



**CRESTONE PEAK**  
RESOURCES

## **STORMWATER MANAGEMENT PLAN**

**Submitted with Form 2A Application for:**

**BLUE 3-65 33-32-31**

Plan Date: August 12, 2021

Submittal Date: September 15, 2021

**Crestone Peak Resources' Stormwater Management Plan was developed with Substantially Equivalent Information and in accordance with COGCC Rule 1002.f.**

PREPARED BY:  
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## 1.0 INTRODUCTION

This facility is part of a comprehensive Field-Wide Stormwater Management Plan developed pursuant to the Colorado Department of Public Health and Environment (CDPHE) COR400000 Construction Stormwater Discharge Permit, and recorded with the Arapahoe County Clerk and Recorder's Office, Case Number AE20-001, and contains substantially equivalent information as required by Rule 1002.f.

## 2.0 SITE DESCRIPTION

Operator / ID	Crestone Peak Resources Operating LLC
Project / Site Name:	BLUE 3-65 33-32-31 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH
Location:	NW ¼, SW ¼ SEC. 34, T3S, R65W, City of Aurora, Adams County, Colorado
Total Project Disturbance:	Construction – 13.0 ac Production – 9.3 ac
Description of Existing Vegetation:	Crop Land, Dry Land; vegetation is about 70-85% grasses and grass-like plants, 5-15% forbs, and 10-15% woody plants. The major grasses include western wheatgrass, green needlegrass, and blue grama. western wheatgrass is a major cool-season grass in this plant community and is a valuable forage plant in late spring and/or early summer. Sub-dominant grasses include needle and thread, buffalograss, and sand dropseed. Major forbs include American vetch, upright prairie coneflower, scarlet globemallow, and dotted gayfeather. a minor amount of shrubs such as fourwing saltbush and winterfat may also occur.
Known Weed Infestations:	Not applicable
Soil Type(s):	Platner loam, 3 to 5 percent slopes (94066)
Primary Receiving Water:	First Creek, 2,226' west of location
Operator ID:	10633
CDPS Permit:	COR401103 (Appendix A)
Stormwater Manager:	David Tewkesbury – Environmental Specialist Crestone Peak Resources Office: 303.774.3985 Mobile: 303.774.3985
SWMP Administrator & Inspector:	David Cummings -Project Manager, P.E. Apex Companies, LLC Mobile: (402) 707-9799
Site Contact:	David Tewkesbury – Environmental Specialist Crestone Peak Resources Office: 303.774.3985 Mobile: 303.774.3985

Emergency Contact:	David Tewkesbury – Environmental Specialist Crestone Peak Resources Office: 303.774.3985 Mobile: 303.774.3985
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### 3.0 TOPSOIL PROTECTION

Crestone operations personnel and construction contractors adhere to topsoil protection best practices, which include proper planning for both interim and final reclamation of the land during and following oil and gas activities. All topsoil management shall be in accordance with the Colorado Oil and Gas Conservation Commission (COGCC) Series 1000 Reclamation Rules 1001.a, 1002.b and 1002.c requirements.

#### 3.1 Site Investigation

National Resources Conservation Service (NRCS) web soil survey data has been reviewed to determine sampling intervals and locations, to identify topsoil depths, texture, and fertility for development of grading plans, topsoil management, interim reclamation plans, and for final reclamation after decommissioning, well plugging and abandonment. Topsoil depth evaluations shall occur within the disturbance area, with the number of pits determined by topography, land use change, or distinct visual surface changes. When necessary, composite samples are gathered within each soil map unit at 0 to 6 inches in depth, using standard agronomic sampling procedures, for fertility and texture analysis.

#### 3.2 Proposed Sequence of Major Activities

- A. Topsoil Removal: Depth of each soil horizon will vary with individual soil units, and determination of depth and proper removal will be monitored during construction by physical characteristics of color, density, and texture change of soil, and as determined during Site Investigation. Topsoil may not be removed during wet soil moisture conditions, as field determined considering soil texture.
- B. Subsoil Horizon Separation: Lower soil horizons will be stockpiled separately from topsoil where it can be used for contouring during reclamation and preserved in order of original state. Distinctly visible soil horizons or soil types shall be stockpiled separately (i.e. gravel or shale layers). Under no circumstances shall subsoil be mixed with topsoil, nor placed on top of the removed topsoil stockpile
- C. Topsoil Protection: If topsoil will be stockpiled for extended periods of time, it shall be protected from degradation due to erosion, compaction and contamination and to maintain soil microbial activity, using best management practices (BMPs) such as stabilizing with mulch, seeding, track walking, perimeter control or a combination of BMPs. Weeds on stockpiles shall be controlled as to prevent production of weed seed and/or enough biomass that would interfere with redistribution of soil or cause onsite debris. Signage shall be installed to identify topsoil stockpiles to facilitate subsequent reclamation and indicate to personnel that the area may not be disturbed during drilling and completion operations.
- D. Recontouring and Compaction Relief: The first material to backfill will be from excavated subsoil materials, and compacted to avoid subsidence, but not restrictive to root growth of plants. The stockpiled soil horizons will be replaced in order and graded with the adjacent undisturbed land. Ripping/subsoiling will be required prior to topsoil redistribution if soil is overly compacted from vehicle or equipment traffic.
- E. Topsoil Redistribution: The stockpiled topsoil will be redistributed uniformly and to minimize compaction of soil. Topsoil may not be redistributed during wet soil moisture

conditions. Topsoil should be leveled with the adjacent undisturbed land, irrigable land being of importance for uniform coverage by flood irrigation water.

### 3.3 Topsoil Storage Requirements

- A. 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. Topsoil salvage quantities are included in the grading plans (Appendix B).
- B. Interim Reclamation: Placement and distribution will be determined by disturbance area boundaries, surface owner input, land use, and topography.
- C. 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.
- D. 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.

## 4.0 STORMWATER MANAGEMENT PLAN

This site-specific Stormwater Management Plan (SWMP) for development in Arapahoe County, Colorado is intended to ensure construction activities adhere to good engineering, hydrologic, and pollution control practices, and to ensure erosion, sediment, and stormwater control measures are selected, installed, implemented, and maintained to protect state waters, and minimize site erosion or degradation.

### 4.1 Nature of Construction Activity

Construction activity will consist of major earthwork, grading and stripping for the purposes of pad construction. Once disturbance allowance is delineated, crews will begin access road construction and perimeter control installation prior to earthwork. Upon installation of perimeter controls, stripping, grading, and stockpiling shall occur. Following completion of earthwork, the disturbance shall be stabilized with structural and non-structural control measures.

All construction and development shall be in accordance with the Colorado Department of Public Health and Environment's CDPS General Permit for Stormwater Discharges Associated with Construction Activity, and the Colorado Oil and Gas Conservation Commission (COGCC) 304.c.15 and 1002.f rules and requirements.

### 4.2 Proposed Sequence of Major Activities

- A. Delineation of disturbance limits (staking)
- B. Access road construction
- C. Perimeter control installation
- D. Grading, stripping, excavation, and earthwork for pad construction
- E. Well drilling & completion(s)
- F. Facility construction
- G. Pipeline & flowline installation
- H. Disturbance reduction
- I. Interim & final reclamation

#### 4.3 Potential Pollutant Sources

Potential pollution sources shall be placed within the project construction boundary, designated staging area(s), working surface, contained by general or sized secondary containment, and stormwater perimeter control measures. Anticipated pollution sources which will be managed by appropriate BMP fact sheets or operational best management standard operating procedures including, but are not limited to:

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> Disturbed and stored soils    | <input checked="" type="checkbox"/> Vehicle/equipment maintenance and fueling | <input type="checkbox"/> Non-industrial waste          |
| <input checked="" type="checkbox"/> Vehicle tracking of sediments | <input checked="" type="checkbox"/> Dust generating processes                 | <input checked="" type="checkbox"/> Potential Spills   |
| <input type="checkbox"/> Management of contaminated soils         | <input checked="" type="checkbox"/> Routine maintenance activities            | <input type="checkbox"/> Spill prevention and response |
| <input checked="" type="checkbox"/> Loading/unloading ops         | <input checked="" type="checkbox"/> On-site waste management                  |  |
| <input checked="" type="checkbox"/> Outdoor storage activities    | <input type="checkbox"/> Concrete truck washing                               |  |

No dedicated concrete or asphalt batch plants will be at the project location. Safety Data Sheets (SDS) for materials to be used are maintained by Crestone. Pollutants shall be managed in accordance with waste regulations administered by COGCC 900 series rules.

#### 4.4 Erosion, Sediment and Stormwater Control Measures

Measures for stormwater, erosion, and sediment control will be accomplished through a combination of construction techniques, structural and non-structural controls, vegetation, and re-vegetation, administrative controls, and good housekeeping practices. Control measures will be implemented and adjusted with changing site conditions, as well as phases of construction. All control measures deployed throughout construction, shall be identified on site specific stormwater management plan as-built maps. Control measure installation and maintenance procedures will defer to Urban Drainage and Flood Control District specifications, or as identified in Section 6.0 and the grading plans (Appendix B).

#### 4.5 Materials Handling and Spill Prevention

Discharges of hazardous substances or oil resulting from spills or construction operations are not authorized under the Construction General Permit or this plan. **In the event of a spill, the Stormwater Manager shall be notified immediately and/or after any emergency response procedures.** Depending on the nature of the spill and material(s) involved, the Colorado Department of Public Health and Environment 24-hour spill reporting line (877-518-5608), Colorado Oil and Gas Conservation Commission (COGCC), local authority (if applicable), and any affected downstream water users shall notified, as necessary. COGCC reporting shall adhere to 900 series rule requirements, and notification made for all spills of 1bbl or more outside of secondary containment.

#### 4.6 Non-Stormwater Discharges

Sources of non-stormwater discharges include emergency fire-fighting activities or a fire hydrant, and uncontaminated springs which do not originate from an area of land disturbance. In the event of construction dewatering, control measures shall be implemented and Low Risk Discharge Guidance for Uncontaminated Groundwater to Land (WQP27) shall be followed.

#### 4.7 Final Stabilization

The Colorado Department of Health and Environment (CDPHE) defines final stabilization as, "finally stabilized means that all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, paved, or a uniform vegetative cover has been established with an individual plant

density of at least 70 percent of pre-disturbance levels, and the vegetation cover is capable of providing erosion control equivalent to pre-existing conditions, or equivalent permanent, physical erosion reduction methods have been employed.” Stabilized unpaved surfaces, such as gravel access roads or working surfaces, necessary for the operation of the facility or nearby facilities, also qualifies as “final stabilized”.

#### 4.8 Post-Construction Stormwater

Following final stabilization, and pursuant of COGCC rule 1002.f and rule 1004, BMPs shall be maintained under Crestone’s Post-Construction Stormwater Program, and evaluated for Tier 1 / Non-Tier 1 status, as applicable and per COGCC 100 series definitions, until the facility is abandoned, and final reclamation is achieved.

### 5.0 INTERIM RECLAMATION

Crestone will adhere to an interim reclamation plan as identified in the grading plans (Appendix B). 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 Colorado Oil and Gas Conservation Commission (COGCC) 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 within 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. Final contour, irrigation, and landscape construction, including plantings and perennial seeding, will occur in the first favorable season. 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.

#### 5.1 Proposed Sequence of Major Activities

- A. Surface Owner Consultation and Timing: Surface owner consultation shall be conducted to minimize disruption of agricultural operations and designate final land use. Interim reclamation shall occur no later than 6 months, after conclusion of subsequent operations. If soil conditions are not conducive due to weather conditions, a Sundry Notice Form 4 shall be submitted, and reclamation commenced as soon as conditions allow and as practicable.
- B. Recontouring, Compaction Relief and Topsoil Redistribution: Refer to the Topsoil Protection Plan to address site specific requirements.
- C. Soil Preparation: Equipment to be cleaned from soil or debris prior to mobilizing and commencing soil preparation operations between properties.
  - 1) Compaction Alleviation: After topsoil re-distribution, the area shall be cross ripped to a depth of eighteen inches with an agricultural ripper/subsoiler; however, this depth may be adjusted in rocky or shallow soils. Chiseling/ripping will be performed at the minimum depth of topsoil. Cultipacker or disking may be required to reduce soil clod size. Ripping with construction style shanks, for the purpose of surface ridge roughness as a stormwater control measure, is only allowed to a six-inch depth.
  - 2) Leveling: All areas will be leveled and graded to drain properly and blend to the adjacent undisturbed land.

**Crestone Peak Resources**

**Site Specific Stormwater Management Plan for Construction Activities**

**BLUE 3-65 33-32-31 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH**

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- 3) Soil Amendments: Necessary amendments will be determined by soil analysis completed during Topsoil Protection Plan Site Investigation, land use, site conditions at time of interim reclamation, and surface owner consultation.
  - 4) Seedbed Preparation: Incorporate soil amendments by disking, harrowing or cultipacking and to provide a seedbed that is firm and friable, and properly crimp straw mulch material.
  - 5) Surface Rock Removal: Surface rocks that interfere with agricultural operations, seeding equipment or future mowing operations will be removed.
- D. Seeding: Seed mix is considered based on consultations with NRCS, CPW, and surface owner; also, by soil type, land use, adjacent reference area vegetation and in accordance with Rule 1202.a.6. Seeding shall not occur in windy conditions or when the soil is frozen or wet. Equipment shall be cleaned from previous mixes, soil, or debris, prior to mobilizing and commencing seeding operations between properties to avoid cross-contamination. Seed shall be applied using appropriate equipment that can place the specified seed at the specified rate and depth.
- E. Mulching: Mulch to be applied within 48 hours after seeding on non-cropland. Mulch application in cropland shall be applied as requested by surface owner. If using straw or hay mulch, only mulch that has been certified as weed-free forage may be used. All mulch types must be anchored properly by methods such as crimping, disking and/or tackifier. Contractor may adjust the rate of mulch and type based on site location, soils, slopes, and time of year to maximize seeding and erosion control success.
- F. Implement Post-Construction Stormwater Control Measures: Additional erosion control measures and materials should include consideration of land use, surface owner grazing practices, and potential damage to materials. Refer to a site-specific stormwater management plan prior to implementation.
- G. Weed control: Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and the current rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act.
- 1) Weed control measures shall be conducted in consultation with the surface owner and County Weed Management Specialist(s) based on site specific conditions. Crestone will monitor and control noxious weeds until the reclamation threshold for release within reclaimed disturbance areas is achieved, including monitoring to measure success of treatments. Weed control measures employed may include mowing or removal and herbicide treatment during the appropriate growing season. During drilling, production, and reclamation operations, all disturbed areas shall be kept reasonably free of noxious weeds and undesirable species.

**6.0 SITE-SPECIFIC BMPs: EROSION & SEDIMENT STORMWATER CONTROL MEASURES, INSPECTION AND MAINTENANCE PROCEDURES**

Site-specific control measures will be inspected on a routine basis by operations personnel, and as identified in Section 6.2 of this SWMP. If a control measure is found to be inadequate or non-functional, a corrective action will be issued by inspection personnel, and the control measure will be replaced, or a new control measure specified. A schedule for implementation of these corrective actions, including date issued and date completed, will be identified in site-specific maintenance logs. The anticipated stormwater control measures, required inspection scheduled, and maintenance processes are detailed below.

6.1 BMPs for Construction

The following control measures will be implemented during all phases of construction of the Project. Construction phases are identified in the grading plans (Appendix B). Timing of phases will be dependent on permit approvals and construction crew(s) scheduling.

<b>BMP Type</b>	<b>Phase of Construction</b>	<b>BMP Implementation</b>
Reinforced Rock Berms (RRB And RRC)	Drilling and Production / Interim Reclamation	Reinforced rock berms (RRCs) shall be utilized immediately upstream of the culverts. Reinforced rock berms (RRBs) will also be placed intermittently along the flowline of the roadside ditches. The RRBs will be placed in the interim phase while the RRCs will be placed in the initial and interim phases per the SWMP plans.
Stabilized Staging Area (SSA)	Drilling and Production / Interim Reclamation	The stabilized staging area shall be used for equipment storage, parking, a loading/unloading zone, portable toilets, construction trailer, waste collection, and material stockpile and storage. The stabilized staging area will essentially be the perimeter of the pad site location.
Sediment Basin (SB)	Drilling and Production / Interim Reclamation	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 site. Periodic maintenance of the pond may be necessary to remove accumulated silt and debris. Sediment basins shall be installed before the pad site grading begins.

**Crestone Peak Resources****Site Specific Stormwater Management Plan for Construction Activities****BLUE 3-65 33-32-31 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH**

<b>BMP Type</b>	<b>Phase of Construction</b>	<b>BMP Implementation</b>
Sediment Trap (ST)	Drilling and Production / Interim Reclamation	Where the tributary disturbed area is less than 1 acre a sediment trap will be planned for the well site at the low point of the pad. It may be implemented at the downstream termination of the diversion ditches. The trap will contain silt from the upstream fill slopes around the pad site. Periodic maintenance of traps may be necessary to remove accumulated silt and debris. Sediment traps shall be installed before the pad site grading begins.
Diversion Ditches (DD)	Drilling and Production / Interim Reclamation	Unlined diversion ditches will be constructed at the toe of the cut and fill slopes along the boundaries of the pad site. These ditches will capture sediment laden runoff from the slopes and channel it into sediment basins and/or traps. In the fill slope application, the material excavated for the ditch shall be compacted and bermed on the downhill side for an additional layer of protection. Diversion ditches shall be installed before grading work begins on the fill slopes and as soon as the pad site grading is complete on the cut slopes.
Seeding And Mulching (SM)	Drilling and Production / Interim Reclamation	Cut and fill slopes adjacent to the pad site 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 bmp's shall be utilized.
Sediment Control Log (SCL)	Drilling and Production / Interim Reclamation	12" diameter sediment control logs shall be used on the downstream perimeter of the spoil and topsoil stockpiles per manufacturer specifications. Sediment control logs shall be installed in the interim phase once stockpiles have been created.
Vehicle Tracking Control (VTC)	Drilling and Production / Interim Reclamation	In lieu of a VTC, the contractor shall install an asphalt apron where a proposed access road intersects a paved public roadway. If the public roadway is gravel, a VTC is not necessary. VTC or asphalt apron shall be installed in the initial phase before the pad site grading begins.
Riprap	Drilling and Production / Interim Reclamation	Type-m riprap shall be installed downstream of all culverts for a width of 4 times the culvert diameter and a length of 4 times the culvert diameter. Riprap shall be installed in the interim phase, following culvert installation.

BMP Type	Phase of Construction	BMP Implementation
Erosion Control Blanket (ECB)	Drilling and Production / Interim Reclamation	Steep slopes shall be protected with straw coconut blankets where indicated on the SWMP plan or where seeding and mulching application is not effective. Blanket shall be installed with seeding during the final phase.

## 6.2 BMPs for Inspections

Inspections will be conducted to document the status of construction activities, stormwater control measure placement, maintenance needs, and effectiveness, to evaluate pollution sources, and to document reclamation / final stabilization progress. Inspections will be managed by the Stormwater Manager and SWMP Administrator and conducted by their designated representative(s). Inspection forms will document current conditions, non-compliance conditions including any release of sediment or other contaminants, additional control measures that are needed, or repair and maintenance work orders.

- During construction, inspections shall be conducted every 14 days, and after a major precipitation or melt event, which has the potential to cause surface runoff.
- For sites earthwork and construction is completed, but final stabilization is not achieved due to vegetative cover, inspections shall be conducted every 30 days and exclude precipitation or melt event response. Inspections will continue until all reclaimed areas have achieved a cover of 70% the pre-construction reference vegetation (i.e. final stabilization).
- Post-construction stormwater inspections will be conducted in accordance with COGCC 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).
- Findings, inspection records and site maps are documented electronically and available within 24 hours of any inspection. All inspection records are stored for a minimum of three years after the location has achieved final stabilization.

## 6.3 BMPs for Maintenance

For maintenance items discovered at active construction locations:

- Action and documentation towards completing repairs identified at the time of inspection shall be made within 24 hours of discovery.
- For maintenance items during post-construction, items will be documented and coordinated with production crews.
- Timeline for completion of maintenance items are a priority and will depend on scope; but in all cases, shall not be completed until field conditions allow for safe access, and utility clearance has been confirmed for actions requiring ground disturbance / earthwork.

**APPENDIX A**

**CDPS STORMWATER GENERAL PERMIT CERTIFICATION**



**COLORADO**

Department of Public  
Health & Environment

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

Certification Number: **COR401103**

**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 Adams County**

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

**Box Elder Creek, Kiowa Creek, South Platte River**

**Facility Activity :** Oil and Gas Exploration and Well Pad Development  
**Disturbed Acres:** 224.5 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: 2/10/2021**  
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 B**

**GRADING, EROSION, AND SEDIMENT CONTROL PLAN(S)**

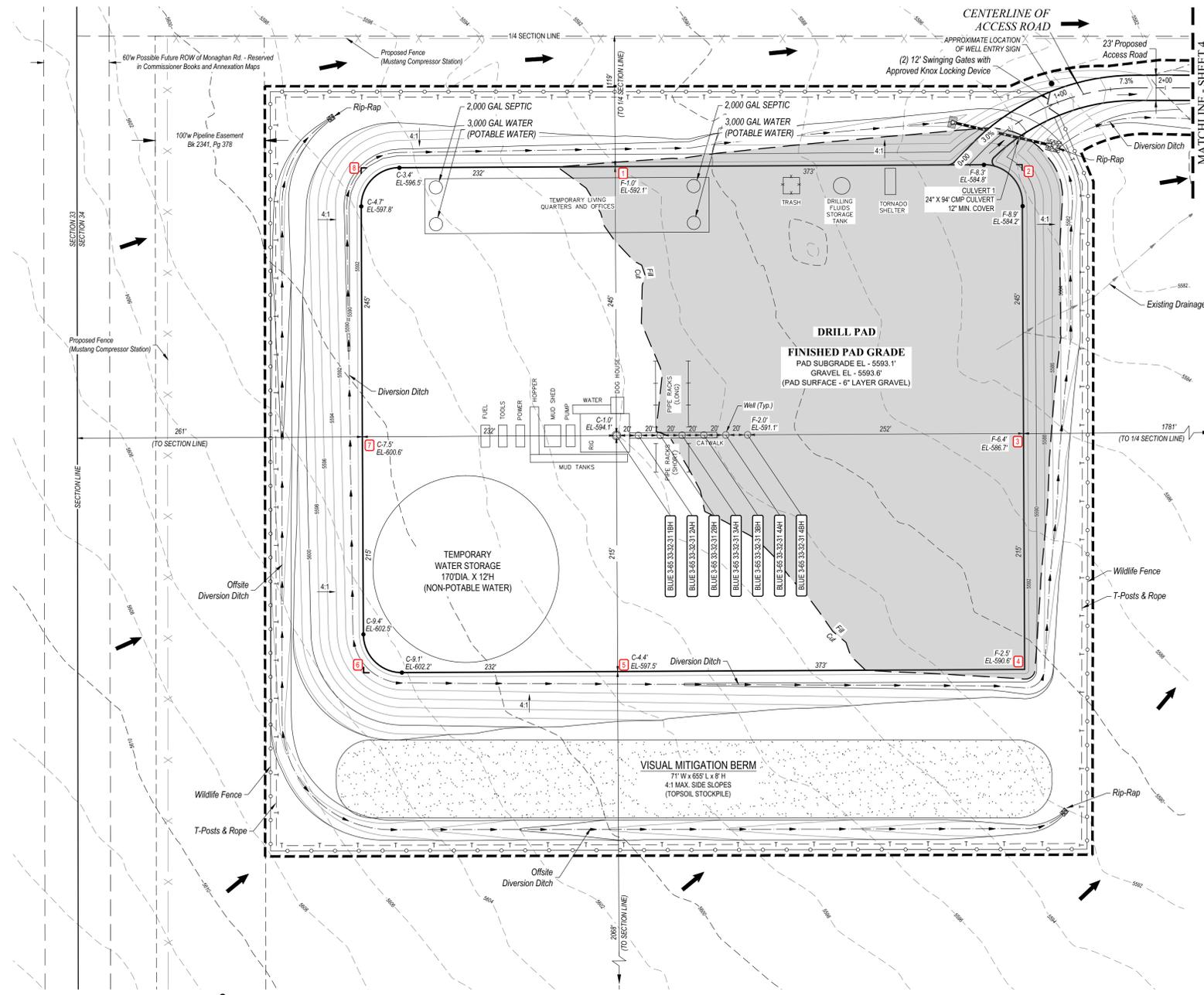




# BLUE 3-65 33-32-31 (FKA BLUE 3-65 32-33 SOUTH) 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH OIL & GAS WELL PERMIT

NW/4 SW/4 SECTION 34, TOWNSHIP 3 SOUTH, RANGE 65 WEST, OF THE 6TH PRINCIPAL MERIDIAN, CITY OF AURORA, COUNTY OF ADAMS, STATE OF COLORADO

**CRESTONE PEAK RESOURCES OPERATING, LLC**  
BLUE 3-65 33-32-31 (FKA BLUE 3-65 32-33 SOUTH) 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH  
SITE PLAN  
NW 1/4 SW 1/4 SEC. 34, T3S, R65W, 6TH P.M.  
CITY OF AURORA, ADAMS COUNTY, COLORADO

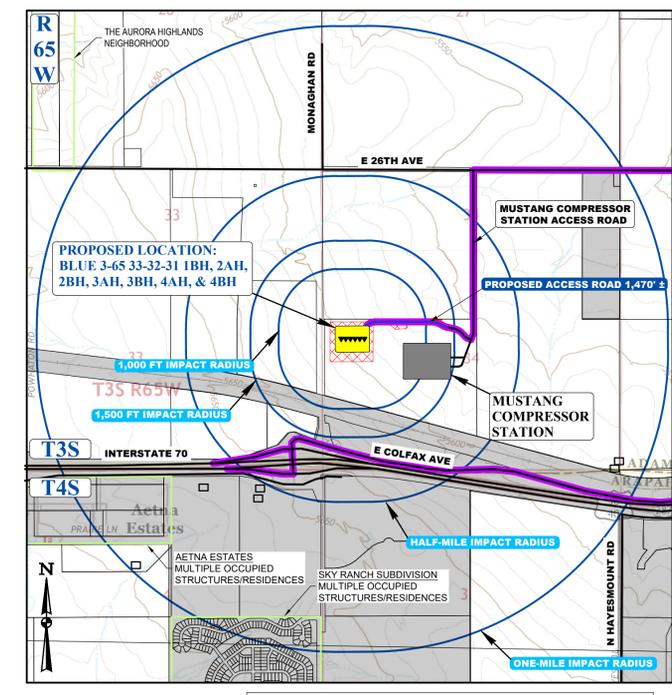


**LEGEND**

- WELL PAD CORNER STAKE
- DESIGN "C" CUT OR "P" FALL AT CORNER STAKE
- DIVERSION DITCH
- LIMITS OF CONSTRUCTION
- POST & ROPE FENCE
- PROPOSED WILDLIFE FENCE
- PROPOSED PRIVACY FENCE
- EXISTING BURIED POWER
- EXISTING BURIED FENCE
- EXISTING BURIED PIPELINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- RIP-RAP OUTLET PROTECTION
- SEMENT BASIN / EXTERIOR DETENTION BASIN
- FLOW DIRECTION

**Drilling Equipment Representative Dimension Table**

Equipment	Qty	Length (ft)	Width (ft)	Height (ft)	Diameter (ft)
Hopper	1	51	12	12	
Mud Shed	1	33	14	11	
Mud Tanks	2	45	11	11	
Drilling Rig	1	45	35	100	
Pump	1	33	14	11	
Power	1	30	11	11	
Tools	1	43	12	11	
Fuel	1	30	11	10	
Dog House	1	29	10	9	
Catwalk	2	58	9	8	
Pipe Rack (long)	2	60			
Pipe Rack (short)	2	26			
Water Tank	1	47	10	11	
Drilling Fluids Storage Tank	1		20	16	
Trash Dumpster	1	15	15	6	
Temp. Water Storage	1		12	170	
Temp Living	1	350	50	14	
Septic Tank	2		4	12	
Potable Water Tank	2		4	12	
Tornado Shelter	1	24	10	10	



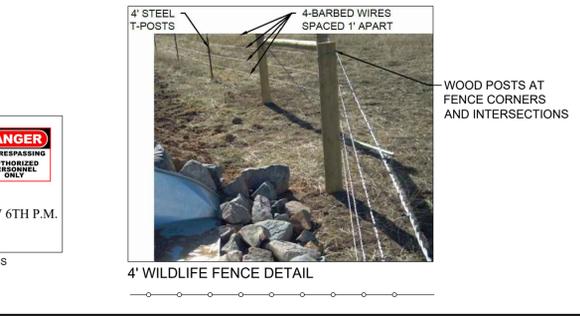
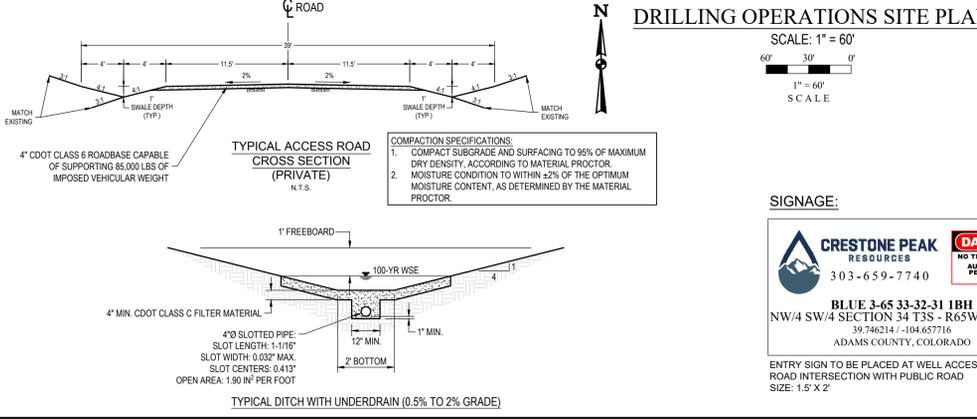
- GENERAL CONSTRUCTION NOTES:**
- THE SITE PLAN, EQUIPMENT AND INFORMATION SHOWN HEREIN ARE FOR REFERENCE ONLY AND ARE NOT INTENDED TO BE USED FOR CONSTRUCTION. ENGINEERED SWMP DRAWINGS RELATIVE TO THIS SITE WILL BE SUBMITTED AND APPROVED FOLLOWING APPLICABLE CITY OF AURORA STANDARDS AND PROCEDURES.
  - THE DIMENSIONS AND LAYOUT DEPICTED IN THE SITE PLAN SHOWN ARE OF A RIG LAYOUT FOR A TYPICAL WELL SITE. ACTUAL DIMENSIONS AND LAYOUT MAY CHANGE BASED ON THE VARIABILITY OF THE EQUIPMENT.
  - ESTIMATED SITE ACTIVITY SCHEDULE:
    - DRILLING - 10-20 DAYS (PER WELL HEAD), 24 HOURS/DAY
    - HYDRAULIC FRACTURING - 10 DAYS (PER WELL HEAD), 24 HOURS/DAY
    - PRODUCTION - 20+ YEARS
  - THE SURFACE MATERIAL FOR THE ACCESS ROAD AND THE PAD SITE WILL BE GRANULAR MATERIAL.
  - A PHOTOMETRIC PLAN IS INCLUDED HERewith.
  - WHEN THE DRILLING FOR THE WELL IS COMPLETE, THE RIG AND ASSOCIATED SUPPORT EQUIPMENT WILL BE REMOVED. VEHICLE TRAFFIC TO AND FROM THE SITE OVER THAT PERIOD OF TIME WILL BE PRIMARILY PASSENGER AND LIGHT TRUCK TRAFFIC, WITH AN OCCASIONAL MAINTENANCE VEHICLE. THE SITE WILL CONTINUE TO BE MAINTAINED UNTIL FINAL ABANDONMENT, WITH WEED AND SNOW REMOVAL AND ACCESS ROAD MAINTENANCE PERFORMED AS NEEDED.
  - CRESTONE PEAK RESOURCES OPERATING, LLC CERTIFIES THAT ALL STRUCTURES ARE IN COMPLIANCE WITH COLORADO STATE REGULATION 8 CCR 1302-14 REGARDING PLACARDING AND CERTIFICATION OF NON-RESIDENTIAL MODULAR OF FACTORY-BUILT STRUCTURES.
  - AFTER CLOSURE OF THE WELL, THE APPLICANT WILL RE-CONTOUR, RECLAIM, AND RESEED THE WELL PAD.

- BEST MANAGEMENT PRACTICES:**
- CRESTONE PEAK RESOURCES OPERATING, LLC IS CURRENTLY EVALUATING AVAILABLE WATER SOURCES FOR THE PROPOSED DRILLING AND COMPLETION OPERATIONS. WHEN FEASIBLE, FRESH WATER WILL BE DELIVERED TO THE SITE VIA TEMPORARY ABOVE GROUND WATER LINES. THE ROUTE OF THE TEMPORARY WATER LINE IS DETERMINED PRIOR TO THE START OF DRILLING OPERATIONS AND IS CONTINGENT ON THE WATER PROVIDER'S ABILITY TO SECURE ALL NECESSARY RIGHT-OF-WAY RIGHTS AND PERMITS. IF A TEMPORARY WATER LINE CANNOT BE UTILIZED, WATER WILL BE DELIVERED TO THE SITE VIA TANKER TRUCK.
- STRUCTURAL BEST MANAGEMENT PRACTICES:**
- REINFORCED ROCK BERMS (RRB) AND (RRC) - REINFORCED ROCK BERMS (RRCS) SHALL BE UTILIZED IMMEDIATELY UPSTREAM OF THE CULVERTS. REINFORCED ROCK BERMS (RRBS) WILL ALSO BE PLACED INTERMITTENTLY ALONG THE FLOWLINE OF THE ROADSIDE DITCHES. THE RRRS WILL BE PLACED IN THE INTERIM PHASE WHILE THE RRRCS WILL BE PLACED IN THE INITIAL AND INTERIM PHASES PER THE SWMP PLANS.
  - STABILIZED STAGING AREA (SSA) - THE STABILIZED STAGING AREA SHALL BE USED FOR EQUIPMENT STORAGE, PARKING, A LOADING/UNLOADING ZONE, PORTABLE TOILETS, CONSTRUCTION TRAILER, WASTE COLLECTION, AND MATERIAL STOCKPILE AND STORAGE. THE STABILIZED STAGING AREA WILL ESSENTIALLY BE THE PERIMETER OF THE PAD SITE LOCATION.
  - SEDIMENT BASIN (SB) - 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 SITE. PERIODIC MAINTENANCE OF THE POND MAY BE NECESSARY TO REMOVE ACCUMULATED SILT AND DEBRIS. SEDIMENT BASINS SHALL BE INSTALLED BEFORE THE PAD SITE GRADING BEGINS.
  - SEDIMENT TRAP (ST) - WHERE THE TRIBUTARY DISTURBED AREA IS LESS THAN 1 ACRE A SEDIMENT TRAP WILL BE PLANNED FOR THE WELL SITE AT THE LOW POINT OF THE PAD. IT MAY BE IMPLEMENTED AT THE DOWNSTREAM TERMINATION OF THE DIVERSION DITCHES. THE TRAP WILL CONTAIN SILT FROM THE UPSTREAM FILL SLOPES AROUND THE PAD SITE. PERIODIC MAINTENANCE OF TRAPS MAY BE NECESSARY TO REMOVE ACCUMULATED SILT AND DEBRIS. SEDIMENT TRAPS SHALL BE INSTALLED BEFORE THE PAD SITE GRADING BEGINS.
  - DIVERSION DITCHES (DD) - UNLINED DIVERSION DITCHES WILL BE CONSTRUCTED AT THE TOE OF THE CUT AND FILL SLOPES ALONG THE BOUNDARIES OF THE PAD SITE. THESE DITCHES WILL CAPTURE SEDIMENT LADEN RUNOFF FROM THE SLOPES AND CHANNEL IT INTO SEDIMENT BASINS AND/OR TRAPS. IN THE FILL SLOPE APPLICATION, THE MATERIAL EXCAVATED FOR THE DITCH SHALL BE COMPACTED AND BERMED ON THE DOWNHILL SIDE FOR AN ADDITIONAL LAYER OF PROTECTION. DIVERSION DITCHES SHALL BE INSTALLED BEFORE GRADING WORK BEGINS ON THE FILL SLOPES AND AS SOON AS THE PAD SITE GRADING IS COMPLETE ON THE CUT SLOPES.
  - SEEDING AND MULCHING (SM) - CUT AND FILL SLOPES ADJACENT TO THE PAD SITE 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 BMP'S SHALL BE UTILIZED.
  - SEDIMENT CONTROL LOG (SCL) - 12" DIAMETER SEDIMENT CONTROL LOGS SHALL BE USED ON THE DOWNSTREAM PERIMETER OF THE SPOIL AND TOPSOIL STOCKPILES PER MANUFACTURER SPECIFICATIONS. SEDIMENT CONTROL LOGS SHALL BE INSTALLED IN THE INTERIM PHASE ONCE STOCKPILES HAVE BEEN CREATED.
  - VEHICLE TRACKING CONTROL (VTC) - IN LIEU OF A VTC, THE CONTRACTOR SHALL INSTALL AN ASPHALT APRON WHERE A PROPOSED ACCESS ROAD INTERSECTS A PAVED PUBLIC ROADWAY. IF THE PUBLIC ROADWAY IS GRAVEL, A VTC IS NOT NECESSARY. VTC OR ASPHALT APRON SHALL BE INSTALLED IN THE INITIAL PHASE BEFORE THE PAD SITE GRADING BEGINS.
  - RIP-RAP - TYPE M RIP-RAP SHALL BE INSTALLED DOWNSTREAM OF ALL CULVERTS FOR A WIDTH OF 4 TIMES THE CULVERT DIAMETER AND A LENGTH OF 4 TIMES THE CULVERT DIAMETER. RIP-RAP SHALL BE INSTALLED IN THE INTERIM PHASE FOLLOWING CULVERT INSTALLATION.
  - EROSION CONTROL BLANKET (ECB) - STEEP SLOPES SHALL BE PROTECTED WITH STRAW COCONUT BLANKETS WHERE INDICATED ON THE SWMP PLAN OR WHERE SEEDING AND MULCHING APPLICATION IS NOT EFFECTIVE. BLANKET SHALL BE INSTALLED WITH SEEDING DURING THE FINAL PHASE.

- ACCESS ROAD AND PAD CONSTRUCTION NOTE:**
- ACCESS ROAD AND PAD CONSTRUCTION SHALL BE DESIGNED AND MAINTAINED TO SUPPORT IMPOSED LOADS OF FIRE APPARATUS (65,000 LBS) UTILIZING THE CDOT ROAD-BASE #6 SPECIFICATION TO PROVIDE FOR ALL WEATHER DRIVING CAPABILITIES. THE ACCESS ROAD SHALL BE 23' WIDE WITH A 29' INSIDE TURNING RADIUS, WHILE CDOT #6 IS SPECIFIED, THE MATERIAL USED TO CONSTRUCT THESE SURFACES MAY BE OF ANY ONE OF, OR A COMBINATION OF SEVERAL AGGREGATE MATERIALS AVAILABLE. APPROVED MATERIALS INCLUDE PREMIUM ROAD BASE MATERIAL, 1.15 ANGULAR INCH RIVER ROCK, CRUSHED GRANITE OR OTHER AGGREGATE WITH NOT LESS THAN ONE-INCH NOMINAL SIZE DESIGNATION AND CDOT ROAD BASE CLASS 6. A SOLID SURFACE (CONCRETE OR ASPHALT) WILL BE ADDED FOR THE FIRST 100 FEET FROM A PAVED PUBLIC R.O.W. THE MAINTENANCE OF THE ROAD WILL BE IN GOOD REPAIR AT ALL TIMES, CLEAR OF ANY STRUCTURES OR OBSTRUCTIONS, AND AN ALL WEATHER SURFACE ALLOWING FOR AN UNOBSTRUCTED PATH FOR EMERGENCY APPARATUS USE.
- LIGHTING:**
- LIGHTING SHALL BE DIRECTED DOWNWARD AND WILL NOT SHINE BEYOND THE BOUNDARIES OF THE WELL SITE.

**DISCLAIMER:**  
THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES. PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS, PARCEL LINES, IF DEPICTED, HAVE NOT BEEN VERIFIED AND MAY BE BASED UPON PUBLICLY AVAILABLE DATA THAT ALSO HAS NOT BEEN INDEPENDENTLY VERIFIED.

**SURVEY BENCHMARK**  
COA BM 458517NE001, A 3 INCH DIAMETER BRASS CAP STAMPED (C.O.A. BM 23-50) ATOP THE N.E. CORNER CORNER. BASE FOR POWER TOWER ON THE WEST SIDE OF POWHATON ROAD BEING THE 1ST POWER TOWER SOUTH OF THE W. 1/4 CORNER SECTION 4, T4S, R65W, AND BEING 125' SOUTH THEREOF.  
LATITUDE: 139°37'52.20"  
LONGITUDE: 107°04'30.0426" (NAD 83)  
ELEV: 5627.70 (NAVD 88)



RESPONSIBLE ENGINEER:

DATE	
REV	
BY	
REVISIONS	

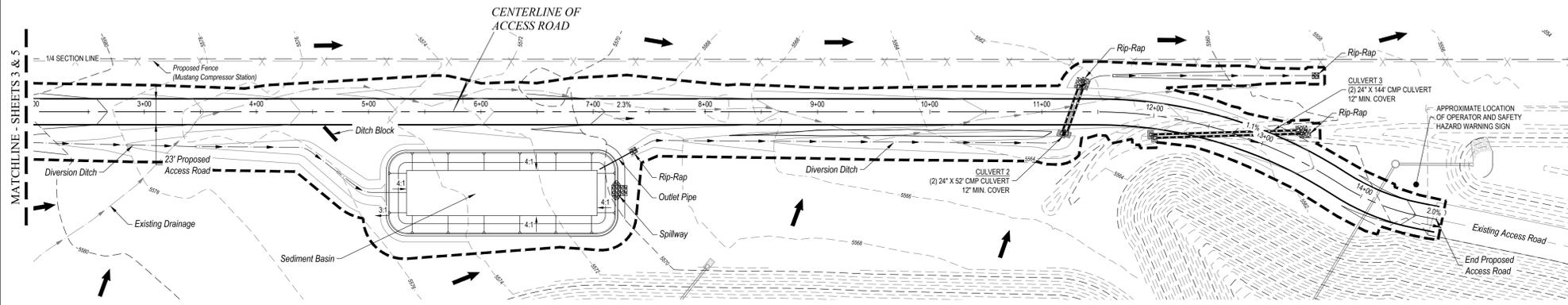
**DRILLING OPERATIONS SITE PLAN**

SCALE: AS NOTED  
DRAWN BY: CLC  
DATE DRAWN: 02-17-2021  
DWG FILE NO.: C - 7 2 5 9  
PROJ. NO.: CRE03-20-0039 WDI  
FILE: 2 5 5 0 2

**SHEET**  
3

# BLUE 3-65 33-32-31 (FKA BLUE 3-65 32-33 SOUTH) 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH OIL & GAS WELL PERMIT

NW/4 SW/4 SECTION 34, TOWNSHIP 3 SOUTH, RANGE 65 WEST, OF THE 6TH PRINCIPAL MERIDIAN, CITY OF AURORA, COUNTY OF ADAMS, STATE OF COLORADO

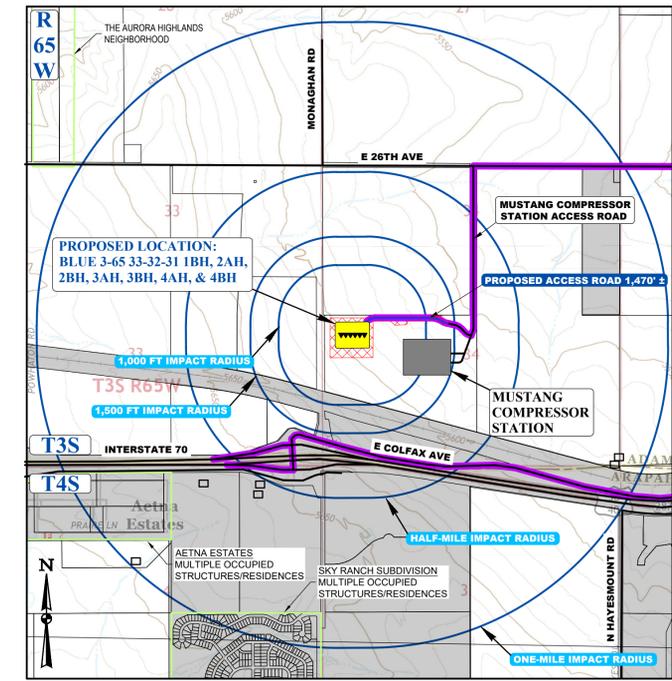


**DRILLING OPERATIONS SITE PLAN**

SCALE: 1" = 60'  
0' 30' 60'

**LEGEND**

□	WELL PAD CORNER STAKE
—	DESIGN 1/2" CUT OR 1/4" FALL AT CORNER STAKE
—	EXISTING GRADE/ELEVATION AT CORNER STAKE (TRUNCATED LESS 5,000 FEET)
—	DIVERSION DITCH
—	T-POST & ROPE FENCE
—	PROPOSED WILDLIFE FENCE
—	PROPOSED PRIVATE FENCE
—	EXISTING OVERHEAD POWER
—	EXISTING BURIED POWER
—	EXISTING FENCE
—	EXISTING BURIED PIPELINE
—	EXISTING MAJOR CONTOUR
—	EXISTING MINOR CONTOUR
—	PROPOSED MAJOR CONTOUR
—	PROPOSED MINOR CONTOUR
—	RIPIRAP OUTLET PROTECTION
—	SEDIMENT BASIN
—	EXTENDED RETENTION BASIN
→	FLOW DIRECTION



**CONTEXT MAP**

SCALE: 1" = 1,500'

**LEGEND**

□	PROPOSED OIL AND GAS WELL SITE
□	OCCUPIED STRUCTURE/RESIDENCE
—	MUNICIPAL BOUNDARY
—	LIMITS OF SITE DISTURBANCE
—	NEIGHBORHOOD BOUNDARY
—	EXISTING ROAD
—	PROPOSED ROAD
—	HAUL ROUTE
—	PARCEL BOUNDARY

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- THE DIMENSIONS AND LAYOUT DEPICTED IN THE SITE PLAN SHOWN ARE OF A RIG LAYOUT FOR A TYPICAL WELL SITE. ACTUAL DIMENSIONS AND LAYOUT MAY CHANGE BASED ON THE VARIABILITY OF THE EQUIPMENT.
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**STRUCTURAL BEST MANAGEMENT PRACTICES:**

- REINFORCED ROCK BERMS (RRB) AND (RRC) - REINFORCED ROCK BERMS (RRC) SHALL BE UTILIZED IMMEDIATELY UPSTREAM OF THE CULVERTS. REINFORCED ROCK BERMS (RRB) WILL ALSO BE PLACED INTERMITTENTLY ALONG THE FLOWLINE OF THE ROADSIDE DITCHES. THE RRBs WILL BE PLACED IN THE INTERIM PHASE WHILE THE RRCs WILL BE PLACED IN THE INITIAL AND INTERIM PHASES PER THE SWMP PLANS.
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**ACCESS ROAD AND PAD CONSTRUCTION NOTE:**

ACCESS ROAD AND PAD CONSTRUCTION SHALL BE DESIGNED AND MAINTAINED TO SUPPORT IMPOSED LOADS OF FIRE APPARATUS (65,000 LBS) UTILIZING THE CDOT ROAD-BASE #6 SPECIFICATION TO PROVIDE FOR ALL WEATHER DRIVING CAPABILITIES. THE ACCESS ROAD SHALL BE 23' WIDE WITH A 29' INSIDE TURNING RADIUS, WHILE CDOT #6 IS SPECIFIED, THE MATERIAL USED TO CONSTRUCT THESE SURFACES MAY BE OF ANY ONE OF, OR A COMBINATION OF SEVERAL AGGREGATE MATERIALS AVAILABLE. APPROVED MATERIALS INCLUDE PREMIUM ROAD BASE MATERIAL, 1-1.5 ANGULAR INCH RIVER ROCK, CRUSHED GRANITE OR OTHER AGGREGATE WITH NOT LESS THAN ONE-INCH NOMINAL SIZE DESIGNATION AND CDOT ROAD BASE CLASS 6. A SOLID SURFACE (CONCRETE OR ASPHALT) WILL BE ADDED FOR THE FIRST 100 FEET FROM A PAVED PUBLIC R.O.W. THE MAINTENANCE OF THE ROAD WILL BE IN GOOD REPAIR AT ALL TIMES, CLEAR OF ANY STRUCTURES OR OBSTRUCTIONS, AND AN ALL WEATHER SURFACE ALLOWING FOR AN UNOBSTRUCTED PATH FOR EMERGENCY APPARATUS USE.

**LIGHTING:**

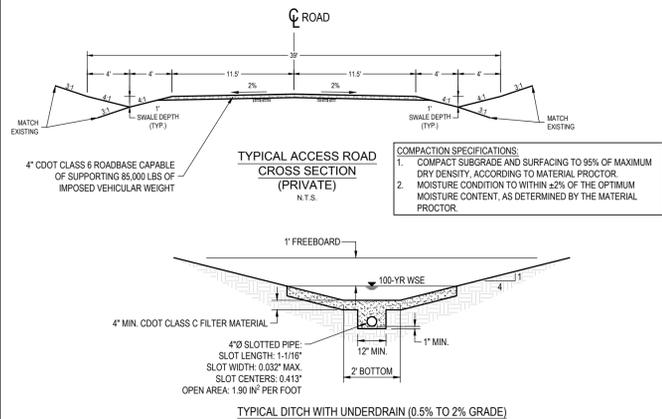
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**NOTE:** EXISTING TOPOGRAPHY INFORMATION WAS COLLECTED BY UINTAH ENGINEERING & LAND SURVEYING ON 07-24-2019.

**SURVEY BENCHMARK**

COA BM 458517NE001, A 3 INCH DIAMETER BRASS CAP STAMPED (C.O.A. BM 23-50) ATOP THE N.E. CORNER CONC. BASE FOR POWER TOWER ON THE WEST SIDE OF POWHATON ROAD BEING THE 1ST POWER TOWER SOUTH OF THE W. 1/4 CORNER SECTION 4, T4S, R65W, AND BEING 125' SOUTH THEREOF.
LATITUDE: 139°37'52.20"
LONGITUDE: 107°04'30.04.26" (NAD 83)
ELEV: 5627.70 (NAVD 88)



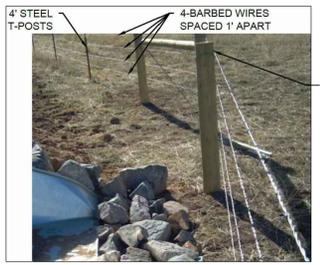
**SIGNAGE:**

**CRESTONE PEAK RESOURCES**  
303-659-7740

**BLUE 3-65 33-32-31 1BH**  
NW/4 SW/4 SECTION 34 T3S - R65W 6TH P.M.  
39.746214 / -104.657716  
ADAMS COUNTY, COLORADO

**DANGER**  
NO TRESPASSING  
AUTHORIZED ONLY

ENTRY SIGN TO BE PLACED AT WELL ACCESS ROAD INTERSECTION WITH PUBLIC ROAD  
SIZE: 1.5' X 2'



WOOD POSTS AT FENCE CORNERS AND INTERSECTIONS

**CRESTONE PEAK RESOURCES OPERATING, LLC**  
BLUE 3-65 33-32-31 (FKA BLUE 3-65 32-33 SOUTH) 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH  
SITE PLAN  
NW 1/4 SW 1/4 SEC. 34, T3S, R65W, 6TH P.M.  
CITY OF AURORA, ADAMS COUNTY, COLORADO

DATE	BY	REVISION

RESPONSIBLE ENGINEER:

**DRILLING OPERATIONS SITE PLAN**

SCALE: AS NOTED
DRAWN BY: C.D.C.
DATE DRAWN: 02-17-2021
UELS FILE NO.: C - 7 2 5 9
PROJ. NO.: CRE03-20-0039 W/D1
FILE: 2 5 5 0 2







**PROJECT SCOPE:**

- IN ADDITION TO INDICATING BMPs, THIS SWMP PLAN SERVES AS A GUIDE TO CONSTRUCTING THE ACCESS ROAD, THE CULVERTS AND THE PAD SITE. THERE ARE NO SEPARATE IMPROVEMENT PLANS INDICATING PLAN AND PROFILES.
- THERE IS ANTICIPATED EXCESS EARTHWORK MATERIAL THAT WILL BE STOCKPILED ADJACENT TO THE PAD UNTIL THE PAD IS REHABILITATED. TOPSOIL WILL ALSO BE TEMPORARILY STOCKPILED ADJACENT TO THE PAD SITE UNTIL THE PAD IS REHABILITATED.
- THE PAD SITE IS PROPOSED TO BE FLAT (0% GRADE) SO THAT POTENTIAL RUNOFF FROM THE PAD IS ELIMINATED. AT THE BASE OF THE UPSTREAM CUT SLOPE, DIVERSION DITCHES ARE PROPOSED TO CAPTURE ONSITE TRIBUTARY FLOW, ELIMINATING RUNON.

**CITY OF AURORA SWMP NOTES:**

PURSUANT TO SECTIONS 138-440 AND 138-442 OF THE AURORA MUNICIPAL CODE, THE PERMITTEE SHALL LOCATE, 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 ON THE SWMP DESIGN DRAWINGS DEVELOPED FOR THIS PROJECT AND SUBMITTED FOR APPROVAL BY THE CITY. BMP INSTALLATIONS SHALL BE INSTALLED PER THE COA STANDARD DETAIL, IN EFFECT AT THE TIME OF INSTALLATION OR PER THE APPROVED SWMP DESIGN DRAWING, A COA APPROVED VARIANCE, OR A COA APPROVED DESIGN DRAWING PLAN AMENDMENT.

- THE PERMITTEE SHALL BE RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, STORM SEWERS, STORM SEWER APPURTENANCES, OTHER PROPERTIES, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
- ADDITIONAL EROSION AND SEDIMENT CONTROL BMPs MAY BE REQUIRED DURING AND AFTER CONSTRUCTION AND SHALL BE EXECUTED AND COMPLETED BY THE PERMITTEE. THE PERMITTEE SHALL PLAN, INSTALL, AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE AND WATER QUALITY BMPs AS INDICATED ON THIS PLAN AND AS NECESSARY TO REDUCE THE DISCHARGE OF POLLUTANTS TO THE MAXIMUM EXTENT PRACTICABLE ADVERSE IMPACTS, EROSION AND SEDIMENT DEPOSITION ONTO PAVED SECTIONS, INTO STORM SEWERS, STORM SEWER APPURTENANCES, RECEIVING WATERS, OR OFF THE PROJECT SITE.
- THE PERMITTEE SHALL TAKE APPROPRIATE PREVENTIVE MEASURES TO MINIMIZE TO THE MAXIMUM EXTENT PRACTICABLE DIRT AND MUD FROM BEING TRACKED OR DEPOSITED ONTO PAVED SECTIONS VIA MULTIPLE BMPs. SEDIMENT, MUD, AND CONSTRUCTION DEBRIS THAT MAY BE TRACKED, DEPOSITED, OR ACCUMULATED ON PAVED SECTIONS, IN THE FLOW LINES, PRIVATE PROPERTY, AND/OR PUBLIC RIGHTS-OF-WAY OF THE CITY AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE CLEANED UP.
- AREAS REACHING SUBSTANTIAL COMPLETION OF GRADING AND TOPSOIL PLACEMENT OPERATIONS MUST BE DRILL SEEDED AND CRIMP MULCHED WITHIN 14 DAYS OF SUBSTANTIAL COMPLETION OF GRADING AND TOPSOIL OPERATIONS. IF AN INCOMPLETE AREA IS TO REMAIN INACTIVE FOR LONGER THAN 30 DAYS, IT MUST BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE LANDSCAPED WITHIN 14 DAYS FROM THE SUSPENSION OR COMPLETION OF LAND DISTURBANCE ACTIVITIES.
- THIS APPROVED SWMP DESIGN DRAWING, THE ASSOCIATED APPROVED SWMP NARRATIVE, A COPY OF THE STORMWATER QUALITY DISCHARGE PERMIT, AND THE RULES AND REGULATIONS REGARDING STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES MANUAL SHALL BE KEPT ON SITE AT ALL TIMES.
- ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP (MAINTENANCE) WHEN THE SEDIMENT LEVEL OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP OR AS DEFINED WITHIN THE RULES AND REGULATIONS REGARDING STORMWATER DISCHARGES AS PART OF THE CONSTRUCTION ACTIVITIES MANUAL, WHICHEVER IS MORE RESTRICTIVE. IF MAINTENANCE OF THE BMP DOES NOT RESTORE THE INTENDED FUNCTION, THEN THE BMP MUST BE REPLACED.
- THE DISCHARGING OF CEMENT, CONCRETE, OR MORTAR FROM READY MIX DELIVERY TRUCKS, PUMP TRUCKS, BATCH PLANTS OR SMALL MECHANICAL MIXERS DIRECTLY ONTO PAVED SURFACES OR DISTURBED GROUND HAVING NO CONTAINMENT IS PROHIBITED. THE DISPOSAL OF ANY LIQUID WASTES OR WASH WATER FROM ANY OPERATIONS SUCH AS PAINTING, DRYWALL, OR TILE INSTALLATIONS DIRECTLY ONTO PAVED SURFACES OR THE GROUND WITHOUT CONTAINMENT IS PROHIBITED. THE PERMITTEE SHALL PROTECT ALL CURB FLOW LINES, ADJACENT WATERWAYS, WETLANDS, STORM SEWERS, STORM SEWER APPURTENANCES, OTHER PROPERTIES, ETC., ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS INVOLVING WHEEL CUTTING, SAW CUTTING OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE.
- IT SHALL BE THE RESPONSIBILITY OF THE PERMITTEE TO RESOLVE CONSTRUCTION PROBLEMS DUE TO CHANGING CONDITIONS OR DESIGN ERRORS THEY MAY ENCOUNTER DURING THE PROGRESS OF ANY PORTION OF THE WORK. IF CONDITIONS IN THE FIELD REQUIRE CHANGES AND THE PROPOSED MODIFICATIONS TO THE APPROVED PLANS INVOLVE SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK OR TO FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE CONTRACTOR, THROUGH THE ENGINEER OF RECORD, SHALL BE RESPONSIBLE TO REVISE PLANS AND SUBMIT THEM TO THE CITY OF AURORA FOR APPROVAL PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE WORK. ANY CONTROLS, FEATURES OR IMPROVEMENTS NOT CONSTRUCTED IN ACCORDANCE WITH THE APPROVED SWMP, CITY OF AURORA STANDARD DETAIL DESIGNS, CITY OF AURORA APPROVED VARIANCES, OR AN APPROVED DESIGN DRAWING AMENDMENT SHALL BE REMOVED AND THE CONTROLS, FEATURES AND/OR IMPROVEMENTS SHALL BE RECONSTRUCTED.
- SECONDARY CONTAINMENT FEATURES SHALL BE IN PLACE FOR ANY BULK FUEL STORAGE, MIXERS, GENERATORS, OR ANY OTHER SPILL OR LEAK SOURCE THAT REMAINS ONSITE FOR A PERIOD LONGER THAN 7 CALENDAR DAYS. A RECOVERY OR SALVAGE DRUM SHALL BE KEPT ONSITE FOR STORAGE OF CONTAMINATED SOILS.
- STRAW BALES AND RECYCLED ASPHALT OR CONCRETE ARE NOT ACCEPTABLE FOR THE CONSTRUCTION OF BMPs WITHIN THE CITY OF AURORA AND MAY NOT BE USED.

**GENERAL NOTES:**

- SEE FIELD WIDE REPORT NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
- ALL BMPs WERE INSTALLED IN THE INITIAL PHASE UNLESS LABELED WITH "PP" (POST PAVING). ALL BMPs SHALL BE LEFT IN PLACE UNTIL REVEGETATION ESTABLISHMENT IS APPROVED BY THE CITY.
- REMOVAL OF SEDIMENT TRAPS ON SITE SHALL ONLY OCCUR AFTER ALL AREAS TRIBUTARY TO THE SEDIMENT TRAPS HAVE BEEN FINAL LANDSCAPED AND ALL VEGETATION HAS BEEN ESTABLISHED IN THE OPINION OF THE CITY.
- THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN GOOD HOUSEKEEPING PRACTICES ON THE CONSTRUCTION SITE. THIS INCLUDES THE FOLLOWING:
  - GARBAGE/TRASH/CONSTRUCTION DEBRIS SHALL BE REMOVED ON A REGULAR BASIS.
  - WASHING OF EQUIPMENT INTO EXISTING DRAINAGEWAYS IS PROHIBITED.
  - PROPER CLEANUP PROCEDURES SHALL BE USED FOR SPILLED MATERIALS.
  - CLEANUP OF DRIPS OR LEAKS FROM EQUIPMENT OR MACHINERY AT THE SITE.
  - MINIMIZING THE AMOUNT OF UNNEEDED MATERIALS STORED ON-SITE.
  - MARK LOCATIONS FOR SPILL CLEANUP EQUIPMENT AND MATERIALS.
  - FERTILIZERS AND OTHER CHEMICALS ARE APPLIED ONLY IN THE QUANTITY REQUIRED.
  - PORTABLE TOILET FACILITIES ARE PROPERLY MAINTAINED AND PROPERLY SECURED.
  - STORAGE CONTAINERS, DRUMS, AND BAGS SHALL BE STORED AWAY FROM DIRECT TRAFFIC ROUTES TO PREVENT ACCIDENTAL SPILLS.
  - CONTAINERS SHALL BE STORED ON PALLETS OR SIMILAR DEVICES TO PREVENT CORROSION OF THE CONTAINERS.
  - ALL CHEMICAL SUBSTANCES USED IN THE WORK PLACE SHALL BE LISTED WITH THE REPORTABLE QUANTITY OF EACH, AND THE MATERIAL SAFETY DATA SHEET (MSDS) OBTAINED FOR EACH. THE MSDS'S WILL BE READILY AVAILABLE FOR USE, I.E., POSTED AT THE LOCATIONS WHERE THE MATERIALS ARE STORED AND HANDLED. ALL CONTAINERS SHALL BE LABELED TO SHOW THE NAME AND TYPE OF SUBSTANCE, STOCK NUMBER, EXPIRATION DATE, HEALTH HAZARDS, INCLUDING REACTIVITY, CORROSIVITY, IGNITABILITY AND TOXICITY, SUGGESTIONS FOR HANDLING, AND FIRST AID INFORMATION. (THIS INFORMATION CAN USUALLY BE FOUND ON THE MSDS. UNLABELED CHEMICALS AND CHEMICALS WITH DETERIORATED LABELS ARE OFTEN DISPOSED OF UNNECESSARILY OR IMPROPERLY.) INSTRUCTIONS AND MATERIALS/EQUIPMENT FOR SPILL CLEANUP PROCEDURES SHALL BE READILY AVAILABLE ON THE CONSTRUCTION SITE. THIS INCLUDES NOTIFICATION OF THE APPROPRIATE AGENCY OR DEPARTMENT, I.E., DOWNSTREAM WATER USERS, COLORADO DEPARTMENT OF HEALTH, ETC. SEE APPENDIX B "SPILL PREVENTION AND MANAGEMENT" FOR PROCEDURES FOR DEALING WITH AND REPORTING SPILLS AND RELEASES.
- NO CONCRETE IS ANTICIPATED TO BE USED IN THE CONSTRUCTION OF THIS WELL SITE PAD SO NO WASHOUT AREA IS ANTICIPATED.
- CAD FILES WILL BE PROVIDED TO THE SURVEYOR FOR CONSTRUCTION STAKING OF THE LIMITS OF CONSTRUCTION AND OTHER IMPROVEMENTS SHOWN HEREIN.
- 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.
- RS AND SCL NOTE: DEGRADING IN PLACE IF FILTREXX MATERIAL (SEE FIELD WIDE REPORT).
- ALL CMP SHALL HAVE A FLARED END SECTION AT EACH END.
- ALL CULVERTS, ACCESS ROADS, AND SEDIMENT BASINS ARE PRIVATELY OWNED AND MAINTAINED.

**VARIANCE REQUEST:**

ON BEHALF OF CRESTONE PEAK RESOURCES OPERATING, LLC, UINTAH ENGINEERING & LAND SURVEYING RESPECTFULLY REQUESTS THE FOLLOWING VARIANCE:  
 1. NOT TO INCLUDE AREA OF PAD WHEN CALCULATING TRIBUTARY AREA FOR SEDIMENT TRAP/BASIN.

# STORM WATER MANAGEMENT PLANS

## BLUE 3-65 33-32-31 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH OIL & GAS WELLS

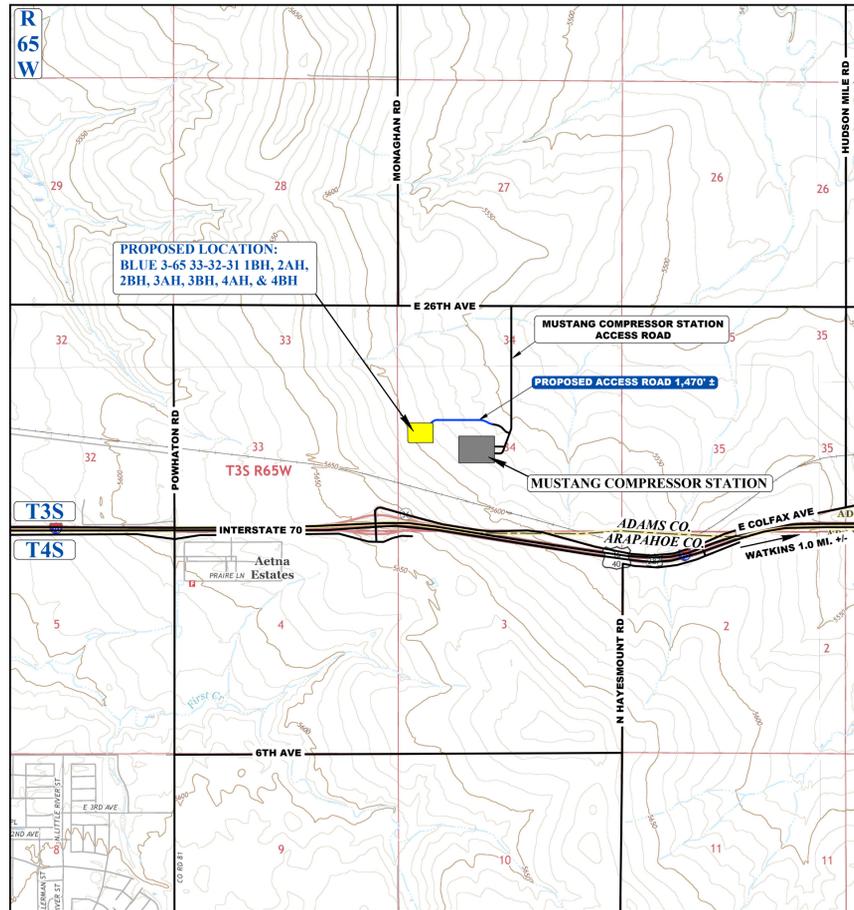
LOCATED IN:

NW 1/4 SW 1/4 SEC. 34, T3S, R65W, 6TH P.M.  
 CITY OF AURORA, ADAMS COUNTY, COLORADO  
 LATITUDE = 39° 44' 46.37"N, LONGITUDE = 104° 39' 27.78"W

SHEET INDEX	
COVER SHEET	1
PAD CONSTRUCTION PLAN	2
ACCESS ROAD PLAN	3
RECLAMATION PLAN	4



**CRESTONE PEAK RESOURCES OPERATING, LLC**  
 BLUE 3-65 33-32-31 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH  
 STORM WATER MANAGEMENT PLANS  
 NW 1/4 SW 1/4 SEC. 34, T3S, R65W, 6TH P.M.  
 CITY OF AURORA, ADAMS COUNTY, COLORADO



VICINITY MAP: WATKINS, COLORADO  
 (DENVER INTERNATIONAL AIRPORT, 2016 - USGS TOPOGRAPHIC QUAD MAP)

SCALE: 1" = 2,000'

**CITY OF AURORA STORM WATER MANAGEMENT:**

THIS STORM WATER MANAGEMENT PLAN HAS BEEN PLACED IN THE CITY OF AURORA FILE FOR THIS PROJECT AND HAS BEEN DETERMINED TO COMPLY WITH THE APPLICABLE CITY OF AURORA STORM WATER MANAGEMENT CRITERIA. ADDITIONAL STORM WATER MANAGEMENT, EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE OWNER OR HIS/HER AGENTS, DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS SWMP SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE PERMITTEE(S) UNTIL SUCH TIME AS THE SWMP IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

ENSURE THAT THE PROVISIONS OF CRS 37-92-602, AS AMENDED BY SENATE BILL 15-212, REGARDING NOTIFICATION OF DOWNSTREAM WATER RIGHTS HOLDERS ARE UPHELD.

**CITY OF AURORA NOTES:**

- 2.03.6.01 CITY OF AURORA PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH CITY OF AURORA DESIGN CRITERIA AND THE CITY CODE. THE CITY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND ELEVATIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. THE CITY OF AURORA, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.
- 2.03.6.02 ALL ROADWAY CONSTRUCTION SHALL CONFORM TO CITY OF AURORA "ROADWAY DESIGN & CONSTRUCTION SPECIFICATIONS" LATEST EDITION.
- 2.03.6.03 ALL WATER DISTRIBUTION, SANITARY SEWER, AND STORM DRAINAGE CONSTRUCTION SHALL CONFORM TO CITY OF AURORA "STANDARDS AND SPECIFICATIONS REGARDING WATER, SANITARY SEWER AND STORM DRAINAGE INFRASTRUCTURE" LATEST REVISION.
- 2.03.6.04 ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CITY. THE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE CITY STANDARDS AND SPECIFICATIONS.
- 2.03.6.05 THE CONTRACTOR SHALL NOTIFY THE CITY PUBLIC IMPROVEMENT INSPECTIONS DIVISION, 303-739-7420, 24 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- 2.03.6.06 LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ACTUAL CONSTRUCTION. FOR INFORMATION, CONTACT UTILITY NOTIFICATION CENTER OF COLORADO, 1-800-922-1987 OR 811.
- 2.03.6.07 THE CONTRACTOR SHALL HAVE ONE SIGNED COPY OF THE PLANS (APPROVED BY THE CITY OF AURORA), ONE COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED AT THE JOB SITE AT ALL TIMES.
- 2.03.6.08 IT IS THE CONSULTANT'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ON-SITE, AND OFF-SITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NEEDED DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS EITHER ON-SITE OR OFF-SITE, WHICH ARISE IN THE FIELD, WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY. THE COST TO RECTIFY ANY ADVERSE SITUATION TO MEET THE CITY STANDARDS AND SPECIFICATIONS AND THE CITY CODE SHALL BE BORNE SOLELY BY THE DEVELOPER.
- 2.03.6.09 THE OWNER/DEVELOPER MUST OBTAIN THE WRITTEN PERMISSION OF THE ADJACENT PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE GRADING OR CONSTRUCTION.
- 2.03.6.15 THE CITY OF AURORA SHALL NOT BE LIABLE FOR THE MAINTENANCE OF PRIVATE ACCESS ROAD. THESE FACILITIES MAY NOT MEET CITY STANDARDS AND SHALL REMAIN IN PRIVATE MAINTENANCE BY CRESTONE PEAK RESOURCES OPERATING, LLC IN PERPETUITY.
- 2.03.6.18 THE OWNER/CONTRACTOR MUST OBTAIN A C.D.P.S. STORM WATER DISCHARGE PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC SAFETY, IF REQUIRED.
- 2.03.6.19 THE OWNER/CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ARMY CORP OF ENGINEERS FOR WETLAND MITIGATION OR WORK WITHIN THE WATERS OF THE U.S., IF REQUIRED. IT IS THE RESPONSIBILITY OF THE OWNER/CONTRACTOR TO PROVIDE A COPY OF THE ARMY CORP OF ENGINEERS' REQUIREMENTS TO THE CITY OF AURORA. IF THERE ARE NO REQUIREMENTS BY THE ARMY CORP OF ENGINEERS, THEN A WRITTEN NOTIFICATION FROM THE ARMY CORP OF ENGINEERS SHALL BE SUBMITTED TO THE CITY OF AURORA STATING SUCH. CITY APPROVAL OF THE CONSTRUCTION PLANS IS SUBJECT TO THE OWNER/CONTRACTOR OBTAINING A 404 PERMIT, IF APPLICABLE. A COPY OF THIS PERMIT SHALL BE SUBMITTED TO THE CITY OF AURORA PRIOR TO ANY PERMITS BEING USED.
- 2.03.6.22 PROJECT SHALL COMPLY WITH THE SUBSURFACE UTILITY ENGINEERING REQUIREMENTS PER SENATE BILL 18-167 WHEN PROJECT INCLUDES EXCAVATION, INCLUDING BUT NOT LIMITED TO ELECTRONICALLY TRACEABLE MARKERS OR TRACING WIRE PER AURORA WATER STANDARDS AND SPECIFICATION FOR ALL SUBSURFACE UTILITIES. BY STAMPING THE PLAN THE ENGINEER OF RECORD IS CERTIFYING THE PLAN MEETS THE STANDARDS ESTABLISHED BY THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE 38-02) FOR DEFINING THE ACCURACY OF AN UNDERGROUND FACILITY.

**ACCESS ROAD AND PAD CONSTRUCTION NOTE:**

ACCESS ROAD AND PAD CONSTRUCTION SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIFE APPARATUS (65,000 LBS) UTILIZING THE CDOT ROAD-BASE #6 SPECIFICATION TO PROVIDE FOR ALL WEATHER DRIVING CAPABILITIES. ACCESS ROAD SHALL BE 23' WIDE WITH A 28' INSIDE TURNING RADIUS. WHILE CDOT #6 IS SPECIFIED, THE MATERIAL USED TO CONSTRUCT THESE SURFACES MAY BE OF ANY ONE OF, OR A COMBINATION OF, SEVERAL AGGREGATE MATERIALS AVAILABLE. APPROVED MATERIALS INCLUDE PREMEKED ROAD BASE MATERIAL, 1 - 1.5 ANGULAR INCH RIVER ROCK, CRUSHED GRANITE OR OTHER AGGREGATE WITH NOT LESS THAN ONE-INCH NOMINAL SIZE DESIGNATION AND CDOT ROAD BASE CLASS 6.

APPROVED FOR ONE YEAR FROM THIS DATE:	
CITY ENGINEER	DATE
FIRE DEPARTMENT	DATE
AURORA WATER DEPARTMENT	DATE

**PROJECT OWNER/DEVELOPER SIGNATURE BLOCK**  
 I HAVE REVIEWED THE INFORMATION CONTAINED WITHIN THE STORMWATER MANAGEMENT PLAN AND ACCEPT RESPONSIBILITY FOR THE REQUIREMENTS SET FORTH.

ATTORNEY IN FACT, CRESTONE PEAK RESOURCES OPERATING, LLC (SIGNATURE) \_\_\_\_\_ DATE \_\_\_\_\_

**PLAN PREPARER SIGNATURE BLOCK**  
 I ACKNOWLEDGE MY RESPONSIBILITY FOR THE PREPARATION OF THE STORMWATER MANAGEMENT PLAN.

CO PROFESSIONAL ENGINEER (SIGNATURE) \_\_\_\_\_ DATE \_\_\_\_\_

CALL 811  
 TWO WORKING DAYS  
 BEFORE YOU DIG  
 1-800-922-1987



**SURVEY BENCHMARK**  
 COA BM 456517NE001, A 3 INCH DIAMETER BRASS CAP STAMPED (C.O.A., BM, 23-50) ATOP THE N.E. CORNER CONC. BASE FOR POWER TOWER ON THE WEST SIDE OF POWHATON ROAD BEING THE 1ST POWER TOWER SOUTH OF THE W. 1/4 CORNER SECTION 4, T4S, R65W, AND BEING 125' SOUTH THEREOF.  
 LATITUDE: N39°37'52.25"  
 LONGITUDE: W104°30'04.26" (NAD 83)  
 ELEV: 5627.70' (NAVD 88)

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REVISIONS	NO.	DATE	BY	DESCRIPTION

RESPONSIBLE ENGINEER:

COVER SHEET

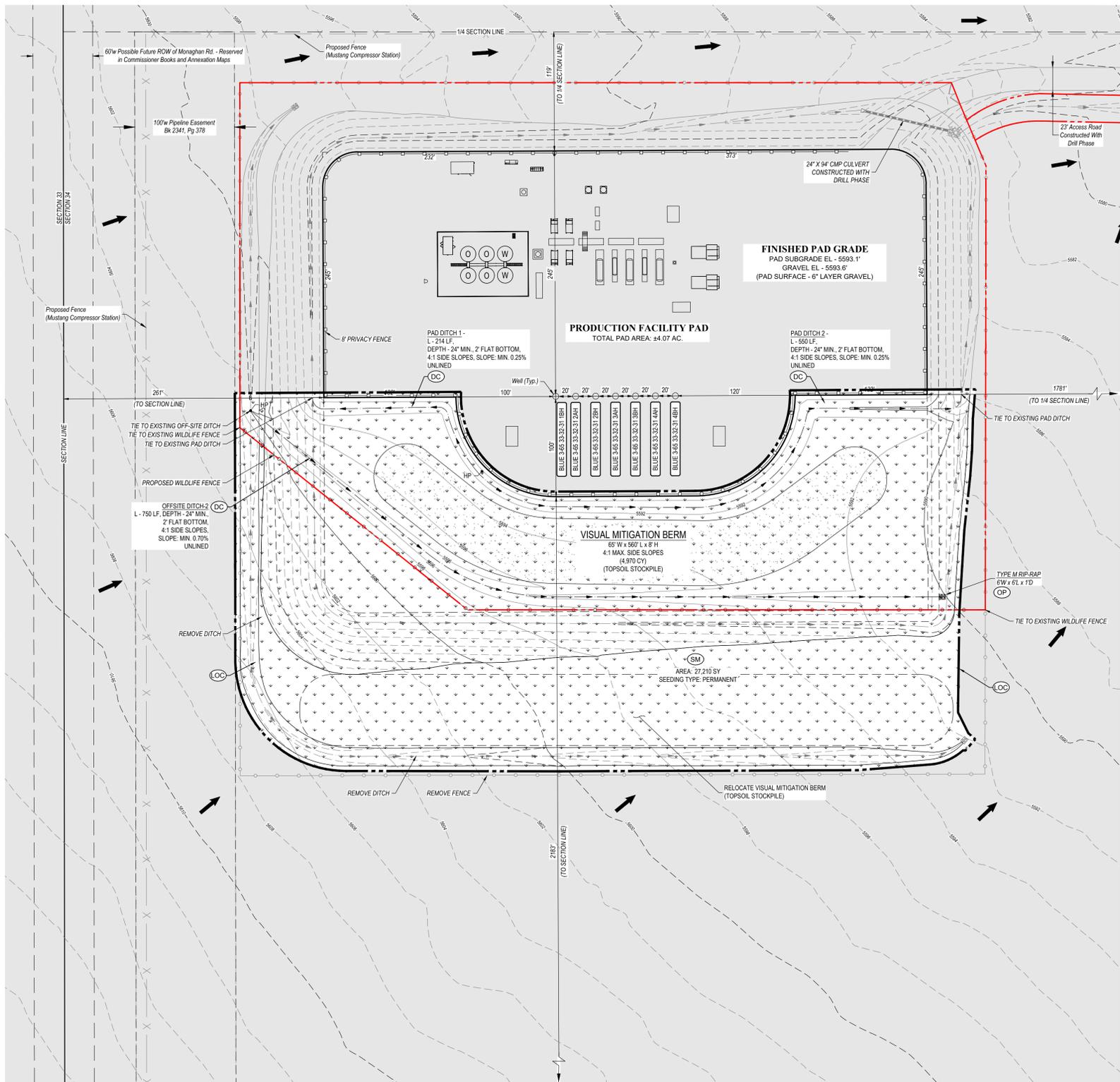
SCALE: NO SCALE  
 DRAWN BY: C.D.C.  
 DATE DRAWN: 02-17-2021  
 UELS FILE NO.: C - 7 2 5 9  
 PROJ. NO.: CRE03-20-0039 WD1  
 FILE: 2 5 4 9 3

SHEET

1







**LEGEND**

HP	HIGH POINT ELEVATION
W.P.C.S.	WELL PAD CORNER STAKE
DESIGN 1" CUT OR 1" FILL AT CORNER STAKE	
EXISTING GROUND ELEV. AT CORNER STAKE (TRUNCATED LESS 5.000 FEET)	
DC	DIVERSION DITCH
ECB	EROSION CONTROL BLANKET
IP	INLET PROTECTION
IPC	RFB FOR CULVERT PROTECTION
RS	ROCK SOCKS/WATTLES
OP	OUTLET PROTECTION
SB	SEDIMENT BASIN
SCL	SEDIMENT CONTROL LOG
SM	SEEDING AND MULCHING
SF	SILT FENCE
LOC	LIMITS OF CONSTRUCTION
TP	T-POST & ROPE FENCE
CF	CONSTRUCTION FENCE
OP	PROPOSED WILDLIFE FENCE
OP	EXISTING OVERHEAD POWER
OP	EXISTING BURIED POWER
OP	EXISTING FENCE
OP	EXISTING BURIED PIPELINE
OP	EXISTING MAJOR CONTOUR
OP	EXISTING MINOR CONTOUR
OP	PROPOSED MAJOR CONTOUR
OP	PROPOSED MINOR CONTOUR
OP	AREA OUTSIDE OF LIMITS OF CONSTRUCTION, "LOC"
OP	DISTURBED AREA AFTER INTERIM RECLAMATION (COGCC 2A REPORTABLE)

**APPROXIMATE EARTHWORK QUANTITIES**

(6") TOPSOIL STRIPPING	0 Cu. Yds.
PAD RECLAMATION CUT	2,260 Cu. Yds.
<b>TOTAL CUT</b>	<b>2,260 Cu. Yds.</b>
<b>PAD RECLAMATION FILL</b>	<b>14,120 Cu. Yds.</b>
DEFICIT MATERIAL	11,860 Cu. Yds.
<b>TOTAL RECLAIMED AREA</b>	<b>2,070 Cu. Yds.</b>

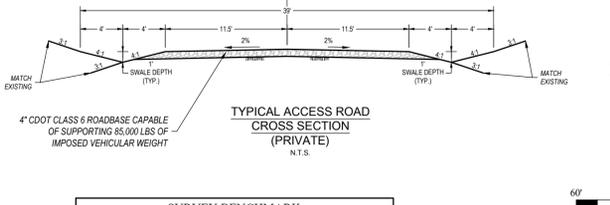
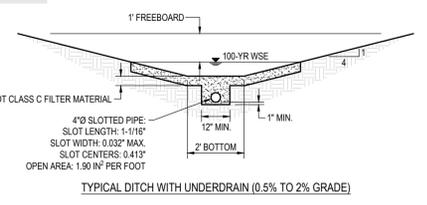
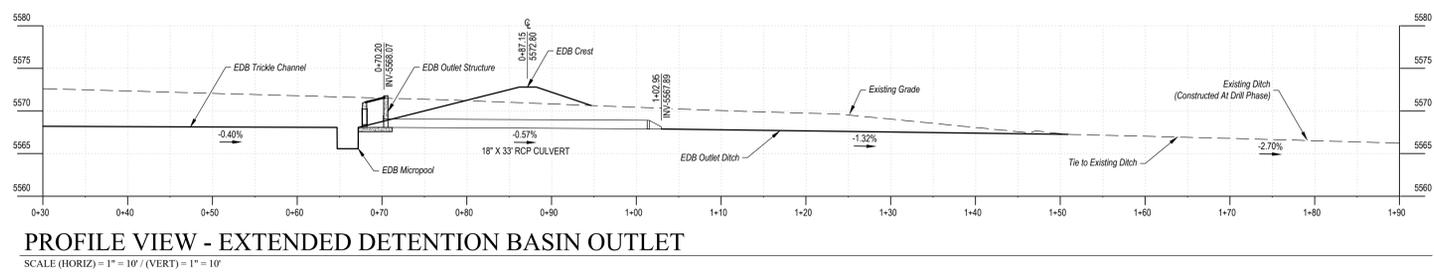
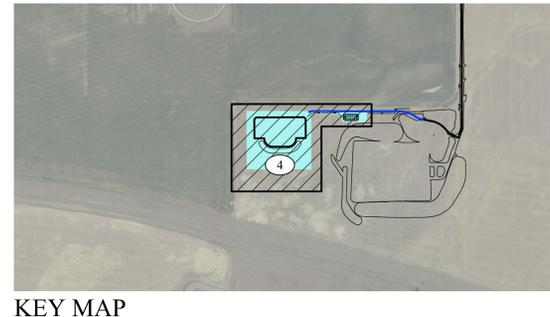
**NOTES:**

- Fill quantity includes 10% for compaction.
- Cut/Fill slopes 4:1 (Typ).

**APPROXIMATE SURFACE DISTURBANCE AREAS**

RECLAMATION TOTAL DISTURBED AREA	DISTANCE	ACRES
	NA	±6.211
<b>TOTAL DISTURBED AREA</b>		<b>±6.211</b>

SIZE OF DISTURBED AREA AFTER INTERIM RECLAMATION IN ACRES (COGCC 2A REPORTABLE): 9.285 ACRES



**SURVEY BENCHMARK**  
COA BM 4S6517NE001, A 3 INCH DIAMETER BRASS CAP STAMPED (C.O.A. BM, 23-50) ATOP THE N.E. CORNER CONW. BASE FOR POWER TOWER ON THE WEST SIDE OF POWHATON ROAD BEING THE 1ST POWER TOWER SOUTH OF THE W. 1/4 CORNER SECTION 4, T4S, R65W, AND BEING 125' SOUTH THEREOF.  
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**COMPACTION SPECIFICATIONS:**

- COMPACT SUBGRADE AND SURFACING TO 95% OF MAXIMUM DRY DENSITY, ACCORDING TO MATERIAL PROCTOR.
- MOISTURE CONDITION TO WITHIN ±2% OF THE OPTIMUM MOISTURE CONTENT, AS DETERMINED BY THE MATERIAL PROCTOR.

REV	DATE	BY	DESCRIPTION

RESPONSIBLE ENGINEER:

**RECLAMATION PLAN**

SCALE: AS NOTED  
DRAWN BY: C.D.C.  
DATE DRAWN: 02-17-2021  
UELS FILE NO.: C - 7 2 5 9  
PROJ. NO.: CR03-20-0039 WD1  
FILE: 2 5 4 9 3

**SHEET 4**

**UNCC**  
UNIVERSITY OF NORTHERN COLORADO  
CALL 811  
TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-922-1987

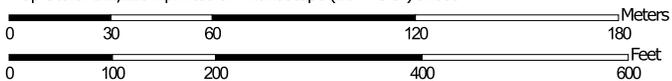
**APPENDIX C**  
**USDA WEB SOIL SURVEY**

Soil Map—Adams County Area, Parts of Adams and Denver Counties, Colorado  
(BLUE 3-65 33-32-31 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH)



Soil Map may not be valid at this scale.

Map Scale: 1:2,220 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84



Soil Map—Adams County Area, Parts of Adams and Denver Counties, Colorado  
(BLUE 3-65 33-32-31 1BH, 2AH, 2BH, 3AH, 3BH, 4AH, & 4BH)

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### 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 17, Jun 4, 2020

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

Date(s) aerial images were photographed: Jul 17, 2015—Oct 2, 2017

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.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PIC	Platner loam, 3 to 5 percent slopes	17.7	100.0%
<b>Totals for Area of Interest</b>		<b>17.7</b>	<b>100.0%</b>