

**Stormwater Management Plan – 304.c.(15)**

**Federal RG 11-13-298 Oil and Gas Location**

**New Location**

**April 2022**



## INTRODUCTION

TEP Rocky Mountain LLC (“TEP”) has developed the following Stormwater Management Plan as required by the Colorado Oil and Gas Conservation Commission (“COGCC”) Rule 304.c.(15) describing the general practices and procedures TEP’s stormwater management program employs during the development of an Oil and Gas Location. Additionally, this plan provides site specific stormwater management control measures that will be employed during development of the Federal RG 11-13-298 pad to ensure compliance with COGCC, Colorado Department of Public Health and Environment, and Federal regulations.

TEP has developed a Field Wide Stormwater Management Plan (SWMP) in compliance with the CDPHE’s Colorado Discharge Permit System (CDPS) and to ensure conformance to the stormwater management standards under COGCC Rule 1002.f. The SWMP will identify possible pollutant sources that may contribute pollutants to stormwater, and identify Best Management Practices (BMPs) that, when implemented, will reduce or eliminate any possible water quality impacts. TEP has also developed a field wide Post-Construction Stormwater Management Plan (PC-SWMP) as required by COGCC Rule 1002.f.(3) to ensure that Best Management Practices (BMPs) are implemented on all subject oil and gas locations under its management where the Construction Stormwater permit issued by CDPHE has been terminated. The PC-SWMP identifies possible pollutant sources that may contribute pollutants to stormwater during the post-construction and reclamation phase of operations and describes BMPs to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, transport of pollutants offsite, or degradation of site conditions. Upon request by the COGCC or the director, TEP will provide the SWMP and / or PC-SWMP for review.

TEP is proposing to drill, complete, and operate twenty-two (22) new directional natural gas wells from the proposed Federal RG 11-13-298 pad located on Federal surface administered by the Bureau of Land Management (“BLM”) overlying Federal lease COC-0003453. The proposed oil and gas location will be located on resource / rangeland within Lot 4 (NW¼NW¼) of Section 13, Township 2 South, Range 98 West, 6th P.M., within Rio Blanco County, Colorado.

The Federal RG 11-13-298 pad will be accessed via an existing 1.86-mile access road from Rio Blanco County Road 26 and BLM 1019, and via a proposed 0.75-mile access road. The existing and proposed access roads will be used during construction, drilling, completion, and production operations. Development of the proposed wells on the Federal RG 11-13-298 pad would also require the construction of two (2) new off-location pipelines, one (1) to support gas gathering operations and one (1) to support transport of produced water. TEP will also utilize the existing Federal RGU 23-7-297 pad (COGCC Loc ID: 316408) as a support facility for development of the proposed wells on the Federal RG 11-13-298 pad.

*Development Phases:* Each phase of development requires the implementation and maintenance of both structural and non-structural stormwater management control measures used by TEP to effectively minimize site erosion and sediment transport. The following outlines the typical development phases which are described in greater detail below.

- 1) Pre-Construction Phase
- 2) Construction Phase (pad, road, and pipeline)
- 3) Interim Reclamation Phase
- 4) Final Reclamation Phase

Please see **Attachment A, Construction Layout**, and **Attachment B, Interim Reclamation Layout**, which depict preliminary site-specific stormwater control measures planned for installation at the Federal RG 11-13-298 pad during initial construction and interim reclamation of the oil and gas location.

## SUPPLEMENTAL SITE INFORMATION

The proposed 8.15-acre Federal RG 11-13-298 pad would be constructed for drilling and completions operations of the twenty-two (22) proposed directional wells. The long-term disturbance attributed to the Federal RG 11-13-298 pad would be approximately 1.54-acres. The proposed access road would account for an additional 4.79-acres of disturbance with approximately 1.29-acres remaining following reclamation of the cut and fill slopes of the proposed road. The proposed pipeline corridors would account for an additional 1.38-acres of disturbance all of which will be fully reclaimed following completion of pipeline installation. The total disturbance associated with development of the Federal RG 11-13-298 pad, access road, and pipeline corridor would be approximately 14.32-acres. Approximately 2.83-acres of long-term disturbance would remain following interim reclamation of the proposed facilities and pipeline corridor. All proposed disturbance would be located on Federal surface. Please see the Plan of Development attached to the Form 2A for a detailed breakdown of disturbance acreage for all project components associated with the Federal RG 11-13-298 pad.

Soils: The National Resource Conservation Service (“NRCS”) identifies the soil type within the boundary of the Federal RG 11-13-298 pad as the Rentsac channery loam. The Rentsac channery loam is described as residuum weathered from calcareous sandstone. This soil type has a very low available water capacity of about 2 inches, and a very low capacity of the most limiting layer to transmit water, 0.00 inches per hour. The Rentsac channery loam is classified as hydrologic soil Group D - having a very slow infiltration rate when thoroughly wet. The typical soil profile is 0 to 5 inches: channery loam; 5 to 16 inches: extremely channery loam, extremely gravelly sandy loam, very flaggy loam; 5 to 16 inches: unweathered bedrock.

The NRCS reports that this soil is classified, under the Uniform Soils Classification System, as silty gravels / gravel-sand-silt mixtures (GM). This soil has a reported hydrologic group rating of D, having a very slow infiltration rate when thoroughly wet. The infiltration rate is listed as very low at approximately 0.00 inches per hour. The NRCS lists the Flood Frequency Class for the facility location as “None”. “None” means that flooding is not probable, and the chance of flooding is nearly zero percent in any year.

NRCS reports that the Erosion factor K (whole soil) is 0.20 for the site, or low to moderate susceptible to erosion by water. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Stormwater BMPs will be implemented to control soil erosion.

Vegetation Description: The primary vegetation communities within the project area are pinyon/juniper woodlands. A comprehensive list of common plant species within the project area can be found in the Biological Survey attached to the Form 2A. A pre-disturbance vegetation assessment was completed at the proposed site and a reference area outside of the disturbance boundary of the facility. The pre-disturbance vegetation assessment determined a percent cover of approximately 50% and the reference area vegetation assessment determined a percent cover of approximately 32%. Please see the vegetation assessment included in the Ryan Gulch Phase 2 Biological Survey Report attached to the Form 2A for additional details.

Weed Infestations: WestWater Engineering (“WestWater”) conducted a biological survey in May 2021 which included a survey for weeds within the Ryan Gulch Phase 2 project area. The survey identified two (2) Colorado State listed noxious weed species within the survey area generally located near existing disturbance such as road, pads, and pipeline corridors. Please see the Biological Survey Report attached to the amended Form 2A for additional details regarding noxious weeds

Non-Stormwater Discharges: Non-stormwater discharges are limited to application of fresh water along the existing / proposed access road and well pad. Excavation activities associated with the proposed activities are not expected to impact groundwater. Per the Sensitive Area Determination prepared by WestWater and attached to the Form 2A, the depth to ground water at the Federal RG 11-13-298 pad is likely to be greater than 100 feet. However, any ground water encountered during excavation will be addressed in accordance with Federal and state regulations.

Receiving Waters: Piceance Creek, a perennial stream which is located east of the oil and gas location approximately 14,500 feet, is the nearest perennial stream. Two (2) unnamed intermittent drainages are located within 2,640 feet of the oil and gas location. The unnamed intermittent drainage located east of the oil and gas location, approximately 1,497 feet, is the nearest surface water feature downgradient of the Federal RG 11-13-298 pad. This unnamed intermittent stream discharges into Ryan Gulch, an intermittent stream located north of the oil and gas location, and eventually in the Piceance Creek. Stormwater control measures, including diversion ditches, sediment traps, wattles, and other control measures, as described below will minimize the potential for impacts to surface water features.

## **STORMWATER MANAGEMENT CONTROL MEASURES**

Potential Pollution Sources and Locations: Stormwater management control measures will be implemented to minimize the potential for pollution. The following potential pollution sources have been identified as part of planned activities on the Federal RG 11-13-298 pad:

### *1) Transport of chemicals and materials, including loading and unloading operations*

Spill prevention during loading and unloading is outlined in TEP's Piceance Basin Spill Prevention and Response Plan ("SPRP") and Integrated Spill Prevention, Control, and Countermeasures ("SPCC") Plan. TEP complies with applicable Department of Transportation ("DOT") requirements when transporting chemicals and materials to oil and gas locations.

### *2) Vehicle/equipment fueling*

Equipment is only fueled in designated fueling areas. Proper storage and transport of fuels is described below.

### *3) Outdoor storage activities, including those for chemicals and additives*

Material or chemicals brought or produced on the oil and gas location will be handled properly using good housekeeping practices. TEP's SPCC and SPRP plans address storage and handling procedures including guidelines for materials handling, storage container labeling, elevation, sealing, covering, securing, and secondary containment, as described below.

### *4) Produced water and drilling fluids storage*

Guidelines for storing produced water, drilling fluids, fuels, and chemicals include the following:

- All containers will be clearly labeled.
- Dry materials will be stored on pallets and covered when not in use to avoid contact with precipitation, stormwater, and wind.
- Potentially hazardous liquid materials in buckets, drums, or tanks will be stored within secondary containment, such as soil berms, steel containers or bermed visqueen, to capture accidental spills or leaks. Drums will be kept off the ground within secondary containment and stored under cover, if needed. The berms shall be constructed such that they are sufficiently impervious to prevent the material from being released beyond the confines of the containment system.

- Fuel tanks will be stored within secondary containment.
- Container lids will be securely fastened.
- In the event of a spill, procedures outlined in TEP's SPRP will be followed. Persons trained in handling spills will be available.
- Spill clean-up and containment materials (absorbent, shovels, etc.) will be readily accessible. Spills will be immediately cleaned up and contaminated materials will be properly stored on site until they can be disposed of in accordance with applicable regulations.
- Storage areas and containers will be monitored for leaks and repaired or replaced as necessary. Storage areas will be inspected regularly, and any minor spills or leaks will be cleaned up immediately.
- As necessary, covers and stormwater diversion structures will be utilized to minimize contact of precipitation and stormwater runoff with materials and wastes with potential to result in discharges causing pollution of surface waters.
- TEP's SPRP will be readily available at the field office as a reference to assist in responding to spills at locations where materials are stored or handled.
- Material Safety Data Sheets (MSDS) and product labels will be available as per TEP's Hazard Communications (HazCom) program.
- Employees will have proper training in materials handling, spill prevention and response.

5) *Outdoor processing activities and machinery*

A variety of operating equipment will be utilized at the oil and gas location for production, storage, and transmission purposes. Equipment is inspected regularly to ensure it is operating properly and that no fluid leaks or spills are evident. Any leaks or problems with equipment will be identified and repaired immediately. Leaked or spilled fluids will be cleaned up promptly in accordance with TEP's Spill Response Plan (SPRP).

Routine equipment maintenance will be performed on-site. Any waste product from maintenance will be containerized and transported off site for proper disposal or recycling. There will be no major equipment overhauls conducted on site. Equipment will be transported off site for major overhauls.

6) *Significant dust or particulate generating processes*

Dust generation may occur from site construction, vehicle traffic, and high winds. Dust suppression will be performed on an as needed basis to minimize the potential for fugitive dust. Please see the Dust Mitigation Plan attached to the Form 2A for specific details on dust suppression methods.

7) *Erosion and vehicle tracking from well pads, road surfaces, and pipeline corridors*

To prevent vehicle tracking, stabilized construction entrances may be utilized as necessary to prevent tracked mud and dust from leaving an area. The use of stabilized construction entrances removes mud and sediment from the vehicle's wheels and offsite transport of soil is reduced.

Control measures will be established during site construction to prevent erosion and transport of sediment off the oil and gas location. Control measures will include structural items such as diversion ditches, wattles, straw bales, sediment traps, water bars, and matting, as well as non-structural items such as timing of ground disturbance activities and dust control measures. Guidelines regarding the selection, installation or implementation, and maintenance of control measures are detailed in TEP's Stormwater Manual.

8) *Waste disposal practices*

Proper waste handling practices will be implemented at the oil and gas location. All materials no longer needed for operations will be removed from the site and re-used or disposed of properly. Wastes will be temporarily stored in sealed containers and regularly collected and disposed of at off-site, suitable facilities. Regular disposal of garbage, rubbish, construction wastes, and sanitary waste will be maintained during operations.

9) *Leaks and spills*

Leaks and spills will be handled according to TEP's SPCC Plan and SPRP. Appropriate TEP personnel are trained on the requirements of these plans during new hire training and then annually thereafter during employment. If a spill occurs, contractors are instructed to notify their TEP point of contact immediately. If the spill or leak can be safely stopped, employees or contractors should do so. The spill should be contained and resources for spill cleanup employed as described in the SPRP.

In case of a liquid leak or spill, such as produced water or hydrocarbon product, containment strategies will be implemented immediately to control the release. Containment strategies include, but are not limited to, utilization of spill kits, creation of diversion ditches and containment berms, installation of check dams or headgates, and removal of free liquid by vacuum truck. Contaminated soils and materials will be land-farmed within bermed areas on site or will be properly stored in sealed containers until removed for proper disposal.

In case of a dry material spill or leak, the affected soil will be land farmed within bermed areas on site, if appropriate, or removed and temporarily stored in a sealed container until removed for proper disposal. If a spill occurs, prompt cleanup is required to minimize any commingling of materials with stormwater runoff.

10) *Ground-disturbing maintenance activities.*

If ground disturbing maintenance activities are necessary, activities will be evaluated by TEP personnel to determine the following: first, whether the scope of activities merits returning to coverage under the CDPHE Construction Stormwater Permit, or if the activities can occur under the Post-Construction Stormwater Plan; and second, whether additional control measures need to be implemented to prevent erosion before, during, or after the maintenance activities. Control measures will be selected and implemented based on the guidelines provides in TEP's Stormwater Manual.

*Pollution Prevention:* Structural and non-structural control measures will be implemented at the oil and gas location to control stormwater and sediment erosion. The following outlines the planned structural and non-structural control measures slated for use at the oil and gas location:

- 1) Structural Control Measures:
  - a. Wattles
  - b. Culvert Inlet and Outlet Protection
- 2) Non-structural Control Measures:
  - a. Minimizing surface disturbance by utilization of off-site support facilities
  - b. Sediment Catchment Basins
  - c. Diversion Ditches
  - d. Surface Roughening
  - e. Seeding and Mulching
  - f. Proper scheduling of construction activities

Erosion Controls: The oil and gas location and existing access road will be unpaved. To prevent erosion from unpaved surfaces, TEP will apply gravel in sufficient quantities to minimize erosion potential. Hydro-mulch will be applied to the cut and fill slopes of the oil and gas location and the associated stockpiles following site construction to minimize erosion potential. Once interim reclamation of the oil and gas location is complete, seed and mulch will be applied to the reclaimed cut and fill slopes.

Vehicle Tracking Control: Construction sites may use vehicle tracking controls to mitigate the transport of mud/sediment adhering to vehicle tires prior to leaving the site and entering the adjacent asphalt and/or public roadways, or areas where vehicle tracking occurs shall have measures in place that contain or filter flows in order to prevent the bypass of flows without treatment. If needed, access roads may be stabilized with base course or gravel to reduce erosion, and street sweeping will be utilized to removed tracked sediment on paved roads, when necessary.

Management of Waste Materials: Locations will be maintained in a clean and orderly fashion to minimize the potential for spills, leaks, stormwater contamination, and safety hazards. Housekeeping will consist of neat and orderly storage of materials and containerized fluids. Wastes will be temporarily stored in sealed containers and regularly collected and disposed of at approved off-site disposal facilities.

Contractors and employees will maintain, as necessary, an equipment storage (lay down) or staging area for equipment and materials storage at each site. These areas will be maintained with good housekeeping and will be inspected regularly for spills, leaks, and potential contamination.

Construction trash and debris (i.e., non-hazardous solid waste) will be collected in containers and hauled off site for disposal at an approved disposal facility. Sanitary waste will be containerized in portable toilets or other storage tanks with waste materials regularly pumped and transported off site for disposal at approved facilities.

Drill cuttings will be managed on location within a bermed cuttings trench. Stormwater run-on that enters the cuttings trench will be pumped out and properly disposed. Drill cuttings will be sampled for compliance with COGCC Table 915-1 and will be buried on location within the cuttings trench / cut slope of the oil and gas location. Please see the Waste Management Plan attached to the Form 2A for additional details on drill cuttings management.

## **SITE-SPECIFIC CONSTRUCTION AND STORMWATER CONTROL MEASURES**

The Federal RG 11-13-298 pad will be constructed to accommodate the development of the twenty-two (22) new proposed natural gas wells. Site-specific stormwater control measures are depicted on **Attachment A, Construction Layout Drawing**, and include diversion ditches, sediment basins, wattles, surface roughening, application of mulch, and application of gravel. Additional stormwater control measures may be considered during site construction. A proposed access road will be constructed from BLM Road 1019 to the oil and gas location. The existing access road from Rio Blanco County Road 26 will continue to be used to access the oil and gas location. Stormwater control measures will be implemented along the access road including bar ditches, riprap, application of surfacing materials, and others as necessary to control stormwater. The proposed access road is approximately 0.75 miles in length and the existing access road from Rio Blanco County Road to the intersection with the proposed access road is approximate 1.86 mile in length.

To support natural gas gathering for the proposed wells on the Federal RG 11-13-298 pad, Bargath will install one (1) eight-inch (8") steel natural gas pipeline (approximately 4,082 feet) from the proposed separators to the proposed tie-in point on the existing sixteen-inch (16") gas pipeline located adjacent to

BLM Road 1019. The proposed natural gas pipeline will be installed adjacent to and paralleling the proposed access road. A new gas pipeline riser and valve set will be installed at the tie-in point with the existing sixteen-inch (16") gas pipeline. The proposed natural gas pipeline will be installed by a qualified construction contractor at the direction of Bargath.

TEP would install one (1) six-inch (6") Coreline or FlexSteel water pipeline (approx. 4,006 feet) from the proposed produced water pump on the Federal RG 11-13-298 pad to the proposed tie-in point with an existing six-inch (6") water pipeline located in the SW¼SW¼ of Section 13, Township 2 South, Range 98 West, 6th P.M., north of BLM Road 1019. The proposed water pipeline will be installed adjacent to and paralleling the proposed access road and will be collocated with the proposed gas pipeline. The proposed off-location pipelines would be installed within a sixty-foot (60') pipeline right-of-way located on Federal surface administered by the Bureau of Land Management. TEP would install several on-location flowlines to support onsite production operations.

Prior to initial pad construction, TEP will have the proposed pad location, access road, and pipeline corridors staked for construction and will hold a pre-construction onsite with the excavation and stormwater contractors to review proposed site construction. TEP's stormwater management contractor will review the preliminary erosion control plan and determine if any additional control measures are needed. Any new control measures implemented because of this review or requested by the surface owner will be documented as required by Federal and/or state regulations.

TEP's stormwater contractor will then oversee the installation of stormwater control measures (i.e. wattles, straw bales, etc.) along the outer perimeter of the proposed disturbance boundary. TEP's construction contractor will then begin removal of existing vegetation within the disturbance footprint by hydro-axing or brush hogging the trees and larger brush within the project disturbance boundary. Stormwater control measures, such as sediment traps and diversion ditches, will then be installed along the perimeter of the site prior to pad excavation.

Topsoil horizon, or the top six inches (6") of soil within the pad disturbance footprint, will then be stripped and stockpiled along the west end of the oil and gas location. Topsoil will be segregated from all other subsurface materials at the site and wattles will be placed around the perimeter of the stockpile to prevent migration of organic materials from the stockpile.

Excavation of the pad will then commence and will be constructed based on the **Attachment A, Construction Layout Drawing**. A perimeter berm will be constructed around the fill side of the pad location and around the cuttings trench. A drive over berm will be constructed at the pad entrance.

The proposed production equipment areas, and on-location flowlines will then be installed. Conductors may be installed during installation of production facilities if drilling operations are expected to commence within six (6) months of installation. Per COGCC Rule 406.e.(4), conductors for wells that have not been drilled within six (6) months of setting the conductor must be plugged per the guidelines outlined in the rule. The areas 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 a minimum of four inches (4") of three-quarter inch (3/4") surfacing materials imported from one or more local gravel pits. The cut and fill slopes, excess stockpile, and topsoil stockpile will be hydro-mulched following completion of pad construction to minimize the potential for site degradation during the initial drilling and well completion phase of the project.

Interim reclamation of the oil and gas location will occur following completion of well construction. Stormwater control measures will be implemented during interim reclamation and will include diversion

ditches, sediment traps, surfacing materials (as needed), and application of seed and mulch. Additional control measure may be implemented as needed to prevent off-site migration of sediment and pollutants. Stormwater control measure planned for interim reclamation are depicted on **Attachment B, Interim Reclamation Layout Drawing**.

## **STORMWATER MANAGEMENT PROGRAM**

Oil and gas operation generally require major ground disturbing activities which may include construction of oil and / or natural gas well pad, access roads, natural gas pipelines, produced water pipelines or off-location flowlines, compressor stations, centralized exploration and production waste management facilities, compressor stations, and other support facilities. All construction activities will follow standard construction and engineering protocols and procedures, and the appropriate stormwater runoff, erosion, and sediment control measures (CMs) will be used to minimize the impact of earth ground disturbing activities. The following sections describe the relationship between the phases of construction and the implementation and maintenance of both structural and non-structural stormwater management control measures used by TEP to effectively minimize site erosion and sediment transport.

### Pre-construction Phase

Preliminary site assessments are made for site planning and management (e.g., well pad dimensions, access roads, pipeline routes, etc.) and to determine needed site-specific control measures, pre-construction vegetative cover, existing drainages/outfalls, soil types, and other site-specific considerations prior to site excavation. These features are incorporated into site specific stormwater plans and are used to develop, implement, maintain, and update/revise the SWMP.

Prior to initial construction activities or ground disturbance, stormwater control measures shall be implemented at construction sites to control erosion (i.e., sequencing of construction activities, surface roughening, etc.) and sediment (i.e., stabilized construction entrances, temporary berms, diversion ditches, etc.), and to protect existing vegetation outside the perimeter of the construction site.

### Construction Phase

Upon completion of pre-construction site assessments and related SWMP management (i.e., development, implementation, maintenance, updates/revisions), construction activities are scheduled or phased to control erosion and sediment and all potential pollutant sources at project sites, and to protect existing vegetation. Construction activities for the exploration and production of natural gas typically follow this general order of operation:

- 1) Installation of perimeter sediment control measures around the proposed site disturbance, including material stockpiles, to ensure adequate protection of surface waters and / or wetland areas adjacent to, or downgradient of the construction site (i.e. well pad, access road, pipeline corridor, utilities);
- 2) Preservation of existing vegetation adjacent to construction activities, or where feasible;
- 3) Clearing and grubbing of site vegetation;
- 4) Preserving topsoil by stripping and placing topsoil within designated areas along the perimeter of the construction site;
- 5) Site construction includes excavation of cut and fill slopes of the proposed access road and well pad, excavation of pipeline right-of-way, installation of utility lines and site facilities, and other ground disturbance activities;
- 6) Implementation of interior erosion and sediment control measures as described in the SWMP (i.e. diversion ditches, sediment traps, surface roughening, mulching, wattles, riprap, culverts, etc.);

- 7) Development of oil and natural gas wells through planned drilling and completion operations;
- 8) Installation and operation of production facilities (if not completed before D&C operations);
- 9) Stormwater control measure management and reporting, including daily or bi-weekly inspection depending on phase of construction.

### Interim Reclamation

Disturbed areas affected by construction, drilling, completion, and/or production operations not required for long-term production operations will be temporarily stabilized after construction is complete. Interim reclamation will be initiated for areas of well pad surfaces, access roads, pipelines, etc. not needed for long-term production operations. Surfaces required for the operation of production facilities will be maintained until wells are no longer productive (approximately 30 years). The following measures may be used for interim reclamation to control stormwater runoff, minimize erosion and the transport of sediment off-site, and to control site degradation:

- 1) Managing debris and waste materials (i.e., well completion and drilling materials, drill pipe, excess materials and equipment, etc.) in accordance with TEP guidelines and regulatory requirements;
- 2) Closing cuttings pits, trenches, and / or management areas per COGCC regulations and re-contouring the disturbances to eliminate the potential for stormwater ponding;
- 3) Grading the construction site to reduce the working pad surface to approximately one-quarter ( $\frac{1}{4}$ ) of an acre or the area required for long-term production operations;
- 4) Cross-ripping disturbed areas compacted by oil and gas operations which are no longer needed following completion of such operations to alleviate compaction;
- 5) Stabilizing unpaved access roads with base course or gravel to minimize erosion, and implementing permanent erosion control measures (e.g., permanent vegetation, erosion control blanket, retaining walls, etc.) for adjacent slopes or ditches;
- 6) Installing water bars and supplemental control measures on slopes greater than 20%, as needed;
- 7) Installing rock check dams, or equivalent structures, in drainage channels susceptible to erosion; and
- 8) Seeding ripped or harrowed ground disturbances with an appropriate seed mix and using stockpiled topsoil for areas of the site that will utilize vegetative final stabilization measures.
- 9) Monthly inspection schedule for < 70% pre-disturbance vegetation cover. Annual inspection schedule for  $\geq$  70% pre-disturbance vegetation cover.

When construction of well pads, pipelines, access roads, and other production facilities are complete, interim reclamation activities will be initiated. Sites located on cropland will be reclaimed in accordance with COGCC regulations and private landowner requirements. All other sites will be reclaimed in the interim using measures described above, taking into consideration the natural landscape of the surrounding undisturbed area, disturbed surface slopes, and the proximity of the site to drainages and surface waters. Please see the Reclamation Plan attached to the Form 2A for further details on site reclamation.

### Final Reclamation

TEP's final reclamation phase of construction aligns with industry and regulatory standards and regulations for reclaiming lands affected by oil and natural gas construction activities and operations. Structural and/or non-structural control measures will be implemented to effectively minimize erosion, sediment transport, and the release of other pollutants at the completion of final reclamation construction activities. Final reclamation of disturbed surfaces at sites may be accomplished with the following sequence of construction activities:

- 1) Plugging and abandoning of wells which are no longer producing;
- 2) Removal of any remaining production equipment, pipeline riser, and debris from the site, and backfilling remaining pits and boreholes used for production operations;
- 3) Recontouring the site to approximate pre-construction contours as practicable, per COGCC regulations, landowner agreements, or land management agency requirements;
- 4) Closing, grading, and re-contouring access roads, and removing culverts;
- 5) Alleviating compaction where necessary per COGCC requirements;
- 6) Replacing stockpiled topsoil over the site and preparing the surface for seeding by disking or ripping; and
- 7) Application of approved seed mix using appropriate application method (hydro-seed, drill seed, or broadcast seed) and covering with mulch to prevent sediment erosion and promoting growth of desirable vegetation.

Sediment and erosion control measures at the site will be maintained or modified as needed until final reclamation of disturbed areas has been completed. Site-specific maps shall be updated to reflect field conditions post-construction.

Restoration control measures, including vegetation, have been designed and will be installed as permanent features. When the surface of the land has been restored (as nearly as practicable) to its condition at the commencement of construction activities all temporary non-biodegradable CMs shall be removed from the site.

## **INSPECTION AND MAINTENANCE**

All TEP internal site inspections are conducted in accordance with State Permit regulations and represent the minimum inspection schedule for construction sites in the Piceance Fields (at least once every 14 calendar days). More frequent inspections are often conducted on active construction sites in accordance with project needs and communication with TEP's SWMP Administrator, Construction Superintendent, and onsite contractors. Internal inspections are conducted by a TEP appointed third party Qualified Stormwater Manager (QSM).

At a minimum, the following shall be evaluated during each inspection for evidence of, or the potential for, pollutants leaving construction site boundaries; entering a stormwater drainage system; or discharging to State waters:

- 1) construction site perimeter;
- 2) all disturbed areas;
- 3) designated haul routes;
- 4) material and waste storage areas exposed to precipitation;
- 5) locations where stormwater has the potential to discharge off-site; and
- 6) locations where vehicles exit the site.

All erosion and sediment control measures identified at the site are evaluated to ensure that they are maintained and operating correctly.

### **Inspection Requirements:**

- 1) Visually verify whether all implemented control measures (CMs) are in effective operational condition and are working as designed in their specifications to minimize pollutant discharges.
- 2) Determine if there are new potential sources of pollutants;

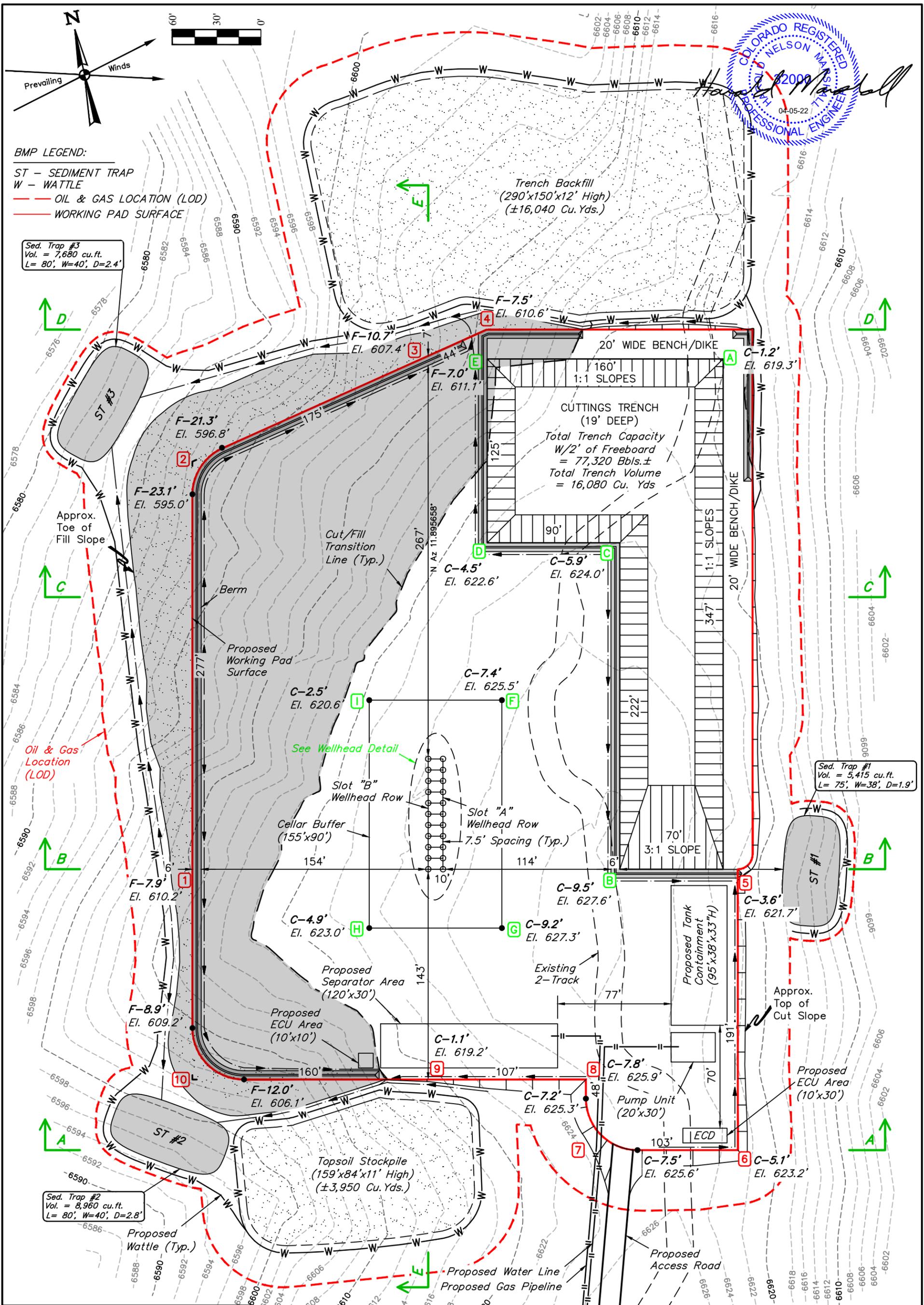
- 3) Assess the adequacy of CMs at the site to identify areas requiring new or modified control measures to minimize pollutant discharges.
- 4) Identify all areas of non-compliance with the Permit requirements and, if necessary, implement corrective action/work order.

### **BEST MANAGEMENT PRACTICES**

The following Best Management Practices for stormwater management will be utilized during development of the oil and gas location:

- 1) Stormwater control measures will be in place during all phases of development (construction, drilling, completions, interim reclamation, and production) to control stormwater runoff in a manner that minimizes erosion, transportation of sediment offsite, and site degradation;
- 2) Stormwater control measures will include perimeter controls and site degradation control measures; these will include a minimum 1.5-foot compacted earthen perimeter berm around the entire working pad surface and around the cuttings trench near the north and east side of the well pad; topsoil will be stockpiled near the south end of the location within the disturbance area and segregated from all subsurface material; there will be a system of exterior diversion ditches around the entire oil and gas location; these diversion ditches will be fitted with rock check dams and will tie into two (2) sediment catchment basins along the eastern side of oil and gas location; site degradation control measures will include grading, slope stabilization (seeding, mulching, surface roughening of the topsoil stockpile), straw wattles along the toe of all fill slopes, and the use of gravel and road base materials for surfacing; wattles will be placed around the entire perimeter of the topsoil stockpile to minimize potential for loss of organic materials.
- 3) Outlet protection should be used when a conveyance discharges onto a disturbed area where there is potential for accelerated erosion due to concentrated flow;
- 4) TEP will conduct stormwater inspections immediately after storm events;
- 5) Bi-weekly inspection of the pad and stormwater control measures (berms, ditches, sediment basins), and the cuttings trench (berms and precipitation buildup); when necessary, precipitation within the cuttings trench will be pumped out and sent into the TEP proposed produced water management system for disposal;
- 6) Stream Crossing and Road Construction – TEP will ensure that control measures are designed, installed, and adequately sized in accordance with good engineering, hydrologic, and pollution control practices; and
- 7) Documentation / Stormwater Management Plan – if it is infeasible to install or repair a control measure immediately after discovering a deficiency, TEP will document and keep on record in the stormwater management plan: (a) a description of why it is infeasible to initiate the installation or repair immediately; and (b) a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.
- 8) A post-construction stormwater program will be developed for the facility as required per Rule 1002.f.(3). Stormwater control is also addressed under a field-wide Stormwater Management Plan.

**ATTACHMENT A**  
**FEDERAL RG 11-13-298 DRILL PAD**  
**CONSTRUCTION LAYOUT DRAWING**  
**PLAN VIEW & CROSS SECTION**



**BMP LEGEND:**  
 ST - SEDIMENT TRAP  
 W - WATTLE  
 --- OIL & GAS LOCATION (LOD)  
 --- WORKING PAD SURFACE

Sed. Trap #3  
 Vol. = 7,680 cu.ft.  
 L= 80', W=40', D=2.4'

Sed. Trap #1  
 Vol. = 5,415 cu.ft.  
 L= 75', W=38', D=1.9'

Sed. Trap #2  
 Vol. = 8,960 cu.ft.  
 L= 80', W=40', D=2.8'

FINISHED GRADE ELEVATION = 6618.1'

REV: 7 04-05-22 M.D. (EQUIPMENT CHANGES)

- NOTES:**
- Rounded corners shown at 35' radius.
  - Construct diversion ditches as needed.
  - Contours shown at 2' intervals.
  - Cut/Fill slopes 1 1/2:1 (Typ. except where noted).
  - Working Pad Surface Varies Overall.
  - The Cut and Fill slopes will be hydro-mulched following site construction.

**TEP Rocky Mountain LLC**

**FEDERAL RG 11-13-298 PAD  
 LOT 4, SECTION 13, T2S, R98W, 6th P.M.  
 RIO BLANCO COUNTY, COLORADO**

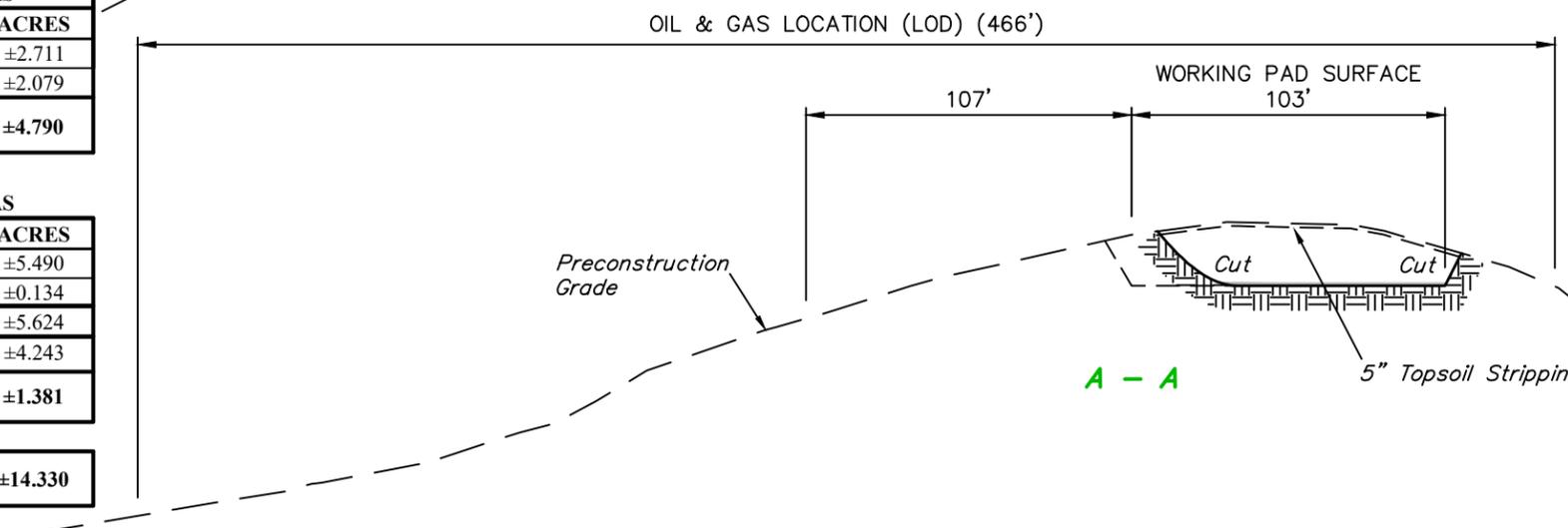
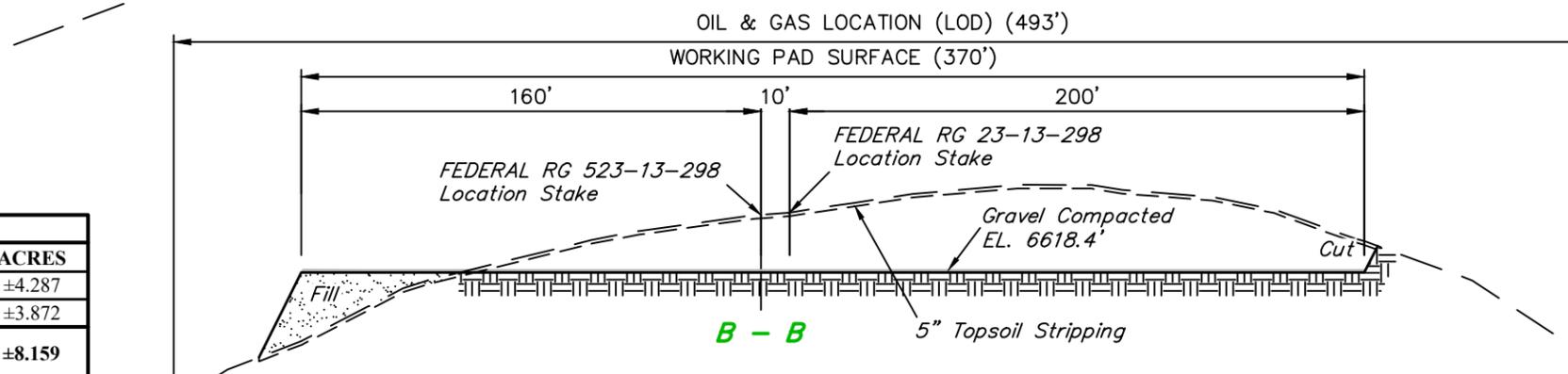
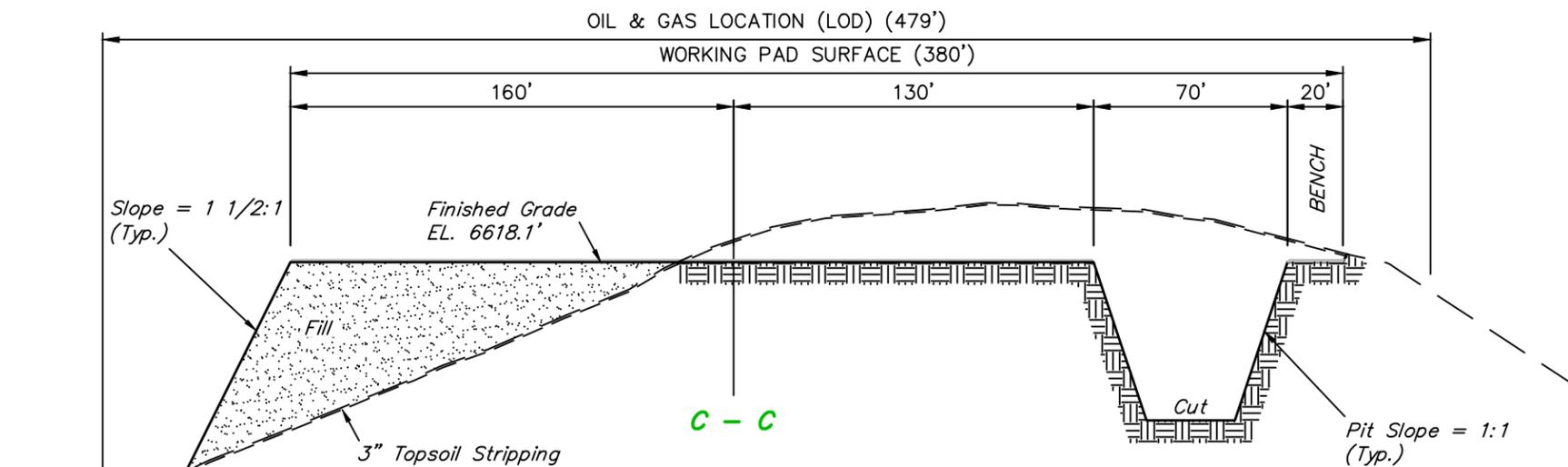
SURVEYED BY	BART HUNTING	07-21-21	SCALE
DRAWN BY	T.L.L.	07-23-21	1" = 60'

**CONSTRUCTION LAYOUT-PLAN VIEW**



**UELS, LLC**  
 Corporate Office \* 85 South 200 East  
 Vernal, UT 84078 \* (435) 789-1017

1" = 20'  
X-Section Scale  
1" = 60'



APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
WORKING PAD SURFACE DISTURBANCE	NA	±4.287
CONSTRUCTION DISTURBANCE	NA	±3.872
<b>TOTAL OIL &amp; GAS LOCATION (LOD)</b>		<b>±8.159</b>

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
30' WIDE ACCESS ROAD R-O-W DISTURBANCE	±3,937'	±2.711
ROAD DISTURBANCE OUTSIDE R-O-W	N/A	±2.079
<b>TOTAL ACCESS ROAD DISTURBANCE AREA</b>		<b>±4.790</b>

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
60' WIDE PIPELINE R-O-W DISTURBANCE	±3,986'	±5.490
PIPELINE DISTURBANCE INSIDE PAD AREA	97'	±0.134
<b>TOTAL PIPELINE DISTURBANCE</b>	<b>4,083'</b>	<b>±5.624</b>
PIPELINE DISTURBANCE INSIDE ROAD R-O-W	N/A	±4.243
<b>TOTAL EXCESS PIPELINE DISTURBANCE AREA</b>		<b>±1.381</b>

<b>TOTAL PROJECT DISTURBANCE</b>		<b>±14.330</b>
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APPROXIMATE EARTHWORK QUANTITIES	
(6") TOPSOIL STRIPPING	3,950 Cu. Yds.
REMAINING LOCATION	26,050 Cu. Yds.
CUTTINGS TRENCH	16,080 Cu. Yds.
<b>TOTAL CUT</b>	<b>46,080 Cu. Yds.</b>
<b>FILL</b>	<b>26,050 Cu. Yds.</b>
EXCESS MATERIAL	20,030 Cu. Yds.
TOPSOIL & TRENCH BACKFILL	20,030 Cu. Yds.
<b>EXCESS UNBALANCE</b> (After Interim Rehabilitation)	<b>0 Cu. Yds.</b>

- NOTES:**
- Fill quantity includes 10% for compaction.
  - Calculations based on 6" of topsoil stripping.
  - Cut/Fill slopes 1 1/2:1 (Typ. except where noted).

**NOTE:**  
Compacted Volume of Approximately 1750 Cu. Yds. 4" aggregate base pad surfacing material is to be Applied to Entire Pad Footprint.

REV: 7 04-05-22 M.D. (TOPSOIL CHANGE & UPDATE ACRES)

Sheet 1 of 2

**TEP Rocky Mountain LLC**

**FEDERAL RG 11-13-298 PAD  
LOT 4, SECTION 13, T2S, R98W, 6th P.M.  
RIO BLANCO COUNTY, COLORADO**

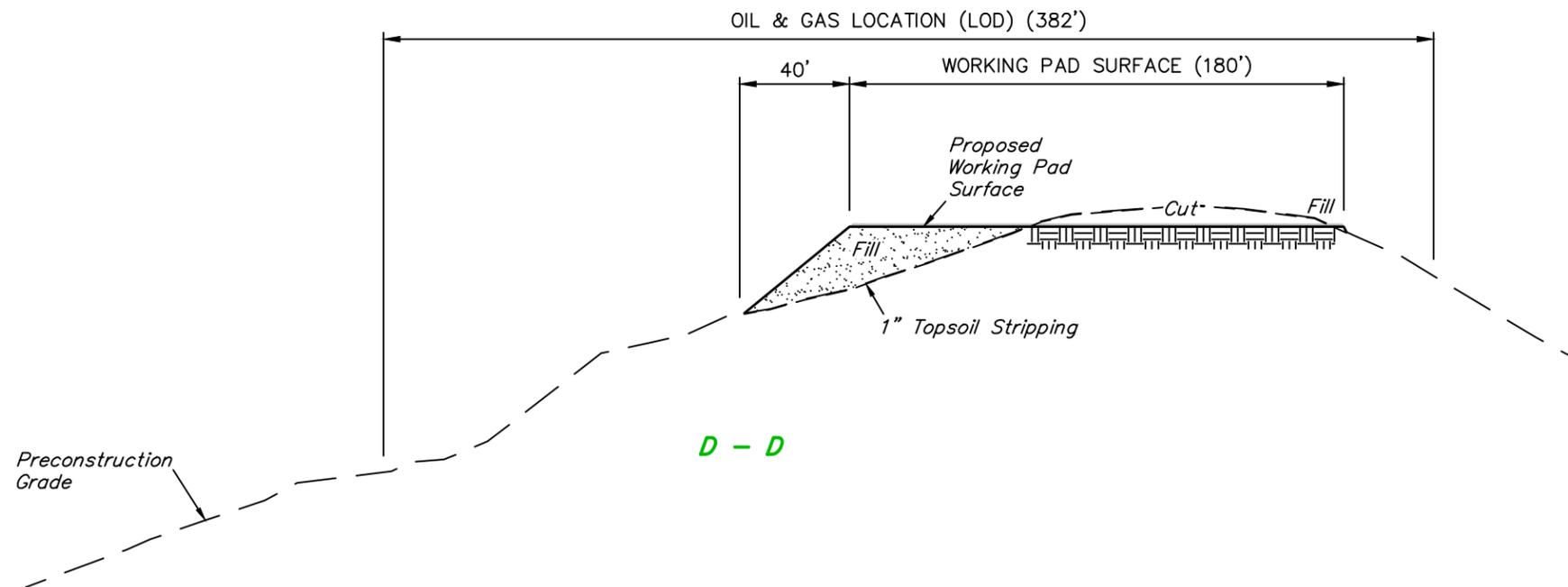
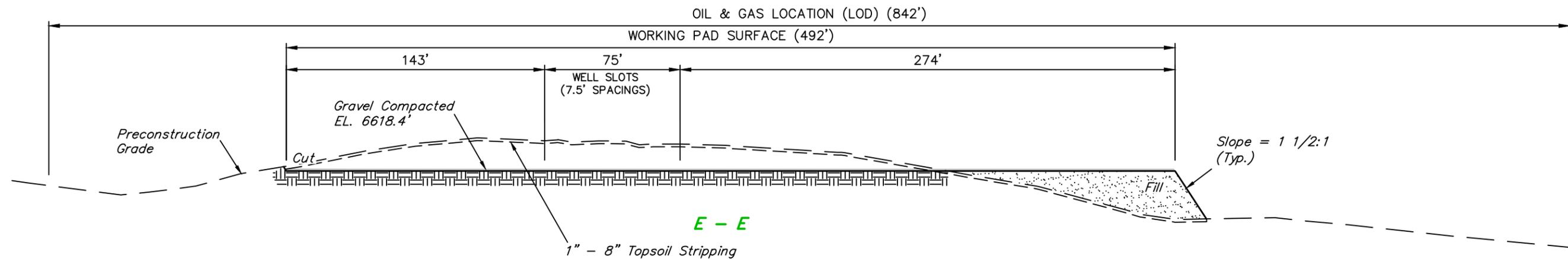
SURVEYED BY	BART HUNTING	07-21-21	SCALE
DRAWN BY	T.L.L.	07-23-21	AS SHOWN

**CONSTRUCTION LAYOUT CROSS SECTIONS**



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Vernal, UT 84078 \* (435) 789-1017

1" = 20'  
 X-Section Scale  
 1" = 60'



Sheet 2 of 2

REV: 7 04-05-22 M.D. (TOPSOIL CHANGE & UPDATE ACRES)

**NOTES:**

- Fill quantity includes 10% for compaction.
- Calculations based on 6" of topsoil stripping.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted).

**NOTE:**

Compacted Volume of Approximately 1750 Cu. Yds. 4" aggregate base pad surfacing material is to be Applied to Entire Pad Footprint.

**TEP Rocky Mountain LLC**

**FEDERAL RG 11-13-298 PAD  
 LOT 4, SECTION 13, T2S, R98W, 6th P.M.  
 RIO BLANCO COUNTY, COLORADO**

SURVEYED BY	BART HUNTING	07-21-21	SCALE
DRAWN BY	T.L.L.	07-23-21	AS SHOWN

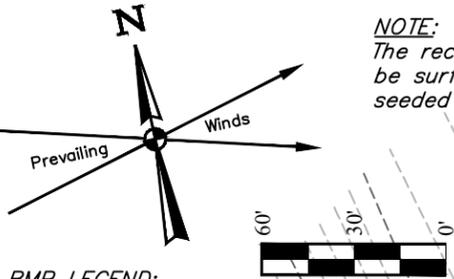
**CONSTRUCTION LAYOUT CROSS SECTIONS**



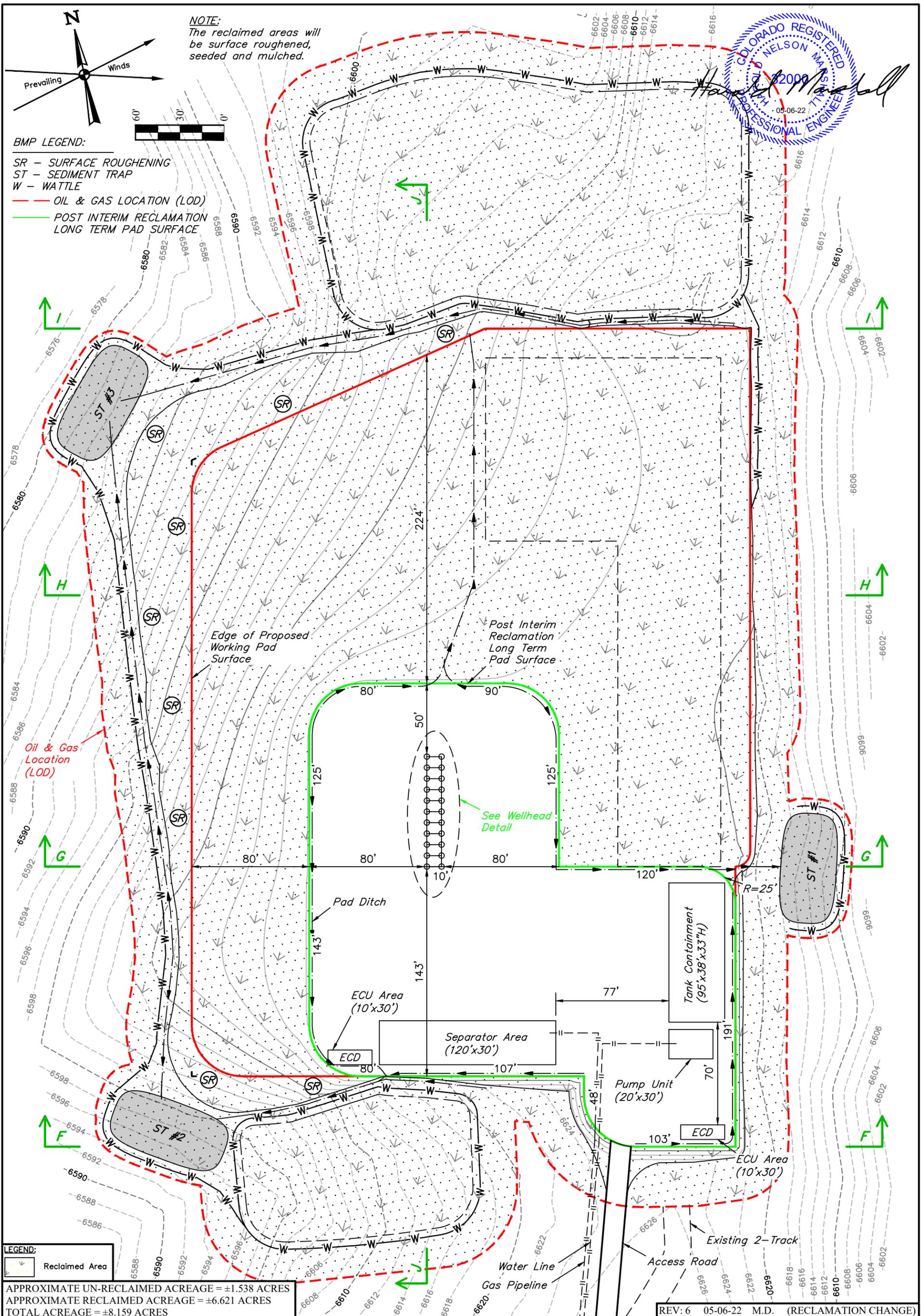
**UELS, LLC**  
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**ATTACHMENT B**  
**FEDERAL RG 11-13-298 DRILL PAD**  
**INTERIM RECLAMATION LAYOUT**  
**PLAN VIEW & CROSS SECTION**

**NOTE:**  
The reclaimed areas will be surface roughened, seeded and mulched.



- BMP LEGEND:**
- SR - SURFACE ROUGHENING
  - ST - SEDIMENT TRAP
  - W - WATTLE
  - OIL & GAS LOCATION (LOD)
  - POST INTERIM RECLAMATION LONG TERM PAD SURFACE



**LEGEND:**  
Reclaimed Area

APPROXIMATE UN-RECLAIMED ACREAGE = ±1.538 ACRES  
APPROXIMATE RECLAIMED ACREAGE = ±6.621 ACRES  
TOTAL ACREAGE = ±8.159 ACRES

**NOTES:**  
• Contours shown at 2' intervals.

REV: 6 05-06-22 M.D. (RECLAMATION CHANGE)

**TEP Rocky Mountain LLC**

**FEDERAL RG 11-13-298 PAD  
LOT 4, SECTION 13, T2S, R98W, 6th P.M.  
RIO BLANCO COUNTY, COLORADO**

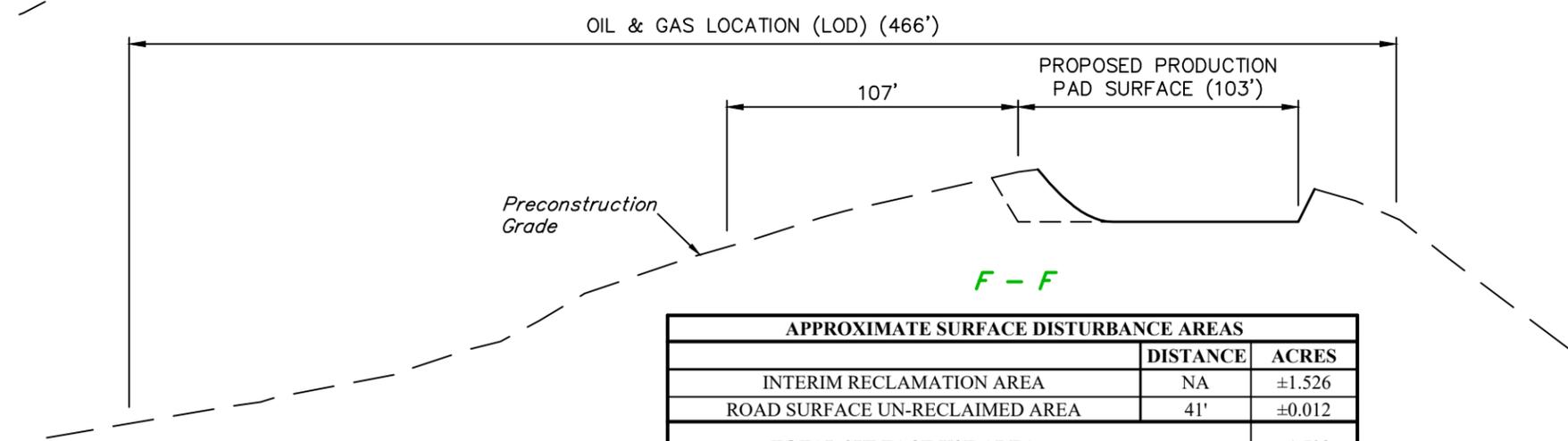
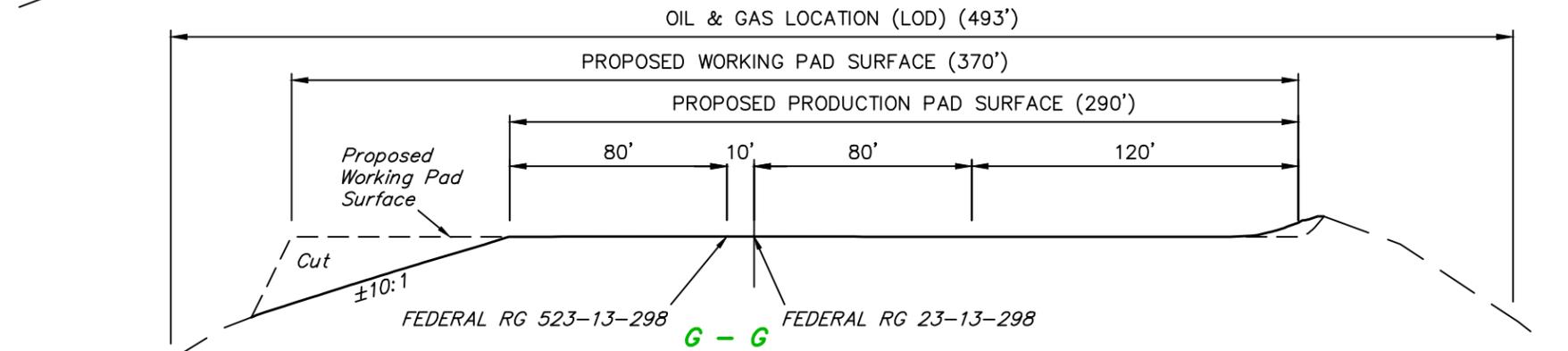
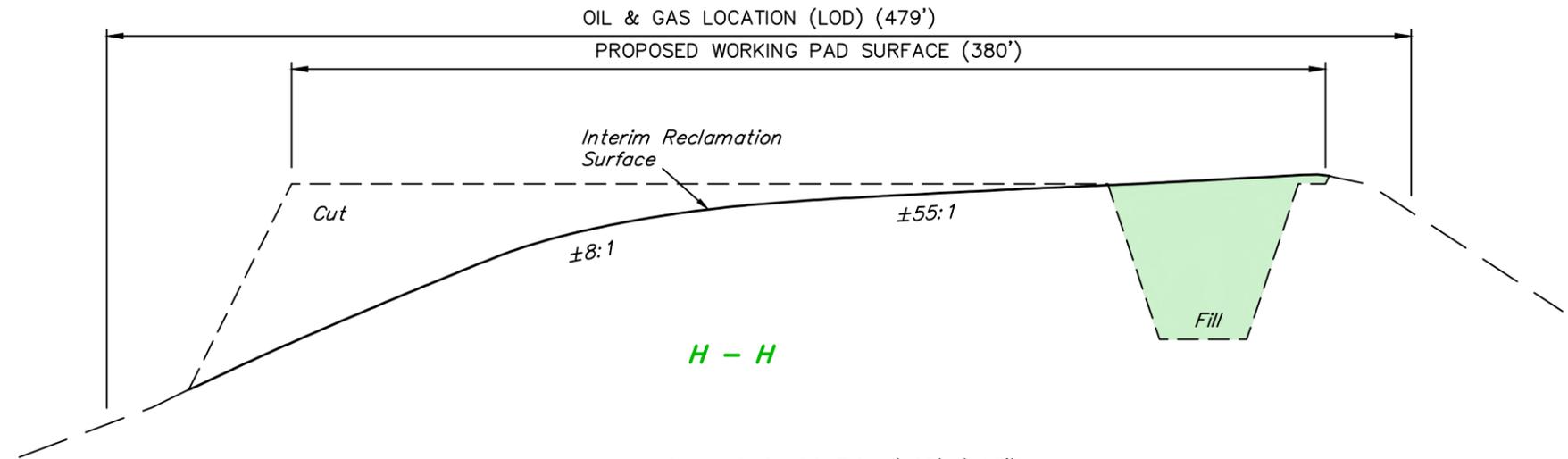
SURVEYED BY	BART HUNTING	07-21-21	SCALE
DRAWN BY	T.L.L.	09-20-21	1" = 60'

**INTERIM RECLAMATION LAYOUT-PLAN VIEW**



**UELS, LLC**  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

1" = 20'  
X-Section  
Scale  
1" = 60'



**NOTE:**  
Reclaim Slopes Vary as Shown.

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
INTERIM RECLAMATION AREA	NA	±1.526
ROAD SURFACE UN-RECLAIMED AREA	41'	±0.012
<b>TOTAL SURFACE USE AREA</b>		<b>±1.538</b>

REV: 5 05-06-22 M.D. (RECLAMATION CHANGE) Sheet 1 of 2



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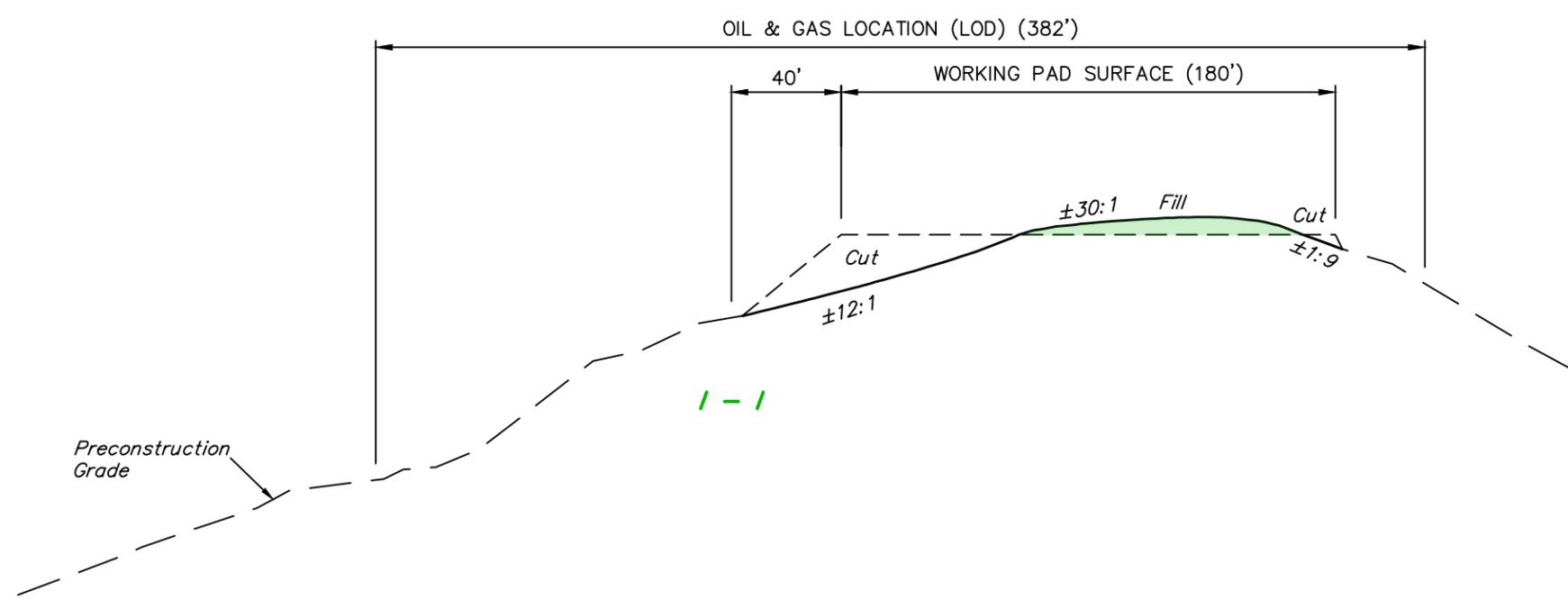
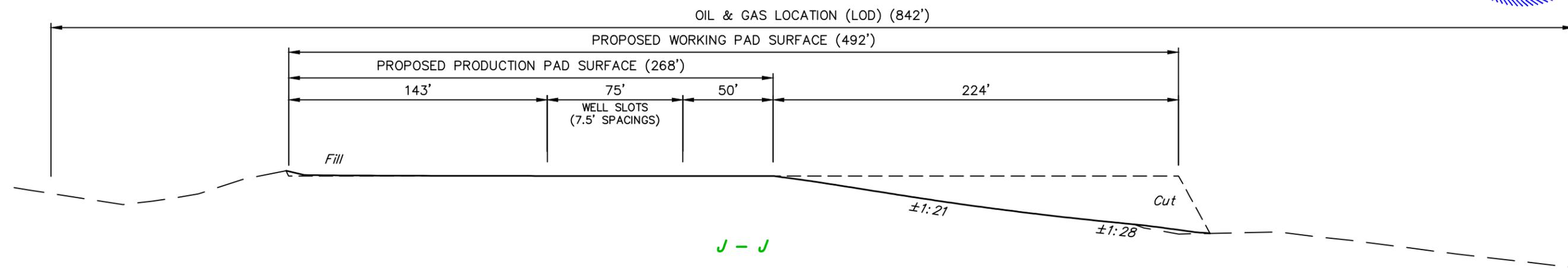
**TEP Rocky Mountain LLC**

**FEDERAL RG 11-13-298 PAD**  
**LOT 4, SECTION 13, T2S, R98W, 6th P.M.**  
**RIO BLANCO COUNTY, COLORADO**

SURVEYED BY	BART HUNTING	07-21-21	SCALE
DRAWN BY	T.L.L.	07-23-21	AS SHOWN

**INTERIM RECLAMATION CROSS SECTIONS**

1" = 20'  
 X-Section  
 Scale  
 1" = 60'



NOTE:  
 Reclaim Slopes Vary as Shown.

REV: 3 01-10-22 T.L.L. (TRENCH CHANGES & ADD (LOD) DIMENSIONS)

TEP Rocky Mountain LLC

FEDERAL RG 11-13-298 PAD  
 LOT 4, SECTION 13, T2S, R98W, 6th P.M.  
 RIO BLANCO COUNTY, COLORADO

SURVEYED BY	BART HUNTING	07-21-21	SCALE
DRAWN BY	T.L.L.	07-23-21	AS SHOWN
<b>INTERIM RECLAMATION CROSS SECTIONS</b>			



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