

**Reclamation Plan – 304.c.(16)**

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

**New Location**

**April 2022**



## **INTRODUCTION**

TEP Rocky Mountain LLC (“TEP”) has prepared the following Reclamation Plan as required by the Colorado Oil and Gas Conservation Commission (“COGCC”) Rule 304.c.(16). This reclamation plan describes the methods TEP will use during interim reclamation and final reclamation of the Federal RG 11-13-298 pad in compliance with Federal, state, and local reclamation standards. TEP also operates under a field wide Surface Reclamation Plan for Oil and Gas Operations which provides additional guidance on surface reclamation methods and best management practice that are applicable for the majority of sites operated by TEP.

This reclamation plan addresses two phases of site reclamation– interim reclamation, and final reclamation. Interim reclamation occurs once well construction and/or facility construction is complete. The area surrounding the wellhead and production facilities, not required for long-term production operations, is recontoured and stabilized to prevent soil erosion and to promote growth of desirable vegetation. The primary objective of interim reclamation is to establish a self-sustaining, vigorous, diverse, native (or otherwise approved) plant community sufficient to minimize visual impacts, provide forage for wildlife, stabilize soils, and impede growth of noxious weeds.

Final reclamation occurs once all existing wells on an oil and gas location have been plugged and abandoned and the location is no longer needed for ongoing production operations. The primary objectives of final reclamation are to return the land to pre-disturbance condition by recontouring the site where necessary, re-establishing hydrologic systems, and establishing self-sustaining native (or otherwise approved) plant communities.

## **SITE DESCRIPTION**

The proposed Federal RG 11-13-298 pad is one (1) of two (2) oil and gas locations included in the Ryan Gulch Phase 2 Oil and Gas Development Plan (“OGDP”). Development of the Federal RG 11-13-298 pad involves construction of the following: the Federal RG 11-13-298 pad, a new access road, a new pipeline corridor for natural gas and produced water transportation, and utilization of other existing facilities (i.e. Federal RGU 23-7-297 pad) to support well completion and production operations.

The proposed Federal RG 11-13-298 pad is located in Lot 4 of Section 13, Township 2 South, Range 98 West, 6th P.M., within Rio Blanco County, Colorado, on Federal surface administered by the Bureau of Land Management (“BLM”). TEP is proposing to construct the Federal RG 11-13-298 pad to support drilling, completion, and production operation of twenty-two (22) proposed natural gas wells. The proposed 8.15-acre Federal RG 11-13-298 pad will have a constructed pad elevation of 6618.10 feet. 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 installation. The total disturbance associated with development of the Federal RG 11-13-298 pad 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.

Construction activities for the Federal RG 11-13-298 pad are scheduled to begin September 2022 and are expected to take approximately ninety (90) days to complete. Drilling operations for the twenty-two (22)

proposed directional wells would begin in September 2023. Since SIMOPS is planned for development of these wells, well completion operations would begin in November 2023. Drilling operations are expected to take approximately two-hundred-twenty-one (221) days and should be completed in April of 2024. Well completion operations are expected to take approximately two-hundred-and-eighty-four (284) days and should be completed in August 2024. Reclamation of the RG 11-13-298 pad would begin September of 2024 and is expected to take approximately thirty (30) days to complete.

## **SOILS DESCRIPTION**

The NRCS classifies the soil within the Federal RG 11-13-298 pad as 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, as described in the Storm Water Management Plan attached to the Form 2A.

## **PRE-DISTURBANCE VEGETATION COMPOSITION**

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 both 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.

## **IDENTIFICATION OF REFERENCE AREA AND VEGETATION COMPOSITION**

Reference area locations correspond to the pre-disturbance vegetation communities found on the pad site and are chosen in areas that experience the same environmental conditions and are not expected to be disturbed. The reference area is used to set goals for reclamation success. The Federal RG 11-13-298 pad reference site is located south of the working pad surface (Lat: 39.881167; Long: -108.346788) with the same soil type, Rentsac channery loam. Please see the Biological Survey Report for the results of the

vegetation assessment and a list of plant species recorded along the reference transect. The Reference Area Map and Reference Area Photos have been attached to the Form 2A.

### **KNOWN 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.

### **GATHERING LINES**

Development of the Federal RG 11-13-298 pad involves the installation and operation of new natural gas and produced water gathering pipelines. Installation of the proposed off-location pipelines, including one (1) eight-inch (8”) steel natural gas gathering pipeline and one (1) six-inch (6”) FlexPipe produced water pipelines. The proposed pipeline corridor would be installed adjacent to the proposed access road and would take advantage of the disturbance associated with road construction. In addition to the disturbance associated with road construction, installation of the proposed pipeline will create approximately 1.38-acres of surface disturbance. Of the proposed 1.38-acres of surface disturbance, approximately 0.10-acres would be within existing road/two-track disturbance, 0.05-acres would be within the existing pipeline corridor disturbance, and 1.22-acres would be new disturbance adjacent to the existing pipeline corridor. No long-term disturbance would be attributed to the proposed pipeline installation.

Cleanup and reclamation of the pipeline corridor(s) will occur immediately following completion of pipeline installation. Cleanup of the construction workspace and any temporary use areas would be performed by removing any construction debris and by performing final grading to the original / pre-disturbance contour. Erosion control measures would be installed, and seeding would be performed in accordance with BLM requirements.

TEP will employ drill, broadcast, or hydroseed methods to ensure proper seed placement. Drill seeding is preferred and will be used wherever soil characteristics and slope allow for effective operation of a rangeland seed drill. Drill seeding will be performed perpendicular to contour. Seed will be placed in direct contact with the soil at an average depth of 0.5 inches, covered with soil, and firmed to eliminate air pockets around the seeds. Broadcast seeding will be employed only in areas where drill seeding is unsafe or physically impossible. Seed will be applied uniformly over disturbed areas with manually operated cyclone-bucket spreaders, mechanical spreaders, or blowers. Broadcast application rates will be twice that of drill rates. The seed will be uniformly raked or dragged to incorporate seed to a sufficient seeding depth. TEP will incorporate the pipeline rights-of-ways (“ROWS”) into its existing weed management plan.

### **ACCESS ROAD**

Construction of a new access road (approximately 3,936 feet) would be required for development of the proposed wells on the Federal RG 11-13-298 pad. The proposed access road would be constructed from BLM Road 1019 to the oil and gas location generally following an existing two-track. The entire length of proposed access road will be located on Federal surface. The access road would consist of a twenty-five foot (25’) wide permanent right-of-way, consisting of a fourteen foot (14’) wide driving surface and five and one half feet (5.5’) on either side for stormwater control measures. An additional fifty-five foot (55’) wide temporary workspace will be constructed for the associated cut and fill slopes. The access road has been designed with a road grade below eight percent (8%). Culverts and wing ditches will be installed periodically along the proposed access road to direct stormwater away from the access road. Culverts would be fitted with rock at the inlet and outlet of the culverts. Culvert installation will be further evaluated during

construction to determine if additional culverts are needed. The access road will be surfaced with six inches (6") of three-quarter inch (3/4") gravel or another surfacing materials approved by the surface owner.

The area outside of the proposed driving surface of the access road will be reclaimed following construction and will follow the same general practices outlined above.

### **REMOVAL OF DRILLING, COMPLETION EQUIPMENT, AND ALL ASSOCIATED DEBRIS AND WASTE MATERIALS**

All drilling, flowback, and well completion equipment will be removed from the oil and gas location upon completion of well construction. Any materials, debris, and non-exploration and production waste materials will be removed from the oil and gas location and recycled or disposed of in accordance with applicable regulations. All guy line anchors left buried for future use will be identified by a marker no less than 4 feet in height and no greater than 1 foot east of the guy line anchor, as required by COGCC rule.

### **MANAGEMENT OF WASTE MATERIALS**

Construction, drilling, and completion operations generate waste streams that will be managed, recycled, and/or disposed in accordance with applicable Federal and state regulations. All potential waste streams are described in detail in the Waste Management Plan attached to the Form 2A, which includes a detailed description of the process and procedures for drill cuttings sampling and onsite disposal.

### **INTERIM RECLAMATION AREAS**

Interim reclamation of the Federal RG 11-13-298 pad will begin within six (6) months following completion of drilling and well completion operations. 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. Of the 8.15-acres of total site disturbance, approximately 1.54-acres (production pad) will be left un-reclaimed for long-term operation of the proposed and existing wells. The disturbed areas surrounding the production pad would be re-contoured to blend as nearly as possible with the natural topography. Final grading of back-fill and cut slopes is necessary to prevent erosion and to encourage re-establishment of desirable vegetation. Please see **Attachment A, Interim Reclamation Layout**, for additional site-specific details.

### **COMPACTION ALLEVIATION**

Compaction alleviation is a necessary component of site reclamation as soil compaction can reduce water infiltration and may hinder the ability of seed to penetrate the soil following germination. All compacted portions of the pad not required for long term operation of the proposed and existing wells, would be ripped to a depth of eighteen inches (18") when surface 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.

### **RECONTOURING**

The disturbed areas of the oil and gas location surrounding the production pad would be re-contoured to blend as nearly as possible with the natural topography. Final grading of back-fill and cut slopes is necessary to prevent erosion and encourages re-establishment of desirable vegetation. 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. Please see **Attachment A, Interim Reclamation Layout**, for additional details.

## RE-ESTABLISH AND STABILIZE DRAINAGE FEATURES

Stormwater control measures will be maintained and/or re-established to ensure soil stabilization at the oil and gas location. Perimeter controls such as diversion ditches, sediment traps, application of seed and mulch, and other measures will be utilized to ensure proper management of stormwater following interim reclamation. Stormwater control features will be established at the oil and gas location to ensure proper management and discharge of stormwater during weather events. Stormwater control measures are described in detail in the Stormwater Management Plan attached to the Form 2A.

## ESTABLISH DESIRED SELF-PERPETUATING PLAN COMMUNITY

The Federal RG 11-13-298 pad is located on Federal surface administered by the Bureau of Land Management. The seed mix provided in Table 1 is planned for use at the Federal RG 11-13-298 pad and will be applied to all disturbed area outside the proposed production pad.

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.

**Table 1. Proposed Seed Mix – Seed Mix 3 (BLM)**

Cultivar	Common Name	Scientific Name	Application Rate (lbs PLS/acre)
Rosana	Western Wheatgrass	<i>Pascopyrum smithii</i>	4
Whitmar	Bluebunch Wheatgrass	<i>Pseudoroegneria spicata</i> ssp. <i>inermis</i>	3.5
Rimrock	Indian Ricegrass	<i>Achnatherum hymenoides</i>	3
	Needle and Thread Grass	<i>Hesperostipa comata</i> ssp. <i>comata</i>	2.5
Maple Grove	Lewis Flax	<i>Linum lewisii</i>	1
	Scarlet Globemallow	<i>Sphaeralcea coccinea</i>	0.5
<b>Alternates</b>			
Critana	Thickspike Wheatgrass	<i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i>	3
	Sulphur Flower Buckwheat	<i>Eriogonum umbellatum</i>	1.5

## SEEDBED PREPARATION AND SEEDING

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 not required for long term production operations would be ripped to a depth of eighteen inches (18”) when surface 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 will be covered by using a harrow, drag bar, or chain. Drill seeding will occur on slopes shallower than 2:1 and on contour with a depth no greater than one-half inch (0.5"). Seeding would occur during the appropriate time of year to ensure the best possible results for plant growth. Seeding typically occurs immediately after reclamation activities while the soil is loose; however, seeding may be delayed due to high temperatures and dry conditions. The seed mix proposed for use at the Federal RG 11-13-298 pad is provided in Table 1.

Hydro-mulch will be applied to the reclaimed area to minimize the potential for soil erosion and to provide protection for the seed prior to germination. Proper reshaping of slopes, placement of soils and earthwork, and other site design characteristics provide for site stabilization. Re-establishment of desirable plant communities provides the best means for ensuring long-term site stability.

TEP will notify the surface owner twenty-four (24) hours prior to seeding and will provide evidence of certification of seed mix.

## **FENCING**

TEP does not plan to fence this oil and gas location. If it is determined that cattle are limiting reclamation success, TEP will evaluate installation of a perimeter fence to limit grazing access to the oil and gas location. Other options that would be considered include, deferred grazing and/or additional application of seed.

## **MANAGEMENT OF INVASIVE PLANTS**

TEP will implement a weed management program to ensure the oil and gas location is free of undesirable plant species designated to be noxious weeds as required by COGCC Rule 1003.f. Weed control measures will be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and the current rules pertaining to the administration and enforcement of Colorado Noxious Weed Act. Field personnel will monitor the oil and gas location for noxious weeds and notify the Environmental Specialist, and a certified weed sprayer will be dispatched to inspect the site and take action to treat the noxious weeds if present. The Pesticide Use Permit will be on record with the BLM for treatment of noxious weeds.

## **RECLAMATION MONITORING, INSPECTION, MAINTENANCE, AND REPORTING**

Permanent vegetative cover will be considered successful when the basal cover of desirable perennial species is at least 80 percent of the basal cover of the undisturbed site or, of a reference area, or, if available, of the potential basal cover as defined in the National Resource Conservation Service (NRCS) Range/Ecological Site(s), or similar, for the area. Additional reclamation success standards are detailed in TEP's field wide Surface Reclamation Plan. Reclamation monitoring will be conducted per BLM's 2015 Oil and Gas Resource Management Plan Amendment, Appendix 3, Surface Reclamation Plan.

## **INTERIM RECLAMATION COMPLETION NOTICE**

TEP will comply with the Interim Reclamation Completion Notice as required per COGCC Rule 1003.e.(3) by submitting a Sundry Notice, Form 4, describing interim reclamation procedures and any associated mitigation measures performed, any changes, if applicable in the landowner's designated final land use, and the required photos.

## **FINAL RECLAMATION OF OIL AND GAS LOCATION**

Final Reclamation of the pad location and access road will occur once the facility is no longer necessary for operations and following final abandonment of the well(s) drilled from the oil and gas location. Upon completion of approved plugging and abandonment of the wells, per Onshore Oil and Gas Order No. 2, "all

casing will be cut-off at the base of the cellar or [a minimum of] three feet (3') below final restored ground level (whichever is deeper). The well bore will 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." The following information will be inscribed: "Fed" or "Ind", as applicable; "well number, location by quarter, quarter section, township and range"; and "lease number".

Any equipment on location would be removed and any pipelines that are associated with the plugged wells would be decommissioned/abandoned per COGCC 1100 series rules. 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.

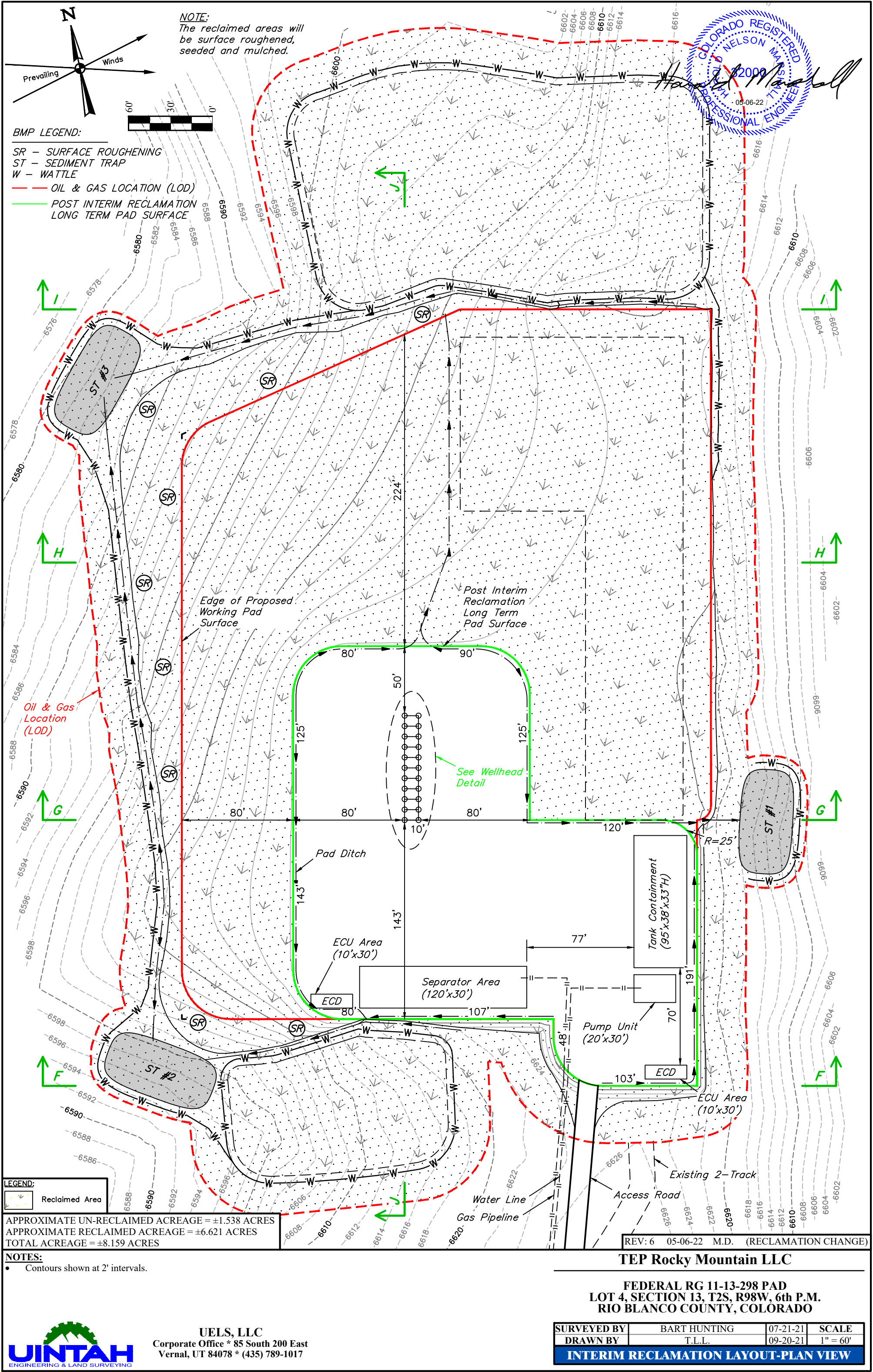
Final reclamation of the oil and gas location, including recontouring, topsoil placement, compaction alleviation, seed application, weed management, and reclamation monitoring, will be generally follow the practices described above.

#### **BEST MANAGEMENT PRACTICES**

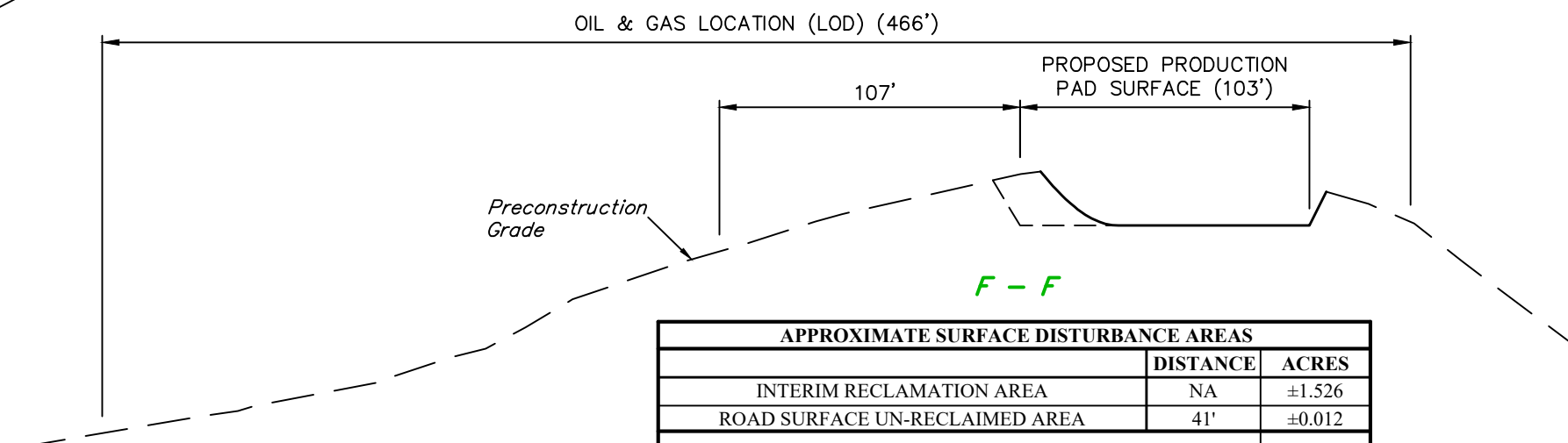
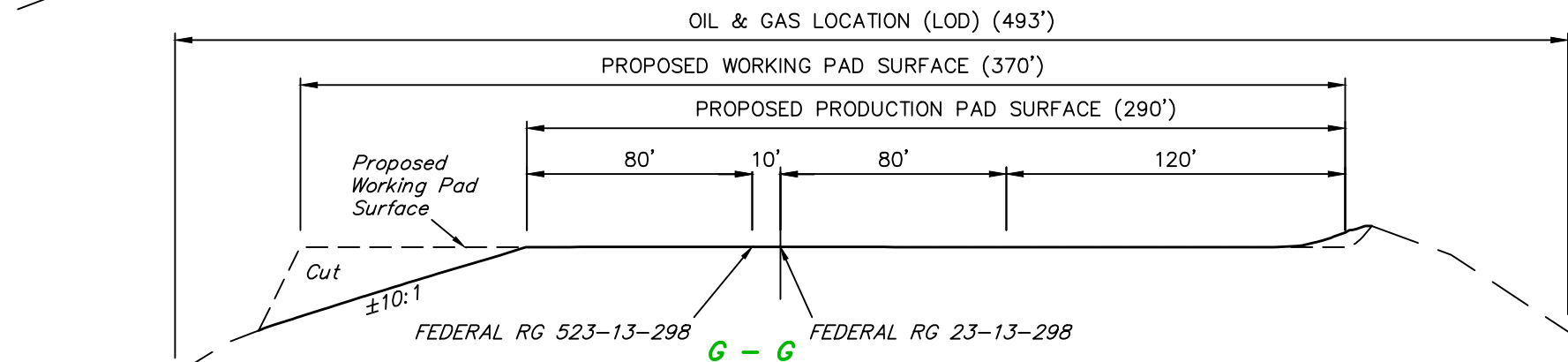
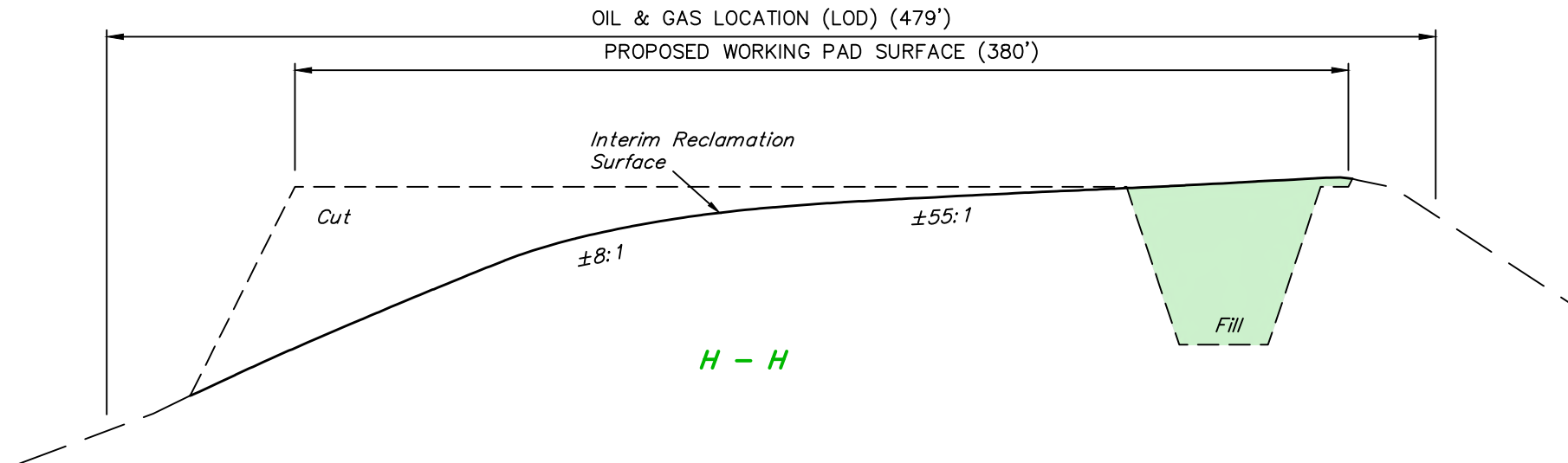
- 1) Interim reclamation will occur within six (6) months following completion of well drilling and completion operations;
- 2) The areas identified to be interim reclaimed will be re-contoured to blend as nearly as possible with the natural topography during site reclamation; all topsoil will be moved from the stockpile area and placed over the oil and gas location cut and fill slopes to a uniform depth to ensure long term topsoil health including protection from erosion, prevention of weed establishment, and maintaining soil microbial activity until final reclamation;
- 3) The location will be reseeded by drill, broadcast, or hydroseed methods; drill seeding will be utilized wherever soil characteristics and slope allow for effective operation of a rangeland seed drill;
- 4) The seed bed will be prepared on all topsoiled areas to alleviate compaction and minimize the potential for erosion;
- 5) Topsoiled areas will be planted with desirable species, or a seed mixture provided by the Surface Owner for this particular location;
- 6) Protection from Wind and Water Erosion – topsoiled areas will be covered with certified weed free mulch at an application rate specified by the product's manufacturer, or a specification sheet that follows good engineering practices;
- 7) Weed Establishment Prevention – TEP uses Cultural, Mechanical, Biological, and Chemical controls to prevent the establishment of weeds;
- 8) Erosion control will be implemented per the Stormwater Management Plan included in the Form 2A for this location and will be inspected and maintained as required by Federal, State, and Local regulation; and
- 9) Noxious weeds which may be introduced due to soil disturbance during reclamation will be treated by methods approved by the BLM Authorized Officer



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



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
TOTAL SURFACE USE AREA		±1.538

Sheet 1 of 2

REV: 5 05-06-22 M.D. (RECLAMATION CHANGE)

**TEP Rocky Mountain LLC**

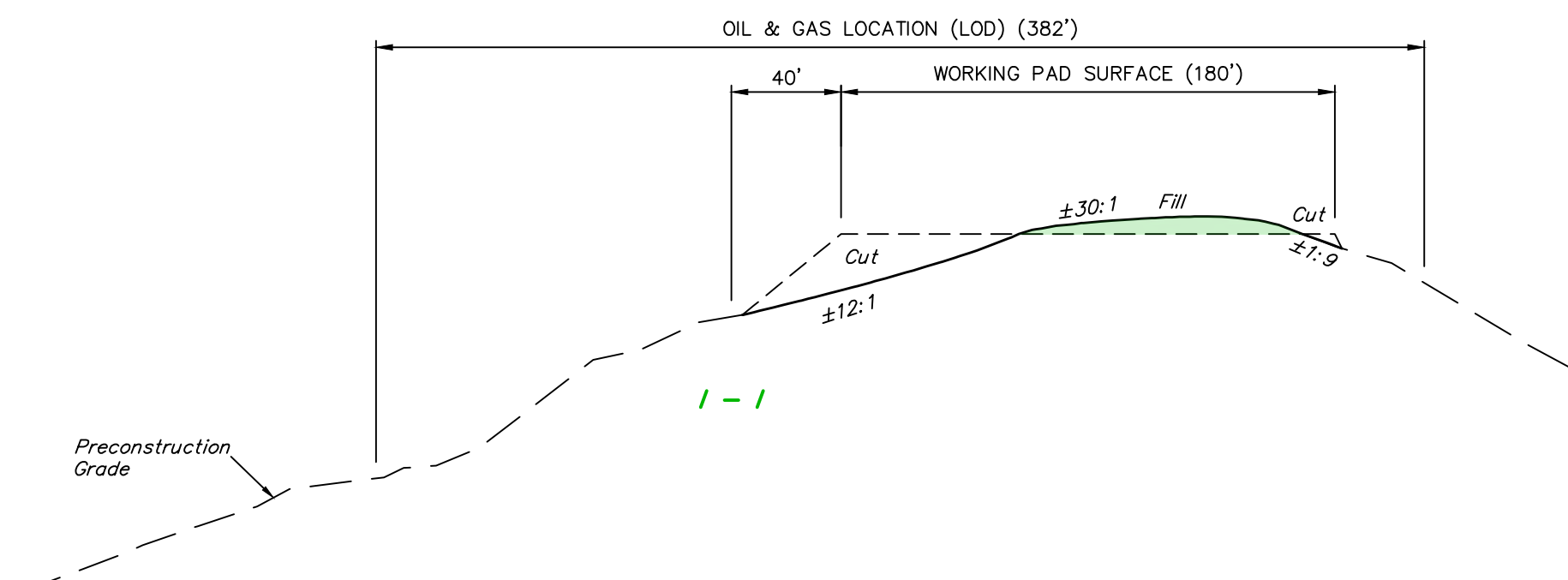
**FEDERAL RG 11-13-298 PAD**  
**LOT 4, SECTION 13, T2S, R98W, 6th P.M.**  
**RIO BLANCO COUNTY, COLORADO**

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



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

A circular blue ink seal for a Colorado Registered Professional Engineer. The outer ring contains the text "COLORADO REGISTERED" at the top and "PROFESSIONAL ENGINEER" at the bottom. Inside the ring, the name "HAROLD NELSON MARSHALL" is written in a circular path. In the center of the seal, the license number "32009" is stamped, and below it, the expiration date "01-10-22" is stamped. Overlaid on the seal is a handwritten signature in black ink that reads "Harold Marshall".



*Sheet 2 of 2*

REV: 3   01-10-22   T.L.L.   (TRENCH CHANGES & ADD (LOD) DIMENSIONS)
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**FEDERAL RG 11-13-298 PAD  
LOT 4, SECTION 13, T2S, R98W, 6th P.M.  
RIO BLANCO COUNTY, COLORADO**

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

**INTERIM RECLAMATION CROSS SECTIONS**



**UELS, LLC**  
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