

TEP Rocky Mountain LLC
Surface Use Plan of Operations for DOE 1-M-18 Pad
Lease No(s): COC 62160
June 7th, 2018

Introduction

TEP Rocky Mountain LLC (TEP) is proposing to drill, complete, and operate fifteen (15) new federal wells from the DOE 1-M-18 pad located on Federal surface overlying Federal Lease COC 62160. The DOE 1-M-18 pad is an existing pad located in the SE¹/₄SE¹/₄ of section 7, NW¹/₄NW¹/₄ of Section 17, and the NE¹/₄NE¹/₄ of Section 18, Township 6 South, Range 94 West, 6th P.M. the DOE 1-M-18 pad has, two (2) existing wells (one P&A and one TA). All fifteen (15) new proposed federal wells will be directionally drilled into BLM Federal Lease COC 62160.

TEP would reconstruct and expand the DOE 1-M-18 pad to accommodate development of the fifteen (15) new wells. The pad would expand to the south to provide the required surface area for drilling and completions operations. TEP would also construct three (3) new support facilities (DOE 1-M-18 Production Pad, DOE 1-M-18 Cuttings Trench, and RWF 12-20 Tank Pad) and reconstruct two (2) existing well pads (RWF 44-18 Pad and RMV 143-18 Pad) to support drilling, completion, and production of the proposed wells.

The DOE 1-M-18 Production Pad, located on Federal surface in the SE¹/₄NE¹/₄ of Section 17 and the SE¹/₄NE¹/₄ of Section 18, Township 6 South, Range 94 West, 6th P.M. would be constructed to support storage of condensate produced from the proposed new wells. The DOE 1-M-18 Production Pad would also be utilized for remote flowback operations. The DOE 1-M-18 Cuttings Management Area, located on Federal surface in the SW¹/₄NE¹/₄ and NW¹/₄SW¹/₄ of Section 17 and the SE¹/₄NE¹/₄ and the NE¹/₄SE¹/₄ of Section 18, Township 6 South, Range 94 West, 6th P.M., is south of the proposed Production Pad and would be constructed to provide permanent drill cuttings storage for cuttings generated from the DOE 1-M-18 proposed wells. The DOE 1-M-18 Cuttings Management Area would be the primary location for drill cuttings from the DOE 1-M-18 pad. The RWF 44-18 pad, located on private surface in the SE¹/₄SE¹/₄ of Section 18, Township 6 South, Range 94 West, 6th P.M., would be reconstructed to provide secondary cuttings storage once the DOE 1-M-18 Cuttings Management Area has reached capacity. The RMV 143-18 Pad, located on private surface in the NW¹/₄SE¹/₄ of Section 18, Township 6 South, Range 94 West, 6th P.M., would be reconstructed and utilized as a remote frac pad for completion of the proposed wells on the DOE 1-M-18 Pad. The RWF 12-20 Tank Pad, located on private surface in the SW¹/₄NE¹/₄ of Section 20, Township 6 South, Range 94 West, 6th P.M., would be constructed to provide produced water storage for the wells on the DOE 1-M-18 Pad.

TEP would install one (1) 8-inch steel gas pipeline and one (1) 4-inch flexpipe water pipeline from the DOE 1-M-18 pad to the RWF 12-20 Tank Pad. Two (2) 2-inch condensate pipelines would be installed from the DOE 1-M-18 Pad to the DOE 1-M-18 Production Pad. The condensate pipelines will be placed in the same trench as the proposed gas and water pipelines.

Two (2) 10-inch temporary surface water supply pipelines would be installed from the existing 10-inch water line, southwest of the RWF 12-20 Tank Pad, to the RMV 143-18 Pad following existing lease roads and Garfield County Road 246. A twelve-foot (12') diameter valve can would be installed at the tie-in with the existing water pipeline. Three (3) 4.5-inch steel frac lines would be installed between the RMV 143-18 pad and the DOE 1-M-18 pad following existing lease roads and Garfield County Road 246. Water would be piped from existing TEP operated water management facilities to the RMV 143-18 pad for use during completion operations. Flowback would be piped back into the TEP water management system for reuse or recycle.

Construction activities for the DOE 1-M-18 Well Pad and the five support facilities would begin in fall of 2018. Drilling and completions operations of the fifteen (15) new proposed wells would begin in March 2019. Drilling operations would be completed around June 2019, with completions operations finishing around August 2019. Development may be accelerated or delayed based on market conditions and company constraints.

Table 1. Well Pads and Wells

Pad Name	Lease Number	CA	Well Name			
DOE 1-M-18	COC 62160 (Proposed Wells)	NA	RWF 43-7	RWF 443-7	RWF 513-8	RWF 514-8
			RWF 414-8	RWF 342-8	RWF 314-8	RWF 442-18
		COC 042346	RWF 511-17	RWF 411-17	RWF 311-17	RWF 11-17
			RWF 512-17	RWF 412-17	RWF 14-17	
	COC 62160 (Existing Wells)	NA	DOE 1-M-18 (P&A)	DOE 1-M-8 (TA)		

Lease Stipulations

The existing DOE 1-M-18 Pad, proposed DOE 1-M-18 Production Pad, and proposed DOE 1-M-18 Cuttings Management Area are located on Federal surface and overlie Federal lease COC 61260. Federal lease stipulation for COC 61260 include:

1. Erosive Soil and Slopes Greater than 30% (CSU)
2. Visual Resource Management Class 2 (CSU)
3. Big Game Timing Limitation (TL) – 60 Day TL; January 1st – March 2nd.
4. Raptor Nesting and Fledgling Habitat (TL) – February 1st – August 15th.

The existing RWF 44-18 Pad, RMV 143-18 pad, and the proposed RWF 12-20 Tank pad are located on private surface and overlie a Fee lease. Federal lease stipulation would not apply.

Resource Survey Requirements

Resource survey will be required for all components of the DOE 1-M-18 development project, which will include the following:

1. Special Status Species Plant Survey (New Survey Required 2018) – In progress as of June 1st, 2018
2. Noxious Weed Survey (New Survey Required 2018) – In progress as of June 1st, 2018
3. Sensitive Wildlife Survey (New Survey Required 2018) – In progress as of June 1st, 2018
4. Cultural Survey (New Survey Required 2018) – In progress as of June 4th, 2018

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

The following ROW/TUPs will be required for the DOE 1-M-18 Pad Development Project:

1. Temporary Surface Water Supply Pipelines (two 10-inch poly) overlie Federal Lease COC 27868 – TUP Required

Private Landowner Surface Use Agreements/ROWs:

TEP has acquired an agreement with Clough Sheep Company LLC to utilize the RWF 44-18 Pad, RMV 143-18, and RWF 12-20 Tank Pad for development of the proposed wells on the DOE 1-M-18 Pad. TEP has also acquired an agreement to install the proposed 8-inch gas pipeline and 4-inch produced water pipeline crossing Clough surface. In addition, TEP has acquired an agreement with the surface owners to lay temporary surface water supply lines and temporary surface frac lines as shown in the attached Plan of Development map. Please see that attached Memorandum of Surface Use Agreement for details.

1. Existing Roads

Existing roads, lease roads and public roads will be utilized during drilling, completions, and production operations for the fifteen (15) new proposed wells and two (2) existing wells on the DOE 1-M-18 pad as summarized below.

The Operator will be responsible for continuous inspection and maintenance of the existing access road. The Operator will conform to a schedule of preventive maintenance, which at a minimum, provides for the following corrective measures on a biannual basis. (Problem areas will be corrected as needed.)

1. Road surface grading.

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

The existing access road will be regraded prior to construction from the low water crossing to the DOE 1-M-18 well pad. The existing low water crossing will be maintained as described above for the life of the wells. Storm water controls will be upgrade along this section of road including a new sediment trap near STA 9+50 to control flow. Riprap will be installed along the bar ditch to control sediment. Additional controls will be evaluated during construction with an Authorized Officer and implemented as necessary. See Road Improvement Plan & Profile for additional details.

2. New or Reconstructed Access Roads

No new road required.

3. Location of Existing Wells

The Existing Well Locations within One-Mile Radius (Plat 5B) plat identifies all existing wells within one mile of the DOE 1-M-18 pad location. See the Plat 5C for details.

Geospatial data will be electronically sent to the Colorado River Valley Field Office.

4. Location of Existing and/or Proposed Production Facilities

Production Equipment

TEP would install production facilities on the DOE 1-M-18 pad to produce the fifteen (15) new wells. Existing wells have or will be P&A. Sixteen (16) separators (4 quad separators and 2 low pressure separators) will be installed on location along the west side of the pad near the entrance to the location. One (1) 300bbl blowdown tank will be installed on location within a 30 foot by 30 foot lined steel containment structure along the west side of the pad, 75 feet south of the proposed separators.

TEP would also install production facilities on the DOE 1-M-18 Production Pad, south of the DOE 1-M-18 well pad. Four (4) 500 barrel condensate tanks and one (1) 500 barrel drain tank will be installed within a 52 foot by 40 foot lined steel containment structure on the DOE 1-M-18 Production Pad. One (1) emissions control device (1-48" HV ECD) will be installed 75 feet south of the proposed tank battery. Condensate production from Federal Lease COC62160 and Federal CA COC042346 will be segregated into separate tanks at the DOE 1-M-18 Production Pad, and will be transported to the tanks through separate condensate pipelines between the separators and the tanks.

Table 2. Production Equipment Details

Pad Name	Equipment Discription	Equipment Count	Capacity	Status
DOE 1-M-18 Pad	Quad Separators	4	NA	Proposed
	Low Pressure Separators	2	NA	Proposed
	Blowdown Tank	1	300bbl	Proposed
DOE 1-M-18 Production Pad	Condensate Tanks	4	500bbl	Proposed
	Drain Tank	1	500bbl	Proposed
	ECD	1	NA	Proposed
RWF 12-20 Tank Pad	Production Water Tanks	6	500bbl	Proposed
	Condensate Tanks	2	500bbl	Proposed
	Vertical Separator	1	NA	Proposed
	Meter (Williams Midstream)	1	NA	Proposed

TEP will also construct the RWF 12-20 Tank Pad, located on private surface, consisting of six (6) 500 barrel produced water tanks and two (2) 500 barrel condensate tanks within a 70' x 40' steel lined containment structure located in the

northwest corner of the pad. One (1) emissions control device (1-48" HV ECD) will be installed 75 feet south of the proposed tank battery. One (1) vertical separator and one (1) meter (Williams Midstream) will be located in the southeast corner of the pad. Produced water and condensate (condensate production from future Balzac Gulch pads) will be hauled off location by truck.

See the construction layout, plan of development map, and facility layout drawing for the DOE 1-M-18 Well Pad, DOE 1-M-18 Production Pad, and RWF 12-20 Tank Pad for additional details.

Pipelines

TEP will install one (1) 8-inch steel gas pipeline, approximately 8,492 feet in length, from the proposed separators on the DOE 1-M-18 to the proposed tie-in with existing production facilities near the proposed RWF 12-20 Tanks Pad. One (1) 4-inch flexpipe water pipeline, approximately 8,492 feet in length, will be installed from the proposed separators on the DOE 1-M-18 pad to the RWF 12-20 Tank Pad, and will be placed in the same trench with the proposed gas pipeline. The natural gas and water pipelines will be installed following existing access roads and/or existing pipeline ROWs as depicted on the attached Plan of Development. Two (2) 2-inch flexpipe condensate pipelines, approximately 2,510 feet in length, will be installed from the DOE 1-M-18 Pad to the DOE 1-M-18 Production Pad. Condensate pipelines will be placed in the same trench with the proposed natural gas and water pipelines.

TEP will install fifteen (15) 2-inch steel wellhead flowlines between the wellheads and the proposed separators. Wellhead flowlines will be buried a minimum of 48-inches below grade. One (1) 2-inch internally coated steel water pipeline will be installed between the separators and the blowdown tank on the DOE 1-M-18 Pad.

One (1) 4-inch steel surface pipeline will be installed from the tank battery to the ECD on the DOE 1-M-18 Production Pad. Additional, one (1) 4-inch steel surface pipeline will be installed from the tank battery to the ECD on the RWF 12-20 Tank Pad.

See Table 3 below for additional details on permanent pipeline. Please also refer to the Plan of Development maps for additional detail on pipelines for each location.

Table 3. Proposed Pipeline Details

Pipeline Description	COGCC Line Type	Number of Lines	Diameter (inch)	Material	Fluid	Depth	Bedding Material	Max. Operating Pressure	Length (ft.)	ROW Width (ft.)
DOE 1-M-18 Gas Pipeline	Gathering Line	1	8	Steel	Gas	48" Min	Screened Subgrade		8492	40
DOE 1-M-18 Water Pipeline	Produced Water Transfer System	1	4	Flexpipe	Water	48" Min	Screened Subgrade		8492	40
DOE 1-M-18 Wellhead Flowlines	Wellhead Line	15	2	Steel	Emulsion	48" Min	Screened Subgrade		≈220	NA
DOE 1-M-18 Condensate Pipelines	Off-Location Flowline	2	2	IC Steel	Condensate	48" Min	Screened Subgrade		≈2510	40
DOE 1-M-18 Water Dump Lines	Dump Line	1	2	IC Steel	Water	Surface	NA		≈90	NA
DOE 1-M-18 Production Pad ECD Piping	Process Piping	1	4	Steel	Emissions	Surface	NA		≈80	NA
RWF 12-20 Tank Pad ECD Piping	Process Piping	1	4	Steel	Emissions	Surface	NA		≈80	NA
RMV 143-18 Frac Pad Water Supply Line (Temp)	NA	2	10	Poly	Water	Surface	NA		≈4055	NA
RMV 143-18 Frac Pad Frac Line (Temp)	NA	3	4.5	Steel	Water	Surface	NA		≈8565	NA
DOE 1-M-18 Remote Flowback Line (Temp)	NA	4	4.5	Steel	Water	Surface	NA		≈2500	NA

Temporary Pipelines

TEP will install two (2) temporary surface 10-inch poly water supply pipelines, approximately 4,055 feet each, from a proposed valve can on the existing 10-inch water pipeline west of the RWF 12-20 tank pad to the RMV 143-18 pad. The two (2) temporary surface water supply pipelines will be utilized to transport water to the RMV 143-18 pad for remote frac operations. Water will be pumped from the Rulison Water Management Facility through existing infrastructure and the two (2) 10-inch temporary water pipelines to the remote frac pad. Three (3) 4.5-inch temporary surface steel frac lines, approximately 8,565 feet each, will be installed following existing roads and pipeline corridors to the DOE 1-M-18 Pad. Four (4) additional frac lines will be installed between the DOE 1-M-18 pad and the DOE 1-M-18 Production Pad supporting remote flowback operations during well completion.

Pipeline routes are shown on the POD map. See Table 3 for additional details on temporary pipeline.

5. Location and Types of Water Supply

Fresh water required for drilling operations and dust control will be trucked via existing county, state and/or lease roads, from approved sources.

Completions operations will utilize recycled produced water from other producing wells and will be delivered via existing pipelines and two (2) temporary surface pipelines to the RMV 143-18 pad. Frac equipment (pump trucks/tanks) will be located on the RMV 143-18 pad. See Table 4 the Water Source table below for additional details on water supply.

Table 4. Water Source Table

Water Source Type	Water Source Use	Latitude	Longitude	Permit Type	Transport Method	Land Ownership	Transport Land Ownership	Volume (bbl.)/ well	Volume (ac-ft.)/ well	Volume (gal)/ well
Perennial Surface (Fresh)	Surface Casing; Intermediate/Production Casing; Dust Control	39.47865	- 107.969055	Private Contract	Trucking	Private	Private	4,500.00	0.58	189,000
Recycled	Stimulation	39.509136 34	- 107.918473	Private Contract	Pipeline	Private	Private	66,000.00	8.51	2,772,000

6. Source of Construction Materials

Surface and subsoil materials within the proposed construction areas will be used. Additional gravel or pit lining material (if required) will 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.

Table 5. Construction Material Source Table

Material Type	Location/Company Name	Street Address	City	State	Zip Code	Latitude	Longitude	Township	Range	Section
Surface (Topsoil's)	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

7. Methods for Handling Waste Disposal

Drill Cuttings Management

Drill cuttings will be hauled off location to the proposed DOE 1-M-18 Cuttings Management Area and the existing RWF 44-18 Pad for disposal. The estimated cuttings volume for the DOE 1-M-18 pad is 12,000cy. The moisture content will be kept as low as practicable to prevent accumulation of liquids. The drill cuttings will be tested to ensure they meet the applicable COGCC Table 910-1 standards. In cases where emergencies such as weather conditions, safety concerns, or operational constraints exist, cuttings may be temporarily stored on another location in accordance with COGCC waste management and CDPHE storm water regulations. See the construction layout(s) for further details.

Flowback

During flowback operations returned frac sand will be managed within a 40 foot by 40 foot berm 2.5 feet high, which will be located on pad within the pad perimeter berm. Returned frac sand will be buried onsite during reclamation of the pad. Any excess frac sand not disposed of onsite will be hauled to an approved third-party disposal facility. See the Waste Handling table (Table 6) below for additional details.

Sewage

Chemical toilets or an enclosed sewer system will be used. Contents will be hauled to and disposed of at an approved disposal facility. Disposal of sewage will occur approximately once per week. See the Waste Handling table (Table 6) below for additional details.

Garbage

All garbage and trash will be stored in enclosed trash containers and removed and deposited in an approved permitted and controlled landfill within one (1) week following termination of drilling operations. No garbage or trash will be disposed of on location. The well site and access road will be kept free of trash and debris at all time. Disposal of garbage and trash will occur approximately once per week during drilling and completions operations. See the Waste Handling table (Table 6) below for additional details.

Produced Water

Produced water (water produced from the wells after the wells are turned over to production) will be transported through proposed pipelines to the RWF 12-20 Tank Battery and trucked from the tank battery to TEP’s approved evaporation ponds. Produced water is then disposed of through: (1) natural evaporation at the evaporation ponds, (2) delivered and injected in to one of the approved UIC facilities, (3) re-used in hydraulic fracturing operations, or (4) hauled to an approved third-party disposal facility. Please refer to the TEP Rocky Mountain (Terra) active Produced Water Disposal Destinations as of September 1, 2016 document for specific details on active destinations for produced water.

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	800	Cubic Yards	One Time Only	Cuttings MGMT/Cuttings Trench	Off-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

8. Ancillary Facilities

TEP will utilize five (5) ancillary support facilities, two (2) existing oil and gas facilities and three (3) new support facilities during development of the proposed wells on the DOE 1-M-18 Pad. The DOE 1-M-18 Production Pad will be constructed for long term production support and remote flowback operations during well completion. The DOE 1-M-18 Cuttings Management Area will be constructed and utilized as the primary location for drill cuttings disposal. The RWF 44-18 pad will be reconstructed and utilized as a secondary location for drill cuttings disposal. The RMV 143-18 Pad will be reconstructed and utilized as a remote frac pad, and the RWF 12-20 Tank pad will be constructed for long-term produced water storage.

See the Plan of Development for additional details.

9. Wellsite Layout

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

- DOE 1-M-18 Construction Layout (Plat 2)
- DOE 1-M-18 Construction Layout Cross Section (Plat 3)
- DOE 1-M-18 Drill Rig Layout (Plat 4)
- DOE 1-M-18 Access Road & Topo Map (Plat 5)
- DOE 1-M-18 Existing Wells Located within One- Mile Radius (Plat 5B)
- DOE 1-M-18 Location Drawing (Plat 6)
- DOE 1-M-18 Multi-Well Plan (Plat 6A)
- DOE 1-M-18 Interim Reclamation Pad Layout (Plat 7)
- DOE 1-M-18 Plan of Development Map (POD)
- DOE 1-M-18 Facility Layout Drawing
- DOE 1-M-18 Access Road Improvement Plan & Profile
- DOE 1-M-18 Geotechnical Investigation Soils Report
- DOE 1-M-18 Production Pad Construction Layout & POD
- DOE 1-M-18 Cuttings Management Area Construction Layout & POD
- RWF 44-18 Cuttings Trench Construction Layout & POD
- RMV 143-18 Frac Pad Construction Layout & POD
- RWF 12-20 Tank Pad Construction Layout & POD

10. Project Disturbance and Plans for Surface Reclamation

Surface Disturbance

The existing 0.78-acre DOE 1-M-18 Pad would be expanded to a 4.83-acre footprint for drilling and completions operations. The existing 1.85-acre access road to the DOE 1-M-18 pad would remain in place. Long-term disturbance attributed to the DOE 1-M-18 pad would be approximately 1.34-acres. The existing access road would be improved from the RMV 123-17 Pad to the DOE 1-M-18 Pad. Access road re-grading will be required for the 1,473 of road approaching the DOE 1-M-18 Pad.

A new 8-inch steel natural gas pipeline (approx. 8,493 feet) would be installed from the DOE 1-M-18 Pad to the RWF 12-20 Tank Pad, where it would tie into existing pipeline infrastructure. A new 4-inch flexpipe produced water pipeline (approx. 8,493 feet) would be installed with the 8-inch gas pipeline and would tie into the proposed tank battery on the RWF 12-20 Tank Pad. Two (2) new 2-inch condensate pipelines (approx. 2,510 feet) would be installed from the DOE 1-M-18 Pad to the DOE 1-M-18 Production Pad. The pipeline easement would consist of a 25-foot permanent easement with an additional 15-foot wide temporary work space. The new pipeline corridor would represent 5.19 acres of initial disturbance. Long-term disturbance attributed to the pipeline corridor is 0.46 acres, which also represents disturbance associated with other existing facilities in the area.

The DOE 1-M-18 Production Pad would be constructed within an area previously disturb during the closure of the Anvil Points Facility (U.S. Naval Oil Shale Reserve). The pad would be constructed for condensate storage, totaling approximately 0.56 acres of disturbance. Long-term disturbance attributed to the DOE 1-M-18 Production Pad would be 0.30 acres.

The DOE 1-M-18 Cuttings Management Area would be constructed south of the proposed DOE 1-M-18 Production Pad, within an area previously disturbed during the closure of the Anvil Points Facility. The pad would be constructed for permanent storage of drill cuttings, totaling approximately 1.65 acres of disturbance. The DOE 1-M-18 Cuttings Management Area would be fully reclaimed following completion of drilling activates on the DOE 1-M-18 Pad.

The existing 0.56-acre RWF 44-18 Pad would be reconstructed to a 2.64-arce footprint for secondary drill cuttings disposal. Excess drill cuttings that exceeds the capacity of the DOE 1-M-18 Cuttings Management area would be hauled to the RWF 44-18 Pad. The RWF 44-18 Pad would be reclaimed to 0.56-acres.

The existing 0.34-acre RMV 143-18 Pad would be reconstructed to a 2.13-acres footprint for remote frac operations. New disturbance associated with the expansion of this pad would be 0.08-acres. Long-term disturbance attributed to the RMV 143-18 pad would be 0.34-acres, which is also the existing production pad footprint.

The RWF 12-20 Tank Pad would be constructed, on private surface, for produced water storage. The pad would be constructed to approximately 1.17 acres of disturbance. Approximately 0.48 acres of disturbance would remain long-term for ongoing production activities.

Total disturbance associated with the DOE 1-M-18 Pad and associated support facilities is 20.18 acres. Eighty-eight percent of the total disturbance acreage would land previously disturbed. The total long-term disturbance, or disturbance remain after interim reclaim, is approximately 5.49 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 completions operations, the locations and surrounding area will be cleared of all remaining debris, materials, trash and junk not required for production. All trash removed will be hauled to the nearest approved disposal facility. Any cuttings located on pad will be sampled to ensure compliance with COGCC 900 and 1000 series rules.

A working area (production pad) must be maintained around each well head and production equipment as these must remain accessible.

Unless an agreement is made with the landowner to keep the road and/or pad in place, the disturbed areas surrounding the well location, including the access road will be re-contoured to blend as nearly as possible with the natural topography. Final grading of back-fill and cut slopes will be done to prevent erosion and encourage establishment of vegetation.

Existing drainages will be re-established. Prior to seeding, stockpiled topsoil (stripped surface material) will be spread to a uniform depth that will allow the establishment of desirable vegetation. Soil samples will be collected once re-contouring and topsoil redistribution has occurred. Recommendations regarding seed mix and/or amendments will be reviewed with BLM prior to application.

All compacted portions of the pad, road, and pipeline route not required for long term production operations will be ripped to a depth of eighteen (18) inches when subsurface conditions permit. If the seed bed has begun to crust over or seal, the seed bed will 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 will be hydroseeded and slope shallower than 2:1 will be drill seeded. Seeding will occur during the appropriate time of year. TEP will notify the Authorized Officer twenty-four (24) hours prior to seeding and shall provide evidence of certification of seed mix.

A BLM recommended interim seed mix (prior to final reclamation) will be used on all disturbed areas except within the footprint of the production pad, as shown on the interim reclamation layout (plat 7). See attached seed mix for further details.

Areas being reclaimed may be fenced to exclude livestock for the first two (2) growing seasons or until the seeded species have established. The type of fencing will be approved by the Authorized Officer.

Noxious weeds which may be introduced due to soil disturbance and reclamation 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 will be conducted per the 1998 DSEIS RMP

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 ¹							
DOE 1-M-18 Pad	Federal	1/0	0.78/0	3.30/0	0.75/0	4.83/0	1.34/0
DOE 1-M-18 Production Pad	Federal	1/0	0/0	0.56/0	0/0	0.56/0	0.30/0
DOE 1-M-18 Cuttings Management Area	Federal	1/0	0/0	1.65/0	0/0	1.65/0	0/0
RWF 44-18 Cuttings Trench	Private	0/1	0/0.56	0/2.08	0/0	0/2.64	0/0.56
RMV 143-18 Frac Pad	Private	0/1	0/0.34	0/1.71	0/0.08	0/2.13	0/0.34
RWF 12-20 Tank Pad ²	Private	0/1	0/0	0/0	0/1.17	0/1.17	0/0.48
Subtotal		3/3	0.78/0.90[1.68]	5.51/3.79[9.30]	0.75/1.25[2.00]	7.04/5.94 [12.98]	1.64/1.38[3.02]
Access Roads							
DOE 1-M-18 Pad (Existing)	Federal	4,393/0	1.85/0	0/0	0/0	1.85/0	1.85/0
DOE 1-M-18 Production Pad	Federal	20/0	0/0	0.01/0	0/0	0.01/0	0.01/0
RWF 44-18 Cuttings Trench (Existing)	Private	0/35	0/0.04	0/0	0/0	0/0.04	0/0.04
RMV 143-18 Frac Pad (Existing)	Private	0/255	0/0.09	0/0	0/0	0/0.09	0/0.09
RWF 12-20 Tank Pad ²	Private	0/50	0/0	0/0	0/0.02	0/0.02	0/0.02
Subtotal		4,413/340[4,753]	1.85/0.13[1.98]	0.01/0[0.01]	0/0.02[0.02]	1.86/0.15[2.01]	1.86/0.15[2.01]
Pipelines ³							
DOE 1-M-18 (8-inch gas line)	Federal/Private	4,643/3,850[8,493]	0.19/0.27[0.46]	1.53/2.90[4.43]	0/0.30	1.72/3.47[5.19]	0.19/0.27[0.46]
DOE 1-M-18 (4-inch water line) ⁴							
DOE 1-M-18 (two 2-inch condensate line) ⁴							
Subtotal		4,643/3,850[8,493]	0.19/0.27[0.46]	1.53/2.90[4.43]	0/0.30[0.30]	1.72/3.47[5.19]	0.19/0.27[0.46]
Grand Total (Fed/Fee)			2.82/1.30[4.12]	7.05/6.96[13.74]	0.75/1.57[2.32]	10.62/9.56[20.18]	3.69/1.80[5.49]

¹ Some Approximately 84% of the disturbance footprint for well pads would be on land previously disturbed and reclaimed.

² Disturbance for the RWF 12-20 Tank Pad is included in Balzac Gulch Phase 2 MDP

³ Some of the proposed pipeline disturbance is not included because it would occur within existing road disturbance.

⁴ 8-inch gas line, 4-inch water line, and two 2-inch condensate lines would be collocated.

Final Reclamation

Unless an agreement is made with the landowner to keep the road and/or pad in place, the disturbed areas surrounding the well location, including the access road will be re-contoured to blend as nearly possible with the natural topography. Final grading of back-filled and cut slopes will be done to prevent erosion and encourage establishment of vegetation. Existing drainages will be re-established.

The long-term objective is to establish a self-perpetuating plant community that is compatible with and capable of supporting the identified land use.

The rate of application of the seed mix listed in the Surface Use Plan in the Master Application for Permit to Drill is listed in pounds of pure live seed (PLS)/acre. The seed will be certified and there will 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 above seed mix to the Authorized Officer.

All compacted portions of the pad, road, and pipeline route will be ripped to a depth of eighteen (18) inches when subsurface conditions permit. Prior to seeding, stockpiled topsoil (stripped surface material) will be spread to a uniform depth that will allow the establishment of desirable vegetation. If the seed bed has begun to crust over or seal, the seed bed will 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.

Areas being reclaimed may be fenced to exclude livestock for the first two (2) growing seasons or until the seeded species have established. The type of fencing will be approved by the Authorized Officer.

Noxious weeds which may be introduced due to soil disturbance and reclamation 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.

Upon completion of approved plugging and abandonment of the wells, a regulation marker will be erected in accordance with 43 CFR 3162.6. The marker will be constructed after contouring. The top of the marker will be closed or capped, and the following minimum information will be permanently placed on the marker with a plate, cap or beaded-on with a welding torch: "Fed" or "Ind", as applicable; "well number, location by quarter, quarter section, township and range"; and "lease number".

Pipelines that are associated with only the plugged wells will be decommissioned/abandoned per COGCC 1100 rule.

11. Surface Ownership:

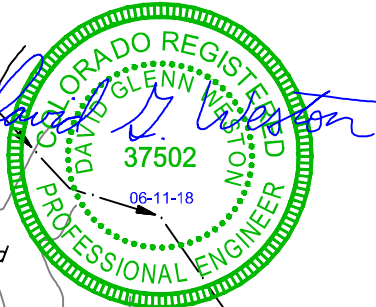
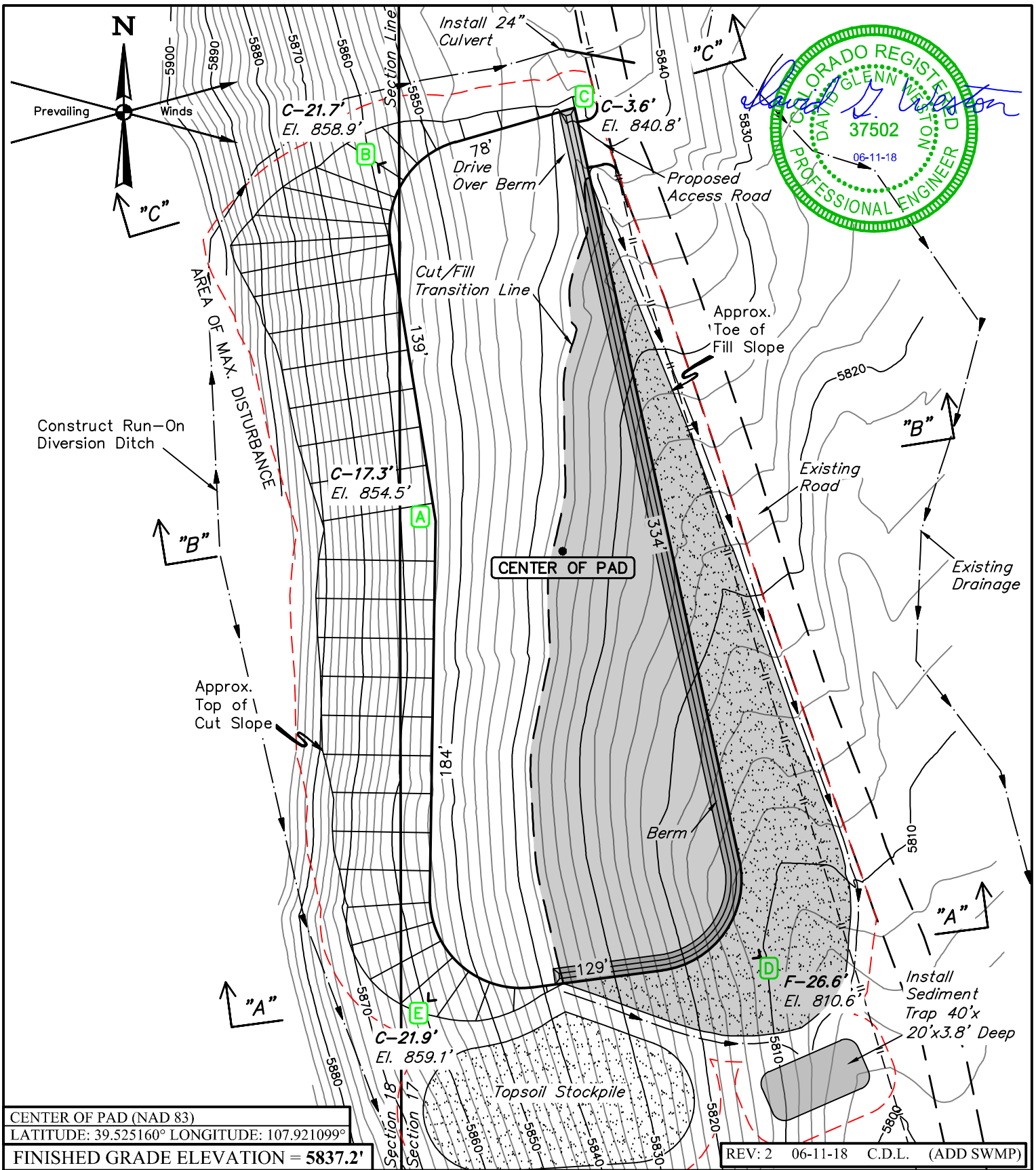
Surface owner name and contact information can be found in Table 8, Surface Ownership Information, below. Please see the Access Road & Topo Map (Plat 5) and the Location Drawing (Plat 6). Surface owners have been notified.

Table 8. Surface Ownership Information

Disturbance Type	Surface Owner	Fee Owner Name	Fee Owner Address	Fee Owner Phone
DOE 1-M-18 Pad	Federal	--	--	--
DOE 1-M-18 Production Pad	Federal	--	--	--
DOE 1-M-18 Cuttings Trench	Federal	--	--	--
RWF 44-18 Cuttings Trench	Private	Clough Sheep Company, LLC	PO Box 686 Rifle, CO 81650	970-618-7749
RMV 143-18 Frac Pad	Private	Clough Sheep Company, LLC	PO Box 686 Rifle, CO 81650	970-618-7749
RWF 12-20 Tank Pad	Private	Clough Sheep Company, LLC	PO Box 686 Rifle, CO 81650	970-618-7749
DOE 1-M-18 Pipelines	Federal	--	--	--
DOE 1-M-18 Pipelines	Private	Clough Sheep Company, LLC	PO Box 686 Rifle, CO 81650	970-618-7749

12. Other Information

Additional information may be provided upon request by Authorized Officer.



CENTER OF PAD (NAD 83)
 LATITUDE: 39.525160° LONGITUDE: 107.921099°
 FINISHED GRADE ELEVATION = 5837.2'

REV: 2 06-11-18 C.D.L. (ADD SWMP)

- NOTES:**
- Round corners at 35' radius or as needed.
 - Contours shown at 2' intervals.
 - Cut slopes 1:1 (Typ.).
 - Fill slopes 1 1/2:1 (Typ.).

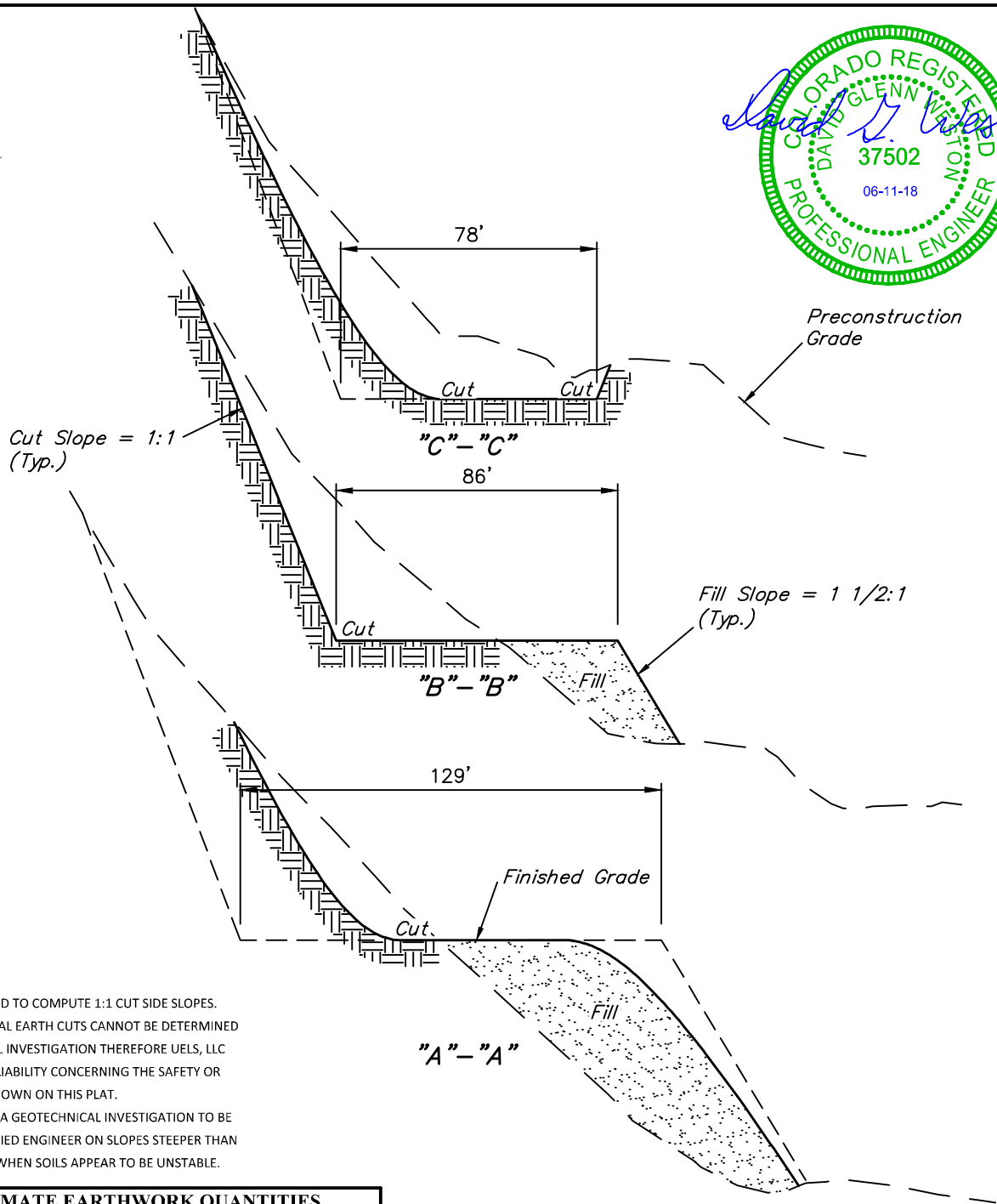
TEP Rocky Mountain LLC
DOE 1-M-18 CUTTINGS MANAGEMENT AREA
SECTIONS 17 & 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO



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

SURVEYED BY	CODY RICH	01-18-18	SCALE
DRAWN BY	M.D.	01-23-18	1" = 50'
CONSTRUCTION LAYOUT		PLAT #1	

X-Section Scale
1" = 50'



Note:
 UELS, LLC WAS REQUESTED TO COMPUTE 1:1 CUT SIDE SLOPES.
 THE STABILITY OF VERTICAL EARTH CUTS CANNOT BE DETERMINED WITHOUT GEOTECHNICAL INVESTIGATION THEREFORE UELS, LLC DOES NOT ASSUME ANY LIABILITY CONCERNING THE SAFETY OR STABILITY OF 1:1 CUTS SHOWN ON THIS PLAT.
 UELS, LLC RECOMMENDS A GEOTECHNICAL INVESTIGATION TO BE PERFORMED BY A QUALIFIED ENGINEER ON SLOPES STEEPER THAN 1.5:1 H:V OR LESS STEEP WHEN SOILS APPEAR TO BE UNSTABLE.

APPROXIMATE EARTHWORK QUANTITIES	
(6") TOPSOIL STRIPPING	1,110 Cu. Yds.
REMAINING LOCATION	8,970 Cu. Yds.
TOTAL CUT	10,080 Cu. Yds.
FILL	8,970 Cu. Yds.
EXCESS MATERIAL	1,110 Cu. Yds.
TOPSOIL	1,110 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	0 Cu. Yds.

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
WELL SITE DISTURBANCE	NA	±1.691
30' WIDE ACCESS ROAD R-O=W DISTURBANCE	±10'	±0.007
TOTAL SURFACE USE AREA		±1.698

REV: 2 06-11-18 C.D.L. (UPDATE ACRES)

NOTES:

- Fill quantity includes 5% for compaction.
- Calculations based on 6" of topsoil stripping.
- Cut slopes 1:1 (Typ.).
- Fill slopes 1 1/2:1 (Typ.).

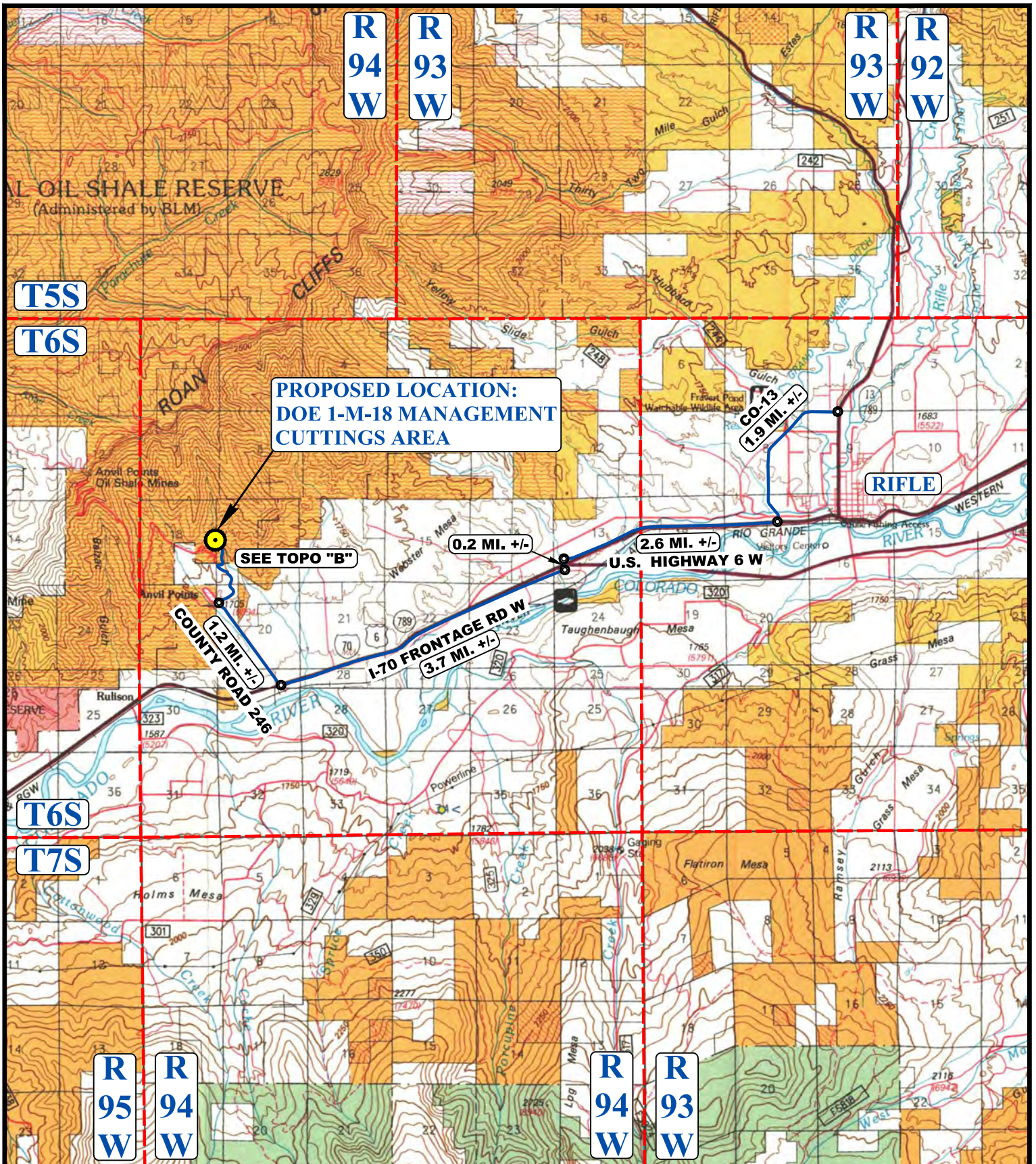
TEP Rocky Mountain LLC

**DOE 1-M-18 CUTTINGS MANAGEMENT AREA
 SECTIONS 17 & 18, T6S, R94W, 6th P.M.
 GARFIELD COUNTY, COLORADO**



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

SURVEYED BY	CODY RICH	01-18-18	SCALE
DRAWN BY	M.D.	01-23-18	AS SHOWN
CONSTRUCTION LAYOUT CROSS SECTIONS			PLAT #2



LEGEND:

 PROPOSED LOCATION



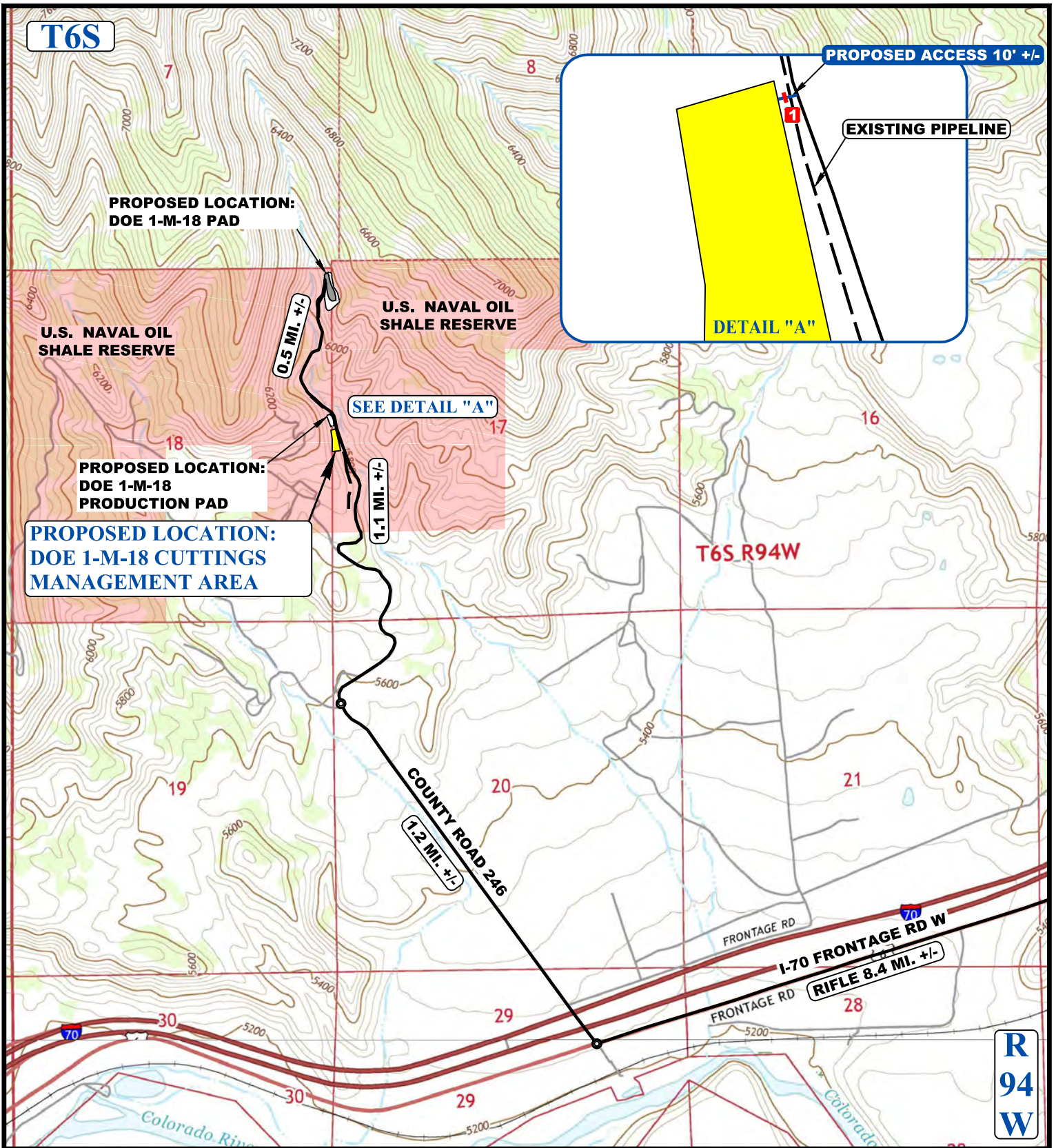
TEP Rocky Mountain LLC

**DOE 1-M-18 CUTTINGS MANAGEMENT AREA
SECTIONS 17 & 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**



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

SURVEYED BY	CODY RICH	04-26-18	SCALE
DRAWN BY	Z.T.	06-11-18	1 : 100,000
ACCESS ROAD MAP			PLAT #3A



NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

LEGEND:

- EXISTING ROAD
- PROPOSED ROAD
- EXISTING PIPELINE
- INSTALL 24" CULVERT



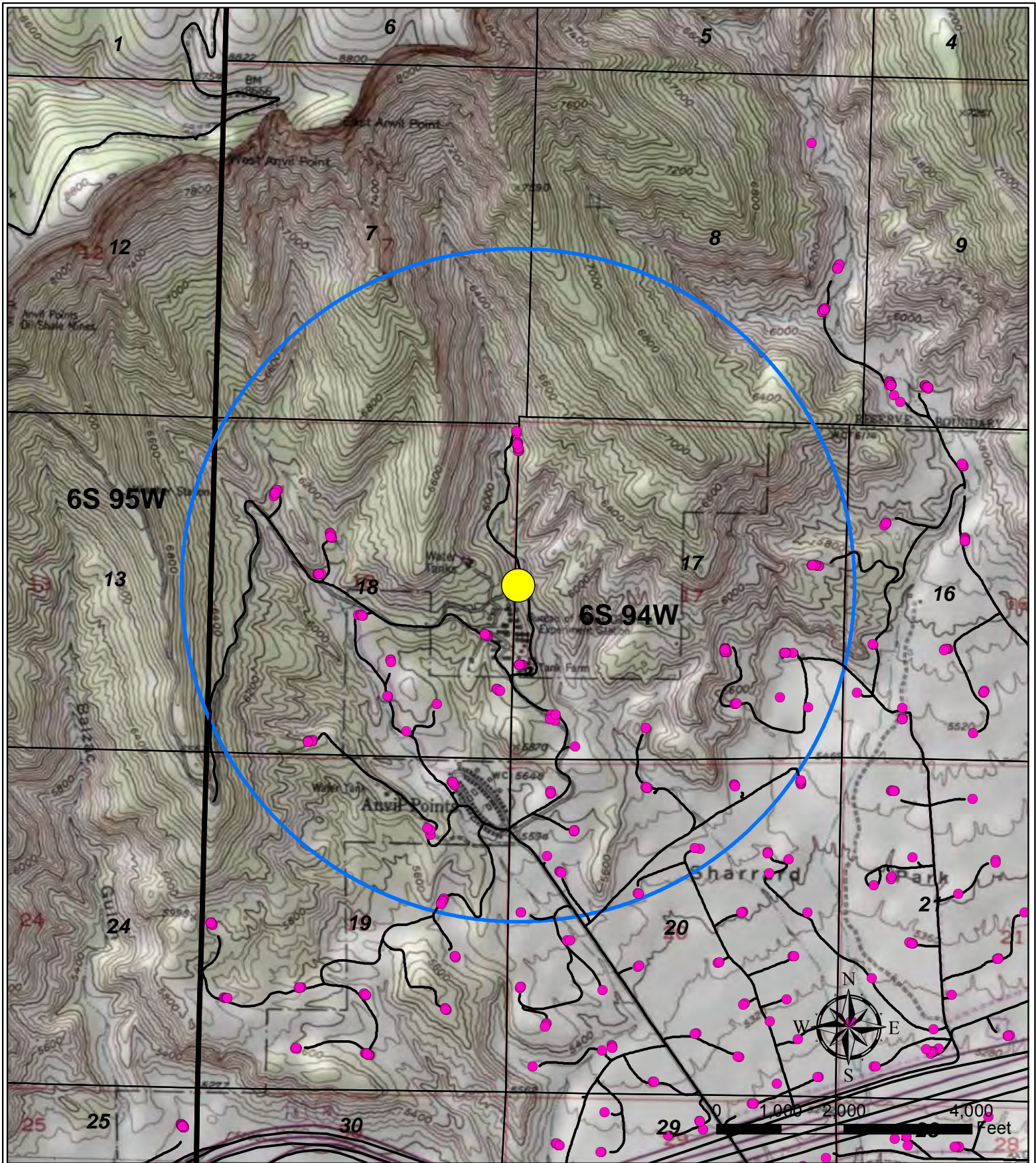
TEP Rocky Mountain LLC

**DOE 1-M-18 CUTTINGS MANAGEMENT AREA
SECTIONS 17 & 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**

SURVEYED BY	CODY RICH	04-26-18	SCALE
DRAWN BY	Z.T.	06-11-18	1 : 24,000
ACCESS ROAD MAP			PLAT #3B



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



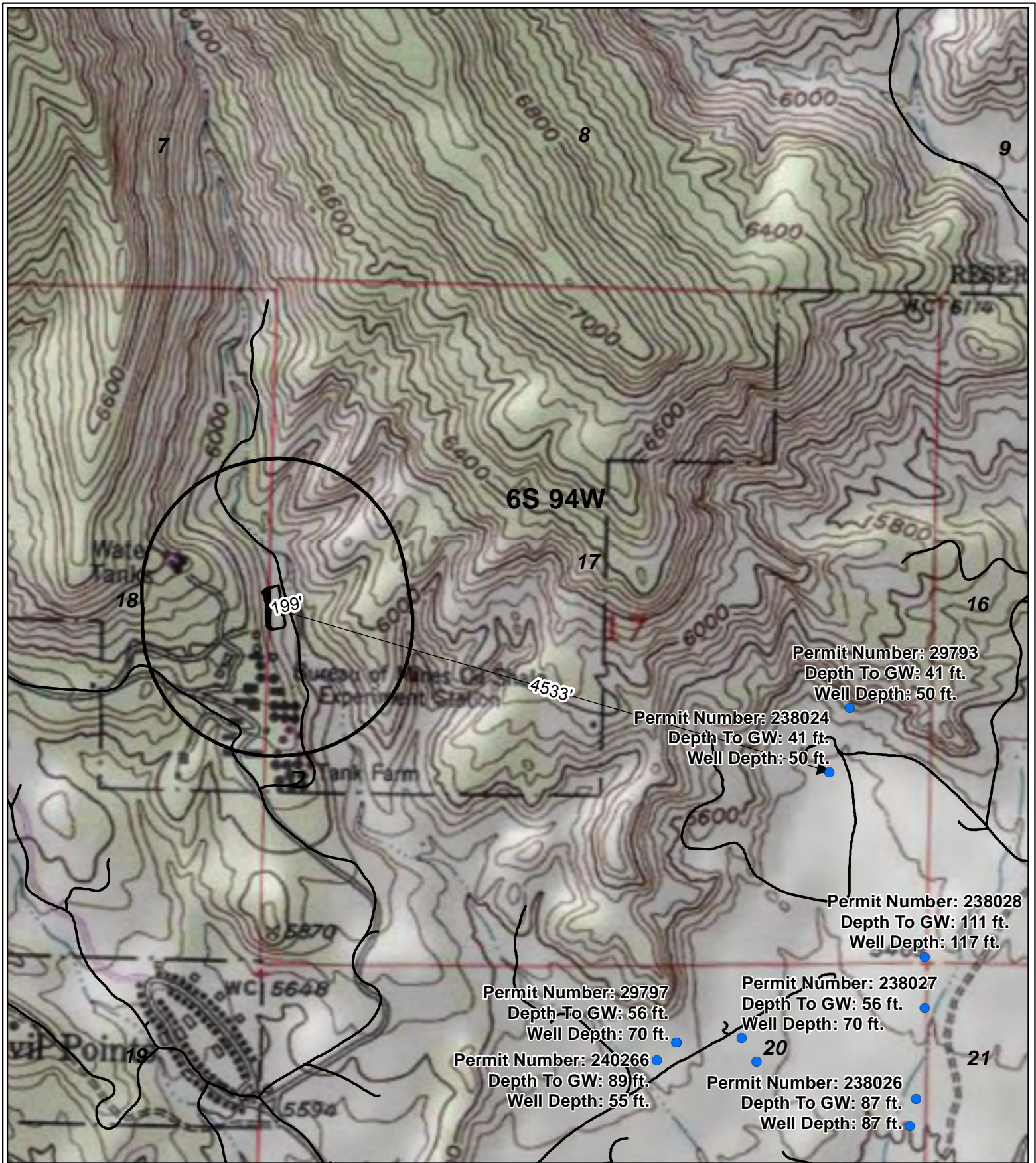
Legend

- Proposed Pad Location
- Known Well Locations
- Existing Road
- One Mile Radius

TEP Rocky Mountain LLC
Plat 3B
DOE 1-M-18
Cuttings Management Area
Existing Well Locations within One-Mile-Radius

June 12, 2018





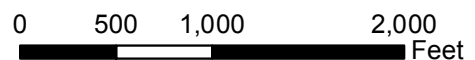
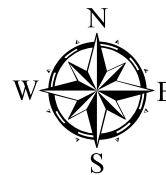
Legend

- Water Well
- Pad
- Existing Road
- 1000' Buffer (from edge of pad)

TEP Rocky Mountain LLC

**Plat 3C
DOE 1-M-18
Cuttings Management Area
Hydrology Map**

June 12, 2018





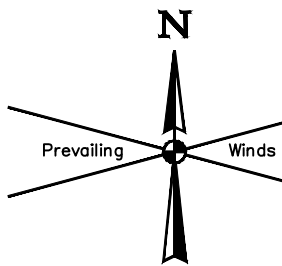
Legend

- Reference Area
- Pad

TEP Rocky Mountain LLC
Plat 3D
DOE 1-M-18
Cuttings Management Area
Reference Area Map



June 12, 2018



U.S. NAVAL OIL SHALE RESERVE

500' Offset from Edge of Disturbance

Existing Road

500'

U.S. NAVAL OIL SHALE RESERVE

Install 24" Culvert

CENTER OF PAD
(NAD 83)
Lat: 39.525160°
Long: 107.921099°

Proposed Access Road

Sec. 18

1/4 Section Line

Sec. 17

500'

Run-On Diversion Ditch

Berm

Sediment Trap

500'

Topsoil Stockpile

Existing Drainage

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N72°E	68'
L2	N73°E	60'
L3	S88°E	137'

CURRENT LAND USE		
<input type="checkbox"/> CROP LAND	<input type="checkbox"/> NON CROP LAND	<input type="checkbox"/> SUBDIVIDED
<input type="checkbox"/> IRRIGATED	<input type="checkbox"/> RANGELAND	<input type="checkbox"/> INDUSTRIAL
<input type="checkbox"/> DRY LAND	<input type="checkbox"/> TIMBER	<input type="checkbox"/> COMMERCIAL
<input type="checkbox"/> IMPROVE PASTURE	<input type="checkbox"/> RECREATIONAL	<input type="checkbox"/> RESIDENTIAL
<input type="checkbox"/> HAY MEADOW	<input type="checkbox"/> OTHER (Desc.):	
<input type="checkbox"/> CRP		



Section 17, T6S, R94W, 6th P.M.
SW 1/4 NW 1/4
Footage: 2649' FNL 60' FWL
Latitude: 39°31'30.57" (39.525160°)
Longitude: 107°55'15.96" (107.921099°)
PDOP = 1.9
Instrument Operator: CODY RICH
Date of Measurement: 01-18-18
Measurement Ref. Point: CENT. OF PAD

TEP Rocky Mountain LLC

**DOE 1-M-18 CUTTINGS MANAGEMENT AREA
SECTIONS 17 & 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**



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

SURVEYED BY	CODY RICH	01-18-18	SCALE
DRAWN BY	C.D.L.	06-11-18	1" = 200'
LOCATION DRAWING			PLAT #4

DISTANCES FROM WELL HEAD(S) (IN FEET)

Description	Building	Building Unit	High Occu. Building	DOAA	Public Road	Above Ground Utility	Railroad	Property Line
CENTER OF PAD	S04'E 3461'	S05'E 3373'	>5280	>5280	S01'W 3811'	SOUTH 3823'	>5280	S86'W 1379'

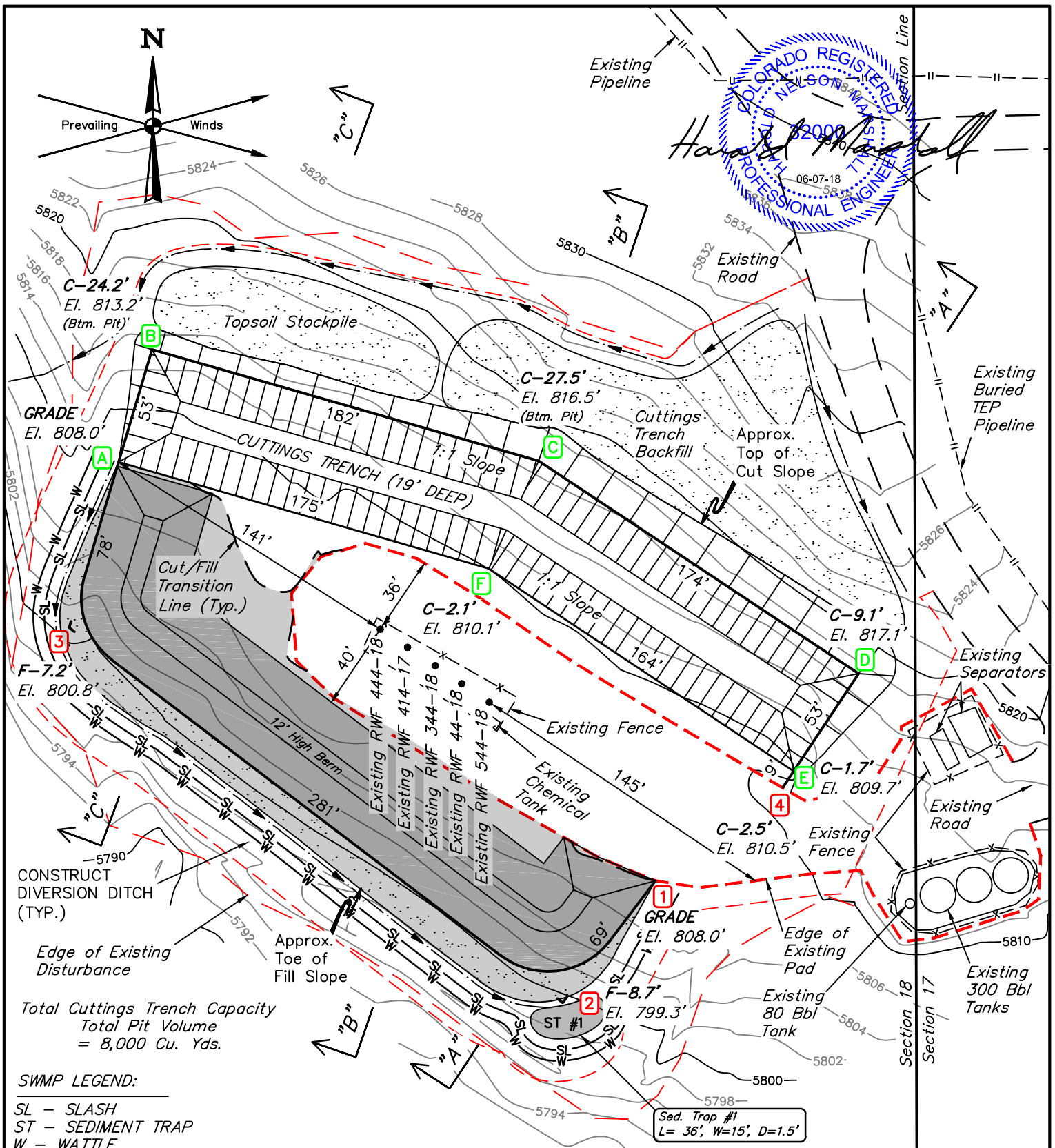
TEP Rocky Mountain LLC

**DOE 1-M-18 CUTTINGS MANAGEMENT AREA
SECTIONS 17 & 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**



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

SURVEYED BY	CODY RICH	01-18-18	SCALE
DRAWN BY	C.D.L.	06-11-18	N.T.S.
LOCATION TABLE			PLAT #4B



FINISHED GRADE ELEVATION = 5808.0'

REV: 4 06-07-18 T.L.L. (TRENCH & PAD CHANGE)

NOTES:

- Round corners at 35' radius or as needed.
- Contours shown at 2' intervals.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted).
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.

TEP Rocky Mountain LLC

**RWF 44-18 CUTTINGS TRENCH
SECTION 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**

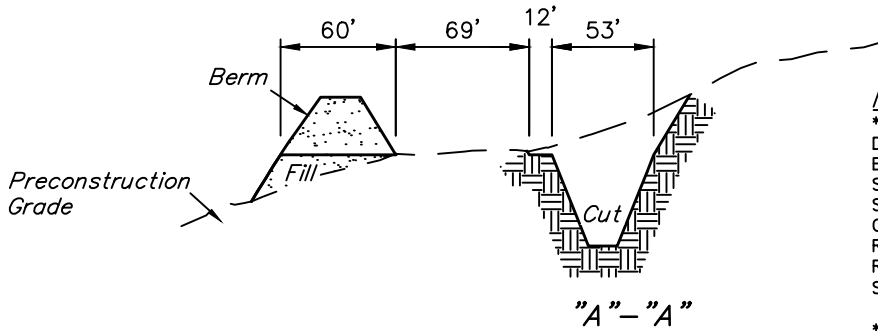
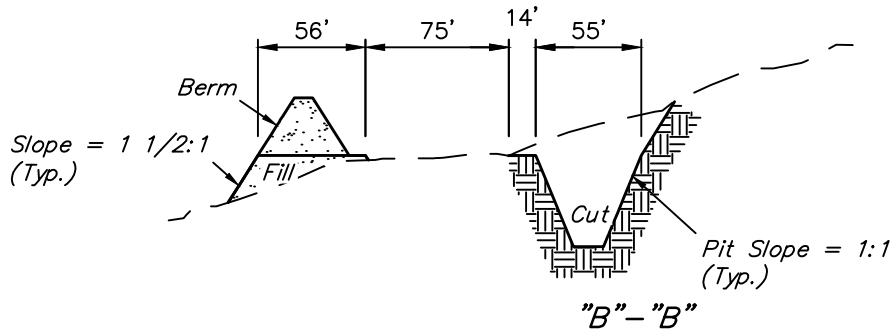
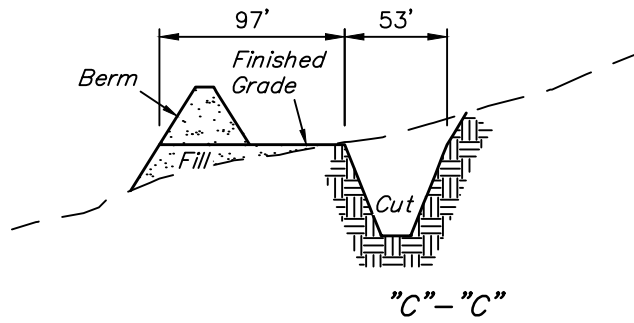


UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

SURVEYED BY	BART HUNTING, C.R.	02-15-18	SCALE
DRAWN BY	T.L.L.	02-27-18	1" = 60'

CONSTRUCTION LAYOUT PLAT #1

X-Section Scale
1" = 40'
1" = 100'



NOTE:

*1. 1:1 SLOPE WILL REQUIRE A RETAINING WALL DESIGN. IT IS RECOMMENDED THAT A GEOTECHNICAL ENGINEER BE CONTACTED TO PERFORM A SUBSURFACE SITE INVESTIGATION. UPON COMPLETION OF THE SUBSURFACE INVESTIGATION CONTACT UELS TO PROVIDE CONSTRUCTION DETAILS AND PLANS TO CONSTRUCT A RETAINING WALL. RETAINING WALL OPTIONS MAY INCLUDE: CONCRETE STEMWALL, USE WALL, SOIL TIEBACKS (NAILS).

*2. A GEOTECHNICAL ENGINEER SHALL PERFORM A SITE INVESTIGATION TO VERIFY THAT THE NATIVE MATERIAL WILL BE STABLE AT A 1:1 CUT/FILL SLOPES.

APPROXIMATE EARTHWORK QUANTITIES	
(6") TOPSOIL STRIPPING	960 Cu. Yds.
REMAINING LOCATION	3,420 Cu. Yds.
CUTTINGS TRENCH	8,000 Cu. Yds.
TOTAL CUT	12,380 Cu. Yds.
FILL	3,420 Cu. Yds.
EXCESS MATERIAL	8,960 Cu. Yds.
TOPSOIL & TRENCH BACKFILL	8,960 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	0 Cu. Yds.

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
WELL SITE DISTURBANCE OUTSIDE EXISTING DISTURBANCE	NA	±0.016
WELL SITE DISTURBANCE WITHIN EXISTING DISTURBANCE	NA	±2.486
TOTAL SURFACE USE AREA		±2.502

REV: 4 06-07-18 T.L.L. (TRENCH & PAD CHANGE)

NOTES:

- Fill quantity includes 5% for compaction.
- Calculations based on 6" of topsoil stripping.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted).

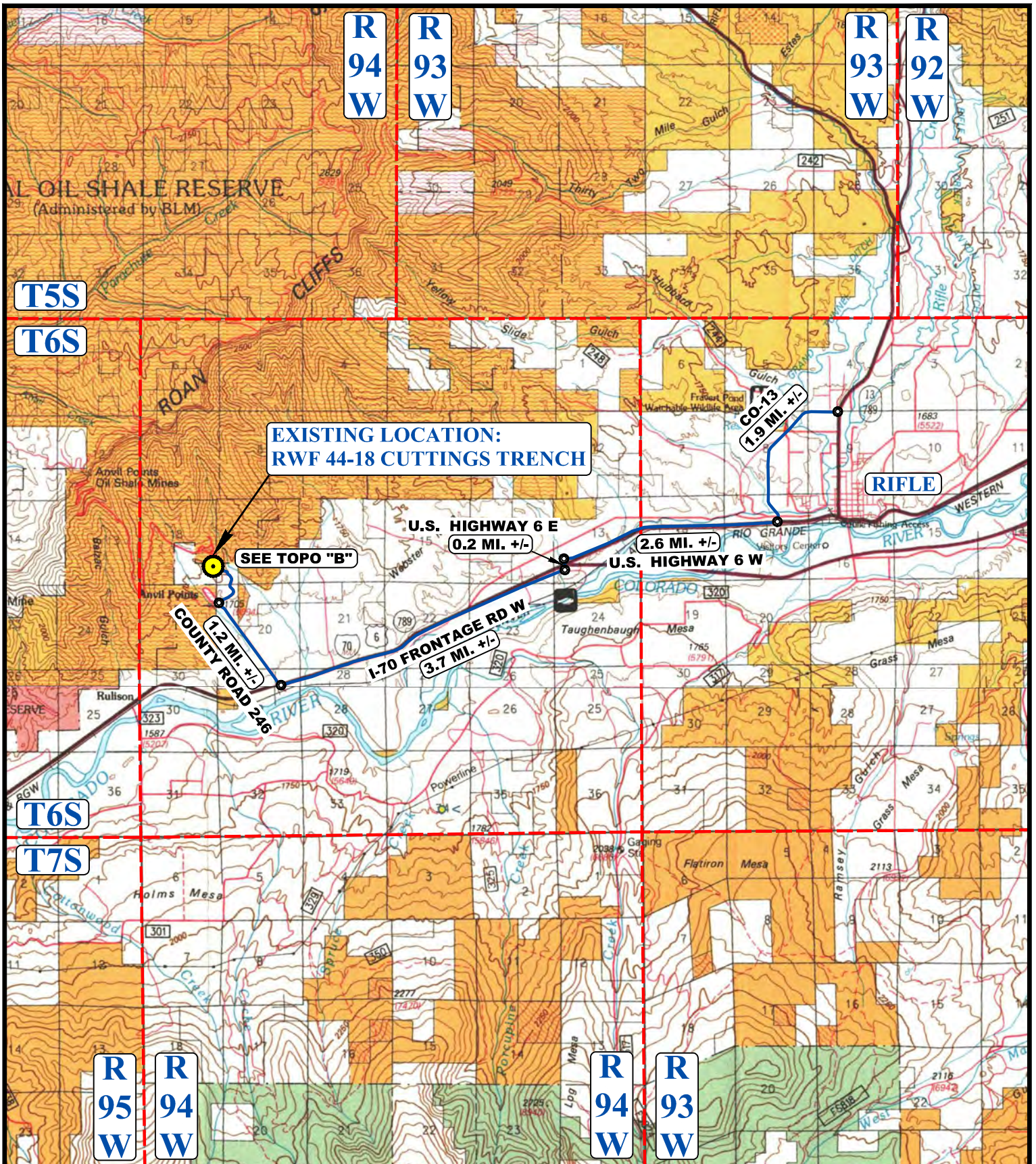
TEP Rocky Mountain LLC

**RWF 44-18 CUTTINGS TRENCH
SECTION 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**



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

SURVEYED BY	BART HUNTING, C.R.	02-15-18	SCALE
DRAWN BY	T.L.L.	02-27-18	AS SHOWN
CONSTRUCTION LAYOUT CROSS SECTIONS			PLAT #2



LEGEND:

 EXISTING LOCATION



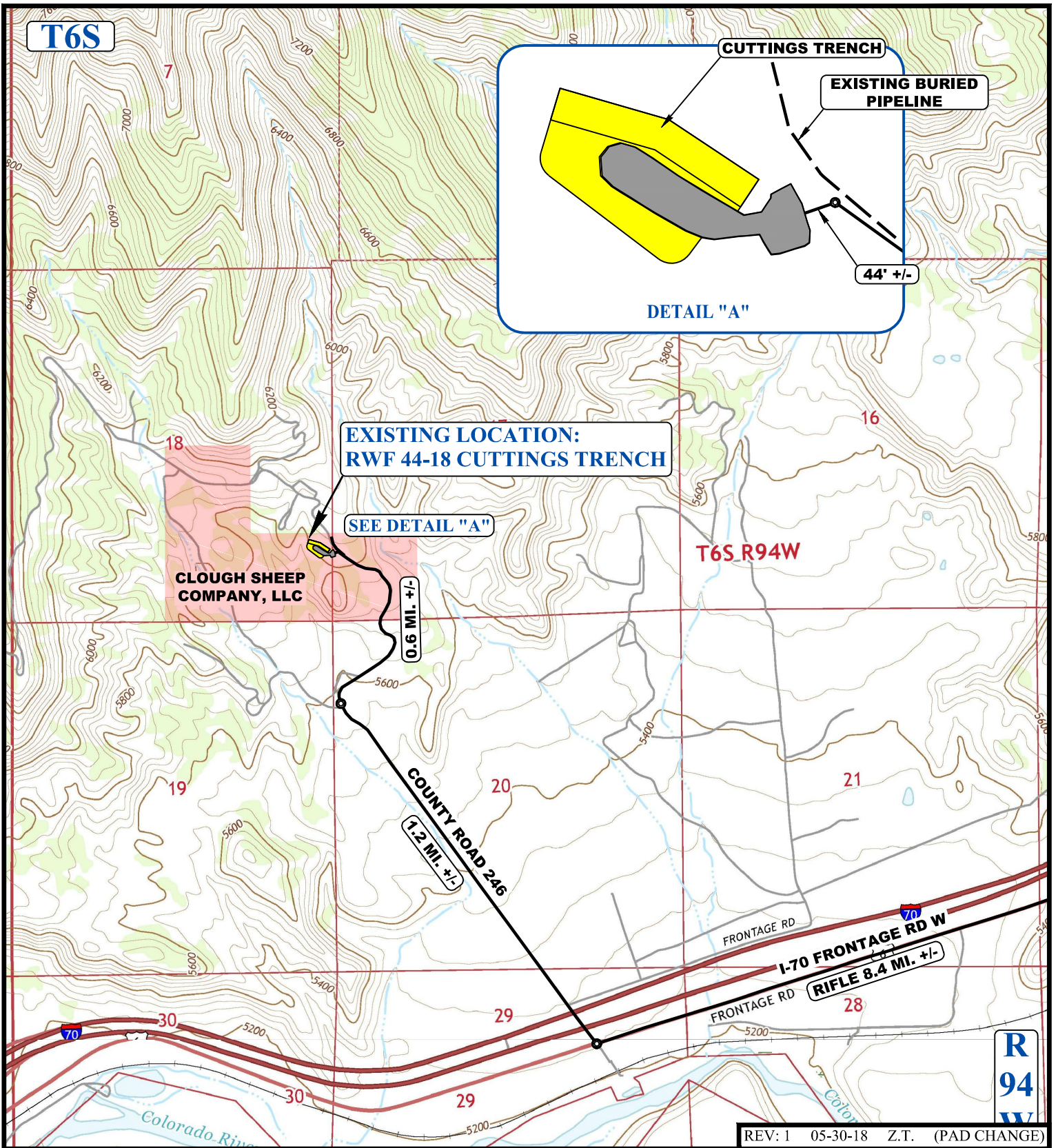
TEP Rocky Mountain LLC

**RWF 44-18 CUTTINGS TRENCH
SECTION 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**



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

SURVEYED BY	BART HUNTING, C.R.	02-15-18	SCALE
DRAWN BY	Z.T.	05-04-18	1 : 100,000
ACCESS ROAD MAP			PLAT #3A



REV: 1 05-30-18 Z.T. (PAD CHANGE)

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

LEGEND:

- EXISTING ROAD
- EXISTING PIPELINE



TEP Rocky Mountain LLC

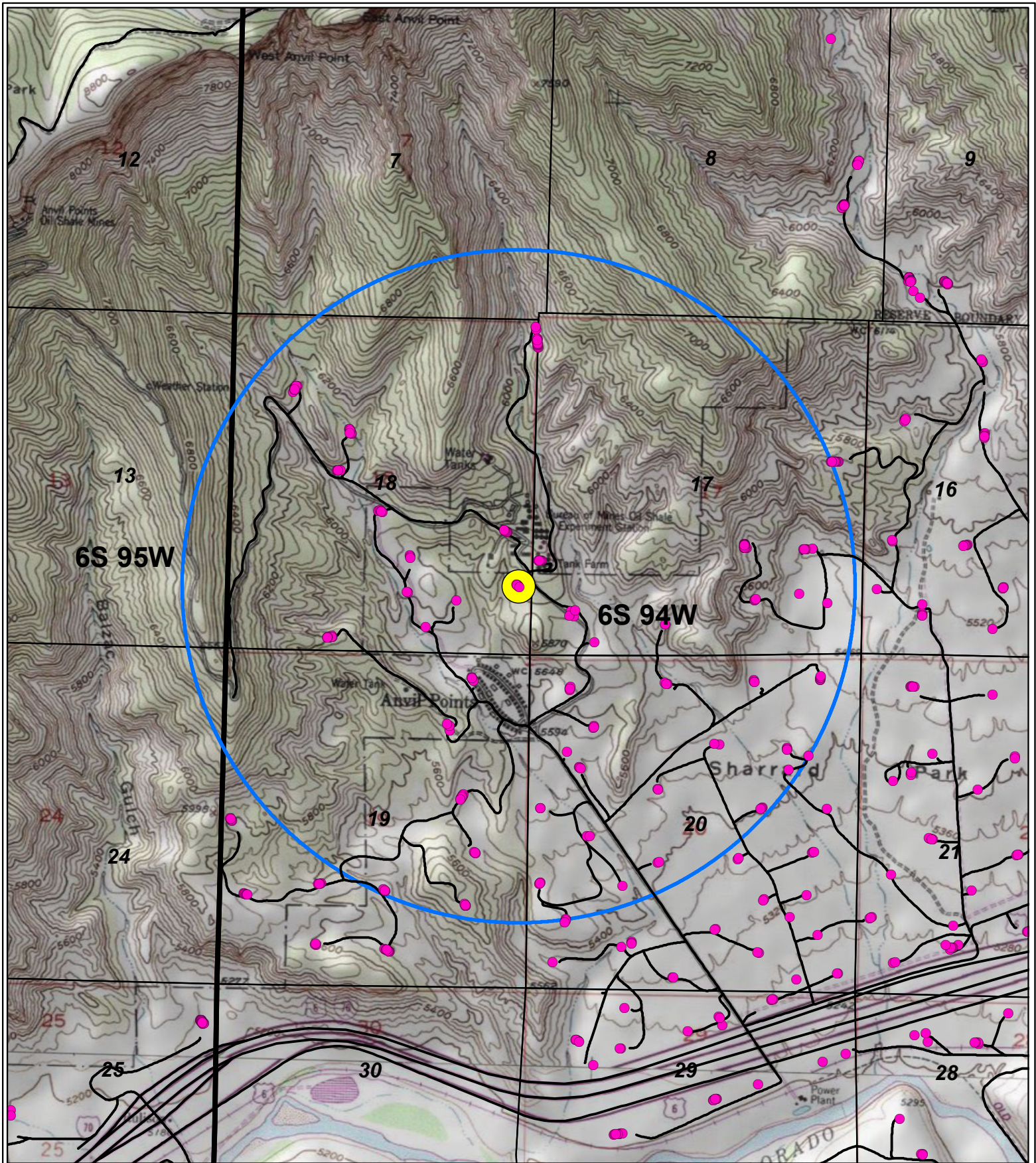
**RWF 44-18 CUTTINGS TRENCH
SECTION 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**

SURVEYED BY	BART HUNTING, C.R.	02-15-18	SCALE
DRAWN BY	Z.T.	05-04-18	1 : 24,000

ACCESS ROAD MAP **PLAT #3B**



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

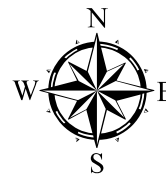


Legend

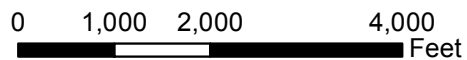
- Known Well Locations
- Proposed Drilling Location
- Existing Road
- One Mile Radius

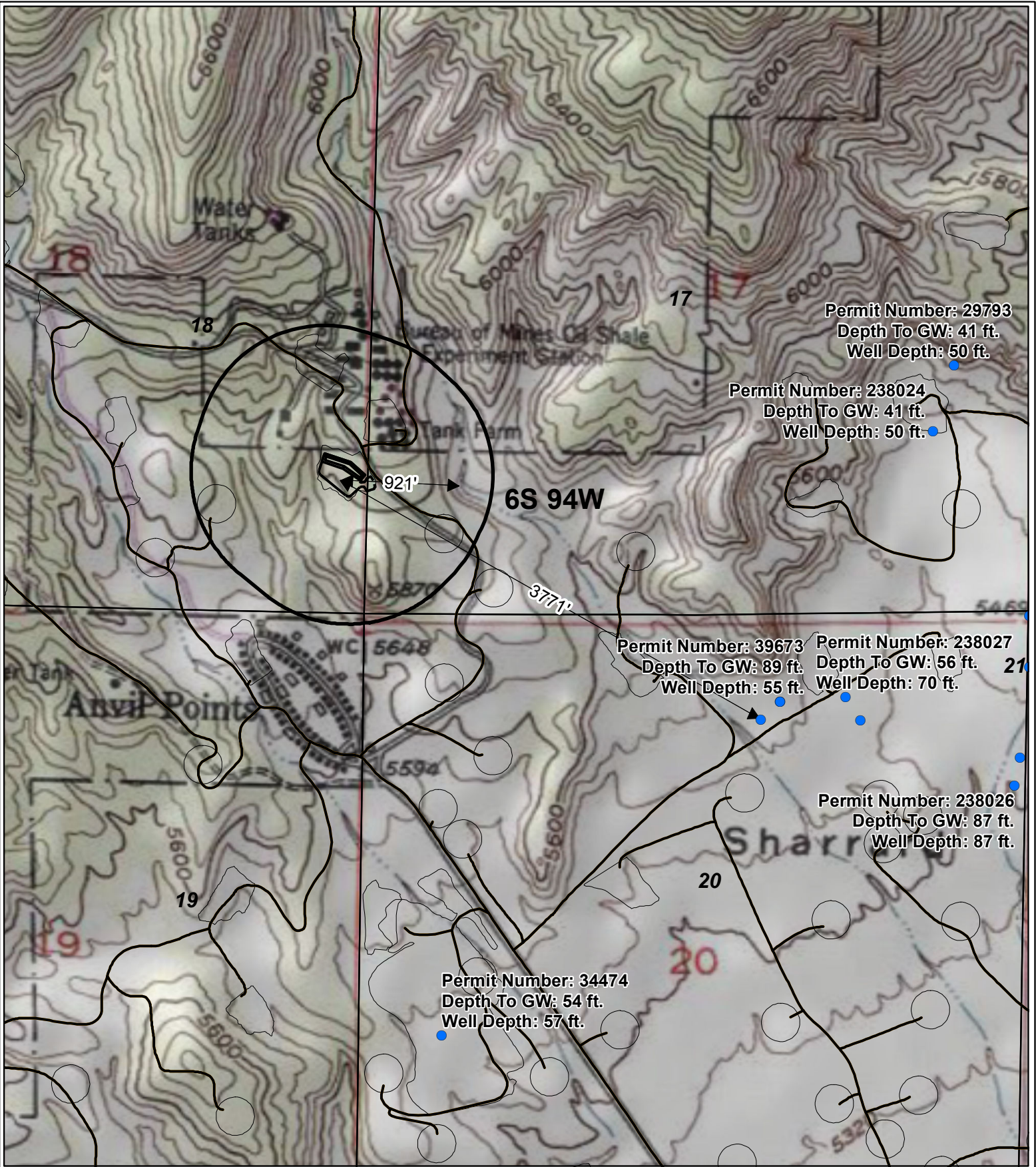
TEP Rocky Mountain LLC

**Plat 3C
RWF 44-18 Cuttings Trench
Existing Well Locations within One-Mile-Radius**



May 23, 2018





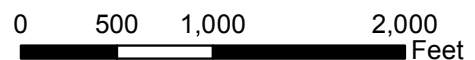
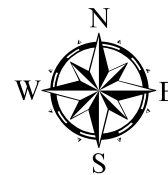
Legend

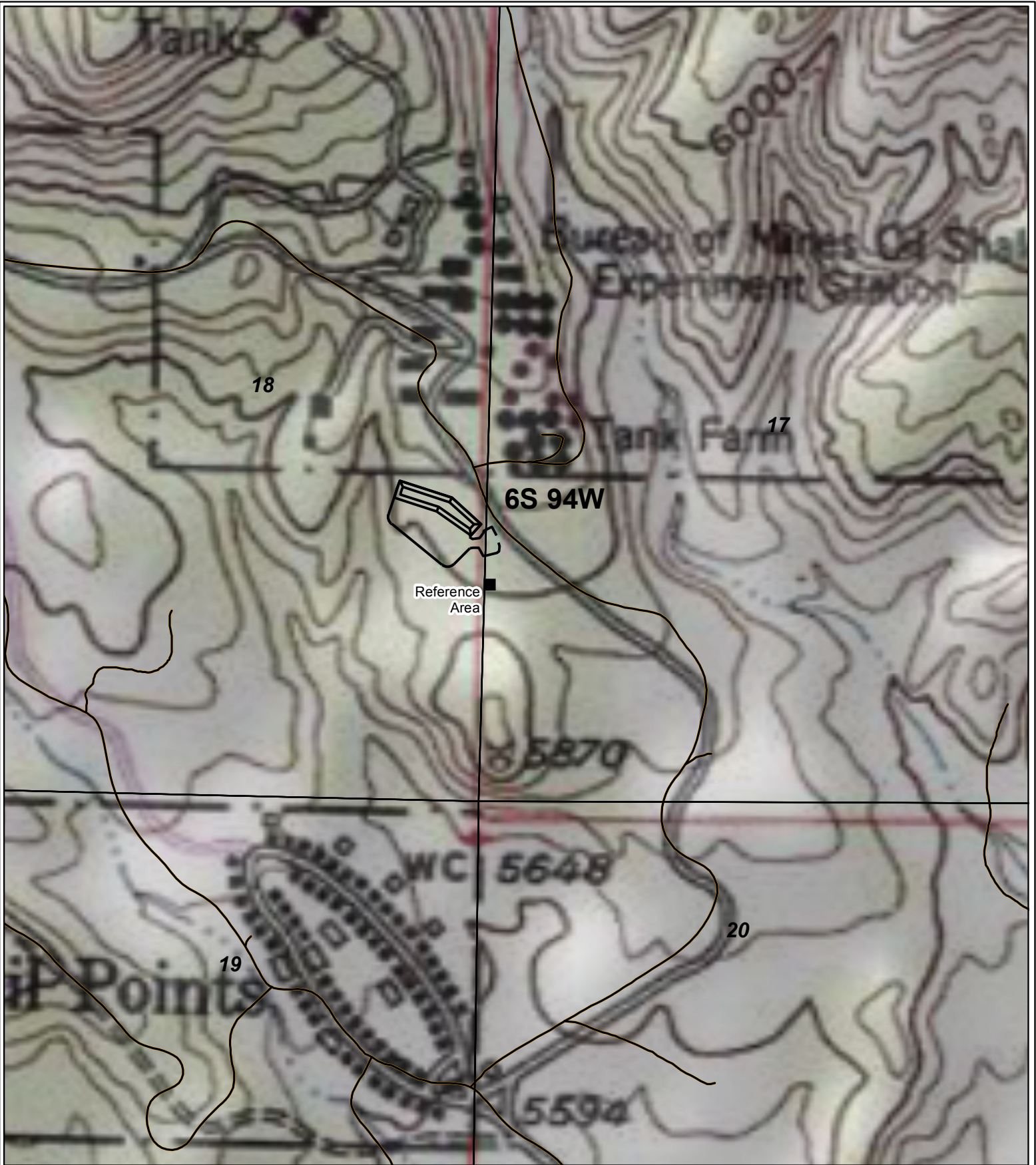
- Water Well
- Pad
- Existing Road
- 1000' Buffer (from edge of pad)

TEP Rocky Mountain LLC

**Plat 3D
RWF 44-18 Cuttings Trench
Hydrology Map**

May 23, 2018





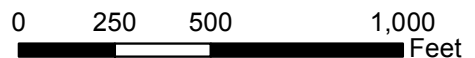
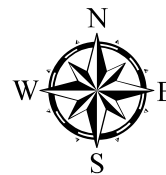
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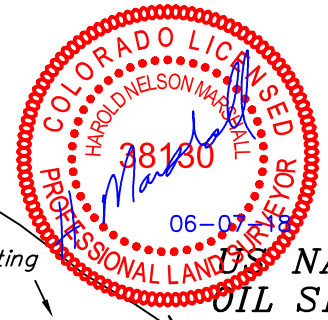
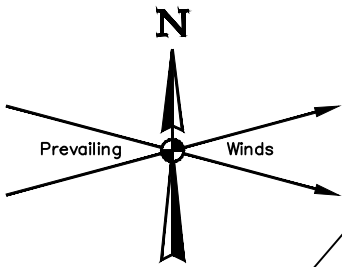
- Reference Area
- Pad

TEP Rocky Mountain LLC

**Plat 3E
RWF 44-18 Cuttings Trench
Reference Area Map**

May 23, 2018





**US NAVAL
OIL SHALE
RESERVE**

**NAVAL
OIL SHALE
RESERVE**

**CLOUGH SHEEP
COMPANY, LLC**

**CLOUGH
SHEEP
COMPANY,
LLC**

1/16 Section Line

Section Line

Section 18
Section 17

EXISTING RWF 444-18
(NAD 83)
Lat: 39.520692°
Long: 107.938845°

SWMP LEGEND:

SL - SLASH
W - WATTLE



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"/> IMPROVE PASTURE	<input type="checkbox"/> RECREATIONAL	<input type="checkbox"/> RESIDENTIAL
<input type="checkbox"/> HAY MEADOW	<input type="checkbox"/> OTHER (Desc.):	
<input type="checkbox"/> CRP		

Section 18, T6S, R94W, 6th P.M.
SE 1/4 SE 1/4
Footage: 1103' FSL 242' FEL
Latitude: 39°31'14.49" (39.520692°)
Longitude: 107°55'19.84" (107.938845°)
PDOP = 1.4
Instrument Operator: Bart Hunting
Date of Measurement: 002-15-18
Measurement Ref. Point: Existing RWF 444-18 Wellhead

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N10°E	399'
L2	N31°E	291'
L3	N42°E	457'
L4	N69°E	234'
L5	N77°E	273'

REV: 3 06-07-18 T.L.L. (TRENCH & PAD CHANGE)

TEP Rocky Mountain LLC

**RWF 44-18 CUTTINGS TRENCH
SECTION 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**



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

SURVEYED BY	BART HUNTING, C.R.	02-15-18	SCALE
DRAWN BY	T.L.L.	05-03-18	1" = 200'
LOCATION DRAWING			PLAT #4

DISTANCES FROM WELL HEAD(S) (IN FEET)

Description	Building	Building Unit	High Occu. Building	DOAA	Public Road	Above Ground Utility	Railroad	Property Line
RWF 444-18	>5280	>5280	>5280	>5280	S07'E 2312	>5280	>5280	N01'W 213
RWF 414-17	>5280	>5280	>5280	>5280	S07'E 2303	>5280	>5280	N01'W 221
RWF 344-18	>5280	>5280	>5280	>5280	S07'E 2293	>5280	>5280	N01'W 230
RWF 44-18	>5280	>5280	>5280	>5280	S07'E 2283	>5280	>5280	N01'W 238
RWF 544-18	>5280	>5280	>5280	>5280	S06'E 2273	>5280	>5280	N01'W 246

DISTANCES FROM PRODUCTION EQUIPMENT (IN FEET)

Description	Building	Building Unit	High Occu. Building	DOAA	Public Road	Above Ground Utility	Railroad	Property Line
SEPARATORS	>5280	>5280	>5280	>5280	S01'E 2229	>5280	>5280	NORTH 254
TANKS	>5280	>5280	>5280	>5280	S02'E 2169	>5280	>5280	NORTH 328

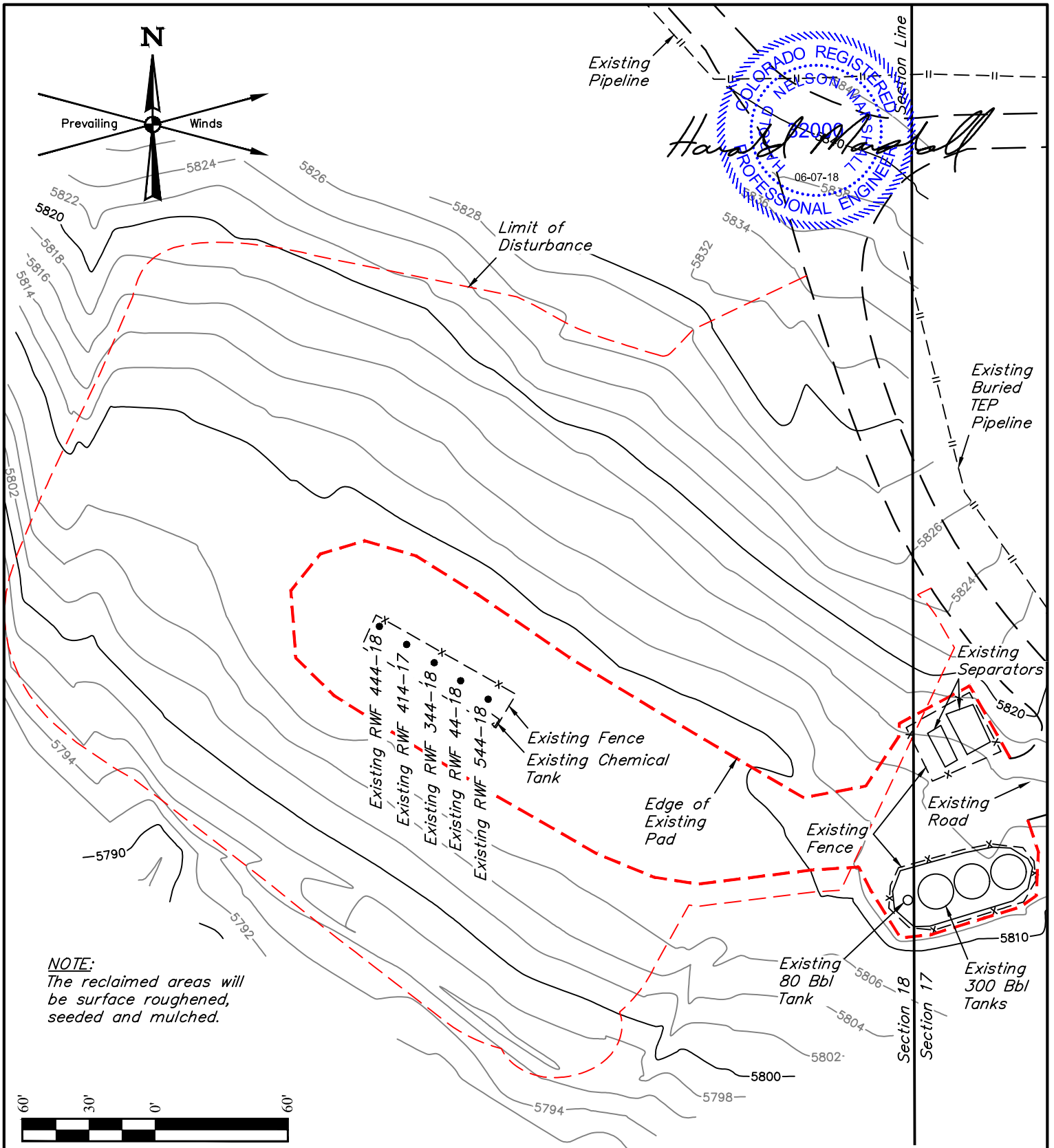
TEP Rocky Mountain LLC

**RWF 44-18 CUTTINGS TRENCH
SECTION 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO**



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

SURVEYED BY	BART HUNTING, C.R.	02-15-18	SCALE
DRAWN BY	T.L.L.	06-07-18	N.T.S.
LOCATION TABLE			PLAT #4B



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

APPROXIMATE RECLAIMED ACREAGE = ±2.274 ACRES

REV: 2 06-07-18 T.L.L. (TRENCH & PAD CHANGE)

NOTES:
 • Contours shown at 2' intervals.

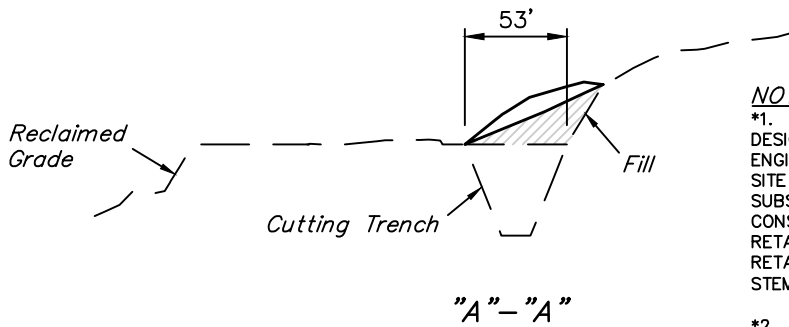
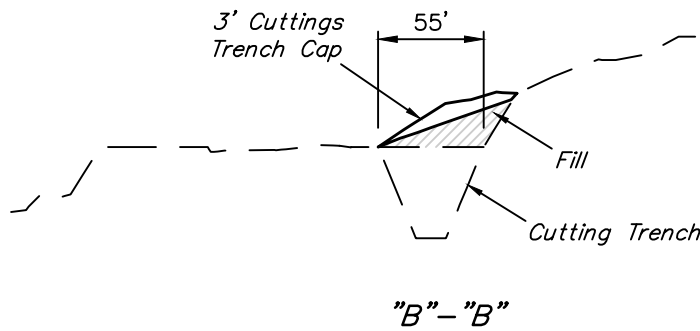
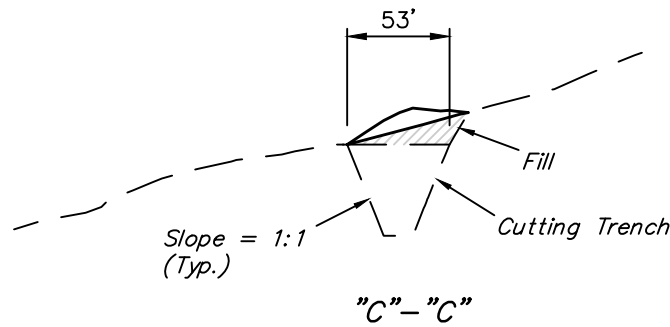
TEP Rocky Mountain LLC
RWF 44-18 CUTTINGS TRENCH
SECTION 18, T6S, R94W, 6th P.M.
GARFIELD COUNTY, COLORADO



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

SURVEYED BY	BART HUNTING, C.R.	02-15-18	SCALE
DRAWN BY	T.L.L.	05-03-18	1" = 60'
INTERIM RECLAIM PLAN			PLAT #5

1" = 40'
 X-Section
 Scale
 1" = 100'



NOTE:

*1. 1:1 SLOPE WILL REQUIRE A RETAINING WALL DESIGN. IT IS RECOMMENDED THAT A GEOTECHNICAL ENGINEER BE CONTACTED TO PERFORM A SUBSURFACE SITE INVESTIGATION. UPON COMPLETION OF THE SUBSURFACE INVESTIGATION CONTACT UELS TO PROVIDE CONSTRUCTION DETAILS AND PLANS TO CONSTRUCT A RETAINING WALL. RETAINING WALL OPTIONS MAY INCLUDE: CONCRETE STEMWALL, USE WALL, SOIL TIEBACKS (NAILS).

*2. A GEOTECHNICAL ENGINEER SHALL PERFORM A SITE INVESTIGATION TO VERIFY THAT THE NATIVE MATERIAL WILL BE STABLE AT A 1:1 CUT/FILL SLOPES.

RECLAIM MANAGEMENT AREA VOLUMES:

3' Topsoil Cap Volume: 2,080 Cu. Yds.
 Fill Volume: 4,600 Cu. Yds.

REV: 6 06-07-18 T.L.L. (TRENCH & PAD CHANGE)

NOTES:

- Trench Cut/Fill slopes 1:1 (Typ.).

TEP Rocky Mountain LLC

**RWF 44-18 CUTTINGS TRENCH
 SECTION 18, T6S, R94W, 6th P.M.
 GARFIELD COUNTY, COLORADO**



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SURVEYED BY	BART HUNTING, C.R.	02-15-18	SCALE
DRAWN BY	T.L.L.	05-03-18	AS SHOWN
RECLAMATION CROSS SECTIONS			PLAT #6