

STORMWATER MANAGEMENT PLAN

Crestone Peak Resources Operating LLC **Bijou 3-65 19-24 North Pad**

Location:

SE ¼ NW ¼ SECTION 21, TOWNSHIP 3 SOUTH, RANGE 65 WEST, 6TH P.M.
ADAMS COUNTY, COLORADO

Prepared For:

Crestone Peak Resources Operating LLC

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I. INTRODUCTION

This Stormwater Management Plan (SWMP) is being prepared for the Crestone Peak Resources LLC's Bijou 3-65 19-24 North Pad. The project consists of the development of infrastructure to support the drilling and production of 12 proposed oil and gas wells located in Adams County.

The purpose of this report is to develop a site specific SWMP using Stormwater Best Management Practices (BMPs) to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. This SWMP shall comply with the Colorado Energy & Carbon Management Commission (ECMC) Rule 1002.f and Rule 304.c.(15) and will accompany Form 2A.

This report will discuss the SWMP impacts that will occur during the different development phases (Pre-Production and Production) of the project and detail the various stormwater BMPs that will be used to minimize erosion, transport of sediment offsite, and site degradation. This SWMP is intended to be a living document which should be updated routinely as site conditions change.

II. GENERAL SITE & PROJECT DESCRIPTION

A. SITE LOCATION AND EXISTING CONDITIONS

The Bijou 3-65 19-24 North Pad is located a 503-acre parcel of land owned by Aurora Tech Center Development LLC in the SE ¼ NW ¼ Section 21, Township 3 South, Range 65 West, 6th P.M. The Site is located approximately 0.45 miles north of the intersection between the proposed access road and E. 34th Avenue. The parcel is zoned agricultural and the existing land-use is cropland agricultural. A vicinity map and location photos have been included with this plan in Appendix A.

The parcel currently has a mass grading plan which the site has been designed from. The mass grading plan has the site drawing to the east into a large sediment basin. It is assumed that the parcel's mass grading plan is part of a previous stormwater management plan.

The nearest hydraulic features is an unnamed tributary located within the extent of the oil & gas location boundary to the south and west of the proposed working pad surface that connects to Second Chance Creek. A hydrology map has been included with this plan in Appendix B.

According to the NRCS Web Soil Survey, the site's soils consist of approximately 84.9% Adena-Colby association, gently sloping, 10.3% Ascalon sandy loam, 3 to 5 percent slopes, 1.2% Platner loam, 3 to 5 percent slopes, and 0.7 Wiley-Adena-Renohill complex, 3 to 20 percent slopes. The Adena-Colby association consists of soils having a slow infiltration rate when thoroughly wet and a low runoff potential (hydraulic soil group C), with a K soil erosion factor of 0.28. Ascalon sandy loam, 3 to 5 percent slopes consists of soils having a moderate infiltration rate when thoroughly wet (hydraulic soil group B), with a K soil factor of 0.17. Platner loam, 3 to 5 percent consists of soils having a slow infiltration rate when thoroughly wet and a medium runoff potential (hydraulic soil group C), with a K soil erosion factor of 0.37. Wiley-Adena-Renohill complex, 3 to 20 percent consists of soils having a slow infiltration rate when thoroughly wet and a medium runoff potential (hydraulic soil group C), with a K soil erosion factor of 0.43. The K soil erosion factor is an index ranging from 0.02 to 0.69, which quantifies the relative susceptibility of the soil to sheet and rill erosion. The following table is a summary of K soil erosion factors with typical soil descriptions.

Table 1 – Summary of K Soil Erosion Factors with Typical Soil Descriptions

K Factor	Types of Soil	Susceptibility to Erosion
0.02 to 0.25	Sands, Clays, Sandy Clays	Low
0.25 to 0.40	Loams, Sandy Loams, Sandy Silts	Moderate
0.40 to 0.69	Silts	High

An NRCS Web Soil Survey Report for this site is included with this plan in Appendix C.

B. PROPOSED DEVELOPMENT

Proposed development will consist of constructing a well pad. The well pad will have two construction phases, a Pre-Production Phase and a Production Phase. The Pre-Production Phase well pad will have a larger disturbance area to facilitate drilling and completions operations. The Production Phase well pad will have a smaller disturbance area to facilitate gathering and production operations. The smaller disturbance area is intended to minimize the needed surface disturbance. The Pre-Production and Production construction plans have been included with this plan in Appendix D. The following table is a summary of disturbance areas below:

Table 2 – Disturbance Areas

Project Area	Pre-Production Acres	Production Acres
Well Pad Working Pad Surface	7.52*	4.27*
Well Pad Cut/Fill Slopes, Ditches, & Berms	12.48*	4.09*
Total Well Pad Disturbance	20.00	8.36
Total Access Road Disturbance	4.56	4.56
Total	24.56	12.92

*Note: Area is already included in the Total Well Pad Disturbance

It is anticipated that heavy construction equipment will construct the working pad surfaces and stormwater BMPs of this project. Construction of the Pre-Production and Production Working Pad Surfaces will consist of:

- Clearing and grubbing the vegetation
- Stripping and stockpiling the topsoil
- Grading the working pad area, stormwater diversion ditches, berms, and sediment control structures
- Installing stormwater detention structures
- Installing construction BMPs
- Installing stormwater BMPs

Topsoil piles and excess subsurface soil piles (if any) will be separated and protected from erosion, offsite sediment transport, and degradation.

Further site development will consist of:

- Mobilization of Pre-Production equipment
- Developing wells
- Installing Production equipment

Site development can vary depending on the site-specific conditions.

C. TOPSOIL STORAGE REQUIREMENTS

- Calculations: Stored topsoil volumes necessary to facilitate subsequent or final reclamation shall be calculated based off areas remaining for production operations and integrated as part of the interim reclamation area per Rule 1003.
- Interim Reclamation: Placement and distribution will be determined by disturbance area boundaries, surface owner input, land use, and topography.
- Topsoil Protection: Stored topsoil shall be protected from erosion and to maintain soil microbial activity, using a combination of best management practices, such as proper design of stockpile depth and contour, stabilizing with mulch, seeding, track walking, perimeter control, establishment of vegetation and weed control.
- Signage and Identification: Stored topsoil locations will be documented per Rule 1002.b. Signage identifying topsoil shall be installed, where feasible, and based on land use.

D. SITE SPECIFIC CONSTRUCTION REQUIREMENT

Prior to commencement of any disturbance, perimeter BMPs will be installed to protect downstream lands from sediment pollution. Once the working area is secure, the well pad will be stripped of topsoil to a depth consistent with the Topsoil Management Plan. The topsoil will be separated and stockpiled. Then the site will be graded, redistributing material across the site between cut and fill areas to reach final pad subgrade elevation. During this process, fill areas will be properly compacted to ensure the working pad surface integrity and stabilization. Water will be used to assist with compaction as well as minimize dust migration as described in the Dust Mitigation Plan. All excess material, if any, will be separated and stockpiled. The contractor will place a capping material (roadbase) on the pad surface and road to a compacted depth as showing on the construction plans to stabilize the road and location. All, stockpiles, cut/fill slopes, ditches, and berms will be stabilized with drill seed and mulch or similar equivalents and have stormwater BMPs installed.

E. DISTURBANCE REDUCTION & RECLAMATION

1. Disturbance Reduction and Interim Reclamation

Once all drilling and completion activities are complete, the working pad surface size will be reduced to minimize the site disturbance during the Production Phase. Enough working pad surface must remain to ensure a safe working environment for continued oil and gas gathering and production operations. All areas needed for ongoing operations will be stabilized for the long-term life of the production pad. All areas not needed will be reclaimed as described below, and in accordance with the Interim Reclamation Plan.

2. Reclamation

Crestone Peak Resources Operating LLC will adhere to an interim reclamation plan as identified in the grading plans. This plan will establish proper planning and execution for reclamation in areas that are affected by oil and gas location construction and development, but no longer in use by production operations. When all wells on a location are completed and turned over to production, the drilling footprint will be reduced, and areas not needed for production will be restored and re-vegetated in accordance with ECOM 1000 series reclamation regulations and consistent with the requirements of Rule 1003 Interim Reclamation. Reference shall also be made to Rules 304.c(14) Topsoil Protection Plan and 304.c(15) Stormwater Management Plan during this process. Soil and aggregate mix used to build a compacted working surface will be removed in areas no longer needed for production. All segregated soil horizons removed from the disturbance area shall be replaced to their original relative positions and contour based on final land use and shall be tilled adequately to alleviate

compaction and re-establish a proper seedbed. The area shall be treated as necessary to prevent invasion of undesirable species and noxious weeds as practicable. The Site will be stabilized, inspected, and maintained to control erosion. Developed areas to be reclaimed will be stripped of topsoil, cross-ripped to 18" or bedrock (compaction alleviation), and graded to pre-development conditions. Surface treatment will consist of reapplying the topsoil and seeding and mulching. Reclaimed areas will be restored to as nearly as practicable to the site's pre-developed condition. The reclaimed areas will be monitored until final stabilization is achieved. All reclamation shall be completed within 12 months on non-crop land.

Successful reclamation of the well site and access road will be considered completed when:

- a. All construction activities are complete
- b. All working pad surface areas are stabilized from compaction and erosion for the remainder of the project
- c. All seeded and mulched areas have achieved a desirable vegetation density when:
 - i. On Crop Land: reclamation has been performed as per Rules 1003 & 1004 and observation by the Director over two (2) growing seasons has indicated no significant unrestored subsidence
 - ii. On Non-Crop Land: reclamation has been performed as per Rules 1003 & 1004 and disturbed areas have been either built on, compacted, paced, or otherwise stabilized in such a way as to minimize erosion to the extent practicable, or a uniform vegetative cover has been established that reflects the pre-development or reference area forbs, shrubs, and grasses with a total plant cover of at least eighty percent (80%) of pre-development or reference area levels, excluding noxious weeds, as determined by the Director through visual appraisal.
- d. Disturbances resulting from flow line installations shall be deemed adequately reclaimed when the disturbed area is reasonably capable of supporting the pre-development land use.
- e. A final reclamation inspection has been completed by the Director, or a representative appointed by the Director, there are no outstanding compliance issues relating to commission rules, regulations, orders, permit conditions or the act, and the Director has notified the operator that final reclamation has been approved. A Sundry Notice Form 4 will be submitted by the operator when final stabilization has been achieved when. The sundry notice will describe the final reclamation procedures and mitigation measures and any changes in the landowner's designated final land use (if applicable).

F. ABANDONMENT

Once the operator has made the decision to no longer operate production and gathering operations on a well, it will be plugged and abandoned (P&A). All equipment associated with the well's oil and gas gathering and producing will be removed from the location. If the well pad and access road is no longer needed, it will be recontoured and reclaimed to its pre-developed conditions and/or in accordance with the surface owner's wishes.

III. SWMP REQUIREMENTS

Crestone Peak Resources Operating LLC has a field-wide master SWMP that covers their construction activities within this area. Also, construction activities within this area are covered under and governed by the CDPS General Permit for Discharges Associated with Construction Activity (Permit No. COR401104).

Stormwater BMPs will be employed in accordance with good engineering, hydrologic, and pollution control

practices in order to prevent pollution in stormwater discharges associated with the development of the Bijou 3-65 19-24 North Pad . All personnel, including applicable contractors, shall comply with the contents of this SWMP plan.

All information and conditions represented this SWMP are estimated and intended as a preliminary plan. As stated previously, this SWMP is intended to be a living document which should be updated routinely as site conditions change. Actual placement of BMP's may deviate based on actual conditions encountered at the site.

A. QUALIFIED STORMWATER MANAGEMENT PLAN MANAGER

The qualified SWMP Manager (QSM) has the authority to dedicate the financial and human resources needed to install & implement SWMP control measures, conduct inspections, keep records, report incidents, and make repairs and/or changes in design. The following person has been assigned as the QSM.

Lisa David
650 Southgate Dr Windsor, CO 80550 Office: (303)-294-7893

B. STATE SWMP REQUIREMENTS

Site inspections must be conducted in accordance with the following requirements. The required inspection schedules are a minimum frequency and do not affect the permittee's responsibility to implement control measures in effective operating condition as prescribed in the SWMP. Proper maintenance of control measures may require more frequent inspections. Site inspections shall start within 7 calendar days of the commencement of construction activities on site.

The person(s) inspecting the site may be on the permittee's staff or a third party hired to conduct stormwater inspections under the direction of the permittee(s). The permittee is responsible for ensuring that the inspector is a qualified stormwater manager.

1. Site Inspections Frequency

Permittees must conduct site inspections at least once every 7 calendar days for sites that discharge to a water body designated as an Outstanding Water by the Water Quality Control Commission. Otherwise, permittees must conduct site inspections in accordance with the following minimum frequencies:

- a. At least one inspection every 7 calendar days; or
- b. At least one inspection every 14 calendar days, if post-storm event inspections are conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Post-storm inspections may be used to fulfill the 14-day routine inspection requirement.
- c. Post-construction stormwater inspections will be conducted in accordance with ECMC Rules 1002.f and 1003.e, to document the status of the location, maintenance needs, effectiveness of stormwater control measures, to evaluate pollution sources, and to document reclamation/final stabilization progress. Inspections will be managed by the Stormwater Manager and conducted by their designated representative(s).
- d. When site conditions make the schedule required in this section impractical, the permittee may petition the division to grant an alternate inspection schedule. The alternative inspection schedule may not be implemented prior to written approval by the division and incorporation into the SWMP.

2. Reduced Inspection Frequency

The permittee may perform site inspections at the following reduced frequencies when one of the following conditions exists:

a. Post-Storm Inspections at Temporarily Idle Sites

For permittees choosing to combine 14-day inspections and post-storm-event-inspections, if no construction activities will occur following a storm event, post-storm event inspections must be conducted prior to re-commencing construction activities, but no later than 72 hours following the storm event. The delay of any post-storm event inspection must be documented in the inspection record. Routine inspections must still be conducted at least every 14 calendar days.

b. Inspections at Completed Sites/Areas

When the site, or portions of a site, are awaiting establishment of a vegetative ground cover and final stabilization, the permittee must conduct a thorough inspection of the stormwater management system at least once every 30 days. Post-storm event inspections are not required under this schedule. This reduced inspection schedule is allowed if all of the following criteria are met:

- All construction activities resulting in ground disturbance are complete;
- All activities required for final stabilization, in accordance with the SWMP, have been completed, with the exception of the application of seed that has not occurred due to seasonal conditions or the necessity for additional seed application to augment previous efforts; and
- The SWMP has been amended to locate those areas to be inspected in accordance with the reduced schedule allowed for in this paragraph.

3. Inspections Exclusion

Inspections are not required for sites that meet the following conditions:

- a. Construction activities are temporarily halted
- b. Snow cover exists over the entire site for an extended period of time and there is no snowmelt (only applies to the routine 7-day, 14-day and monthly inspections, as well as the post-storm-event inspections)

When the permittee has an inspection exclusion, the following information must be documented in accordance with permit requirements:

- a. Dates when construction activities began & ended
- b. Dates when snow cover existed and date when snow melt began

C. LOCAL SWMP REQUIREMENTS

Crestone Peak Resources Operating, LLC has an executed Field wide Report Stormwater Management Plan for Well Pads and Access Road with the City of Aurora. "Pursuant to Sections 138-440 and 138-442 of the Aurora Municipal Code, the Permittee shall location, install, and maintain all Best Management Practices, including, but not limited to, erosion controls, sediment controls, drainage controls, and water quality BMPs as indicated in the approved Stormwater Management Plan (SWMP). The following notes are a requirement and shall be included in the SWMP narrative developed for this project and submitted for the approval by the City. BMP installations shall be installed per the COA Standard Detail in effect at the time of installation or per approved SWMP design drawing, COA approved variance, or a COA approved design drawing plan amendment."

COA Stormwater Management Standard Notes:

1. A City of Aurora Stormwater Quality Discharge Permit for Construction Activities must be issued by the City and executed by a COA Erosion Control staff prior to any earthwork activities. An on-site inspection will be conducted to verify the correct installation and adequacy of initial BLMPS for the site. No earthwork, including clearing and grubbing, or demolition activities are to begin until the project site has passed an inspection and the City of Aurora Stormwater Quality Discharge Permit for Construction Activities has been executed. The Permittee is required to present the project's CDPHE-WQCH Stormwater Discharge Associated with Construction Activities Permit to the Inspector during the initial inspection. The Permittee shall designate a Stormwater Management Plan (SWMP) Administrator on the application for the City of Aurora Stormwater Quality Discharge Permit for Construction Activities. The SWMP Administrator will act as the project representative for any concerns or issues regarding environmental controls and stormwater management.
2. The requirements shall be the obligation of the Permittee, until such time as the Permit is properly closed, or otherwise allowed by the City to be voided, modified, transferred, re-assigned or replaced.
3. This SWMP Narrative, the SWMP design drawings, and the Permittee's inspection and maintenance records are all components of required record keeping and shall be kept on site at all times and updated as required. These and any other pertinent records shall be provided to the City when requested.
4. Any discrepancy between the SWMP and any other approved Stormwater Management Plan for this site shall require compliance with the more restrictive, valid, approved plan.
5. Streets shall be constructed with Rough Cut Street Control measures, surface roughened or otherwise temporarily stabilized with rough cut street controls within seven (7) days of completion of grading in the appropriate phase. If paving is to occur within fourteen (14) days after final grading, rough cut street controls shall be waived.
6. Inspections and maintenance of erosion and sediment control Best Management Practices (BMPs) are the continuous obligation of the Permittee. BMPs shall be inspected at a minimum every seven (7) days and within 24-hours after the end of a precipitation event that produced run-off, and following snowmelt events. If a site is temporarily idle and no construction activities will occur during the 48 hours following a storm event, the post-precipitation event (including snowmelt) inspection shall be conducted prior to commencing construction activities on the site, but no later than 72 hours following the storm event. All necessary maintenance and repairs shall be initiated and completed on an on-going basis, as features are required to operate continuously. Inspection may need to be conducted at a greater frequency than noted above, to ensure features and systems are operating adequately. Erosion and sediment control BMPs shall be maintained and functional for the entire duration of the project.
7. Ingress and egress vehicle access points onto disturbed areas shall be stabilized with Vehicle Tracking Control Pads (VTC) and shall be constructed with angular rock, 3" to 6" in size and to a depth of at least 9-inches. The use of recycled asphalt or concrete is not permitted. The VTC shall be installed over a liner of non-woven geotextile with a weight of at least 10oz/yd² and a grab tensile strength of at least 250 pounds. No dirt or other materials shall be placed on paved surfaces or curb flowlines to act as curb ramps. Only metal ramps or rock wattles may be used in the curb flowline.
8. Fugitive dust emissions resulting from grading activities and/or wind shall be controlled using reasonably available control technology as defined by the Colorado Department of Public Health and Environment.
9. All potential pollution sources on-site shall be identified and control measures installed and practiced to minimize the likelihood of a release. Spill prevention controls shall be developed for the site with BMPs in place to respond to any spills, leaks or other releases.
10. Hydraulic mulching as a means to cover and protect seeding is not an acceptable means of applying mulch in the City of Aurora unless a previously installed irrigation system is used to aid in germination and growth and where approved through variance. Hydraulic seeding is not permitted.

11. For all porous landscape detention facilities, in order to prevent clogging of filter medium, installation of the filtration system must be delayed until after the site is fully landscaped.
12. If stockpiles are located within 100 feet of a drainageway or a public storm sewer system, additional sediment controls such as temporary diversion dikes, silt fence, or sediment basin shall be required.

D. SWMP INSPECTION SCOPE

When conducting a SWMP site inspection:

1. Visually verify whether all implemented control measures 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 control measures 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(s).

The following areas, if applicable, must be inspected for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters:

1. All disturbed areas
2. Ditches, berms, and any areas with stormwater mitigation
3. Site perimeter
4. Spill containment areas
5. Topsoil & material stockpiles
6. All locations where stormwater has the potential to discharge offsite
7. Locations where vehicles enter/exit the working pad surface

The permittee must keep a record of all SWMP inspections conducted for each permitted site. Inspection reports must identify any incidents of noncompliance with the terms and conditions of this permit. Inspection records must be retained and signed in accordance with the SWMP. At a minimum, the inspection report must include:

1. Facility Name
2. Inspector's name, title, and company
3. Date of inspection
4. Weather conditions at the time of inspection
5. Phase of construction at the time of inspection
6. Estimated acreage of disturbance at the time of inspection
7. Location(s) and identification of discharges of sediment or other pollutants from the site
8. Location(s) and identification of control measures needing maintenance
9. Location(s) and identification of inadequate control measures
10. Location(s) and identification of additional control measures needed that were not in place at the time of inspection
11. Location of discharges of sediment or other pollutants from the site
12. Description of inspection frequency and any deviations from the minimum inspection schedule.

This would include documentation of division approval for an alternate inspection schedule. Location and description of corrective action(s) that have been taken, or where a report does not identify any incidents requiring corrective action, the report shall contain a statement.

IV. APPENDIX

APPENDIX A – VICINITY MAP & LOCATION PHOTOS

R
65
W

EXISTING POWER LINE (TYP.)

2000' OFFSET
FROM
PROPOSED
ACCESS ROAD

PROPOSED LOCATION:
BIJOU 3-65 19-24 NORTH PAD

PROPOSED ACCESS 2,375' +/-

PROPOSED ACCESS 459' +/-

E. 38TH AVE

MONAGHAN ROAD

T3S






NOTES:

- There are no RBU within 2,000' of the proposed access road or the working pad surface.

LEGEND:

- 1** INSTALL CATTLE GUARD & GATE
- 2** INSTALL 24" CULVERT

LEGEND:

-  WORKING PAD SURFACE
-  EXISTING ROAD
-  PROPOSED ACCESS ROAD
-  POWER LINE
-  PROPOSED FENCE



UELS, LLC

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REV: 2 09-28-23 P.M. (CORRECT QTR/QTR IN TITLE BLOCK)

**CRESTONE PEAK
RESOURCES OPERATING LLC**

BIJOU 3-65 19-24 NORTH PAD
SE 1/4 NW 1/4, SECTION 21, T3S, R65W, 6th P.M.
ADAMS COUNTY, COLORADO

SURVEYED BY	JAYSEN CHILDERS	07-03-23	SCALE
DRAWN BY	K.C.	07-26-23	1 : 12,000

ACCESS ROAD MAP

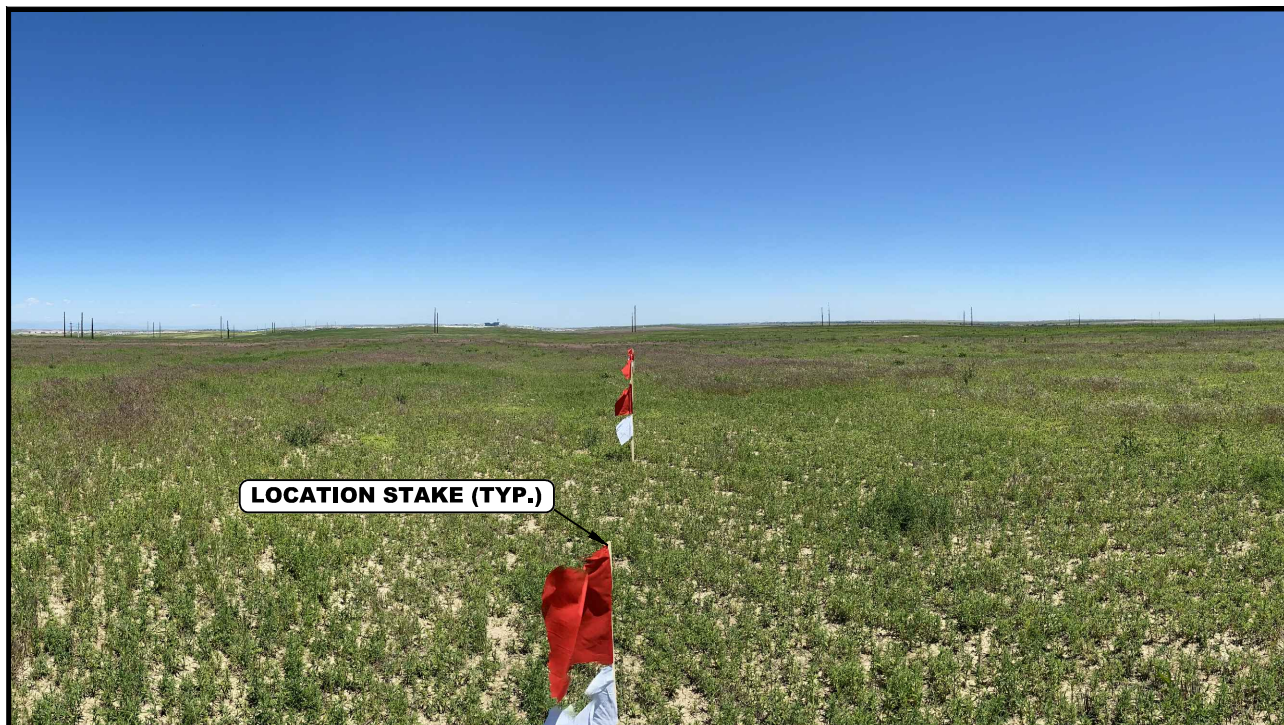


PHOTO: VIEW OF LOCATION STAKES

CAMERA ANGLE: NORTHERLY



PHOTO: VIEW OF LOCATION STAKES

CAMERA ANGLE: EASTERLY

REV: 1 09-28-23 P.M. (CORRECT QTR/QTR IN TITLE BLOCK)

**CRESTONE PEAK
RESOURCES OPERATING LLC**

**BIJOU 3-65 19-24 NORTH PAD
SE 1/4 NW 1/4, SECTION 21, T3S, R65W, 6th P.M.
ADAMS COUNTY, COLORADO**

TAKEN BY	JAYSEN CHILDERS	07-03-23	
DRAWN BY	K.C.	07-26-23	
LOCATION PHOTOS			PHOTO 1



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

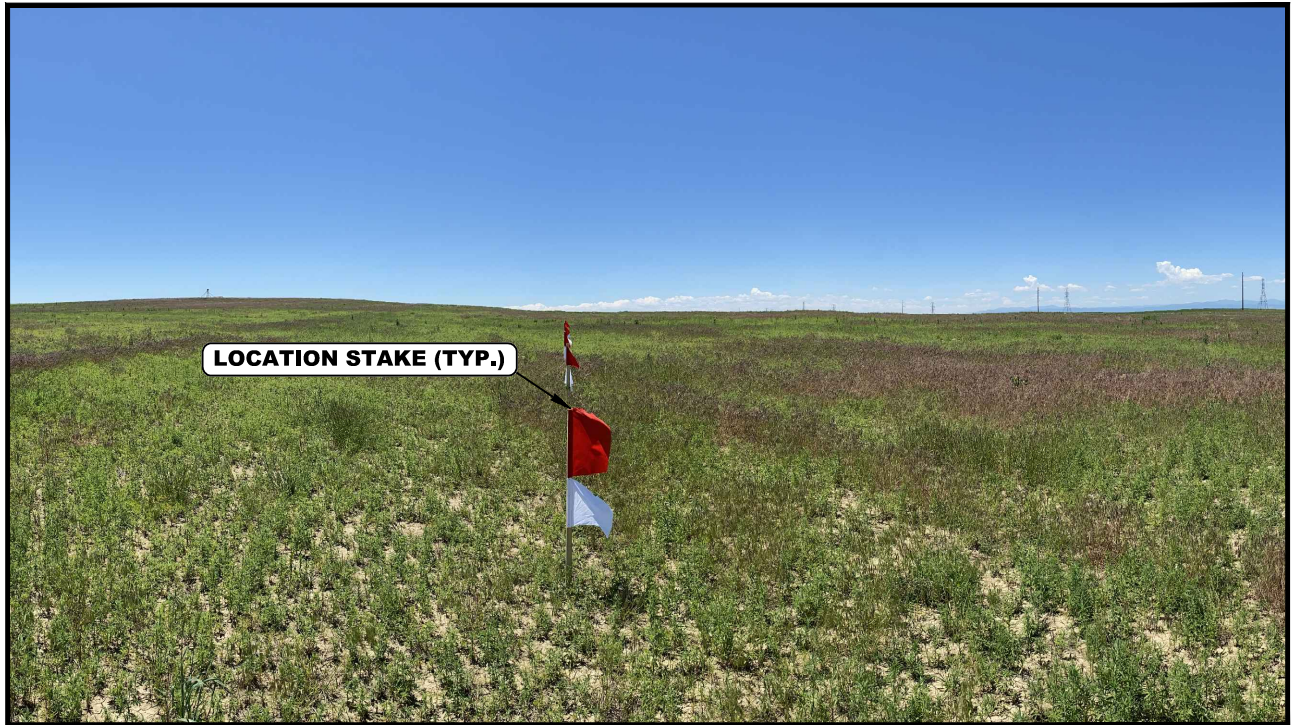


PHOTO: VIEW OF LOCATION STAKES

CAMERA ANGLE: SOUTHERLY



PHOTO: VIEW OF LOCATION STAKES

CAMERA ANGLE: WESTERLY

REV: 1 09-28-23 P.M. (CORRECT QTR/QTR IN TITLE BLOCK)

**CRESTONE PEAK
RESOURCES OPERATING LLC**

**BIJOU 3-65 19-24 NORTH PAD
SE 1/4 NW 1/4, SECTION 21, T3S, R65W, 6th P.M.
ADAMS COUNTY, COLORADO**

TAKEN BY	JAYSEN CHILDERS	07-03-23	
DRAWN BY	K.C.	07-26-23	
LOCATION PHOTOS			PHOTO 2



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

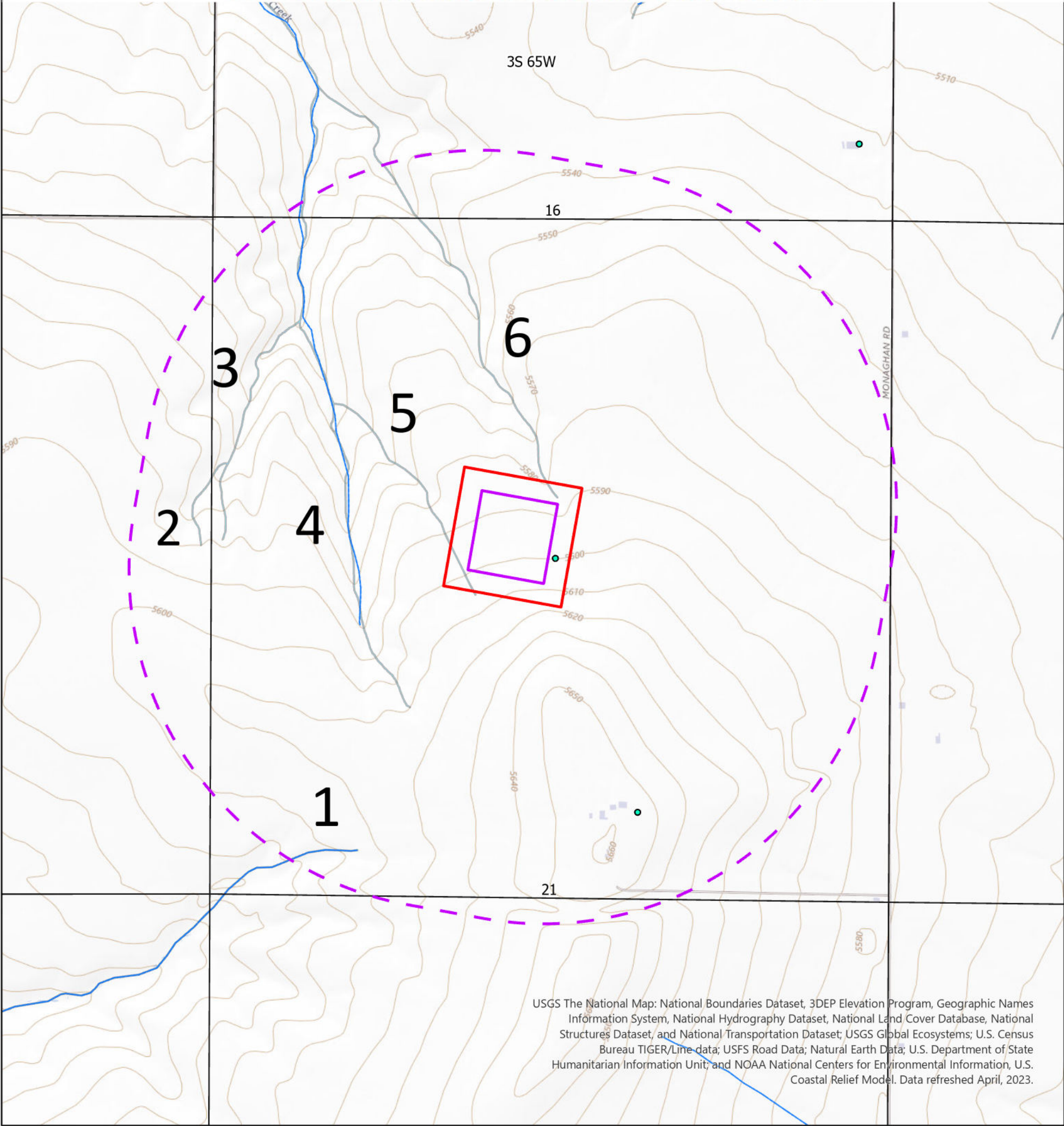
APPENDIX B – HYDROLOGY MAP

CRESTONE PEAK RESOURCES OPERATING, LLC
BIJOU 3-65 19-24 NORTH
SEC 21, T3S, R65W, 6th P.M.
ADAMS COUNTY, COLORADO



Feature Number	Feature Type	Approximate Distance and Direction from The WPS
1	First Creek Tributary T*	Approximately 2,355 feet south. Downgradient
2	Unnamed Tributary to Second Chance Creek*	Approximately 2,085 feet west. Downgradient
3	Unnamed Tributary to Second Chance Creek*	Approximately 1,890 feet west. Downgradient
4	Second Chance Creek*	Approximately 830 feet west. Downgradient
5	Unnamed Tributary to Second Chance Creek*	Feature 5 is mapped abutting the southwestern corner of the WPS
6	Unnamed Tributary to Second Chance Creek*	Feature 6 is mapped terminating within the boundaries of the WPS

There are no Rule 411 buffer zones, Public Water System Facilities, or surface waters that are 15 stream miles upstream of a Public Water System intake within 2,640 feet of the WPS. The features listed above were field verified by qualified biologists on May 8, 2023. Wetland delineation survey was contained to a 500 foot buffer surrounding the proposed OGL. * No OHWM was observed at the time of field survey.

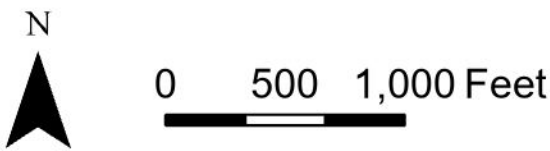


USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed April, 2023.

HYDROLOGY
MAP

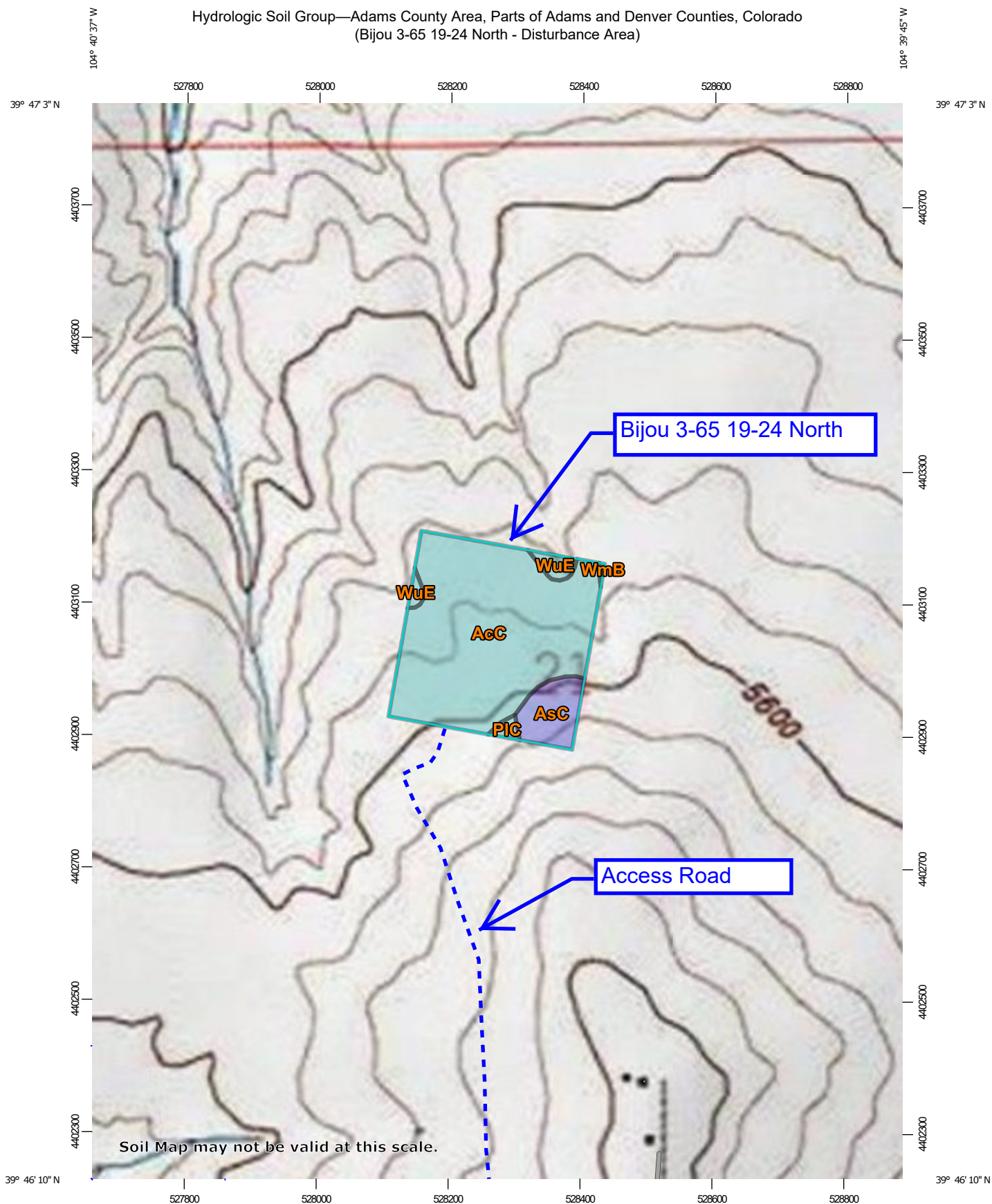
- Disturbance (Oil and Gas Location (OGL))
- Working Pad Surface (WPS)
- 2,640 Foot Buffer Around WPS
- Public Permitted Water Wells
- NHD-Mapped Stream/River
- NWI Mapped Riverine

Projection: WGS 1984
Date: 8/8/2023
Drafted by: JLL
Revised: 10/12/2023

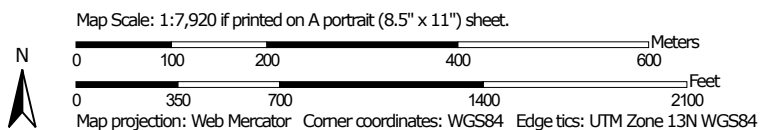


APPENDIX C – NRCS WEB SOIL SURVEY REPORT

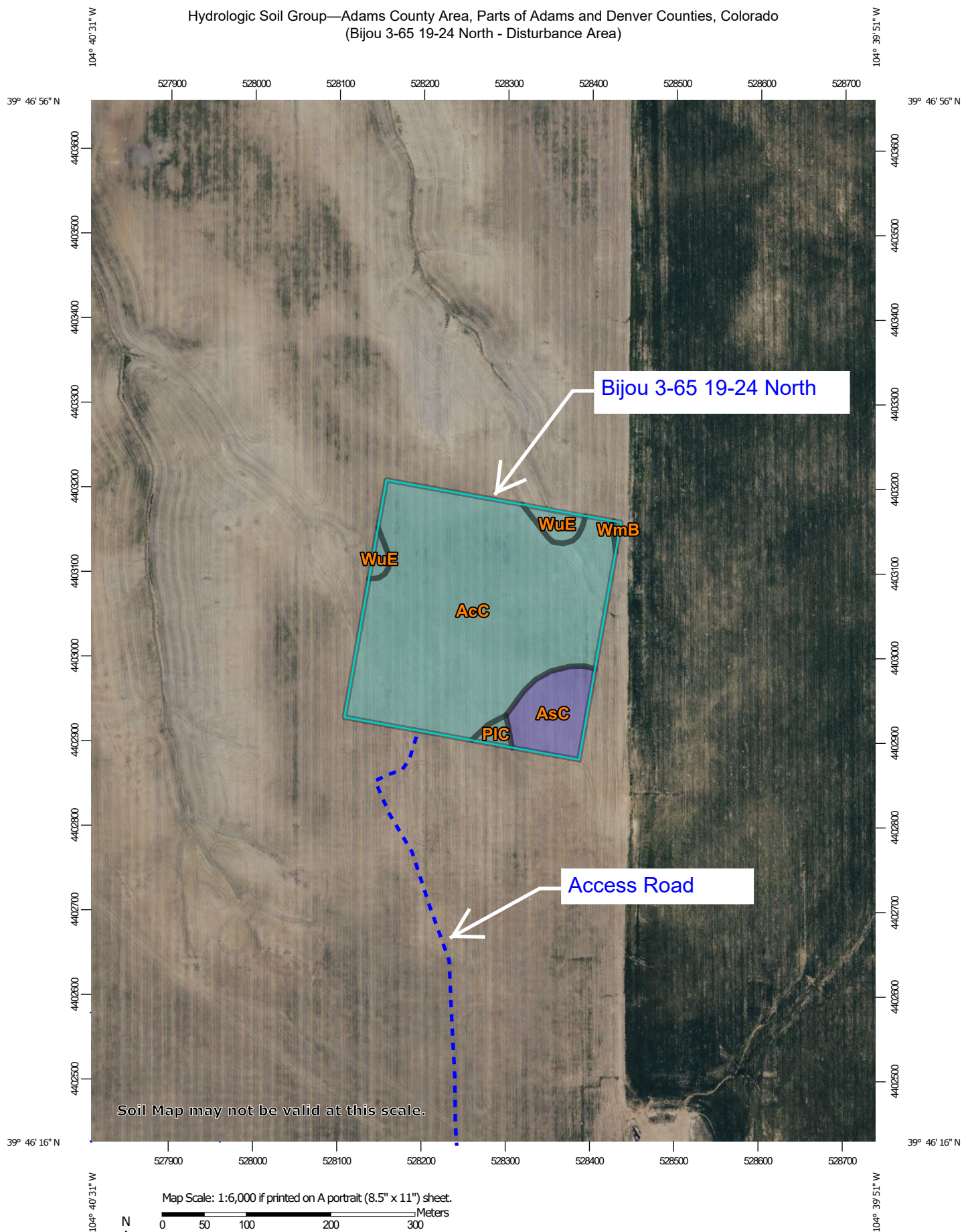
Hydrologic Soil Group—Adams County Area, Parts of Adams and Denver Counties, Colorado (Bijou 3-65 19-24 North - Disturbance Area)



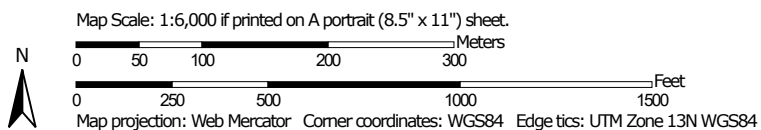
Soil Map may not be valid at this scale.



Hydrologic Soil Group—Adams County Area, Parts of Adams and Denver Counties, Colorado (Bijou 3-65 19-24 North - Disturbance Area)




Soil Map may not be valid at this scale.



Hydrologic Soil Group—Adams County Area, Parts of Adams and Denver Counties, Colorado
(Bijou 3-65 19-24 North - Disturbance Area)

MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Adams County Area, Parts of Adams and Denver Counties, Colorado
 Survey Area Data: Version 19, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AcC	Adena-Colby association, gently sloping	C	17.00	84.9%
AsC	Ascalon sandy loam, 3 to 5 percent slopes	B	2.10	10.3%
PIC	Platner loam, 3 to 5 percent slopes	C	0.20	1.2%
WmB	Weld loam, 1 to 3 percent slopes	C	0.00	0.2%
WuE	Wiley-Adena-Renohill complex, 3 to 20 percent slopes	C	0.70	3.4%
Totals for Area of Interest			20.00	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

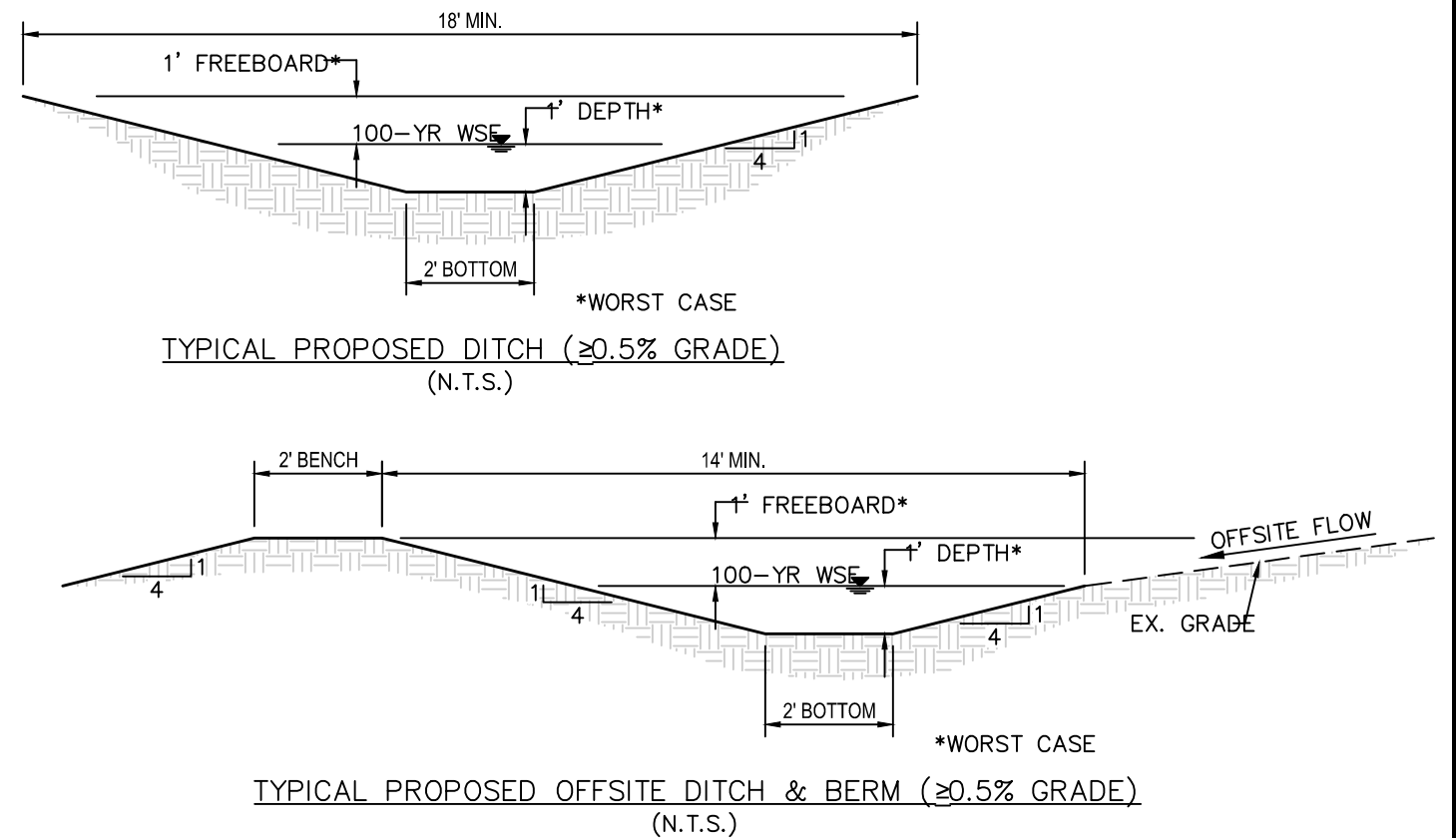
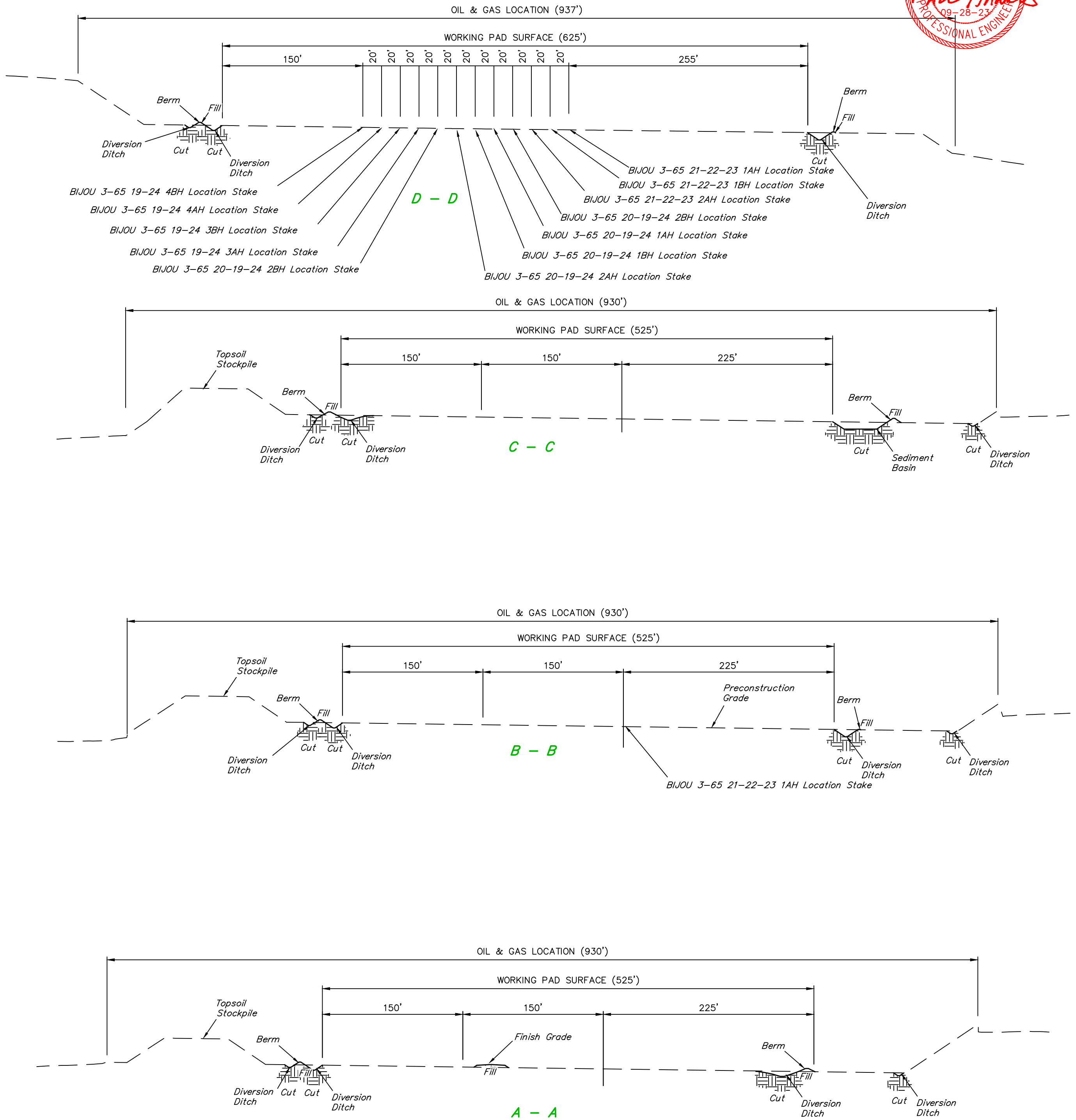
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX D – PRE-PRODUCTION & PRODUCTION CONSTRUCTION PLANS

1" = 30'
X-Section
Scale
1" = 80'



APPROXIMATE EARTHWORK QUANTITIES	
(13") TOPSOIL STRIPPING	34,850 Cu. Yds.
WELL PAD CUT	2,410 Cu. Yds.
ACCESS ROAD CUT	50 Cu. Yds.
DITCHES & SED BASIN CUT	2,110 Cu. Yds.
TOTAL CUT	39,420 Cu. Yds.
WELL PAD FILL	1,010 Cu. Yds.
ACCESS ROAD FILL	870 Cu. Yds.
DITCHES & SED BASIN FILL	180 Cu. Yds.
TOTAL FILL	2,060 Cu. Yds.
EXCESS MATERIAL	37,360 Cu. Yds.
TOPSOIL USED	16,780 Cu. Yds.
TOPSOIL TO BE STOCKPILED	18,070 Cu. Yds.
SPOILS TO BE STOCKPILED	2,510 Cu. Yds.
GRAVEL BASE ON PAD (6")	6,050 Cu. Yds.
GRAVEL BASE ON ACC RD (6")	1,600 Cu. Yds.

APPROXIMATE WELL SITE DISTURBANCE AREAS	
WORKING PAD SURFACE DISTURBANCE	±7.52 ACRES
CONSTRUCTION DISTURBANCE	±12.48
TOTAL OIL & GAS LOCATION	±20.00
APPROXIMATE SURFACE DISTURBANCE AREAS	
CONSTRUCTION DISTURBANCE	NA ±20.00
ACCESS ROAD DISTURBANCE	±2665' ±4.56
TOTAL SURFACE USE AREA	±24.56

NOTES:

- Fill quantity includes 10% for compaction.
- Calculations based on 13" of topsoil stripping.
- Cut/Fill slopes 4:1 (Typ.).
- Round corners at 35' radius or as needed.



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

REV: 1 09-28-23 P.M. (CORRECT QTR/QTR IN TITLE BLOCK)

CRESTONE PEAK
RESOURCES OPERATING LLC

BIJOU 3-65 19-24 NORTH PAD
SE 1/4 NW 1/4, SECTION 21, T3S, R65W, 6th P.M.
ADAMS COUNTY, COLORADO

SURVEYED BY	JAYSEN CHILDERS	07-03-23	SCALE
DRAWN BY	K.C.	09-19-23	AS SHOWN

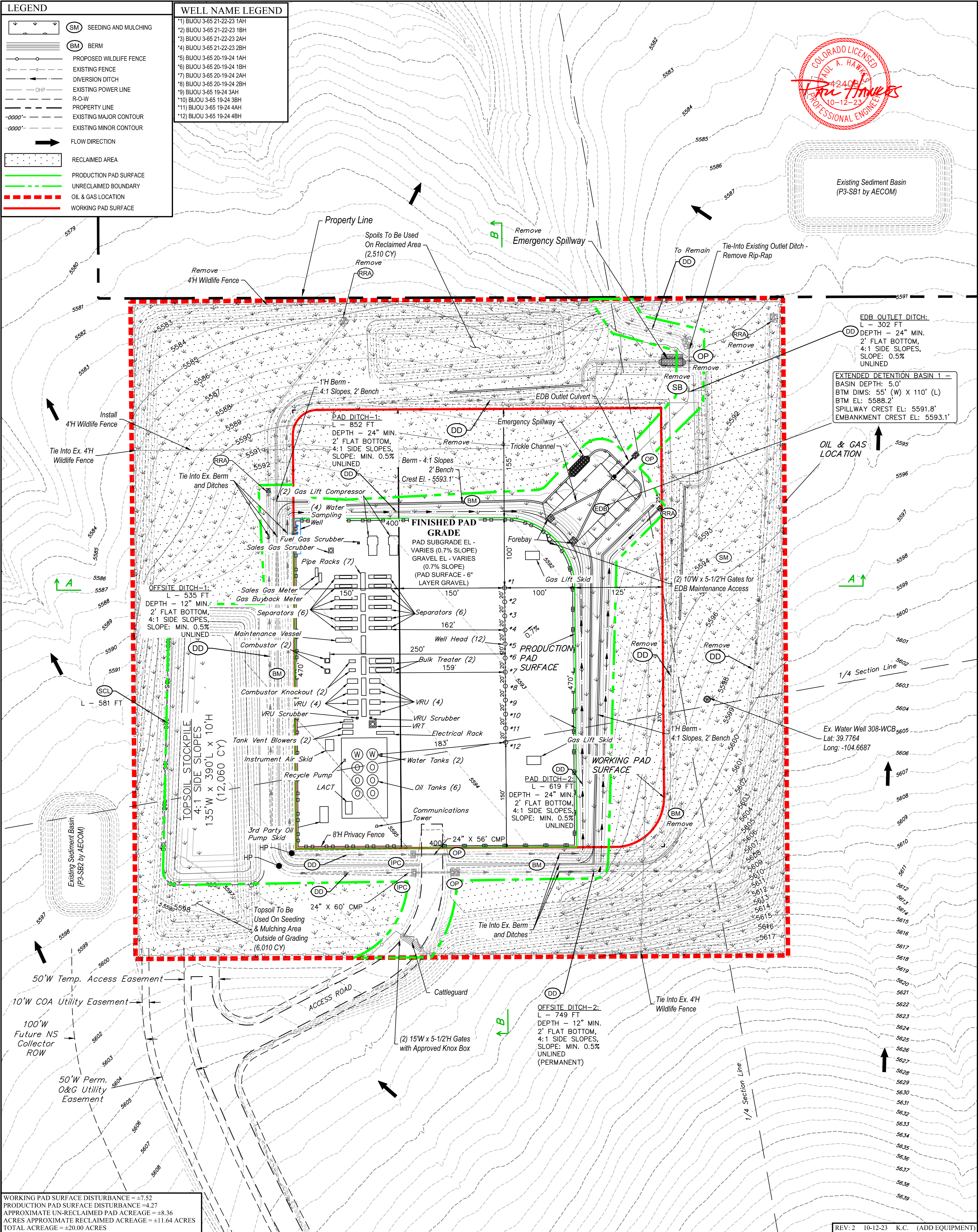
CONSTRUCTION LAYOUT - CROSS SECTIONS

LEGEND

SEEDING AND MULCHING
BERM
PROPOSED WILDLIFE FENCE
EXISTING FENCE
DIVERSION DITCH
EXISTING POWER LINE
R-O-W
PROPERTY LINE
EXISTING MAJOR CONTOUR
EXISTING MINOR CONTOUR
FLOW DIRECTION
RECLAIMED AREA
PRODUCTION PAD SURFACE
UNRECLAIMED BOUNDARY
OIL & GAS LOCATION
WORKING PAD SURFACE

WELL NAME LEGEND

*1) BJOU 3-65 21-22-23 1AH
*2) BJOU 3-65 21-22-23 1BH
*3) BJOU 3-65 21-22-23 2AH
*4) BJOU 3-65 21-22-23 2BH
*5) BJOU 3-65 20-19-24 1AH
*6) BJOU 3-65 20-19-24 1BH
*7) BJOU 3-65 20-19-24 2AH
*8) BJOU 3-65 20-19-24 2BH
*9) BJOU 3-65 19-24 3AH
*10) BJOU 3-65 19-24 3BH
*11) BJOU 3-65 19-24 4AH
*12) BJOU 3-65 19-24 4BH

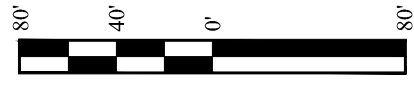


WORKING PAD SURFACE DISTURBANCE = ±7.52
PRODUCTION PAD SURFACE DISTURBANCE = ±4.27
APPROXIMATE UN-RECLAIMED PAD ACREAGE = ±8.36
ACRES APPROXIMATE RECLAIMED ACREAGE = ±11.64 ACRES
TOTAL ACREAGE = ±20.00 ACRES

- NOTES:**
- Contours shown at 1' intervals.
 - Cut/Fill slopes 4:1 (Typ.).
 - Overall Working Pad Surface = 625' x 525'
 - Overall Production Pad Surface = 470' x 400'



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



REV: 2 10-12-23 K.C. (ADD EQUIPMENT)

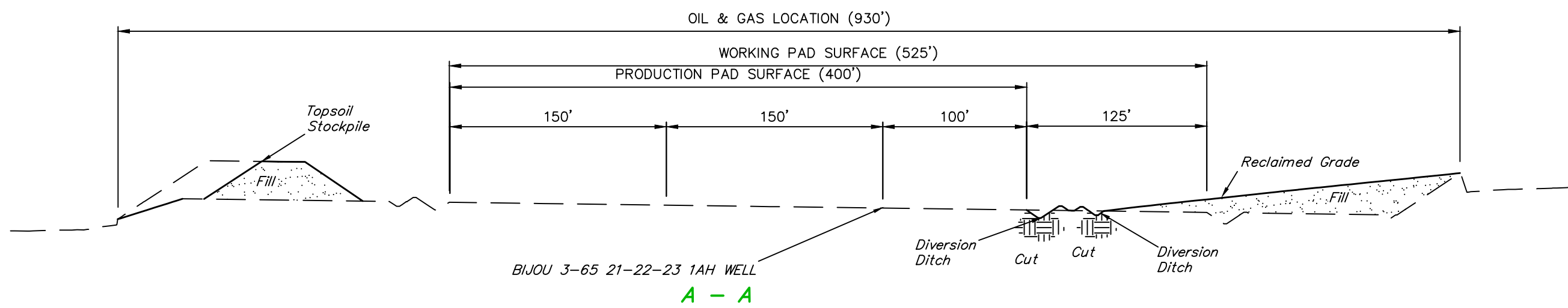
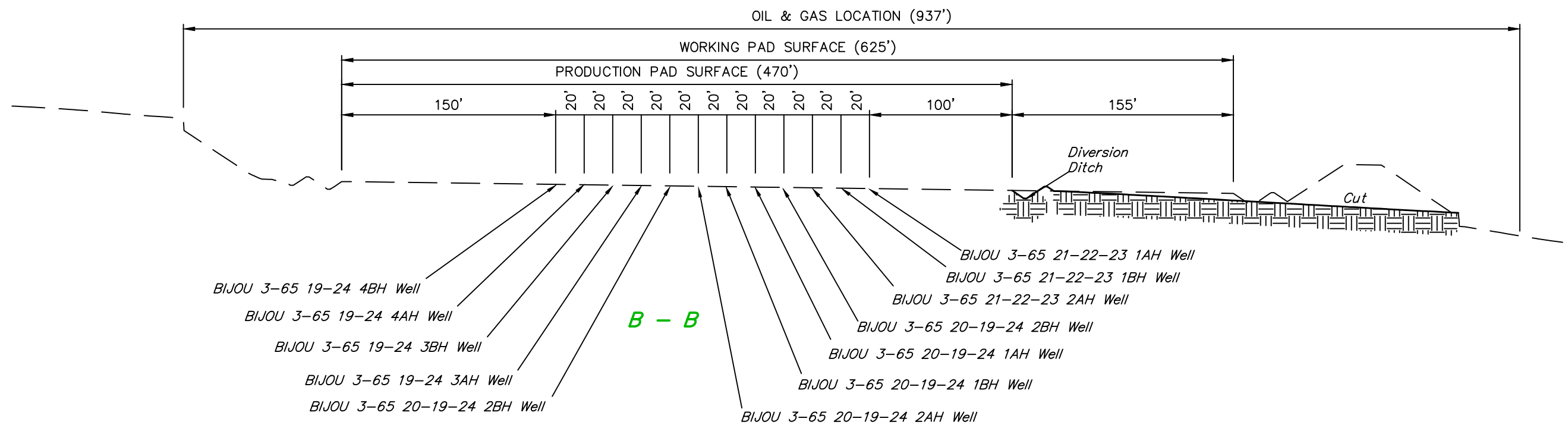
**CRESTONE PEAK
RESOURCES OPERATING LLC**

BJOU 3-65 19-24 NORTH PAD
SE 1/4 NW 1/4, SECTION 21, T3S, R65W, 6th P.M.
ADAMS COUNTY, COLORADO

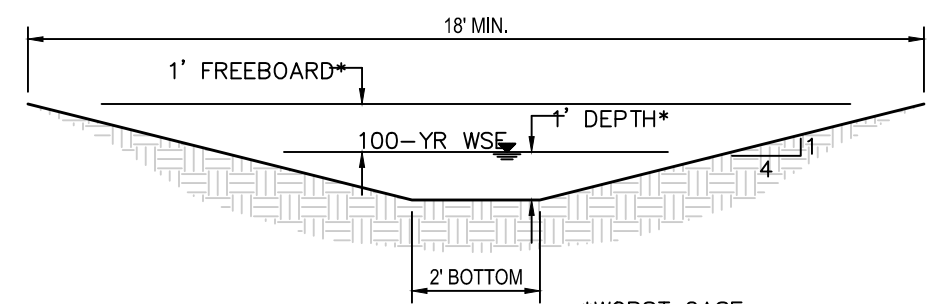
SURVEYED BY	JAYSEN CHILDERS	07-03-23	SCALE
DRAWN BY	K.C.	09-19-23	1" = 80'

INTERIM RECLAMATION LAYOUT

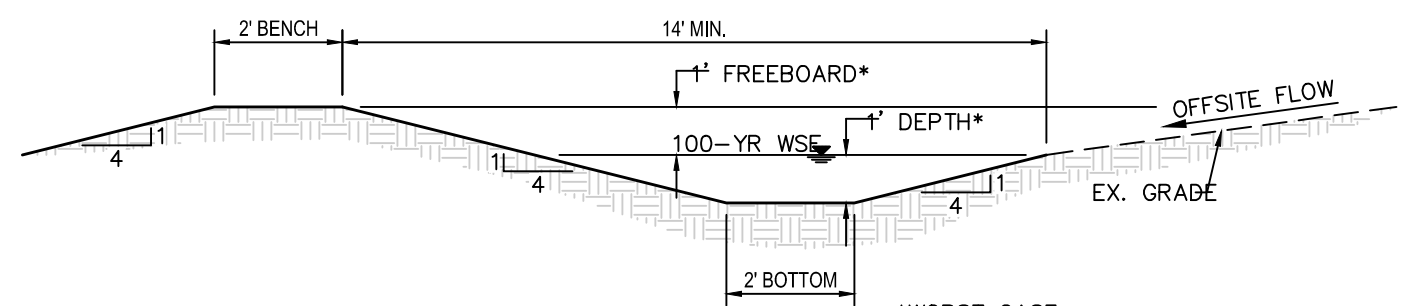
1" = 30'
X-Section
Scale
1" = 80'



APPROXIMATE EARTHWORK QUANTITIES	
(13") TOPSOIL STRIPPING	0 Cu. Yds.
PAD RECLAMATION	28,660 Cu. Yds.
TOTAL CUT	25,660 Cu. Yds.
PAD RECLAIM - FILL	49,770 Cu. Yds.
SPOILS STOCKPILE MATERIAL USED	2,510 Cu. Yds.
DEFICIT MATERIAL	18,600 Cu. Yds.
TOPSOIL ON RECLAIMED PAD	6,010 Cu. Yds.



TYPICAL PROPOSED PAD DITCH ($\geq 0.5\%$ GRADE)
(N.T.S.)



TYPICAL PROPOSED OFFSITE DITCH & BERM ($\geq 0.5\%$ GRADE)
(N.T.S.)

REV: 1 09-28-23 P.M. (CORRECT QTR/QTR IN TITLE BLOCK)

**CRESTONE PEAK
RESOURCES OPERATING LLC**

BIJOU 3-65 19-24 NORTH PAD
SE 1/4 NW 1/4, SECTION 21, T3S, R65W, 6th P.M.
ADAMS COUNTY, COLORADO

SURVEYED BY	JAYSEN CHILDERS	07-03-23	SCALE
DRAWN BY	K.C.	09-19-23	AS SHOWN

INTERIM RECLAMATION - CROSS SECTIONS



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

APPENDIX E - CDPS GENERAL PERMIT CERTIFICATION



COLORADO

**Department of Public
Health & Environment**

CERTIFICATION TO DISCHARGE
UNDER
CDPS GENERAL PERMIT COR400000
STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES

Certification Number: COR401104

This Certification to Discharge specifically authorizes:

Owner Crestone Peak Resources
Operator Crestone Peak Resources
to discharge stormwater from the facility identified as

COP Field Permit Arapahoe County West of Watkins

To the waters of the State of Colorado, including, but not limited to:

Box Elder Creek, Coal Creek, South Platte River

Facility Activity : Oil and Gas Exploration and Well Pad Development

Disturbed Acres: 315.17 acres

Facility Located at: County Line Rd and Watkins Rd Watkins CO 80137
Arapahoe County
Latitude 39.6714 Longitude -104.499444

Specific Information
(if applicable):

Certification is issued and effective: 1/29/2021
Expiration date of general permit: 3/31/2024

This certification under the permit requires that specific actions be performed at designated times. The certification holder is legally obligated to comply with all terms and conditions of the permit.

This certification was approved by:
Meg Parish, Section Manager
Permits Section
Water Quality Control Division



APPENDIX F – SITE-SPECIFIC SWMP BEST MANAGEMENT PRACTICES (BMPs)

The following are the site-specific SWMP BMPs.

1. Diversion Ditch(es)

Seven (7) Diversion Ditches will be constructed during the drilling/completions (active construction) and production (interim reclamation) at low points/outfalls from the diversion ditch network. Diversion ditches will surround the construction area capturing sediment laden runoff channeling into the down-gradient sediment basin. The Diversion Ditch is to be removed once Final Stabilization has been reached.

- The west and north pad ditch-1 will be 1,062'L with a depth of 24" min and 4:1 side slope with a 0.5% unlined minimum slope along the sides of the pad to the sediment basin.
- The south pad ditch-2 will be 173'L with a 24" depth and 4:1 side slope with 0.5% unlined minimum slope out-letting to the culvert underlying the access road.
- The east pad ditch-3 will be 829'L with a 24" depth and 4:1 side slope with 0.5% unlined minimum slope along the south and east sides of the pad to the sediment basin.
- The west off-site ditch-1 will be 820'L with a 12" depth and 4:1 side slope with 0.5% unlined minimum slope discharging to the rip rap apron north of the pad.
- The south off-site ditch-2 will be 194'L with a 12" depth and 4:1 side slope with 0.5% unlined minimum slope out-letting to the culvert underlying the access road.
- The south and east off-site ditch-3 will be 1,183'L with a 12" depth and 4:1 side slope with 0.5% unlined minimum slope discharging to the rip rap apron north and east of the pad.
- The outlet ditch will be 120'L with a 24" depth and 4:1 side slope with 0.5% unlined minimum slope discharging from the sediment trap

2. Berms

Berms help contain and divert runoff. Berms may be used for the upslope of cut or fill slopes to contain or divert surface water. The purpose of a berm is to contain surface water with a perimeter barrier or divert surface water when accompanied with a ditch. Berms will be placed along the exterior boundaries around the sediment. Berms and ditches will divert surface water to the on-pad sediment basin/detention basin. Berms will be 1' high with 4:1 slopes and 2' bench.

3. Culvert

This site will be constructed with two (2) culverts under the access road and an IPC for culvert protection. The culverts will be constructed on the west side of the pad at the access road entrance, both consisting of 24" x 58' and 24" x 60' CMP.

4. Sediment Basin (SB)/Detention Basin

The Sediment Basin will be constructed on the northeast side of the drill pad edge during the drilling/completions (active construction) and production (interim reclamation) at low points/outfalls from the diversion ditch network. Where the tributary disturbed area is greater than 1 acre, a sediment basin will be planned for the well site at the low point of the pad. It will be implemented at the downstream termination of the diversion ditches. The basin will contain silt from the upstream cut and fill slopes around the drill pad. Periodic maintenance of the sediment basin may be necessary to remove accumulated silt and debris. Sediment basins shall be installed before the site grading begins. Sediment Basin will be removed once Final Stabilization has been reached. The sediment basin will be standard with a 4.3' depth, bottom width 70'W x 140'L and the spillway crest length 5590.2'.

5. Outlet Protection (OP)

There will be two (2) OP at the exit points of the culverts at the access road entrance of the pad, both constructed on the east side of the culvert and one on the outlet structure of the sediment basin.

6. Sediment Control Log (SCL)

The sediment control log will be placed along the exterior of the spoils stockpile, along the north edge of the topsoil pile and along the north edge of the Limits of Disturbance during the pre-production and production phase.

7. Reinforced Rock Aprons (RRA)/Rip-Rap

During the drilling/completions (active construction) and production (Interim Reclamation) at the off-site diversion ditch and culvert outlets/outfalls, and within swales as check dam structures. The ripraps will be on the outfall of the outlet ditches and will be removed once final stabilization has been reached. Riprap shall be installed in the interim phase, following culvert or outfall installation.

8. Seeding and Mulching

Seeding and mulching will be done during the drilling/completions (active construction) and production (Interim reclamation) on all areas where construction activity has ceased for 14 or more calendar days which have not been temporarily stabilized, and areas of final reclamation. Seeding and mulching will be done on the areas within the northern, eastern, and western Limits of Construction (LOC) but not included within the Drill Pad area. Topsoil and spoils stockpiles to be spread over the reclaim area once pad reduction occurs. Cut and fill slopes adjacent to the pad and access road swales shall be stabilized with SM. It shall be applied after grading is complete in the final phase. If the seeding and mulching application does not provide adequate stabilization for the area where slopes exceed 4:1, then more robust BMPs shall be utilized.

9. Covering Materials

Storage of any dry components (such as powdered clay or cement) for drill mud, drilling fluids ("mud"), piping solvents, hydraulic fluid/oil, diesel fuel, fertilizers, chemicals, etc. will occur on the pad site. The stabilized (granular material) surface of the pad site will act as barrier between the stored material and the bare ground. Storage containers shall be covered and stored on pallets or other similar means so that direct contact with the ground is avoided. Containers shall be labeled with the contents.

10. Materials Handling & Spill Prevention Procedures

A Spill Prevention Control and Countermeasure Plan (SPCC) is prepared, specific for the drilling rig operations on the site. The plan addresses the secondary containment measures, estimated quantities of spills (in barrels), and probability of spills. Absorbent material contaminated with crude oil, condensate, or other exempt waste will be handled in a manner that prevents spillage. Contaminated material cannot be placed in the landfill. Soaked items will be stored in leak proof containers located on site in the waste storage area.

Crestone Peak Resources Operating LLC will maintain equipment/facilities to prevent drips, leaks, spills, etc. Drip pans or other containment vessels will be used to collect drips, leaks, etc. Absorbent materials will be reused if possible. Absorbent pads, booms and other soaked material will be recycled through an approved recycler.

11. Spill Response Procedures

Upon detection of any spill, the first action to be taken is to ensure personal safety. All possible ignition sources, including running engines, electrical equipment (including cellular telephones, etc.), or other hazards will be immediately turned off or removed from the area. The extent of the spill and the nature of the spilled material will be evaluated to determine if remedial actions could result in any health hazards, escalation of the spill, or further damage that would intensify the problem. If such conditions exist, a designated employee will oversee the area of the spill and the construction SWMP Administrator will be notified immediately.

The source of the spill will be identified and if possible, the flow of pollutants stopped if it can be done safely. However, no one should attend to the source or begin cleanup of the spill until ALL emergency priorities (fire, injuries, etc.) have been addressed. Clean-up measures shall be conducted in accordance with Crestone Peak Resources LLC's Fieldwide Stormwater Management Plan.

12. Vehicle Tracking Controls

Vehicle Tracking Control (VTC) is a temporary control measure that consists of a stabilized layer of aggregate or a pre-fabricated structure that is used to minimize tracking of sediments from the construction site (exposed soil) to paved road surfaces. Aggregate based vehicle tracking pads are typically 12-feet wide and 70-feet long. Pre-fabricated vehicle tracking pads are typically 12-feet wide and 35-feet long.

Ingress and egress vehicle access points onto disturbed areas shall be stabilized with Vehicle Tracking Control Pads (VTC) and shall be constructed with angular rock, 3" to 6" in size and to a depth of at least 9-inches. The use of recycled asphalt or concrete is not permitted. The VTC shall be installed over a liner of non-woven geotextile with a weight of at least 10 oz/yd² and a grab tensile strength of at least 250 pounds. No dirt or other materials shall be placed on paved surfaces or curb flow lines to act as curb ramps. Only metal ramps or rock wattles may be used in the curb flow line.