0.00
<b>Start 5665.41 hold at 807.20 MD</b>									
900.00	20.62	210.51	879.32	-133.53	-78.67	154.98	0.00	0.00	0.00
1,000.00	20.62	210.51	972.92	-163.86	-96.55	190.19	0.00	0.00	0.00
1,100.00	20.62	210.51	1,066.52	-194.20	-114.42	225.40	0.00	0.00	0.00
<b>9 5/8"</b>									
1,200.00	20.62	210.51	1,160.11	-224.54	-132.29	260.61	0.00	0.00	0.00
1,300.00	20.62	210.51	1,253.71	-254.87	-150.17	295.82	0.00	0.00	0.00
1,400.00	20.62	210.51	1,347.31	-285.21	-168.04	331.03	0.00	0.00	0.00
1,500.00	20.62	210.51	1,440.90	-315.54	-185.92	366.24	0.00	0.00	0.00
1,600.00	20.62	210.51	1,534.50	-345.88	-203.79	401.45	0.00	0.00	0.00
1,700.00	20.62	210.51	1,628.09	-376.22	-221.66	436.66	0.00	0.00	0.00
1,800.00	20.62	210.51	1,721.69	-406.55	-239.54	471.87	0.00	0.00	0.00
1,900.00	20.62	210.51	1,815.29	-436.89	-257.41	507.08	0.00	0.00	0.00
2,000.00	20.62	210.51	1,908.88	-467.23	-275.29	542.29	0.00	0.00	0.00
2,100.00	20.62	210.51	2,002.48	-497.56	-293.16	577.50	0.00	0.00	0.00
2,200.00	20.62	210.51	2,096.07	-527.90	-311.03	612.71	0.00	0.00	0.00
2,300.00	20.62	210.51	2,189.67	-558.23	-328.91	647.92	0.00	0.00	0.00
2,400.00	20.62	210.51	2,283.27	-588.57	-346.78	683.13	0.00	0.00	0.00
2,500.00	20.62	210.51	2,376.86	-618.91	-364.65	718.34	0.00	0.00	0.00
2,600.00	20.62	210.51	2,470.46	-649.24	-382.53	753.55	0.00	0.00	0.00
2,700.00	20.62	210.51	2,564.06	-679.58	-400.40	788.76	0.00	0.00	0.00
2,800.00	20.62	210.51	2,657.65	-709.92	-418.28	823.98	0.00	0.00	0.00
2,900.00	20.62	210.51	2,751.25	-740.25	-436.15	859.19	0.00	0.00	0.00
3,000.00	20.62	210.51	2,844.84	-770.59	-454.02	894.40	0.00	0.00	0.00
3,100.00	20.62	210.51	2,938.44	-800.92	-471.90	929.61	0.00	0.00	0.00
3,200.00	20.62	210.51	3,032.04	-831.26	-489.77	964.82	0.00	0.00	0.00
3,300.00	20.62	210.51	3,125.63	-861.60	-507.65	1,000.03	0.00	0.00	0.00
3,400.00	20.62	210.51	3,219.23	-891.93	-525.52	1,035.24	0.00	0.00	0.00
3,500.00	20.62	210.51	3,312.82	-922.27	-543.39	1,070.45	0.00	0.00	0.00
3,600.00	20.62	210.51	3,406.42	-952.61	-561.27	1,105.66	0.00	0.00	0.00
3,700.00	20.62	210.51	3,500.02	-982.94	-579.14	1,140.87	0.00	0.00	0.00
3,800.00	20.62	210.51	3,593.61	-1,013.28	-597.01	1,176.08	0.00	0.00	0.00
3,900.00	20.62	210.51	3,687.21	-1,043.61	-614.89	1,211.29	0.00	0.00	0.00
4,000.00	20.62	210.51	3,780.80	-1,073.95	-632.76	1,246.50	0.00	0.00	0.00
4,100.00	20.62	210.51	3,874.40	-1,104.29	-650.64	1,281.71	0.00	0.00	0.00
4,200.00	20.62	210.51	3,968.00	-1,134.62	-668.51	1,316.92	0.00	0.00	0.00
4,300.00	20.62	210.51	4,061.59	-1,164.96	-686.38	1,352.13	0.00	0.00	0.00
4,400.00	20.62	210.51	4,155.19	-1,195.30	-704.26	1,387.34	0.00	0.00	0.00
4,500.00	20.62	210.51	4,248.79	-1,225.63	-722.13	1,422.55	0.00	0.00	0.00
4,600.00	20.62	210.51	4,342.38	-1,255.97	-740.01	1,457.76	0.00	0.00	0.00
4,700.00	20.62	210.51	4,435.98	-1,286.30	-757.88	1,492.97	0.00	0.00	0.00
4,800.00	20.62	210.51	4,529.57	-1,316.64	-775.75	1,528.18	0.00	0.00	0.00



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WMC 312-20 - Slot WMC 312-20
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	KB=24' @ 8892.00usft
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>MD Reference:</b>	KB=24' @ 8892.00usft
<b>Site:</b>	WMC 24-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	WMC 312-20	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.00	20.62	210.51	4,623.17	-1,346.98	-793.63	1,563.39	0.00	0.00	0.00
5,000.00	20.62	210.51	4,716.77	-1,377.31	-811.50	1,598.60	0.00	0.00	0.00
5,100.00	20.62	210.51	4,810.36	-1,407.65	-829.37	1,633.81	0.00	0.00	0.00
5,123.12	20.62	210.51	4,832.00	-1,414.66	-833.51	1,641.95	0.00	0.00	0.00
<b>G_SAND</b>									
5,161.58	20.62	210.51	4,868.00	-1,426.33	-840.38	1,655.49	0.00	0.00	0.00
<b>G_SAND_BASE</b>									
5,200.00	20.62	210.51	4,903.96	-1,437.99	-847.25	1,669.02	0.00	0.00	0.00
5,300.00	20.62	210.51	4,997.55	-1,468.32	-865.12	1,704.23	0.00	0.00	0.00
5,400.00	20.62	210.51	5,091.15	-1,498.66	-883.00	1,739.44	0.00	0.00	0.00
5,500.00	20.62	210.51	5,184.75	-1,528.99	-900.87	1,774.65	0.00	0.00	0.00
5,600.00	20.62	210.51	5,278.34	-1,559.33	-918.74	1,809.86	0.00	0.00	0.00
5,700.00	20.62	210.51	5,371.94	-1,589.67	-936.62	1,845.07	0.00	0.00	0.00
5,800.00	20.62	210.51	5,465.54	-1,620.00	-954.49	1,880.28	0.00	0.00	0.00
5,900.00	20.62	210.51	5,559.13	-1,650.34	-972.37	1,915.49	0.00	0.00	0.00
6,000.00	20.62	210.51	5,652.73	-1,680.68	-990.24	1,950.70	0.00	0.00	0.00
6,100.00	20.62	210.51	5,746.32	-1,711.01	-1,008.11	1,985.91	0.00	0.00	0.00
6,200.00	20.62	210.51	5,839.92	-1,741.35	-1,025.99	2,021.12	0.00	0.00	0.00
6,300.00	20.62	210.51	5,933.52	-1,771.68	-1,043.86	2,056.33	0.00	0.00	0.00
6,400.00	20.62	210.51	6,027.11	-1,802.02	-1,061.73	2,091.54	0.00	0.00	0.00
6,472.60	20.62	210.51	6,095.07	-1,824.05	-1,074.71	2,117.11	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
6,500.00	20.21	210.51	6,120.74	-1,832.28	-1,079.56	2,126.66	1.50	-1.50	0.00
6,600.00	18.71	210.51	6,215.03	-1,860.97	-1,096.47	2,159.97	1.50	-1.50	0.00
6,700.00	17.21	210.51	6,310.16	-1,887.53	-1,112.12	2,190.80	1.50	-1.50	0.00
6,800.00	15.71	210.51	6,406.06	-1,911.94	-1,126.50	2,219.12	1.50	-1.50	0.00
6,900.00	14.21	210.51	6,502.67	-1,934.17	-1,139.60	2,244.93	1.50	-1.50	0.00
7,000.00	12.71	210.51	6,599.92	-1,954.22	-1,151.41	2,268.19	1.50	-1.50	0.00
7,100.00	11.21	210.51	6,697.75	-1,972.06	-1,161.92	2,288.91	1.50	-1.50	0.00
7,200.00	9.71	210.51	6,796.09	-1,987.70	-1,171.13	2,307.05	1.50	-1.50	0.00
7,246.53	9.01	210.51	6,842.00	-1,994.21	-1,174.97	2,314.62	1.50	-1.50	0.00
<b>WSTC_LOWER</b>									
7,300.00	8.21	210.51	6,894.87	-2,001.11	-1,179.04	2,322.62	1.50	-1.50	0.00
7,400.00	6.71	210.51	6,994.02	-2,012.29	-1,185.62	2,335.59	1.50	-1.50	0.00
7,500.00	5.21	210.51	7,093.47	-2,021.23	-1,190.89	2,345.97	1.50	-1.50	0.00
7,600.00	3.71	210.51	7,193.17	-2,027.92	-1,194.83	2,353.74	1.50	-1.50	0.00
7,698.97	2.22	210.51	7,292.00	-2,032.32	-1,197.43	2,358.85	1.50	-1.50	0.00
<b>MVRD</b>									
7,700.00	2.21	210.51	7,293.03	-2,032.36	-1,197.45	2,358.89	1.50	-1.50	0.00
7,800.00	0.71	210.51	7,393.00	-2,034.55	-1,198.74	2,361.43	1.50	-1.50	0.00
7,847.00	0.00	0.00	7,440.00	-2,034.80	-1,198.88	2,361.72	1.50	-1.50	0.00
<b>Start 3522.00 hold at 7847.00 MD</b>									
7,900.00	0.00	0.00	7,493.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,000.00	0.00	0.00	7,593.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,100.00	0.00	0.00	7,693.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,200.00	0.00	0.00	7,793.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,300.00	0.00	0.00	7,893.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,400.00	0.00	0.00	7,993.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,500.00	0.00	0.00	8,093.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,600.00	0.00	0.00	8,193.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,700.00	0.00	0.00	8,293.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,800.00	0.00	0.00	8,393.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00
8,900.00	0.00	0.00	8,493.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WMC 312-20 - Slot WMC 312-20
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	KB=24' @ 8892.00usft
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>MD Reference:</b>	KB=24' @ 8892.00usft
<b>Site:</b>	WMC 24-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	WMC 312-20	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,000.00	0.00	0.00	8,593.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,693.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,793.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
9,219.00	0.00	0.00	8,812.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
<b>KMVGAS</b>										
9,300.00	0.00	0.00	8,893.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
9,400.00	0.00	0.00	8,993.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,093.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,193.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,293.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,393.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,493.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,593.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,100.00	0.00	0.00	9,693.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,200.00	0.00	0.00	9,793.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,300.00	0.00	0.00	9,893.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,400.00	0.00	0.00	9,993.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,449.00	0.00	0.00	10,042.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
<b>CMEO</b>										
10,500.00	0.00	0.00	10,093.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,193.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,293.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,800.00	0.00	0.00	10,393.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,493.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
11,000.00	0.00	0.00	10,593.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
11,100.00	0.00	0.00	10,693.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
11,200.00	0.00	0.00	10,793.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
11,219.00	0.00	0.00	10,812.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
<b>RLNS</b>										
11,300.00	0.00	0.00	10,893.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
11,369.00	0.00	0.00	10,962.00	-2,034.80	-1,198.88	2,361.72	0.00	0.00	0.00	
<b>TD at 11369.00 - TD</b>										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
WMC 312-20 KMV - hit/miss target - Shape	0.00	0.00	8,812.00	-2,034.80	-1,198.88	1,591,023.20	2,349,357.10	39.433475	-107.803806	
- plan hits target center - Circle (radius 50.00)										
WMC 312-20 PBHL - plan hits target center - Point	0.00	0.00	10,962.00	-2,034.80	-1,198.88	1,591,023.20	2,349,357.10	39.433475	-107.803806	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,100.00	1,066.52	9 5/8"	9-5/8	13-1/2	



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WMC 312-20 - Slot WMC 312-20
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	KB=24' @ 8892.00usft
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>MD Reference:</b>	KB=24' @ 8892.00usft
<b>Site:</b>	WMC 24-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	WMC 312-20	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
5,123.12	4,832.00	G_SAND				
5,161.58	4,868.00	G_SAND_BASE				
7,246.53	6,842.00	WSTC_LOWER				
7,698.97	7,292.00	MVRD				
9,219.00	8,812.00	KMVGAS				
10,449.00	10,042.00	CMEO				
11,219.00	10,812.00	RLNS				
11,369.00	10,962.00	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
120.00	120.00	0.00	0.00	Start Build 3.00	
807.20	792.47	-105.37	-62.09	Start 5665.41 hold at 807.20 MD	
6,472.60	6,095.07	-1,824.05	-1,074.71	Start Drop -1.50	
7,847.00	7,440.00	-2,034.80	-1,198.88	Start 3522.00 hold at 7847.00 MD	
11,369.00	10,962.00	-2,034.80	-1,198.88	TD at 11369.00	

**ESTIMATED DEPTHS OF ANTICIPATED WATER, CONDENSATE, GAS OR MINERAL BEARING FORMATIONS**

**WELL NAME:**            **WMC 312-20**

<b><u>ESTIMATE TOPS:</u></b>			<b>Approx.</b>	
<b><u>Formation</u></b>	<b><u>TVD</u></b>	<b><u>MD</u></b>	<b><u>Thickness (ft.)</u></b>	<b><u>Resources</u></b>
Wasatch	surface	surface	4832	"Potentially Useable Quality" Water
Top of "G" Sand	4832	<b>5123</b>	36	"Potentially Useable Quality" Water
Base of "G" Sand	4868	<b>5162</b>	1974	"Potentially Useable Quality" Water
Lower Wasatch	6842	<b>7247</b>	450	Gas and "Limited Use Quality" Water
Ohio Creek	7292	<b>7699</b>	1520	Gas and "Limited Use Quality" Water
Mesaverde	7292	<b>7699</b>	1520	Gas and "Limited Use Quality" Water
ATOG	8812	<b>9219</b>	1230	Gas and "Limited Use Quality" Water
Cameo Coals	10042	<b>10449</b>	770	Gas and "Limited Use Quality" Water
Rollins SS	10812	<b>11219</b>	150	Gas and "Limited Use Quality" Water
<b><u>TD</u></b>	<b><u>10962</u></b>	<b><u>11369</u></b>		

**GEOLOGIC & DRILLING PROGNOSIS**

Prepared: 12-Oct-20 LC

**WELL NAME:** WMC 312-20  
Directional from the pad WMC 24-17

**API:** 05-045-XXXXX  
**STATE:** CO  
**COUNTY:** Garfield  
**LOCATION:** Sec. 17 T 7S R 93W  
**TYPE OF LEASE:** FED  
**FEDERAL EA:** Yes  
**HARDLINE:** NA

**ELEVATION (ft):**  
PAD (ft): 8868  
GROUND (ft): 8865  
KELLY BUSHING (ft): 8892

**RIG INFORMATION:**  
RIG NAME: 318  
KB HEIGHT (ft): 24

<u>Formation</u>	<u>TVD</u>	<u>MD</u>	<u>Formation Notes</u>
Wasatch	surface	surface	"Potentially Useable Quality" Water
Top of "G" Sand	4832	5123	"Potentially Useable Quality" Water
Base of "G" Sand	4868	5162	"Potentially Useable Quality" Water
Lower Wasatch	6842	7247	Gas and "Limited Use Quality" Water
Ohio Creek	7292	7699	Gas and "Limited Use Quality" Water
Mesaverde	7292	7699	Gas and "Limited Use Quality" Water
ATOG	8812	9219	Gas and "Limited Use Quality" Water
Cameo Coals	10042	10449	Gas and "Limited Use Quality" Water
Rollins SS	10812	11219	Gas and "Limited Use Quality" Water
<b><u>TD</u></b>	<b><u>10962</u></b>	<b><u>11369</u></b>	

**MUD LOGGING:** Type: (Optional) Remote Gas Unit  
Interval: Base of surface casing to TD with total gas only

**OPEN HOLE LOGS:** Specifics: (Optional) Triple-Combo (DIL-GR-SP-Neutron Density)  
Interval: GR from TD to surface, DIL-SP and Neutron Density from TD to 100' inside surface casing

**CASED HOLE LOGS:** Specifics: Pulsed Neutron Log (e.g. RMTE, RPM, or RST)  
Processing: Emulsion Triple Combo Using OH logs and training well  
Cement Evaluation: CBL

**CSG & CEMENT PROGRAM: SHOE TEST REQUIRED**

	<u>Csq Size (in)</u>	<u>Depth Set (tvd)</u>	<u>Depth Set (md)</u>	<u>Hole Size (in)</u>	<u>Approx. Cmt Tail (ft3)</u>	<u>Tail Yield (ft3/sx)</u>	<u>Approx. Sx Tail</u>	<u>Approx. Cmt Lead (ft3)</u>	<u>Lead Yield (ft3/sx)</u>	<u>Approx. Sx Lead</u>	<u>WOC (hrs)</u>
Conductor:											
Surface:	9.625	1067	1100	13.50	340	2.08	164	283	2.34	121	8
Liner or Production:	4.5	10962	11369	8.75	1047	1.83	572	878	1.98	444	
					<b>Surface (sacks): 285</b>		<b>Prod. (sacks): 1015</b>				

**ANTICIPATED PRESSURES (psi)**

<u>MASP</u>	<u>Prod Csq Test Pressure</u>	<u>Anticipated BHP</u>	<u>Prod. Csq. Grade</u>
2,631	8,500	5,043	P-110

**MUD PROGRAM:** (Do not deviate from mud engineer's recommendation without prior consent from Houston office)

<u>FROM (md)</u>	<u>TO (md)</u>	<u>TYPE MUD</u>	<u>#/GAL</u>	<u>VIS</u>	<u>WL</u>	<u>CHEMICALS</u>
0	1100	WBM	8.5-9.5	60		
1100	11369	LSND/AIR	9.5-12.5	40-50	8-12	PHPA/Barite

(Write mud added to system on tour sheets and report all mud mixed and daily cost.)  
in morning report)

**LOST CIRCULATION:** Report depth and bbls of mud lost on morning report and tour sheet. Any severe lost circulation problems should be reported immediately to well supervisor.

**SURVEYS:** Run every 100' on surface hole and trips unless otherwise instructed.

**TEP GEOLOGIST:** Office: Stephen Sunnenberg  
Cell: 281-936-0361 303-918-4327 [ssunnenberg@terraep.com](mailto:ssunnenberg@terraep.com)  
(note: if there are questions concerning TD or logging, please call Geologist)

**APD ID:** 10400064314

**Submission Date:** 10/30/2020

Highlighted data reflects the most recent changes

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

[Show Final Text](#)

**Well Type:** CONVENTIONAL GAS WELL

**Well Work Type:** Drill

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

WMC\_24\_17\_AccessRoad\_TopoMap\_20201021123927.pdf

**Existing Road Purpose:** ACCESS,FLUID TRANSPORT

**Row(s) Exist?** NO

### ROW ID(s)

**ID:**

**Do the existing roads need to be improved?** YES

**Existing Road Improvement Description:** Minor road maintenance would be performed along the existing access roads prior to construction. Storm water controls along the existing access roads would be evaluated during construction to ensure they are functioning properly. Additional controls may be evaluated during construction with the Authorized Officer or surface owners and implemented, as necessary.

**Existing Road Improvement Attachment:**

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

WMC\_24\_17\_AccessRoad\_TopoMap\_20201021124117.pdf

**New road type:** RESOURCE

**Length:** 4526 Feet

**Width (ft.):** 80

**Max slope (%):** 20

**Max grade (%):** 12

**Army Corp of Engineers (ACOE) permit required?** N

**ACOE Permit Number(s):**

**New road travel width:** 20

**New road access erosion control:** Storm water BMPs will be installed along new access road to control run off. Bar ditches with periodic check dams will be constructed on either side of the access road to divert storm water from the road surface. Culvert installation will be evaluated as necessary during construction. Culverts will be constructed with rock armored inlets and outlets to control erosion. Other drainage control structures may be evaluated and implemented as necessary to control storm water and ensure proper flow of water through drainage. The proposed access road cut and fill slopes will be reseeded to prevent erosion.

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**New road access plan or profile prepared?** Y

**New road access plan attachment:**

WMC\_24\_17\_AccessRoad\_Plan\_and\_Profile\_rev\_20201014\_20201021124658.pdf

**Access road engineering design?** N

**Access road engineering design attachment:**

**Turnout?** N

**Access surfacing type:** GRAVEL

**Access topsoil source:** ONSITE

**Access surfacing type description:**

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** Mechanically stripped by heavy machinery such as a dozer.

**Access other construction information:** Construction of a new access road (approximately 4,526 feet) would be required for development of the proposed wells on the WMC 24-17 pad. The proposed access road would be constructed from the existing Caerus O-18 pad to the WMC 24-17 pad. The proposed access road traverses across private and Federal surface. Approximately 2,366 feet of the proposed access road would be located on private surface and the remaining additional 2,160 feet of the proposed access road would be located on Federal surface. The access road would consist of a twenty-five (25) permanent right-of-way, consisting of the twenty-foot (20) wide driving surface and two and one-half foot on either side for storm water controls, and a fifty-five foot (55) wide temporary works space for the associated cut and fill slopes. The access road would generally be constructed with a driving surface of approximately twenty-feet (20) in width. The road would be constructed with two and one-half feet (2.5) on either side of the proposed driving surface for stormwater control features such as bar ditches, berms, and culvert inlets / outlets. The access road was designed with road grades at or below twelve percent (12%). Culverts would be installed periodically along the proposed access road to direct storm water away from the access road. Culverts would be fitted with rock at the inlet and outlet of the culvert. Location of proposed culverts are shown on the attached Access Road Plan and Profile. Culvert installation would be further evaluated during construction to determine if additional culverts are needed. The access road would be surfaced with six-inches (6) of three-quarter inch (3/4) gravel or another surfacing materials approved by the Authorized Officer or surface owner. Trees and vegetation along the proposed access road would be hydro-axed / mulched. Topsoil would be stripped from the proposed road surface area and windrowed along the outer edges of the proposed road alignment. Topsoil would be pulled back and replaced along the cut and fill slopes of the access road following completion of construction. A steel frame gate will be installed at the intersection of the proposed access road and the existing range fence along the eastern edge of TEPs property boundary located in Section 18, Township 7 South, Range 93 West, 6th P.M. The gate would be fitted with a steep chain and pad lock to control access and ensure containment of cattle grazing within the associated allotments. Road maintenance plans and conformance standards described in the Existing Roads section above would be applied to the proposed access road for the WMC 24-17 pad. Please refer to the Proposed Access Road Plan and Profile and Plan of Development Map for additional details.

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

**Drainage Control**

**New road drainage crossing:** CULVERT

**Drainage Control comments:** Culverts (CMP) will be installed at each drainage crossing along the proposed access road. Culverts will be fitted with rock at the inlet and outlet of the culvert. Location of proposed culverts are shown on the attached Access Road Plan and Profile. Culvert installation will be further evaluated during construction to determine if additional culverts are needed.

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Road Drainage Control Structures (DCS) description:** Storm water BMPs will be installed along new access road to control run off. Bar ditches with periodic check dams will be constructed on either side of the access road to divert storm water from the road surface. Culvert installation will be evaluated as necessary during construction. Culverts will be constructed with rock armored inlets and outlets to control erosion. Other drainage control structures may be evaluated and implemented as necessary to control storm water and ensure proper flow of water through drainage.

**Road Drainage Control Structures (DCS) attachment:**

### [Access Additional Attachments](#)

### [Section 3 - Location of Existing Wells](#)

**Existing Wells Map?** YES

**Attach Well map:**

WMC\_24\_17\_ExistingWells\_OneMileRadius\_20201021124913.pdf

### [Section 4 - Location of Existing and/or Proposed Production Facilities](#)

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** TEP would install wellhead telemetry and other wellhead specific equipment on the WMC 24-17 pad to support production of the proposed wells. TEP would also install production facilities, including separators, tanks, and an Emission Control Device (ECD), on the WMC 24-17 pad to effectively produce the proposed wells. Eighteen (18) separators (4 quad separators, 1 single separator, and 1 low pressure separator) would be installed along the west side of the WMC 24-17 pad within a ninety-foot (90) by thirty-foot (30) area. Two (2) five-hundred-barrel (500bbl) condensate tanks and two (2) eighty-barrel (80bbl) steel fluid storage tanks, used for well blowdown and pipeline venting operations, would be installed within a forty-foot (40) by forty-foot (40) lined steel containment structure along the south side of the pad. The tank battery would be installed with a minimum of seventy-five feet (75) setback from the proposed separators, wellheads, and ECD. One (1) ECD would be installed on pad south of the separators and seventy-five feet (75) west of the proposed tank battery to control air emissions. On the RU 23-17 pad, TEP would construct a thirty-foot (30) by thirty-foot (30) equipment area near the pad entrance to support Summits proposed production equipment, which includes a natural gas sales meter, a natural gas buy-back meter for fuel gas, and a pig launcher.

**Production Facilities map:**

RU\_23\_17\_EquipmentArea\_SiteMap\_rev\_20201022\_20201022163015.pdf

WMC\_24\_17\_Facility\_Layout\_Drawing\_20201021150032.pdf

### [Section 5 - Location and Types of Water Supply](#)

#### [Water Source Table](#)

**Water source type:** RECYCLED

**Water source use type:** STIMULATION

**Source latitude:** 39.4593

**Source longitude:** -107.82296

**Source datum:** NAD83

**Water source permit type:** PRIVATE CONTRACT

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Water source transport method:** PIPELINE

**Source land ownership:** PRIVATE

**Source transportation land ownership:** PRIVATE

**Water source volume (barrels):** 120000

**Source volume (acre-feet):** 15.46717156

**Source volume (gal):** 5040000

---

**Water source type:** PERENNIAL SURFACE

**Water source use type:** SURFACE CASING  
DUST CONTROL  
INTERMEDIATE/PRODUCTION  
CASING

**Source latitude:** 39.5294

**Source longitude:** -107.7336

**Source datum:** NAD83

**Water source permit type:** PRIVATE CONTRACT

**Water source transport method:** TRUCKING

**Source land ownership:** PRIVATE

**Source transportation land ownership:** PRIVATE

**Water source volume (barrels):** 2250

**Source volume (acre-feet):** 0.29000947

**Source volume (gal):** 94500

---

**Water source type:** PERENNIAL SURFACE

**Water source use type:** SURFACE CASING  
DUST CONTROL  
INTERMEDIATE/PRODUCTION  
CASING

**Source latitude:** 39.4866

**Source longitude:** -107.8839

**Source datum:** NAD83

**Water source permit type:** PRIVATE CONTRACT

**Water source transport method:** TRUCKING

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Source land ownership:** PRIVATE

**Source transportation land ownership:** PRIVATE

**Water source volume (barrels):** 2550

**Source volume (acre-feet):** 0.3286774

**Source volume (gal):** 107100

**Water source and transportation map:**

TEP\_WaterSource\_LocationMap\_20201021144926.pdf

**Water source comments:** Fresh water required for drilling operations (surface, intermediate, and production casing) and dust control, would be transported by truck from either the Giles Fresh Water Takeout or the Airport Land Partners Limited Takeout. The Giles Fresh Water Takeout is located on the Colorado River on TEP property north of County Road 320 near Spruce Creek. The Airport Land Partners Limited Takeout is located on the Last Chance Ditch north of the Garfield County Airport along Garfield County Road 346. Water trucks would utilize existing county, state, and lease roads and would follow existing truck routes where applicable. The intake on the water pumps at the source locations would be fitted with a quarter-inch (0.25) mesh screen to prevent impacts to aquatic wildlife in the river or ditch. TEP estimate that approximately 4,500bbls of fresh water would be used for drilling operations and dust control per well. Well completion operations would be conducted via SIMOPS, which utilizes recycled produced water from other producing wells operated by TEP. Recycled produced water would be transported from TEPs existing water management facilities to TEP's existing Beaver Creek Completions Pit and then pumped to the RU 44-7 frac pad via existing pipeline infrastructure. Fluid for well completion operations would then be pumped from the remote frac pad to the wells on the WMC 24-17 pad.

**New water well?** N

**New Water Well Info**

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

## Section 6 - Construction Materials

**Using any construction materials:** YES

**Construction Materials description:** Surface and subsoil materials within the proposed construction areas would be used. Additional gravel or pit lining material (if required) would be obtained from the Una gravel pit located in Section 34 of Township 6 South, Range 96 West, 6th P.M., the Mamm Creek gravel pit located in Section 9 of Township 6 South, Range 92 West, 6th P.M., or the Flag Sand & Gravel pit located in Section 11 of Township 6 South, Range 92 West, 6th P.M.

**Construction Materials source location attachment:**

## Section 7 - Methods for Handling Waste

**Waste type:** PRODUCED WATER

**Waste content description:** Produced water after well is turned over to production. The volume reported below is not accurate nor known at this time. However, these volumes are reported on an annual basis to BLM once information is known.

**Amount of waste:** 100 barrels

**Waste disposal frequency :** Weekly

**Safe containment description:** Water is piped into existing infrastructure.

**Safe containmant attachment:**

**Waste disposal type:** OFF-LEASE INJECTION      **Disposal location ownership:** FEDERAL

**Disposal type description:**

**Disposal location description:** Please refer to the TEP Rocky Mountain LLC (Terra) Active Produced Water Disposal Destinations As of October 1, 2018 document. This document includes a list of TEP operated UIC facilities where produced water may be transported for disposal.

**Waste type:** FLOWBACK

**Waste content description:** Frac Sand

**Amount of waste:** 35000 pounds

**Waste disposal frequency :** One Time Only

**Safe containment description:** During flowback operations returned frac sand will be managed within a forty foot (40) by forty foot (40) area with two and one half foot (2.5) high earthen berms surrounding all sides of the management area. The frac sand management area will be located on pad within the pad perimeter berm.

**Safe containmant attachment:**

**Waste disposal type:** BURIAL ONSITE      **Disposal location ownership:** FEDERAL

**Disposal type description:**

**Disposal location description:** Once flowback operations are complete, returned frac sand will be mixed with drill cuttings and/or clean fill material and buried onsite. Sampling of returned frac sand will be conducted as described for drill cuttings to ensure that COGCC standards are met prior to pad reclamation. Any excess frac sand remaining onsite after reclamation activities are complete will be hauled to an approved third-party disposal facility.

**Waste type:** PRODUCED WATER

**Waste content description:** Produced water after well is turned over to production. The volume is reported below is not accurate nor known at this time. However, these volumes are reported on an annual basis to BLM once information is known.

**Amount of waste:** 100 barrels

**Waste disposal frequency :** Weekly

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Safe containment description:** Water is piped into existing infrastructure.

**Safe containmant attachment:**

**Waste disposal type:** RECYCLE

**Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** Please refer to TEP Rocky Mountain LLC (Terra) Active Produced Water Disposal Destinations As of October 1, 2018 document: Water may be re-used in hydraulic fracturing operations. The following conditions apply: - Water is treated with biocide in all cases whether it resides in frac tanks or approved temporary water recycling pits. It is also treated on the fly if necessary before being pumped downhole. - Frac flowback water is collected into tanks or temporary water recycling pits. It is treated with biocide as necessary. - Water may be moved to a different location once operations are complete at its current location. - Terra has not encountered any practical chemistry limits or conditions that would cause water to be removed from service.

**Waste type:** PRODUCED WATER

**Waste content description:** Produced water after well is turned over to production. The volume is reported below is not accurate nor known at this time. However, these volumes are reported on an annual basis to BLM once information is known.

**Amount of waste:** 100 barrels

**Waste disposal frequency :** Weekly

**Safe containment description:** Water is piped into existing infrastructure.

**Safe containmant attachment:**

**Waste disposal type:** OFF-LEASE INJECTION

**Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** Please refer to the TEP Rocky Mountain LLC (Terra) Active Produced Water Disposal Destinations As of October 1, 2018 document. This document includes a list of TEP operated UIC facilities where produced water may be transported for disposal.

**Waste type:** PRODUCED WATER

**Waste content description:** Produced water after well is turned over to production. The volume is reported below is not accurate nor known at this time. However, these volumes are reported on an annual basis to BLM once information is known.

**Amount of waste:** 100 barrels

**Waste disposal frequency :** Weekly

**Safe containment description:** Water is piped through proposed and existing infrastructure to water storage and processing facilities and then hauled by truck to a commercial disposal facility.

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY

**Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** Please see TEP Rocky Mountain LLC (Terra) Active Produced Water Disposal Destinations As of October 1, 2018 document. Water may be hauled to third party disposal facilities including Owl SWD Operating LLC, Harley Dome #1 SWD, Greenleaf Environmental Services, White River Dome, or PBR Disposal.

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Waste type:** GARBAGE

**Waste content description:** Garbage/trash

**Amount of waste:** 4000 pounds

**Waste disposal frequency :** Weekly

**Safe containment description:** All garbage and trash will be stored in enclosed bear proof trash containers.

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY      **Disposal location ownership:** COMMERCIAL FACILITY

**Disposal type description:**

**Disposal location description:** ECDC Environmental, Wray Gulch Landfill, Green Leaf Facility, or GarCo Landfill

**Waste type:** SEWAGE

**Waste content description:** Sewage

**Amount of waste:** 200 barrels

**Waste disposal frequency :** Weekly

**Safe containment description:** Chemical toilets or enclosed sewer system

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY      **Disposal location ownership:** COMMERCIAL FACILITY

**Disposal type description:**

**Disposal location description:** Contents will be hauled to and disposed at an approved disposal facility. Disposal of sewage will occur approximately once per week. Town of Silt is the primary disposal location, with the South Canyon Landfill being the secondary disposal location.

### Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?** NO

**Reserve pit length (ft.)**                      **Reserve pit width (ft.)**

**Reserve pit depth (ft.)**    **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

### Cuttings Area

**Cuttings Area being used?** YES

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Are you storing cuttings on location?** N

**Description of cuttings location**

**Cuttings area length (ft.)** 160

**Cuttings area width (ft.)** 90

**Cuttings area depth (ft.)** 19

**Cuttings area volume (cu. yd.)** 7260

**Is at least 50% of the cuttings area in cut?** Y

**WCuttings area liner** NONE

**Cuttings area liner specifications and installation description**

## Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** Y

**Ancillary Facilities attachment:**

RU\_23\_17\_EquipmentArea\_ConstructionLayout\_rev\_20201022\_20201022162928.pdf

RU\_23\_17\_EquipmentArea\_SiteMap\_rev\_20201022\_20201022162927.pdf

RU\_44\_7\_Frac\_Pad\_Equipment\_Layout\_20201021150123.pdf

RU\_44\_7\_Frac\_Pad\_Overview\_Map\_20201021150124.pdf

**Comments:** TEP would utilize two (2) ancillary support facilities (RU 44-7 pad and RU 23-17 pad) during development of the proposed wells on the WMC 24-17 pad. The RU 23-17 pad is an existing oil and gas location that would be utilized for Summits production equipment, including a new natural gas sales meter, temporary natural gas buy-back meter for rig fuel gas, and a pig launcher. An equipment area approximately thirty-foot (30) by thirty-foot (30) would be constructed within the disturbance boundary of the site near the existing access to support installation of the proposed production equipment. Please see the RU 23-17 Construction Layout for further details on construction and placement of proposed production equipment on the RU 23-17 pad. The RU 44-7 pad is an existing oil and gas location that would be utilized for remote frac operations for the proposed wells on the WMC 24-17 pad. The existing RU 44-7 pad was constructed in 2014 for the development of fourteen (14) wells, which were drilled in early 2015. The RU 44-7 pad was not reclaimed following initial drilling operations since the location was planned to be used during development of the wells on the RU 23-17 pad, RU 31-17 pad, and now the WMC 24-17 pad. Well completion equipment including frac tanks, blenders, sand silos, and pumps would be temporarily staged on the RU 44-7 pad during well completion operations. Please see the RU 44-7 Frac Equipment Layout for a detailed depiction of the proposed frac equipment planned for temporary placement on the RU 44-7 pad during well completion operations on the WMC 24-17 pad.

## Section 9 - Well Site Layout

**Well Site Layout Diagram:**

WMC\_24\_17\_Construction\_Plats\_rev\_20201019\_20201021150242.pdf

WMC\_24\_17\_POD\_Summary\_rev\_10\_28\_2020\_20201028085454.pdf

**Comments:** The WMC 24-17 pad would be constructed to provide the necessary working surface to support safe and efficient working conditions for all TEP employees and contractors during every phase of development, including construction, drilling, completions, and production operations. Prior to initial pad construction, TEP would have the proposed pad location, proposed access road, and proposed pipeline corridor staked for construction and TEPs storm water contractor would install initial storm water control measures (i.e. waddles, straw bales, etc.) along the outer perimeter of the proposed disturbance boundary. TEPs construction contractor would then begin removal of existing vegetation within the disturbance footprint by hydro-axing or brush hogging the trees or larger bushes within the project disturbance boundary. Topsoil would be stripped from the access road corridor and placed along the outer boundary of the access road corridor. Topsoil within the pad disturbance footprint would be stripped and stockpiled along the west end of the pad location. Topsoil within the pipeline disturbance corridor would be stripped and placed along the east side of the proposed pipeline corridor. Topsoil would be

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

stripped to a depth of approximately six-inches (6) and would be segregated from all other subsurface materials for use during reclamation. Excavation of the pad and road would then commence. The access road construction is detailed in the New Access Road Construction Section of this document. The pad will be constructed based on the attached construction layout. A perimeter berm and drive over berm will be constructed around the fill side of the pad location and around the drilling pit as shown on the attached construction layout. The northeast corner of the pad location (corner #7) will be constructed with a three (3) to four (4) foot high rock wall to preserve the stand of oak brush located near this corner. The rock wall will be keyed in during construction of the fill slope. The proposed production equipment, on-location flowlines, and well conductors would then be installed. The area beneath the proposed rig footprint will be compacted to ensure stability of the rig during drilling operations. The pad working surface will be bladed level and graveled with three quarter inch minus (3/4 minus) surfacing materials imported from one or more of the gravel pits listed in Table 5, Construction Material Source Table. Excess rock or boulders exposed during excavation of the pad location will be placed / stacked along the exposed cut slope of the proposed pad and / or proposed road where appropriate. Placement of rock or boulders will be reviewed with the Authorized Officer or Surface owner prior to placement.

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** FEDERAL

**Multiple Well Pad Number:** WMC 24-17

**Recontouring attachment:**

**Drainage/Erosion control construction:** Please see attached Construction Plats for details.

**Drainage/Erosion control reclamation:** The disturbed areas surrounding the well location, including the access roads would be re-contoured to blend as nearly as possible with the natural topography. Final grading of cut and fill slopes would be done to prevent erosion and encourage establishment of desirable vegetation. Any existing drainages disturbed and not re-established during interim reclamation would be re-established during final reclamation. The long-term objective of final reclamation is to re-establish a self-perpetuating plant community that is compatible with and capable of supporting the identified land use.

<b>Well pad proposed disturbance (acres):</b> 4.89	<b>Well pad interim reclamation (acres):</b> 3.84	<b>Well pad long term disturbance (acres):</b> 1.05
<b>Road proposed disturbance (acres):</b> 6.35	<b>Road interim reclamation (acres):</b> 4.28	<b>Road long term disturbance (acres):</b> 2.07
<b>Powerline proposed disturbance (acres):</b> 0	<b>Powerline interim reclamation (acres):</b> 0	<b>Powerline long term disturbance (acres):</b> 0
<b>Pipeline proposed disturbance (acres):</b> 2.4	<b>Pipeline interim reclamation (acres):</b> 2.4	<b>Pipeline long term disturbance (acres):</b> 0
<b>Other proposed disturbance (acres):</b> 6.1	<b>Other interim reclamation (acres):</b> 5.15	<b>Other long term disturbance (acres):</b> 0.95
<b>Total proposed disturbance:</b> 19.74	<b>Total interim reclamation:</b> 15.670000000000002	<b>Total long term disturbance:</b> 4.07

**Disturbance Comments:** The WMC 24-17 Pad and the two (2) support facilities will be construction to support drilling, completion, and production of seventeen (17) proposed directional wells. The total disturbance associated with the WMC 24-17 pad and the associated support facilities is approximately 19.74 acres. On Federal surface there would be approximately 10.35 acres of disturbance, and on private surface there would be approximately 9.39 acres of disturbance. Of the 19.74 acres of disturbance, 6.47 acres would be within an area of existing disturbance or areas disturbed by previous development activities. Twenty percent (33%) of the total disturbance acreage would be on lands previously disturbed. The long-term disturbance, or disturbance remaining after interim reclamation, is approximately 4.07 acres. See the construction plats and/or POD maps for additional details.

**Reconstruction method:** The disturbed areas surrounding the well location, including the access roads would be re-contoured to blend as nearly as possible with the natural topography. Final grading of cut and fill slopes would be done to prevent erosion and encourage establishment of desirable vegetation. Any existing drainages disturbed and not re-established during interim reclamation would be re-established during final reclamation. The long-term objective of final

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

reclamation is to re-establish a self-perpetuating plant community that is compatible with and capable of supporting the identified land use.

**Topsoil redistribution:** Prior to seeding, stockpiled topsoil (stripped surface material) will be spread to a uniform depth that will allow the establishment of desirable vegetation.

**Soil treatment:** Soil samples may be collected once re-contouring and topsoil redistribution has occurred. Amendment recommendations would be reviewed with BLM prior to application.

**Existing Vegetation at the well pad:** Please see attached list of common species found in the WMC 24-17 Pad Project Area

**Existing Vegetation at the well pad attachment:**

WMC\_24\_17\_Common\_Plant\_Species\_List\_20201021151400.pdf

**Existing Vegetation Community at the road:** Please see attached list of common species found in the WMC 24-17 Pad project area (attached at Existing Vegetation at the well)

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** Please see attached list of common species found in the WMC 24-17 Pad project area (attached at Existing Vegetation at the well)

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** Please see attached list of common species found in the WMC 24-17 Pad project area (attached at Existing Vegetation at the well)

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** N

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** N

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** N

**Seed harvest description:**

**Seed harvest description attachment:**

[Seed Management](#)

[Seed Table](#)

**Seed Summary**

**Total pounds/Acre:**

**Seed Type**

**Pounds/Acre**

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Seed reclamation attachment:**

WMC\_24\_17\_Seed\_Mix\_20201021151851.pdf

**Operator Contact/Responsible Official Contact Info**

**First Name:** Eric

**Last Name:** DeKam

**Phone:** (970)948-4303

**Email:** edekam@terraep.com

**Seedbed prep:** All compacted portions of the pad, road, and pipeline corridors (if necessary) would be ripped to a depth of eighteen inches (18") when subsurface conditions permit. Prior to seeding, topsoil would be spread to a uniform depth that would allow the establishment of desirable vegetation. If the seed bed has begun to crust over or seal, the seed bed would be prepared by disking or some mechanical means sufficient to allow penetration of the seed into the soil. In addition, broad cast seed should be covered using a harrow, drag bar, or chain.430

**Seed BMP:** Seeding will occur at appropriate time of year. Soil sampling may be conducted to determine appropriate soil amendment recommendations and applications.

**Seed method:** Slopes steeper than 2:1 will by hydroseeded and slopes shallower than 2:1 will be drill seeded, generally.

**Existing invasive species?** N

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** Noxious weeds which may be introduced due to soil disturbance during final reclamation would be treated by methods approved by the Authorized Officer. The Pesticide Use Permit shall be on record with the BLM for treatment of noxious weeds.

**Weed treatment plan attachment:**

**Monitoring plan description:** Reclamation monitoring will be conducted per Appendix K (Fluid Minerals) of the June 2015 Colorado River Valley Field Office Decision and Approved Resource Management Plan Amendment, Specifically the Plans for Reclamation of the Surface Template Northwest Colorado District.

**Monitoring plan attachment:**

**Success standards:** Per Appendix K (Fluid Minerals) of the June 2015 Colorado River Valley Field Office Decision and Approved Resource Management Plan Amendment, specifically the Plans for Reclamation of the Surface - Template Northwest Colorado District.

**Pit closure description:** Pit will be sampled and closed in accordance with COGCC rules.

**Pit closure attachment:**

**Section 11 - Surface Ownership**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

## Section 12 - Other Information

**Right of Way needed?** Y

**Use APD as ROW?** N

**ROW Type(s):**

## ROW Applications

FE\_WMC\_24\_17\_Pad\_MLA\_SF299\_\_10\_22\_2020\_20201026094835.pdf  
POD\_WMC\_24\_17\_Pad\_MLA\_SF299\_\_10\_22\_2020\_20201026101301.pdf  
WMC\_24\_17\_4in\_PWPL\_FLPMA\_POD\_20201022\_20201022165125.pdf  
WMC\_24\_17\_4in\_PWPL\_FLPMA\_SF299\_20201022\_20201022165139.pdf  
WMC\_24\_17\_8in\_NGPL\_MLA\_POD\_20201022\_20201022165125.pdf  
WMC\_24\_17\_8in\_NGPL\_MLA\_SF299\_20201022\_20201022165140.pdf  
WMC\_24\_17\_TUP\_FracPL\_Installation\_BP\_20170418\_20201022165126.pdf  
WMC\_24\_17\_TUP\_FracPL\_POD\_20201022\_20201022165127.pdf  
WMC\_24\_17\_TUP\_FracPL\_SF299\_20201022\_20201022165140.pdf  
Access\_FE\_WMC\_24\_17\_FLPMA\_SF299\_10\_27\_2020\_20201028080943.pdf  
Access\_POD\_WMC\_24\_17\_Pad\_FLPMA\_DRAFT\_SF299\_10\_22\_2020\_20201028080955.pdf

**SUPO Additional Information:** Section 11 Surface Ownership: For other disturbance types (New Access Road, Existing Access Road, Pipeline and Other), please see the attached SUPO document for private ownership information. Associated agreements are attached below.

**Use a previously conducted onsite?** N

**Previous Onsite information:**

## Other SUPO Attachment

City\_of\_Rifle\_Ordinance\_7\_2018\_Eliminating\_Beaver\_Creek\_Jurisdiction\_20201021153114.pdf  
RU\_23\_17\_EquipmentArea\_ConstructionLayout\_rev\_20201022\_20201022163331.pdf

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

RU\_23\_17\_EquipmentArea\_SiteMap\_rev\_20201022\_20201022163330.pdf

RU\_44\_7\_Frac\_Pad\_Equipment\_Layout\_20201021153113.pdf

RU\_44\_7\_Frac\_Pad\_Overview\_Map\_20201021153114.pdf

WMC\_24\_17\_AccessRoad\_Plan\_and\_Profile\_rev\_20201014\_20201021153118.pdf

WMC\_24\_17\_Construction\_Plats\_rev\_20201019\_20201021153119.pdf

Leverich\_Access\_Easement\_20111219\_20201028071506.pdf

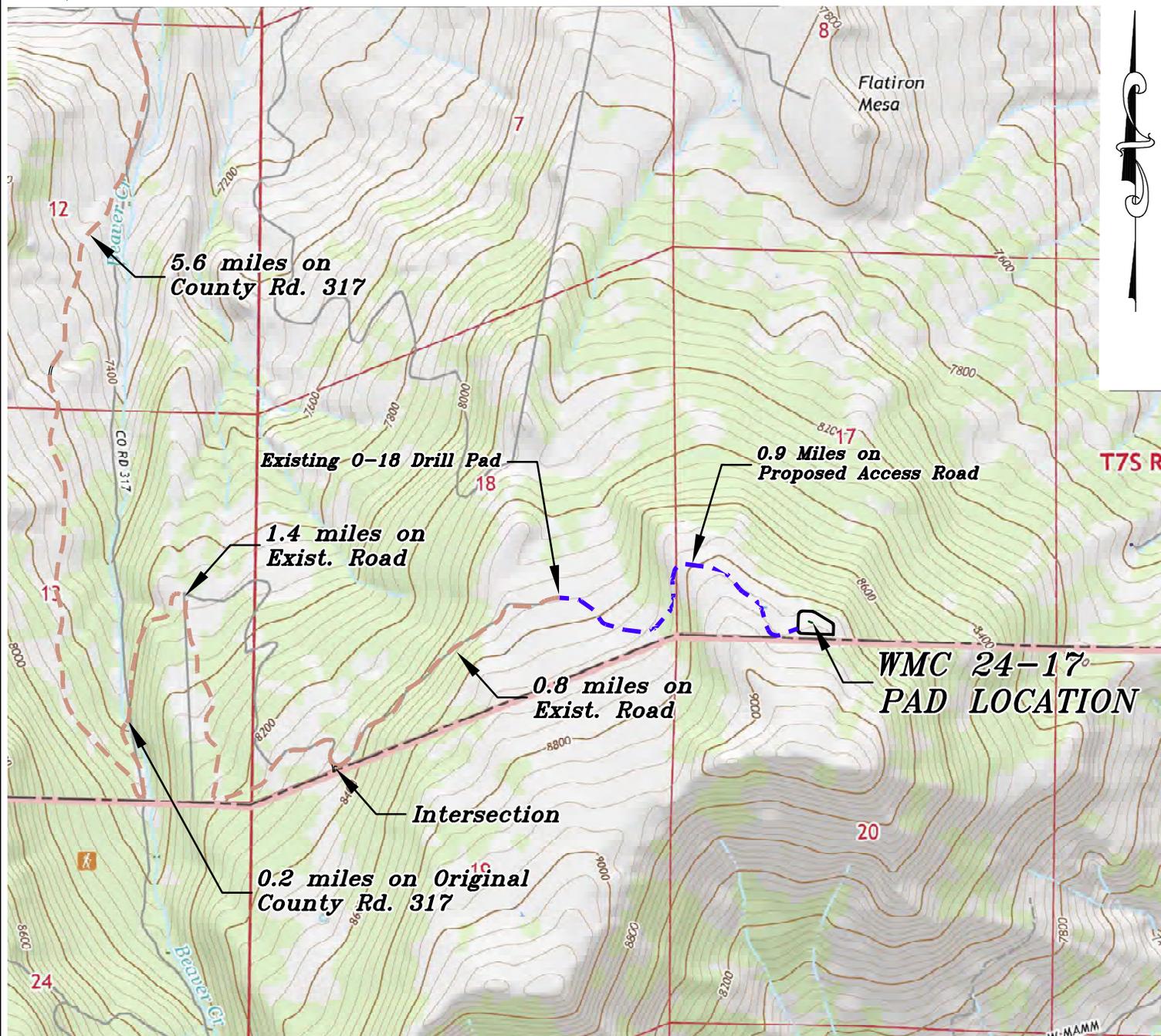
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WMC\_24\_17\_SUPO\_Final\_10\_28\_2020\_20201028085535.pdf

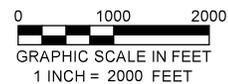
Youberg\_Access\_Right\_of\_Way\_REC\_944599\_10\_30\_2020\_20201030151929.pdf

Youberg\_Memo\_of\_Frac\_Pad\_and\_Temp\_Pipeline\_Letter\_Agmt\_REC\_944598\_10\_30\_2020\_20201030151937.pdf

Section 17  
T. 7 S., R. 93 W.



--- Proposed Road  
--- Existing Road



**ACCESS DESCRIPTION:**

FROM THE INTERSECTION OF STATE HIGHWAY 6 AND COUNTY ROAD 323 (RULISON ROAD) NORTH OF RULISON, PROCEED SOUTHERLY ALONG COUNTY ROAD 323 (RULISON ROAD) ±1.1 MILES TO THE INTERSECTION WITH COUNTY ROAD 309 (RULISON PARACHUTE ROAD), PROCEED LEFT IN AN EASTERLY DIRECTION ±2.3 MILES TO THE INTERSECTION WITH COUNTY ROAD 320 (RIFLE RULISON ROAD), PROCEED RIGHT IN AN EASTERLY DIRECTION ±6.2 MILES TO THE INTERSECTION WITH COUNTY ROAD 317 (BEAVER CREEK ROAD), PROCEED RIGHT ALONG COUNTY ROAD 317 IN A SOUTHERLY DIRECTION ±5.6 MILES TO A HAIR-PIN CURVE TO THE LEFT ON TO THE ORIGINAL COUNTY RD. 317 ±0.2 MILES TO AN INTERSECTION WITH THE EXISTING DIRT/GRAVEL ROAD, STAY RIGHT IN A NORTHERLY TO WESTERLY DIRECTION ±1.4 MILES TO A INTERSECTION, STAY LEFT ±0.8 MILES IN A NORTHEASTERLY DIRECTION TO THE EXISTING 0-18 DRILL PAD, PROCEED EASTERLY ACROSS DRILL PAD TO A NEWLY CONSTRUCTED ACCESS ROAD, PROCEED IN AN EASTERLY DIRECTION ±0.9 MILES TO THE PROPOSED WMC 24-17 DRILL PAD LOCATION, AS SHOWN HEREON.

REVISED: 10/13/20

SCALE:	1" = 2000'
DATE:	9/10/20
PLAT:	5 of 7
PROJECT:	TEP Valley
DFT:	cs

Construction Plan Prepared for:

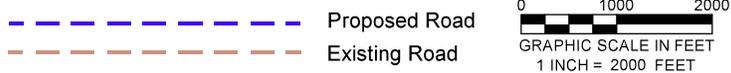
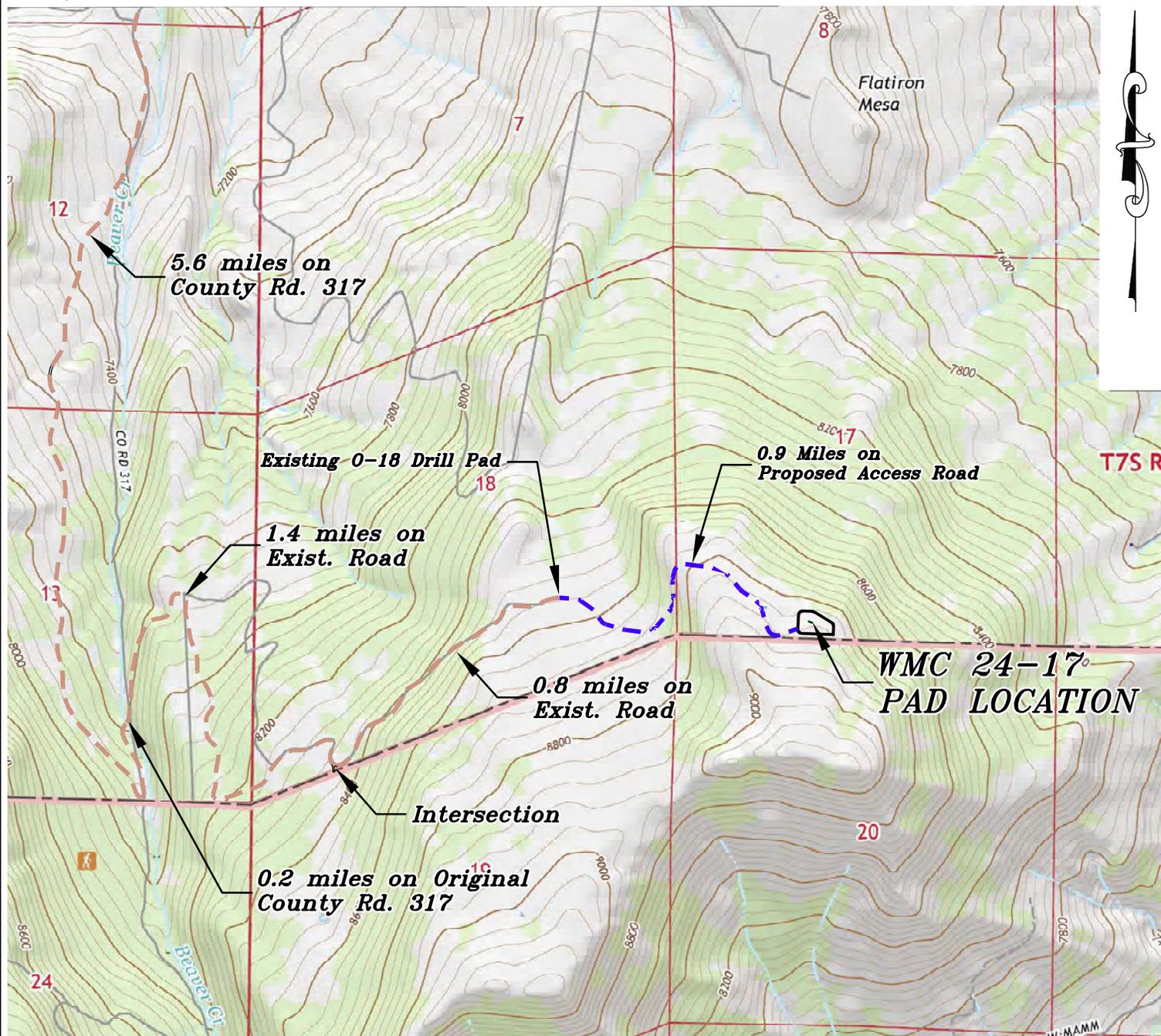
**TERRA** TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 5  
ACCESS ROAD & TOPO MAP

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



Section 17  
T. 7 S., R. 93 W.



**ACCESS DESCRIPTION:**

FROM THE INTERSECTION OF STATE HIGHWAY 6 AND COUNTY ROAD 323 (RULISON ROAD) NORTH OF RULISON, PROCEED SOUTHERLY ALONG COUNTY ROAD 323 (RULISON ROAD) ±1.1 MILES TO THE INTERSECTION WITH COUNTY ROAD 309 (RULISON PARACHUTE ROAD), PROCEED LEFT IN AN EASTERLY DIRECTION ±2.3 MILES TO THE INTERSECTION WITH COUNTY ROAD 320 (RIFLE RULISON ROAD), PROCEED RIGHT IN AN EASTERLY DIRECTION ±6.2 MILES TO THE INTERSECTION WITH COUNTY ROAD 317 (BEAVER CREEK ROAD), PROCEED RIGHT ALONG COUNTY ROAD 317 IN A SOUTHERLY DIRECTION ±5.6 MILES TO A HAIR-PIN CURVE TO THE LEFT ON TO THE ORIGINAL COUNTY RD. 317 ±0.2 MILES TO AN INTERSECTION WITH THE EXISTING DIRT/GRAVEL ROAD, STAY RIGHT IN A NORTHERLY TO WESTERLY DIRECTION ±1.4 MILES TO A INTERSECTION, STAY LEFT ±0.8 MILES IN A NORTHEASTERLY DIRECTION TO THE EXISTING 0-18 DRILL PAD, PROCEED EASTERLY ACROSS DRILL PAD TO A NEWLY CONSTRUCTED ACCESS ROAD, PROCEED IN AN EASTERLY DIRECTION ±0.9 MILES TO THE PROPOSED WMC 24-17 DRILL PAD LOCATION, AS SHOWN HEREON.

REVISED: 10/13/20

SCALE:	1" = 2000'
DATE:	9/10/20
PLAT:	5 of 7
PROJECT:	TEP Valley
DFT:	cs

Construction Plan Prepared for:

**TERRA** TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 5  
ACCESS ROAD & TOPO MAP

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





**SHEET INDEX**

- Sheet 1 Cover Sheet
- Sheet 2 Access Road Alignment Plan and Profile - Sta. 0+00 to Sta. 33+00
- Sheet 3 Access Road Alignment Plan and Profile - Sta. 28+00 to 66+00  
Mass Haul Diagram
- Sheet 4 Cross Sections Sta. 0+00 to 16+00
- Sheet 5 Cross Sections Sta. 16+50 to 29+50
- Sheet 6 Cross Sections Sta. 30+00 to 45+00

VICINITY MAP

136 East 3rd Street  
 Rifle, Colorado 81650  
 Ph. (970) 625-1330  
 Fax (970) 625-2773

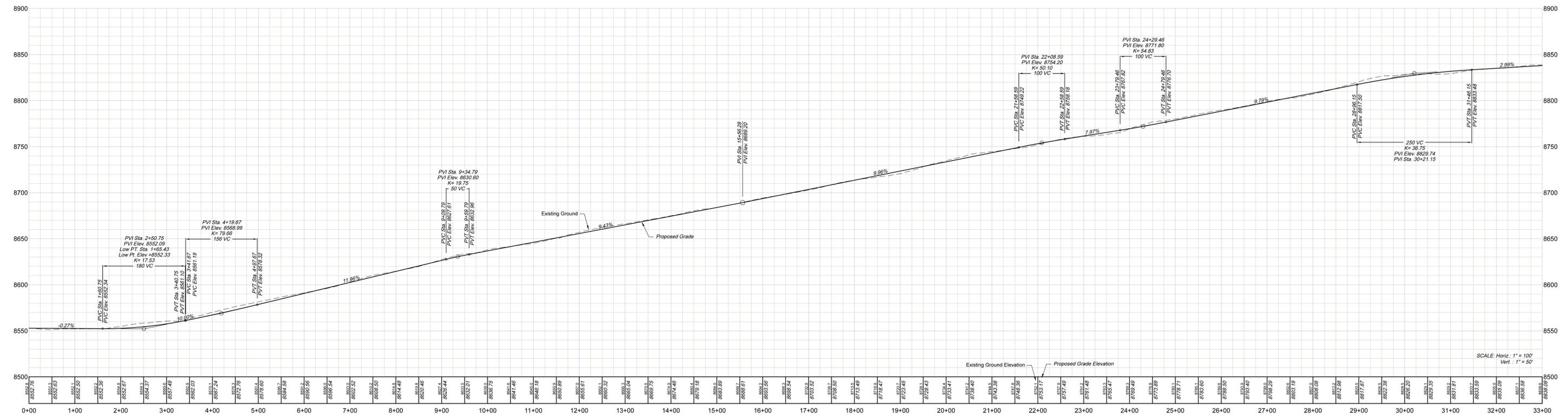
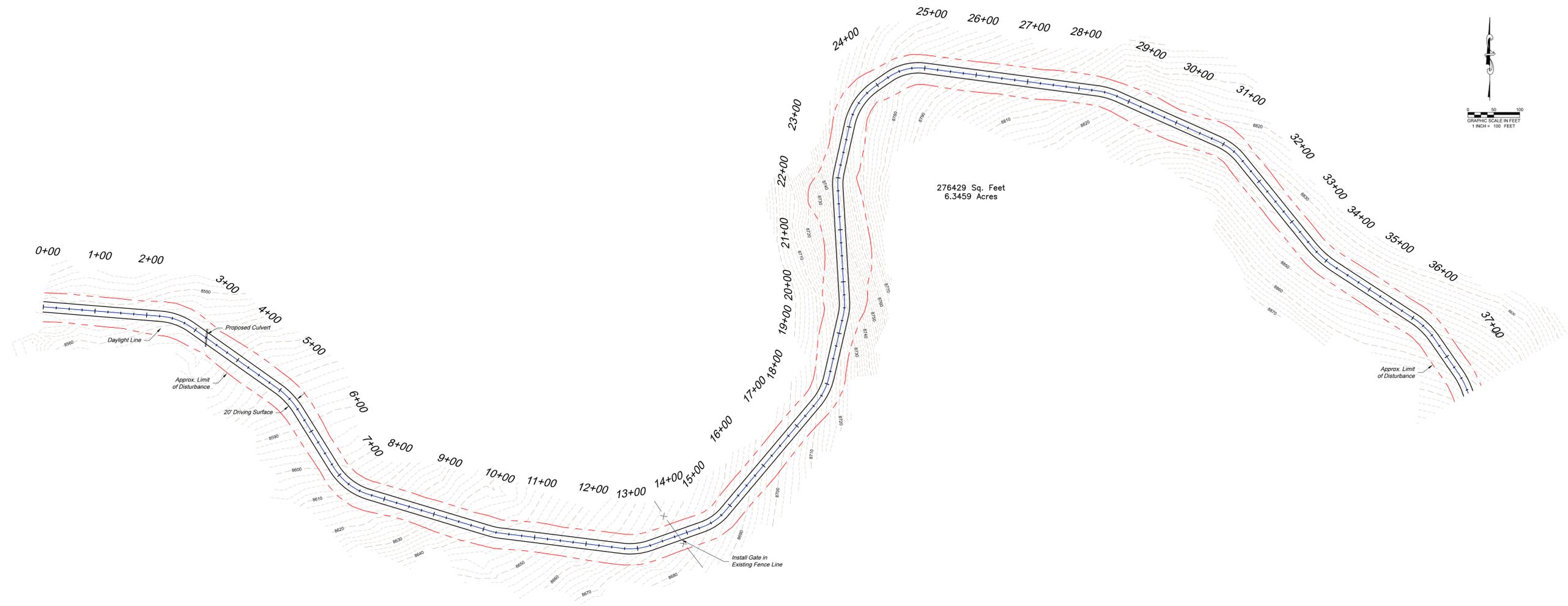
**BOOKCLIFF**  
 Survey Services, Inc.

REVISION	DESCRIPTION
9/25/20	Per Review
10/14/20	Per Review

WMC 24-17 Drill Pad  
 Access Road Alignment  
 COVER SHEET

TEP  
 Rocky Mountain LLC

FILE:	Valley	PROJECT NO.	WMC 24-17
DFT:	cs	SHEET	1
DATE:	9/10/20	OF	6

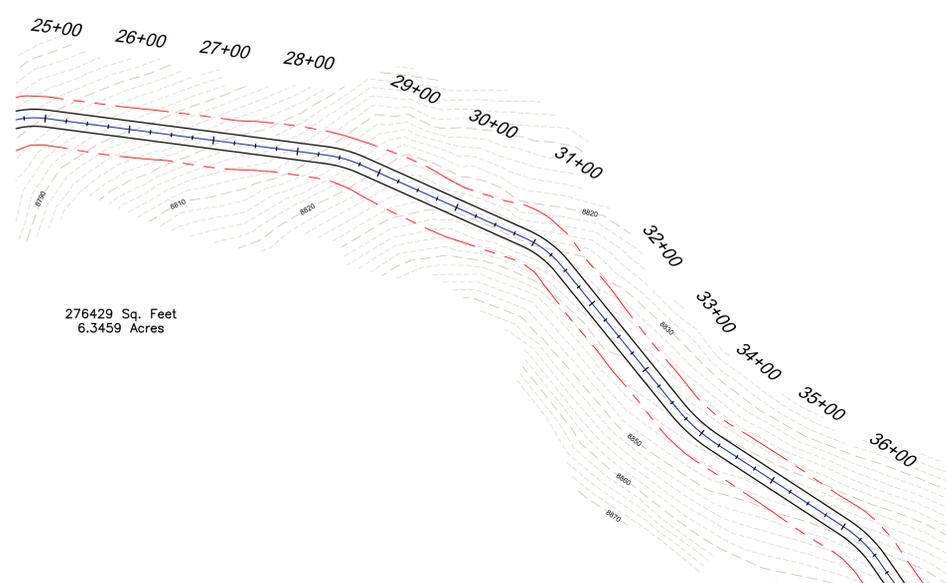
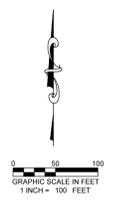


REVISION	DESCRIPTION
8/20/20	Revised Pad Elev., add Culverts
9/10/20	Construction Docs
9/25/20	Per Review
10/14/20	Per Review

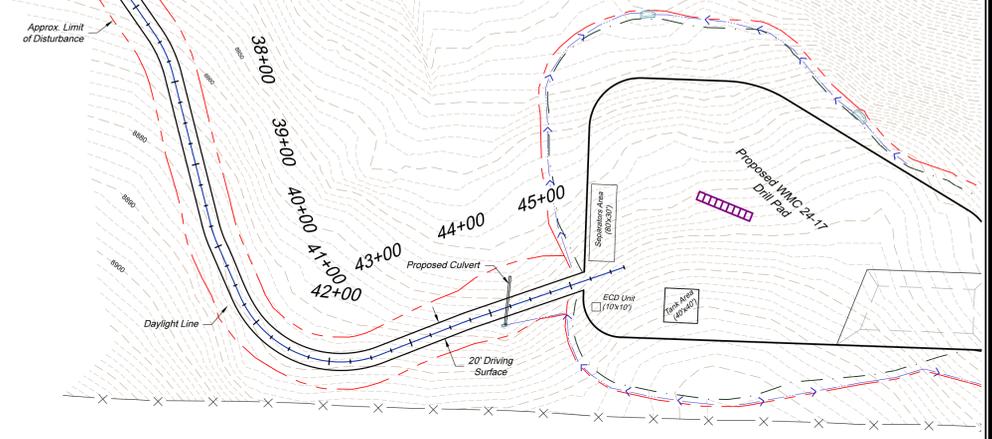
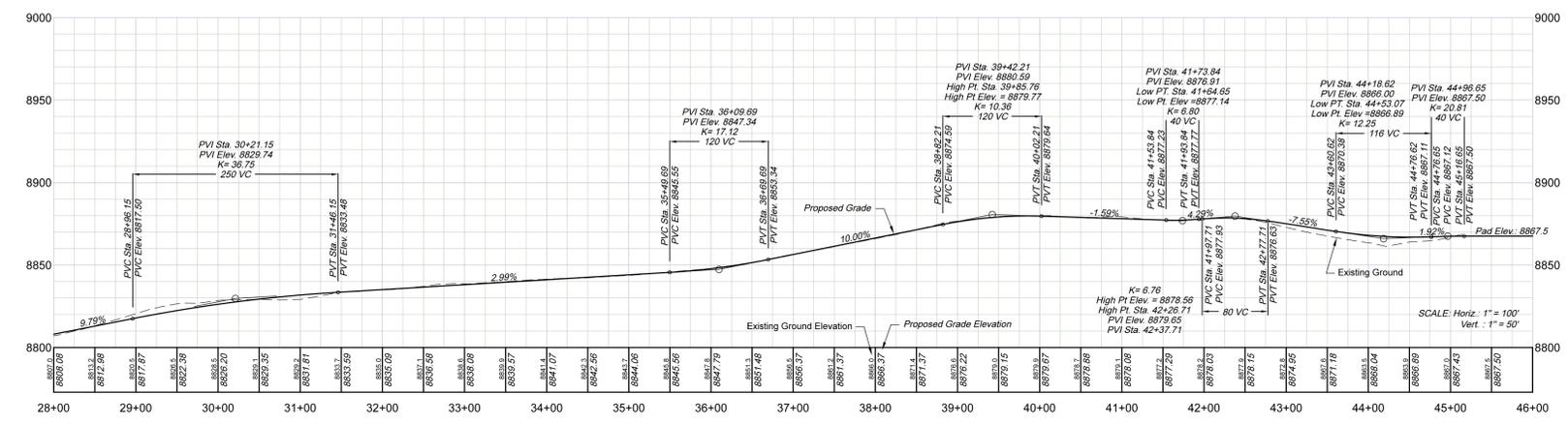
*WMC 24-17 Drill Pad  
Access Road Alignment Sta. 0+00 to 33+00*

**TERRA** ENERGY PARTNERS  
**TEP** Rocky Mountain LLC

FILE:	Valley	PROJECT NO.	WMC 24-17
DFT:	cs		
CK:		SHEET	2
DATE:	7/29/20	OF	6

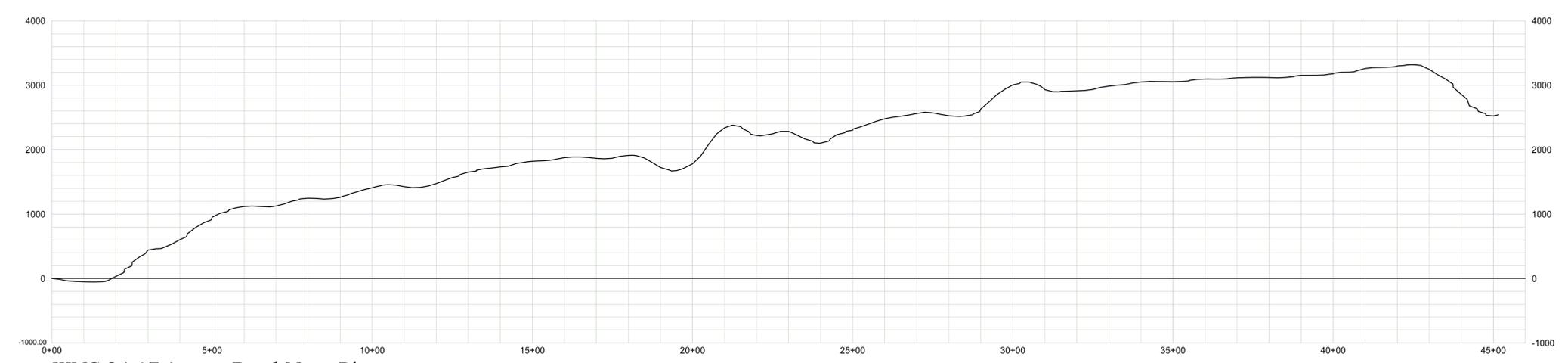


276429 Sq. Feet  
6.3459 Acres



- \*Road Construction Notes**
- 1) Design Cut Slope: 1.5:1  
Design Fill Slope: 1.5:1
  - 2) Topsoil based on 6" Soil Depth.
  - 3) 10% Swell Factor Applied to Road Cut Volume.  
20% Swell Factor Applied to Pad Cut Volume.
  - 4) Total Disturbance Access Road: ±6.35 ac
  - 5) Mass Diagram does not include swell factor.

ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	38,200	42,970	3,890	-8,660
PR	8,720			8,720
Road	5,920	2,970	2,970	-20
<b>TOTALS</b>	<b>52,840</b>	<b>45,940</b>	<b>6,860</b>	<b>40</b>



**WMC 24-17 Access Road Mass Diagram**  
Scale: Horiz.: 1" = 200'  
Vert.: 1" = 1000' cy

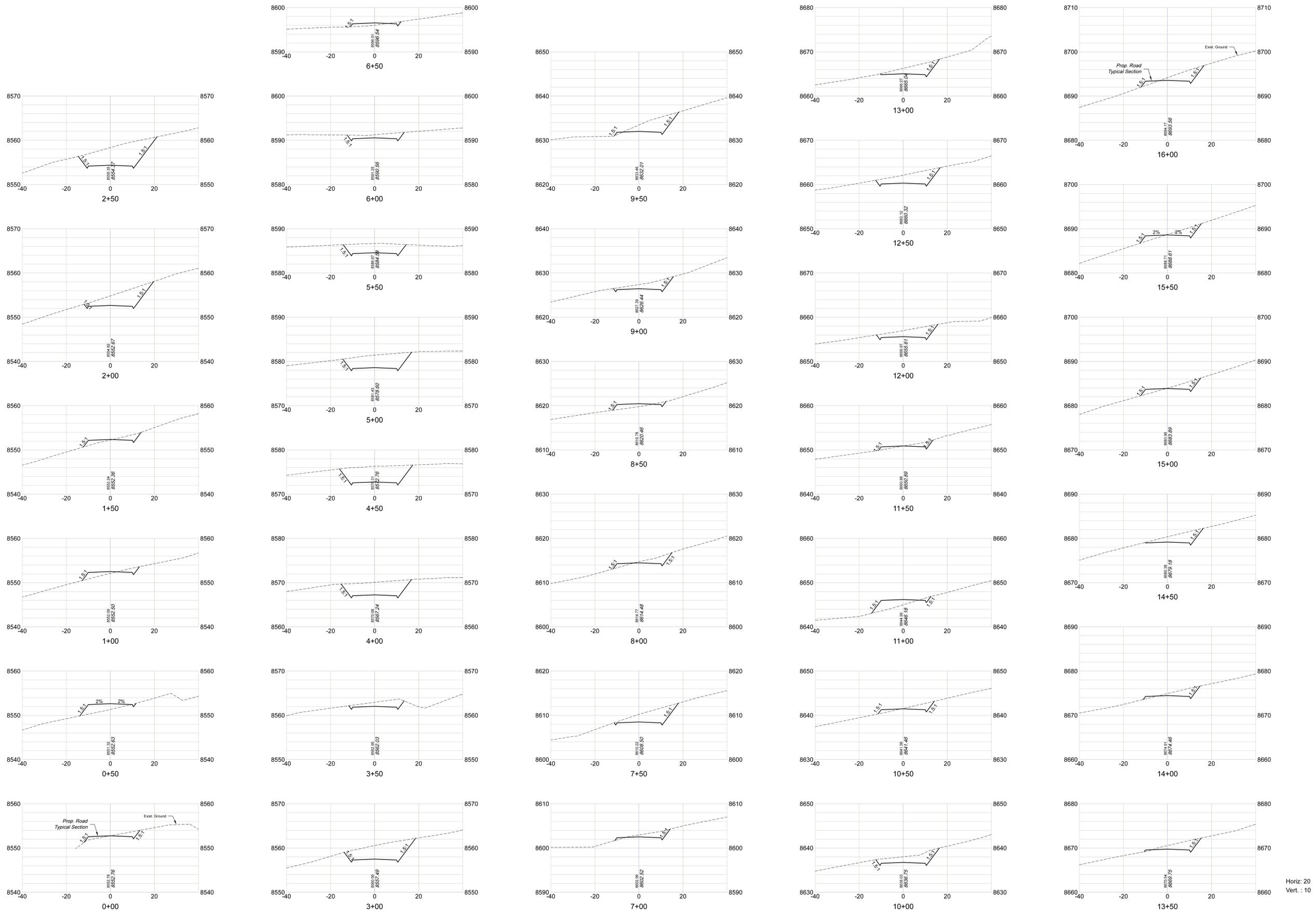


REVISION	DESCRIPTION
8/20/20	Revised Pad Elev., add Culverts
9/10/20	Construction Docs
9/25/20	Per Review
10/14/20	Per Review

WMC 24-17 Drill Pad  
Access Road Alignment Sta. 32+00 to 42+00  
Mass Haul Diagram



FILE:	Valley	PROJECT NO.	WMC 24-17
DFT:	cs		
CK:		SHEET	3
DATE:	7/29/20	OF	6



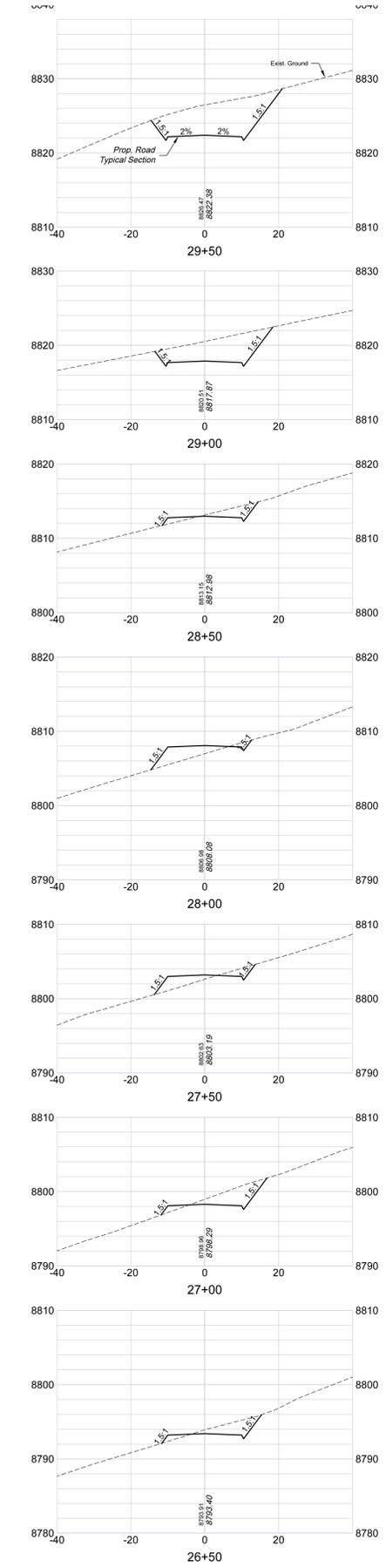
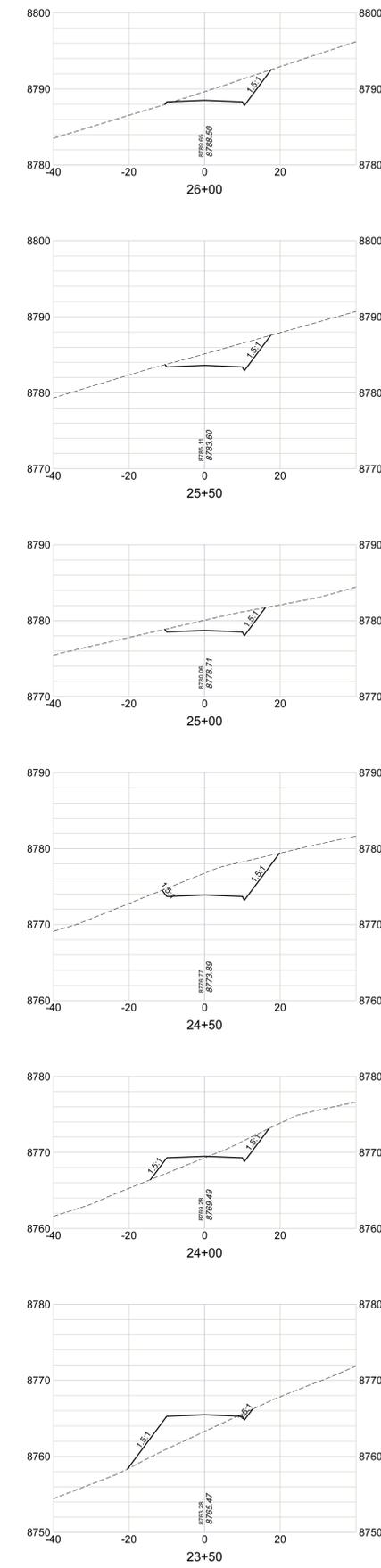
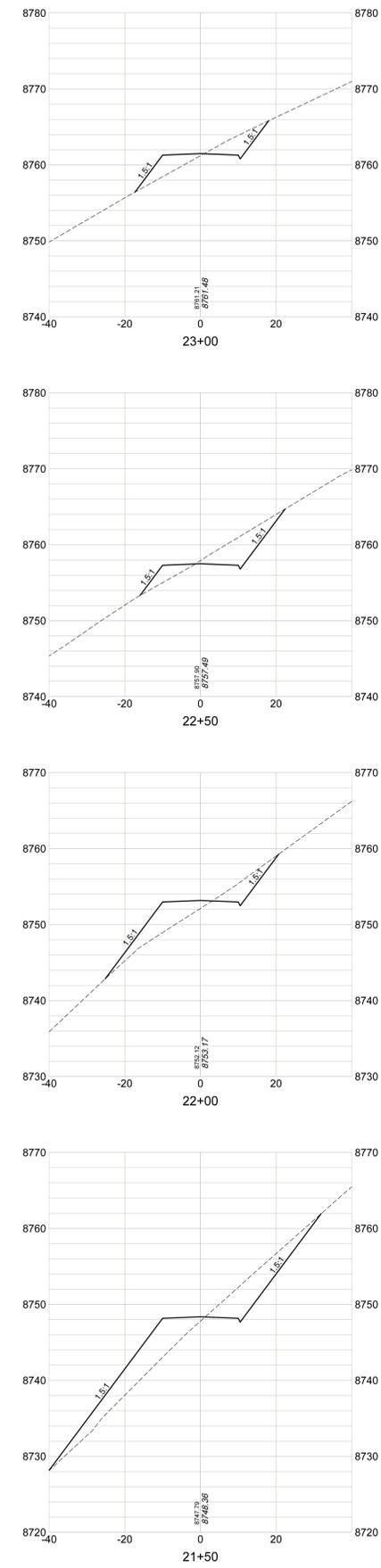
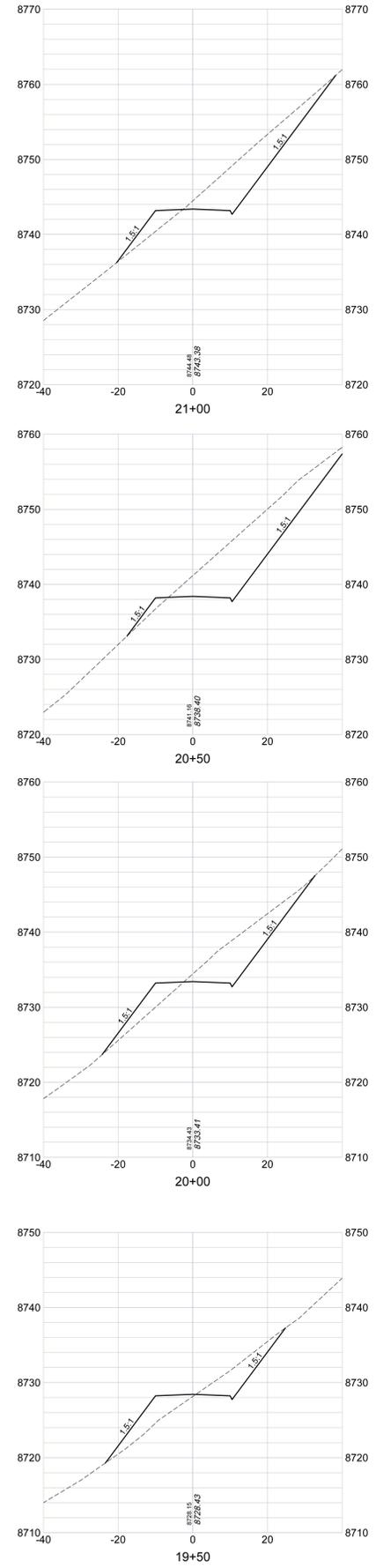
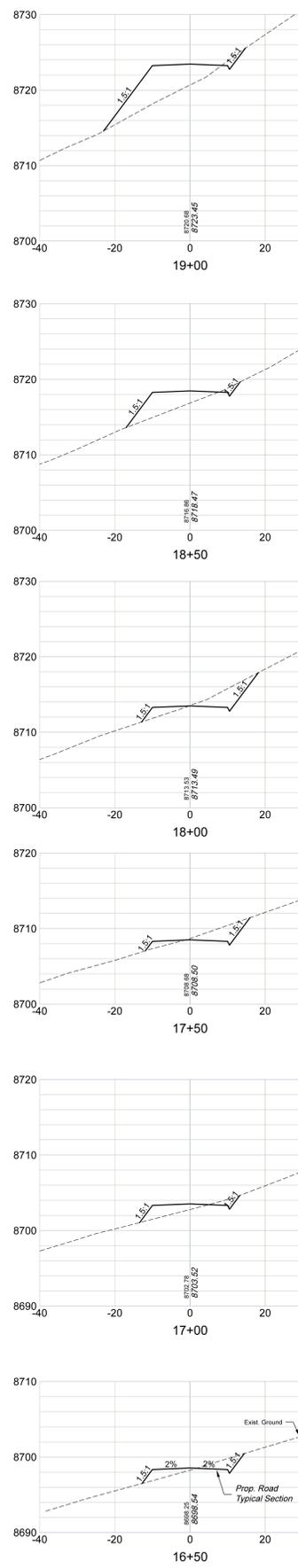
REVISION	DESCRIPTION

WMC 24-17 Drill Pad  
Access Road Cross Sections  
Sta. 0+00 to 16+00



FILE:	Valley	PROJECT NO.	WMC 24-17
DFT:	cs		
CK:		SHEET	4
DATE:	9/10/20	OF	6

Horiz: 20  
Vert: 10



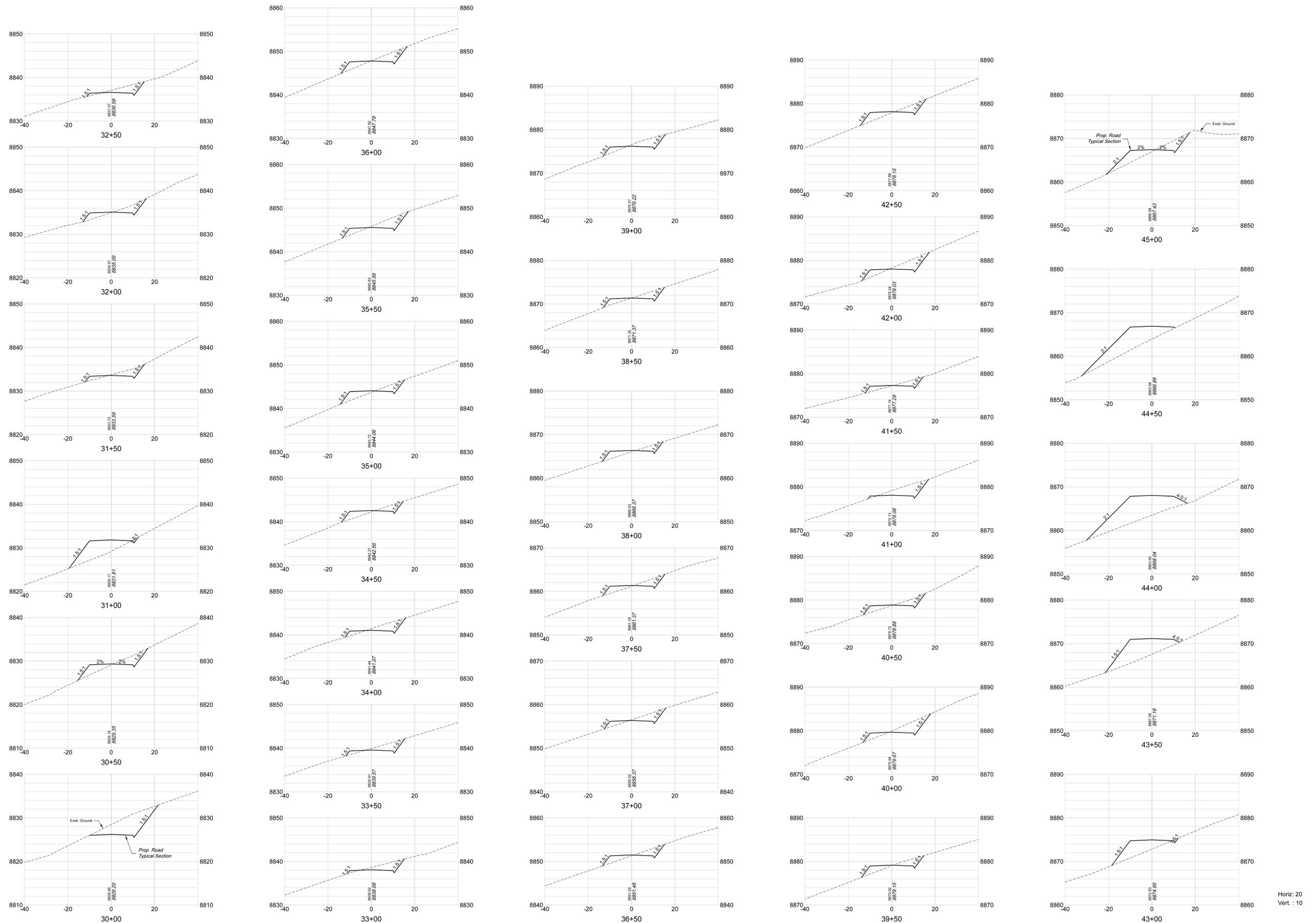
REVISION	DESCRIPTION

WMC 24-17 Drill Pad  
Access Road Cross Sections  
Sta. 16+50 to 29+50



FILE:	Valley	PROJECT NO.	WMC 24-17
DFT:	cs	CK:	SHEET 5
DATE:	9/10/20	OF	6

Horiz: 20  
Vert: 10



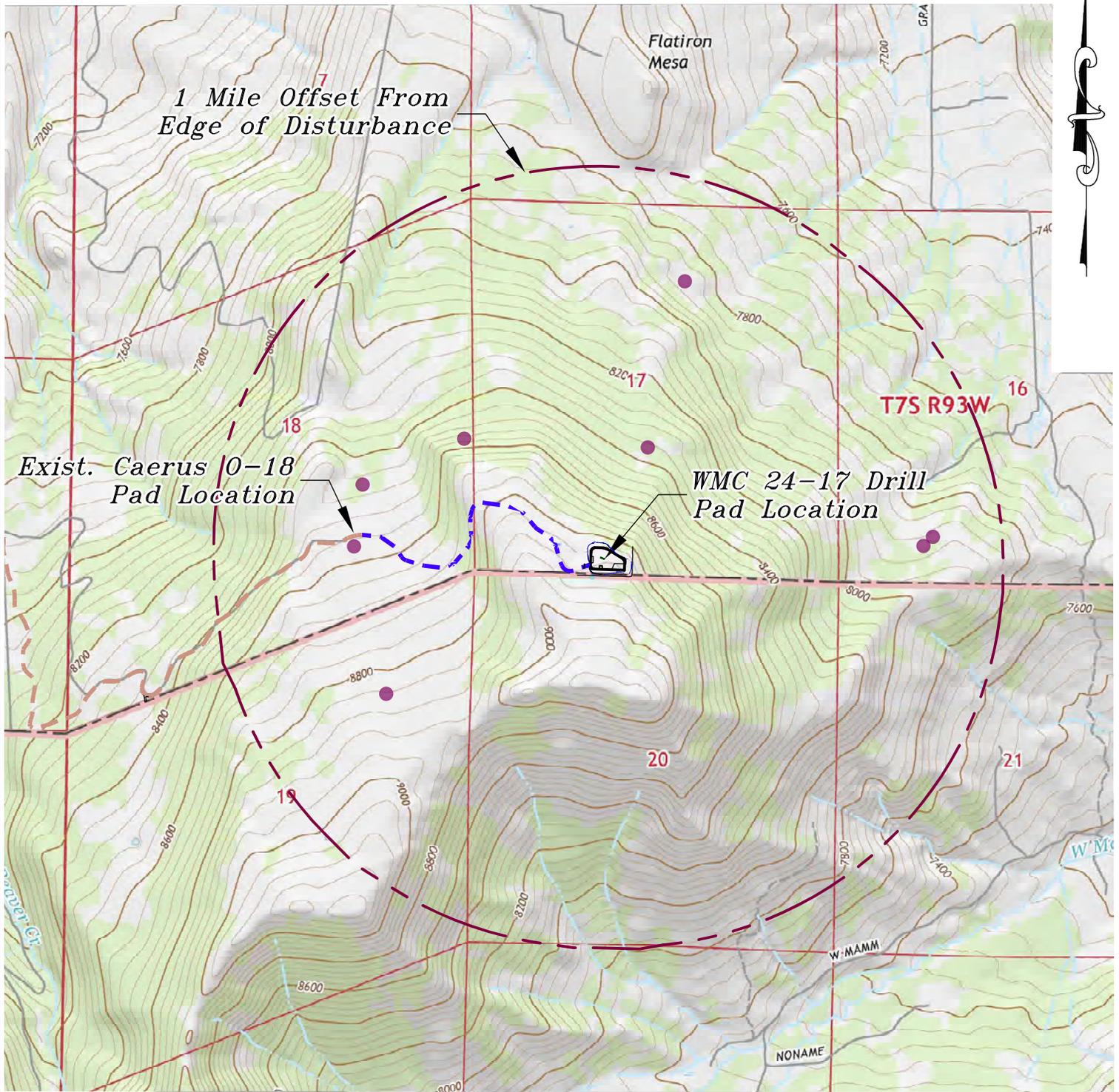
REVISION	DESCRIPTION

WMC 24-17 Drill Pad  
 Access Road Cross Sections  
 Sta. 30+00 to 45+00



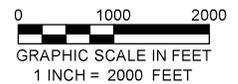
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DFT:	cs	CK:	SHEET 6
DATE:	9/10/20	OF:	6

Horiz: 20  
 Vert: 10



**LEGEND**

- KNOWN WELL LOCATIONS ●
- EXISTING ROAD - - - - -
- PROPOSED ROAD - - - - -



REVISED: 9/25/20

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



SCALE: 1" = 2000'  
DATE: 9/10/20  
PLAT: 5A of 7  
PROJECT: TEP Valley  
DFT: cs

Construction Plan Prepared for:

**TERRA** TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 5A  
WELL PROXIMITY MAP

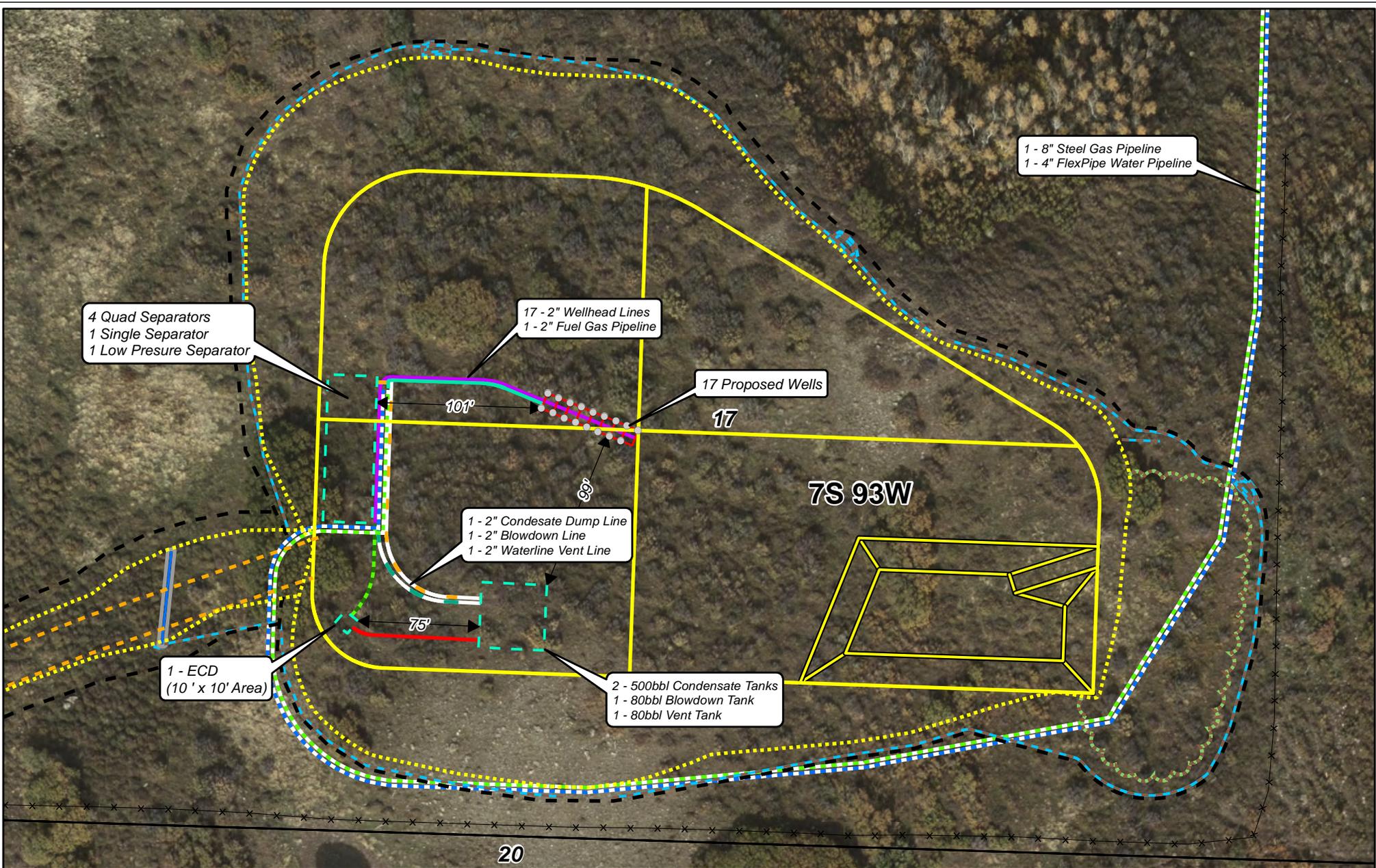


- Legend**
- Proposed Gas Pipeline
  - Proposed Water Pipeline
  - Existing Gas Pipeline
  - Existing Water Pipeline
  - Existing Condensate Pipeline
  - Existing Pad Edge
  - Existing Well
  - Propose Equipment Area
  - Proposed Daylight Line
  - Proposed Production Equipment
  - Existing Production Equipment
  - Existing Road
  - Existing Fence
  - Proposed Fence
  - Existing Limit of Disturbance
  - Stormwater Controls
  - Culvert
  - Summit / Red Rock Gathering
  - Parcel Ownership

**TEP Rocky Mountain LLC**  
**RU 23-17 Pad**  
**Equipment Area - Site Map**  
**T7S R93W, Section 17**



**October 22, 2020**



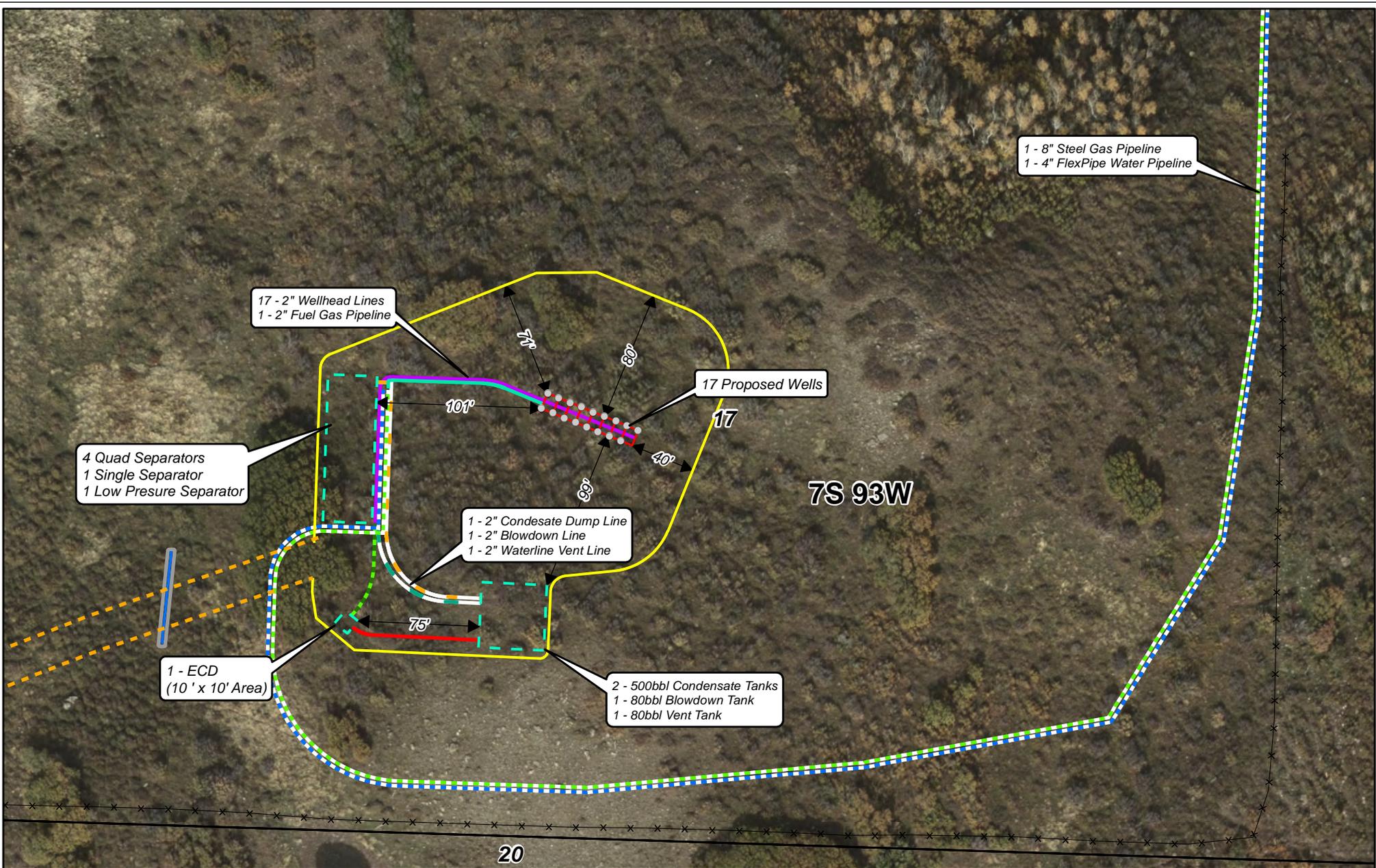
**Legend**

- Proposed Wells
- Condensate Dump Line
- Blowdown / Vent Lines
- ECD Fuel Gas Line
- Process Piping
- Rig Fuel Gas Line
- Wellhead Lines (17)
- Proposed Water Pipeline
- Proposed Gas Pipeline
- Proposed Cellar
- Propose Pad Edge
- Proposed Drilling Pit
- Proposed Daylight Line
- Proposed Production Equipment
- Proposed Access Road
- Proposed Topsoil Stockpile
- Existing Fence
- Stormwater Controls
- Proposed Culvert
- Proposed Limit of Disturbance

**TEP Rocky Mountain LLC**  
**Facility Layout Drawing &  
Equipment Setbacks for Construction**



**October 13, 2020**



1 - 8" Steel Gas Pipeline  
1 - 4" FlexPipe Water Pipeline

17 - 2" Wellhead Lines  
1 - 2" Fuel Gas Pipeline

17 Proposed Wells

4 Quad Separators  
1 Single Separator  
1 Low Pressure Separator

7S 93W

1 - 2" Condensate Dump Line  
1 - 2" Blowdown Line  
1 - 2" Waterline Vent Line

1 - ECD  
(10' x 10' Area)

2 - 500bbl Condensate Tanks  
1 - 80bbl Blowdown Tank  
1 - 80bbl Vent Tank

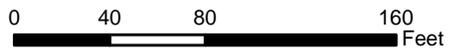
- Legend**
- Proposed Wells
  - Condensate Dump Line
  - Blowdown / Vent Lines
  - ECD Fuel Gas Line
  - Process Piping
  - Rig Fuel Gas Line
  - Wellhead Lines (17)
  - Proposed Water Pipeline
  - Proposed Gas Pipeline
  - Production Pad
  - Proposed Cellar
  - Proposed Production Equipment
  - Proposed Access Road
  - Existing Fence
  - Proposed Culvert

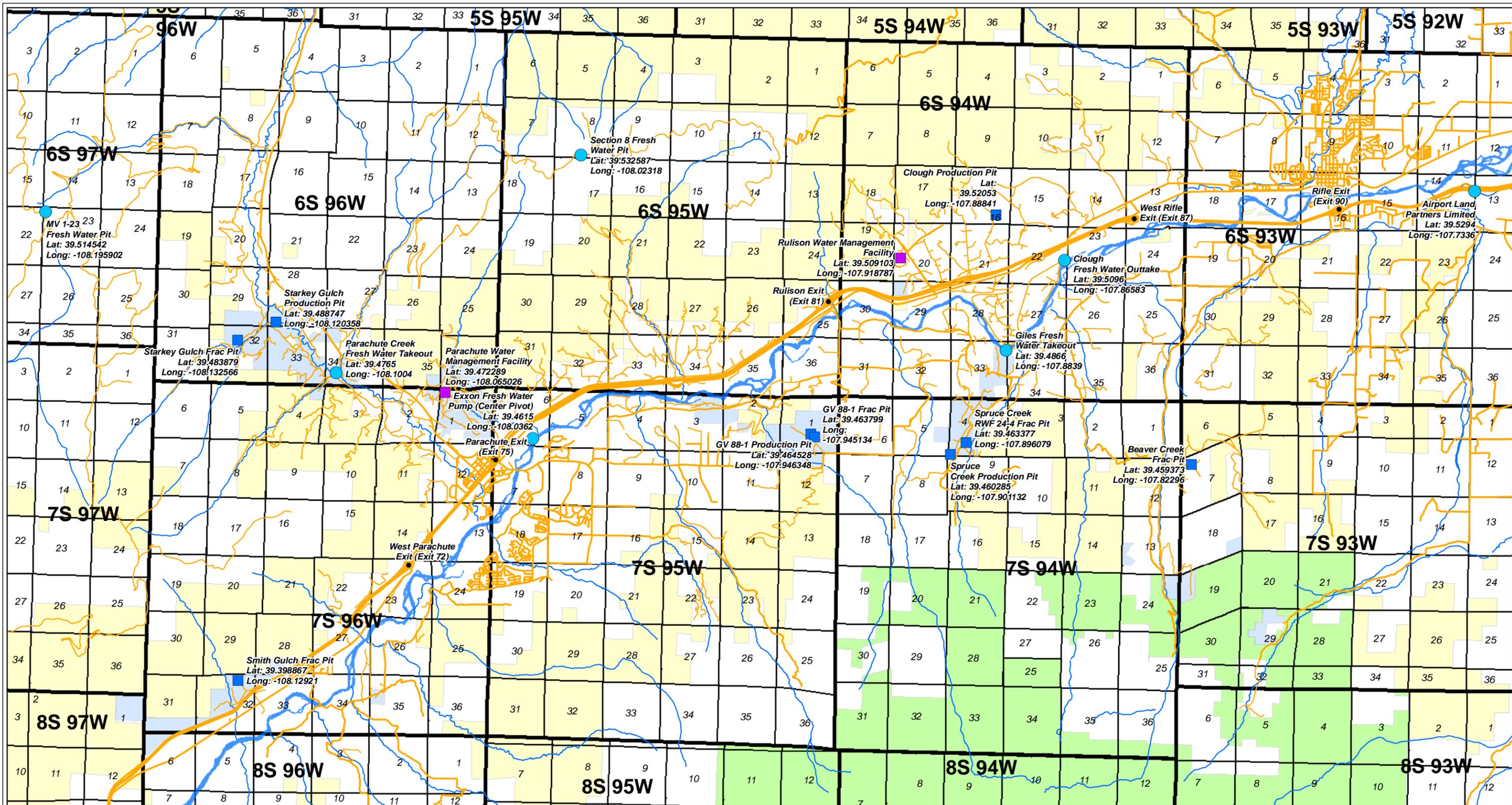
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**TEP Rocky Mountain LLC**

**Facility Layout Drawing & Equipment Setbacks for Reclamation**

**October 13, 2020**



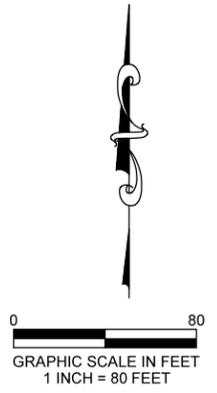
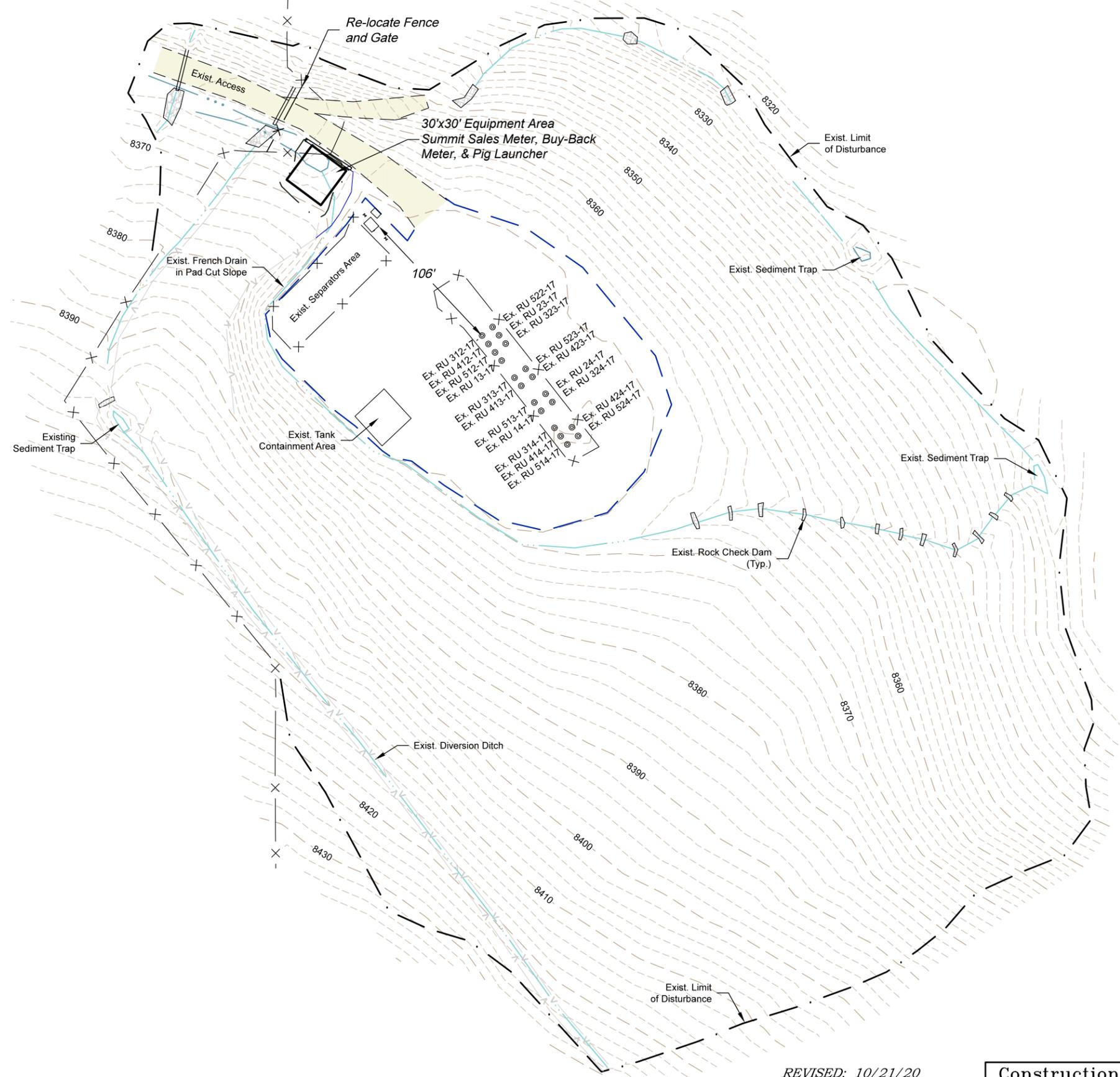


**Legend**

- TEP Water Management Facility
- Fresh Water Source
- TEP Produced Water Pit
- County Road
- Other Existing Road
- TEP Surface
- BLM Surface
- USFS Surface

**TEP Rocky Mountain LLC**  
**Grand Valley**  
**Existing Water Source Map**  
**October 24, 2019**





REVISED: 10/21/20

SCALE: 1" = 80'  
DATE: 8/31/20  
SHEET: 1 of 2  
PROJECT: TEP  
DFT: CS

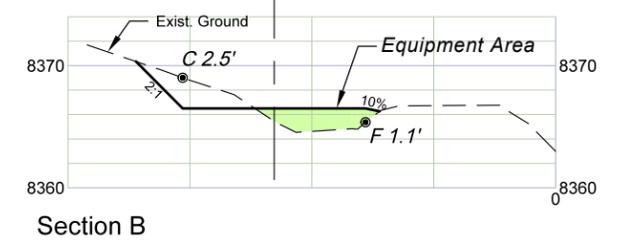
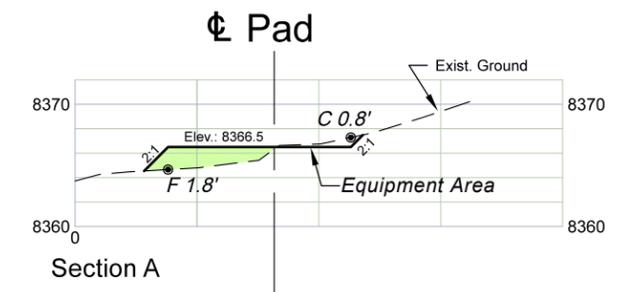
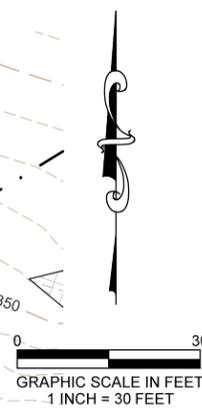
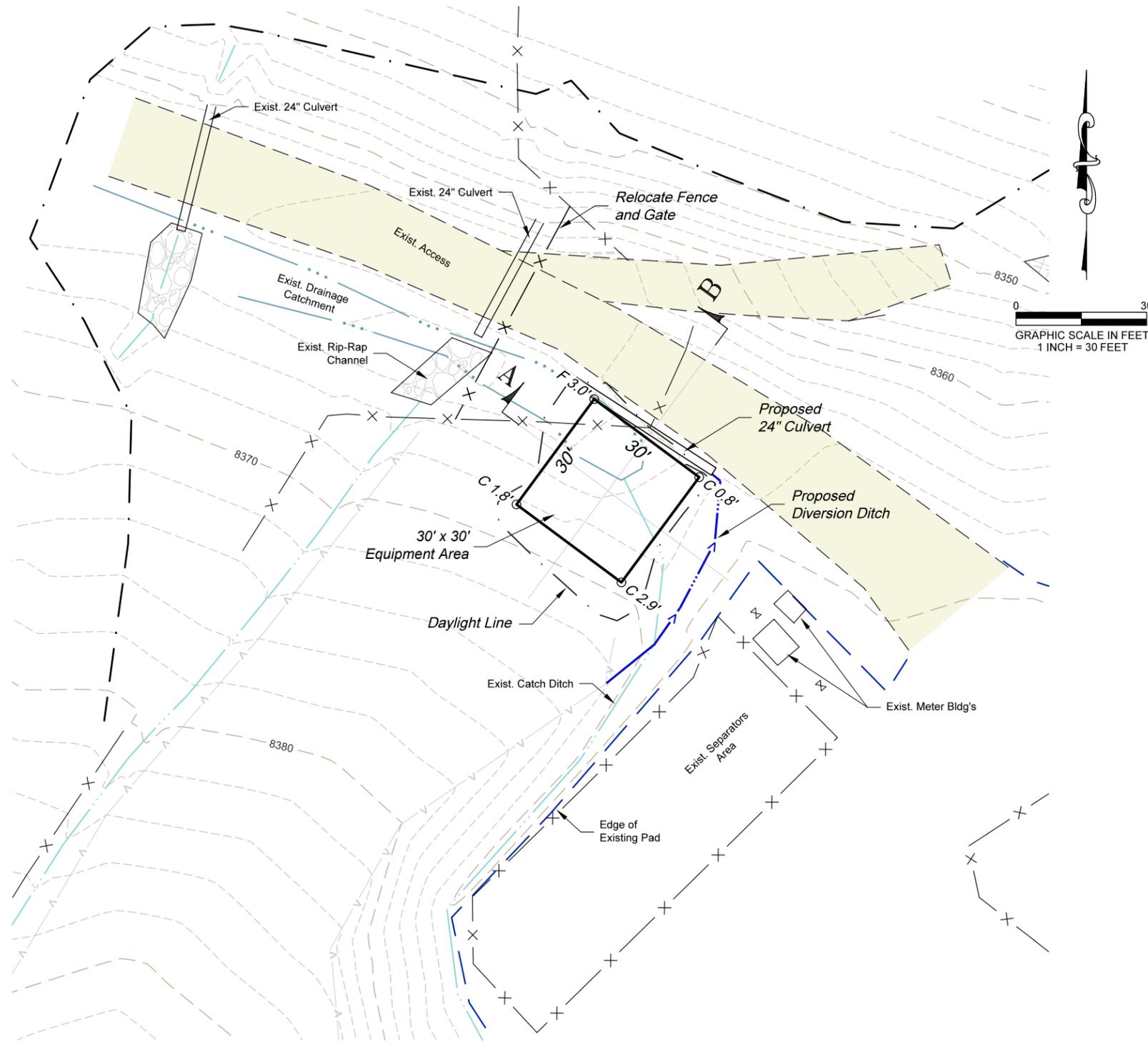
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**BOOKCLIFF**  
Survey Services, Inc.

Construction Plan Prepared for:

**TERRA** TEP Rocky Mountain LLC

RU 23-17 Support Pad - Plat 1  
OVERALL CONSTRUCTION LAYOUT



SCALE: Horiz.: 1" = 30'  
Vert.: 1" = 10'

**30' x 30' - Equipment Area Detail**

Scale: 1" = 30'

- \*Construction Notes**
- 1) Design Cut Slope: 2:1  
Design Fill Slope: 4:1 to 2:1, as Noted.
  - 2) Topsoil based on 6" Soil Depth.
  - 3) 20% Swell Factor Applied to Earthwork Cut Volume.

ESTIMATED EARTHWORK QUANTITIES (cy)				
ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	40	30	30	-20



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REVISED: 10/21/20  
SCALE: As Noted  
DATE: 9/01/20  
SHEET: 2 of 2  
PROJECT: TEP  
DFT: cs

Construction Plan Prepared for:  
**TERRA** TEP Rocky Mountain LLC  
RU 23-17 Pad - Plat 2  
EQUIPMENT AREA DETAIL AND  
CROSS SECTIONS



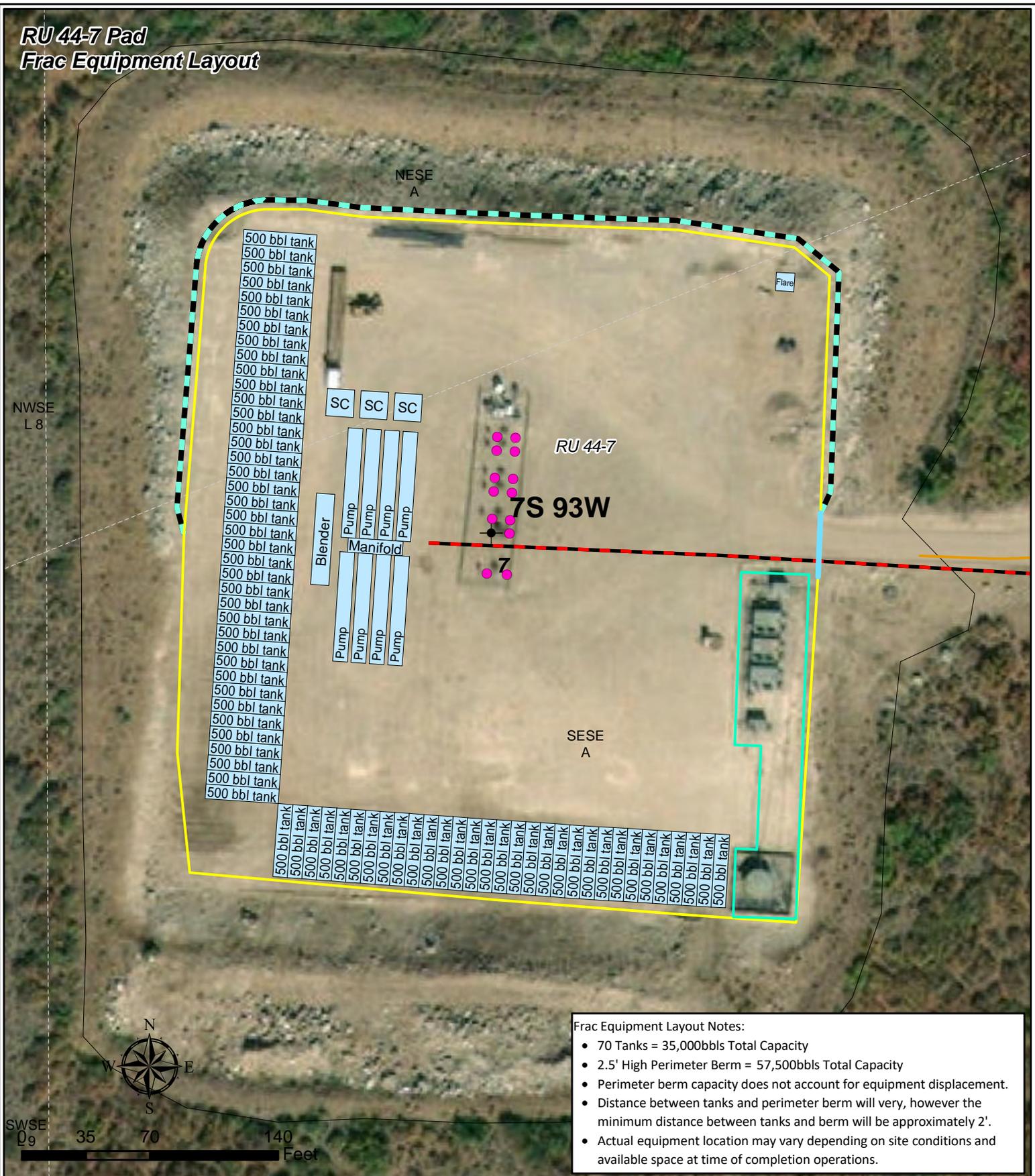
- Legend**
- Proposed Gas Pipeline
  - Proposed Water Pipeline
  - Existing Gas Pipeline
  - Existing Water Pipeline
  - Existing Condensate Pipeline
  - Existing Pad Edge
  - Existing Well
  - Propose Equipment Area
  - Proposed Daylight Line
  - Proposed Production Equipment
  - Existing Production Equipment
  - Existing Road
  - Existing Fence
  - Proposed Fence
  - Existing Limit of Disturbance
  - Stormwater Controls
  - Culvert
  - Summit / Red Rock Gathering
  - Parcel Ownership

**TEP Rocky Mountain LLC**  
**RU 23-17 Pad**  
**Equipment Area - Site Map**  
**T7S R93W, Section 17**

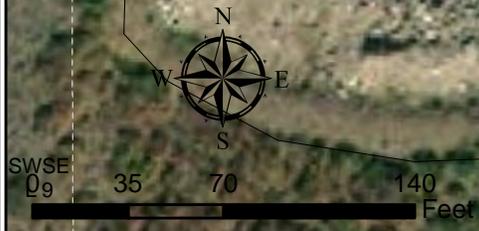


**October 22, 2020**

# RU 44-7 Pad Frac Equipment Layout



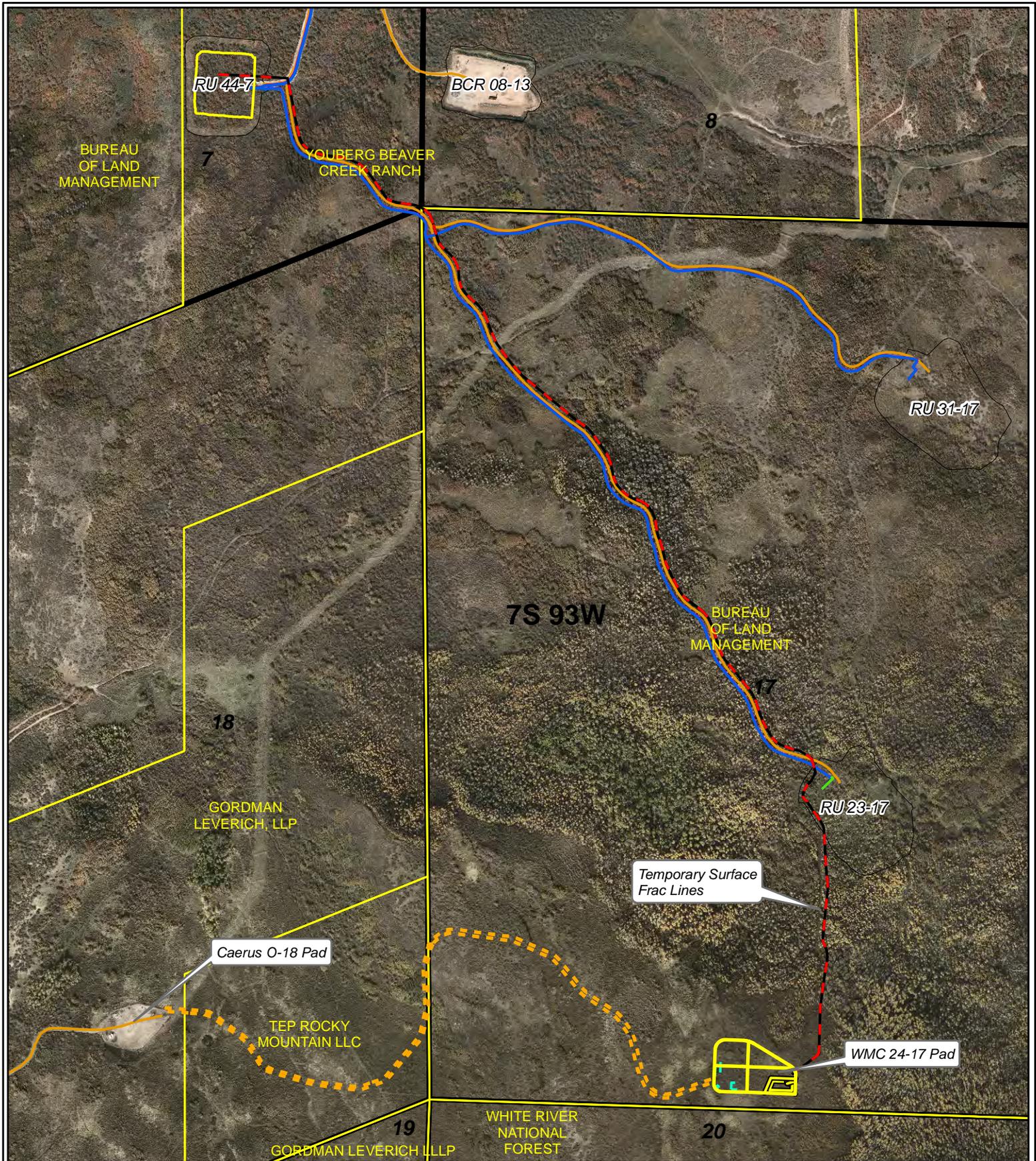
- Frac Equipment Layout Notes:**
- 70 Tanks = 35,000bbls Total Capacity
  - 2.5' High Perimeter Berm = 57,500bbls Total Capacity
  - Perimeter berm capacity does not account for equipment displacement.
  - Distance between tanks and perimeter berm will vary, however the minimum distance between tanks and berm will be approximately 2'.
  - Actual equipment location may vary depending on site conditions and available space at time of completion operations.



## Legend

- Plugged and Abandoned Well
- Production Gas Well
- ▭ Frac Equipment
- ▬ Existing Berm (2.5' High)
- ▬ Drive Over Berm (2.5' High)
- ▬ Existing Pad Edge
- ▬ Existing Production Equipment
- ▬ Proposed Frac Lines
- ▬ Existing Road
- ▭ Existing Pad





**Legend**

- Propose Pad Edge
- Proposed Drilling Pit
- Proposed Production Equipment
- - - Proposed Road
- - - Proposed Frac Lines (5-4.5")
- Existing Gas Pipeline
- Existing Water Pipeline
- Existing Condensate Pipeline
- Existing Pad
- Parcel Ownership

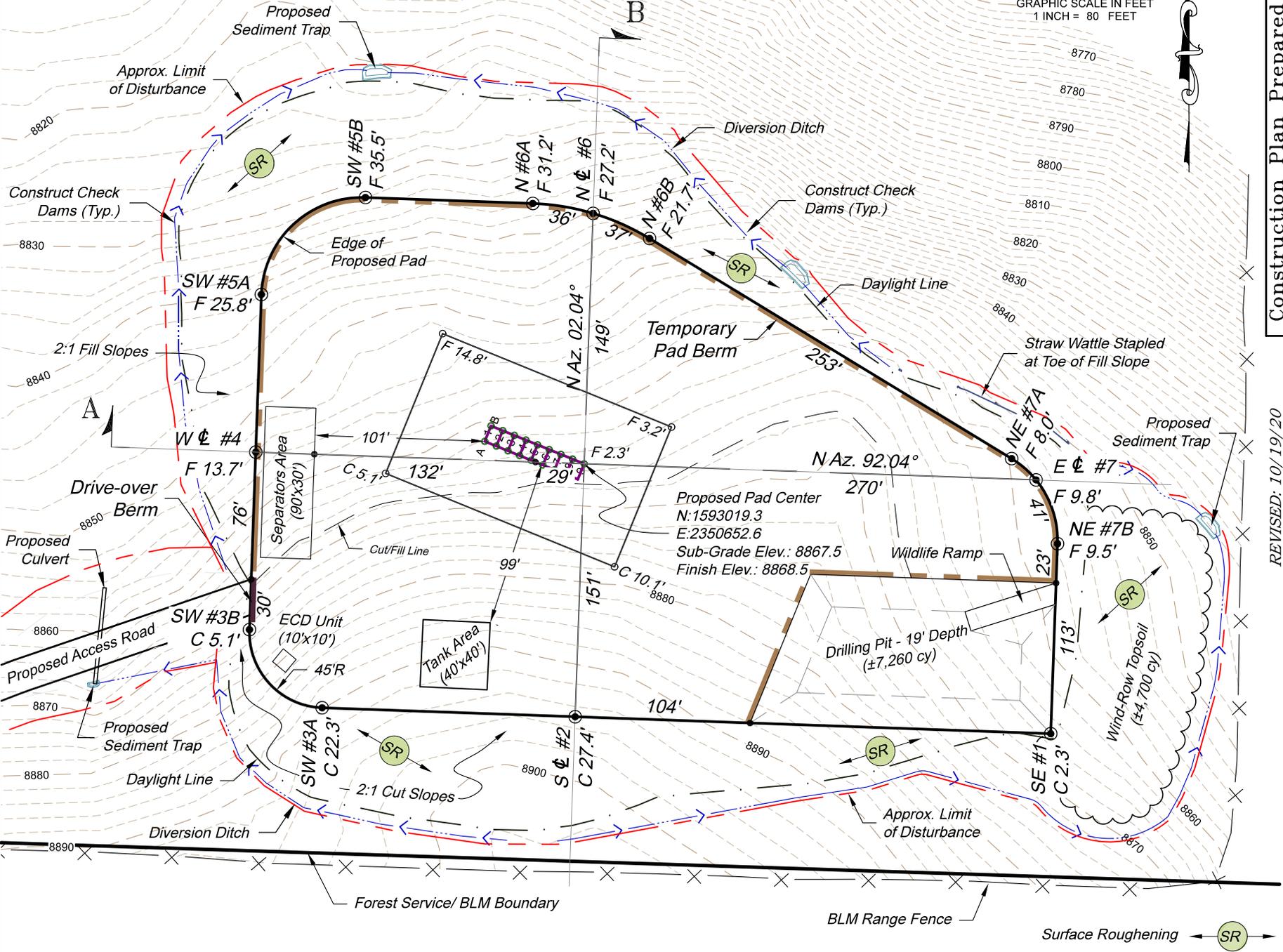
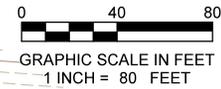
**TEP Rocky Mountain LLC**

**RU 44-7 Frac Pad  
Overview Map  
T7S R93W, Section 7**

**October 20, 2020**



Section 17  
T. 7 S., R. 93 W.



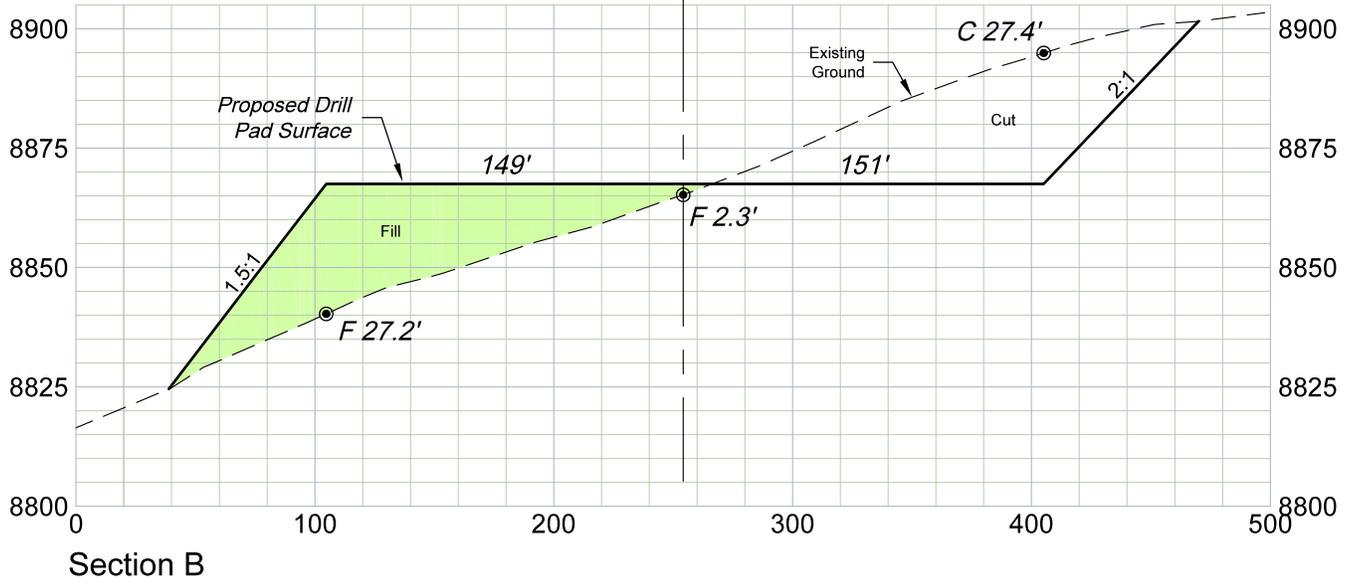
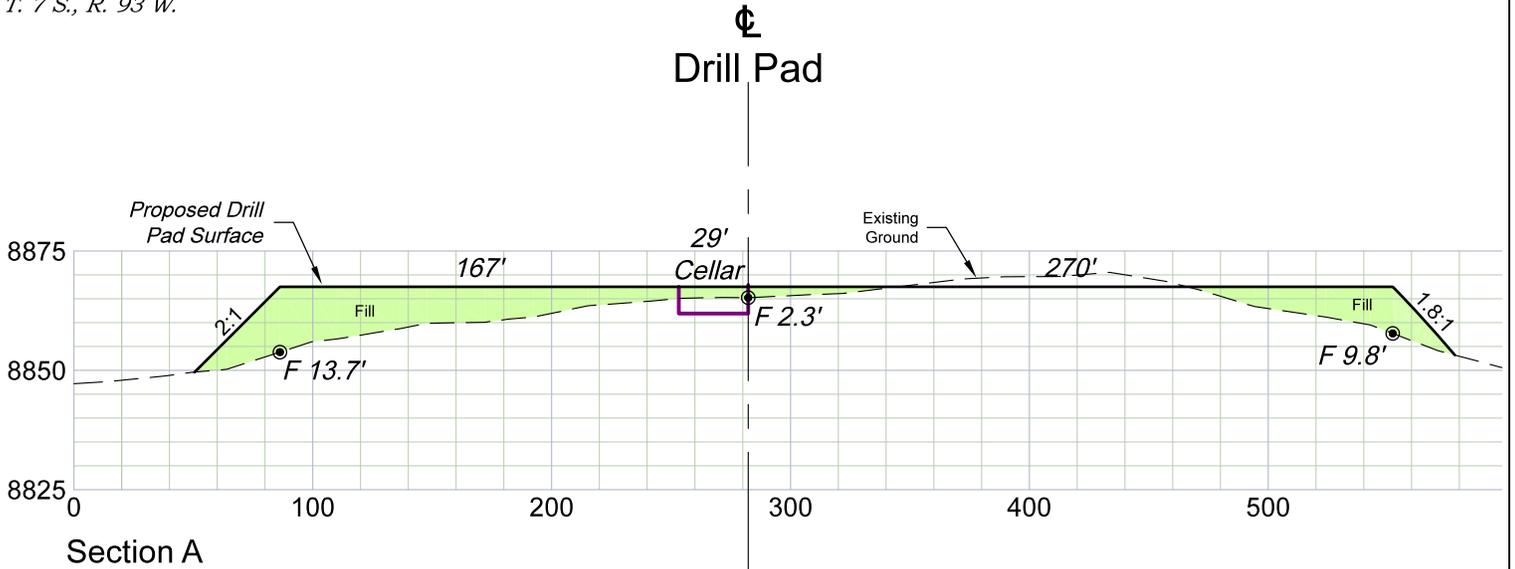
Construction Plan Prepared for:  
TEP Rocky Mountain LLC  
WMC 24-17 Drill Pad - Plat 2  
CONSTRUCTION LAYOUT

REVISED: 10/19/20

SCALE:	1" = 80'
DATE:	9/10/20
PLAT:	2 of 7
PROJECT:	Valley
DFT:	CS

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SCALE: Horiz.: 1" = 80'  
Vert.: 1" = 40'

Pad Surface Completion Volumes:  
6" Aggregate Base = ±2025 cy  
6" Shale Base = ±2025 cy

- \*Notes**  
 1) Design Cut Slope: 1.5:1  
 Design Fill Slope: 1.5:1 unless Otherwise Noted.  
 2) Topsoil based on 6" Soil Depth.  
 3) 20% Swell Factor Applied to Earthwork Cut Volume.  
 4) Total Pad Disturbance = ±4.89 ac.

ESTIMATED EARTHWORK QUANTITIES (cy)				
ITEM	CUT	FILL	TOPSOIL	EXCESS
Pad	38,200	42,970	3,890	-8,660
Pit	8,720			8,720
Road	5,920	2,970	2,970	-20
<b>TOTALS</b>	<b>52,840</b>	<b>45,940</b>	<b>6,860</b>	<b>40</b>

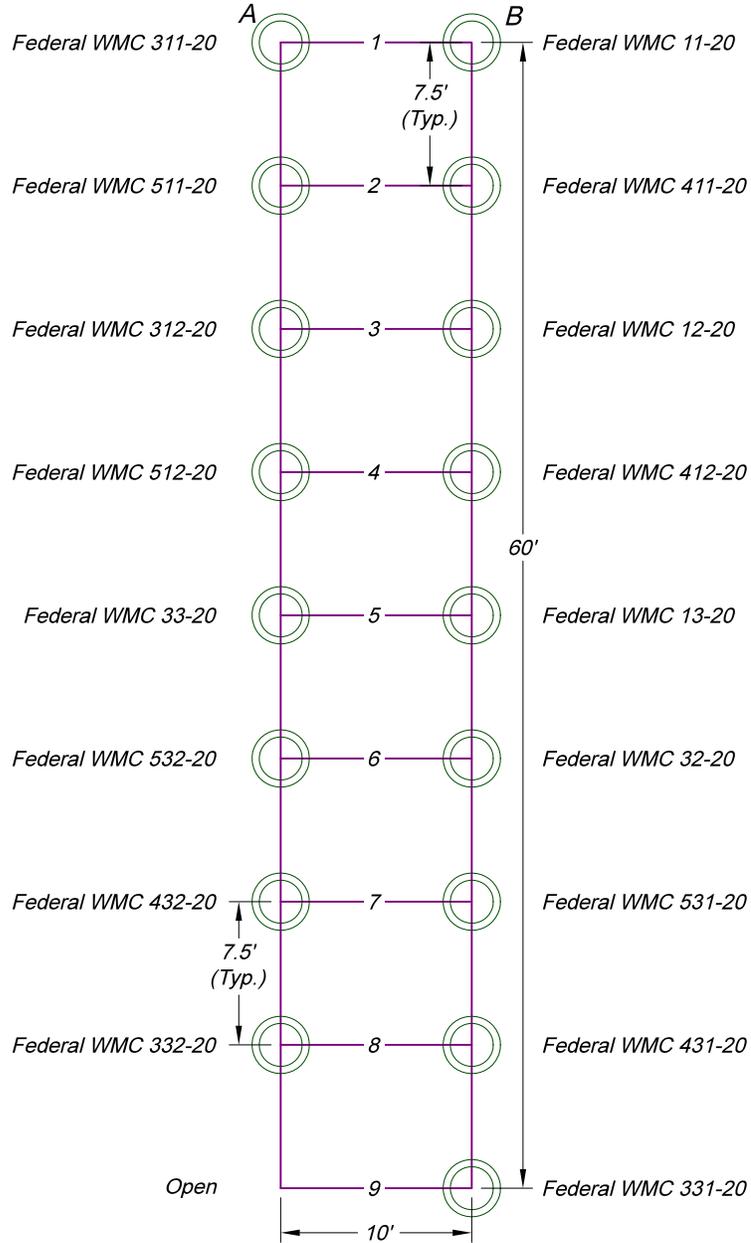
REVISED: 10/13/20

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SCALE: As Noted  
 DATE: 9/10/20  
 PLAT: 2A of 7  
 PROJECT: TEP Valley  
 DFT: cs

**Construction Plan Prepared for:**  
 TEP Rocky Mountain, LLC  
 WMC 24-17 Drill Pad - Plat 2A  
 CONSTRUCTION LAYOUT  
 CROSS SECTIONS



**WELL HEAD DETAIL**

Scale: 1" = 10'

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SCALE: NA  
DATE: 9/10/20  
PLAT: 2B of 7  
PROJECT: TEP Valley  
DFT: cs

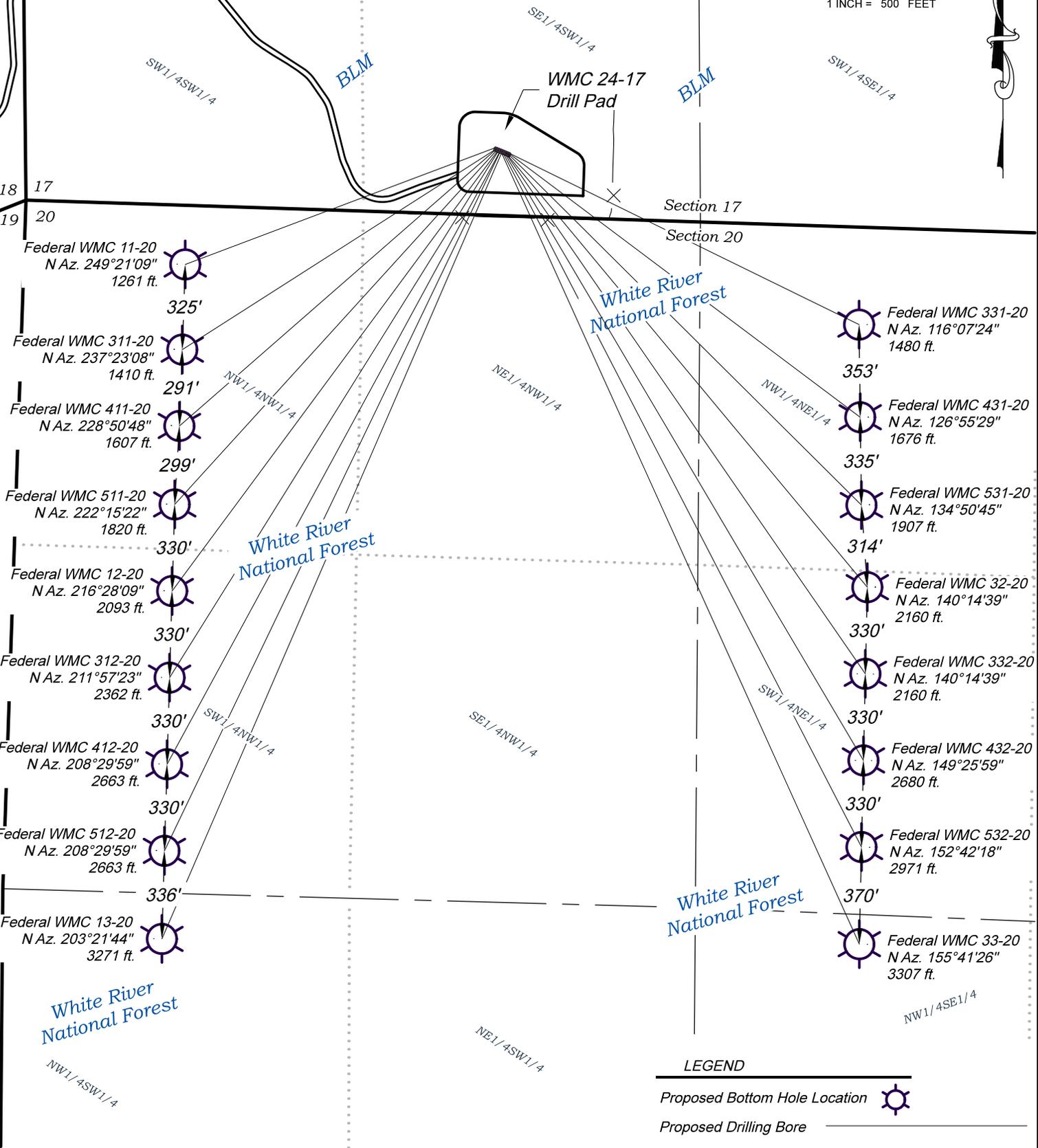
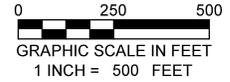
Construction Plan Prepared for:



TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 2B  
WELL HEAD DETAIL

Section 17  
T. 7 S., R. 93 W.



- LEGEND**
- Proposed Bottom Hole Location
  - Proposed Drilling Bore

REVISED: 10/13/20

SCALE:	1" = 500'
DATE:	9/10/20
PLAT:	3 of 7
PROJECT:	TEP Valley
DFT:	cs

**Construction Plan Prepared for:**  
 TEP Rocky Mountain LLC

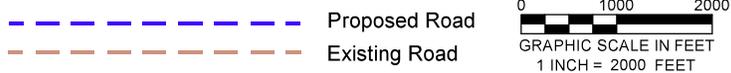
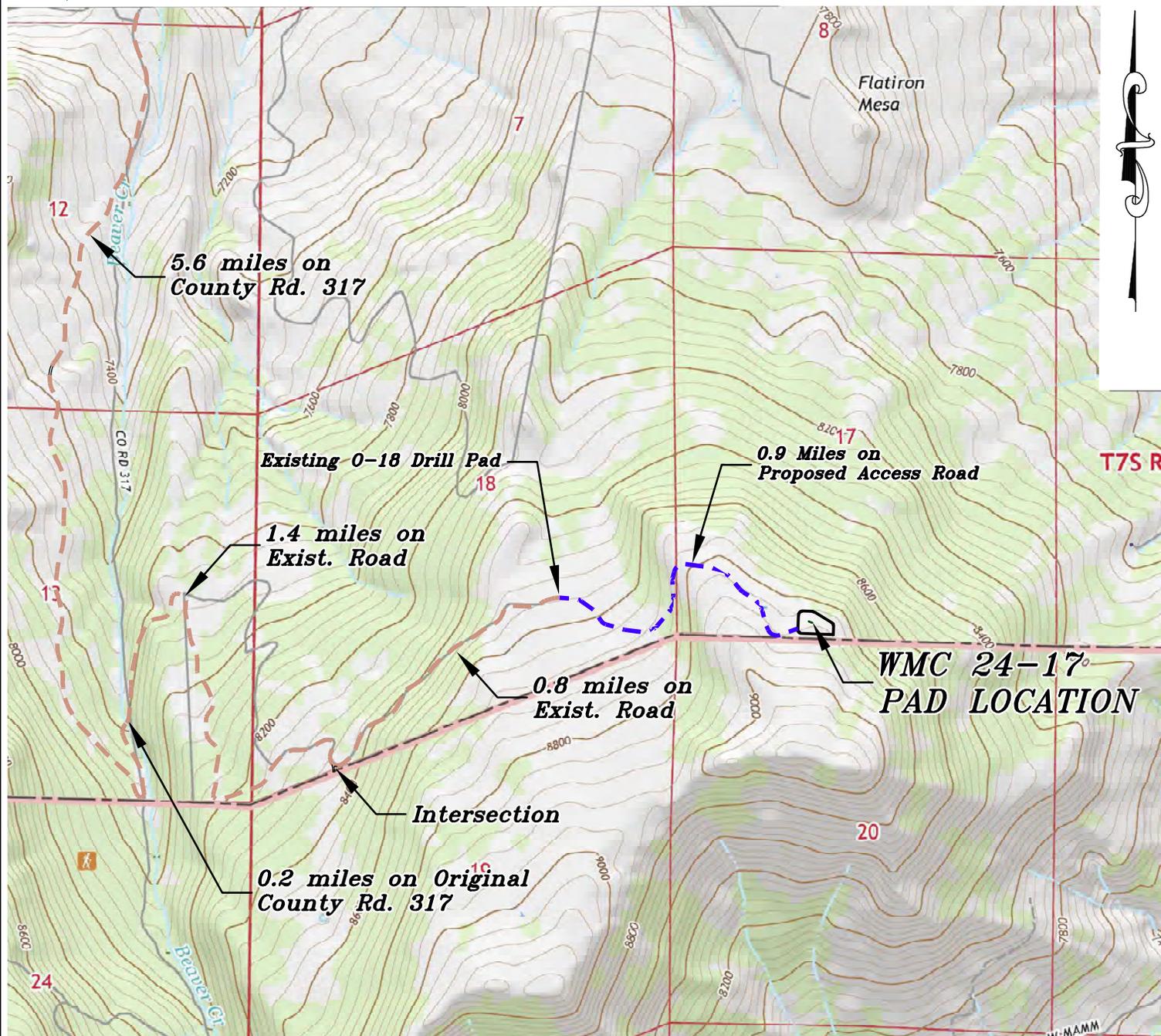
WMC 24-17 Drill Pad - Plat 3  
 MULTI-WELL PLAN

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Section 17  
T. 7 S., R. 93 W.



**ACCESS DESCRIPTION:**

FROM THE INTERSECTION OF STATE HIGHWAY 6 AND COUNTY ROAD 323 (RULISON ROAD) NORTH OF RULISON, PROCEED SOUTHERLY ALONG COUNTY ROAD 323 (RULISON ROAD) ±1.1 MILES TO THE INTERSECTION WITH COUNTY ROAD 309 (RULISON PARACHUTE ROAD), PROCEED LEFT IN AN EASTERLY DIRECTION ±2.3 MILES TO THE INTERSECTION WITH COUNTY ROAD 320 (RIFLE RULISON ROAD), PROCEED RIGHT IN AN EASTERLY DIRECTION ±6.2 MILES TO THE INTERSECTION WITH COUNTY ROAD 317 (BEAVER CREEK ROAD), PROCEED RIGHT ALONG COUNTY ROAD 317 IN A SOUTHERLY DIRECTION ±5.6 MILES TO A HAIR-PIN CURVE TO THE LEFT ON TO THE ORIGINAL COUNTY RD. 317 ±0.2 MILES TO AN INTERSECTION WITH THE EXISTING DIRT/GRAVEL ROAD, STAY RIGHT IN A NORTHERLY TO WESTERLY DIRECTION ±1.4 MILES TO A INTERSECTION, STAY LEFT ±0.8 MILES IN A NORTHEASTERLY DIRECTION TO THE EXISTING 0-18 DRILL PAD, PROCEED EASTERLY ACROSS DRILL PAD TO A NEWLY CONSTRUCTED ACCESS ROAD, PROCEED IN AN EASTERLY DIRECTION ±0.9 MILES TO THE PROPOSED WMC 24-17 DRILL PAD LOCATION, AS SHOWN HEREON.

REVISED: 10/13/20

SCALE:	1" = 2000'
DATE:	9/10/20
PLAT:	5 of 7
PROJECT:	TEP Valley
DFT:	cs

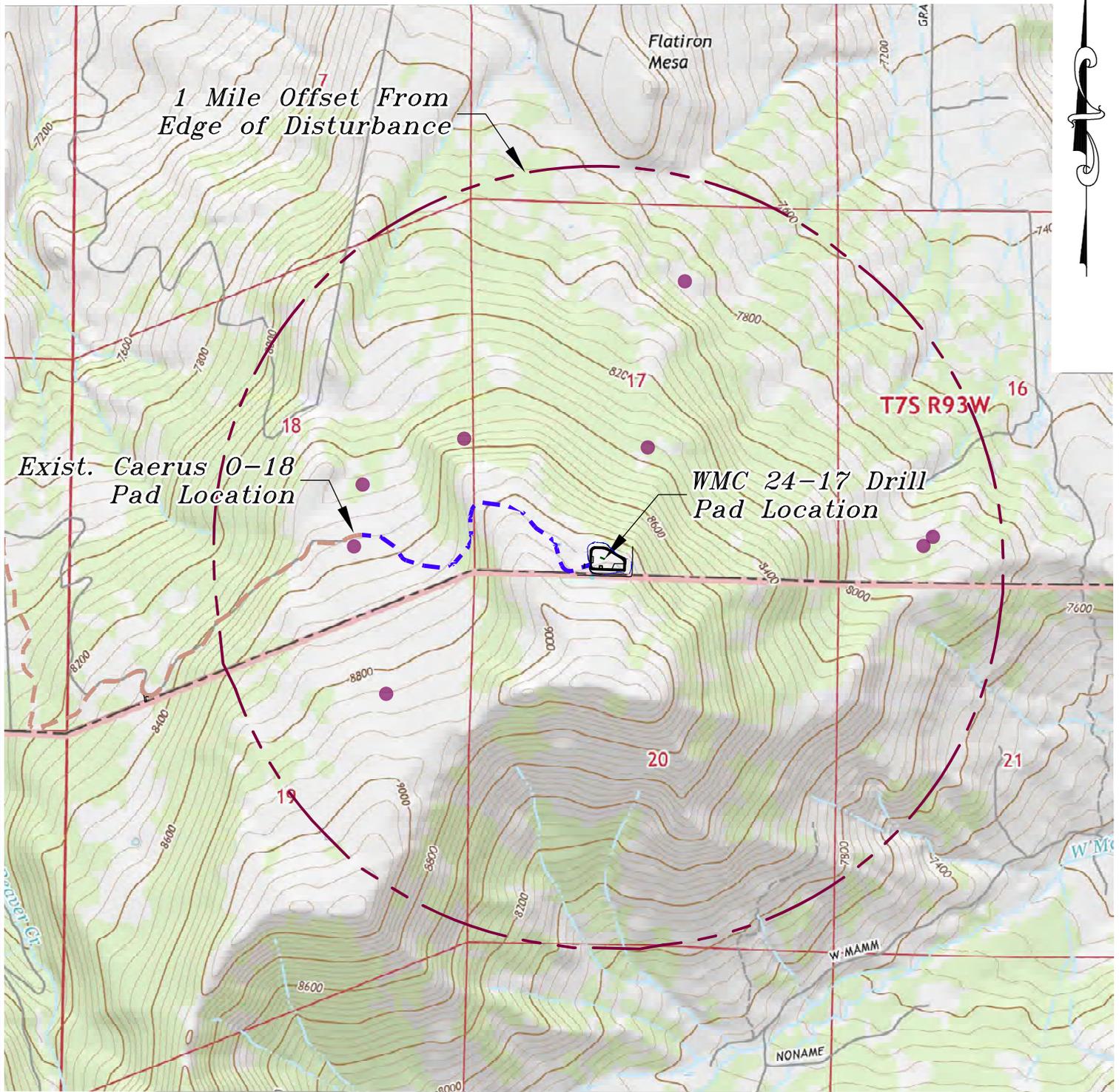
Construction Plan Prepared for:

**TERRA** TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 5  
ACCESS ROAD & TOPO MAP

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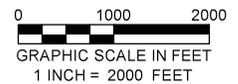




25 0000 0000000 0000 00000000

**LEGEND**

- KNOWN WELL LOCATIONS ●
- EXISTING ROAD - - - - -
- PROPOSED ROAD - - - - -



REVISED: 9/25/20

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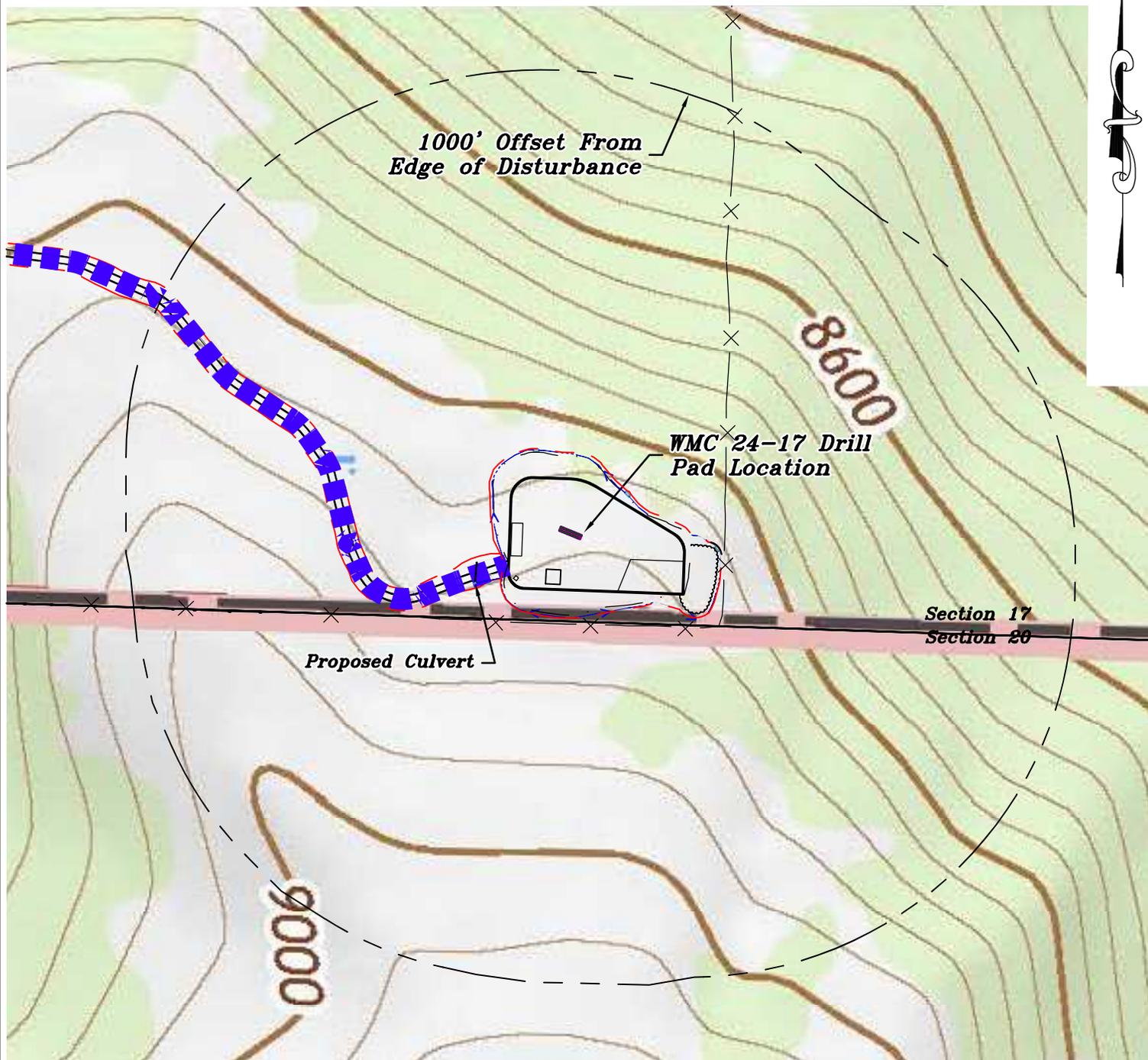


SCALE:	1" = 2000'
DATE:	9/10/20
PLAT:	5A of 7
PROJECT:	TEP Valley
DFT:	cs

Construction Plan Prepared for:



WMC 24-17 Drill Pad - Plat 5A  
WELL PROXIMITY MAP



**LEGEND**

- PROPOSED ROAD
- EXISTING DRAINAGE
- STORMWATER DRAINAGE CHANNEL

**NOTE:**

1. Nearest Water Well Permit No: 184747  
N Az. 310°57'11" 2536 ft.
2. Nearest Down Gradient Surface Water Feature:  
N Az. 255°20'06" 4191 ft.

REVISED: 10/20/20

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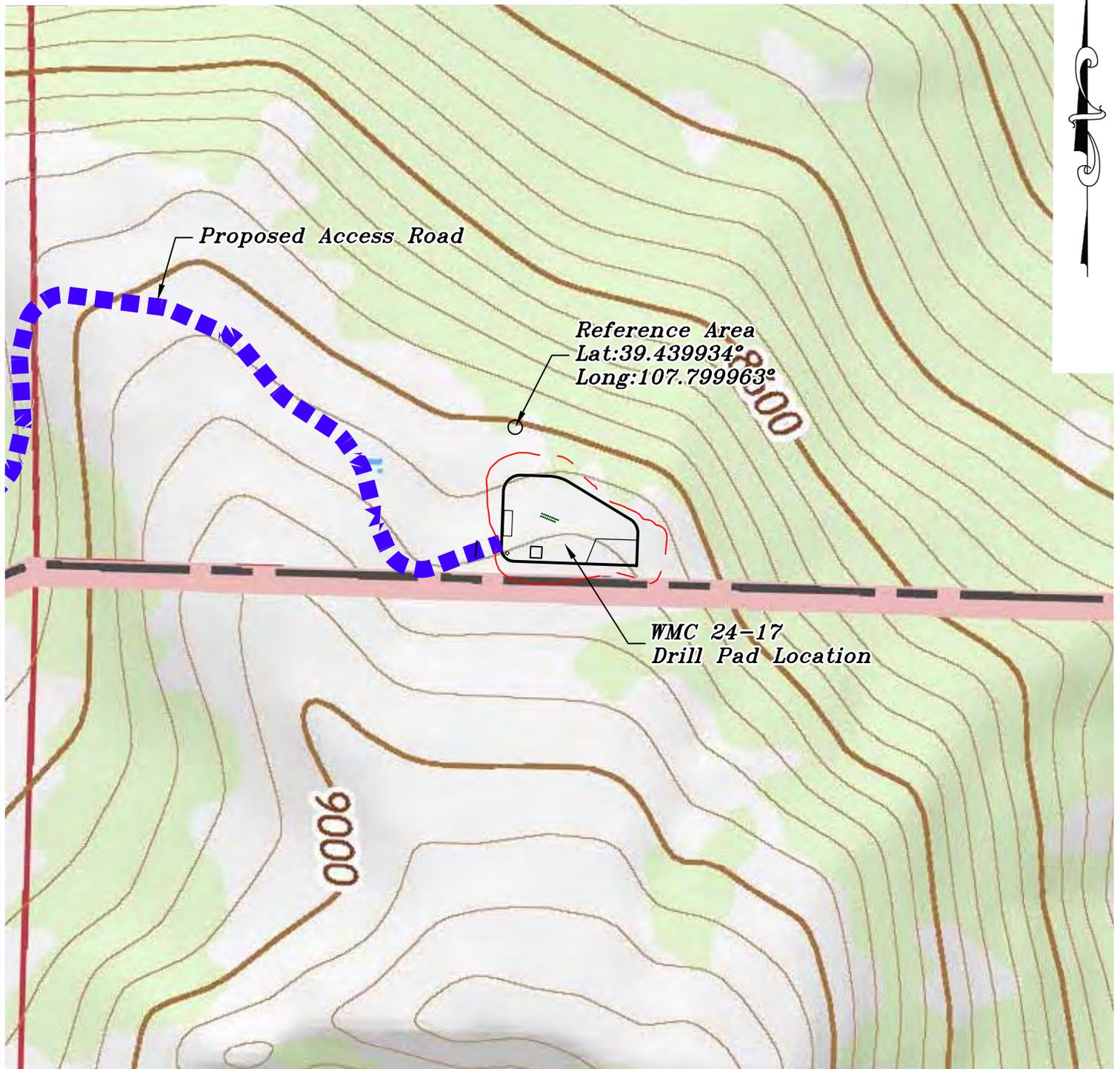


SCALE:	1" = 400'
DATE:	9/10/20
PLAT:	5B of 7
PROJECT:	TEP Valley
DFT:	cs

**Construction Plan Prepared for:**



WMC 24-17 Drill Pad - Plat 5B  
HYDROLOGY MAP



LEGEND

Proposed Road 

REVISED: 10/19/20

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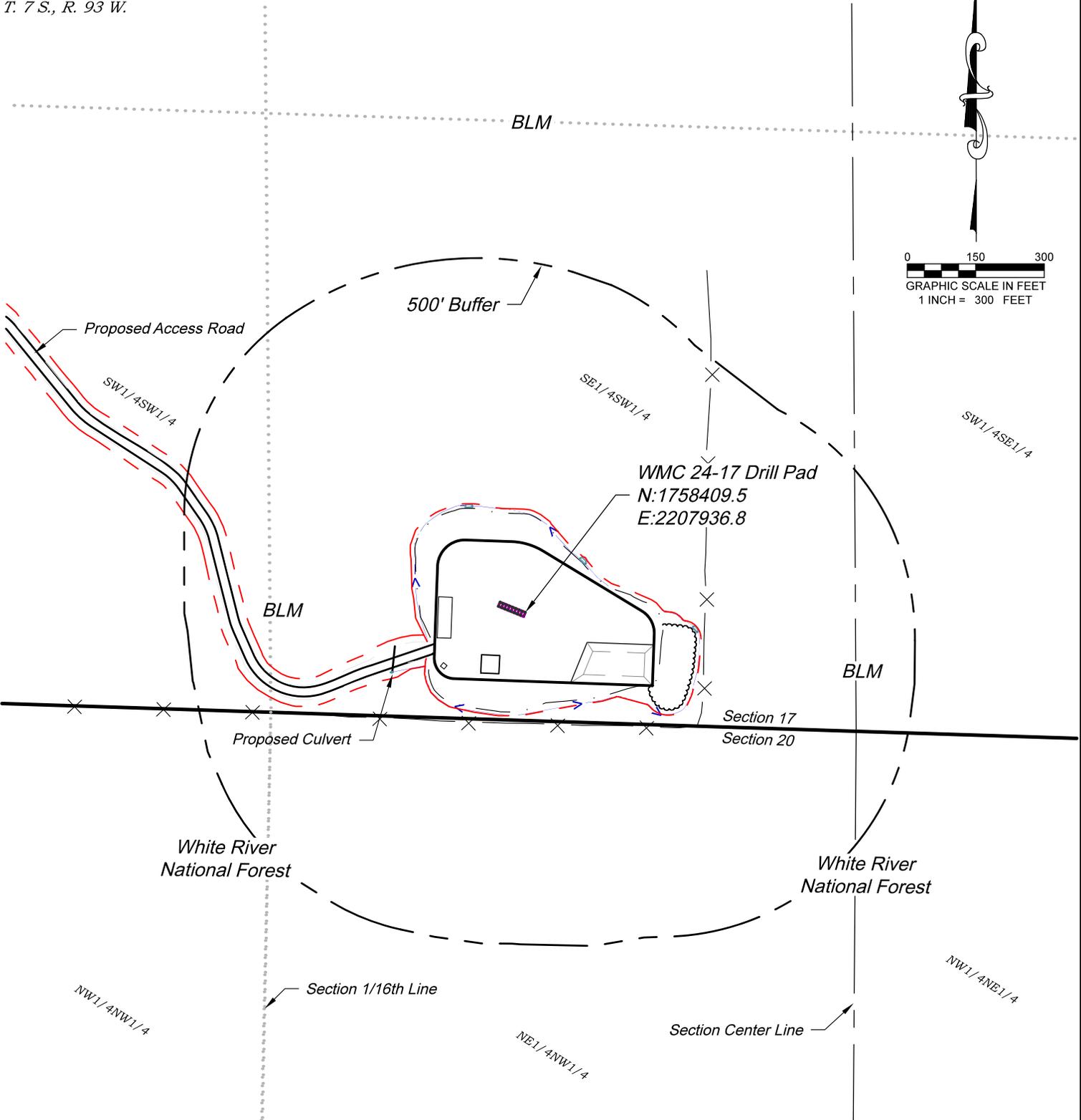
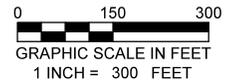
SCALE: 1" = 500'  
DATE: 9/10/20  
PLAT: 5C of 7  
PROJECT: TEP Valley  
DFT: cs

Construction Plan Prepared for:

 TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 5C  
REFERENCE AREA MAP

Section 17  
T. 7 S., R. 93 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 type="checkbox"/> OTHER (describe):	
<input type="checkbox"/> CRP		

REVISED: 10/19/20

SCALE:	1" = 300'
DATE:	9/10/20
PLAT:	6 of 7
PROJECT:	TEP Valley
DFT:	cs

Construction Plan Prepared for:



TEP Rocky Mountain LLC

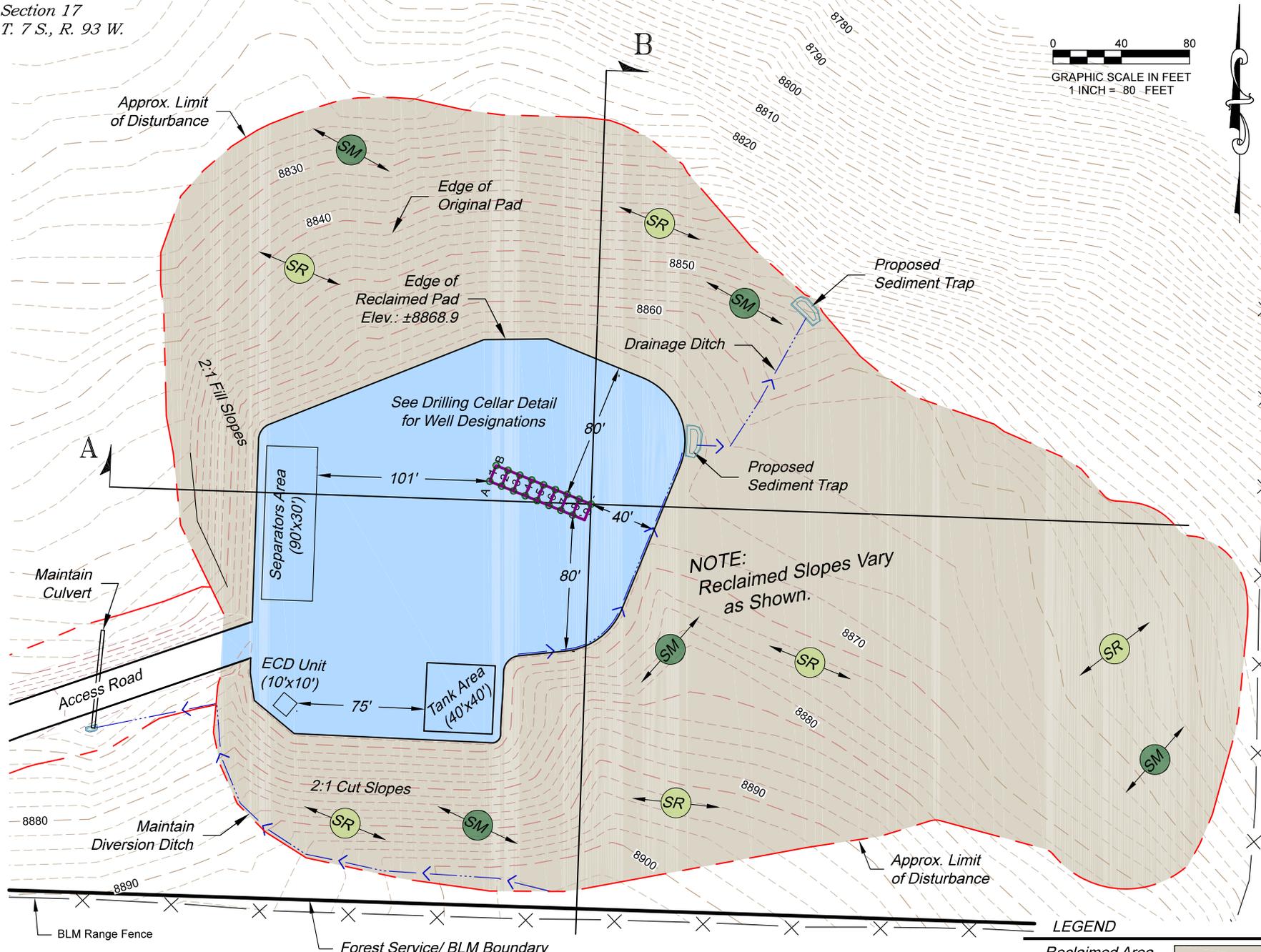
WMC 24-17 Drill Pad - Plat 6  
LOCATION DRAWING

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Section 17  
T. 7 S., R. 93 W.



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

Construction Plan Prepared for:  
**TERRA**  
TEP Rocky Mountain LLC  
WMC 24-17 Drill Pad - Plat 7  
INTERIM RECLAMATION LAYOUT

REVISED: 10/13/20  
SCALE: 1" = 80'  
DATE: 9/10/20  
PLAT: 2 of 7  
PROJECT: Valley  
DFT: cs

NOTE:  
Reclaimed Slopes Vary  
as Shown.

UnReclaimed Area: ±1.05 ac.  
Reclaimed Area: ±3.84 ac.  
Total Site Disturbance: ±4.89 ac.

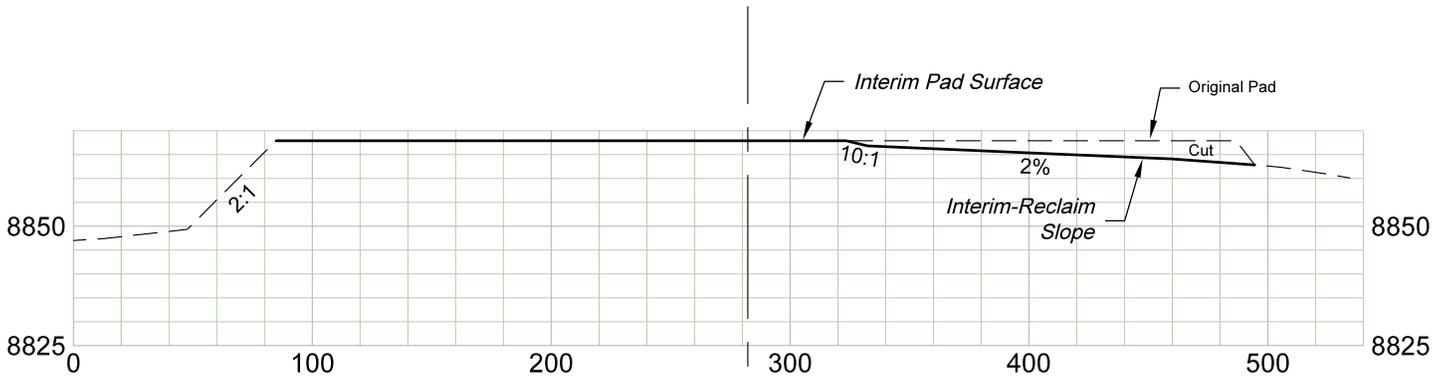
**LEGEND**

Reclaimed Area	
UnReclaimed Area	
Seed & Mulch	
Surface Roughening	

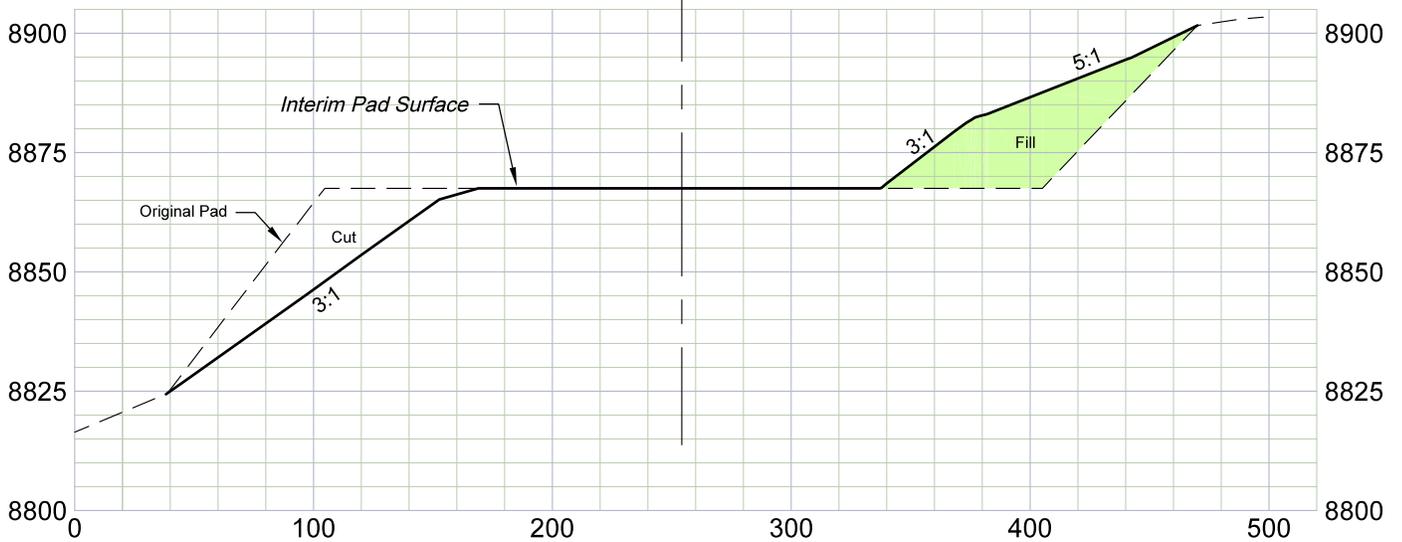
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⊕  
Interim Reclaim Pad



Section A



Section B

SCALE: Horiz.: 1" = 80'  
Vert. : 1" = 40'

**\*NOTE :**  
Reclam Slopes Vary as Shown.

REVISED: 9/28/20

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SCALE: As Noted  
DATE: 9/10/20  
PLAT: 7A of 7  
PROJECT: TEP Valley  
DFT: cs

Construction Plan Prepared for:



TEP Rocky Mountain, LLC

WMC 24-17 Drill Pad - Plat 7A

INTERIM RECLAMATION CROSS SECTIONS

**WMC 24-17 Pad  
Plan of Development Summary  
October 28, 2020**

INTRODUCTION

TEP Rocky Mountain, LLC (“TEP”) is proposing to drill, complete, and produce seventeen (17) new directional wells from the proposed WMC 24-17 pad located on Federal surface administered by the Bureau of Land Management (“BLM”) in the SE¼SW¼ of Section 17 of Township 7 South, Range 93 West, 6<sup>th</sup> P.M. The WMC 24-17 pad would be located north of the United States Forest Service (“USFS”) boundary and would overlie Federal lease COC-050944. All seventeen (17) proposed wells would be directionally drilled into Federal lease COC-075070 within Section 20 of Township 7 South, Range 93 West, 6<sup>th</sup> P.M.

Proposed Well Count: Seventeen (17)

Total Well Count: Seventeen (17) – Federal Lease COC-075070

Surface Ownership: Bureau of Land Management (BLM)

Spacing Orders (Section 20): Cause #1 – Order #229; Setback 100’ N/S and 600’ E/W

High Priority Wildlife Habitat:

Oil and Gas Location: None

Existing / Proposed Access Road: Designated Cutthroat Trout Critical Habitat

TEP would construct the WMC 24-17 pad to provide enough working surface to support drilling and completions operations. The existing access road to the Caerus O-18 pad (COGCC Loc ID: 311604) would be utilized with minor maintenance action planned during construction of the well pad. A new access road would be constructed from the Caerus O-18 pad to the proposed WMC 24-17 pad. TEP would also install new production facilities and pipelines to support efficient and effective well operations. TEP will utilize the existing RU 44-7 pad (COGCC Loc ID: 439173) for remote well completion operations and would install temporary surface lines between the RU 44-7 pad and WMC 24-17 pad to support well completion operations.

TEP is currently proposing to begin construction activities for the WMC 24-17 pad in the May of 2021. Construction activities are anticipated to take approximately ten (10) weeks to complete. Drilling operations are currently scheduled to occur from February of 2022 through May of 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 July of 2022. Interim reclamation of the WMC 24-17 pad would begin late summer of 2022 and would take approximately four (4) weeks to complete.

SITE ACCESS & CONSTRUCTION

The existing access road from Garfield County Road 317A to the Caerus O-18 pad would be utilized along with a new access road from the Caerus O-18 pad to the WMC 24-17 pad. The existing access road (approximately 12,541 feet or 2.37 miles) will undergo minor maintenance actions where necessary during construction of the WMC 24-17 pad. The proposed access road (approximately 4,526 feet or 0.86 mile) from the Caerus O-18 pad to the WMC 24-17 pad would be constructed crossing private and Federal property. The proposed access road would be constructed with a twenty-foot (20’) driving surface with two-and-one-half feet (2.5’) on either side for storm water control features including berms, bar ditches, rip-rap, and others necessary to effectively control stormwater along the proposed access road. Culverts will be installed at key points along the access road as shown on the Road Plan & Profile. Additional culverts installation locations may be identified during road construction and reviewed with the surface owner prior to installation. The road will be surfaced with gravel or other road

surfacing materials approved by the surface owner. The proposed access road from the Caerus O-18 pad to the WMC 24-17 Pad will be constructed with a total disturbance footprint of approximately 6.35 acres. Approximately 3.37 acres of the proposed disturbance footprint would be on private surface and 2.98 acres would be on Federal surface. Please see the attached Access Road Plan & Profile for additional details.

The proposed WMC 24-17 pad will be constructed to provide enough working pad surface to support drilling, completions, and production operations for the seventeen (17) proposed wells. Storm water controls including waddles, diversion ditches, sediment traps, and others, will be installed during construction of the location to effectively control storm water and sediment from the location. Existing vegetation will be hydro-axed / mulched prior to striping topsoil. Topsoil will be stripped and stockpile along the east side of the pad. The pad working surface will be approximately four-hundred-and-eighty feet (480') in length by three hundred feet (300') in width. The northeast corner (#7) will be constructed with a three (3) to four (4) foot high rock / boulder wall to preserve the stand of oak brush near this corner of the pad. This stand of oak brush is roughly fifteen-feet (15') tall and would help provide screening for the pad.

A drilling pit will be excavated in the southeast corner of the pad and used for water-based drill cuttings management during drilling operations. The proposed production facilities will be installed along the west side of the pad near the pad entrance. The WMC 24-17 pad will be constructed with a disturbance footprint of approximately 4.89 acres, all on Federal surface. Please see the construction layout for additional details regarding pad construction and storm water control features.

Rocks or boulders excavated during road and pad construction will be placed / stacked on the cut slope of the pad and / or road where appropriate. Placement of rocks / boulders will be reviewed with the surface owner prior to placement.

The existing RU 23-17 pad (COGCC Loc ID: 452566) will be utilized to support the natural gas sales meter, the rig fuel buy-back meter, and the pig launcher. A thirty-foot (30') by thirty-foot (30') equipment pad will be constructed northwest of the existing separators adjacent to the existing access road where the proposed meters will be installed. The existing gate and a section of the existing fence line on the north and south side of the existing road will be relocated near the existing twenty-four-inch (24") culvert northwest of the proposed equipment pad.

#### SITE EQUIPMENT LIST

TEP would install wellhead telemetry and other wellhead specific equipment on the WMC 24-17 pad to support production operations for the seventeen (17) proposed wells. TEP would also install production facilities, including separators, tanks, and Emission Control Devices ("ECD"), on the WMC 24-17 pad to effectively operate and produced the proposed wells. Proposed separators and ECD will be installed along the west side of the pad with approximately of one hundred feet (100') between the separators and proposed wellheads. Tanks will be installed with a lined steel containment structure ninety-nine feet (99') south of the proposed wellheads. Production equipment will be installed prior to commencement of drilling operations.

On the RU 23-17 pad, Summit Midstream will install a natural gas sales meter, a rig fuel buy-back meter, and a pig launcher on the proposed equipment pad north west of the existing separators. The meters and pig launcher will be installed within a thirty-foot (30') by thirty-foot (30') pad adjacent to the existing access road near the pad entrance.

The following describes the production facilities planned for use during drilling, completion, and production operations associated with the proposed wells on the WMC 24-17 pad:

1. Proposed WMC 24-17 Pad:

- a. Drilling Equipment:
    - i. Drilling Rig – Please see typical rig layout.
    - ii. Drilling Pit – Drilling cuttings management and disposal
  - b. Completions Equipment: Flowback Operations
    - i. Two (2) 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. TEP Production Equipment:
    - i. Proposed Separators: Eighteen (18) Separators within 90' x 30' area
      - 1. Four (4) Quad Separators
      - 2. One (1) Single Separator
      - 3. One (1) Low Pressure Separator
    - ii. Proposed Tank Battery: Four (4) Tanks within 40' x 40' Line Steel Containment
      - 1. Two (2) 500bbl Condensate Tanks; Internally Coated
      - 2. One (1) 80bbl Blowdown; Internally Coated
      - 3. One (1) 80bbl Vent Tank; Internally Coated
    - iii. Proposed Emissions Control Device: One (1) - 48" x 12'
2. Existing RU 23-17 Pad:
- a. Proposed Production Equipment:
    - i. One (1) Sales Meter
    - ii. One (1) Buyback Meter
3. Existing RU 44-7 Pad:
- a. Completions Equipment:
    - i. Eight (8) Completions Pumps
    - ii. Seventy (70) Five Hundred Barrel (500bbl) Frac Tanks
    - iii. One (1) Blender
    - iv. Three (3) Sand Silos

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

### PROPOSED PIPELINES

TEP would install one (1) eight-inch (8") steel gas pipeline (approximately 2855 feet) and one (1) four-inch (4") FlexPipe produced water pipeline (approximately 2892 feet) from the WMC 24-17 pad following an existing range fence to the tie-in point with an existing eight-inch (8") natural gas pipeline operated by Summit and an existing four-inch (4") produce water pipeline operated by TEP located near the RU 23-17 pad in NE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 17, Township 7 South, Range 93 West, 6<sup>th</sup> P.M. The proposed gas and water pipelines will be collocated in the same trench within a fifty-foot (50') right-of-way (35' permanent and 15' temporary). The water and gas pipelines will be installed with approximately eighteen-inch (18") of separation and will be buried with a minimum depth of cover of forty-eight-inch (48").

To minimize the visual impact of the pipeline corridor to public viewers north of the corridor, TEP would conduct tree thinning adjacent to the proposed pipeline corridor. Areas of tree thinning would be determined after the pipeline right-of-way has been cleared. TEP would meet with the Authorized Officer following right-of-way

clearing to evaluate extent of visual impacts and to identify areas along the right-of-way for tree thinning. Tree thinning along the right-of-way would be used to break up the vertical line of the right-of-way on the landscape and blends edges of the right-of-way into the surrounding landscape.

The following outlines the proposed on-location pipelines that will be installed at the WMC 24-17 pad during site construction. Please see the Facility Layout Drawing for a depiction of onsite equipment and piping.

1. Seventeen (17) two-inch (2") Coated Steel Wellhead Flowlines (approximately 100' each)
2. One (1) two-inch (2") Coated Steel Condensate Dump Line (approximately 85')
3. One (1) two-inch (2") Coated Steel Fuel Gas Flowline (rig fuel; approximately 100')
4. One (1) two-inch (2") Coated Steel Flowline (blowdown; approximately 85')
5. One (1) two-inch (2") Coated Steel Flowline (waterline vent; approximately 85')
6. One (1) four-inch (4") Aluminum Surface Vent Flowline (ECD; approximately 75')
7. One (1) one-inch (1") Steel Gas Supply Flowline (ECD; approximately 60')

Please see the attached Facility Layout Drawing showing all proposed equipment and associated pipeline planned for installation during development of the WMC 24-17 pad.

#### ELECTRICAL

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

#### DRILL CUTTINGS MANAGEMENT

Drill cuttings generated during drilling operations on the WMC 24-17 pad will be managed within a drilling pit constructed in the southeast corner of the pad. The drilling pit would be approximately one-hundred-and-eighty feet (180') in length by ninety feet (90') in width, with a depth of approximately nineteen feet (19'). Drill cuttings are estimated at three hundred and twenty-five cubic yards (325cy) per well, with a total drill cuttings volume of five-thousand-five-hundred and twenty-five cubic yards (5,525cy). The drilling pit has been designed with a maximum capacity of seven-thousand two-hundred and sixty cubic yards (7,260cy). The drilling pit would be constructed with a two- and one-half foot (2.5') high perimeter berm along the north, east, and western sides of the drilling pit to ensure containment of drill cuttings. A wildlife ramp will be constructed near the northeast corner to prevent entrapment.

#### COMPLETIONS OPERATIONS

Completions operations will be conducted remotely from the RU 44-7 pad. SIMOPS will be employed during development of the seventeen (17) proposed. Water will be transported from the Beaver Creek Completions Pit 11-7-793 (COGCC Loc ID: 432702) to the RU 44-7 pad via two (2) existing six-inch (6") FlexSteel water pipelines. Temporary completions equipment including frac tanks, blenders, sand silos, and pumps would be temporarily staged on the RU 44-7 pad during well completion operations. See the Site Equipment List section above for specific details on proposed temporary completion equipment.

TEP will install five (5) four-and-one-half-inch (4.5") steel temporary surface frac lines (approx. 7,654') from the RU 44-7 frac pad to the WMC 24-17 pad following the existing access road and proposed pipeline corridor.

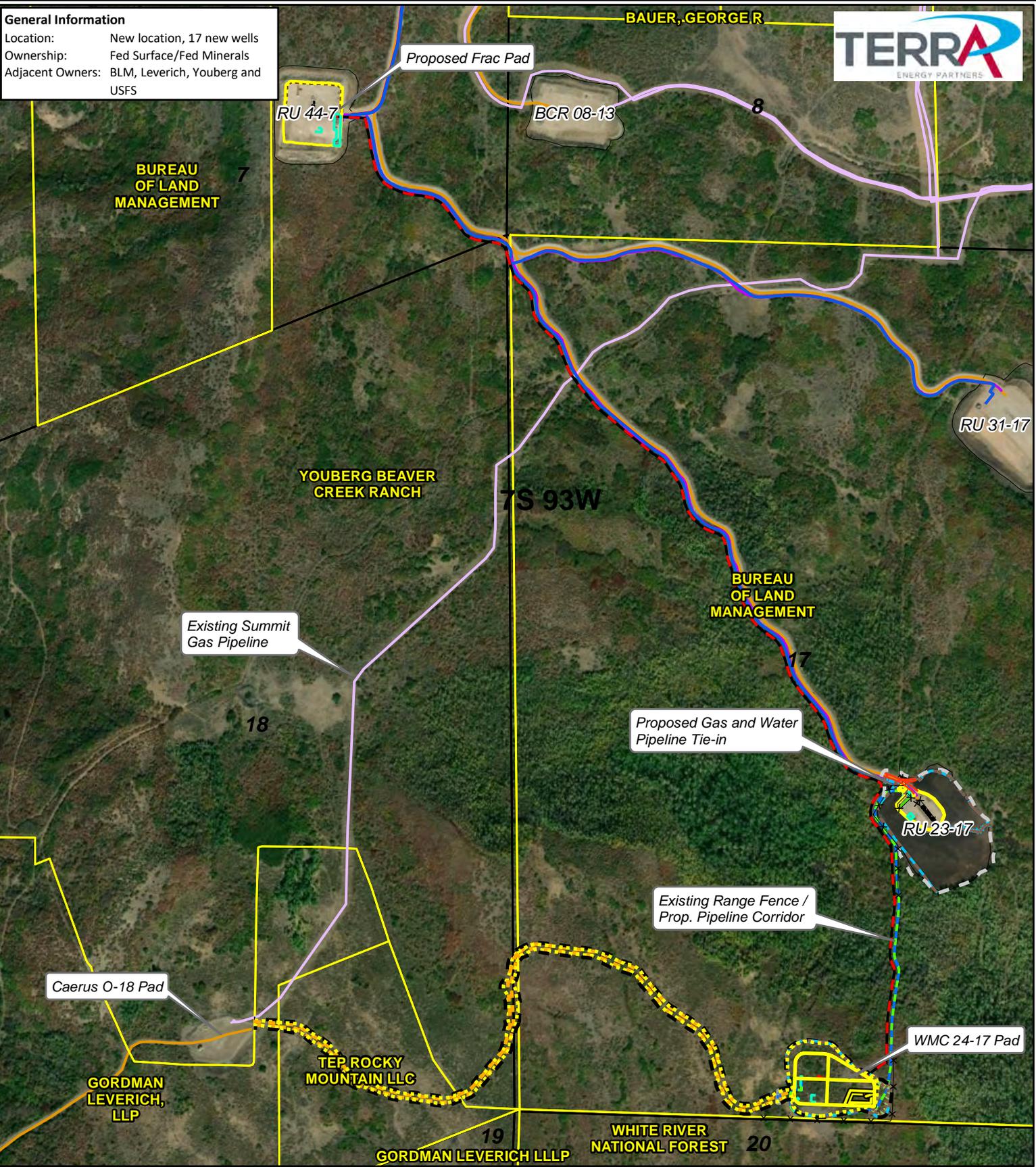
Flowback operations will occur on the WMC 24-17 pad. Returned stimulation fluids generated during flowback operations would be processed through four (4) phase separators to separate gas, water, condensate, and sand. Water would be reused during future well completion operations on the WMC 24-17 pad or transported via

pipelines to TEP operated water management facilities. Frac sand would be managed within a forty-foot (40') by forty-foot (40') area with two- and one-half foot (2.5') high earthen berms surrounding all sides of the management area. The frac sand management area would be located on pad within the pad perimeter berm near the drilling pit.

#### SITE RECLAMATION

Within six (6) months following completions of planned operations on the WMC 24-17 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.

**General Information**  
 Location: New location, 17 new wells  
 Ownership: Fed Surface/Fed Minerals  
 Adjacent Owners: BLM, Leverich, Youberg and USFS



- Legend**
- Proposed Cellar
  - Propose Pad Edge
  - Proposed Drilling Pit
  - Proposed Daylight Line
  - Proposed Limit of Disturbance
  - Proposed Production Equipment
  - Proposed Road
  - Proposed Topsoil Stockpile
  - Existing Fence
  - Stormwater Controls
  - Proposed Culvert
  - Proposed Gas Pipeline
  - Proposed Frac Lines
  - Parcel Ownership
  - Existing Gas Pipeline
  - Existing Water Pipeline
  - Existing Condensate Pipeline
  - Summit / Red Rock Gathering
  - Summit / Grand River Gathering
  - Existing Road
  - Existing Pad

**TEP Rocky Mountain LLC**

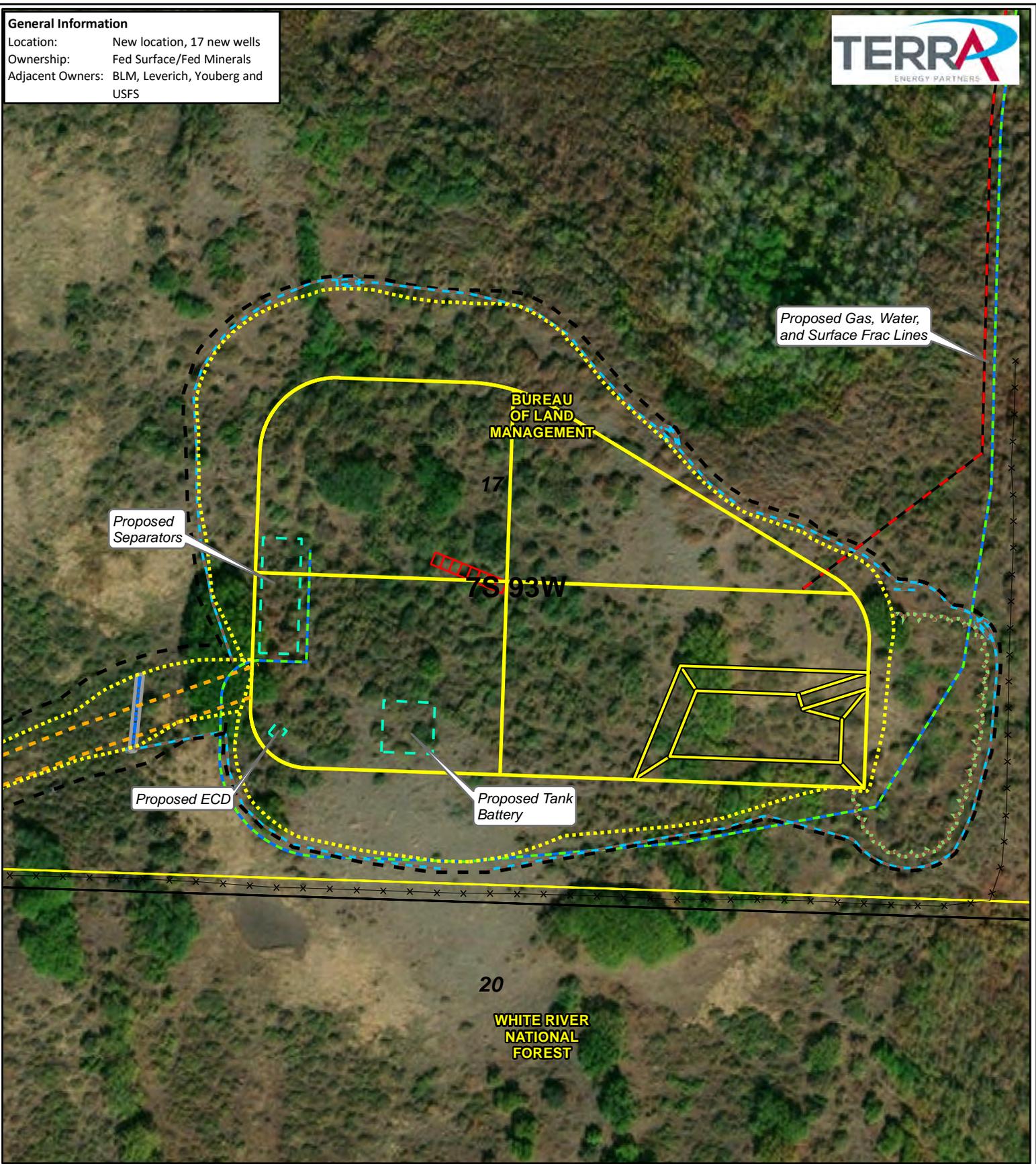
**WMC 24-17 Pad  
 Plan of Development  
 T7S R93W, Section 17**

**October 12, 2020**



**General Information**

Location: New location, 17 new wells  
Ownership: Fed Surface/Fed Minerals  
Adjacent Owners: BLM, Leverich, Youberg and USFS

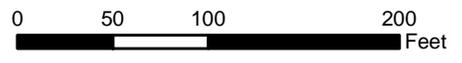


- Legend**
- Proposed Cellar
  - Proposed Pad Edge
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  - Proposed Limit of Disturbance
  - Proposed Production Equipment
  - Proposed Road
  - Proposed Topsoil Stockpile
  - Existing Fence
  - Stormwater Controls
  - Proposed Culvert
  - Proposed Pipelines
  - Proposed Frac Lines
  - Parcel Ownership

**TEP Rocky Mountain LLC**

**WMC 24-17 Pad  
Plan of Development  
T7S R93W, Section 17**

**October 12, 2020**



**Common plant species occurring in the project area.**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Abundance*</b>	<b>Habitat Type</b>
<b>Grasses</b>			
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	xx	Mountain shrublands, reclaimed areas
Kentucky bluegrass	<i>Poa pratensis</i>	xx	Mountain shrublands, aspen woodlands
Muttongrass	<i>Poa fendleriana</i>	xx	Mountain shrublands
Needle and thread	<i>Hesperostipa comata</i>	xx	Mountain shrublands
Prairie Junegrass	<i>Koeleria macrantha</i>	x	Mountain shrublands
Slender wheatgrass	<i>Elymus trachycaulus</i>	xx	Mountain shrublands
Smooth brome	<i>Bromus inermis</i>	xx	Disturbed areas, aspen woodlands
Squirreltail	<i>Elymus elymoides</i>	xx	Mountain shrublands
Western wheatgrass	<i>Pascopyrum smithii</i>	x	Mountain shrublands, reclaimed areas
<b>Forbs</b>			
American vetch	<i>Vicia americana</i>	xx	Mountain shrublands, aspen woodlands
Arizona mule-ears	<i>Wyethia arizonica</i>	xxx	Mountain shrublands
Arrowleaf balsamroot	<i>Balsamorhiza sagitta</i>	xx	Mountain shrublands
Aspen fleabane	<i>Erigeron speciosus</i>	xx	Mountain shrublands
Bastard toadflax	<i>Comandra umbellata</i>	xx	Mountain shrublands
Bigleaf lupine	<i>Lupinus polyphyllus</i>	x	Mountain shrublands
Blue-eyed Mary	<i>Collinsia parviflora</i>	xx	Mountain shrublands
Brittle pricklypear	<i>Opuntia fragilis</i>	xx	Mountain shrublands
Common dandelion	<i>Taraxacum officinale</i>	x	Mountain shrublands
Common yarrow	<i>Achillea millefolium</i>	xxx	Mountain shrublands

Drummond's rockcress	<i>Arabis drummondii</i>	xx	Mountain shrublands
Dusty penstemon	<i>Penstemon comarrhenus</i>	xx	Mountain shrublands
Fendler's sandwort	<i>Arenaria fendleri</i>	xx	Mountain shrublands
Lesser rushy milkvetch	<i>Astragalus convallarius</i>	xx	Mountain shrublands
Lewis flax	<i>Linum lewisii</i>	xx	Mountain shrublands
Littleflower alumroot	<i>Heuchera parviflora</i>	x	Mountain shrublands
Lobeleaf groundsel	<i>Packera multilobata</i>	xx	Mountain shrublands
Longleaf phlox	<i>Phlox longifolia</i>	xx	Mountain shrublands
Louisiana sagewort	<i>Artemisia ludoviciana</i>	x	Mountain shrublands
Mat penstemon	<i>Penstemon caespitosus</i>	x	Mountain shrublands
Mountain deathcamas	<i>Zigadenus elegans</i>	xx	Mountain shrublands
Nineleaf biscuitroot	<i>Lomatium triternatum</i>	x	Mountain shrublands
Pale agoseris	<i>Agoseris glauca</i>	xx	Mountain shrublands
Pearly pussytoes	<i>Antennaria anaphaloides</i>	x	Mountain shrublands
Porter's licorice-root	<i>Ligusticum porteri</i>	xx	Aspen woodlands
Rocky Mountain Iris	<i>Iris missouriensis</i>	xxx	Mountain shrublands
Rosy pussytoes	<i>Antennaria rosea</i>	xx	Mountain shrublands
Scarlet gilia	<i>Ipomopsis aggregata</i>	xx	Mountain shrublands
Silvery lupine	<i>Lupinus argenteus</i>	xx	Mountain shrublands, aspen woodlands
Slender cinquefoil	<i>Potentilla gracilis</i>	xx	Mountain shrublands
Sulphur flower buckwheat	<i>Eriogonum umbellatum</i>	xx	Mountain shrublands
Sweetcicely	<i>Osmorhiza berteroi</i>	xx	Aspen woodlands
Tapertip onion	<i>Allium acuminatum</i>	x	Mountain shrublands
Twolobe larkspur	<i>Delphinium nuttallianum</i>	x	Mountain shrublands

Twolobe speedwell	<i>Veronica biloba</i>	xx	Mountain shrublands
Wooly cinquefoil	<i>Potentilla hippiana</i>	xx	Mountain shrublands
Wyoming Indian paintbrush	<i>Castilleja linariifolia</i>	xx	Mountain shrublands
<b>Shrubs/Trees</b>			
Antelope bitterbrush	<i>Purshia tridentata</i>	xx	Mountain shrublands
Black sagebrush	<i>Artemisa nova</i>	x	Mountain shrublands
Chokecherry	<i>Prunus virginiana</i>	xx	Aspen woodlands
Gambel oak	<i>Quercus gambelii</i>	xxx	Mountain shrublands
Longflower rabbitbrush	<i>Chrysothamnus depressus</i>	xx	Mountain shrublands
Mountain mahogany	<i>Cercocarpus montanus</i>	xxx	Mountain shrublands
Mountain snowberry	<i>Symphoricarpos oreophilus</i>	xxx	Mountain shrublands, Aspen woodlands
Quaking aspen	<i>Populus tremuloides</i>	xxx	Aspen woodlands
Rocky Mountain maple	<i>Acer glabrum</i>	xx	Aspen woodlands
Saskatoon serviceberry	<i>Amelanchier alnifolia</i>	xxx	Mountain shrublands, Aspen woodlands
Woods' Rose	<i>Rosa woodsii</i>	xx	Mountain shrublands, Aspen woodlands
Yellow rabbitbrush	<i>Chrysothamnus viscidflorus</i>	xx	Mountain shrublands

\*Abundance:

xxx= High frequency; with uniform distribution across project area.

xx= Moderate frequency; occurrence scattered throughout project area.

x= Infrequent; only a small number of individuals noted within project area.

**WMC 24-17 Proposed Seed Mix**

<b>Mixed Mountain Shrubland, including Oakbrush and Mountain Sagebrush (16-22 inches precip.)</b>					
<i>Common Name</i>	<i>Species Name</i>	<i>Variety</i>	<i>Seeds per Pond</i>	<i>PLS lbs/acre</i>	
<b>Plant <u>Three</u> of the Following Grasses (15% of Mix Each, 45% Total)</b>					
Bluebunch Wheatgrass	<i>Pseudoroegneria spicata</i>	Colorado/Utah source, or Anatone, Goldar	140,000	2.8	
Indian Ricegrass (lower elevations)	<i>Achnatherum hymenoides</i>	UP* White River preferred, or Nezpar, Paloma, Rimrock	141,000	2.8	
Mountain Brome (higher elevations)	<i>Bromopsis marginatus</i>	UP* Cold Springs preferred, or Bromar, Garnet	64,000	6.1	
Slender Wheatgrass	<i>Elymus trachycaulus</i>	San Luis	159,000	1.6	
<b>And <u>Two</u> of the Following Grasses (10% of Mix Each, 20% Total)</b>					
Prairie Junegrass	<i>Koeleria macrantha</i>	Colorado/Utah source preferred	2,315,000	0.1	
Sandberg Bluegrass	<i>Poa secunda</i> "sandbergii"	UP* Colorado-Sims Mesa, or High Plains	882,000	0.3	
Muttongrass	<i>Poa fendleriana</i>	Colorado/Utah source preferred	890,000	0.3	
<b>And <u>One</u> of the Following Grasses (10% of Mix, 10% Total)</b>					
Columbia Needlegrass	<i>Achnatherum nelsonii</i>	Colorado/Utah source preferred	150,000	1.7	
Letterman's Needlegrass	<i>Achnatherum lettermanii</i>	Colorado/Utah source preferred	225,000	1.2	
Needle-and-Thread	<i>Hesperostipa comata</i>	Colorado/Utah source preferred	115,000	2.2	
<b>And <u>One</u> of the Following Grasses (10% of Mix, 10% Total)</b>					
Thickspike Wheatgrass (coarser soil)	<i>Elymus lanceolatus</i>	Bannock, Critana, Schwendimar	154,000	1.7	
Western Wheatgrass (finer soil)	<i>Pascopyrum smithii</i>	UP* or Colorado/Utah source, or Arriba, Recovery, Rodan, Rosana	110,000	2.4	
<b>And <u>Five</u> of the Following Subshrubs/Forbs (3% of Mix Each, 15% Total)</b>					
<i>Common Name</i>	<i>Scientific Name</i>	<i>PLS lbs/acre</i>	<i>Common Name</i>	<i>Scientific Name</i>	<i>PLS lbs/acre</i>
American Vetch	<i>Vicia americana</i>	2.4	Rydberg's Penstemon	<i>Penstemon rydbergii</i>	0.09
Arrowleaf Balsamroot	<i>Balsamorhiza sagittata</i>	1.4	Scarlet Gilia	<i>Ipomopsis aggregata</i>	0.2
Bigelow's Tansy-aster	<i>Dieteria bigelovii</i>	0.05	Scarlet Globemallow	<i>Sphaeralcea coccinea</i>	0.16
Blanketflower	<i>Gaillardia aristata</i>	0.6	Showy Daisy	<i>Erigeron speciosus</i>	0
Broom Snakeweed	<i>Gutierrezia sarothrae</i>	0.05	Showy Golden-eye	<i>Heliomeris multiflora</i>	0.07
Creeping Holly-grape	<i>Mahonia repens</i>	1.5	Sticky Geranium	<i>Geranium viscosissimum</i>	1.6
Hairy Golden-aster	<i>Heterotheca villosa</i>	0.1	Sulphur Buckwheat	<i>Eriogonum umbellatum</i>	0.4
Lewis Blue Flax	<i>Linum lewisii</i>	0.5	Tailcup Lupine	<i>Lupinus caudatus</i>	4.4
Mule's-ears	<i>Wyethia amplexicaulus</i>	2.8	Tapertip Hawks-beard	<i>Psilochenia (Crepis) acuminata</i>	0.1
Rocky Mountain Beeplant	<i>Peritoma serrulata</i>	0.7	Utah Sweetvetch	<i>Hedysaurum boreale</i>	1.7
Rocky Mountain Penstemon	<i>Penstemon strictus</i>	0.1	Western Yarrow	<i>Achillea millefolium</i>	0.03

**CITY OF RIFLE, COLORADO  
ORDINANCE NO. 7  
SERIES OF 2018**

AN ORDINANCE OF THE CITY OF RIFLE, COLORADO, AMENDING  
ARTICLE II OF CHAPTER 13 OF THE RIFLE MUNICIPAL CODE  
PERTAINING TO THE RIFLE WATERSHED DISTRICT.

WHEREAS, the City of Rifle ("Rifle" or the "City") is a home-rule municipality organized pursuant to Article XX of the Colorado Constitution and with the authority of the Rifle Home Rule Charter; and

WHEREAS, Article II of Chapter 13 of the Rifle Municipal Code establishes the City's Watershed District and sets for the permitting and regulatory requirements within the Watershed District, as provided pursuant to the authority of Section 31-15-707, C.R.S.; and

WHEREAS, the City has recently decommissioned its Beaver Creek Water Plant affecting the regulation of the Beaver Creek watershed and requiring amendments to Article II, Chapter 13 of the Rifle Municipal Code; and

WHEREAS, the City desires to clarify prohibited and regulated activities in its watershed with amendments to Section 13-2-240 of the Rifle Municipal Code; and

NOW, THEREFORE, THE COUNCIL OF THE CITY OF RIFLE, COLORADO, ORDAINS THAT:

1. The City Council incorporates the foregoing recitals as conclusions, facts, determinations, and findings by the City Council.

2. Chapter 13, Article 2 of the Rifle Municipal Code is hereby amended as follows, with double underlined text added and ~~strike-through language deleted~~:

**Article II – Watershed District**

**Division 1 – General Provisions**

**Sec. 13-2-20. - Jurisdiction and map.**

The jurisdiction of the District shall extend over the territory occupied by the City waterworks and all reservoirs, streams, trenches, pipes and drains used in and necessary for the construction, maintenance and operation of the same, and over ~~Beaver Creek~~, the Colorado River and all water sources and drainage areas tributary thereto for five (5) miles above the points from which water is diverted for use by the City. The District Map, with all notations, references and

other information shown thereon, is incorporated herein as part of this Article. The official District Map is located and can be reviewed in the office of the City Clerk, and copies thereof are available on request at a cost as set forth in Appendix A to this Code.

**Sec. 13-2-30. - Definitions.**

Whenever the following words or phrases are used in this Article, they shall have the following meaning:

\*\*\*\*

*Tributary* means any watercourse, stream, creek, spring or drainage area which provides a source of supply to the City's potable water diversion points on ~~Beaver Creek~~ and the Colorado River.

\*\*\*\*

**Sec. 13-2-40. - Prohibited activities; permitted activities requiring notice.**

(a) It is unlawful for any person to cast, place, dump or deposit in any part of the City waterworks any substance or material which may injure or obstruct the same or tend to contaminate or pollute the water or obstruct the flow of water through the City's water facilities. For a distance of five (5) miles upstream from the points where the water supply is diverted, no person shall:

- (1) Throw, cast, put or deposit any pollutant or contaminant into or in close proximity to ~~Beaver Creek~~, the Colorado River, or any of ~~their~~ its tributaries or drainage areas;
- (2) Store or retain any offensive or unwholesome substance on any premises in such position that the substance or drainage therefrom may be carried by natural causes into ~~Beaver Creek~~, the Colorado River, or any of ~~their~~ its tributaries or drainage areas; or
- (3) Permit to flow into ~~Beaver Creek~~, the Colorado River, or any of ~~their~~ its tributaries or drainage areas from any place or premises any foul or contaminating fluid.

(b) It shall be unlawful for any person to cause injury or damage to the City waterworks.

(c) In addition to the general prohibitions of Sections 13-1-820, 13-1-830 of this Chapter and Subsections (a) and (b) above, it shall be unlawful for any person to engage in any of the following activities within the Watershed District, which activities the City Council finds pose a potential or threat of injury to the waterworks or pollution to the City's water supply, unless such person shall, prior to commencement of such activity, receive a permit for such activity under the provisions of this Article:

- (1) Construction, maintenance and/or operation of any sewage treatment disposal system with an average design capacity greater than 2,000 gallons per day; provided that

any sewage disposal system with an average design capacity less than or equal to 2,000 gallons per day is also subject to regulation under this Article if it is not installed, operated and maintained in compliance with all applicable laws, rules, regulations, permits, and Best Management Practices which condition is met if Garfield County regulations are adhered to, or is located within one hundred (100) feet of any watercourse. Construction or installation of a sewage disposal system.

(2) Construction, maintenance and/or operation of a surface or subsurface tank that stores chemicals, chemical waste, biological nutrient or material, radioactive material, petroleum product, or any industrial, municipal or agricultural waste, excepting residential propane tanks and septic systems.

(32) Excavation, dredging, filling, grading, or compaction of any topsoil, sand, rock, dirt, or other material over an area in excess of 0.5 acre. The area disturbed by the construction and maintenance of a driveway to a single family residence shall not be included in the calculation of the 0.5 acre threshold under this section. ~~Excavation, grading, filling or surfacing.~~

(43) Removal of any vegetation or trees by any method over an area in excess of 0.5 acre. ~~Removal of vegetation.~~

(4) ~~Timber harvesting.~~

(5) Any surface or subsurface mining or mineral resource extraction, including any and all oil and/or natural gas drilling, extraction or mining. ~~Drilling operations.~~

(6) Alteration, improvements or modifications of any water drainage courses.

(7) ~~Surface and subsurface mining operations.~~

(78) Use of any restricted use pesticide (RUP), herbicide fungicide, rodenticide, insecticide or any other chemical for eradication or control of any plants or animals that is within one hundred (100) feet of any watercourse. ~~Spraying or using herbicides.~~

(8) Construction of any impervious surface with an aggregate area greater than 25,000 square feet that could direct any contamination or pollutant toward watercourse or Town waterworks.

(9) Using, handling, storing or transmitting toxic or hazardous substances, including but not limited to radioactive materials.

(10) Using, handling, storing or transporting flammable or explosive materials, except for domestic purposes or within vehicular fuel storage tanks.

(11) Land application of primary, secondary, treated or untreated sewage, sewage sludge, biosolids, septage, mixed liquor, screenings, grit or any byproduct of sewage or sludge.

(12) Construction and operation of a feedlot unrelated to current farming and ranching operations.

(13) Any of the activities prohibited in this section regardless of the amount of acreage affected if such activities are located in or within one hundred (100) feet of any watercourse, and/or if such activity is associated with the construction of any water diversion, storage or conveyance structure, including but no limited to such structures as diversion headworks, dams, canals, ditches, flumes, pipelines, conduits, reservoirs, drains, wells, (excluding domestic wells serving less than three (3) residences) and pumps, and further including any equipment, buildings, structures, roads, and other facilities necessary for the construction, maintenance and operation of the structures.

(d) The following activities are permitted within the District, provided that written notification of such activity is provided to the City ten (10) days prior to commencement of such activity:

(1) Road maintenance by governmental entities.

(2) Construction or maintenance of farm or ranch roads, irrigation ditches or ponds, where such roads or ponds are constructed and maintained to assure that flow and circulation patterns and chemical and biological characteristics of all surface and groundwater resources are not impaired, and that any adverse effect on the aquatic environment will be otherwise minimized.

(3) Normal farming and ranching activities such as plowing, haying, seeding, cultivating, minor drainage, harvesting for the production of food and fiber, upland soil and water conservation practices, or livestock grazing.

(4) Normal maintenance of ponds, bridges, riprap, and drainage and irrigation ditches and related structures, including ditch burning whether by hand or with the use of equipment and machinery.

(5) Noxious weed or insect control.

(6) Removal of dead, insect infected or diseased trees.

(7) Construction of a livestock water tank as defined in C.R.S. §35-49-105 (2012).

(8) Maintenance of wetlands.

(9) Modifications to any watercourse for fisheries improvements or riparian habitat creation and/or restoration permitted by the Army Corps of Engineers.

(10) Emergency riparian work, provided that any permanent work shall be regulated if otherwise regulated by this ordinance; and

(11) Wildland fire mitigation and emergency firefighting activities; and

(12) Drilling of domestic wells serving less than (3) residences. ~~(1) Stock grazing~~

~~(2) Road maintenance and improves by governmental entities.~~

The written notice required under this Subsection shall include the name and address of the person undertaking the activity, a legal and common description of the location of the proposed activity, a description of the proposed activity, a discussion of the potential impacts upon the City's waterworks or water supply, and such other information as the City may require. The purpose of this notice requirement is to allow the City an opportunity to protect the waters of the District by suggesting a best management practice for such activity prior to its commencement.

(e) In the event that any activity not listed in Subsection (c) above is being conducted in such a manner that the City Council finds that there exists a foreseeable risk of injury to the City's waterworks or pollution to the City's water supply, the person responsible for such activity shall be notified by the City of such finding and the City may require that the activity cease and desist until a permit is obtained for the activity under the provisions of this Article.

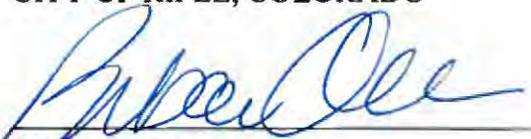
INTRODUCED on May 16, 2018, read by title, passed on first reading, and ordered published by title as required by the Charter.

INTRODUCED a second time at a regular meeting of the Council of the City of Rifle, Colorado, held on June 6, 2018, passed without amendment, approved, and ordered published in full as required by the Charter.

Dated this 6 day of June 2018.

CITY OF RIFLE, COLORADO

BY:

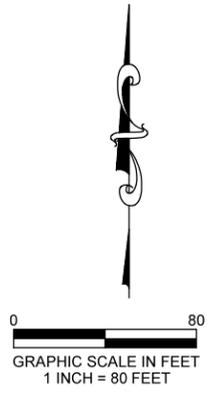
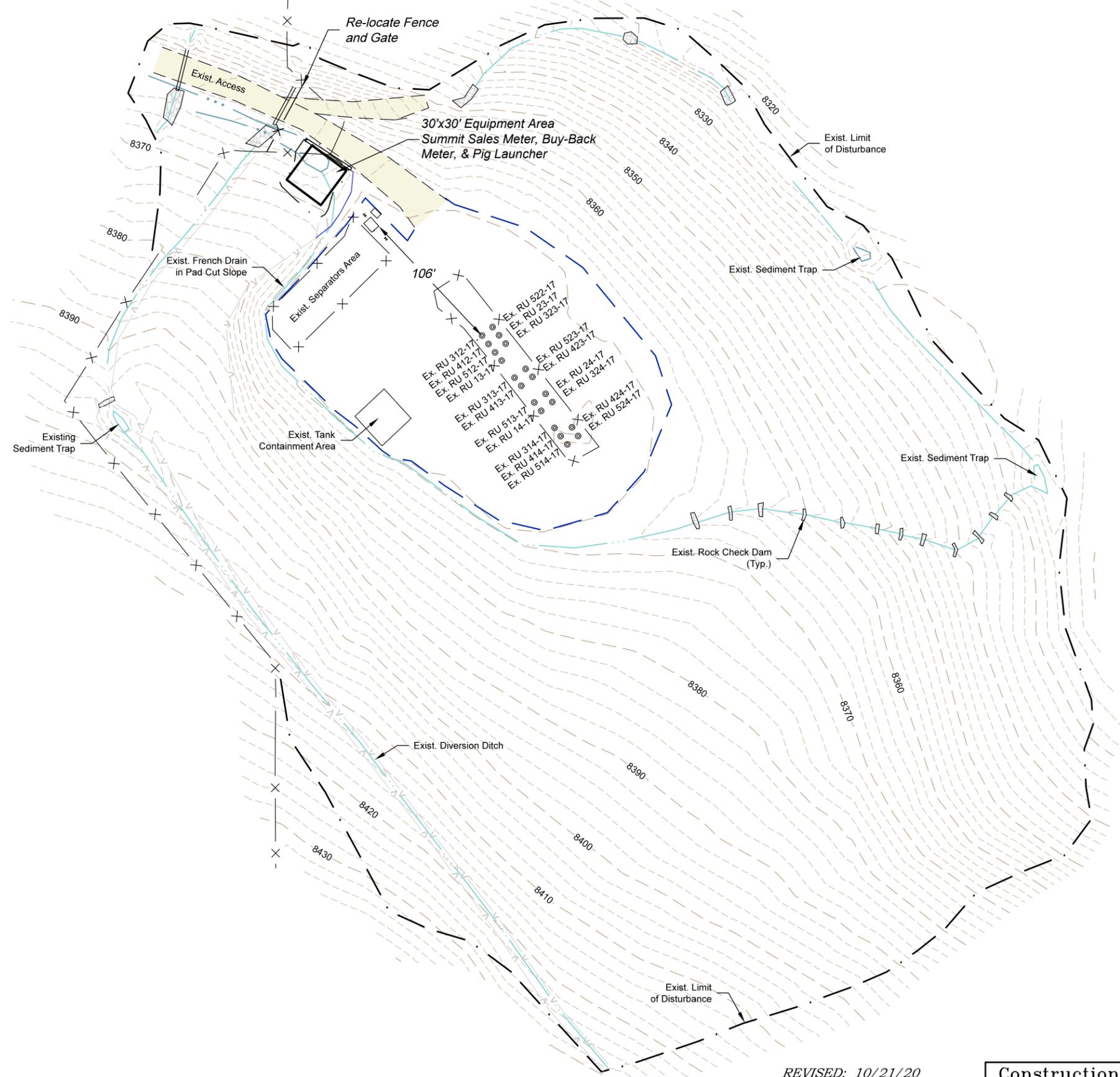
  
\_\_\_\_\_  
Mayor

ATTEST:

City of Rifle, Colorado  
Ordinance No. 7, Series of 2018  
Page 6 of 6

*Kathy Christians*  
City Clerk





REVISED: 10/21/20

SCALE: 1" = 80'  
DATE: 8/31/20  
SHEET: 1 of 2  
PROJECT: TEP  
DFT: CS

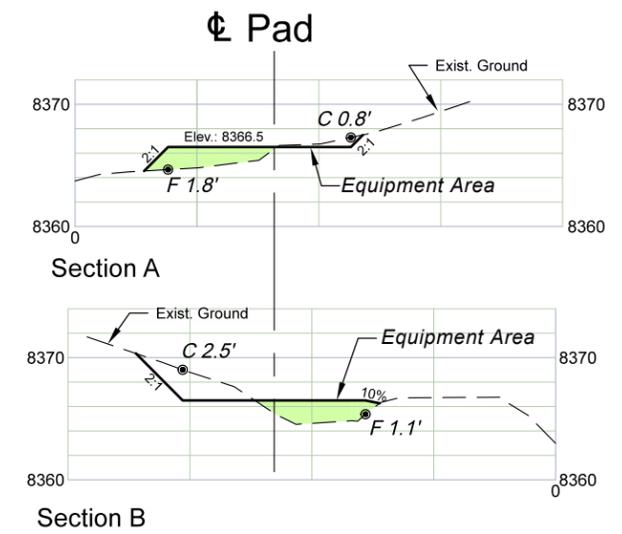
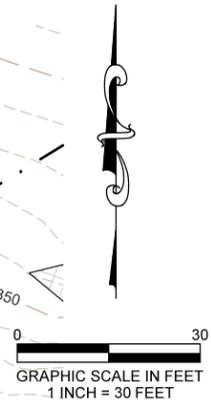
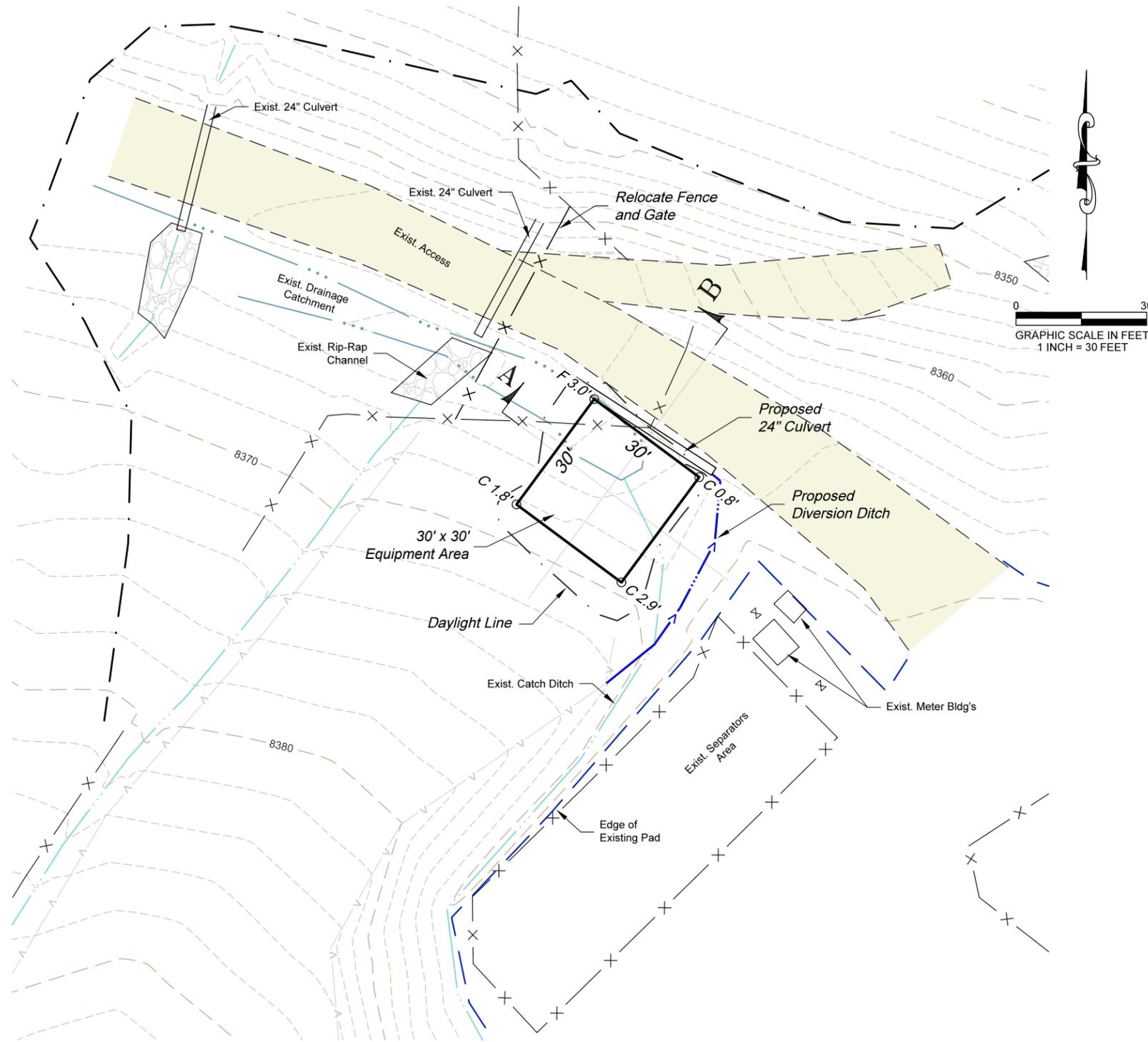
136 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-1330  
Fax (970) 625-2773

**BOOKCLIFF**  
Survey Services, Inc.

Construction Plan Prepared for:

TERRA TEP Rocky Mountain LLC

RU 23-17 Support Pad - Plat 1  
OVERALL CONSTRUCTION LAYOUT



SCALE: Horiz.: 1" = 30'  
Vert.: 1" = 10'

**30' x 30' - Equipment Area Detail**

Scale: 1" = 30'

- \*Construction Notes**
- 1) Design Cut Slope: 2:1  
Design Fill Slope: 4:1 to 2:1, as Noted.
  - 2) Topsoil based on 6" Soil Depth.
  - 3) 20% Swell Factor Applied to Earthwork Cut Volume.

ESTIMATED EARTHWORK QUANTITIES (cy)				
ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	40	30	30	-20



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

REVISED: 10/21/20  
SCALE: As Noted  
DATE: 9/01/20  
SHEET: 2 of 2  
PROJECT: TEP  
DFT: cs

Construction Plan Prepared for:  
**TERRA** TEP Rocky Mountain LLC  
RU 23-17 Pad - Plat 2  
EQUIPMENT AREA DETAIL AND  
CROSS SECTIONS



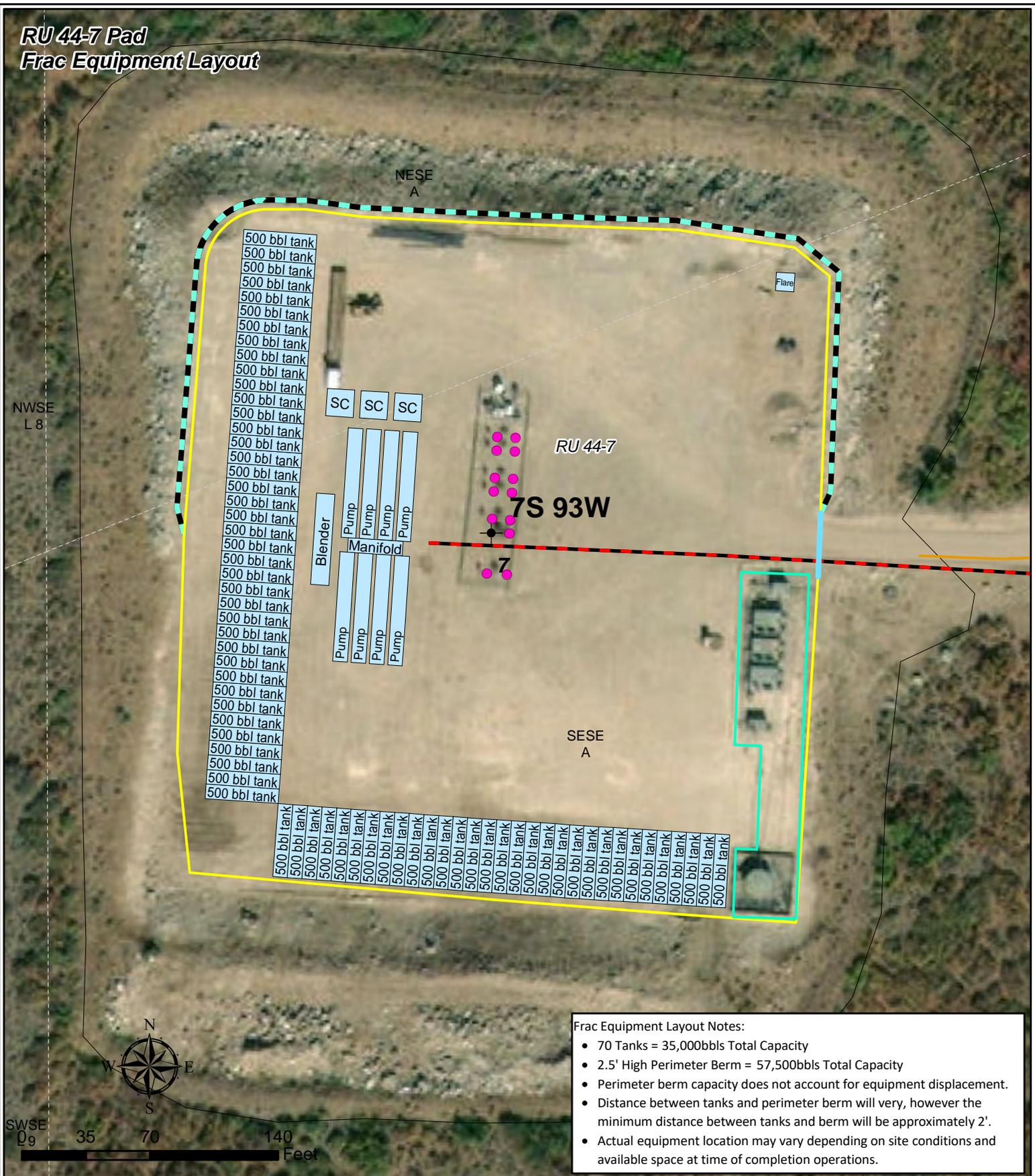
- Legend**
- Proposed Gas Pipeline
  - Proposed Water Pipeline
  - Existing Gas Pipeline
  - Existing Water Pipeline
  - Existing Condensate Pipeline
  - Existing Pad Edge
  - Existing Well
  - Propose Equipment Area
  - Proposed Daylight Line
  - Proposed Production Equipment
  - Existing Production Equipment
  - Existing Road
  - Existing Fence
  - Proposed Fence
  - Existing Limit of Disturbance
  - Stormwater Controls
  - Culvert
  - Summit / Red Rock Gathering
  - Parcel Ownership

**TEP Rocky Mountain LLC**  
**RU 23-17 Pad**  
**Equipment Area - Site Map**  
**T7S R93W, Section 17**



**October 22, 2020**

# RU 44-7 Pad Frac Equipment Layout

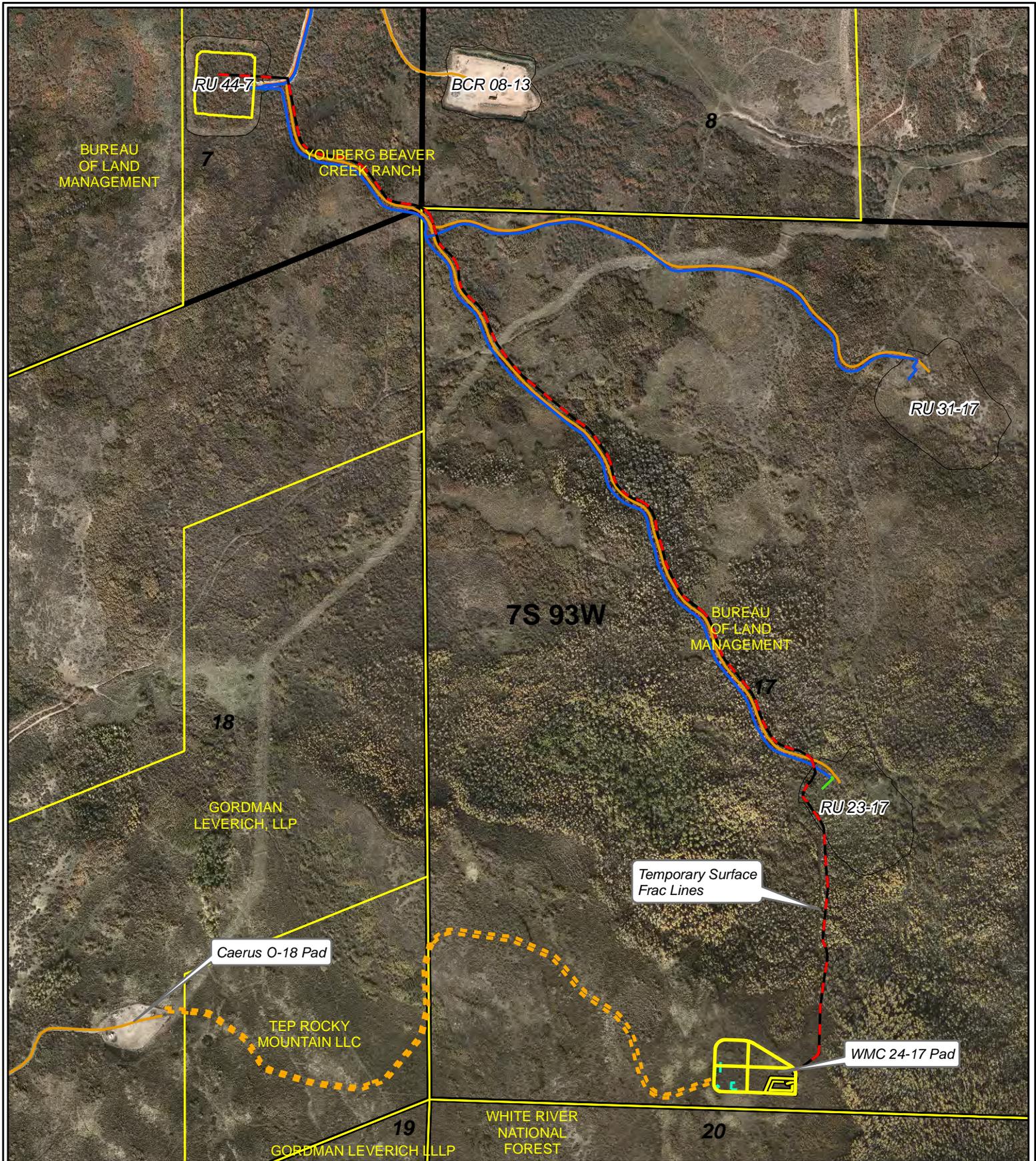


- Frac Equipment Layout Notes:**
- 70 Tanks = 35,000bbls Total Capacity
  - 2.5' High Perimeter Berm = 57,500bbls Total Capacity
  - Perimeter berm capacity does not account for equipment displacement.
  - Distance between tanks and perimeter berm will vary, however the minimum distance between tanks and berm will be approximately 2'.
  - Actual equipment location may vary depending on site conditions and available space at time of completion operations.

## Legend

- Plugged and Abandoned Well
- Production Gas Well
- ▭ Frac Equipment
- ▬ Existing Berm (2.5' High)
- ▬ Drive Over Berm (2.5' High)
- ▬ Existing Pad Edge
- ▬ Existing Production Equipment
- ▬ Proposed Frac Lines
- ▬ Existing Road
- ▭ Existing Pad





**Legend**

- Propose Pad Edge
- Proposed Drilling Pit
- Proposed Production Equipment
- - - Proposed Road
- - - Proposed Frac Lines (5-4.5")
- Existing Gas Pipeline
- Existing Water Pipeline
- Existing Condensate Pipeline
- Existing Pad
- Parcel Ownership

**TEP Rocky Mountain LLC**

**RU 44-7 Frac Pad  
Overview Map  
T7S R93W, Section 7**

**October 20, 2020**





**SHEET INDEX**

- Sheet 1 Cover Sheet
- Sheet 2 Access Road Alignment Plan and Profile - Sta. 0+00 to Sta. 33+00
- Sheet 3 Access Road Alignment Plan and Profile - Sta. 28+00 to 66+00  
Mass Haul Diagram
- Sheet 4 Cross Sections Sta. 0+00 to 16+00
- Sheet 5 Cross Sections Sta. 16+50 to 29+50
- Sheet 6 Cross Sections Sta. 30+00 to 45+00

VICINITY MAP

136 East 3rd Street  
 Rifle, Colorado 81650  
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 Fax (970) 625-2773

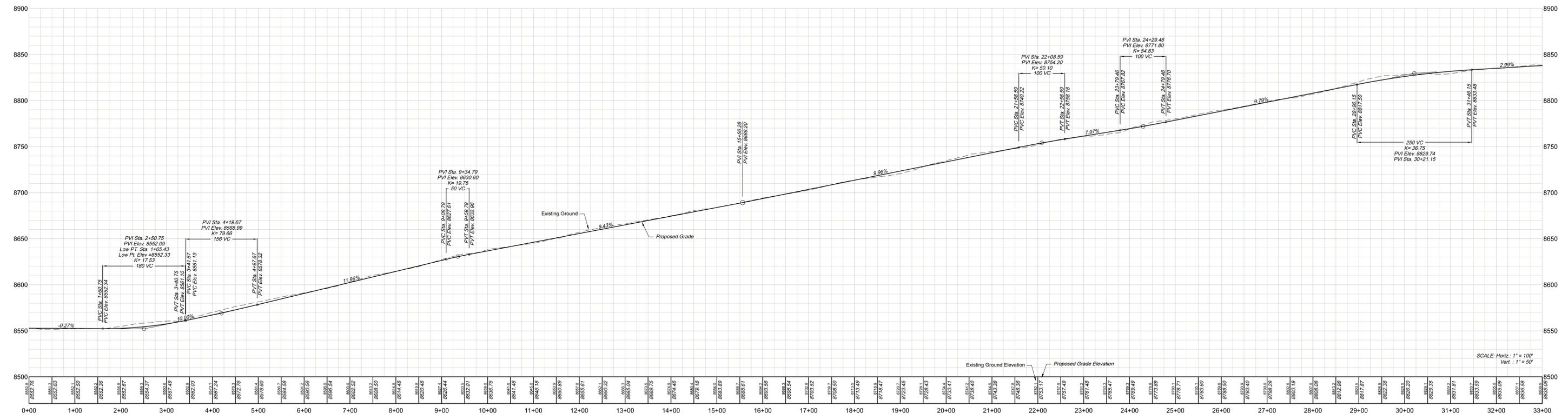
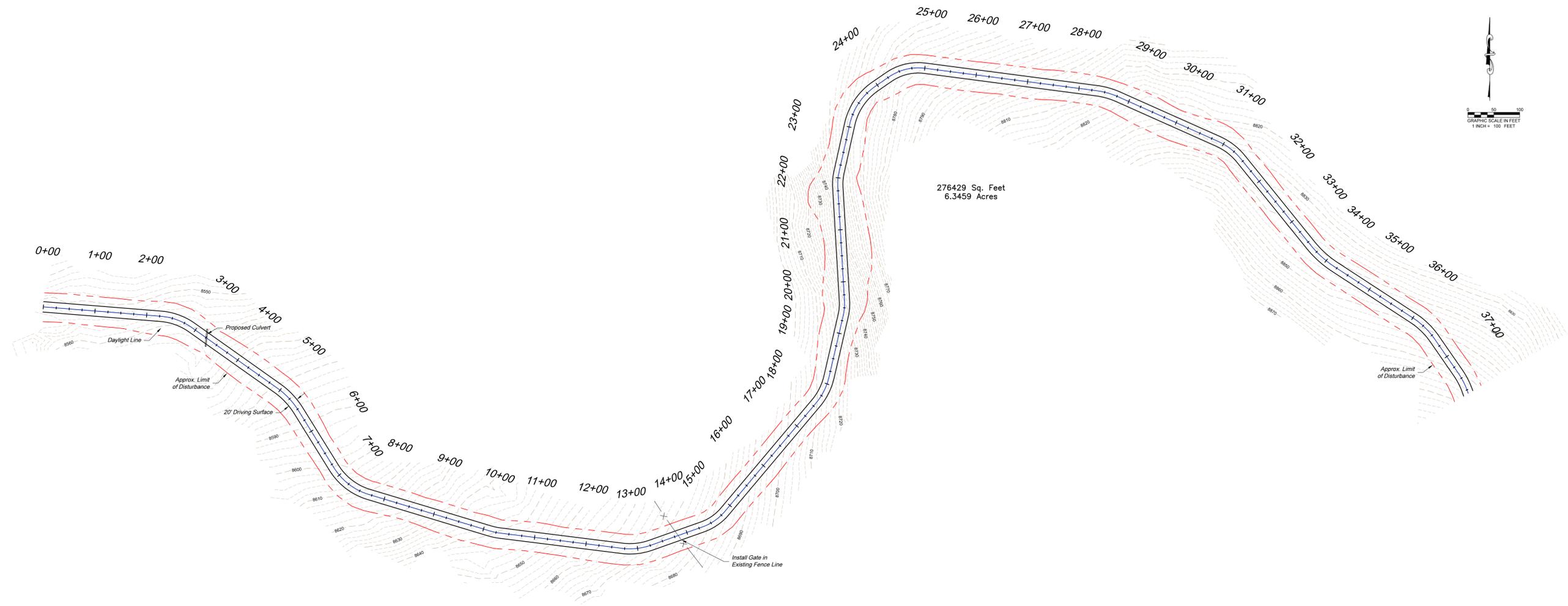
**BOOKCLIFF**  
Survey Services, Inc.

REVISION	DESCRIPTION
9/25/20	Per Review
10/14/20	Per Review

WMC 24-17 Drill Pad  
 Access Road Alignment  
 COVER SHEET

TEP  
 Rocky Mountain LLC

FILE: Valley	PROJECT NO. WMC 24-17
DFT: cs	
CK:	SHEET 1
DATE: 9/10/20	OF 6

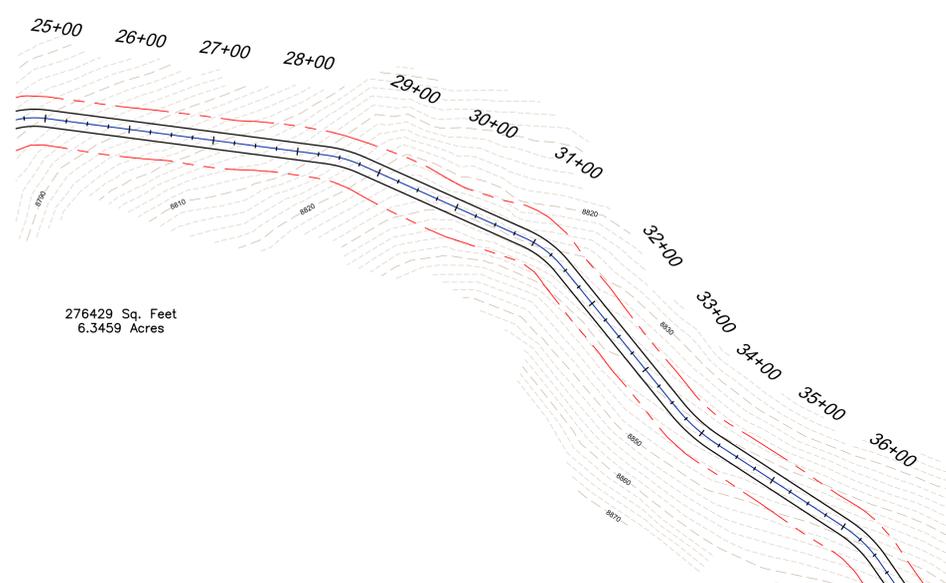
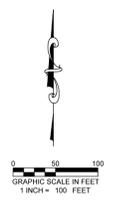


REVISION	DESCRIPTION
8/20/20	Revised Pad Elev., add Culverts
9/10/20	Construction Docs
9/25/20	Per Review
10/14/20	Per Review

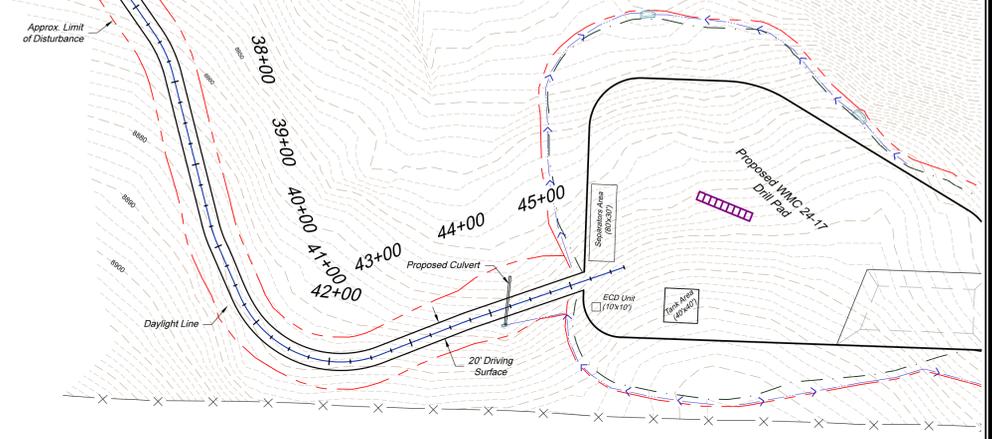
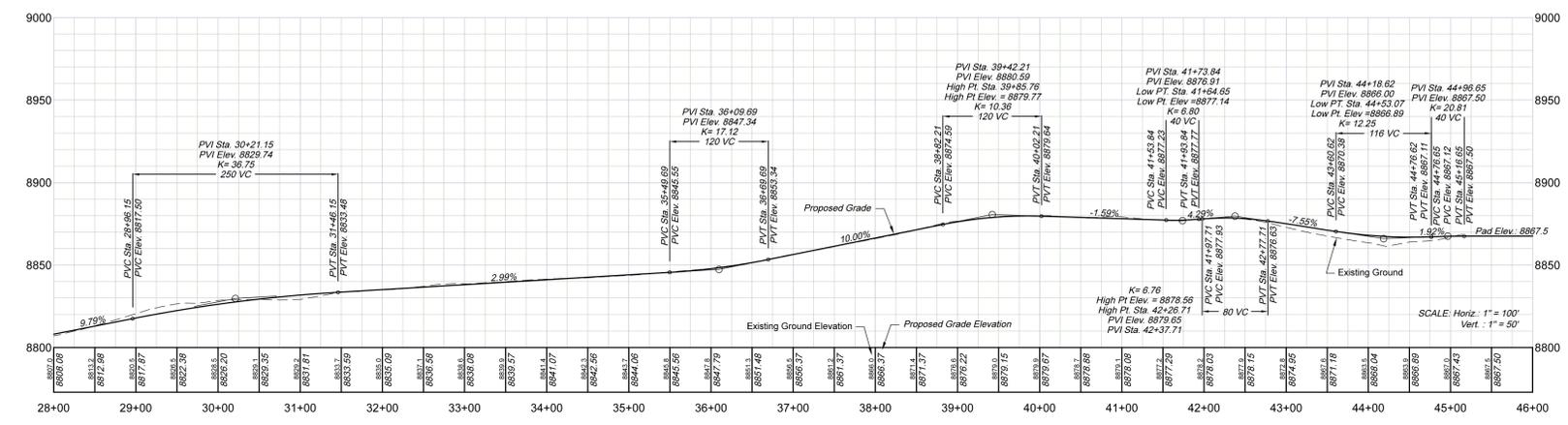
*WMC 24-17 Drill Pad  
Access Road Alignment Sta. 0+00 to 33+00*

**TERRA** ENERGY PARTNERS  
**TEP** Rocky Mountain LLC

FILE:	Valley	PROJECT NO.	WMC 24-17
DFT:	cs		
CK:		SHEET	2
DATE:	7/29/20	OF	6

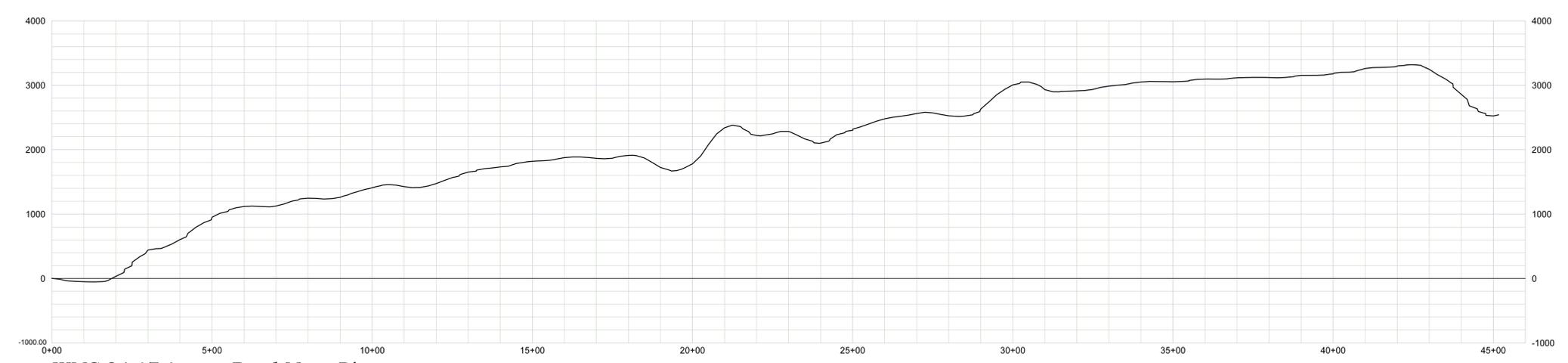


276429 Sq. Feet  
6.3459 Acres



- \*Road Construction Notes
- 1) Design Cut Slope: 1.5:1  
Design Fill Slope: 1.5:1
  - 2) Topsoil based on 6" Soil Depth.
  - 3) 10% Swell Factor Applied to Road Cut Volume.  
20% Swell Factor Applied to Pad Cut Volume.
  - 4) Total Disturbance Access Road: ±6.35 ac
  - 5) Mass Diagram does not include swell factor.

ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	38,200	42,970	3,890	-8,660
PR	8,720			8,720
Road	5,920	2,970	2,970	-20
<b>TOTALS</b>	<b>52,840</b>	<b>45,940</b>	<b>6,860</b>	<b>40</b>



WMC 24-17 Access Road Mass Diagram  
Scale: Horiz. 1" = 200'  
Vert. 1" = 1000 cy

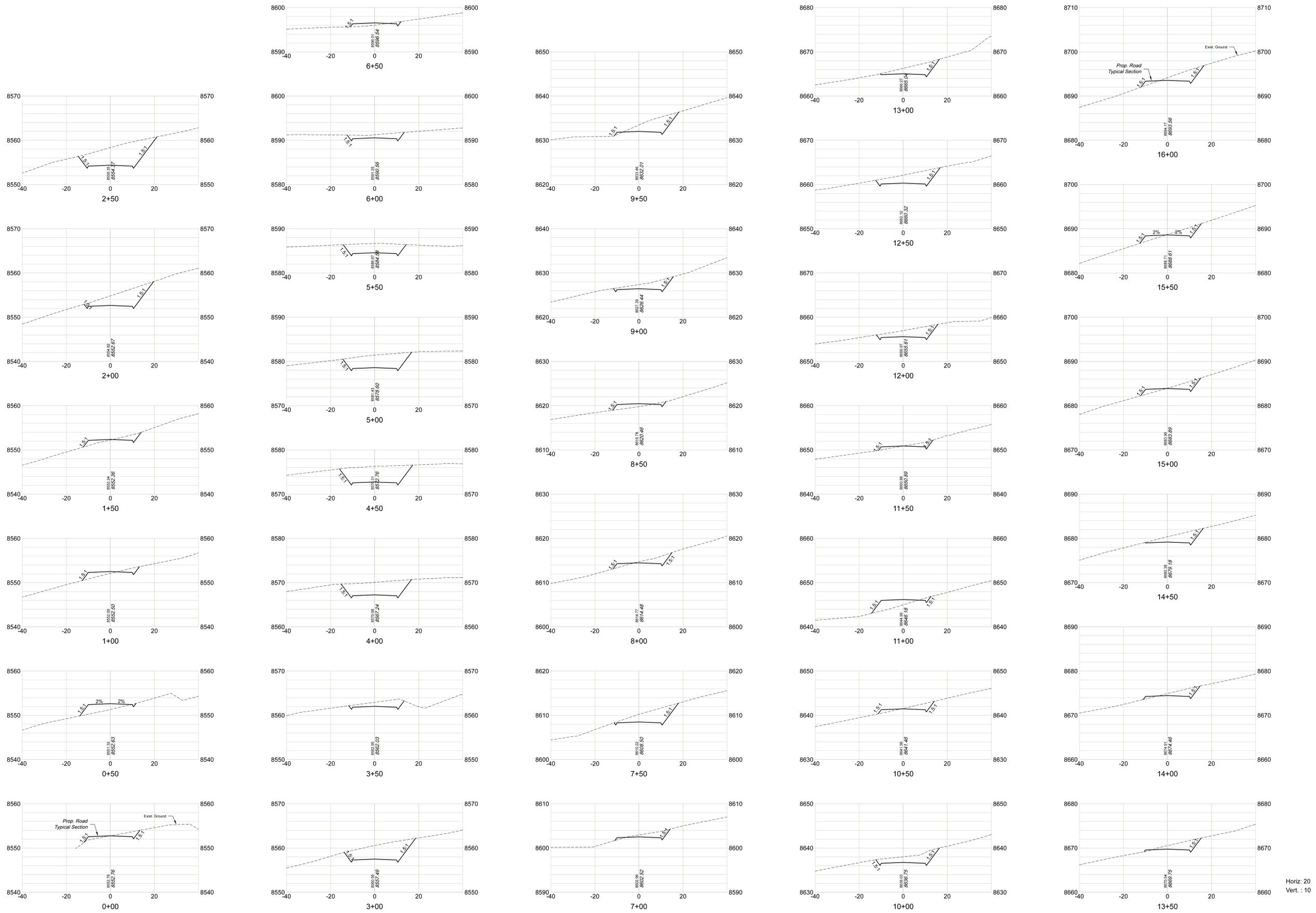
136 East 3rd Street  
Rifle, Colorado 81650  
Ph. (970) 625-1330  
Fax (970) 625-2773

REVISION	DESCRIPTION
8/20/20	Revised Pad Elev., add Culverts
9/10/20	Construction Docs
9/25/20	Per Review
10/14/20	Per Review

WMC 24-17 Drill Pad  
Access Road Alignment Sta. 32+00 to 42+00  
Mass Haul Diagram

TEP Rocky Mountain LLC

FILE:	Valley	PROJECT NO.	WMC 24-17
DFT:	cs		
CK:		SHEET	3
DATE:	7/29/20	OF	6



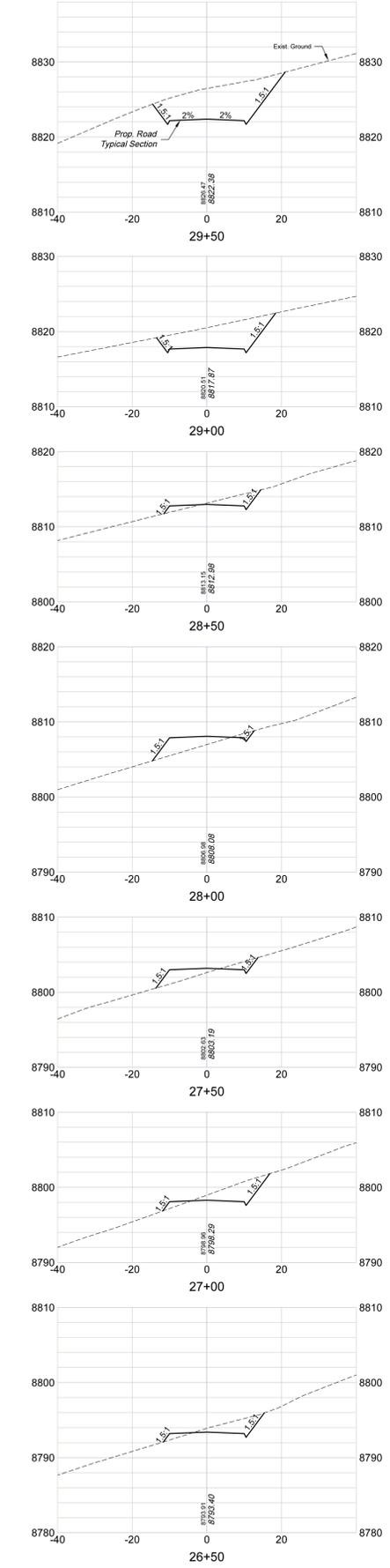
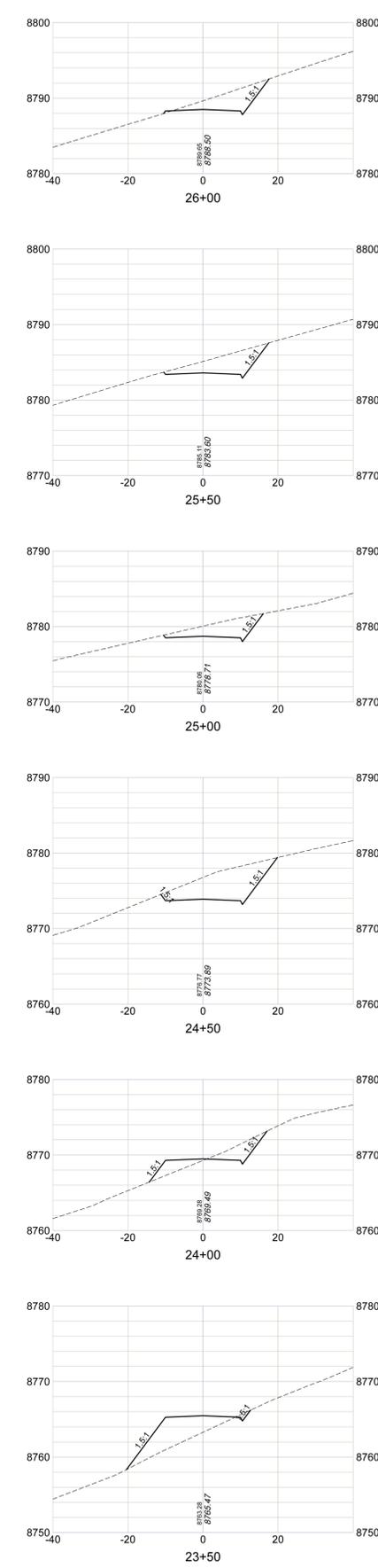
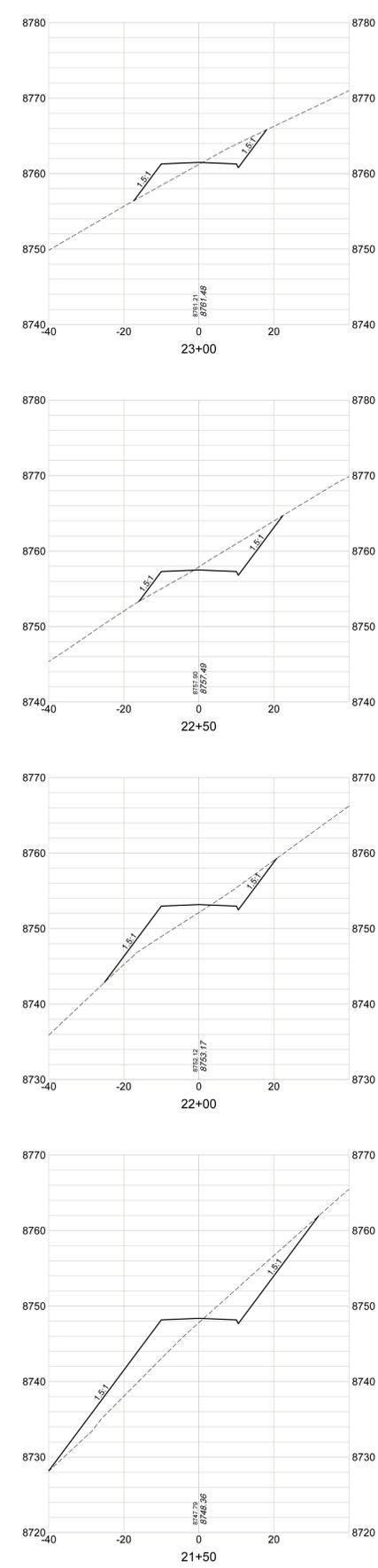
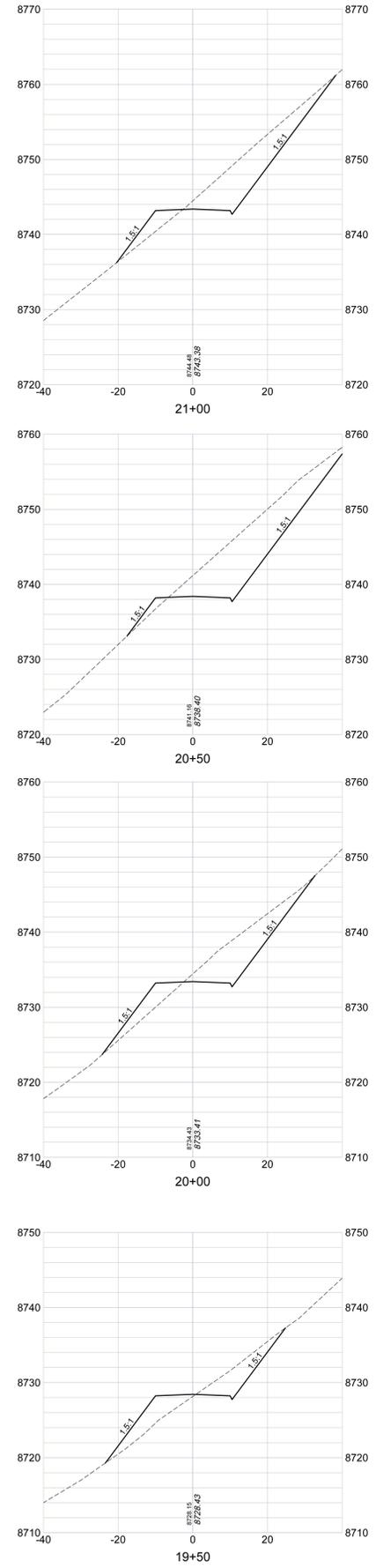
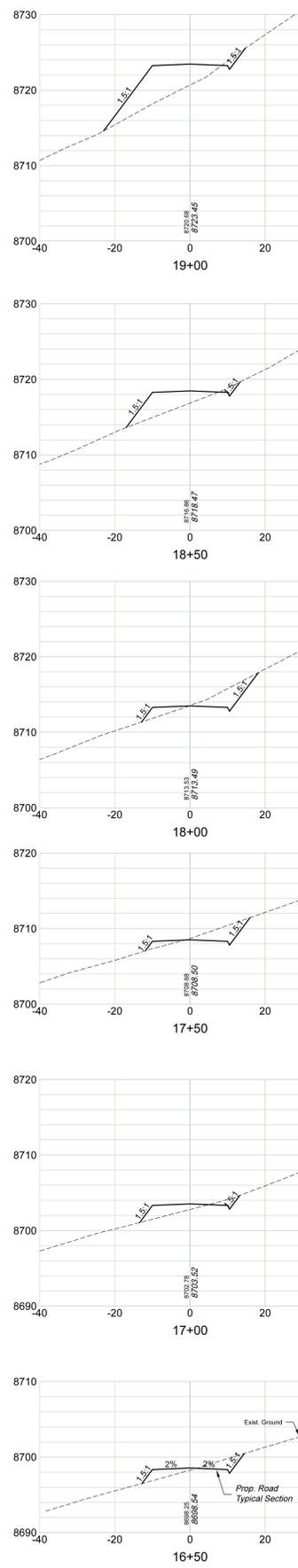
REVISION	DESCRIPTION

WMC 24-17 Drill Pad  
Access Road Cross Sections  
Sta. 0+00 to 16+00



FILE:	Valley	PROJECT NO.	WMC 24-17
DFT:	cs		
CK:		SHEET	4
DATE:	9/10/20	OF	6

Horiz: 20  
Vert: 10



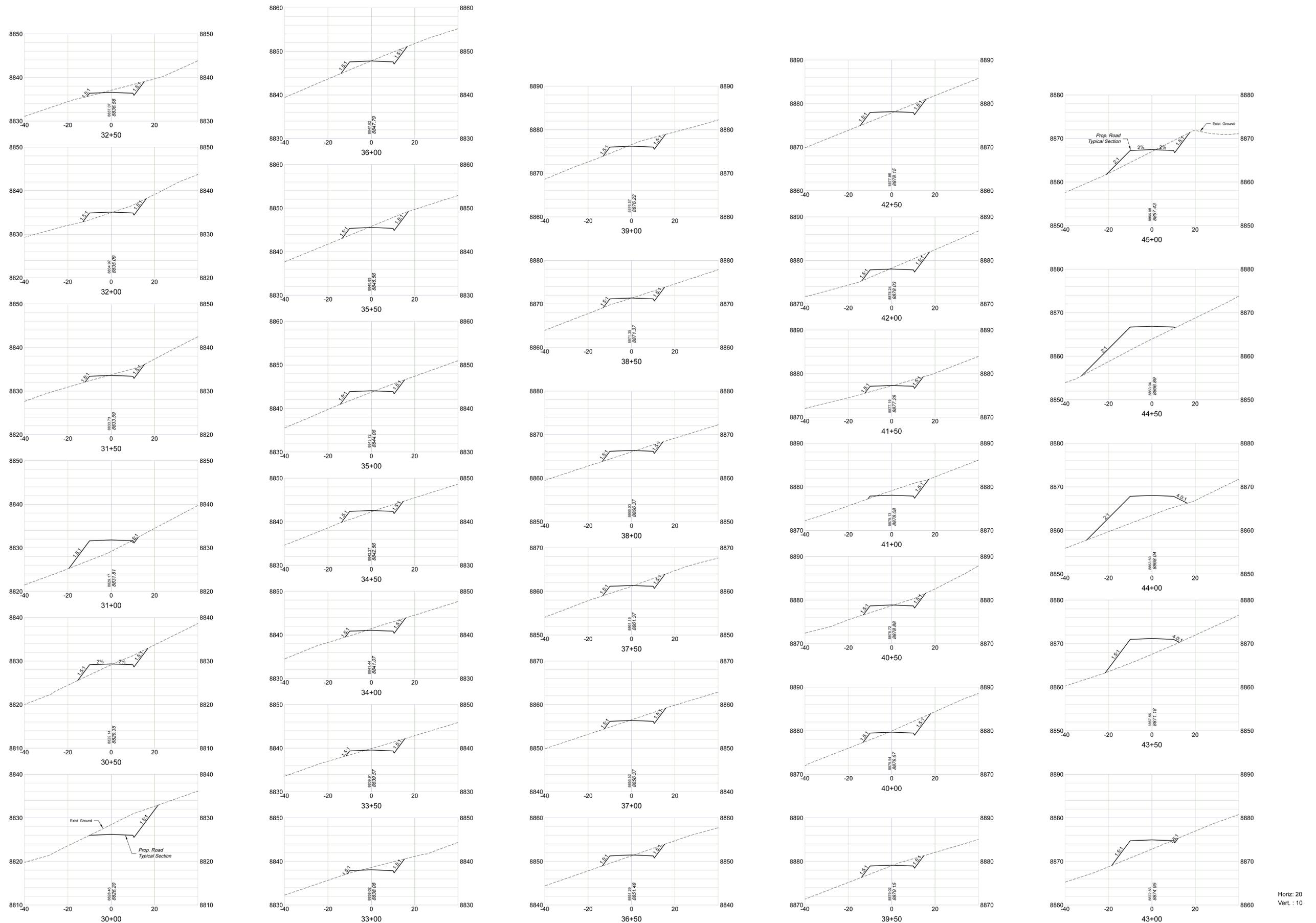
REVISION	DESCRIPTION

WMC 24-17 Drill Pad  
Access Road Cross Sections  
Sta. 16+50 to 29+50



FILE:	Valley	PROJECT NO.	WMC 24-17
DFT:	cs	CK:	SHEET 5
DATE:	9/10/20	OF	6

Horiz: 20  
Vert: 10



Horiz: 20  
Vert: 10



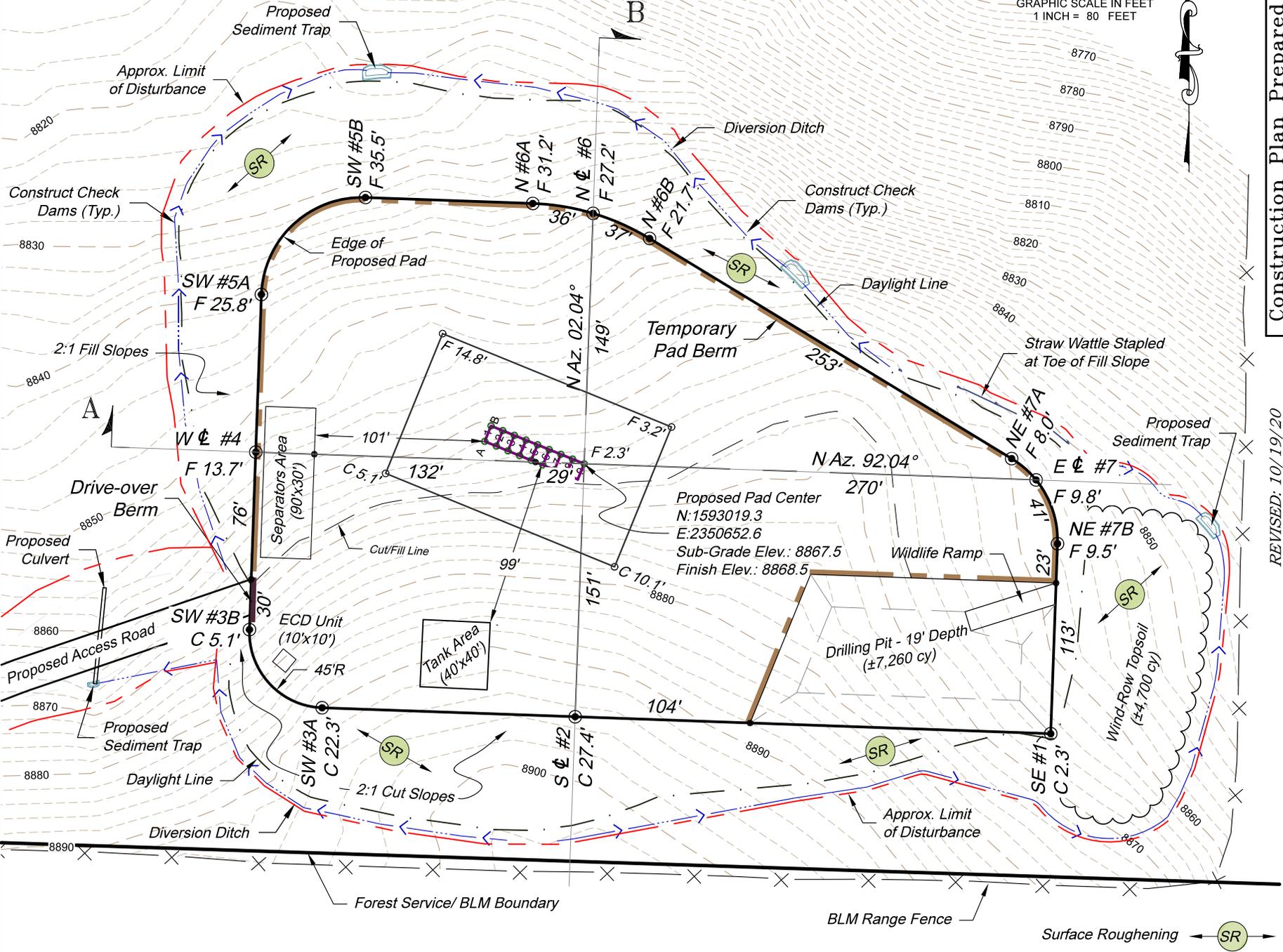
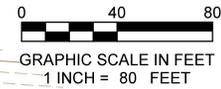
REVISION	DESCRIPTION

WMC 24-17 Drill Pad  
Access Road Cross Sections  
Sta. 30+00 to 45+00



FILE: Valley	PROJECT NO. WMC 24-17
DFT: cs	
CK:	SHEET 6
DATE: 9/10/20	OF 6

Section 17  
T. 7 S., R. 93 W.



Construction Plan Prepared for:  
TEP Rocky Mountain LLC

**TERRA**  
SURVEYING & CONSULTING

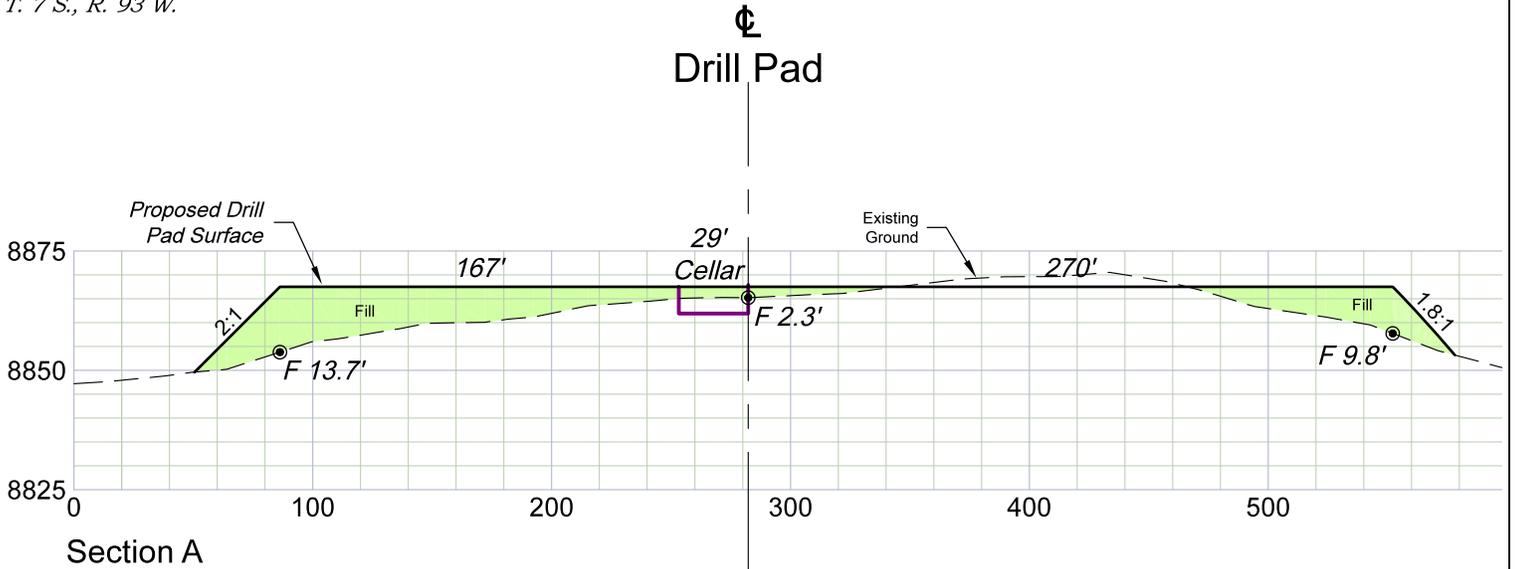
WMC 24-17 Drill Pad - Plat 2  
CONSTRUCTION LAYOUT

REVISED: 10/19/20

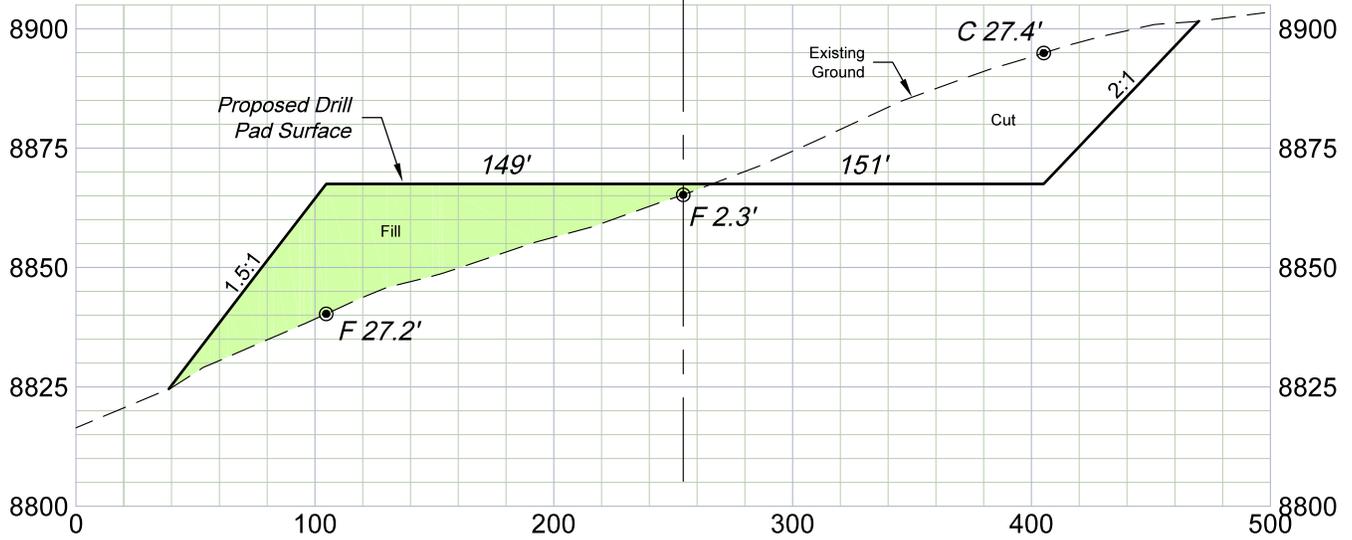
SCALE: 1" = 80'  
DATE: 9/10/20  
PLAT: 2 of 7  
PROJECT: Valley  
DFT: CS

**BOOKCLIFF**  
Survey Services, Inc.

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



Section A



Section B

SCALE: Horiz.: 1" = 80'  
Vert.: 1" = 40'

Pad Surface Completion Volumes:  
6" Aggregate Base = ±2025 cy  
6" Shale Base = ±2025 cy

- \*Notes**  
 1) Design Cut Slope: 1.5:1  
 Design Fill Slope: 1.5:1 unless Otherwise Noted.  
 2) Topsoil based on 6" Soil Depth.  
 3) 20% Swell Factor Applied to Earthwork Cut Volume.  
 4) Total Pad Disturbance = ±4.89 ac.

ESTIMATED EARTHWORK QUANTITIES (cy)				
ITEM	CUT	FILL	TOPSOIL	EXCESS
Pad	38,200	42,970	3,890	-8,660
Pit	8,720			8,720
Road	5,920	2,970	2,970	-20
<b>TOTALS</b>	<b>52,840</b>	<b>45,940</b>	<b>6,860</b>	<b>40</b>

REVISED: 10/13/20

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



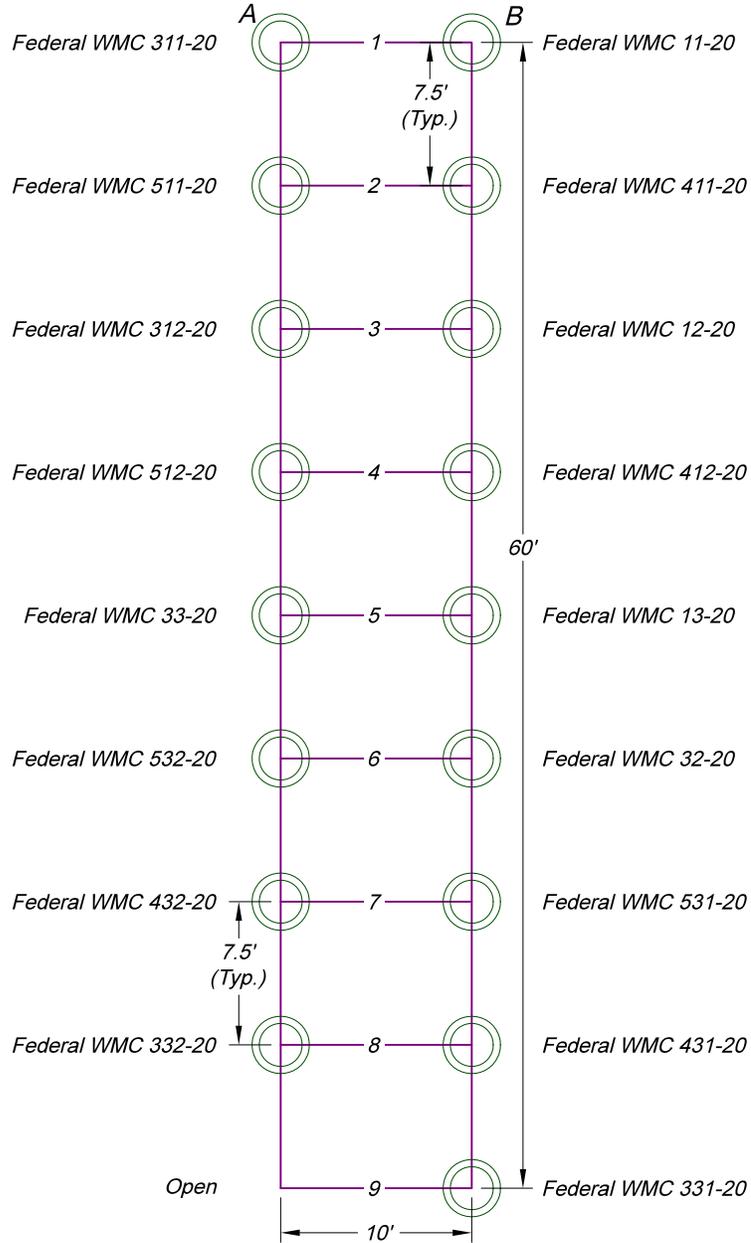
SCALE: As Noted  
 DATE: 9/10/20  
 PLAT: 2A of 7  
 PROJECT: TEP Valley  
 DFT: cs

Construction Plan Prepared for:



TEP Rocky Mountain, LLC

WMC 24-17 Drill Pad - Plat 2A  
CONSTRUCTION LAYOUT  
CROSS SECTIONS



**WELL HEAD DETAIL**

Scale: 1" = 10'

Construction Plan Prepared for:



TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 2B

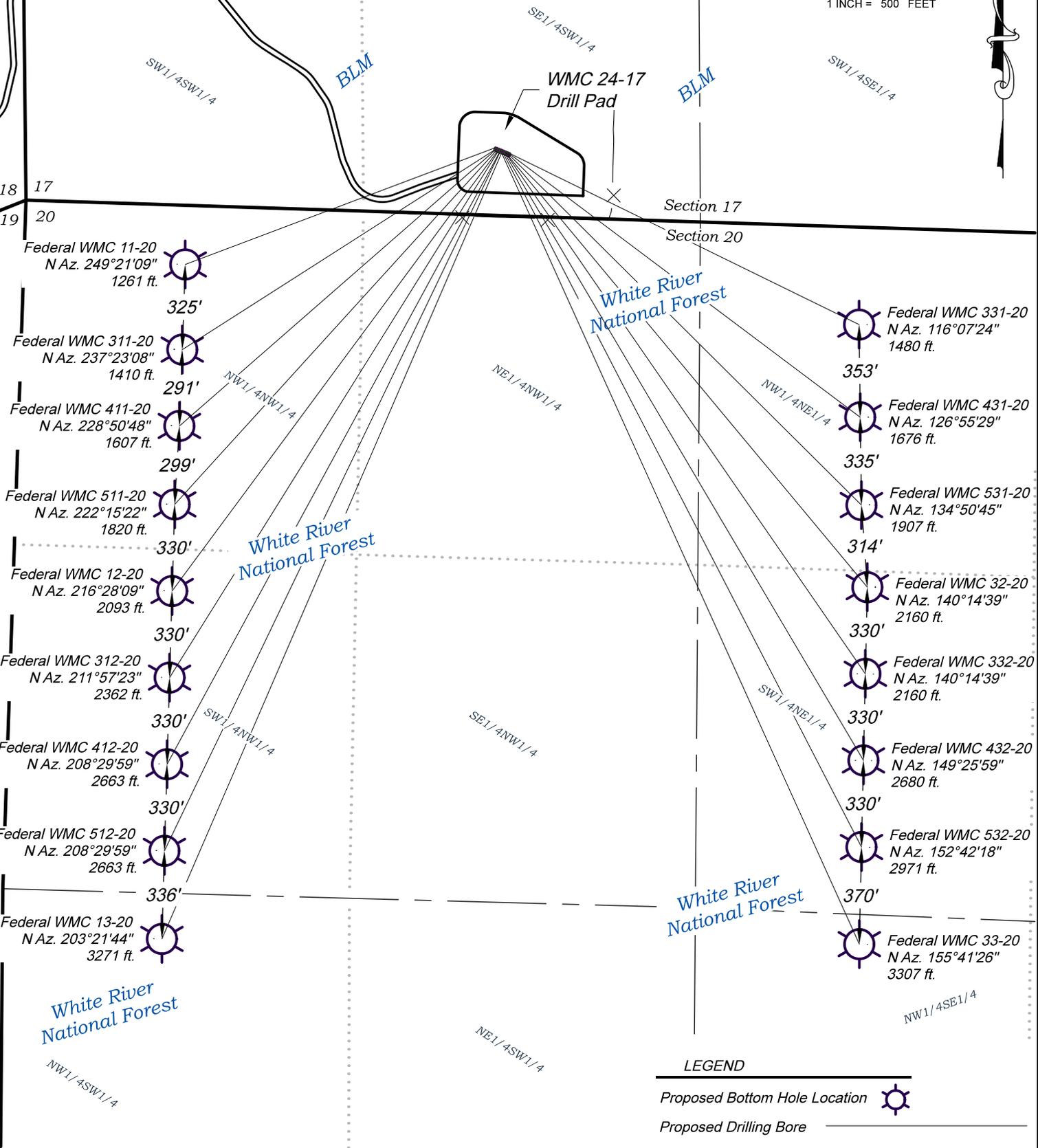
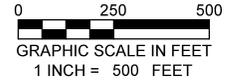
WELL HEAD DETAIL

136 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-2720  
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SCALE:	NA
DATE:	9/10/20
PLAT:	2B of 7
PROJECT:	TEP Valley
DFT:	cs

Section 17  
T. 7 S., R. 93 W.



**LEGEND**

Proposed Bottom Hole Location

Proposed Drilling Bore

REVISED: 10/13/20

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



SCALE: 1" = 500'  
DATE: 9/10/20  
PLAT: 3 of 7  
PROJECT: TEP Valley  
DFT: cs

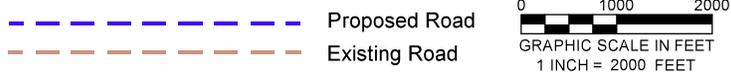
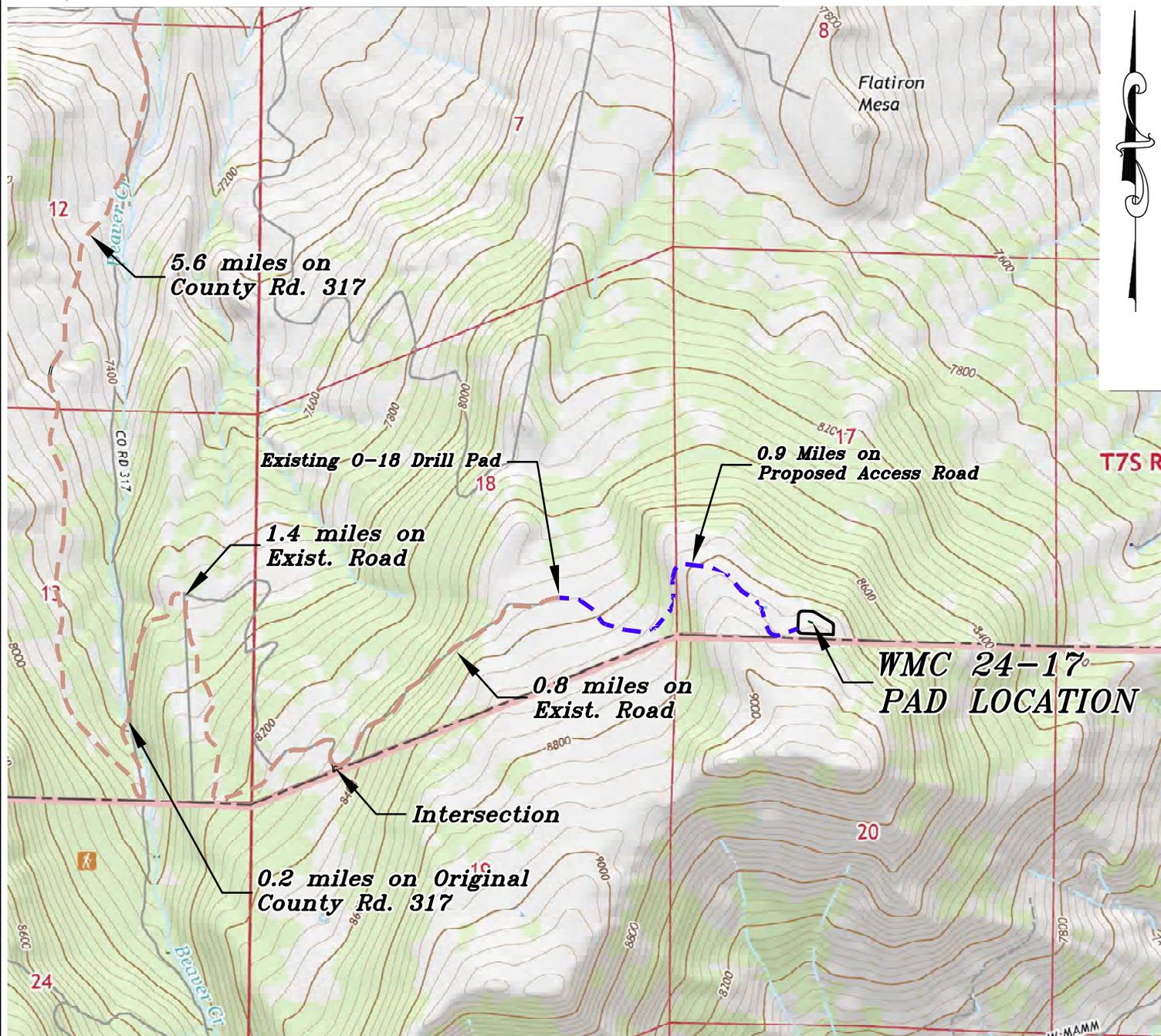
**Construction Plan Prepared for:**

**TERRA** TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 3  
MULTI-WELL PLAN



Section 17  
T. 7 S., R. 93 W.



**ACCESS DESCRIPTION:**

FROM THE INTERSECTION OF STATE HIGHWAY 6 AND COUNTY ROAD 323 (RULISON ROAD) NORTH OF RULISON, PROCEED SOUTHERLY ALONG COUNTY ROAD 323 (RULISON ROAD) ±1.1 MILES TO THE INTERSECTION WITH COUNTY ROAD 309 (RULISON PARACHUTE ROAD), PROCEED LEFT IN AN EASTERLY DIRECTION ±2.3 MILES TO THE INTERSECTION WITH COUNTY ROAD 320 (RIFLE RULISON ROAD), PROCEED RIGHT IN AN EASTERLY DIRECTION ±6.2 MILES TO THE INTERSECTION WITH COUNTY ROAD 317 (BEAVER CREEK ROAD), PROCEED RIGHT ALONG COUNTY ROAD 317 IN A SOUTHERLY DIRECTION ±5.6 MILES TO A HAIR-PIN CURVE TO THE LEFT ON TO THE ORIGINAL COUNTY RD. 317 ±0.2 MILES TO AN INTERSECTION WITH THE EXISTING DIRT/GRAVEL ROAD, STAY RIGHT IN A NORTHERLY TO WESTERLY DIRECTION ±1.4 MILES TO A INTERSECTION, STAY LEFT ±0.8 MILES IN A NORTHEASTERLY DIRECTION TO THE EXISTING 0-18 DRILL PAD, PROCEED EASTERLY ACROSS DRILL PAD TO A NEWLY CONSTRUCTED ACCESS ROAD, PROCEED IN AN EASTERLY DIRECTION ±0.9 MILES TO THE PROPOSED WMC 24-17 DRILL PAD LOCATION, AS SHOWN HEREON.

REVISED: 10/13/20

SCALE:	1" = 2000'
DATE:	9/10/20
PLAT:	5 of 7
PROJECT:	TEP Valley
DFT:	cs

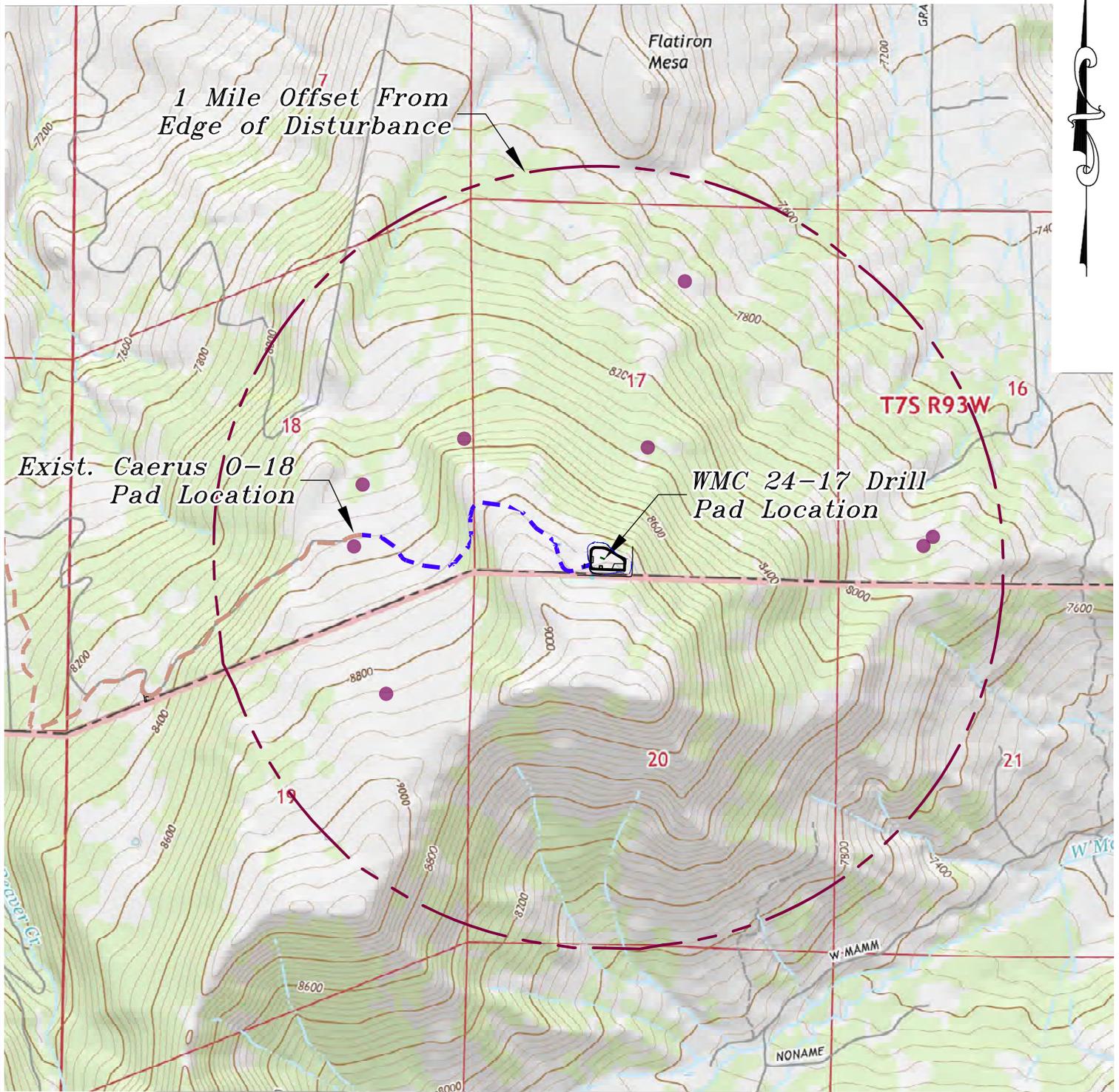
Construction Plan Prepared for:

**TERRA** TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 5  
ACCESS ROAD & TOPO MAP

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

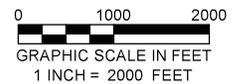




25 0000 0000000 000 0000 000000

**LEGEND**

- KNOWN WELL LOCATIONS ●
- EXISTING ROAD - - - - -
- PROPOSED ROAD - - - - -



REVISED: 9/25/20

136 East Third Street  
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Ph. (970) 625-2720  
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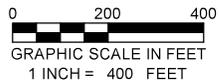
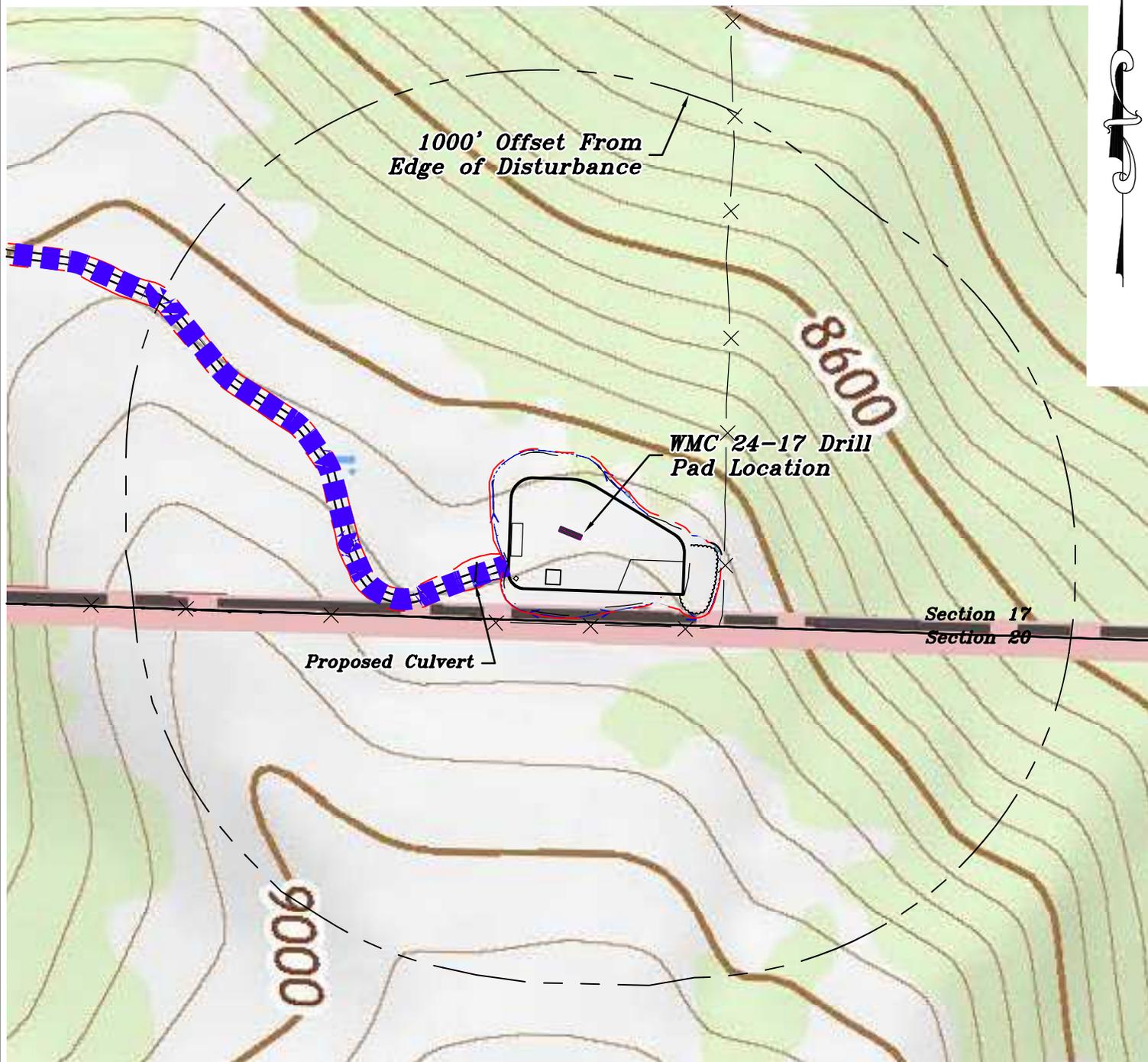


SCALE:	1" = 2000'
DATE:	9/10/20
PLAT:	5A of 7
PROJECT:	TEP Valley
DFT:	cs

Construction Plan Prepared for:

**TERRA** TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 5A  
WELL PROXIMITY MAP



**LEGEND**

- PROPOSED ROAD
- EXISTING DRAINAGE
- STORMWATER DRAINAGE CHANNEL

**NOTE:**

1. Nearest Water Well Permit No: 184747  
N Az. 310°57'11" 2536 ft.
2. Nearest Down Gradient Surface Water Feature:  
N Az. 255°20'06" 4191 ft.

REVISED: 10/20/20

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

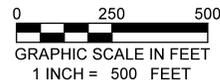
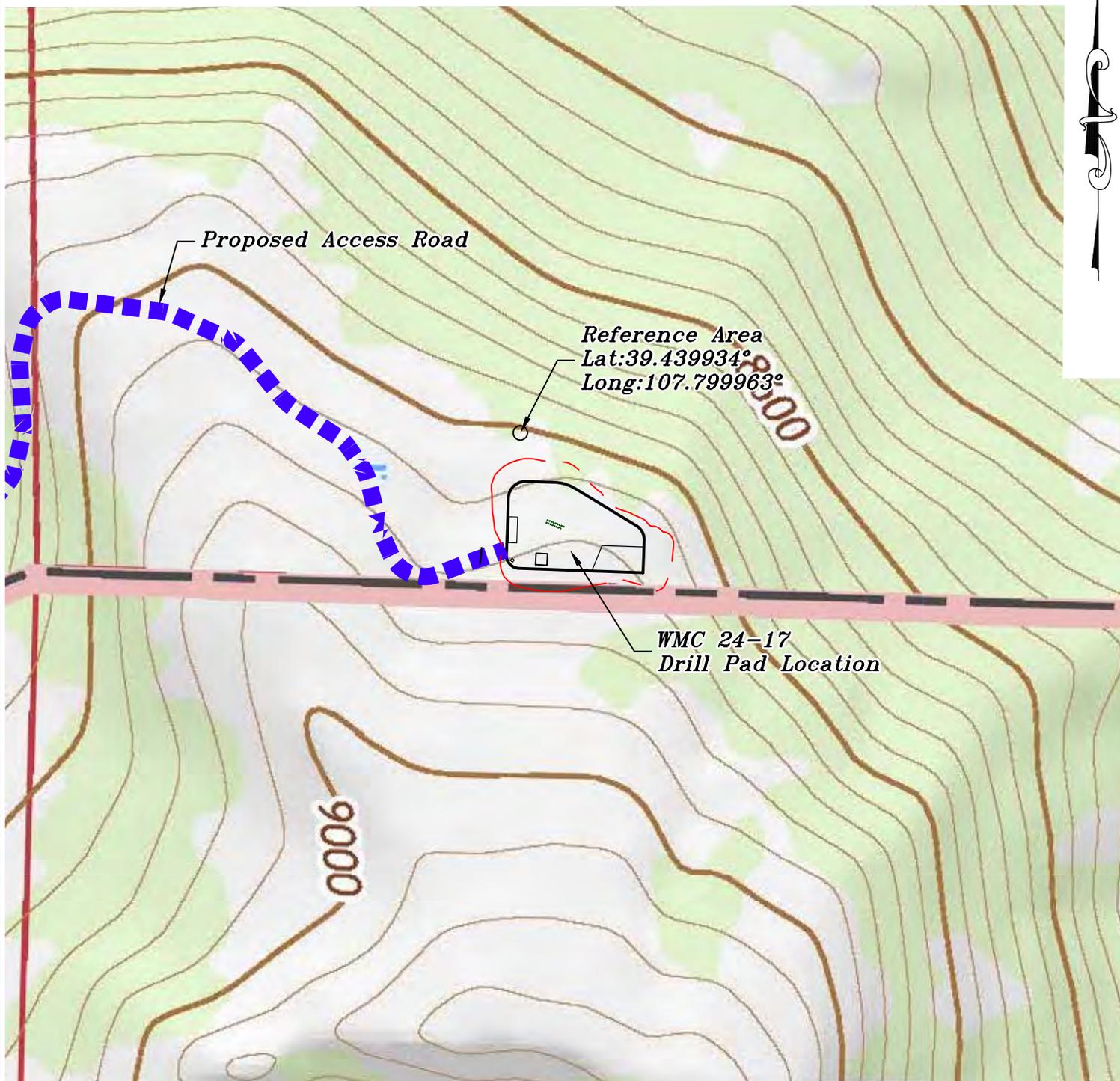


SCALE:	1" = 400'
DATE:	9/10/20
PLAT:	5B of 7
PROJECT:	TEP Valley
DFT:	cs

**Construction Plan Prepared for:**



WMC 24-17 Drill Pad - Plat 5B  
HYDROLOGY MAP



LEGEND

Proposed Road 

REVISED: 10/19/20

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



SCALE: 1" = 500'  
DATE: 9/10/20  
PLAT: 5C of 7  
PROJECT: TEP Valley  
DFT: cs

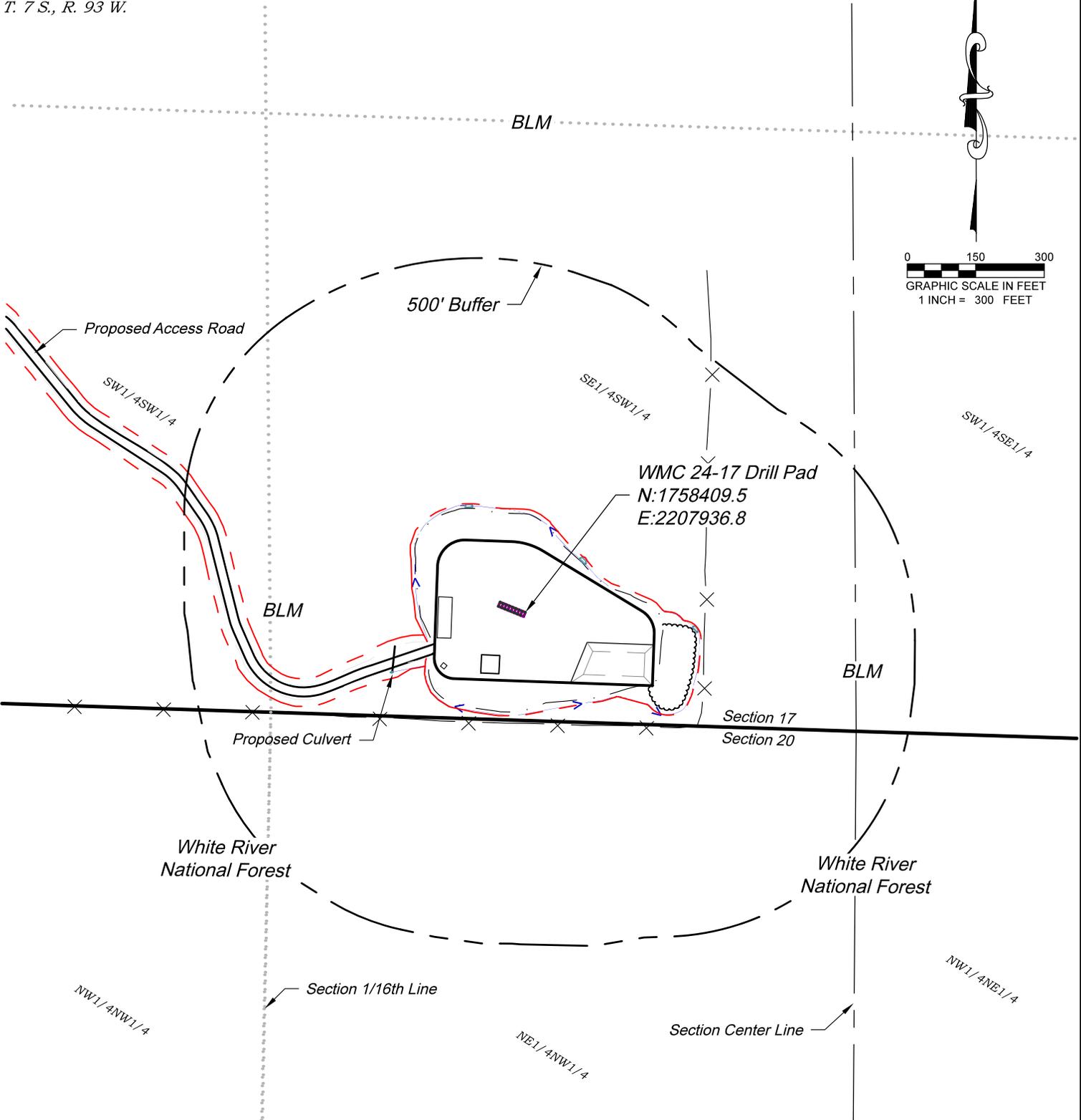
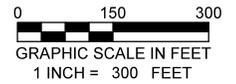
Construction Plan Prepared for:



TEP Rocky Mountain LLC

WMC 24-17 Drill Pad - Plat 5C  
REFERENCE AREA MAP

Section 17  
T. 7 S., R. 93 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 type="checkbox"/> OTHER (describe):	
<input type="checkbox"/> CRP		

REVISED: 10/19/20

SCALE: 1" = 300'  
DATE: 9/10/20  
PLAT: 6 of 7  
PROJECT: TEP Valley  
DFT: cs

Construction Plan Prepared for:



TEP Rocky Mountain LLC

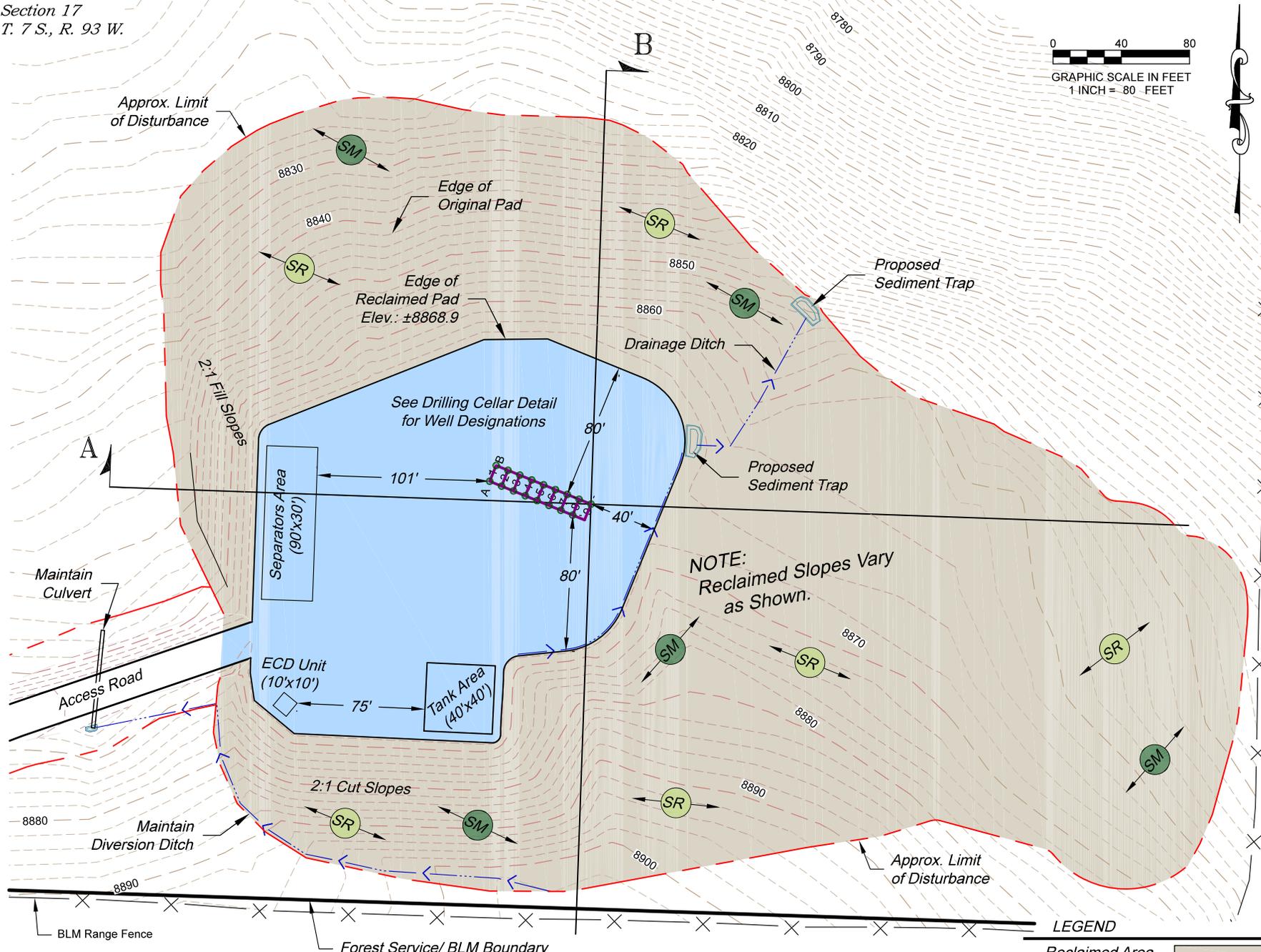
WMC 24-17 Drill Pad - Plat 6  
LOCATION DRAWING

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





Section 17  
T. 7 S., R. 93 W.



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

Construction Plan Prepared for:  
**TERRA**  
TEP Rocky Mountain LLC  
WMC 24-17 Drill Pad - Plat 7  
INTERIM RECLAMATION LAYOUT

REVISED: 10/13/20  
SCALE: 1" = 80'  
DATE: 9/10/20  
PLAT: 2 of 7  
PROJECT: Valley  
DFT: CS

NOTE:  
Reclaimed Slopes Vary  
as Shown.

UnReclaimed Area: ±1.05 ac.  
Reclaimed Area: ±3.84 ac.  
Total Site Disturbance: ±4.89 ac.

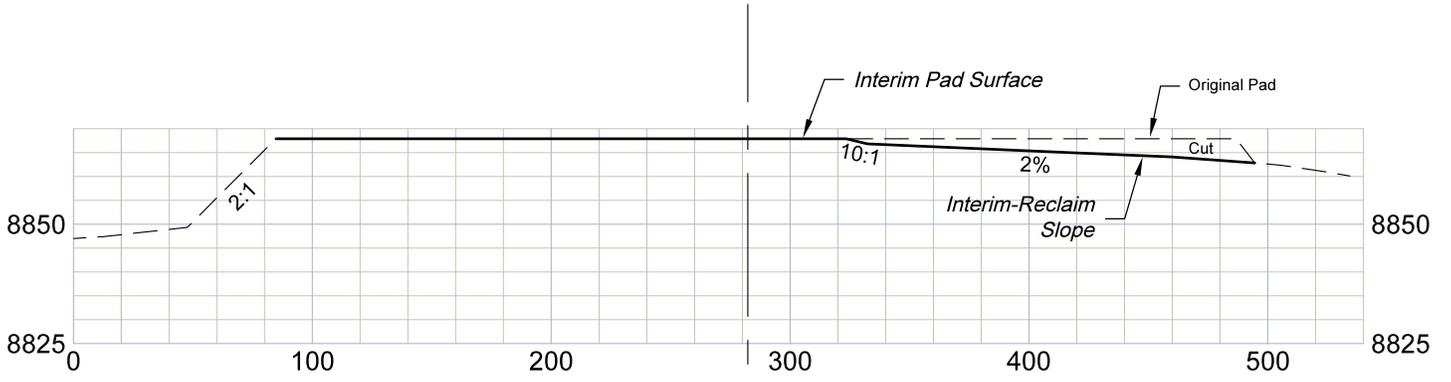
**LEGEND**

Reclaimed Area	
UnReclaimed Area	
Seed & Mulch	
Surface Roughening	

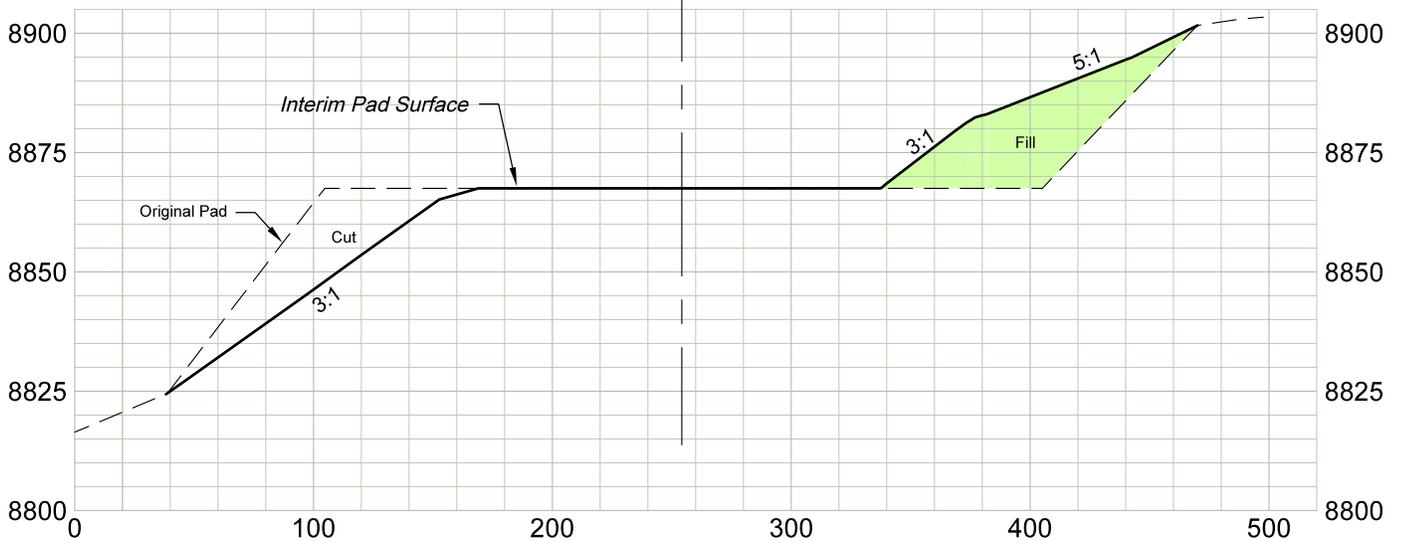
**BOOKCLIFF**  
Survey Services, Inc.

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

⊕  
Interim Reclaim Pad



Section A



Section B

SCALE: Horiz.: 1" = 80'  
Vert. : 1" = 40'

**\*NOTE :**  
Reclam Slopes Vary as Shown.

REVISED: 9/28/20

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



SCALE: As Noted  
DATE: 9/10/20  
PLAT: 7A of 7  
PROJECT: TEP Valley  
DFT: cs

Construction Plan Prepared for:



TEP Rocky Mountain, LLC

WMC 24-17 Drill Pad - Plat 7A

INTERIM RECLAMATION CROSS SECTIONS

## EASEMENT

KNOW ALL BY THESE PRESENTS:

That Gordman Leverich Limited Limited Liability Partnership, a Colorado limited partnership, c/o Chris W. Leverich, 555 E. Durant, Suite 4A, Aspen, Colorado 81611, hereinafter referred to as Grantor, (whether one or more), for and in consideration of the sum of One Dollar (\$1.00) and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, *in accordance with that certain Contract dated June 17, 2008 by and between the parties hereof, "Seller shall convey an easement to the herein described property for the purpose of oil and gas development...Seller shall also convey an easement for the access to the Laramie (Honea) property located in Lots 1 and 2 Section 19, Township 7 South, Range 93 West"*, does hereby grant, convey and warrant unto LARAMIE ENERGY II, LLC, a Delaware limited liability company, having its principal office at 1512 Larimer Street, Suite 1000, Denver, Colorado 80202, and to its successors and assigns, hereinafter referred to as Grantee, the exclusive right, privilege and easement ("Easement") for the purpose of locating and surveying pipeline route, and for constructing, entrenching, operating, maintaining, repairing, altering, replacing and removing one or more pipelines, including without limitation above and below ground valves, meters, pigging equipment, wireleads, communications lines, power lines, cathodic protection equipment and markers, necessary or desirable in connection with the purposes herein, all for the handling, gathering and movement of natural gas, including coalbed methane, and the constituents contained therein, and for constructing, installing, maintaining, operating, replacing and removing an access road, and necessary appurtenances, for the access of vehicles and equipment to the drilling and producing locations of Grantee, in, over, across, under and upon the following lands in Garfield County, State of Colorado, to-wit:

Township 7 South, Range 94 West, 6th P.M.

Section 13: That portion of said Section more particularly described as a strip of land on Exhibit A attached hereto and by this reference made a part hereof.

Township 7 South, Range 93 West, 6th P.M.

Section 18: That portion of said Section more particularly described as a strip of land on Exhibit A attached hereto and by this reference made a part hereof.

The Easement granted hereby is more specifically identified as a strip of land measuring thirty (30) feet in width, and is located over, across, under and upon the lands of Grantor specifically described on a pipeline and access road location and dimensional survey map to be attached hereto and made a part hereof as Exhibit "A"; provided, however, notwithstanding Exhibit "A", the initial pipeline and access road constructed hereunder shall constitute the centerline thereof, such that the Easement shall ordinarily extend fifteen (15) feet on each side of the centerline, which shall be installed in the center of the access road. The center line description location and dimensions of the Easement shall be established by a preliminary drawing which shall be attached hereto as Exhibit "A" and made a part hereof upon execution hereof. The Exhibit "A" shall be replaced upon construction of the initial pipeline and access road by an asbuilt survey of the access road and initial pipeline.

TO HAVE AND TO HOLD unto Grantee, together with all the rights, benefits and privileges necessary and convenient for the full use and enjoyment of the rights herein granted. Grantor retains the right to use and enjoy the lands contained within the Easement except as Grantor's use and enjoyment may interfere with or create a potential hazard to the rights herein granted to Grantee, it being understood and agreed that Grantor shall not place any obstruction within or conduct any activities upon the Easement which could even potentially interfere with the normal operation and maintenance of the access road or pipelines and associated equipment.

It is further agreed as follows:

LW

1. All pipelines constructed by Grantee shall, at the time of construction thereof, be buried to a depth not less than 3 feet as measured from the surface above the pipeline to the top of the pipeline, except that at the option of Grantee, such line or lines may be placed above the channel of any stream, - or other water courses.

2. During construction, repair, replacement or removal, Grantee shall have the right to use an additional strip of land not more than fifteen (15) feet in width on each side of the Easement strip referred to above for working space only and additional work space of one hundred feet by one hundred and fifty feet (100' X 150') along the easement area at the crossing of roads, streams, terraces and uneven terrain. Nevertheless, all this area shall be included in establishing acreage for valuation of consideration to be paid to Grantor under the "disturbed area" clause. Disturbed areas shall be defined as new disturbance, not on the existing road way and shall be compensated after calculated actual square footage of new disturbance at the rate of \$20,000 per surface acre of new disturbance.

3. It is understood and agreed by the parties that the consideration recited above covers not only the Easement granted herein, but also fully compensates Grantor for all reasonable and ordinary damages caused by, associated with and otherwise incurred in connection with pipelines and access road within the construction boundaries of the Easement. Following construction of the pipelines and access road, Grantee will pay for any damages to Grantor's growing crops or fences caused by the maintenance or operation of Grantee's facilities; provided, however, that the Grantee shall have the right from time to time to cut or clear trees, brush and other obstructions on the right-of-way that might interfere with the operation or maintenance of Grantee's facilities.

4. Grantee will restore the surface outside of the running surface and barrow ditches of the access road to its original contour as nearly as practicable, the disturbance to which shall be occasioned by the construction, maintenance or operation of said pipelines and access road under and through the above described land. Further, Grantee agrees to reseed and conduct annual weed control on all areas disturbed by Grantee's operations other than the running surface of the access road in a manner consistent with the vegetation or consistent with BLM high mountain pasture mixture of grass and legums existing prior to Grantee's operations on the Easement.

6. This instrument may be executed in counterparts and Grantor shall receive payment hereunder in such proportion as their respective interests bear to the fee simple title.

7. Grantor represents and warrants that he is the owner in fee simple of the lands covered by the Easement, subject only to outstanding mortgages and rights of way, if any, now of record in said county, and in the event of default by Grantor, Grantee shall have the right to discharge or redeem for Grantor, in whole or in part, any mortgage, tax or other lien on the lands covered by the Easement and thereupon be subrogated to such lien and rights incident thereto.

8. The rights of the parties may be assigned in whole or in part.

9. Grantee agrees to indemnify and hold harmless Grantor, its officers, employees, agents, successors and assigns against any and all liability, loss, damages, claims, demand actions, causes of actions, including court costs and attorney's fees which may result from property damage or personal injury to, or death to persons whomsoever, to the extent such arises from Grantee's occupancy of the Easement or Grantee's operations on the Easement, except to the extent that such liability, loss, damage, claims, demand actions, causes of action, including court costs and attorney's fees, arise out of the negligence, willful misconduct, of Grantor, its agents, employees, successors or assigns.

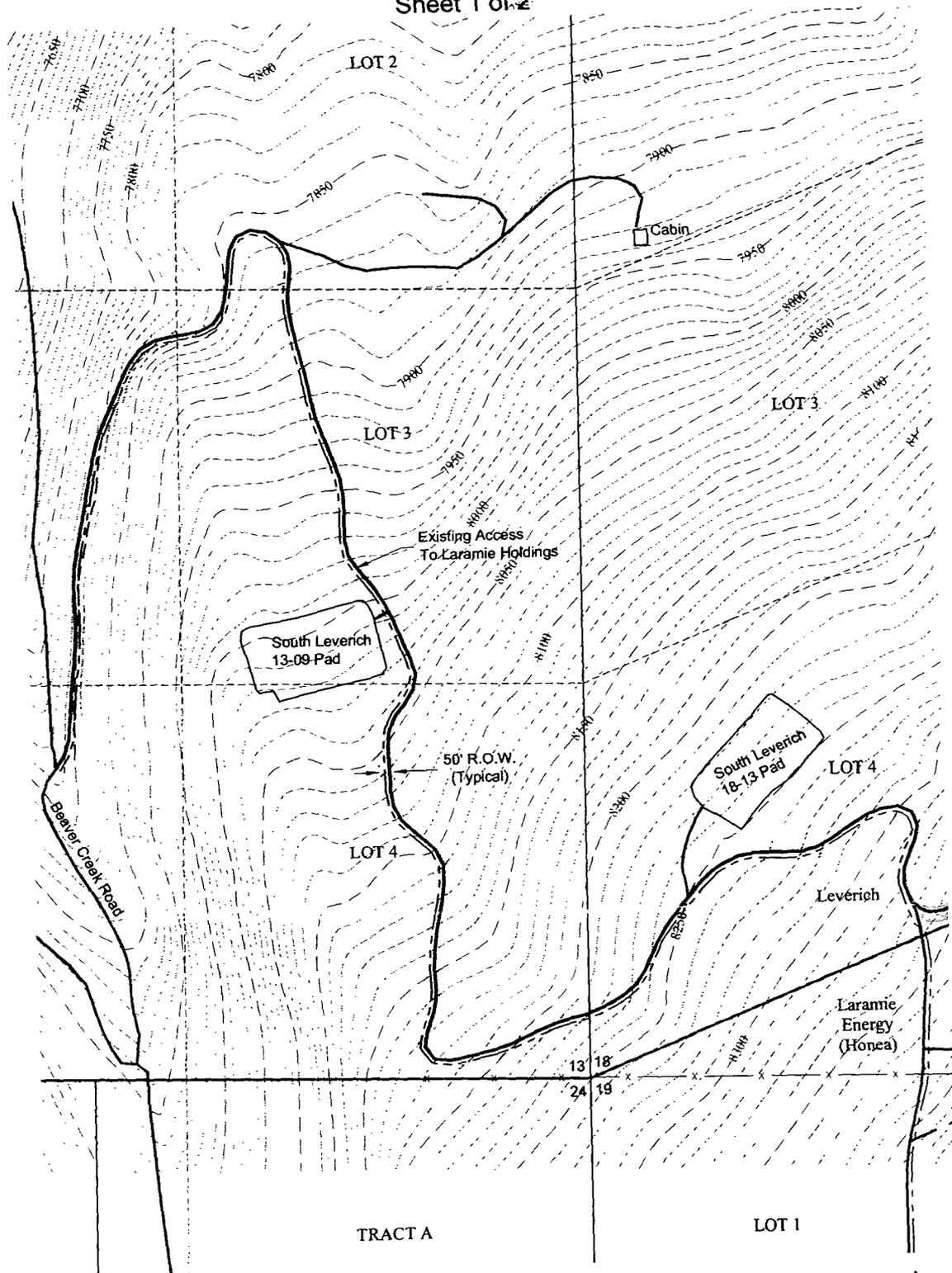
This instrument and the rights, easements and agreements herein contained shall be covenants running with the land and shall inure to the benefit of and be binding and obligatory upon the heirs, executors, administrators, successors and assigns of the parties hereto.

Dated this 19<sup>th</sup> day of December, 2011.



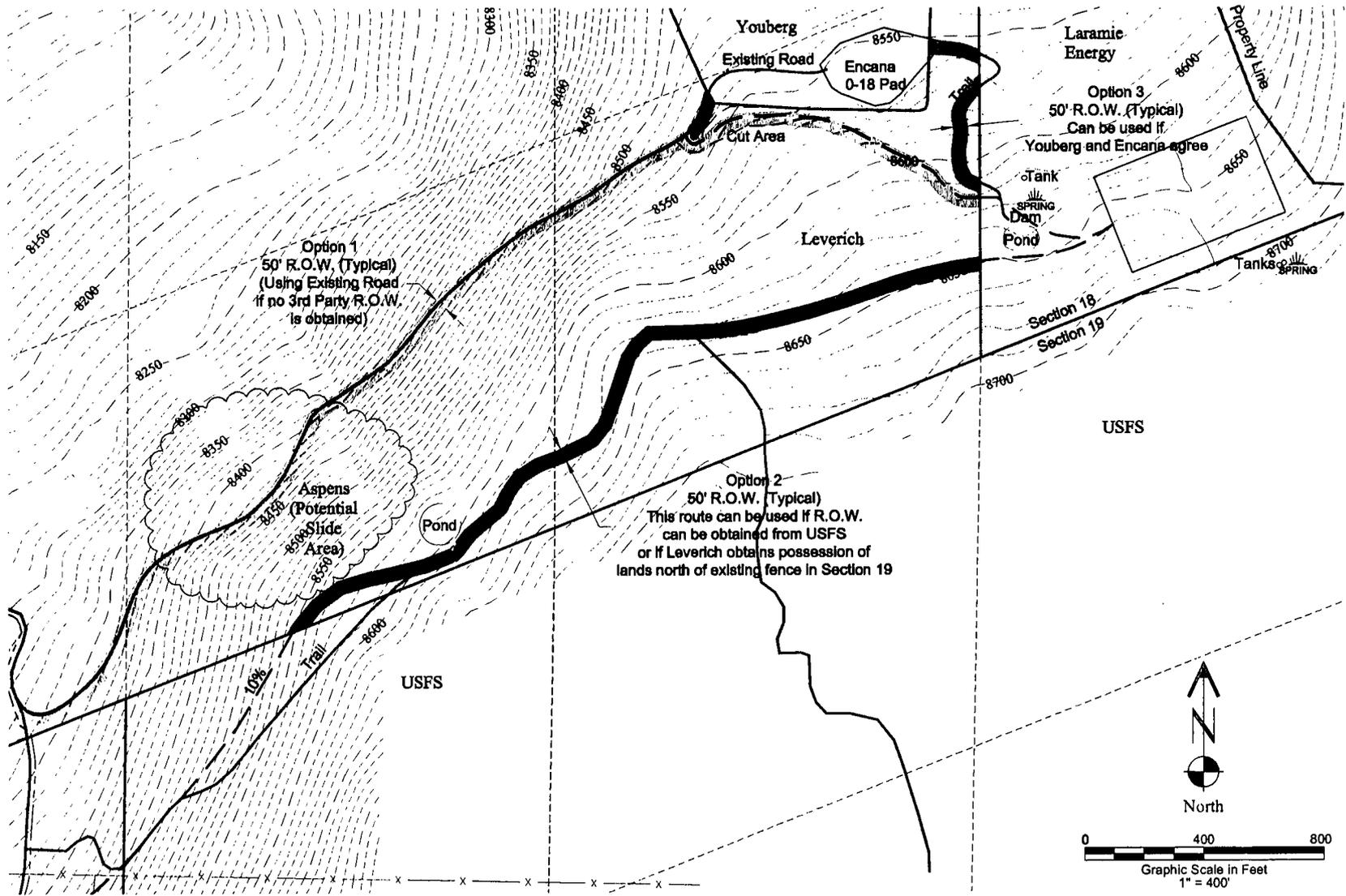
# Exhibit A

## Sheet 1 of 2



# Exhibit A

## Sheet 2 of 2



# **WMC 24-17 Pad Plan of Development Summary October 28, 2020**

## INTRODUCTION

TEP Rocky Mountain, LLC (“TEP”) is proposing to drill, complete, and produce seventeen (17) new directional wells from the proposed WMC 24-17 pad located on Federal surface administered by the Bureau of Land Management (“BLM”) in the SE¼SW¼ of Section 17 of Township 7 South, Range 93 West, 6<sup>th</sup> P.M. The WMC 24-17 pad would be located north of the United States Forest Service (“USFS”) boundary and would overlie Federal lease COC-050944. All seventeen (17) proposed wells would be directionally drilled into Federal lease COC-075070 within Section 20 of Township 7 South, Range 93 West, 6<sup>th</sup> P.M.

Proposed Well Count: Seventeen (17)

Total Well Count: Seventeen (17) – Federal Lease COC-075070

Surface Ownership: Bureau of Land Management (BLM)

Spacing Orders (Section 20): Cause #1 – Order #229; Setback 100’ N/S and 600’ E/W

High Priority Wildlife Habitat:

Oil and Gas Location: None

Existing / Proposed Access Road: Designated Cutthroat Trout Critical Habitat

TEP would construct the WMC 24-17 pad to provide enough working surface to support drilling and completions operations. The existing access road to the Caerus O-18 pad (COGCC Loc ID: 311604) would be utilized with minor maintenance action planned during construction of the well pad. A new access road would be constructed from the Caerus O-18 pad to the proposed WMC 24-17 pad. TEP would also install new production facilities and pipelines to support efficient and effective well operations. TEP will utilize the existing RU 44-7 pad (COGCC Loc ID: 439173) for remote well completion operations and would install temporary surface lines between the RU 44-7 pad and WMC 24-17 pad to support well completion operations.

TEP is currently proposing to begin construction activities for the WMC 24-17 pad in the May of 2021. Construction activities are anticipated to take approximately ten (10) weeks to complete. Drilling operations are currently scheduled to occur from February of 2022 through May of 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 July of 2022. Interim reclamation of the WMC 24-17 pad would begin late summer of 2022 and would take approximately four (4) weeks to complete.

## SITE ACCESS & CONSTRUCTION

The existing access road from Garfield County Road 317A to the Caerus O-18 pad would be utilized along with a new access road from the Caerus O-18 pad to the WMC 24-17 pad. The existing access road (approximately 12,541 feet or 2.37 miles) will undergo minor maintenance actions where necessary during construction of the WMC 24-17 pad. The proposed access road (approximately 4,526 feet or 0.86 mile) from the Caerus O-18 pad to the WMC 24-17 pad would be constructed crossing private and Federal property. The proposed access road would be constructed with a twenty-foot (20’) driving surface with two-and-one-half feet (2.5’) on either side for storm water control features including berms, bar ditches, rip-rap, and others necessary to effectively control stormwater along the proposed access road. Culverts will be installed at key points along the access road as shown on the Road Plan & Profile. Additional culverts installation locations may be identified during road construction and reviewed with the surface owner prior to installation. The road will be surfaced with gravel or other road

surfacing materials approved by the surface owner. The proposed access road from the Caerus O-18 pad to the WMC 24-17 Pad will be constructed with a total disturbance footprint of approximately 6.35 acres. Approximately 3.37 acres of the proposed disturbance footprint would be on private surface and 2.98 acres would be on Federal surface. Please see the attached Access Road Plan & Profile for additional details.

The proposed WMC 24-17 pad will be constructed to provide enough working pad surface to support drilling, completions, and production operations for the seventeen (17) proposed wells. Storm water controls including waddles, diversion ditches, sediment traps, and others, will be installed during construction of the location to effectively control storm water and sediment from the location. Existing vegetation will be hydro-axed / mulched prior to striping topsoil. Topsoil will be stripped and stockpile along the east side of the pad. The pad working surface will be approximately four-hundred-and-eighty feet (480') in length by three hundred feet (300') in width. The northeast corner (#7) will be constructed with a three (3) to four (4) foot high rock / boulder wall to preserve the stand of oak brush near this corner of the pad. This stand of oak brush is roughly fifteen-feet (15') tall and would help provide screening for the pad.

A drilling pit will be excavated in the southeast corner of the pad and used for water-based drill cuttings management during drilling operations. The proposed production facilities will be installed along the west side of the pad near the pad entrance. The WMC 24-17 pad will be constructed with a disturbance footprint of approximately 4.89 acres, all on Federal surface. Please see the construction layout for additional details regarding pad construction and storm water control features.

Rocks or boulders excavated during road and pad construction will be placed / stacked on the cut slope of the pad and / or road where appropriate. Placement of rocks / boulders will be reviewed with the surface owner prior to placement.

The existing RU 23-17 pad (COGCC Loc ID: 452566) will be utilized to support the natural gas sales meter, the rig fuel buy-back meter, and the pig launcher. A thirty-foot (30') by thirty-foot (30') equipment pad will be constructed northwest of the existing separators adjacent to the existing access road where the proposed meters will be installed. The existing gate and a section of the existing fence line on the north and south side of the existing road will be relocated near the existing twenty-four-inch (24") culvert northwest of the proposed equipment pad.

#### SITE EQUIPMENT LIST

TEP would install wellhead telemetry and other wellhead specific equipment on the WMC 24-17 pad to support production operations for the seventeen (17) proposed wells. TEP would also install production facilities, including separators, tanks, and Emission Control Devices ("ECD"), on the WMC 24-17 pad to effectively operate and produced the proposed wells. Proposed separators and ECD will be installed along the west side of the pad with approximately of one hundred feet (100') between the separators and proposed wellheads. Tanks will be installed with a lined steel containment structure ninety-nine feet (99') south of the proposed wellheads. Production equipment will be installed prior to commencement of drilling operations.

On the RU 23-17 pad, Summit Midstream will install a natural gas sales meter, a rig fuel buy-back meter, and a pig launcher on the proposed equipment pad north west of the existing separators. The meters and pig launcher will be installed within a thirty-foot (30') by thirty-foot (30') pad adjacent to the existing access road near the pad entrance.

The following describes the production facilities planned for use during drilling, completion, and production operations associated with the proposed wells on the WMC 24-17 pad:

1. Proposed WMC 24-17 Pad:

- a. Drilling Equipment:
    - i. Drilling Rig – Please see typical rig layout.
    - ii. Drilling Pit – Drilling cuttings management and disposal
  - b. Completions Equipment: Flowback Operations
    - i. Two (2) 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. TEP Production Equipment:
    - i. Proposed Separators: Eighteen (18) Separators within 90' x 30' area
      - 1. Four (4) Quad Separators
      - 2. One (1) Single Separator
      - 3. One (1) Low Pressure Separator
    - ii. Proposed Tank Battery: Four (4) Tanks within 40' x 40' Line Steel Containment
      - 1. Two (2) 500bbl Condensate Tanks; Internally Coated
      - 2. One (1) 80bbl Blowdown; Internally Coated
      - 3. One (1) 80bbl Vent Tank; Internally Coated
    - iii. Proposed Emissions Control Device: One (1) - 48" x 12'
2. Existing RU 23-17 Pad:
- a. Proposed Production Equipment:
    - i. One (1) Sales Meter
    - ii. One (1) Buyback Meter
3. Existing RU 44-7 Pad:
- a. Completions Equipment:
    - i. Eight (8) Completions Pumps
    - ii. Seventy (70) Five Hundred Barrel (500bbl) Frac Tanks
    - iii. One (1) Blender
    - iv. Three (3) Sand Silos

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

### PROPOSED PIPELINES

TEP would install one (1) eight-inch (8") steel gas pipeline (approximately 2855 feet) and one (1) four-inch (4") FlexPipe produced water pipeline (approximately 2892 feet) from the WMC 24-17 pad following an existing range fence to the tie-in point with an existing eight-inch (8") natural gas pipeline operated by Summit and an existing four-inch (4") produce water pipeline operated by TEP located near the RU 23-17 pad in NE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 17, Township 7 South, Range 93 West, 6<sup>th</sup> P.M. The proposed gas and water pipelines will be collocated in the same trench within a fifty-foot (50') right-of-way (35' permanent and 15' temporary). The water and gas pipelines will be installed with approximately eighteen-inch (18") of separation and will be buried with a minimum depth of cover of forty-eight-inch (48").

To minimize the visual impact of the pipeline corridor to public viewers north of the corridor, TEP would conduct tree thinning adjacent to the proposed pipeline corridor. Areas of tree thinning would be determined after the pipeline right-of-way has been cleared. TEP would meet with the Authorized Officer following right-of-way

clearing to evaluate extent of visual impacts and to identify areas along the right-of-way for tree thinning. Tree thinning along the right-of-way would be used to break up the vertical line of the right-of-way on the landscape and blends edges of the right-of-way into the surrounding landscape.

The following outlines the proposed on-location pipelines that will be installed at the WMC 24-17 pad during site construction. Please see the Facility Layout Drawing for a depiction of onsite equipment and piping.

1. Seventeen (17) two-inch (2") Coated Steel Wellhead Flowlines (approximately 100' each)
2. One (1) two-inch (2") Coated Steel Condensate Dump Line (approximately 85')
3. One (1) two-inch (2") Coated Steel Fuel Gas Flowline (rig fuel; approximately 100')
4. One (1) two-inch (2") Coated Steel Flowline (blowdown; approximately 85')
5. One (1) two-inch (2") Coated Steel Flowline (waterline vent; approximately 85')
6. One (1) four-inch (4") Aluminum Surface Vent Flowline (ECD; approximately 75')
7. One (1) one-inch (1") Steel Gas Supply Flowline (ECD; approximately 60')

Please see the attached Facility Layout Drawing showing all proposed equipment and associated pipeline planned for installation during development of the WMC 24-17 pad.

#### ELECTRICAL

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

#### DRILL CUTTINGS MANAGEMENT

Drill cuttings generated during drilling operations on the WMC 24-17 pad will be managed within a drilling pit constructed in the southeast corner of the pad. The drilling pit would be approximately one-hundred-and-eighty feet (180') in length by ninety feet (90') in width, with a depth of approximately nineteen feet (19'). Drill cuttings are estimated at three hundred and twenty-five cubic yards (325cy) per well, with a total drill cuttings volume of five-thousand-five-hundred and twenty-five cubic yards (5,525cy). The drilling pit has been designed with a maximum capacity of seven-thousand two-hundred and sixty cubic yards (7,260cy). The drilling pit would be constructed with a two- and one-half foot (2.5') high perimeter berm along the north, east, and western sides of the drilling pit to ensure containment of drill cuttings. A wildlife ramp will be constructed near the northeast corner to prevent entrapment.

#### COMPLETIONS OPERATIONS

Completions operations will be conducted remotely from the RU 44-7 pad. SIMOPS will be employed during development of the seventeen (17) proposed. Water will be transported from the Beaver Creek Completions Pit 11-7-793 (COGCC Loc ID: 432702) to the RU 44-7 pad via two (2) existing six-inch (6") FlexSteel water pipelines. Temporary completions equipment including frac tanks, blenders, sand silos, and pumps would be temporarily staged on the RU 44-7 pad during well completion operations. See the Site Equipment List section above for specific details on proposed temporary completion equipment.

TEP will install five (5) four-and-one-half-inch (4.5") steel temporary surface frac lines (approx. 7,654') from the RU 44-7 frac pad to the WMC 24-17 pad following the existing access road and proposed pipeline corridor.

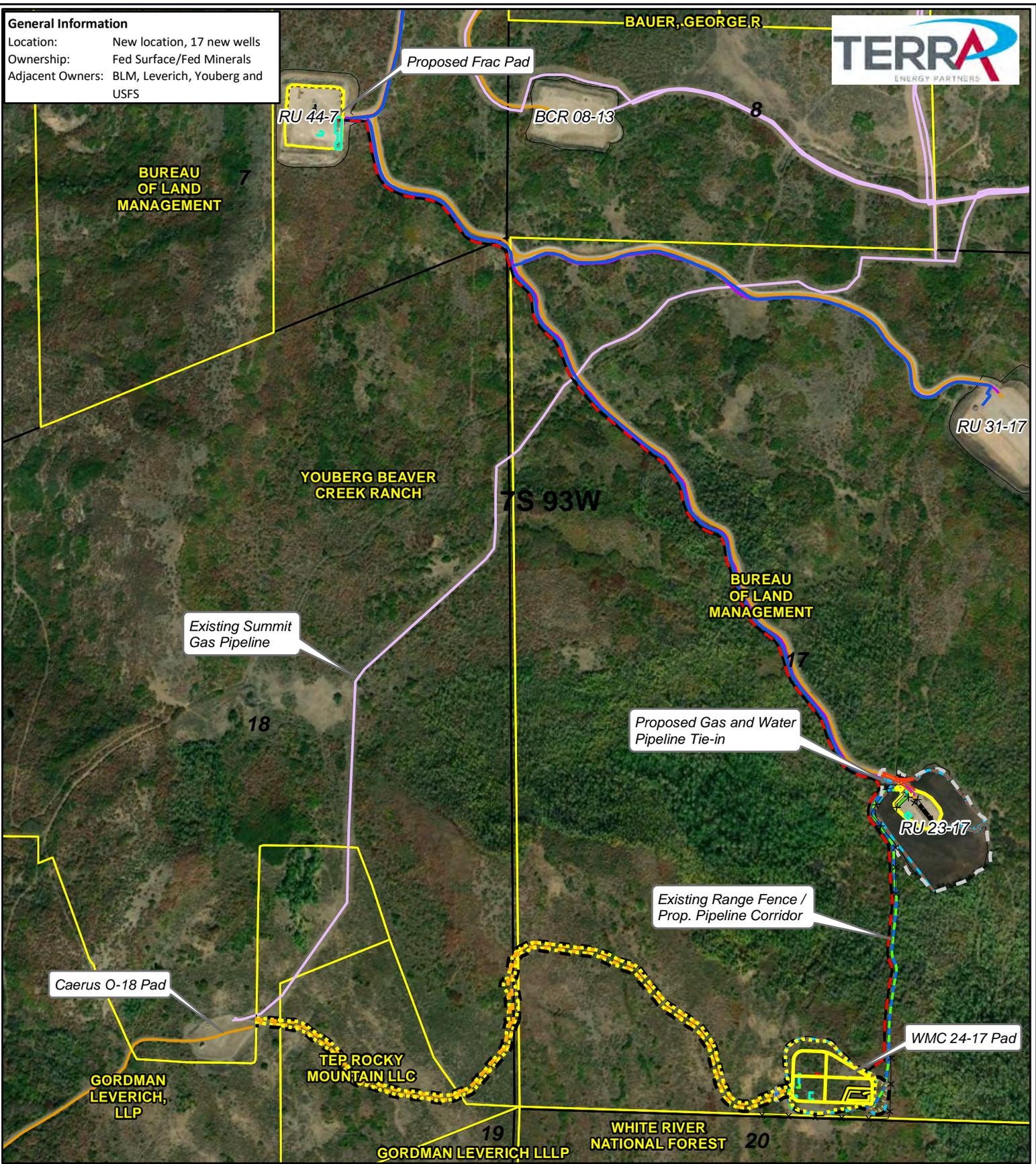
Flowback operations will occur on the WMC 24-17 pad. Returned stimulation fluids generated during flowback operations would be processed through four (4) phase separators to separate gas, water, condensate, and sand. Water would be reused during future well completion operations on the WMC 24-17 pad or transported via

pipelines to TEP operated water management facilities. Frac sand would be managed within a forty-foot (40') by forty-foot (40') area with two- and one-half foot (2.5') high earthen berms surrounding all sides of the management area. The frac sand management area would be located on pad within the pad perimeter berm near the drilling pit.

#### SITE RECLAMATION

Within six (6) months following completions of planned operations on the WMC 24-17 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.

**General Information**  
 Location: New location, 17 new wells  
 Ownership: Fed Surface/Fed Minerals  
 Adjacent Owners: BLM, Leverich, Youberg and USFS



- Legend**
- Proposed Cellar
  - Propose Pad Edge
  - Proposed Drilling Pit
  - Proposed Daylight Line
  - Proposed Limit of Disturbance
  - Proposed Production Equipment
  - Proposed Road
  - Proposed Topsoil Stockpile
  - Existing Fence
  - Stormwater Controls
  - Proposed Culvert
  - Proposed Gas Pipeline
  - Proposed Frac Lines
  - Parcel Ownership
  - Existing Gas Pipeline
  - Existing Water Pipeline
  - Existing Condensate Pipeline
  - Summit / Red Rock Gathering
  - Summit / Grand River Gathering
  - Existing Road
  - Existing Pad

**TEP Rocky Mountain LLC**

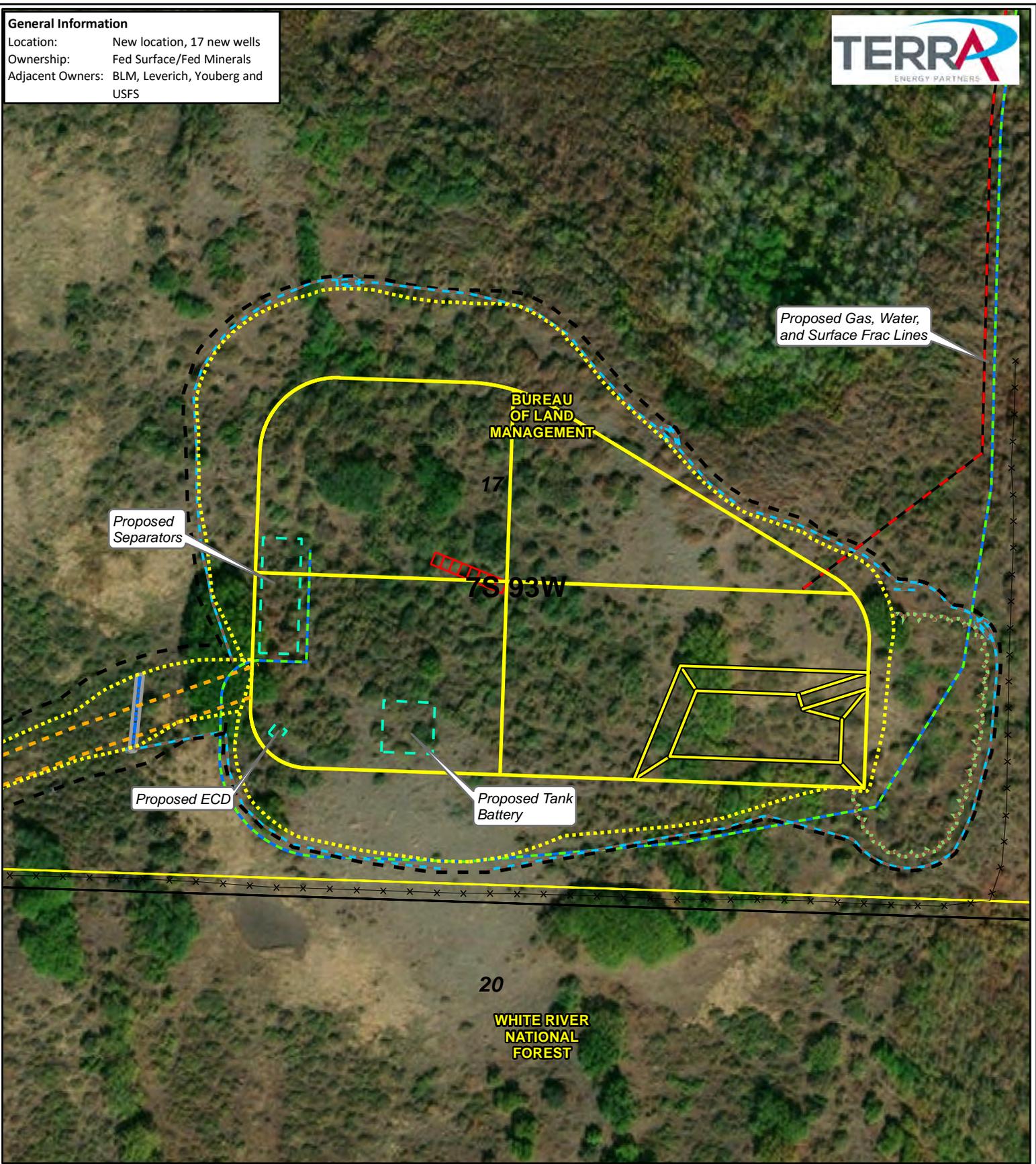
**WMC 24-17 Pad  
 Plan of Development  
 T7S R93W, Section 17**

**October 12, 2020**



**General Information**

Location: New location, 17 new wells  
Ownership: Fed Surface/Fed Minerals  
Adjacent Owners: BLM, Leverich, Youberg and USFS



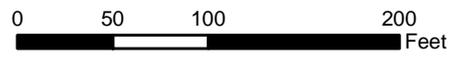
- Legend**
- Proposed Cellar
  - Proposed Pipelines
  - Propose Pad Edge
  - Proposed Frac Lines
  - Proposed Drilling Pit
  - Parcel Ownership
  - Proposed Daylight Line
  - Proposed Limit of Disturbance
  - Proposed Production Equipment
  - Proposed Road
  - Proposed Topsoil Stockpile
  - Existing Fence
  - Stormwater Controls
  - Proposed Culvert

**TEP Rocky Mountain LLC**

**WMC 24-17 Pad  
Plan of Development  
T7S R93W, Section 17**



**October 12, 2020**



**TEP Rocky Mountain LLC**  
**Surface Use Plan of Operations for**  
**Proposed Federal WMC 24-17 Pad**  
**October 28, 2020**

**INTRODUCTION**

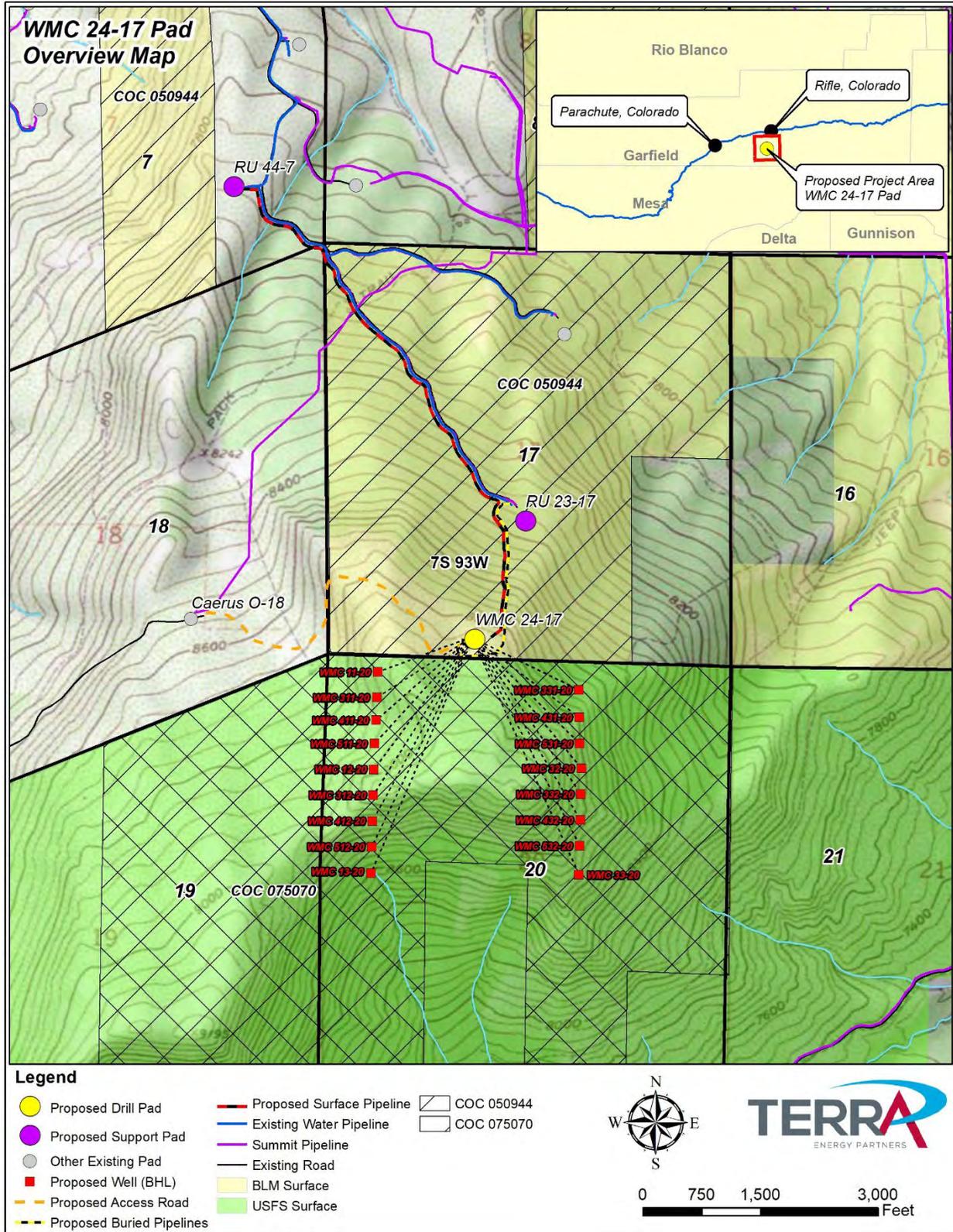
TEP Rocky Mountain LLC (“TEP”) is proposing to drill, complete, and operate seventeen (17) proposed directional natural gas wells from the proposed WMC 24-17 pad located on Federal surface administered by the Bureau of Land Management (“BLM”) overlying Federal lease COC-050944. The WMC 24-17 pad is a new well pad located on resource / range land in the SE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 17, Township 7 South, Range 93 West, 6<sup>th</sup> P.M., within Garfield County, Colorado. All seventeen (17) proposed wells would be directionally drilled into the adjacent Federal lease COC-075070 south of the WMC 24-17 pad. Please see Table 1, Well Pads and Wells List for a list of the proposed wells on the WMC 24-17 pad.

The WMC 24-17 well pad would be constructed to accommodate the development of the seventeen (17) new proposed directional wells. An access road approximately 4,526 feet in length would be constructed from the existing Caerus O-18 pad to the WMC 24-17 pad and would provide long-term access to the seventeen (17) proposed directional wells. TEP would utilize two (2) existing well pads for support facilities during drilling, completions, and production operations associated with the proposed wells on the WMC 24-17 pad. The RU 23-17 pad, located on Federal surface in the NE $\frac{1}{4}$ SW $\frac{1}{4}$  and NW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 17, Township 7 South, Range 93 West, 6<sup>th</sup> P.M., would be used to support Summit Midstream’s (“Summit”) proposed production equipment. A small portion of the RU 23-17 pad would be expanded to place the Summit proposed sales meter, temporary buy-back meter, and pig launcher. The existing RU 44-7 pad would be utilized as a remote frac support location for well stimulation operations for the proposed new directional wells on the WMC 24-17 pad. The RU 44-7 pad is located on private surface (Youberg Beaver Creek Ranch, L.P.) in the SE $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 7, Township 7 South, Range 93 West, 6<sup>th</sup> P.M. See Figure 1 for an overview of the proposed development plan.

To support production operations on the WMC 24-17 pad, TEP would install one (1) four-inch (4”) FlexPipe water pipeline (approx. 2,892 feet) from the separators on the WMC 24-17 pad to the existing four-inch (4”) water line at the RU 23-17 pad. TEP would also install one (1) eight-inch (8”) steel natural gas pipeline (approx. 2,855 feet) from the proposed separators on the WMC 24-17 pad to the existing eight-inch (8”) natural gas pipeline operated by Summit. The proposed tie-in point would be near the entrance of the RU 23-17 pad. TEP would install several on-location pipelines to support onsite production operations which are described in detail below. The proposed pipelines would be installed within a fifty-foot (50’) pipeline right-of-way following the BLM and United States Forest Service (“USFS”) property boundary south of the pad and the existing range fence northwest of the pad to the RU 23-17 pad.

Well completion operations associated with the proposed wells on the WMC 24-17 pad would be conducted via simultaneous operations (“SIMOPS”) from the existing RU 44-7 pad. Water would be transported to the RU 44-7 pad via existing water pipelines operated and maintained by TEP. TEP would install five (5) four-and-one-half-inch (4.5”) steel temporary surface frac lines from the RU 44-7 pad to the WMC 24-17 pad to support remote frac and flowback operations. Temporary surface frac lines would be installed following the existing access road to the RU 23-17 pad and the proposed pipeline corridor to the WMC 24-17 pad. Recycled produced water would be pumped from existing TEP operated water management facilities to the RU 44-7 pad during completions operations. Flowback would be processed through a four (4) phase separator, and flowback water would either be piped back to the RU 44-7 pad and recycled for future well completion operations, or transported to TEP’s Water Management Facilities for processing, reuse, or recycling.

Figure 1. WMC 24-17 Project Overview Map



Construction activities for the WMC 24-17 pad and the associated support facilities are scheduled to begin in May 2021. Drilling and completions operations for the seventeen (17) proposed directional wells would begin in February 2022. Since SIMOPS is planned for development of these wells, well completion operations would begin in March 2022. Drilling operations would be completed by mid-May 2022 and completions operations would be completed by July 2022. The WMC 24-17 pad would be reclaimed during the fall of 2022 or the following growing season, depending on weather conditions and project scheduling. Development may be accelerated or delayed based on market conditions and company constraints.

**Table 1. Well Pads and Wells List**

Pad Name (Underlying Lease)	Lease Number	CA/Section	Well Name (Proposed wells in Bold)			
WMC 24-17 pad (COC-050944)	COC-075070	Section 20	<b>WMC 311-20</b>	<b>WMC 511-20</b>	<b>WMC 312-20</b>	<b>WMC 512-20</b>
			<b>WMC 33-20</b>	<b>WMC 532-20</b>	<b>WMC 432-20</b>	<b>WMC 332-20</b>
			<b>WMC 11-20</b>	<b>WMC 411-20</b>	<b>WMC 12-20</b>	<b>WMC 412-20</b>
			<b>WMC 13-20</b>	<b>WMC 32-20</b>	<b>WMC 531-20</b>	<b>WMC 431-20</b>
			<b>WMC 331-20</b>			

**EXISTING ROADS**

Existing roads, including private lease roads and public roads, would be utilized during construction, drilling, completions, and production operations of the seventeen (17) proposed wells on the WMC 24-17 pad. Existing lease roads would be operated and maintained as summarized below. The operator would be responsible for periodic inspection and maintenance of the existing lease roads. The operator would conform to a schedule of preventative maintenance, which at a minimum, provides for the following measures on a biannual basis. Problem areas would be corrected as needed.

1. Road surface grading and application of surfacing materials, as needed.
2. Relief ditch, culvert, and cattle guard cleaning.
3. Erosion control measures for cut and fill slopes and all other disturbed areas.
4. Road closures during periods of excessive soil moisture to prevent rutting caused by vehicular traffic.
5. Road and slope stabilization measures as required.
6. All roads shall be maintained to the standards required for the construction of the road until final abandonment and rehabilitation takes place.

Minor road maintenance would be performed along the existing access roads prior to construction. Storm water controls along the existing access roads would be evaluated during construction to ensure they are functioning properly. Additional controls may be evaluated during construction with the Authorized Officer or surface owners and implemented, as necessary. See Construction Layout and Access Road Map for further details.

**NEW OR RECONSTRUCTED ACCESS ROADS**

Construction of a new access road (approximately 4,526 feet) would be required for development of the proposed wells on the WMC 24-17 pad. The proposed access road would be constructed from the existing Caerus O-18 pad to the WMC 24-17 pad. The proposed access road traverses across private and Federal surface. Approximately 2,366 feet of the proposed access road would be located on private surface and the remaining additional 2,160 feet of the proposed access road would be located on Federal surface. The access road would consist of a twenty-five (25') permanent right-of-way, consisting of the twenty-foot (20') wide

driving surface and two and one-half foot on either side for storm water controls, and a fifty-five foot (55') wide temporary works space for the associated cut and fill slopes.

The access road would generally be constructed with a driving surface of approximately twenty-feet (20') in width. The road would be constructed with two and one-half feet (2.5') on either side of the proposed driving surface for stormwater control features such as bar ditches, berms, and culvert inlets / outlets. The access road was designed with road grades at or below twelve percent (12%). Culverts would be installed periodically along the proposed access road to direct storm water away from the access road. Culverts would be fitted with rock at the inlet and outlet of the culvert. Location of proposed culverts are shown on the attached Access Road Plan and Profile. Culvert installation would be further evaluated during construction to determine if additional culverts are needed. The access road would be surfaced with six-inches (6") of three-quarter inch (3/4") gravel or another surfacing materials approved by the Authorized Officer or surface owner.

Trees and vegetation along the proposed access road would be hydro-axed / mulched. Topsoil would be stripped from the proposed road surface area and windrowed along the outer edges of the proposed road alignment. Topsoil would be pulled back and replaced along the cut and fill slopes of the access road following completion of construction.

A steel frame gate will be installed at the intersection of the proposed access road and the existing range fence along the eastern edge of TEP's property boundary located in Section 18, Township 7 South, Range 93 West, 6<sup>th</sup> P.M. The gate would be fitted with a steep chain and pad lock to control access and ensure containment of cattle grazing within the associated grazing allotments.

Road maintenance plans and conformance standards described in the Existing Roads section above would be applied to the proposed access road for the WMC 24-17 pad.

Please refer to the Proposed Access Road Plan and Profile and Plan of Development Map for additional details.

## **LOCATION OF EXISTING WELLS**

The Existing Well Locations within One-Mile Radius of the project are identified on Plat 5C, included in the construction plat package.

## **LOCATION OF EXISTING AND PROPOSED PRODUCTION FACILITIES**

### Production Equipment

TEP would install wellhead telemetry and other wellhead specific equipment on the WMC 24-17 pad to support production of the proposed wells. TEP would also install production facilities, including separators, tanks, and an Emission Control Device ("ECD"), on the WMC 24-17 pad to effectively produce the proposed wells. Eighteen (18) separators (4 quad separators, 1 single separator, and 1 low pressure separator) would be installed along the west side of the WMC 24-17 pad within a ninety-foot (90') by thirty-foot (30') area. Two (2) five-hundred-barrel (500bbl) condensate tanks and two (2) eighty-barrel (80bbl) steel fluid storage tanks, used for well blowdown and pipeline venting operations, would be installed within a forty-foot (40') by forty-foot (40') lined steel containment structure along the south side of the pad. The tank battery would be installed with a minimum of seventy-five feet (75') setback from the proposed separators, wellheads, and ECD. One (1) ECD would be installed on pad south of the separators and seventy-five feet (75') west of the proposed tank battery to control air emissions.

On the RU 23-17 pad, TEP would construct a thirty-foot (30') by thirty-foot (30') equipment pad near the pad entrance to support Summit's proposed production equipment, which includes a natural gas sales meter, a natural gas buy-back meter for fuel gas, and a pig launcher.

Table 2, Production Equipment Details, provides a list of the production facilities proposed on both the WMC 24-17 pad and the RU 23-17 pad. Please see the Plan of Development Summary and the Construction Layout for the WMC 24-17 pad and RU 23-17 pad for additional details.

**Table 2. Production Equipment Details**

Pad Name	Equipment Description	Equipment Count	Capacity	Status
WMC 24-17 pad	Quad Separators	4	NA	Proposed
	Single Separator	1	NA	Proposed
	Low Pressure Separator	1	NA	Proposed
	Condensate Tanks	2	500bbl	Proposed
	Blowdown/Vent Tanks	2	80bbl	Proposed
	Emission Control Device	1	NA	Proposed
RU 23-17 pad	Sales Meter (Summit)	1	NA	Proposed
	Buy-Back Meter (Summit)	1	NA	Proposed

### Pipelines

TEP would install one (1) eight-inch (8") steel natural gas pipeline (approximately 2,855 feet) and one (1) four-inch (4") Flexpipe produced water pipeline (approximately 2,892 feet) from the WMC 24-17 pad to the existing RU 23-17 pad. The proposed pipelines would be installed following the existing property boundary south of the WMC 24-17 pad and the existing range fence northeast of the WMC 24-17 pad to the RU 23-17 pad. The proposed natural gas pipeline would tie-into the existing eight-inch (8") natural gas pipeline at the RU 23-17 pad, which is operated by Summit. The proposed produced water pipeline would tie-into the existing four-inch (4") produced water pipeline at the RU 23-17 pad, which is operated by TEP. The proposed gas and water pipelines would be collocated in the same trench with a fifty-foot (50') right-of-way. The pipeline right-of-way would consist of a thirty-five foot (35') wide permanent right-of-way and a fifteen-foot (15') temporary workspace running the length of the right-of-way. The natural gas and produced water pipelines would have approximately eighteen-inches (18") of separation and would be buried with a minimum of forty-eight inch (48") depth of cover.

To minimize the visual impact of the pipeline corridor to public viewers north of the corridor, TEP would conduct tree thinning adjacent to the proposed pipeline corridor. Areas of tree thinning would be determined after the pipeline right-of-way has been cleared. TEP would meet with the Authorized Officer following right-of-way clearing to evaluate extent of visual impacts and to identify areas along the right-of-way for tree thinning. Tree thinning along the right-of-way would be used to break up the vertical line of the right-of-way on the landscape and blends edges of the right-of-way into the surrounding landscape.

Installation of the proposed pipeline would require the temporary removal of the existing range fence between the WMC 24-17 pad and the RU 23-17 pad. Following completion of installation of the proposed pipelines, TEP would reinstall the range fence along the east side of the pipeline right-of-way. Prior to installation, TEP would consult with the Authorized Officer to review the proposed placement of the range fence to ensure the most appropriate position of the fence within the right-of-way.

On the WMC 24-17 pad, TEP would install seventeen (17) two-inch (2") coated steel wellhead flowlines (approximately 100 feet) between the proposed wellheads and the proposed separators. To provide a fuel source for drilling operations, one (1) two-inch (2") coated steel fuel gas flowline (approximately 100 feet) would be installed from the manifold near the separators to a riser near the proposed wellheads. One (1) two-inch (2") coated steel condensate dump line (approximately 85 feet) would be installed from the proposed separators to the proposed blowdown tanks. Two (2) two-inch (2") coated steel dump lines (approximately 85 feet each) would be installed from the proposed separators and water pipeline to the proposed blowdown / vent tanks. One (1) four-inch (4") aluminum pipeline (approximately 85 feet) would be installed from the proposed blowdown tanks to the proposed ECD and one (1) one-inch (1") steel gas supply flowline (approximately 60 feet) would be installed from the separators to the ECD. Please see the WMC 24-17 pad Plan of Development Summary for additional details.

**Table 3. Proposed Pipeline Details**

Pad Name	Pipeline Description (COGCC Line Type)	Number of Lines (Status)	Dia. (in.)	Material	Fluid	Depth	Bedding Material	Length (ft.)	ROW Width (ft.)
WMC 24-17 Pad	Wellhead Flowline (On-Location Flowline)	17	2	Coated Steel	Emulsion	48" Min	Screened Subgrade	±100	NA
	Gathering Line	1	8	Steel	Gas	48" Min	Screened Subgrade	2,855	50
	Water Pipeline (Off-Location Flowline)	1	4	FlexPipe	Water	48" Min	Screened Subgrade	2,892	50
	Condensate Dump Line (On-Location Flowline)	1	2	Coated Steel	CNDS	48" Min	Screened Subgrade	±85	NA
	Fuel Gas Pipeline (On-Location Flowline)	1	2	Coated Steel	Gas	48" Min	Screen Subgrade	±100	NA
	Water Vent Line (On-Location Flowline)	1	2	Coated Steel	Water	48" Min	Screen Subgrade	±85	NA
	Blowdown Line (On-Location Flowline)	1	2	Coated Steel	Water	48" Min	Screened Subgrade	±85	NA
	ECD Piping (Process Piping)	1	4	Aluminum	Emissions	Surf.	NA	±75	NA
	Fuel Gas Pipeline - ECD (On-Location Flowline)	1	1	Steel	Gas	48" Min	Screen Subgrade	±60	NA
	Temp. Surface Frac Lines (Off-Location Flowline)	5	4.5	Steel	Water	Surf.	NA	±7,654	50

Temporary Pipelines

TEP would install five (5) four and one-half inch (4.5") temporary surface steel frac lines, approximately 7,654 feet in length each, from the RU 44-7 pad to the WMC 24-17 pad. The temporary surface frac lines would be installed following the existing access road to the RU 23-17 and the proposed pipeline corridor to the WMC 24-17 pad. The temporary surface frac lines would be used to support remote frac and flowback operation for the seventeen (17) proposed wells on the WMC 24-17 pad. Water used for well completion operations would be pumped to the RU 44-7 pad via two (2) existing six-inch (6") FlexSteel water pipelines. All temporary surface lines would be removed within six (6) months following completions operations. Pipeline routes are shown on the Plan of Development Map. See Table 3, Proposed Pipeline Details, for additional details regarding the proposed temporary pipelines.

Electrical

TEP would install one (1) two-inch (2”) electrical conduit from the thermoelectric generator (TEG) at the proposed separators to the chemical skid which would be located near the proposed wells. The TEG would provide supplemental power to the chemical pump during well production.

**LOCATION AND TYPES OF WATER SUPPLY**

Fresh water required for drilling operations (surface, intermediate, and production casing) and dust control, would be transported by truck from either the Giles Fresh Water Takeout or the Airport Land Partners Limited Takeout. The Giles Fresh Water Takeout is located on the Colorado River on TEP property north of County Road 320 near Spruce Creek. The Airport Land Partners Limited Takeout is located on the Last Chance Ditch north of the Garfield County Airport along Garfield County Road 346. Water trucks would utilize existing county, state, and lease roads and would follow existing truck routes where applicable. The intake on the water pumps at the source locations would be fitted with a quarter-inch (0.25”) mesh screen to prevent impacts to aquatic wildlife in the river or ditch. TEP estimate that approximately 4,500bbls of fresh water would be used for drilling operations and dust control per well.

Well completion operations would be conducted via SIMOPS, which utilizes recycled produced water from other producing wells operated by TEP. Recycled produced water would be transported from TEP’s existing water management facilities to the RU 44-7 frac pad via existing pipeline infrastructure. Fluid for well completion operations would then be pumped from the remote frac pad to the wells on the WMC 24-17 pad. Please see Table 4, Water Source Table, for additional details.

**Table 4. Water Source Table**

<i>Name / Water Source Type</i>	<i>Water Source Use</i>	<i>Lat</i>	<i>Longitude</i>	<i>Permit Type</i>	<i>Transport Method</i>	<i>Land Ownership</i>	<i>Transport Land Ownership</i>	<i>Volume Per Well (bbl.)</i>	<i>Volume Per Well (ac-ft.)</i>	<i>Volume Per Well (gal)</i>
Airport Land Partners Takeout /Perennial Surface	Surface Casing; Intermediate/ Production Casing; Dust Control	39.5294	-107.7336	Private Contract	Trucking	Private	Private	2,250	0.29	94,500
Giles Fresh Water Takeout / Perennial Surface	Surface Casing; Intermediate/ Production Casing; Dust Control	39.4866	-107.8839	Private Contract	Trucking	Private	Private	2,250	0.29	94,500
Beaver Creek Frac Pad / Recycled	Stimulation	39.4593	-107.82296	Private Contract	Pipeline	Private	Private	120,000	15.47	5,040,000

**SOURCE OF CONSTRUCTION MATERIALS**

Surface and subsoil materials within the proposed construction areas would be used. Additional gravel or pit lining material (if required) would be obtained from the Una gravel pit located in Section 34 of Township 6 South, Range 96 West, 6<sup>th</sup> P.M., the Mamm Creek gravel pit located in Section 9 of Township 6 South, Range 92 West, 6<sup>th</sup> P.M., or the Flag Sand & Gravel pit located in Section 11 of Township 6 South, Range 92 West, 6<sup>th</sup> P.M.

**Table 5. Construction Material Source Table**

<i>Material Type</i>	<i>Location/Company Name</i>	<i>Street Address</i>	<i>City</i>	<i>State</i>	<i>Zip Code</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Township</i>	<i>Range</i>	<i>Section</i>
Surface (Topsoil)	On Site Material	--	--	--	--	--	--	--	--	--
Subsurface	On Site Material	--	--	--	--	--	--	--	--	--
Gravel	Una Gravel Pit	318 CR 300	Parachute	Colorado	81635	39.399139	-108.10076	7S	96W	34
Gravel	United Mamm Creek	3095 CR 346	Rifle	Colorado	81650	39.536002	-107.673969	6S	92W	9
Gravel	Flag Sand & Gravel	1412 CR 311	New Castle	Colorado	81647	39.540505	-107.632125	6S	92W	11

**METHODS OF HANDLING WASTE DISPOSAL**

Drilling Fluids Management

A closed loop drilling system would be utilized to separate liquid and solids during drilling operations on the WMC 24-17 pad. Drilling fluids would be re-used throughout the drilling process. Once drilling operations are complete, drilling fluids would be stored in tanks and recycled for future drilling operations.

Drill Cuttings Management

Drill cuttings generated during drilling operations on the WMC 24-17 pad would be managed within a drilling pit constructed in the southeast corner of the pad. The drilling pit would be approximately one-hundred-and-eighty feet (180') in length by ninety feet (90') in width, with a depth of approximately nineteen feet (19'). Drill cuttings are estimated at three hundred and twenty-five cubic yards (325cy) per well, with a total drill cuttings volume of five-thousand-five-hundred and twenty-five cubic yards (5,525cy). The drilling pit has been designed with a maximum capacity of seven-thousand two-hundred and sixty cubic yards (7,260cy). The drilling pit would be constructed with a two and one-half foot (2.5') high perimeter berm along the north, east, and western sides of the drilling pit to ensure containment of drill cuttings. A wildlife ramp would be constructed near the northeast corner to prevent entrapment. Any excess drill cuttings that cannot be managed on location within the drilling pit would be hauled to an approved third-party commercial disposal facility. Please see the attached construction layouts for additional details on the proposed drill cuttings management area.

*Protocol for Managing Cuttings*

As drill cuttings are brought to the surface, they would 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 would be used to move the cuttings from the temporary storage cell to the drilling pit. The moisture content of the drill cuttings would be kept as low as practicable to prevent accumulation of liquids within the drilling pit. Once all drill cuttings are placed into the drilling pit, samples would be taken to determine if the cuttings meet Colorado Oil and Gas Conservation Commission (“COGCC”) standards. Additional treatment or amendment of the cuttings may be needed to ensure that COGCC 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 would be collected and submitted to an approved analytical laboratory and analyzed for the full COGCC 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 cleanup standards, the drill cuttings would be covered with a minimum of three feet (3') of clean fill material during pad reclamation.

In cases where weather conditions, safety concerns, or operational constraints require, drill cuttings may be transported via truck to an approved third-party commercial disposal facility in accordance with COGCC rules for treatment and final disposal.

Completions - Flowback

Returned stimulation fluids generated during flowback operations would be processed through four (4) phase separators to remove gas, water, condensate, and sand. Water would be reused during future well completion operations on the WMC 24-17 pad or transported via pipelines as described in the Produced Water section below. Frac sand would be managed within a forty-foot (40') by forty-foot (40') area with two and one-half foot (2.5') high earthen berms surrounding all sides of the management area. The frac sand management area would be located on pad within the pad perimeter berm. Once flowback operations are complete, returned frac sand would be mixed with drill cuttings and/or clean fill material and buried onsite within the drilling pit or cut slope of the pad. Once mixed with the drill cuttings, sampling would be conducted as described above for drill cuttings to ensure that COGCC standards are met prior to pad reclamation. Any frac sand remaining onsite after reclamation activities are complete would be hauled off-site to an approved third-party commercial disposal facility.

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. Please see the Waste Handling table (Table 6) below for additional details.

Sewage

Chemical toilets or an enclosed sewer system would be used during construction, drilling, and completions operations. Contents would be hauled to and disposed at an approved commercial disposal facility. Disposal of sewage would occur approximately once per week. Please see the Waste Handling table (Table 6) for additional details.

**Table 6. Waste Handling**

Waste Type	Waste Content Description	Amount of Waste per Well	Unit of Measure	Disposal Frequency	Containment Description	Disposal Type	Disposal Location
Drilling	Drill Cuttings	325	Cubic Yards	One Time Only	Drilling Pit	On-site Disposal	Private
Sewage	Sewage	200	Barrels	Weekly	Chemical toilets or enclosed sewer system	Haul to Commercial Facility	Commercial
Garbage	Garbage/Trash	4000	Pounds	Weekly	Enclosed trash containers	Haul to Commercial Facility	Commercial
Flowback	Frac Sand	35000	Pounds	One Time Only	Earthen berm containment on pad	Burial on Site	Private
Produced Water	Produced water after well is turned over to production. The volume reported is not accurate nor known at this time.	100+	Barrels	Weekly	Water is piped into existing infrastructure	Recycled/Off-Lease Injection/Commercial Facility	Private

Garbage

All garbage and trash would be stored in enclosed bear proof trash containers. Disposal of garbage and trash would occur approximately once per week during drilling and completions operations. All garbage and trash would be transported to a permitted and controlled landfill within one (1) week following

termination of drilling or completion operations. Garbage or trash would not be disposed of on-location. The well site and access road would always be kept free of trash and debris during long-term production operations. Please see the Waste Handling table (Table 6) for additional details.

### Produced Water

Produced water (water produced from the wells after the wells are turned over to production) would be transported through the proposed four-inch (4") produced water pipeline to the tie-in point with an existing four-inch (4") water pipeline at the RU 23-17 pad. Water would then be transported via existing water pipelines to one of TEP's existing water management facilities. Produced water would be treated with biocide at the water management facility. Produced water would 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 into one of the approved TEP operated underground injection control ("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. Please refer to the "TEP Rocky Mountain (Terra) active Produced Water Disposal Destinations as of October 1, 2018" document (Appendix 4 in the Master APD) for specific details on active destinations for produced water.

### **ANCILLARY FACILITIES**

TEP would utilize two (2) ancillary support facilities (RU 44-7 pad and RU 23-17 pad) during development of the proposed wells on the WMC 24-17 pad. The RU 23-17 pad is an existing oil and gas location that would be utilized for Summit's production equipment, including a new natural gas sales meter, temporary natural gas buy-back meter for rig fuel gas, and a pig launcher. An equipment pad approximately thirty-foot (30') by thirty-foot (30') would be constructed within the disturbance boundary of the site near the existing access to support installation of the proposed production equipment. Please see the RU 23-17 Construction Layout for further details on construction and placement of proposed production equipment on the RU 23-17 pad.

The RU 44-7 pad is an existing oil and gas location that would be utilized for remote frac operations for the proposed wells on the WMC 24-17 pad. The existing RU 44-7 pad was constructed in 2014 for the development of fourteen (14) wells, which were drilled in early 2015. The RU 44-7 pad was not reclaimed following initial drilling operations since the location was planned to be used during development of the wells on the RU 23-17 pad, RU 31-17 pad, and now the WMC 24-17 pad. Well completion equipment including frac tanks, blenders, sand silos, and pumps would be temporarily staged on the RU 44-7 pad during well completion operations. Please see the RU 44-7 Frac Equipment Layout for a detailed depiction of the proposed frac equipment planned for temporary placement on the RU 44-7 pad during well completion operations on the WMC 24-17 pad.

### **WELLSITE LAYOUT AND CONSTRUCTION**

The WMC 24-17 pad would be constructed to provide the necessary working surface to support safe and efficient working conditions for all TEP employees and contractors during every phase of development, including construction, drilling, completions, and production operations. Prior to initial pad construction, TEP would have the proposed pad location, proposed access road, and proposed pipeline corridor staked for construction and TEP's storm water contractor would install initial storm water control measures (i.e. waddles, straw bales, etc.) along the outer perimeter of the proposed disturbance boundary. TEP's

construction contractor would then begin removal of existing vegetation within the disturbance footprint by hydro-axing or brush hogging the trees or larger bushes within the project disturbance boundary.

Topsoil would be stripped from the access road corridor and placed along the outer boundary of the access road corridor. Topsoil within the pad disturbance footprint would be stripped and stockpiled along the west end of the pad location. Topsoil within the pipeline disturbance corridor would be stripped and placed along the east side of the proposed pipeline corridor. Topsoil would be stripped to a depth of approximately six-inches (6") and would be segregated from all other subsurface materials for use during reclamation.

Excavation of the pad and road would then commence. The access road construction is detailed in the New Access Road Construction Section of this document. The pad will be constructed based on the attached construction layout. A perimeter berm and drive over berm will be constructed around the fill side of the pad location and around the drilling pit as shown on the attached construction layout. The northeast corner of the pad location (corner #7) will be constructed with a three (3) to four (4) foot high rock wall to preserve the stand of oak brush located near this corner. The rock wall will be keyed in during construction of the fill slope.

The proposed production equipment, on-location flowlines, and well conductors would then be installed. The area beneath the proposed rig footprint will be compacted to ensure stability of the rig during drilling operations. The pad working surface will be bladed level and graveled with three quarter inch minus (3/4" minus) surfacing materials imported from one or more of the gravel pits listed in Table 5, Construction Material Source Table.

Excess rock or boulders exposed during excavation of the pad location will be placed / stacked along the exposed cut slope of the proposed pad and / or proposed road where appropriate. Placement of rock or boulders will be reviewed with the Authorized Officer or Surface owner prior to placement.

The cut and fill slopes of the pad will be hydro-seeded / mulched following completions of pad construction to minimize the potential for site degradation during the initial drilling and well completion phase of the project.

The wellsite would be constructed per the attached construction sheets. Additional site-specific details can be found on the following documents:

- WMC 24-17 Pad Construction Layout (Plat 2)
- WMC 24-17 Pad Construction Layout Cross Section (Plat 2B)
- WMC 24-17 Pad Wellhead Detail (Plat 2C)
- WMC 24-17 Pad Multi-Well Plan (Plat 3)
- WMC 24-17 Pad Drill Rig Layout (Plat 4)
- WMC 24-17 Pad Access Road & Topo Map (Plat 5)
- WMC 24-17 Pad Well Proximity Map (Plat 5A)
- WMC 24-17 Pad Hydrology Map (Plat 5B)
- WMC 24-17 Pad Location Drawing (Plat 6)
- WMC 24-17 Pad Location Table (Plat 6A)
- WMC 24-17 Pad Interim Reclamation Pad Layout (Plat 7)
- WMC 24-17 Pad Plan of Development Summary / Map
- WMC 24-17 Pad Access Road Plan & Profile
- RU 44-7 Pad Frac Equipment Layout
- RU 23-17 Pad Construction Layout and Cross Sections

## **PROJECT DISTURBANCE AND PLANS FOR SURFACE RECLAMATION**

### Surface Disturbance

The proposed 4.89-acre WMC 24-17 pad would be constructed for drilling and completions operations of the seventeen (17) proposed directional wells. The long-term disturbance attributed to the WMC 24-17 pad would be approximately 1.05 acres. All proposed disturbance for the WMC 24-17 pad would be on Federal surface. Topsoil would be stored along the eastern side of the pad location as shown on the attached construction layout.

The proposed access road for the WMC 24-17 pad would begin at the Caerus O-18 pad and head easterly to the proposed pad location. The total disturbance for the proposed road construction would be approximately 6.35 acres, 2.98 of which would be located on Federal surface and 3.37 of which would be located on private surface. The long-term disturbance attributed to the access road would be 2.07 acres, 0.98 of which would be located on Federal surface and 1.09 of which would be located on private surface.

The existing RU 23-17 pad would be utilized for installation of Summit's sales meter, the proposed temporary buy-back meter, and the proposed pig launcher. The 0.08 acre of proposed construction activities on the RU 23-17 pad would be within the existing limit of disturbance. No new disturbance would be attributed to RU 23-17 pad.

The existing 6.02-acre RU 44-7 pad will be utilized to support remote well completion operations associated with the seventeen (17) proposed directional wells on the WMC 24-17 pad. The pad will not be expanded from its current footprint. The existing pad surface will be bladed prior to setting temporary completion equipment. The long-term disturbance attributed to the RU 44-7 pad would remain 0.92 acres. The RU 44-7 pad will not be immediately reclaimed following completion of frac operations and will remain open to support well completion operations for the proposed wells on the RU 31-17 pad.

Installation of the proposed pipelines, including one (1) eight-inch (8") natural gas pipeline and one (1) four-inch (4") produced water pipeline, would create approximately 2.40 acres of surface disturbance. Of the 2.30 acres of disturbance associated with pipeline installation, all disturbance would be located on Federal surface. Approximately 2.18 acres of the of the pipeline disturbance corridor would be new disturbance with the remaining 0.22 acres occurring on land previously disturbed. No long-term disturbance would be attributed to pipeline installation.

The total disturbance associated with the WMC 24-17 pad and the associated support facilities is approximately 19.74 acres. On Federal surface there would be approximately 10.35 acres of disturbance, and on private surface there would be approximately 9.39 acres of disturbance. Of the 19.74 acres of disturbance, 6.47 acres would be within an area of existing disturbance or areas disturbed by previous development activities. Twenty percent (33%) of the total disturbance acreage would be on lands previously disturbed. The long-term disturbance, or disturbance remaining after interim reclamation, is approximately 4.07 acres.

Table 7, Proposed Disturbance for Project Components, below shows the proposed surface disturbance acreage for each component of the development plan.

### Interim Reclamation

Immediately upon completion of drilling and well completion operations, the locations and surrounding areas would be cleared of all remaining garbage and material not required for production. All garbage removed would be hauled to the nearest approved disposal facility. Returned frac sand would be mixed

with drill cuttings and any drill cuttings located on pad would be sampled to ensure compliance with COGCC rules, as described above under Methods for Handling Waste Disposal.

A working area (production pad) must be maintained around each wellhead and production equipment to ensure site accessibility and safe working conditions during long-term production operations. Unless an agreement is made with the landowner to keep the pad and/or road in place, the disturbed areas surrounding the production pad, including the access road disturbance outside the travel surface, would be re-contoured to blend as nearly as possible with the natural topography. Final grading of back-fill and cut slopes prevents erosion and encourages re-establishment of desirable vegetation. Please see the Interim Reclamation Plan (Plat 7) for additional site-specific details on pad reclamation.

Any existing drainages disturbed during pad construction would be re-established where appropriate. Prior to seeding, topsoil would be spread to a uniform depth to promote the establishment of desirable vegetation. Soil samples may be collected once re-contouring and topsoil redistribution has occurred to determine if any soil amendments are needed. Recommendations regarding seed mix and/or soil amendments would be reviewed with the surface owner prior to application.

All compacted portions of the pad, road, and pipeline route, not required for long term production operations, would be ripped to a depth of eighteen inches (18") when subsurface conditions permit. If the seed bed has begun to crust over or seal, the seed bed would be prepared by disking or some other mechanical means sufficient to allow penetration of the seed into the soil. In addition, broadcast seed should be covered by using a harrow, drag bar, or chain. Generally, slopes steeper than 2:1 would be hydroseeded and slopes shallower than 2:1 would be drill seeded. Seeding would occur during the appropriate time of year to ensure the best possible results for plant growth. The rate of application of the seed mix is listed in pounds of pure live seed (PLS) per acre. The seed mix will be certified and there will be no primary or secondary noxious weeds in the seed mixture. TEP will notify the Authorized Officer twenty-four (24) hours prior to seeding and shall provide evidence of certification of seed mix.

An approved seed mix, or a seed mix provided by the landowner or Authorized Officer, would be used on all disturbed areas except within the footprint of the production pad, as shown on the Interim Reclamation Plan (Plat 7). See Table 8 below for on the proposed seed mix.

Noxious weeds which may be introduced due to soil disturbance and bare ground conditions during well development and production will be treated by methods approved by the Authorized Officer. The Pesticide Use Permit shall be on record with the BLM for treatment of noxious weeds. Reclamation monitoring would be conducted per Appendix K (Fluid Minerals) of the June 2015 Colorado River Valley Field Office Decision and Approved Resource Management Plan Amendment, Specifically the Plans for Reclamation of the Surface – Template Northwest Colorado District.

#### Final Reclamation

Final Reclamation of the pad location and access road would occur following final abandonment of all wells drilled from the pad location unless an agreement is made with the landowner to keep the pad and/or road in place. Upon completion of approved plugging and abandonment of the wells, per Onshore Oil and Gas Order No. 2, all casing shall be cut-off at the base of the cellar or three feet (3') below final restored ground level (whichever is deeper). The well bore shall then be covered with a metal plate at least 1/4-inch-thick and welded in place, or a four inch (4") pipe, ten feet (10') in length, four feet (4') above ground and embedded in cement as specified by the Authorized Officer. The well location and identity shall be permanently inscribed. A weep hole shall be left if a metal plate is welded in place.

**Table 7. Proposed Disturbance of Project Components**

<i>Well Pad</i>	<i>Surface Ownership</i>	<i>Number or Length (feet) (Federal/Private)</i>	<i>Existing Disturbance (acres) (Federal/Private)</i>	<i>Re-disturbance (acres) (Federal/Private)</i>	<i>New Disturbance (acres) (Federal/Private)</i>	<i>Total Short-Term Disturbance (acres) (Federal/Private)</i>	<i>Long Term Disturbance (acres) (Federal/Private)</i>
Well Pad/Support Pads							
WMC 24-17 Drill Pad	Federal	1/0	0/0[0]	0/0[0]	4.89/0[4.89]	4.89/0[4.89]	1.05/0[1.05]
RU 23-17 Support Pad	Federal	1.0	0.01/0[0.01]	0.07/0[0.07]	0/0[0]	0.08/0[0.08]	0.03/0[0.03]
RU 44-7 Frac Pad <sup>1</sup>	Private	0/1	0/6.02[6.02]	0/0[0]	0/0[0]	0/6.02[6.02]	0/0.92[0.92]
<b>Subtotal</b>		<b>2/1</b>	<b>0.01/6.02[6.03]</b>	<b>0.07/0[0.07]</b>	<b>4.89/0[4.89]</b>	<b>4.97/6.02[10.99]</b>	<b>1.08/0.92[2.01]</b>
Access Road							
WMC 24-17 Proposed Access Road	Federal/Private	2,149/2,367[4,516]	0/0.02[0.02]	0/0.12[0.12]	2.98/3.22[6.2]	2.98/3.37[6.35]	0.98/1.09[2.07]
<b>Subtotal</b>		<b>2,149/2,367[4,516]</b>	<b>0/0.02[0.02]</b>	<b>0/0.12[0.12]</b>	<b>2.98/3.22[6.2]</b>	<b>2.98/3.37[6.35]</b>	<b>0.98/1.09[2.07]</b>
Pipelines <sup>2</sup>							
WMC 24-17 (8-inch gas line)	Federal	2,855/0 [2,855]	0/0[0]	0.22/0[0.22]	2.18/0[2.18]	2.4/0[2.4]	0/0[0]
WMC 24-17 (4-inch water line)		2,892/0 [2,892]					
<b>Subtotal</b>		<b>2,892/0 [2,892]<sup>3</sup></b>	<b>0/0[0]</b>	<b>0.22/0[0.22]</b>	<b>2.18/0[2.18]</b>	<b>2.4/0[2.4]</b>	<b>0/0[0]</b>
<b>Grand Total (Fed/Fee)<sup>4</sup></b>			<b>0.01/6.05[6.06]</b>	<b>0.29/0.12[0.41]</b>	<b>10.05/3.22[13.27]</b>	<b>10.35/9.39[19.74]</b>	<b>2.06/2.01[4.07]</b>

<sup>1</sup> RU 44-7 Pad is an existing O&G Location. No expansion or new construction activities are planned.

<sup>2</sup> Proposed pipelines will be collocated within the same trench.

<sup>3</sup> Length represents the total length of the proposed pipeline corridor not the total length of each individual pipeline planned for installation.

<sup>4</sup> Approximately 33% of the proposed project disturbance would be on land previously disturbed by previous Oil and Gas operations.

**Table 8. Proposed Seed Mix**

<b>Mixed Mountain Shrubland, including Oakbrush and Mountain Sagebrush (16-22 inches precip.)</b>					
<i>Common Name</i>	<i>Species Name</i>	<i>Variety</i>	<i>Seeds per Pond</i>	<i>PLS lbs/acre</i>	
<b>Plant <u>Three</u> of the Following Grasses (15% of Mix Each, 45% Total)</b>					
Bluebunch Wheatgrass	<i>Pseudoroegneria spicata</i>	Colorado/Utah source, or Anatone, Goldar	140,000	2.8	
Indian Ricegrass (lower elevations)	<i>Achnatherum hymenoides</i>	UP* White River preferred, or Nezpar, Paloma, Rimrock	141,000	2.8	
Mountain Brome (higher elevations)	<i>Bromopsis marginatus</i>	UP* Cold Springs preferred, or Bromar, Garnet	64,000	6.1	
Slender Wheatgrass	<i>Elymus trachycaulus</i>	San Luis	159,000	1.6	
<b>And <u>Two</u> of the Following Grasses (10% of Mix Each, 20% Total)</b>					
Prairie Junegrass	<i>Koeleria macrantha</i>	Colorado/Utah source preferred	2,315,000	0.1	
Sandberg Bluegrass	<i>Poa secunda</i> "sandbergii"	UP* Colorado-Sims Mesa, or High Plains	882,000	0.3	
Muttongrass	<i>Poa fendleriana</i>	Colorado/Utah source preferred	890,000	0.3	
<b>And <u>One</u> of the Following Grasses (10% of Mix, 10% Total)</b>					
Columbia Needlegrass	<i>Achnatherum nelsonii</i>	Colorado/Utah source preferred	150,000	1.7	
Letterman's Needlegrass	<i>Achnatherum lettermanii</i>	Colorado/Utah source preferred	225,000	1.2	
Needle-and-Thread	<i>Hesperostipa comata</i>	Colorado/Utah source preferred	115,000	2.2	
<b>And <u>One</u> of the Following Grasses (10% of Mix, 10% Total)</b>					
Thickspike Wheatgrass (coarser soil)	<i>Elymus lanceolatus</i>	Bannock, Critana, Schwendimar	154,000	1.7	
Western Wheatgrass (finer soil)	<i>Pascopyrum smithii</i>	UP* or Colorado/Utah source, or Arriba, Recovery, Rodan, Rosana	110,000	2.4	
<b>And <u>Five</u> of the Following Subshrubs/Forbs (3% of Mix Each, 15% Total)</b>					
<i>Common Name</i>	<i>Scientific Name</i>	<i>PLS lbs/acre</i>	<i>Common Name</i>	<i>Scientific Name</i>	<i>PLS lbs/acre</i>
American Vetch	<i>Vicia americana</i>	2.4	Rydberg's Penstemon	<i>Penstemon rydbergii</i>	0.09
Arrowleaf Balsamroot	<i>Balsamorhiza sagittata</i>	1.4	Scarlet Gilia	<i>Ipomopsis aggregata</i>	0.2
Bigelow's Tansy-aster	<i>Dieteria bigelovii</i>	0.05	Scarlet Globemallow	<i>Sphaeralcea coccinea</i>	0.16
Blanketflower	<i>Gaillardia aristata</i>	0.6	Showy Daisy	<i>Erigeron speciosus</i>	0
Broom Snakeweed	<i>Gutierrezia sarothrae</i>	0.05	Showy Golden-eye	<i>Helimeris multiflora</i>	0.07
Creeping Holly-grape	<i>Mahonia repens</i>	1.5	Sticky Geranium	<i>Geranium viscosissimum</i>	1.6
Hairy Golden-aster	<i>Heterotheca villosa</i>	0.1	Sulphur Buckwheat	<i>Eriogonum umbellatum</i>	0.4
Lewis Blue Flax	<i>Linum lewisii</i>	0.5	Tailcup Lupine	<i>Lupinus caudatus</i>	4.4
Mule's-ears	<i>Wyethia amplexicaulus</i>	2.8	Tapertip Hawks-beard	<i>Psilochenia (Crepis) acuminata</i>	0.1
Rocky Mountain Beeplant	<i>Peritoma serrulata</i>	0.7	Utah Sweetvetch	<i>Hedysaurum boreale</i>	1.7
Rocky Mountain Penstemon	<i>Penstemon strictus</i>	0.1	Western Yarrow	<i>Achillea millefolium</i>	0.03

Any production equipment on location would be removed and any pipelines that are associated with the plugged wells would be decommissioned/abandoned per COGCC 1100 series rule. If pipelines are abandoned in place, pipeline risers would be cut off and capped at a minimum of three-feet (3') below final grade. The disturbed areas surrounding the well location, including the access roads would be re-contoured to blend as nearly as possible with the natural topography. Final grading of cut and fill slopes would be done to prevent erosion and encourage establishment of desirable vegetation. Any existing drainages disturbed and not re-established during interim reclamation would be re-established during final reclamation. The long-term objective of final reclamation is to re-establish a self-perpetuating plant community that is compatible with and capable of supporting the identified land use.

All compacted portions of the pad, road, and pipeline corridors (if necessary) would be ripped to a depth of eighteen inches (18") when subsurface conditions permit. Prior to seeding, topsoil would be spread to a uniform depth that would allow the establishment of desirable vegetation. If the seed bed has begun to crust over or seal, the seed bed would be prepared by disking or some mechanical means sufficient to allow penetration of the seed into the soil. In addition, broad cast seed should be covered using a harrow, drag bar, or chain.

The rate of application of the seed mix is listed in pounds of pure live seed (PLS) per acre. The seed mix would be certified and there would be no primary or secondary noxious weeds in the seed mixture. The operator shall notify the Authorized Officer twenty-four (24) hours prior to seeding and shall provide evidence of certification of the seed mix to the Authorized Officer.

An approved seed mix, or a seed mix provided by the landowner or Authorized Officer, would be used on all areas disturbed during the final reclamation process. See Table 8 for details on the proposed seed mix.

Noxious weeds which may be introduced due to soil disturbance during final reclamation would be treated by methods approved by the Authorized Officer. The Pesticide Use Permit shall be on record with the BLM for treatment of noxious weeds. Reclamation monitoring will be conducted per Appendix K (Fluid Minerals) of the June 2015 Colorado River Valley Field Office Decision and Approved Resource Management Plan Amendment, Specifically the Plans for Reclamation of the Surface – Template Northwest Colorado District.

## **SURFACE OWNERSHIP**

Implementation of the development plan detailed above would occur on three (3) separate surface owners, the Bureau of Land Management, Youberg Beaver Creek Ranch, L.P. and Gordman Leverich, LLP. TEP has worked with the private surface owners and has acquired all necessary surface use agreements and rights-of-way grants for the activities mentioned in the development plan above.

**Table 9. Surface Ownership Information**

<b>Project Components</b>	<b>Surface Owner</b>	<b>Fee Owner Name</b>	<b>Fee Owner Address</b>	<b>Fee Owner Phone</b>
WMC 24-17 Pad RU 23-17 Pad Proposed Gas Pipeline Proposed Water Pipeline Proposed Temp. Frac Pipelines Proposed Access Roads	Federal	Bureau of Land Management	2300 River Frontage Rd, Silt, CO 81652	970-876-9000
RU 44-7 Pad (Frac Pad) Proposed Temp. Frac Pipelines Existing/Proposed Access Roads	Private	Youberg, Beaver Creek Ranch, L.P.	1604 Bataan Lane Gulf Breeze, FL 32563	850-281-9892
Existing/Proposed Access Roads	Private	Gordman Leverich, LLP	555 E. Durant Avenue, Suite 4A Aspen, CO 81611	970-379-3342

A summary of the project components by surface ownership including surface owner name and contact information can be found in Table 9, Surface Ownership Information. Please see the Plan of Development Map for further details on associated surface ownership.

## **OTHER INFORMATION**

### Stipulations

The WMC 24-17 pad, RU 23-17 pad, proposed access road, proposed gas and water pipelines, and portions of the proposed temporary surface frac lines would be located on Federal surface overlying Federal Lease COC-050944. The seventeen (17) proposed wells from the WMC 24-17 pad will be directionally drilled into Federal Lease COC-075070 south of the pad location; therefore, the proposed project components would require approval of Right-of-Way grants issued by BLM and would be subject to the stipulations described in the Colorado River Valley Field Office Approved Resource Management Plan Amendment (“RMPA”) issued in June 2015. The following outlines the lease and RMPA stipulations that are applicable to the WMC 24-17 pad and the associated support facilities:

1. Summary of Applicable Federal Lease COC-050944 Stipulations:
  - a. Protections for Critical Watershed Areas: Beaver Creek is no longer include within the City of Rifle Watershed District and there for this stipulation no longer applies.
2. Summary of Applicable RMPA Stipulations:
  - a. Slopes Greater than 30% and Fragile Soils (CSU-1)
  - b. Steep Slopes greater than 50% (NSO-2)
  - c. Municipal Watershed and Public Water Source (NSO 3)

As stated in the Flatiron Mesa Phase 3 Environmental Assessment (DOI-BLM-CO-N040-2016-0066-EA), TEP “has road rights-of-way across BLM to cover the off-lease portions of the Flatiron Mesa transportation system. BLM’s Flatiron Mesa road system functions with a blanket COA limiting drilling, completions and construction traffic between **January 16 and April 29 annually.**” This timing limitation applies to vehicular traffic associated with construction activities at the RU 23-17 pad and remote well completions operations at the RU 44-7 pad.

The RU 44-7 Pad (Frac Pad), along with portions of the proposed access road and temporary surface pipelines, are located on private surface overlying private minerals. Federal lease stipulations would not apply to these components of the project unless otherwise mentioned above.

### Resource Survey Requirements

Resource surveys are required for all components of the WMC 24-17 development project including the WMC 24-17 pad, RU 23-17 equipment pad, RU 44-7 pad (frac pad), proposed access road, proposed natural gas and produced water pipelines, and proposed frac pipelines. The following surveys would be completed by a BLM approved contractor:

1. Special Status Species Plant Survey: Habitat Assessment Conducted August 2020
  - o Follow-up survey will be conducted in spring of 2021.
2. Noxious Weed Survey: Spring 2021
3. Wildlife Survey: To be completed prior to construction, drilling, and/or completions operations.
4. Cultural Survey: Complete August 2020
5. Wetlands Survey: Completed August 2020

### BLM Rights-of-Way (ROW)/Temporary Use Permit (TUP) Requirements:

The following ROW/TUPs would be required for the construction and operation of the proposed WMC 24-17 pad, the access road, and supporting pipelines (buried and temporary surface) that would be located on BLM surface:

1. *BLM Rights-of-Way Grant (MLA) for Proposed Pad (Off-lease Wells):* Grant would include the construction and operation of the proposed WMC 24-17 pad supporting the seventeen (17) off-lease wells. The WMC 24-17 proposed pad will be located within the SE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 17, Township 7 South, Range 93 West, 6<sup>th</sup> P.M.
2. *BLM Rights-of-Way Grant (FLPMA) for Access (Off-lease wells):* Grant would include access for the seventeen (17) proposed wells to be drilled on the WMC 24-17 pad. Access for the new proposed off-lease wells will cross Federal Leases COC-050944. The access will cross BLM property located in the S $\frac{1}{2}$ SW $\frac{1}{4}$  of Section 7, Township 7 South, Range 93 West, 6<sup>th</sup> P.M.
3. *BLM Rights-of-Way Grant (MLA) for Proposed Natural Gas Pipeline:* Grant would include the proposed fifty foot (50') wide pipeline corridor for the eight-inch (8") natural gas pipeline on BLM property located within the E $\frac{1}{2}$ SW $\frac{1}{4}$  of Section 17, Township 7 South, Range 93 West, 6<sup>th</sup> P.M.
4. *BLM Right-of-Way Grant (FLPMA) for Proposed Water Pipeline:* Grant would include the proposed fifty foot (50') wide pipeline corridor for the four-inch (4") produced water pipeline located on BLM property within E $\frac{1}{2}$ SW $\frac{1}{4}$  of Section 17, Township 7 South, Range 93 West, 6<sup>th</sup> P.M.
5. *BLM Right-of-Way Grant (TUP) for Proposed Frac Pipelines:* Grant would include the five (5) four and one half inch (4.5") steel temporary surface frac pipelines located on BLM property within NW $\frac{1}{4}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$  of Section 17, Township 7 South, Range 93 West, 6<sup>th</sup> P.M.

TEP has three (3) existing BLM Grants (COC-59786, COC-74411, & COC-76419) for access across BLM surface to the existing FEE RU 44-7 pad. BLM ROWs/TUPs would not be required for the RU 44-7 pad, or any segments of the proposed pipelines or access road located on private surface. TEP would acquire SUAs/ROWs from the associated private landowners as listed below.

### Private Landowner Surface Use Agreements (SUA)/ROWs:

TEP has or would acquire SUAs and ROWs from the following private landowners:

1. *Access Right-of-Way Agreement on Youberg Beaver Creek Ranch L.P.:* This agreement includes access to the WMC 24-17 pad crossing Youberg property. The access includes a section of existing access road within the W $\frac{1}{2}$ SE $\frac{1}{4}$  of Section 18, Township 7 South, Range 93 West, 6<sup>th</sup> P.M., and a section of proposed access road within Lot 5 (SE $\frac{1}{4}$ SE $\frac{1}{4}$ ) of Section 18, Township 7 South, Range 93 West, 6<sup>th</sup> P.M.
2. *Easement on Gordman Leverich, LLP:* This agreement includes access from Garfield County Road 317A to the WMC 24-17 pad crossing Leverich property. The agreement also includes a section of existing access road within Lot 4 (SW $\frac{1}{4}$ SW $\frac{1}{4}$ ), SE $\frac{1}{4}$ SW $\frac{1}{4}$ , and SW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 18, Township 7 South, Ranch 93 West, 6<sup>th</sup> P.M., and a section of proposed access road within SW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 18, Township 7 South, Range 93 West, 6<sup>th</sup> P.M.
3. *Memorandum of Frac Pad and Temporary Pipeline Letter Agreement on Youberg Beaver Creek Ranch L.P.:* This agreement gives TEP the right of access to the RU 44-7 pad and the capability to use the existing RU 44-7 pad for remote well completions operations. This agreement includes the right to install five (5) four and one-half inch (4.5") steel temporary surface frac lines for use during well completions operations associated with the seventeen (17) proposed wells on the WMC 24-17 Pad.

### CPW Consultation

TEP consulted with Colorado Parks and Wildlife (“CPW”) during an onsite review of the proposed WMC 24-17 pad on October 16, 2020. During the onsite TEP described the proposed development plans for the project as described above and discussed potential impacts to wildlife. During the onsite CPW confirmed that the WMC 24-17 pad is not located within any High Priority Habitat layers. However, the existing access road to the WMC 24-17 pad, RU 44-7 pad, and RU 23-17 pad crosses through the Designated Cutthroat Trout Habitat High Priority Habitat layer. TEP has implemented storm water control measures (i.e. sediment traps, culvert head gates, etc.) along the existing access roads to minimize potential adverse impacts to Designated Cutthroat Trout Habitat. TEP agreed to stage a spill response trailer containing supplies necessary to respond to a spill at the RU 31-12V pad to ensure immediate and effective response in the event of a spill.

### Geospatial Data

Geospatial data would be electronically sent to the Colorado River Valley Field Office.

**ACCESS RIGHT-OF-WAY AGREEMENT**

STATE OF COLORADO            §  
  §  
COUNTY OF GARFIELD        §

This Access Right-of-Way Agreement ("Agreement") is effective as of the 29<sup>th</sup> day of October, 2020, and is entered into by and between BEAVER CREEK RANCH, L.P., an Iowa Limited Partnership doing business in Colorado as **YOUBERG BEAVER CREEK RANCH L.P.**, represented by David R. Youberg, General Partner ("Grantor"), whose address is 1604 Bataan Lane, Gulf Breeze, Florida 32563, and **TEP ROCKY MOUNTAIN LLC** ("Grantee"), whose address is 1058 County Road 215, Parachute, CO 81635. Grantee and Grantor are herein referred to collectively as the "Parties."

FOR AND IN CONSIDERATION of the sum of One Hundred and No/100 Dollars (\$100.00) and other good and valuable consideration in hand paid, the receipt and sufficiency of which are hereby acknowledged, Grantor does hereby grant, convey, and assign unto Grantee, and its successors and assigns, a non-exclusive right-of-way for ingress and egress on, over, through, and across a strip of land twenty-five (25) feet in width for the purpose of surveying, constructing, maintaining, servicing, inspecting, using, operating, modifying, widening, protecting, repairing, and abandoning a new and existing road (the "Road Right-of-Way") as depicted on the attached Exhibit "A" and Exhibit "B". The Road Right-of-Way is located on the following described lands:

Township 7 South, Range 93 West, 6<sup>th</sup> P.M.  
Section 18: W $\frac{1}{2}$ SE $\frac{1}{4}$ , Lot 5 (SE $\frac{1}{4}$ SE $\frac{1}{4}$ )  
Garfield County  
State of Colorado

This Agreement is made subject to the following terms and conditions:

1. **TEMPORARY ADDITIONAL WIDTH:** During the Road Right-of-Way construction, Grantee may temporarily use up to an additional fifty (50) feet of work area adjacent to the Road Right-of-Way.
2. **NOTICE:** Grantee shall give Grantor seven (7) days' notice before Road Right-of-Way construction. Any notice, demand or communication to be given to Grantor or Grantee may be delivered in person, by certified or registered mail, postage prepaid, or by fax or electronic mail with confirmation of receipt, addressed to the party for whom intended as follows:

Youberg Beaver Creek Ranch, L.P.  
1604 Bataan Lane  
Gulf Breeze, Florida 32563  
(850) 281-9892

TEP Rocky Mountain LLC  
Attn: Land Department  
1058 County Road 215  
Parachute, Colorado 81635  
(970) 285-9377

Either party may give written notice designating a different address to substitute for the one specified above when necessary. Notice shall be deemed given upon receipt.

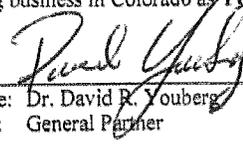
3. **USE AND ENJOYMENT:** Grantor reserves the right to the use and enjoyment of the Road Right-of-Way for any use, but shall not hinder, conflict, or interfere with Grantee's surface or sub-surface rights granted herein or disturb Grantee's facilities without the express written consent of Grantee.
4. **DAMAGES:** The consideration paid by Grantee and received by Grantor includes full and final payment for any and all damages to the land, growing crops, pasturage, timber, fences, buildings, or other improvement of Grantor resulting from the exercise of the rights herein granted during initial construction. Grantor waives the right to collect any further or additional damages in any way arising or resulting from the exercise of the rights herein granted.
5. **RECLAMATION:** Whenever lands are disturbed by Grantee during times of Road Right-of-Way construction and/or maintenance, Grantee shall reclaim and reseed the land within six (6) months after said Road Right-of-Way construction and/or maintenance is complete and repair any damage to other structures, as well as crops, timber, and pasturage of Grantor that may subsequently arise from the exercise of the rights herein granted after the initial construction.

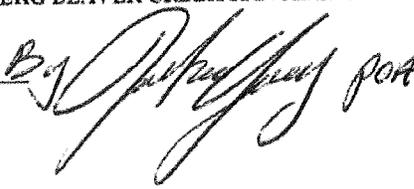
6. FENCES AND GATES: If there are gates now existing along or across the existing Road Right-of-Way, Grantee shall have the right to use such existing gates in the exercise of all rights conferred herein. Grantee shall repair any fence, cattle guard, gate, or any other structure that is damaged during Grantee's Road Right-of-Way construction and/or maintenance while on Grantor's property within a forty-eight (48) hour period. If a fence or gate is taken down during Grantee's Road Right-of-Way construction and/or maintenance, said fence or gate shall be reinstalled and/or repaired by close of business that same day, unless Grantor gives approval otherwise.
7. WEED CONTROL: Grantee shall be responsible for controlling all noxious weeds on the Road Right-of-Way. Grantee shall also be responsible for preventing such noxious weeds from spreading to Grantor's lands adjacent to the Road Right-of-Way. In the event such noxious weeds spread to Grantor's lands adjacent to the Road Right-of-Way, Grantee shall be responsible for controlling the noxious weeds on those lands as well, provided that those portions of the adjacent lands affected by the construction of the Road Right-of-Way were free of such noxious weeds prior to construction. If the lands immediately adjacent to the Road Right-of-Way are not free of such noxious weeds prior to construction, Grantee's responsibility shall be limited to reasonable control of such noxious weeds on the Road Right-of-Way. If Grantee locates or Grantor notifies Grantee of the location of noxious weeds on the Road Right-of-Way or adjacent lands, Grantee shall implement control procedures before noxious weeds go to seed. Grantee's responsibility for weed control shall be ongoing and shall continue for three (3) years after the Road Right-of-Way has ceased to be used by Grantee for the purposes herein granted. Such control as set forth above shall at the very minimum conform to those established by the Bureau of Land Management.
8. TERMINATION: This Agreement and all rights granted hereunder shall terminate automatically upon Grantee's non-use of the Road Right-of-Way for a consecutive period of twenty-four (24) months. Upon termination of the Agreement, Grantee shall execute and record a release of this Agreement. Additionally, upon termination, Grantee shall reclaim the Road Right-of-Way.
9. NON-EXCLUSIVE USE AND RESERVATIONS: This Agreement and all other rights hereby granted are not exclusive to Grantee and are limited to the specific grant herein. This Agreement does not, in any way whatsoever, convey any water rights or the right to use water. Grantor reserves unto itself and its successors and assigns all rights not specifically granted to Grantee herein. Grantor may grant additional rights-of-way or easements on, over, across, under and/or through the Road Right-of-Way to any third party for any reason, in Grantor's sole and absolute discretion, so long as such grant does not interfere with Grantee's rights as described in this Agreement.
10. CHANGE OF OWNERSHIP: This Agreement shall be binding upon, and its benefit and burden shall inure to, the heirs, successors and assigns, and assigns of the Parties.
11. ASSIGNABILITY: This instrument and the covenants and agreements herein contained may be assigned in whole or in part only upon prior written consent of Grantor, such consent shall not be unreasonably withheld.
12. COOPERATION: Grantor agrees to cooperate with Grantee, at Grantee's sole cost, in obtaining any permits, licenses, permissions, or approvals ("Permits"), which Grantee deems necessary or convenient to conduct, certify, confirm, evidence, facilitate, or effectuate the Road Right-of-Way. Grantor agrees to join in the application for any such Permits if Grantor's signature is required in the application process.
13. INDEMNITY: Grantee does hereby covenant and agree to indemnify and hold Grantor harmless against any and all losses, damages, claims, demands and suits (and all reasonable costs and expenses incidental thereto, including court costs and attorney's fees) that Grantor may suffer or incur or to which it may be made liable (collectively, "Claims"), arising from personal injury, death, property damage, environmental damage, pollution or contamination relating to the surveying, constructing, maintaining, servicing, inspecting, using, operating, modifying, widening, protecting, repairing, and/or abandoning of the Road or arising from Grantee's performance or exercise or failure to perform or exercise any and all rights or obligations under this Agreement. Grantee's indemnity obligations shall exclude all Claims resulting from the gross negligence or malicious acts (or omissions) of Grantor, its agents, employees, or representatives.
14. ENTIRE AGREEMENT: This Agreement constitutes all of the agreements and stipulations of the parties pertaining to the Road Right-of-Way, superseding all prior agreements, representations, or understandings, whether written or verbal, and may be modified or amended only by a written agreement signed by both parties.
15. SEVERABILITY: In the event any provision or any portion of any provision of this Agreement is held by a court of competent jurisdiction to be invalid or unenforceable by reason of any law or public policy, such provision or portion thereof shall be considered to be deleted, and the remainder of this Agreement shall constitute the entire agreement between Grantor and Grantee covering the subject matter hereof.

IN WITNESS WHEREOF, the Parties have executed this Agreement the day and year indicated below but effective on the date first set forth above.

Grantor:

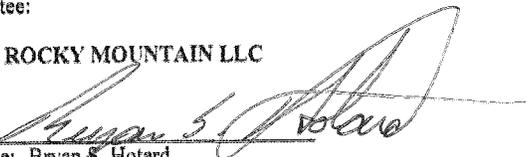
BEAVER CREEK RANCH, L.P. an Iowa Limited Partnership  
doing business in Colorado as YOUBERG BEAVER CREEK RANCH L.P.

By:   
Name: Dr. David R. Youberg  
Title: General Partner

By:  POA

Grantee:

TEP ROCKY MOUNTAIN LLC

By:   
Name: Bryan S. Hotard  
Title: Attorney-in-Fact

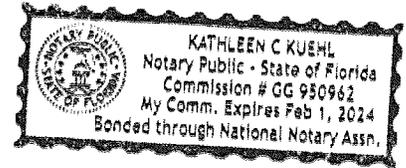
Acknowledgements

STATE OF FLORIDA )  
 )  
COUNTY OF SANTA ROSA )

On this 27<sup>th</sup> day of October, 2020, before me, the undersigned, a Notary Public in and for said County and State, personally appeared **Dr. David R. Youberg** known to me to be the persons whose name is subscribed to the foregoing instrument and acknowledged to me that he executed same in capacity of **General Partner of Beaver Creek Ranch, L.P.** an Iowa Limited Partnership doing business in Colorado as **Youberg Beaver Creek Ranch L.P.**

My Commission Expires: 01/01/2024

*Kathleen C Kuehl*  
\_\_\_\_\_  
Notary Public



STATE OF COLORADO )  
 )  
COUNTY OF GARFIELD )

On this 29<sup>th</sup> day of October 2020, before me, the undersigned, a Notary Public in and for said County and State, personally appeared **Bryan S. Hotard** known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed same in the capacity of **Attorney-in-Fact of TEP Rocky Mountain LLC.**

My Commission Expires: 08/28/2021

*Makayla M. Grant*  
\_\_\_\_\_  
Notary Public

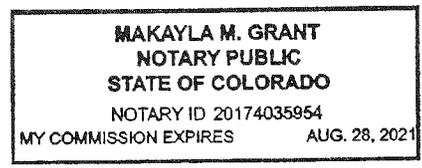
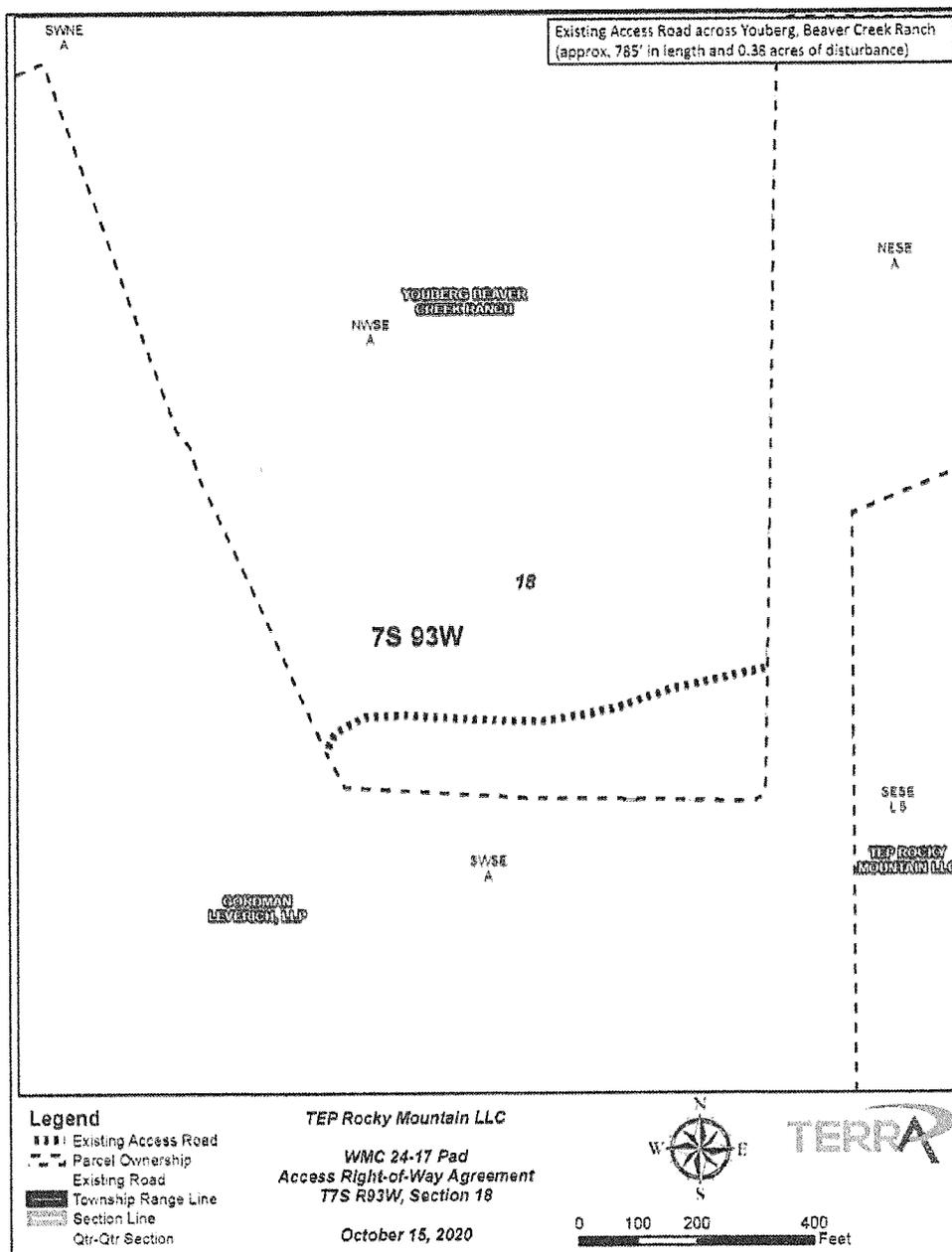


Exhibit "A"

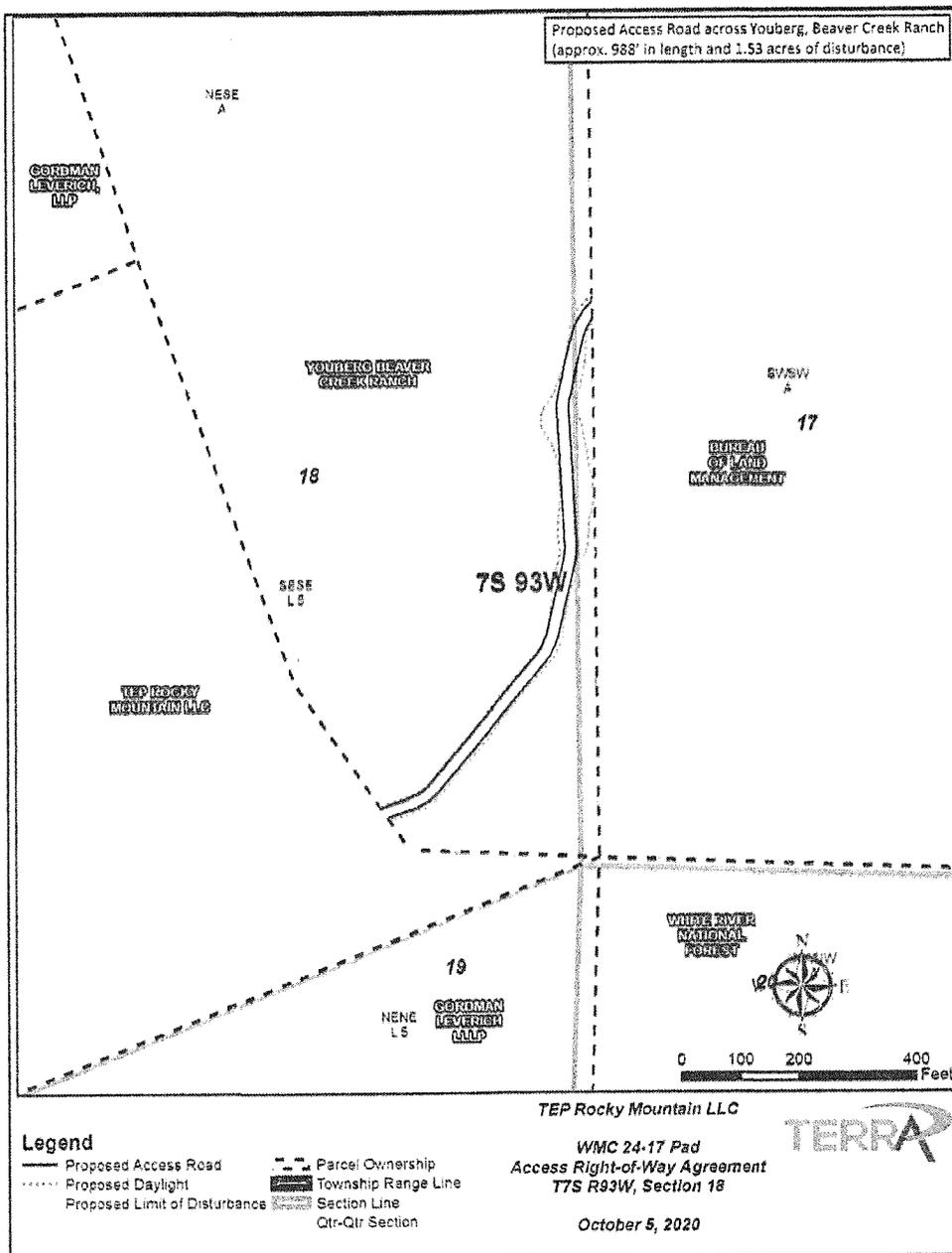
Attached to and made a part hereof that certain ACCESS RIGHT-OF-WAY AGREEMENT dated October 29<sup>th</sup>, 2020, by and between BEAVER CREEK RANCH, L.P., an Iowa Limited Partnership doing business in Colorado as YOUNBERG BEAVER CREEK RANCH, L.P., Grantor, TEP ROCKY MOUNTAIN LLC, Grantee.



T:\Projects\Reference\Bis\Job\WMC 24-17 Pad\WMC 24-17\_BJA\_Existing Access Road\_Youberg.mxd (source: 10/15/2020 2:18:11 PM)

Exhibit "B"

Attached to and made a part hereof that certain ACCESS RIGHT-OF-WAY AGREEMENT dated October 29<sup>th</sup> 2020, by and between BEAVER CREEK RANCH, L.P., an Iowa Limited Partnership doing business in Colorado as YOUBERG BEAVER CREEK RANCH, L.P., Grantor, and TEP ROCKY MOUNTAIN LLC, Grantee.



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**MEMORANDUM OF FRAC PAD  
AND TEMPORARY PIPELINE LETTER AGREEMENT**

This Memorandum of Frac Pad and Temporary Pipeline Letter Agreement ("Memorandum") is made and executed as of the 29<sup>th</sup> day of October, 2020 to evidence that:

The Frac Pad and Temporary Pipeline Letter Agreement ("Agreement") dated the 29<sup>th</sup> day of October, 2020 was entered into by and between **BEAVER CREEK RANCH, L.P.**, an Iowa limited Partnership doing business in Colorado as **YOUBERG BEAVER CREEK RANCH L.P.**, whose address is 1604 Bataan Lane, Gulf Breeze, Florida 32563 ("Grantor"), and **TEP ROCKY MOUNTAIN LLC**, whose address is 1058 County Road 215, Parachute, Colorado 81635 ("Grantee"), with Grantor and Grantee collectively known as the "Parties," which, among other provisions, provides as follows:

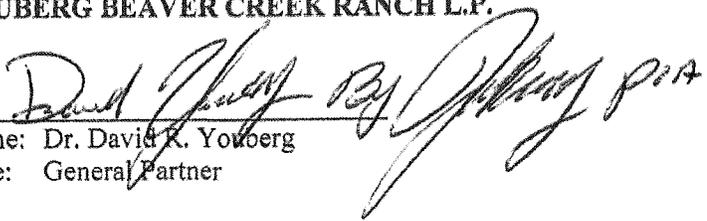
- 1) Grantor agrees that Grantee and its employees, contractors, subcontractors, agents, and business invitees may access, construct, and use the existing RU 44-7 as a Frac Pad and install several temporary surface pipelines as depicted on the attached Exhibit "A", for operations in connection with the completions of oil and gas wells on the WMC 24-17 Pad; and,
- 2) This Memorandum shall be construed as a covenant running with the lands and shall be binding on any and all personal representatives, successors, and assigns of the Parties.

This Memorandum is being executed by the Parties for the primary purpose of recording and thus advising all interested parties of the existence and validity of such Agreement, the exact terms and conditions of which are more fully stated in the unrecorded instrument on file with the respective Parties. This Memorandum shall constitute notice to all parties of the existence of this Agreement as though it was described in total detail herein.

IN WITNESS WHEREOF, the Parties have executed this Memorandum as of the date first above written.

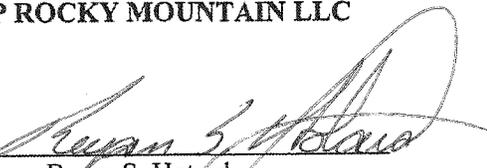
Grantor:

**BEAVER CREEK RANCH, L.P.**, an Iowa Limited Partnership doing business in Colorado as **YOUBERG BEAVER CREEK RANCH L.P.**

By:   
Name: Dr. David R. Youberg  
Title: General Partner

Grantee:

**TEP ROCKY MOUNTAIN LLC**

By:   
Name: Bryan S. Hotard  
Title: Attorney-in-Fact

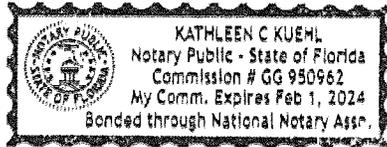
**Acknowledgements**

STATE OF FLORIDA       )  
  )  
COUNTY OF SANTA ROSA   )

On this 29<sup>th</sup> day of October, 2020, before me, the undersigned, a Notary Public in and for said County and State, personally appeared **Dr. David R. Youberg**, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed same in the capacity of **General Partner of Beaver Creek Ranch, L.P.**, an Iowa Limited Partnership doing business in Colorado as **Youberg Beaver Creek Ranch L.P.**

My Commission Expires: 03/01/2024

Kathleen C Kuehl  
Notary Public



STATE OF COLORADO       )  
  )  
COUNTY OF GARFIELD     )

On this 29<sup>th</sup> day of October, 2020, before me, the undersigned, a Notary Public in and for said County and State, personally appeared **Bryan S. Hotard**, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed same in the capacity of **Attorney-in-Fact of TEP Rocky Mountain LLC**.

My Commission Expires: 08/28/2021

Makayla M. Grant  
Notary Public

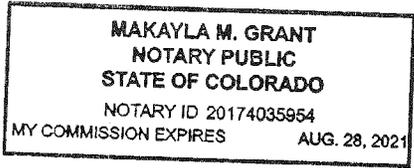
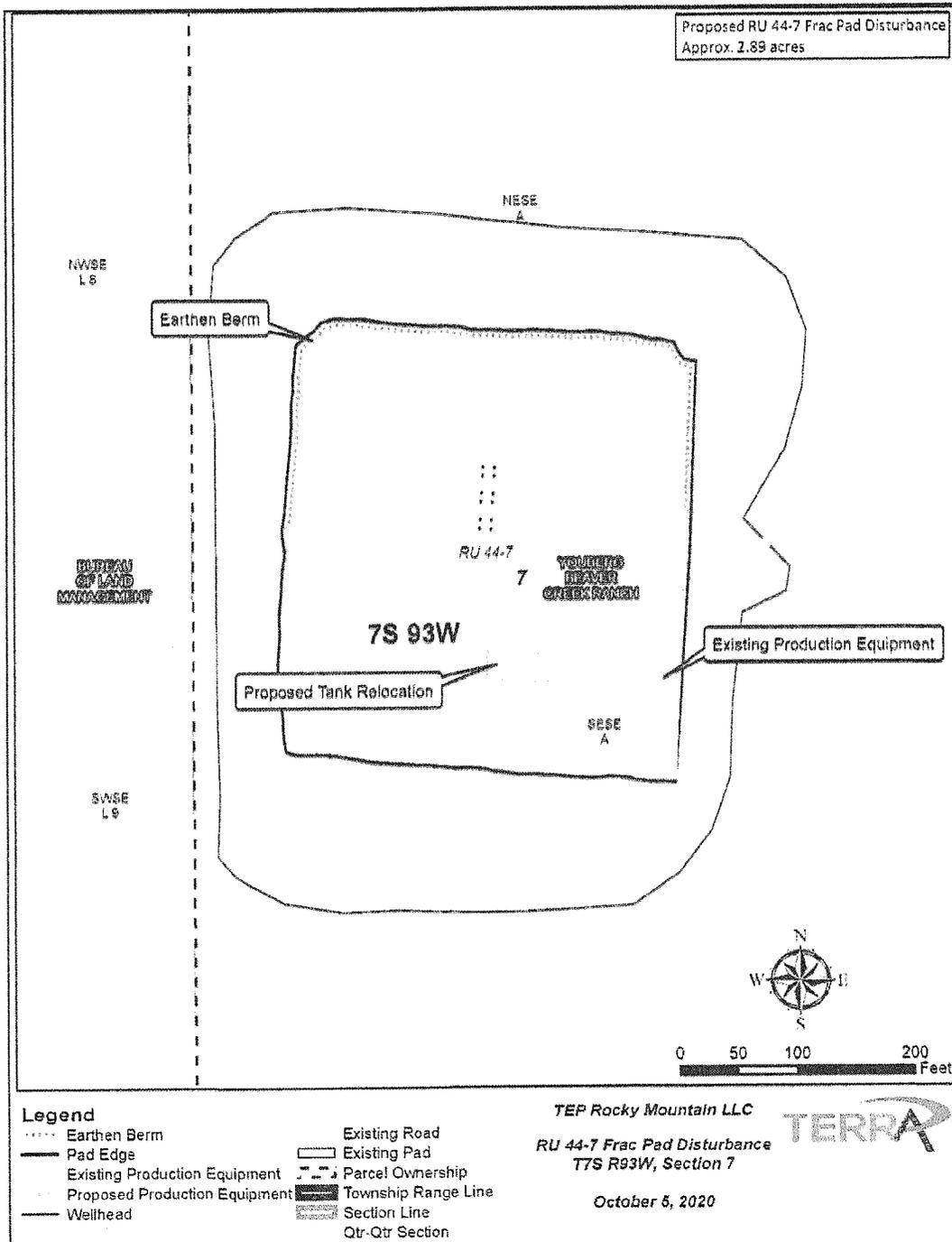


Exhibit "A" (page 1 of 2)

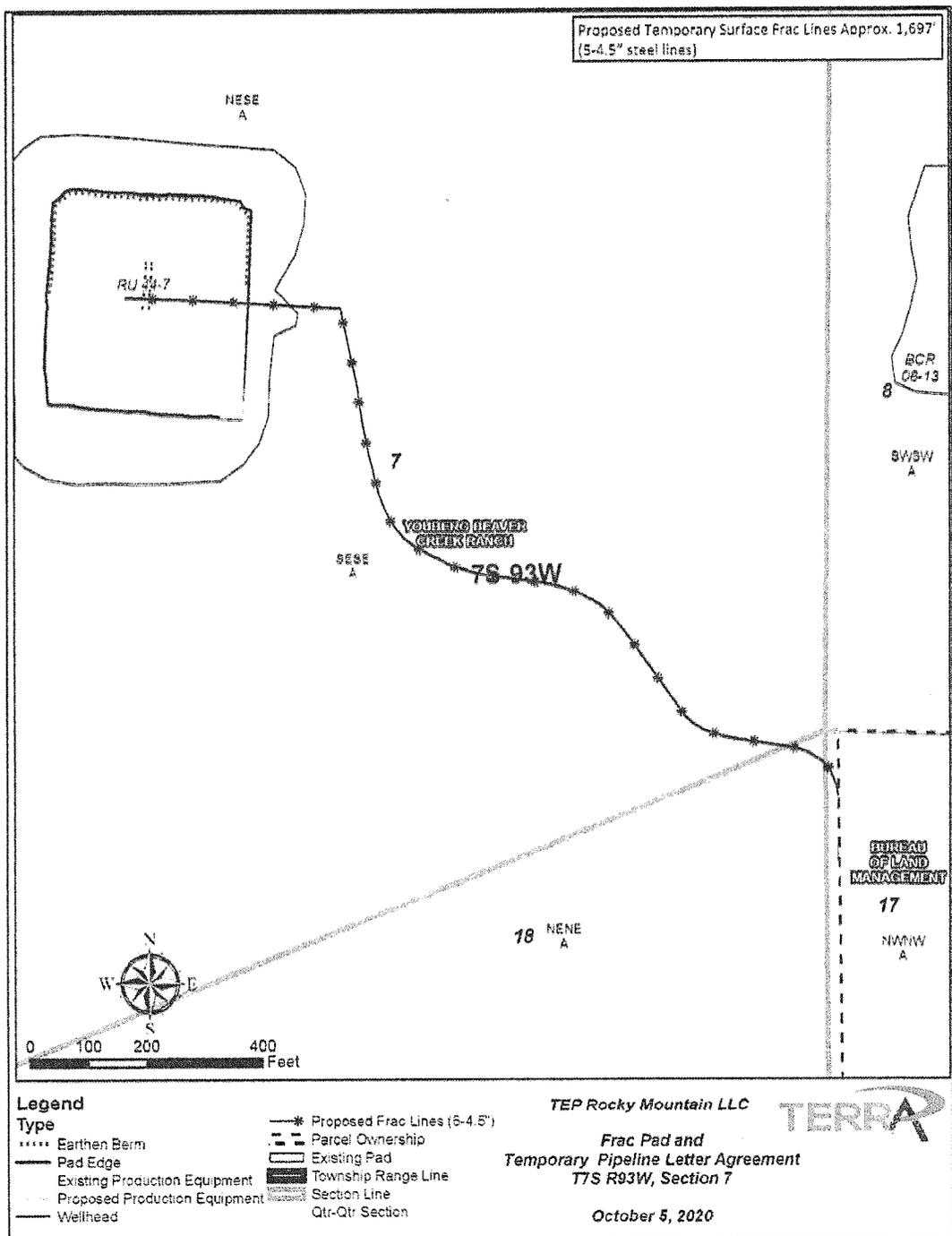
Attached to and made a part hereof that certain Memorandum of Frac Pad and Temporary Pipeline Letter Agreement dated this 29<sup>th</sup> day of October 2020, by and between BEAVER CREEK RANCH, L.P., an Iowa Limited Partnership doing business in Colorado as YOUNBERG BEAVER CREEK RANCH L.P., Grantor, and TEP ROCKY MOUNTAIN LLC, Grantee.



T:\Projects\Research\Subcom\WMC\2447\Pad\Vis\10\WMC\2447\_BLM\_RGR\_Pad.mxd 10/26/2020 8:51:04 AM

Exhibit "A" (page 2 of 2)

Attached to and made a part hereof that certain Memorandum of Frac Pad and Temporary Pipeline Letter Agreement dated this 29<sup>th</sup> day of October 2020, by and between BEAVER CREEK RANCH, L.P., an Iowa Limited Partnership doing business in Colorado as YOUNBERG BEAVER CREEK RANCH L.P., Grantor, and TEP ROCKY MOUNTAIN LLC, Grantee.



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**APD ID:** 10400064314

**Submission Date:** 10/30/2020

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Well Type:** CONVENTIONAL GAS WELL

**Well Work Type:** Drill

### Section 1 - General

**Would you like to address long-term produced water disposal?** NO

### Section 2 - Lined Pits

**Would you like to utilize Lined Pit PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Lined pit PWD on or off channel:**

**Lined pit PWD discharge volume (bbl/day):**

**Lined pit specifications:**

**Pit liner description:**

**Pit liner manufacturers information:**

**Precipitated solids disposal:**

**Describe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Lined pit precipitated solids disposal schedule:**

**Lined pit precipitated solids disposal schedule attachment:**

**Lined pit reclamation description:**

**Lined pit reclamation attachment:**

**Leak detection system description:**

**Leak detection system attachment:**

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Lined pit Monitor description:**

**Lined pit Monitor attachment:**

**Lined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information attachment:**

### **Section 3 - Unlined Pits**

**Would you like to utilize Unlined Pit PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD disturbance (acres):**

**PWD surface owner:**

**Unlined pit PWD on or off channel:**

**Unlined pit PWD discharge volume (bbl/day):**

**Unlined pit specifications:**

**Precipitated solids disposal:**

**Describe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Unlined pit precipitated solids disposal schedule:**

**Unlined pit precipitated solids disposal schedule attachment:**

**Unlined pit reclamation description:**

**Unlined pit reclamation attachment:**

**Unlined pit Monitor description:**

**Unlined pit Monitor attachment:**

**Do you propose to put the produced water to beneficial use?**

**Beneficial use user confirmation:**

**Estimated depth of the shallowest aquifer (feet):**

**Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?**

**TDS lab results:**

**Geologic and hydrologic evidence:**

**State authorization:**

**Unlined Produced Water Pit Estimated percolation:**

**Unlined pit: do you have a reclamation bond for the pit?**

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Is the reclamation bond a rider under the BLM bond?**

**Unlined pit bond number:**

**Unlined pit bond amount:**

**Additional bond information attachment:**

#### Section 4 - Injection

**Would you like to utilize Injection PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Injection PWD discharge volume (bbl/day):**

**Injection well mineral owner:**

**Injection well type:**

**Injection well number:**

**Injection well name:**

**Assigned injection well API number?**

**Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

#### Section 5 - Surface Discharge

**Would you like to utilize Surface Discharge PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

#### Section 6 - Other

**Would you like to utilize Other PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



**APD ID:** 10400064314

**Submission Date:** 10/30/2020

Highlighted data  
reflects the most  
recent changes

**Operator Name:** TEP ROCKY MOUNTAIN LLC

**Well Name:** FEDERAL

**Well Number:** WMC 312-20 (24-17)

[Show Final Text](#)

**Well Type:** CONVENTIONAL GAS WELL

**Well Work Type:** Drill

## Bond Information

**Federal/Indian APD:** FED

**BLM Bond number:** COB000480

**BIA Bond number:**

**Do you have a reclamation bond?** NO

**Is the reclamation bond a rider under the BLM bond?**

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**